

Factors Influencing Gross Domestic Product

Lesson by

Sherilyn Narker, economic and financial education specialist, Federal Reserve Bank of Atlanta

Lesson description

In this activity, students will explore how a country's factors of production influence a country's level of Gross Domestic Product. In the lesson, they will be introduced to economic terminology, complete a graphic organizer, and participate in a group card sorting activity. Students will use their understanding of the factors influencing GDP to make and support a hypothesis about which GDP and GDP per capita goes with each country. They will then write a short piece using evidence from the card sort to justify which factors they think are most important in determining a country's GDP.

Concepts

Entrepreneurship
GDP per capita
Gross Domestic Product
Human Capital

Literacy Rate
Natural Resources
Physical Capital
Standard of Living

Objectives

Students will be able to:

- define key terms such as entrepreneurship, GDP per capita, gross domestic product, human capital, literacy rate, natural resources, physical capital, and standard of living.
- explain how changes in a particular factor will influence the GDP of a country.
- analyze economic data and identify to which type of resource the data refers.
- compose a written piece giving evidence to support which factors seem to have the most significant effect on GDP.

Related Content Areas

Economics, World Studies, Current Events, Human Geography

Time Required

One 55 minute class period

Materials

- PowerPoint slides entitled *Factors Influencing GDP*
- Internet Access for Video (if possible)
- Handout #1 – *Fed Explained Assessment* (one per student if this was not assigned as Video Q & A homework)
- Handout #2 - Factors Influencing Economic Growth and Standard of Living (one per student)
- Activity #1 - One set of cards laminated and cut out for each group of six students.

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Preparation

Formative Assessment Option: Step 7 in the procedures suggests showing *The Fed Explains Real vs. Potential GDP* video. Teachers have the option of assigning this video to students through the Fed's Econlowdown Video Q & A website. Teachers can use the instructions found on page 4 in this document to register their students for Video Q & A. Teachers should register students at least two days prior to the lesson. The students will receive login instructions from their teacher the day before the lesson and access the video on their home computer or on a classroom device if available. After viewing the video, students will answer questions about the content. The students' scores will be automatically displayed in the teacher's gradebook in Econlowdown. This will give the instructor an idea of student understanding prior to implementing lesson.

Preparing for the lesson:

1. Copy the handouts.
2. Print, laminate, cut out, and bag one set of cards for each group of students.
3. If showing the video during class, make sure it will launch on your school computer. The hyperlink connects to [youtube.com](https://www.youtube.com). If you cannot access youtube.com from school, you can use your Econlowdown account to show the video. That site does not pull it from youtube.com.

Procedures: Instructions for the PowerPoint have been put in italics. Content background is in regular type.

1. *Open the PowerPoint and Display slide 2. Review the lesson objectives.*
2. Introduce the lesson by asking the following question: "What do people mean when they say "the economy"? Students will have a wide range of responses to this question. They may mention money, businesses, jobs, prices, etc. Tell the students that some people would describe the economy as the complex interactions among consumers, businesses, and government as each seeks to produce, consume, and distribute resources, goods, and services.
3. Ask the students how they think we would measure whether or not the U.S. economy is doing well. If you assigned the *Fed Explained Video Q & A* for homework, some students may say Gross Domestic Product or they may just know the term already. Some will likely say we measure it by looking at whether businesses succeed, people can find jobs, and /or citizens can afford to buy what they need. Tell students that we usually use changes in our gross domestic product to measure whether our economy is growing or shrinking. If you did not already assign the video for homework, tell them they will watch a short video on GDP and work with their classmates to complete a short assessment.
4. *Display slide 3 (or slide 4 if you assigned the video for homework). Click on each image to launch a browser and the video.*
5. (If you watched the video in class.) Give each student a copy of Handout #1, the video assessment and ask them to complete the activity as a group. Ask the groups to share their responses and go over the correct answers with the students. (The video Q & A questions are available in a print format in this document and an answer key follows the student version.)
6. If students are not already in groups, divide them into groups of six or less students. Give each group of students a stack of the cards you prepared before class.

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7. *Display slide 4.*
8. Ask the groups to find the cards shown on slide 4. Tell them to organize the cards on the table top in front of them in the format shown on the slide.
9. Distribute Handout #2. Tell students that they will be learning about some important factors countries need to have good GDP. Tell them they will fill in their handout and complete their table top chart as you discuss each factor.
10. *Display slide 5.* Ask a student to read the definition of “human capital”. Ask the students to give some real life examples of human capital. Tell them to see if they can find two cards for each country which seem to belong to the human capital category. Ask them to place the cards in the correct spot. Continue this same process as you *display slides 6 -8*. Go around the room and check if the students are placing cards correctly.
11. *Display slide 9.* Ask a student to read the definition. Tell students to find the literacy rate cards on their chart.
12. *Display slide 10.* Read the definitions with the students and ask them to place the GDP and GDP per capita cards beside Natural Resources on their chart. Ask the students to analyze the factors for each country and try to place the GDP and GDP per capita cards with the correct country. Ask several students to share why they places a particular card with a particular country.
13. *Display slide 11.* Ask if any group placed all the GDP numbers correctly. Encourage the students to share how well they did and why they made particular placement. Ask them to correct their charts if necessary.
14. *Display slide 12.* Discuss the debriefing questions with the students. Ask them to address these questions on the space provided on Handout #2. Ask students to share their responses and ask other students to comment on the explanations. Indicate whenever a student uses a good example of evidence to back their opinions.
15. Optional Activity – Go to <http://catalog.socialstudies.com/pdf/ZP219Psample.pdf> and show your students the photo collection from *Material World*. These are a bit dated, but each photo is accompanied by the per capita income and literacy rate of the country. The photos depict a middle class family from the country with all their possessions.

Factors Influencing Gross Domestic Product

Preparation for Video Q & A: Econlowdown Instructor Management Set-Up

Use this paper to register yourself as an instructor for Econlowdown. It is recommended that you use a personal email account since some district firewalls may reject your confirmation email. Please follow the instructions below.

1. Go to https://bts.stlouisfed.org/econ_ed/online_learning/.
2. Click REGISTER on the left hand navigation.
3. Enter the required fields in the form and click "SUBMIT".
4. Go to your email account.
5. If you do not see your confirmation email in your inbox, check your spam/junk folder. Usually, you will find it in that location.
6. Follow the information provided in your confirmation email and log onto the Instructor Management Panel.
7. Click on MY CLASSROOMS.
8. Enter the Class Name, Begin Date, and End Date. For example:
Class Name: Fall 2014 World Studies 1st Period
Begin Date: 08/11/14
End Date: 12/19/14
9. Click ADD NEW CLASSROOM. The classroom name should appear on the left hand navigation.
10. A dropdown box will appear for you to select how many students you are adding to your classroom. There are three options for adding students:
 - a. Generate generic student names like Student A, Student B, etc.
 - b. "Import student list" allows you to pull from a spreadsheet saved on your computer. Your file must be saved in the CSV format. You can save any excel document in this format by clicking "save as" and using the drop down box to choose CSV.
 - c. Type student names directly into the program.
11. Click the ADD STUDENTS button under your classroom name to add your students.
12. Click "print student login" and you will be able to print documents with your students user names and passwords to distribute to your class.
13. A new green button should appear called ADD COURSE/VIDEO. Click this button under your student list.
14. You will see a list of all the course and video options.
15. Click *The Fed Explains Real versus Potential GDP* video.
16. Select ADD TO CLASSROOM.
17. When your students log into the site, they will see this video as an option. They will be instructed to answer the questions after viewing the video.
18. If you click on this video title listed under your class name, you will be able to see each student's progress and the score they earned on the video questions.

Factors Influencing Gross Domestic Product

The Fed Explained Assessment – Student Version

1. The two main economic goals pursued by the Federal Reserve are

- A Economic security and economic growth
- B Price stability and maximum employment
- C Economic stability and economic freedom
- D Maximum employment and economic security

2. How often do government statisticians compute our country's GDP?

- A every month
- B every six months
- C one time per year
- D every three months

3. All of the following activities would be included in the country's GDP *except*

- A cutting someone's hair at a hair salon
- B washing the dishes after dinner at home
- C fixing a customer's car at the auto repair shop

4. Select all of the following items that would lower the potential GDP of a country.

- A Production machinery is damaged and cannot be used.
- B A large percentage of workers become elderly and can no longer work.
- C Fewer people complete high school and college leading to lower worker productivity.
- D A national recession lowers the number of goods and services produced in the economy.

5. When the economy is operating below potential GDP, the Federal Reserve is most likely concerned with

- A rising price level
- B increasing inflation
- C high levels of unemployment
- D shortages of necessary goods like energy and food

Factors Influencing Gross Domestic Product

6. The Federal Reserve goals of price stability and maximum employment are sometimes called

- A monetary policy
- B the dual mandate
- C open market operations
- D supervision and regulation

7. Real Gross Domestic Product (RGDP) can best be defined as

- A the average of all the prices of goods and services produced in the economy.
- B the percent change in the price level of all goods and service produced in an economy in a given time period.
- C the total value of all final goods and services produced in an economy in a given time period adjusted for inflation.
- D the value of all final goods and services that could be produced in an economy in a given time period if all its capacity was utilized.

8. An economy producing below its potential GDP most often results from

- A High prices of production inputs.
- B corrupt government policies that stifle economic growth.
- C low consumer demand for goods and services in the economy.
- D loss of consumer purchasing power due to a high inflation rate in the economy.

9. Production done at home is not counted in gross domestic product because

- A economists want people to work at companies not at home.
- B there is no market price to calculate for work done for oneself.
- C production done at home is not valuable to anyone except the person doing it.
- D goods produced at home lack the quality control found in the commercial market.

10. When the economy is operating above its potential GDP, the Federal Reserve will most likely

- A Increase the amount of dollars in circulation to boost economic activity.
- B Decrease the amount of dollars in circulation to keep inflation under control.
- C Pursue policies designed to decrease the unemployment rate in the economy.
- D Do nothing since the economy is performing even better than everyone expected.

Factors Influencing Gross Domestic Product

The Fed Explained Assessment – Answer Key

1. The two main economic goals pursued by the Federal Reserve are

- A Economic security and economic growth
- B Price stability and maximum employment*
- C Economic stability and economic freedom
- D Maximum employment and economic security

2. How often do government statisticians compute our country's GDP?

- A every month
- C every six months
- D one time per year
- B every three months*

3. All of the following activities would be included in the country's GDP *except*

- A cutting someone's hair at a hair salon
- B washing the dishes after dinner at home*
- C fixing a customer's car at the auto repair shop

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- A Production machinery is damaged and cannot be used.*
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Factors Influencing Gross Domestic Product

Handout #2 - Factors Influencing Economic Growth and Standard of Living

Define each of the following terms as your teacher discusses them. You will complete the boxes on the right after you have participated in an activity.



Human capital is...

↓ can ____ GDP

↑ can ____ GDP



Physical capital is...

↓ can ____ GDP

↑ can ____ GDP



Entrepreneurship is...

↓ can ____ GDP

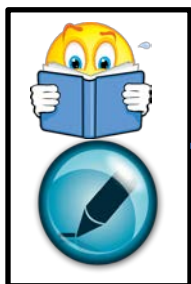
↑ can ____ GDP



Natural Resources are...

↓ can ____ GDP

↑ can ____ GDP



Literacy rate is ...

↓ can ____
Standard of Living

↑ can ____
Standard of Living

Factors Influencing Gross Domestic Product

In the chart below, predict which GDP and GDP per capita you think goes with each country you analyzed.

| | | |
|-----------------------|--|--|
| India | | |
| China | | |
| Japan | | |
| Germany | | |
| United Kingdom | | |
| Russia | | |

In the chart below, write the correct GDP and GDP per capita you think goes with each country you analyzed.

| | | |
|-----------------------|--|--|
| India | | |
| China | | |
| Japan | | |
| Germany | | |
| United Kingdom | | |
| Russia | | |

In the space below, discuss which factors influencing GDP seem to be the most important in determining GDP in the countries you analyzed.

Factors Influencing Gross Domestic Product

Handout #2 - Factors Influencing Economic Growth and Standard of Living

Define each of the following terms as your teacher discusses them. You will complete the boxes on the right after you have participated in an activity.



Human capital is...

A measure of the economic value of an employee's skill set.

↓ can _ ↓ _ GDP

↑ can _ ↑ _ GDP



Physical capital is...

Any manufactured asset that is applied to production, such a machinery, buildings, or vehicles

↓ can _ ↓ _ GDP

↑ can _ ↑ _ GDP



Entrepreneurship is...

The process of identifying and starting a new business, bringing together resources, and taking both the risks and rewards associated with the business.

↓ can _ ↓ _ GDP

↑ can _ ↑ _ GDP

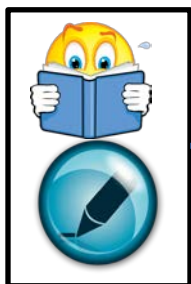


Natural Resources are...

The gifts of nature available for the production of goods and services

↓ can _ ↓ _ GDP

↑ can _ ↑ _ GDP



Literacy rate is ...

Percentage of the adult population who can read, write, and use printed material

↓ can _ ↓ _

Standard of Living

↑ can _ ↑ _

Standard of Living

Factors Influencing Gross Domestic Product

In the chart below, predict which GDP and GDP per capita you think goes with each country you analyzed.

| | | |
|-----------------------|--------------------|--|
| India | Answers will vary. | |
| China | | |
| Japan | | |
| Germany | | |
| United Kingdom | | |
| Russia | | |

In the chart below, write the correct GDP and GDP per capita for each country you analyzed.


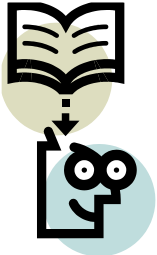
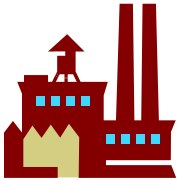
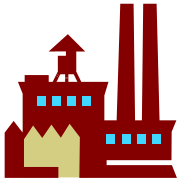






| | | |
|-----------------------|-------------------------|-----------------|
| India | \$4.962 Trillion | \$4,000 |
| China | \$13.37 Trillion | \$9,800 |
| Japan | \$2.378 Trillion | \$37,300 |
| Germany | \$4.729 Trillion | \$37,100 |
| United Kingdom | \$2.378 Trillion | \$37,300 |
| Russia | \$2.553 Trillion | \$18,100 |

In the space below, discuss which factors influencing GDP seem to be the most important in determining GDP in the countries you analyzed. Also discuss the relationship between Literacy Rates and Standard of Living.

_____Answers will vary_____









Factors Influencing Gross Domestic Product

Activity #1 – Cards for Group Card Sort

| | |
|--|--|
|  Human Capital |  Human Capital |
|  Physical Capital |  Physical Capital |
|  ship  Entrepreneur |  ship  Entrepreneur |
|  Natural Resources |  Natural Resources |









Factors Influencing Gross Domestic Product

Activity #1 – Cards for Group Card Sort (page 2 of 9)

| | |
|--|---|
|  <p>Children have guaranteed right to free education until the age of 14</p> |  <p>As of 2011, 74% of Indian adults could read and write</p> |
|  <p>Crops grown in India include rice, wheat, cotton, tea, sugarcane, and lentils</p> |  <p>India has 3.3 million square kilometers of territory and 48% of the land can be farmed</p> |
|  <p>Workers in India – 49% work in farming 20% work in industry 31% work in services</p> |  <p>In 2013, 30% of India's GDP came from investment in physical capital</p> |
|  <p>Small and medium size businesses were responsible for 8.7% of India's GDP.</p> |  <p>16% of Indian adults own their own business</p> |









Factors Influencing Gross Domestic Product

Activity #1 – Cards for Group Card Sort (page 3 of 9)

| | |
|---|---|
|  <p>94% of Japanese children attend high school</p> |  <p>As of the most recent census, 99% of Japanese adults could read and write</p> |
|  <p>Crops grown in Japan include rice, sugar beets, vegetables, and fruit</p> |  <p>Japan has .37 million square kilometers of territory and 11.8% of the land can be farmed</p> |
|  <p>Workers in Japan – 3.9% work in farming 26.2% work in industry 70% work in services</p> |  <p>In 2013, 21.6% of Japan's GDP came from investment in physical capital</p> |
|  <p>Small and medium size businesses were responsible for 50% of Japan's GDP.</p> |  <p>31% of Japanese adults report being entrepreneurs or self-employed</p> |



Factors Influencing Gross Domestic Product

Activity #1 – Cards for Group Card Sort (page 4 of 9)

| | |
|--|---|
|  <p>80% of Chinese children finish middle school; high school is not required</p> |  <p>As of the most recent census, 95.1% of Chinese adults could read and write</p> |
|  <p>Crops grown in China include rice, wheat, potatoes, corn, peanuts, tea, and cotton</p> |  <p>China has 9.6 million square kilometers of territory and 11.6% of the land can be farmed</p> |
|  <p>Workers in China – 34.8% work in farming 29.5% work in industry 35.7% work in services</p> |  <p>In 2013, 46% of China's GDP came from investment in physical capital</p> |
|  <p>Small and medium size businesses were responsible for 60% of China's GDP.</p> |  <p>7% of Chinese workers report being entrepreneurs</p> |

Factors Influencing Gross Domestic Product

Activity #1 – Cards for Group Card Sort (page 5 of 9)

| | |
|--|---|
|  <p>The average German child attends some kind of formal schooling for 16 years.</p> |  <p>As of the most recent census, 99% of German adults could read and write</p> |
|  <p>Crops grown in Germany include wheat, potatoes, sugar beets, barley, and fruit</p> |  <p>Germany has .36 million square kilometers of territory and 33.25% of the land can be farmed</p> |
|  <p>Workers in Germany – 1.6% work in farming 24.6% work in industry 73.8% work in services</p> |  <p>In 2013, 17.5% of Germany's GDP came from investment in physical capital</p> |
|  <p>Small and medium size businesses were responsible for 42.5% of Germany's GDP.</p> |  <p>7% of German workers report being entrepreneurs or self-employed</p> |









Factors Influencing Gross Domestic Product

Activity #1 – Cards for Group Card Sort (page 6 of 9)

| | |
|--|---|
|  <p>The average Russian child attends some kind of formal schooling for 14 years.</p> |  <p>As of the most recent census, 99% of Russian adults could read and write</p> |
|  <p>Crops grown in Russia include grain, sugar beets, sunflower seed, vegetables, and fruits</p> |  <p>Russia has 17 million square kilometers of territory and 7.11% of the land can be farmed</p> |
|  <p>Workers in Russia – 9.7% work in farming 27.8% work in industry 62.5% work in services</p> |  <p>In 2013, 22% of Russia's GDP came from investment in physical capital</p> |
|  <p>Small and medium size businesses were responsible for 10.5% of Russia's GDP.</p> |  <p>11.6% of Russian workers report being entrepreneurs or self-employed</p> |

Factors Influencing Gross Domestic Product

Activity #1 – Cards for Group Card Sort (page 7 of 9)

| | |
|---|--|
|  <p>The average United Kingdom child attends some kind of formal schooling for 16 years.</p> |  <p>As of the most recent census, 99% of United Kingdom adults could read and write</p> |
|  <p>Crops grown in United Kingdom include cereals, oilseed, potatoes, and vegetables</p> |  <p>The United Kingdom has .24 million square kilometers of territory and 24.8% of the land can be farmed</p> |
|  <p>Workers in United Kingdom 1.4% work in farming 18.2% work in industry 80.4% work in services</p> |  <p>In 2013, 13.8% of United Kingdom GDP came from investment in physical capital</p> |
|  <p>Small and medium size businesses were responsible for 50.45% of United Kingdom GDP.</p> |  <p>14.6% of United Kingdom workers report being entrepreneurs or self-employed</p> |

Factors Influencing Gross Domestic Product

Activity #1 – Cards for Group Card Sort (page 8 of 9)

India

Japan

China

Germany

United Kingdom

Russian Federation

Factors Influencing Gross Domestic Product

**GDP =
\$4.962 Trillion**

**GDP =
\$4.729 Trillion**

**GDP =
\$13.37 Trillion**

**GDP =
\$3.227 Trillion**

**GDP =
\$2.378 Trillion**

**GDP =
\$2.553 Trillion**

**GDP/Capita =
\$4,000**

**GDP/Capita =
\$37,100**

**GDP/Capita =
\$9,800**

**GDP/Capita =
\$39,500**

**GDP/Capita =
\$37,300**

**GDP/Capita =
\$18,100**

Factors Influencing Gross Domestic Product

Key - Do not print and laminate.

India
GDP =
\$4.962 Trillion
GDP/Capita =
\$4,000

Japan
GDP =
\$4.729 Trillion
GDP/Capita = \$37,100

China
GDP =
\$13.37 Trillion
GDP/Capita =
\$9,800

Germany
GDP =
\$3.227 Trillion
GDP/Capita =
\$39,500

United Kingdom
GDP =
\$2.378 Trillion
GDP/Capita = \$37,300

Russian Federation
GDP =
\$2.553 Trillion
GDP/Capita = \$18,100

****Based on PPP 2013 from CIA World Factbook****

Factors Influencing Gross Domestic Product

Standards and Benchmarks

National Standards for Economic Education

Content Standard 13: Income

- a. Students will understand that: Income for most people is determined by the market value of the productive resources they sell. What workers earn primarily depends on the market value of what they produce.

Content Standard 14: Entrepreneurship

- a. Students will understand that: Entrepreneurs take on the calculated risk of starting new businesses, either by embarking on new ventures similar to existing ones or by introducing new innovations. Entrepreneurial innovation is an important source of economic growth.
- b. Students will be able to use this knowledge to: Identify the risks and potential returns to entrepreneurship, as well as the skills necessary to engage in it. Understand the importance of entrepreneurship and innovation to economic growth, and how public policies affect incentives for and, consequently, the success of entrepreneurship in the United States.

Content Standard 15: Economic Growth

- a. Students will understand that: Investment in factories, machinery, new technology, and in the health, education, and training of people stimulates economic growth and can raise future standards of living.
- b. Students will be able to use this knowledge to: Predict the consequences of investment decisions made by individuals, businesses, and governments.

Common Core Standards

| Grades 6-8 Students | Grades 9-10 students | Grades 11-12 students |
|---|---|---|
| Integration of Knowledge and Ideas | | |
| 7. Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts. | 7. Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text. | 7. Integrate and evaluate multiple sources of information presented in diverse formats and media |
| Writing Standards for Literacy in History/Social Studies 6 – 12 Research to Build and Present Knowledge | | |
| 7. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. | 7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. | 7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |