Lesson 7: How do institutions affect productivity and standard of living?

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In this economics lesson, students will explore more about how economic institutions affect poverty.

Description of the lesson

Students will go deeper into understanding how key economic institutions (open markets, rule of law, property rights, and entrepreneurship) affect poverty. Students will explore data and information to support the importance of economic growth and poverty reduction.

Economics

Economics is the study of choices and the choices that a country can make are widely affected by economic institutions. Additionally, economic institutions change the standard of living and poverty levels within a country. Therefore, it’s important to understand how economic freedom or capitalism changes the incentives of people within a country and economic well-being.

Objectives

After completing this lesson students will be able to:

* define and explain concepts like incentives and innovation.
* describe how innovation is the key to economic productivity and raised standards of living.
* explain how economic institutions provide incentives (or disincentives) for innovation.

Voluntary National Content Standards in Economics

* Standard 13: Income for most people is determined by the market value of the productive resources they sell. What workers earn depends, primarily, on the market value of what they produce and how productive they are.
* Standard 15: Investment in factories, machinery, new technology, and the health, education, and training of people can raise future standards of living.

Concepts

Absolute Poverty, Economic freedom, Economic Institutions, GDP, Incentives, Relative Poverty

Time Required

60 minutes

Materials Needed

* Slide presentation “Lesson 7 How do Institutions affect productivity and standard of living?”
* Copies of Activity 7.1, one per student
* Devices with internet access, one per student or group of 2 students

Procedure

1. Start the lesson by showing slide 2 which states the according to the World Bank Group[[1]](#footnote-1) which is an organization that includes five institutions working towards sustainable solutions to reduce poverty and build prosperity in developing countries there are about 811 million people living in extreme poverty (living on less than $2.15 per day).
2. Ask students how we can reduce poverty around the world. *Answers may vary but include educating people, wealth redistribution policies such as universal incomes, increasing welfare programs around the world, etc.* Accept answers without judgement and explain that this lesson is going to focus on how economic institutions (open markets, property rights, rule of law, and entrepreneurship) have been drastically reducing poverty for decades.
3. Hand out Activity 7.1. Tell students that poverty is a major global problem and that organizations around the world have been working for decades to reduce it. Show slide 3. Note that until COVID-19 global poverty levels had been decreasing with the goal of ending extreme poverty by 2030. Unfortunately, “global poverty reduction was dealt a severe blow by the COVID-19 pandemic and a series of major shocks during 2020-22, causing three years of lost progress. Low-income countries were most impacted and have yet to recover. In 2022, a total of 712 million people globally were living in extreme poverty, an increase of 23 million people compared to 2019.”[[2]](#footnote-2) (World Bank Group, 2024)
4. Using slides 4-5, provide key terms to the students and define them.
   1. The most used measures of poverty are **income** measures. Incomes are money payments the owners of resources earn for contributing their resources to production.
      1. The most familiar category of income is **wages and salaries**, the income earned by labor. The other 3 categories are:
         1. **rent** payments to the owners of natural resources,
         2. **interest** payments to the owners of capital, and
         3. **profit** to entrepreneurs, who undertake the risk of productive enterprise.
      2. In developed countries, most people receive their income in the form of money, but in impoverished countries especially, in-kind income is predominant.
         1. A farmer who plants and harvests grain that his family eats is earning an income; his income is in the form of grain rather than money.
   2. Because production generates income, total production = total income. Thus, the most common measure of production or output, the GDP (gross domestic product) is also used as a measure of income.
      1. More specifically, GDP is the commonly used measure of total output or total production, and GDP per capita is the commonly used measure of average income or standard of living.
      2. GDP (gross domestic product) is the total value of final output produced annually in a nation.
      3. GDP per capita (gross domestic product per capita) = GDP ÷ population.
      4. (GNP, or Gross National Product, and GNI, or Gross National Income, are also used to measure income. GDP, GNP, and GNI figures for a particular nation differ only slightly.)
5. Next have students look up different income levels as measure by GDP per capita using the FRED (Federal Reserve Education Data). Follow the instructions on slide 6 and on a classroom computer with projector to navigate to the website with the students. Have students use their devices individually or in groups of 2-3 to navigate online to <https://fred.stlouisfed.org/>. In the search bar have students search for “Canada GDP per capita.” Select Constant GDP per capita for Canada. Students should see a graph that looks like the graph below (on slide 7):  
   A graph on a white background

   Description automatically generated

*(Teacher note: FRED updates data when they get the latest data from the source. You can set up an account and save graphs so when you update slides/teaching materials you have the latest data available)*

Explain to students that GDP is one measure of productivity and income for a country (there are others). Constant GDP, or Real GDP, allows for people to make comparisons across time because it adjusts it for inflation. Constant GDP per capita allows people to make comparisons across both time and countries because countries all have different populations and sizes so this helps control for that. Ask the students the following questions about the graph which are on slide 8.

* 1. What is the latest date for data and what is the GDP? *Answers will vary year to year. You can hover over the line at the end for the answer.* Have students record this on Activity 7.1.
  2. What is the general trend of Constant GDP per Capita? *Answer: GDP per capita has been increasing.*
  3. What are those dips in Constant GDP per Capita? *Answer: recessions (Teacher note: you can click edit graph, then go to formatting, and add recession shading to your graph).*

1. Point out to the students that there are several periods of a recession (the decline in Constant GDP). Notably since 2019, Canada experienced one of the longest and deepest declines in Real GDP per capita in recent history (since about 1985).[[3]](#footnote-3)
2. Show slide 9. Have students think about 5 countries they are interested in learning more about. Have students write down those 5 countries below Canada in Activity 7.1. Alternatively, you could assign students countries or use the groups and countries from Lesson 6 Activity: How free is that country?
3. Show slide 9. Next have students click “edit graph” in the top right corner. Next select “Add line”. In the search bar have students add in other country’s constant GDP per capita (i.e. United States, Germany, etc.). Note that if they add too many the axis will adjust but then some of the lines can be hard to distinguish. Allow students about 5 minutes to add some other countries and add this data to Activity 7.1. After about 5 minutes talk about the trends or countries that the students explored. What countries did they pick? How did that compare to Canada?
4. Using the class computer and projector, show students this visualization from Visual Capitalist’s [Top 10 Countries by GDP per Capita, by Region.](https://www.visualcapitalist.com/cp/ranked-countries-gdp-per-capita-2023/) Note that the image on slide 10 will link to this website. Ask general questions to the class such as what do you notice? Are there any countries that are surprising?
5. Tell students that while GPD is a measure of what the country produces there are other indicators of wealth/poverty. Show slide 11. Explain that one such measure is Purchasing Power Parity (PPP). Instead of using current market rates for prices (such as in nominal data), PPP tries to more accurately account for differences in the cost of living between countries – especially in places where labor and goods are far cheaper. Note that the PPP values facilitate comparison of actual purchasing power among nations.
   1. Show students this visualization of the [PPP of a big mac across the globe](https://www.visualcapitalist.com/cp/big-mac-index-purchasing-power-parity-burger-inflation/).(1:27)[[4]](#footnote-4) by clicking on the image in slide 10. Then show the bottom table of how much a burger costs around the world comparing May 2004 and January 2022. Ask students questions about where a Big Mac costs the most. Least? Which countries have seen the biggest change in price?
6. Tell students that while income measures are both useful and widely used, they do have shortcomings which are on slide 12:
   1. Per capita GDP and GNI (Gross National Income) are averages, and therefore depict standard of living in very general terms that may hide income disparities within a population.
      1. Averages – per capita and all others – smooth out differences in the income of individuals and groups, and thus may not accurately portray the material well-being of large portions, or even a majority, of a nation’s citizens.
   2. Suppose in the most extreme instance, that 95% of a country’s income went to a ruling family, leaving only 5% for the millions of citizens. In that case, the general poverty of the population would be hidden by the per capita average
7. Explain that income is closely tied to consumption using slide 13. It is derived from output and used for consumption or savings (which is merely delayed consumption). In subsistence economies where savings are non-existent, current consumption = output.
   1. Consumption (as opposed to output) measurements provide more reliable indicators of standards of living where income data is non-existent or hard to gather.
   2. Rather than relying on estimated values or assumptions about the level of material well-being implied by dividing GDP by population, consumption measurement is derived from a statistically significant number of household surveys. The survey data about the goods and services the members of the household actually consume are then converted to monetary values.
   3. Many poverty researchers prefer consumption measures to output-based measurement in developing countries because the data are more precise and can be collected without large government outlays.
   4. Household surveys also have the advantage of providing a reliable way to account for income-in-kind.
   5. China and India – until recently the location of a majority of the world’s poor – have large, accurate household surveys going back several decades. More and more developing countries joined them in this practice in the 1990s.
8. Tell students that there is a big difference in GDP, income, consumption, PPP, and many other metrics that you have all seen. There is a wide range of poverty globally. Define for students the following measures of poverty on slide 14:
   1. **Absolute poverty** is identified by designating a minimum threshold of material well-being. The incomes of the poor fall below the minimum threshold.
      1. Poverty lines differ among nations, as each designates its own acceptable minimum level of material well-being.
   2. **Relative poverty** differs from absolute poverty in that it is identified by comparing levels of material well-being experienced by different individuals or groups, rather than by comparing the level of well-being to a standard.
      1. Since income is not equally distributed among all members of a society, some will be relatively poor and others will be, by comparison, relatively rich
9. Explain to students that throughout history, absolute poverty has been the norm. Show slide 15 which shows historical data around the world. Only in the past two-and-a-half centuries have some nations reached levels of production leading to a marked reduction in poverty. Since 1750, human society has made consistent inroads against absolute poverty, and improvements have been especially noteworthy in the last quarter century. For the first time in human history, we are experiencing a sustained decline not only in the percentage of the world’s population that is poor, but in the total number of the poor.
10. Show slide 16 and remind students that at the beginning of the lesson the World Bank Group estimates there are about 700 million people living in extreme poverty (living on less than $2.15 per day). Additionally, looking at data, poverty rates have been declining substantially until COVID-19. Show students images from the World Bank’s [Poverty and Inequality Platform](https://pip.worldbank.org/home)[[5]](#footnote-5) which are on slides 16-17. Ask the students the following questions about the images:
    1. What do you notice happening to poverty since about 1990? *Answer: decreasing substantially*
    2. Are there certain regions that have seen more reduction than others? *Answer: East Asia and Pacific region and South Asia region.*
    3. Are there areas that have seen an increase in poverty? *Answer: Sub-Saharan Africa*
11. Have students use their devices and navigate to the World Bank Poverty and Inequality Platform to look at Country Profiles: <https://pip.worldbank.org/country-profiles>. Have students follow instructions on slide 18 for Activity 3.1. Using the search bar at the top have students look for the poverty rate at $2.15 a day (2017 PPP) for Canada and the other countries they have selected. Give students 2-3 minutes to fill out the poverty rates in Activity 3.1.
12. Show students the World Bank Poverty and Inequality platform image for poverty reduction for Canada which is also on slide 19. Ask students what they notice? *Answers may vary but may include that since it’s relatively small—even since 1971 the peak was around 2.5% but that poverty has been drastically reduced in Canada to less than a half of a percent.*
13. Students can use slide 20 and the World Bank PIP to look at the poverty reduction for the countries they have chosen. Have students record this on Activity 7.1 for their countries. Give the students 2-3 minutes to complete this.
14. Show slide 21. Tell students that economic growth the rising of people’s standard of living. It is the key to reducing absolute poverty. There are two methods of reducing the number of poor: one is to redistribute income from the rich to the poor, and the other is economic growth.
    1. Using a pie analogy helps to explain the two alternatives. If we think of the economy as a pie, reducing poverty by redistributing income (reducing income inequality) is analogous to giving the poor a bigger slice of the pie (show slide 22.) while reducing poverty through economic growth means making the pie bigger. When that happens, the poor have a bigger slice even if the relative size of the slices doesn’t change.
    2. While redistribution is intuitively appealing as a solution to poverty in a world with great disparities of wealth, redistribution accounts for 1/5 of the reduction in poverty since 2000 and economic growth accounts for 4/5 of poverty reduction.[[6]](#footnote-6)
15. Have students complete the economic growth for their countries in Activity 3.1 using the steps in slide 23 and the World Bank Poverty and Inequality Platform to look at Country Profiles: <https://pip.worldbank.org/country-profiles>. Give students another 2-3 minutes to locate this information.
16. If you have not shown your students the Fraser Institute’s Freedom of the World index and map be sure to use the Lesson 6 Activity: How Free is that Country? and briefly acquaint the students with the index. Slide 24 shows the economic freedom map and a link with QR code.
17. Navigate to Freetheworld.org using slide 25 and either click on Canada or search for the country in the search bar at the top. Add Canada’s score to Activity 7.1. Then have students add the scores of the Freedom of the world index for the other countries they have selected.
18. Tells the students to look at the data they have put together on their sheet and in the images and graphs that they have seen in this lesson. Ask the students if there are any trends or common themes they have noticed? (Question on slide 26) *Answers may vary but include that wealthier countries in general have higher economic growth rates, lower poverty levels, and greater economic freedom scores.*
19. Follow this up by showing slide 27 and explaining again that the economic institutions are key to defining a countries economic freedom and act as an incentive for how decisions are made within the country.
20. Explain that the Fraser Institute created 4 quartiles by ranking nations in terms of the strength of their economic institutions, or degree of “economic freedom.” Those economies in the top quartiles of the ranking (to the right of the graph) have more economic freedom. Those nations in the bottom quintiles (to the left) have less economic freedom and greater government control over the economy, including greater income redistribution. Follow this up by explaining that countries that protect and support the key economic institutions (open markets, rule of law, property rights, and entrepreneurship) have higher levels of income and economic growth. The current data comes from the Fraser Institute’s Economic Freedom of the World: 2023 Annual Report[[7]](#footnote-7)
    1. This suggests that there is a strong correlation between economic freedom and income. Show students slide 28.[[8]](#footnote-8)
    2. Explain that with economic freedom comes a decrease in poverty because of increased economic growth. Show slide 29 to show poverty rates by economic freedom.
21. Countries that protect economic institutions have higher incomes but also even the poorest individuals are better off in those countries than others (remind students about increasing the size of the pie). Show students slide 30 and explain that this graphic shows that for all countries the poorest 10% of the population have about 2.1-2.8% of the income. Ask students if they would rather have 2.7% of the income per capita of the least free (about $6300) or of the most free (about $48,000). *Answer: the share of the most free*
    1. Follow this up by showing slide 31 and showing the students the economic freedom and income earned by poorest 10%. The world’s poor receive from 2 – 3% of their nations’ income and that endeavoring to reduce poverty through redistribution has not produced increases in well-being beyond those experienced by the poor in nations where little or no redistributive efforts are made.
22. Tell students that a lot of these metrics has to do with income but there are many other metrics that matter. Continue this showing and discussing the results of economic freedom and
    1. Life expectancy (see slide 32 for data)
    2. Infant mortality (see slide 33 for data)
       1. Teacher note: this would be in the opposite direction as the least free countries have much higher infant mortality rates)
    3. UN World Happiness index (see slide 34 for data)
23. Economic freedom is also important for outcomes specifically related to women. Navigate to <https://womenandprogress.org/> or use slide 25 to show students how health, education, and financial outcomes for women is drastically different for women depending on the economic freedom of that country.

Closure

1. Close the lesson by explaining that two hundred years ago, per capita incomes in different parts of the world were relatively similar.  But some locations – notably the U.S. and western Europe – experienced sustained economic growth over long periods of time. It is that growth rather than the degree of income inequality that resulted in the poor of western economies being relatively wealthy by the absolute standard of world poverty. In summary, then, the most commonly observed patterns, world-wide, indicate that attacking absolute rather than relative deprivation is the key to reducing poverty:
   1. Sustained growth always goes hand-in-hand with poverty reduction.
   2. There is little evidence correlating shifts in income distribution to long-term poverty reduction
2. Understanding that economic freedom is related to economic growth, what might you suggest countries do if they want to reduce poverty and increase standards of living? *Answer: protect their economic institutions like open markets, property rights, rule of law, and entrepreneurship.*

Assessment

Have students read through select reports published by the Fraser Institute. Once they have read the report have students summarize the report by answering the following questions:

1. What economic institution is the report talking about?
2. Why is this economic institution important? Use economic concepts from class to help you explain this.
3. Based on your reading how well is Canada protecting that economic institution. Explain in 3-4 sentences.
4. If the trend continues, what do you predict might happen to the Canada’s economic freedom, GDP or other measure of income, and to citizens.

Sample reports

Teachers should easily be able to search for economic indicators or economic freedom reports to incorporate into their classrooms.

(note that these suggestions have a summary and a link to the full report at the bottom of the page):

* Canada Still Needs to Open up to Competition by Vincent Geloso   
  <https://www.fraserinstitute.org/studies/canada-stills-needs-to-open-up-to-competition>
* Initiatives to equalize everyone will only result in disorder by Matthew Lau   
  <https://www.fraserinstitute.org/article/initiatives-to-equalize-everyone-will-only-result-in-disorder>
* The Government's Groundwater Grab: An Attack on Property Rights in Quebec by Diane Katz and Jean-Francois Minardi   
  <https://www.fraserinstitute.org/studies/governments-groundwater-grab-an-attack-on-property-rights-quebec>
* Measuring Entrepreneurship: Conceptual Frameworks and Empirical Indicators by Keith Godin, Jason Clemens, and Niels Veldhuis   
  <https://www.fraserinstitute.org/studies/measuring-entrepreneurship-conceptual-frameworks-and-empirical-indicators>

Watch and Listen (Optional Extra Resources)

* {Video} Fraser Institute: The Benefits of Economic Freedom (1:51 min)

Show students the following video demonstrating the importance of economic freedom on poverty. This video visually shows some of the key results about economic freedom and metrics like poverty, income, and more. It emphasizes that as you have more income you can save which has long-term positive implications for individuals and countries.

* + Link: <https://www.fraserinstitute.org/economic-freedom/economic-freedom-basics>
* {Podcast} NPR Planet Money Summer School History 6: China, Taiwan and how Nations Grow Rich (36 min)

Have students listen to this simple to understand podcast which focuses on how economic freedom made major changes to China and Taiwan. The podcast interviews people whose lives were changed for the better when economic institutions like property rights and entrepreneurship were established and protected. The incentives were changed for the better and these individuals saw incomes increased and many improvements in their personal standard of living.

* + Link: <https://www.npr.org/2024/08/13/1253934831/east-asian-economic-transformation>

Activity 7.1

Fill in the table with data from the following sources.

* Real GDP per Capita
  + Federal Reserve Economic Data <https://fred.stlouisfed.org/>
  + In the search bar search for “Canada GDP per capita.” Select Constant GDP per capita for Canada.
* Poverty Rate at $2.15 a day (2017 PPP)
  + The World Bank Poverty and Inequality Platform [https://pip.worldbank.org/country-profiles](https://pip.worldbank.org/country-profiles/IDN)
  + In the search bar type in the country you are looking for
* Economic Growth
  + The World Bank Poverty and Inequality Platform [https://pip.worldbank.org/country-profiles](https://pip.worldbank.org/country-profiles/IDN)
  + In the search bar type in the country you are looking for
* Freedom of the World Score
  + <https://freetheworld.org/>
  + Click on a country or search for the country you are looking for in the search bar

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| --- | --- | --- | --- | --- | --- |
| Country | Real GDP per Capita | Poverty rate at $2.15 a day (2017 PPP) | Briefly explain or describe what has happened to the poverty rate | Economic Growth | Freedom of the World score |
| Canada |  |  |  |  |  |
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1. <https://www.worldbank.org/en/who-we-are> [↑](#footnote-ref-1)
2. <https://www.worldbank.org/en/topic/poverty/overview> [↑](#footnote-ref-2)
3. <https://www.fraserinstitute.org/studies/changes-in-per-person-gdp-income-1985-to-2023> [↑](#footnote-ref-3)
4. Visual Capitalist, The Big Mac Index: A Measure of Purchasing Power Parity & Burger Inflation <https://www.visualcapitalist.com/cp/big-mac-index-purchasing-power-parity-burger-inflation/> [↑](#footnote-ref-4)
5. World Bank Group, Poverty and Inequality Platform, <https://pip.worldbank.org/home> [↑](#footnote-ref-5)
6. Dollar, David; Kleineberg, Tatjana; Kraay, Aart. 2013. Growth Still Is Good for the Poor. Policy Research Working Paper;No. 6568. © World Bank, Washington, DC. http://hdl.handle.net/10986/16001 [↑](#footnote-ref-6)
7. <https://www.fraserinstitute.org/studies/economic-freedom-of-the-world-2023-annual-report> [↑](#footnote-ref-7)
8. Fraser Institute Economic Freedom of the World 2023 <https://www.fraserinstitute.org/sites/default/files/economic-freedom-of-the-world-2023.pdf> [↑](#footnote-ref-8)