



Lesson 10:

Global Income Inequality: What are the causes and consequences?

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In this lesson students discover the degree to which global income inequality exists and some of the issues that result from it.

Description of the lesson

In this lesson, students recreate the relative income inequalities of real countries with a hands-on activity and work in jigsaw cooperative learning groups to make connections between income inequality and other socioeconomic variables.

Economics

Equality is a difficult concept to adequately express in clear terms. While the difference between equality of opportunity and equality of outcomes is somewhat straightforward in the framework of economic goals, many times students want to use the word “equal” as a synonym for “fair.” Fair is a troublesome term in economics because of its subjectivity. Equality is intrinsically linked with many topics covered in an economics course including allocation strategies, public goods, taxation policies, and income. Of course, whenever equality is a topic of concern, inequality is as well. The focus of this lesson is specifically income inequality on a global scale. Income inequality is the extent to which income is distributed in a population unevenly, which has an impact on standard of living, policies for redistribution of income, and abilities to save, invest, and create wealth. This lesson is primarily concerned with getting students to understand the fact that income inequality exists in every country in the world and it has correlations with a variety of other socioeconomic variables.

Ethics

The ethics of income inequality involves a discussion about positive and normative statements. The fact that income inequality exists is a positive statement that can be empirically demonstrated. To say income inequality is unethical is a normative statement because it implies that there is a way things “should” be done. Social norms, politics, and personal preferences for economic and social goals all play a role in deciding that question. The fact that income inequality is a global phenomenon presents an interesting aspect of the ethical discussion because it suggests the possibility that some inequality is inevitable, especially in economic systems that do not prioritize equality as a social goal. If that is true, a deeper ethical quandary is how much is acceptable. An outcome-based ethical model would suggest that the “right” action is one that is the most beneficial for the most people. But is having equal income the most beneficial outcome? Keeping these ethical frameworks in mind as you teach this lesson will help students understand the complexity of this topic.

Objectives:

After completing this lesson students will be able to:

- define income inequality and provide evidence that it exists in the world.
- explain how income inequality is related to other variables such as education, economic growth, political stability, and healthcare.
- evaluate global income inequality using an outcome-based and duty-based ethical model.

Standards

[Voluntary National Content Standards in Economics](#)¹

- Standard 13: Income
 - 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.
- Standard 16: Role of Government
 - There is an economic role for government in a market economy whenever the benefits of a government policy outweigh its costs. Governments often provide for national defense, address environmental concerns, define and protect property rights, and attempt to make markets more competitive. Most government policies also have direct or indirect effects on peoples' incomes.

Concepts

Income

Income distribution

Time Required

90 minutes

Materials Needed

- Slide presentation: "Global Income Inequality: What are the Causes and Consequences?"
- Blank sheets of paper or sticky notes, one per student
- Clear plastic cups [like these](#) or something similar, 40 total, divided into 8 groups of 5
- Extra large dry lima beans [like these](#) or something similar like pom poms, 800 total divided into 8 groups of 100. Make sure what you are using isn't too small, there needs to be a visual impact.
- 8 ziplock bags for the lima beans
- One Sharpie or other permanent marker for labeling cups
- Copies of Activity 10.1: Income Quintiles for Mystery Countries, one copy on cardstock cut apart
- Copies of Activity 10.2: Global Income Inequality Causes and Consequences Cards, one set of six, for every six students in the class. Each student will be getting one of the six cards to participate in a jigsaw cooperative learning group.
- Copies of Activity 10.3: Global Income Inequality Discussion Sheet, one per student copied front/back
- Copy of Activity 10.4: Closure Discussion Guide printed for the teacher

¹ Voluntary National Content Standards in Economics: <https://www.councilforeconed.org/wp-content/uploads/2012/03/voluntary-national-content-standards-2010.pdf>

- Copies of Assessment 10: Podcast Guest, one per student or display slide presentation
- OPTIONAL: Link to “Is Inequality Inevitable” YouTube Video
https://www.youtube.com/watch?v=rEnf_CFoyv0

Teacher Preparation

Divide the cups into 8 stacks of 5 cups each. Each group should have a cup labeled (with the sharpie) 1st quintile, 2nd quintile, 3rd quintile, 4th quintile, 5th quintile. Separate the beans into 8 groups of 100 and place in ziplock bags. It is essential to have 100 beans in each bag. Be sure to have some extra lima beans in case some go missing or get damaged during the day.

Prior to conducting the lesson, you may want to watch the “Is Inequality Inevitable” video found here: https://www.youtube.com/watch?v=rEnf_CFoyv0. There is also the option to show this to students after or near the end of the lesson. *Showing it to them before may sway opinions.*

Procedure

1. Explain that today’s lesson is about **income inequality** (how evenly or unevenly income is distributed in a population) and what, if anything, should be done about it. Display slide 1 of Slide Presentation: Global Income Inequality: What are the Causes and Consequences?
2. Ask the students what comes to mind when they hear income inequality which is on slide 2. Encourage them to share anything that comes to mind and not over think it. Write some of their answers on the board. ***Answers may vary but include: rich people, poor people, jobs, money, wealth, and possibly even things like classism, racism, etc.***
3. Review the definition of **income inequality** on slide 3 as the extent to which income is distributed unequally among a group of people.
4. Explain that the class will participate in a brief simulation using slide 4. Tell them you are going to represent *all* the consumers in a fictional country (Econland in this lesson). You (representing *all* the consumers in the country) have \$100 to spend and the only thing you want to buy are hand-drawn squares. Instruct students to get a piece of paper and pencil. Ask all students to draw a square on a piece of paper and put their pencils or pens down when finished. Walk around the room and make a silent mental note of squares that are exceptionally well done, poorly done, or are unique (filled in or colored in, etc.). This will be important later in the lesson.
5. Display slide 5 and announce that you aren’t sure the best way to distribute the \$100. Remind students that you, as the teacher, represent ALL consumers in the economy. Ask if anyone has any suggestions. Use procedure 6 as a guide to navigate possible answers.

6. The order/necessity of the sub-procedures below will depend on which suggestions are made so be flexible. Note, this is not a comprehensive list of all the possible suggestions. The goal is to demonstrate at least three different distribution methods so the students experience different income distributions. This is an important component to establish so the later, more data-driven-components make sense.
- “Pay everyone the same amount.”* If this is suggested, agree that that is a good idea and since everyone drew a square, they should all get paid. Divide \$100 (of fictional money, you don’t actually need to distribute any fake money or anything) by the number of students in the class. Write whatever number you get ($100/\#$ of students) on the board and announce that under this system, this would be everyone’s income and it would, by definition, be totally equal.
 - “Only buy the ones you like.”* Agree that this is a good option and kind of how market economies work. Identify several unique squares that you made mental notes about earlier and agree to pay those students a high amount (to keep it easy, make it the same amount and an easy divisor of \$100 like pick 10 squares and pay those 10 students \$10 each). Write the amount of income each of the students you bought from would have on the board and announce that under this system, if you didn’t sell your square, your income is \$0.
 - “Pay by size/color/quality/etc.”* Agree that this works for you and choose a metric like size. Say that you’ll pay more for the bigger squares. Make up a system like any squares larger than 3 inches get at least \$20, between 2 and 3 get \$10 and less than 2 get \$1. Students do not need to actually measure the squares; you’re just making the point that not everyone will get the same amount.
 - “Pay everyone a minimum amount, and then pay more for certain criteria.”* This is a variation on option C but provides a way to introduce things like minimum wage or guaranteed income levels.
7. Discuss each of the following questions on slide 6.
- Which option did you like the best? ***Answers may vary but include: The people who were better square makers are more likely to enjoy a system where they get paid based on their talents or abilities. There may be exceptions, of course, if those skilled square makers have strong personal preferences for equality.***

- b. Which option seemed the most “fair?” *Answers may vary. There isn’t a definitive answer here. This is your opportunity to point out how the word “fair” is divisive, subjective, and problematic for discussing things like policy or decision-making for a large group. For example, allocating a brand-new electronic device at a store on a first-come-first served basis may seem “fair” to some, but for those that were geographically distant or had to work during the release hours may not think so. Instead, the store may decide to do a lottery - which also seems “fair” until someone points out that the winner of the lottery may not even be someone who wanted the item in the first place.*
- c. Which option seemed the most “equal?” *Answers may vary. Unlike fair, equality in this case can be measured in at least one way - the amount of income received. Explain that there are multiple versions of equality - equality of outcomes or equality of opportunity - but for this lesson, the class should consider equality in the sense of how much income people have relative to others. To this end, the most “equal” outcome of this simulation is the one where everyone got the same pay regardless of how their square looked.*
- d. Is having equal income a beneficial outcome? *Answers may vary. Equality is beneficial if that is the goal of the economy - for everyone to have exactly the same amount of income. However, there is also an argument to be made that giving everyone equal income may not be the best for things like innovation or growth. Taken to an extreme, if children were given equal income to adults, their decision-making would likely be quite different and perhaps not as beneficial to the economy (or themselves if they spent it all on candy or toys).*
8. Explain the concept of using quintiles using slides 7 - 9. A large portion of income inequality data and research uses quintiles to explain income inequality. Explain that quintiles are essentially created by taking a population, organizing it around some statistic (ours will be income), and dividing it into five equal parts. For example, when allocating your hundred dollars in the previous activity, there was one option where everyone got an equal amount of money. In that scenario, each quintile had 20% of all the money in the room (like slide 8) and one scenario where the consumers only purchased the squares they liked so some students received much more income than others (like slide 9). The most extreme example is to pay all \$100 to one person. In that scenario, the fifth quintile technically has 100% of the money, but it is only represented by one person within that quintile.
9. Divide the class into 8 roughly equal groups.(Teacher Hint: If it’s a small class, you can use fewer groups.) Display slide 10. Give each group five plastic cups (previously labeled with the Quintile #s), a bag of 100 beans, and one of the mystery countries from Activity 10.1: Mystery Country Quintiles.

10. Explain that the data on the card (Activity 10.1: Mystery Country Quintiles) comes from the [world bank](#)² and represents real **income distribution** (a statistical measure of the level of income received by the population of a nation) from 8 different countries on four different continents. Each group needs to carefully count out the correct number of beans for each quintile and place them in the cup. Each bean represents 1% of all the income from the country. **Teacher note: This activity can be easily updated using the World Bank Data to update the numbers on the document and slide presentation as needed.**
11. When all the beans have been accurately counted, have each group display their five cups in order from first quintile (with the fewest beans) to fifth quintile (with the most beans). Ideally, the cups would be displayed on one table side by side to make the comparisons obvious. Have students look around the room to notice the visual differences (especially in countries B and C for example). Conduct the following discussion:
- Observing these 8 sets of cups, are there any trends that stick out? **Answers may vary, but the main thing you are looking for is for students to realize that income inequality is a real thing and is a global phenomenon. In every single country in the world that has reliable data, the top quintile has over 30% of the income for the country. Remind students that if everything was equal, every quintile should have 20% of the income.**
 - Are there any countries where the lowest quintile has 0 beans? **Answer: No, but countries C and H aren't far from it. Remind students that within a country, each quintile has the same number of people. For example, in these countries the same number of people are living off of the 2 or 4 beans as the cup that has the 60 plus beans.**
 - Which countries appear to be most similar? **Answer: A and D have the exact same income distribution. B and E are similar as are F and G.**
12. If desired, ask students to try to guess the countries. When ready to reveal, display slide 11 so students can see the countries (A is Argentina, B is Sweden, C is South Africa, D is United States, E is Belarus, F is Canada, G is India, and H is Panama.) It's hard to predict what students will tease out of this reveal, but a few questions and talking points (using slide 12) that may help you navigate the discussion are below.
- Is income distribution only a problem in the United States? **Answer: No, students need to see that this inequality is a global phenomenon. Some of these countries have very different government systems and economic systems (i.e. command, market, mixed, etc.) yet income inequality still exists.**

² The World Bank LAC Equity Lab: Income Inequality-Composition by Quintile:
<https://www.worldbank.org/en/topic/poverty/lac-equity-lab1/income-inequality/composition-by-quintile>

- b. What do Sweden and Belarus have in common? **Answer: Sweden and Belarus are examples of less inequality (a somewhat common theme for the European countries). The data for Norway, Denmark, Poland, Finland, etc. all look similar. Explain that these countries are known for offering large social “safety nets” and also have high taxes to provide high degrees of government services. Politically, Sweden and Belarus are very different.**
- c. Can we say that income equality is the same thing as wealth? **Answer: No. Income inequality is NOT a measure of overall wealth. While the US and Argentina are statistically similar in terms of distribution, remind students that the US GDP is more than five times larger than Argentina’s. Similarly, regarding overall standard of living, Argentina’s GDP per capita is around \$13,650 while the United States’ is north of \$76,300 (as of 2022).**

Teacher note: If students ask for the extreme examples (like who are the least/most, etc.), explain that some countries do not report accurate data (or at least data the international community trusts) so we don’t really know what’s going on in Cuba, North Korea, Iran, or even China really. Feel free to send students directly to the data for them to do their own research. <http://wdi.worldbank.org/table/1.3>

13. Explain that there are multiple ways to measure income inequality using slide 13. Some are statistically complex while others are relatively simple ratios. This lesson focuses on two measures. The first is the ratio method. It divides the mean income of the 5th quintile by the mean income of the 1st quintile. The higher the number, the more inequality there is between those two quintiles. A ratio of 4, for example, would mean that the 5th quintile is making 4 times more income than the 1st quintile.
14. Explain that the Gini Coefficient is another measure of income inequality using slide 14. This one is more involved mathematically, but essentially it measures income distribution for an entire population. A Gini coefficient of 0 would mean that everyone in the population has the exact same income - perfect equality. A Gini coefficient of 100 means that one person has all the income. Again, a higher number means greater income inequality. If students conduct their own research, they may find different sources have different Gini Coefficients. This is due to different calculations and sources of income and income per capita as well as whether you are reporting pre/post income redistribution.
15. Show the Gini coefficients of the 8 countries from the previous activity on slide 15. **Teacher Note: an astute student may notice that Argentina and the U.S. had the same quintile breakdown, but slightly different Gini numbers. Explain that this has to do with the inequality within each range.**
16. Display slide 16 and tell students in the final phase of the lesson, they will look at causes and consequences of global income inequality. Display slide 17 and distribute Activity 10.2: Global Income Inequality Causes and Consequences Cards to students in order. Give the first student card one, the second card two, and so on. Start over after card six has been handed out.

17. Tell students to group themselves in groups of 2-4 with students that have *the same card number*. The number of groups doesn't matter, just make sure students are not mixing numbers.
18. Tell students they have ten minutes to read their card, discuss the content with their partners, and answer the questions on the activity. Make sure they know it is important to answer question three. During this activity, circle the room and look for students who have placed the "X" on question one in the middle to left hand side of their understanding. See what questions you can answer for them to aid in their understanding.
19. When the ten minutes has expired, tell students to stop what they are doing and gather their attention.
20. Display slide 18 and explain that in addition to the causes and consequences of global income inequality they just discussed, there is an ethical component to income inequality as well. Slide 18 shows three ways of thinking about ethics - outcomes, character, and duty. Specific to this lesson, review the definitions of the outcome and duty-based models (Note: since we are dealing with *global* issues, character-based ethics are a little broad and subject to cultural differences in character so probably best to avoid it). Tell students that in the final segment of this lesson they will have an opportunity to combine the economics of income inequality with some of these ethical frameworks. Below are the three definitions:
 - a. Outcomes-based ethics: a moral philosophy that discerns right or wrong action based on the consequences produced by the action.
 - b. Virtue-based ethics: a moral philosophy that discerns right or wrong based on whether one's actions contribute to the formation of good character.
 - c. Duty-based ethics: a moral philosophy that discerns right or wrong based on the analysis of one's obligations.
21. Display slide 19 and distribute Activity 10.3: Global Income Inequality Discussion Questions to each student. Explain that they are now to regroup into groups of four, but their group must have four different numbers, preferably two even and two odd numbers. Specific numbers do not matter, but having two even and two odd will ensure students have two causes and two consequences.
22. Tell students to go from smallest number to largest number and share their cause/consequence and summary. Encourage them to ask each other questions as they go and to fill in their chart on Activity 10.3: Global Income Inequality Discussion Questions. The timing for this will vary from class to class, but the charts should be able to be completed in around 10-15 minutes.
23. The remainder of the questions on Activity 10.3 can be answered individually or discussed as a group.

Closure

24. Close the lesson by reviewing the discussion questions on slides 20-22 - questions two and three that deal with the ethical implications of global income inequality. Activity 10.3: Global Income Inequality Discussion Questions Suggested Answers is a discussion guide to help guide students.

Assessment

25. Conclude the lesson by assigning the assessment below independently and may be completed during class time or for homework.
26. Distribute Assessment 10: Podcast Guest to each student and display slide 23. Students are to take on the role of someone who has been invited to make a two-minute appearance regarding income inequality. They are to make sure the audience understands that income inequality does indeed exist and then make an ethics-based argument as to whether or not that matters and if anything should be done about it.
 - a. To make this more realistic, have students actually record their responses as if they were actually on a professional podcast if they have access to some sort of recording software like audacity or even using the voice dictation function on their phone (optional). The “Two Minute Economist” is an example of the type of thing they should be aiming for: <https://open.spotify.com/show/5Bv6a8tjNjNzxAblgsZae>
 - b. In terms of measuring their knowledge, you should be looking for some sort of evidence from the lesson that income inequality exists (globally or from their county research) and a rational economic argument that supports their opinion. For example, if a student says paying for college for everyone will reduce income inequality, they need to be able to link that to higher education generally yielding higher lifelong earnings, etc. If a student says nothing should be done about income inequality, they need to connect that opinion to economic opportunity, incentives, or the importance of economic freedom.

Some sample assessment items:

1. Country A has a Gini Coefficient of 45. Country B has a Gini Coefficient of 72. Based solely on this information, an economist could reasonably conclude
 - a. Country A has a higher GDP.
 - b. Country B has more resources.
 - c. Country A has more income inequality.
 - d. **Country B has more income inequality.**

2. As the education and technology gap widens among developed economies and emerging economies what would be the likely impact on income inequality and economic growth globally?

Income Inequality

Economic Growth

- | | | |
|----|-----------------|-----------------|
| a. | increase | decrease |
| b. | Increase | increase |
| c. | decrease | increase |
| d. | decrease | decrease |
3. Perfect income equality would mean that all quintiles of the population have what percentage of the total income?
- a. 10%
 - b. 20%**
 - c. 50%
 - d. 100%.

References (for information on Activity 10.2)

Card 1

Robinson, J. and Acemoglu, D. (2017, January 30). *The economic impact of colonialism*. VoxEU. Retrieved March 30, 2023 from <https://cepr.org/voxeu/columns/economic-impact-colonialism>

Rodrigo Adão, Paul Carrillo, Arnaud Costinot, Dave Donaldson, Dina Pomeranz, Imports, Exports, and Earnings Inequality: Measures of Exposure and Estimates of Incidence, *The Quarterly Journal of Economics*, Volume 137, Issue 3, August 2022, Pages 1553–1614, <https://doi.org/10.1093/qje/qjac012>

Card 2

Dabla-Norris, E. et. al., (2015, June). *Causes and Consequences of Income Inequality: A Global Perspective*. Imf.org. Retrieved March 30, 2023 from <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1513.pdf>

Card 3

Winthrop, R. and McGivney, E. (2015, June 10). *Why wait 100 years? Bridging the gap in public education*. Brookings.edu. Retrieved March 30, 2023 from <https://www.brookings.edu/research/why-wait-100-years-bridging-the-gap-in-global-education/>

Card 4

Dabla-Norris, E. et. al., (2015, June). *Causes and Consequences of Income Inequality: A Global Perspective*. Imf.org. Retrieved March 30, 2023 from <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1513.pdf> *pages 7 and 9 feature the info on this card.

Card 5 (broadly)

The IMF and Income Inequality: An introduction to inequality. Retrieved March 30, 2023 from <https://www.imf.org/en/Topics/Inequality/introduction-to-inequality#:~:text=Some%20of%20key%20factors%20behind,labor%20and%20product%20market%20policies>

Card 6

Malikova, A. and Alimova, B (2022). *Income Inequality and Political Instability*. Working Paper. Tashkent, Uzbekistan. Available at <https://iariw.org/wp-content/uploads/2022/08/Malikov-Alimov-IARIW-2022.pdf>

Activity 10.1: Income Quintiles for Mystery Countries (cut apart)

COUNTRY A

Quintile	1	2	3	4	5
% income (# of beans)	5	10	15	23	47

COUNTRY B

Quintile	1	2	3	4	5
% income (# of beans)	8	13	18	23	38

COUNTRY C

Quintile	1	2	3	4	5
% income (# of beans)	2	5	8	17	68

COUNTRY D

Quintile	1	2	3	4	5
% income (# of beans)	5	10	15	23	47

Activity 10.1: Income Quintiles for Mystery Countries (cut apart) (cont.)

COUNTRY E

Quintile	1	2	3	4	5
% income (# of beans)	10	15	18	23	34

COUNTRY F

Quintile	1	2	3	4	5
% income (# of beans)	7	12	17	23	41

COUNTRY G

Quintile	1	2	3	4	5
% income (# of beans)	8	12	15	21	44

COUNTRY H

Quintile	1	2	3	4	5
% income (# of beans)	4	8	13	21	54

Activity 10.2: Global Inequality Causes and Consequences Cards

Card 1

Cause: Global Trade

Global Income Inequality is caused by a large range of factors. One of those is the way global trade works. In general, trade creates wealth because it encourages specialization and moves resources to more valuable uses. This fact has led to increases in standards of living across the world and, in some cases, has been correlated with *reducing* income inequality within certain countries¹.

Some historic trade practices, however, have led to vast inequalities between countries. Colonization is perhaps the most obvious example with colonizing countries taking resources in ways that were typically non-voluntary. European countries tremendously benefitted from these exchanges while the colonized countries of Africa, Latin America, and Southeast Asia rarely did. By some estimations, up to 30% of the world's current income inequality can be attributed to the lasting effects of colonization.

Modern trade practices can also contribute to income inequality between and within countries. A recent study of Ecuador found that of all the economic gains that came from trade from 2009-2015, the 90th income percentile received seven times more than the rest of the country. To make matters worse, the top one percent of income earners received 11 times the benefit of trade than the rest of the country. This is most likely because of an economic shift moving from exporting commodities (like agricultural products) to exporting manufactured products. The number of people in a country who can benefit from commodity exports is typically greater than the number who can benefit from manufactured products that require higher levels of investment and physical capital. While still under investigation, early data indicates that this same pattern is likely to play out in other countries around the world that are economically similar to Ecuador.

1. On the spectrum below put an X on the line that indicates how well you feel you understand what you just read.

Don't understand at all-----Perfectly understand

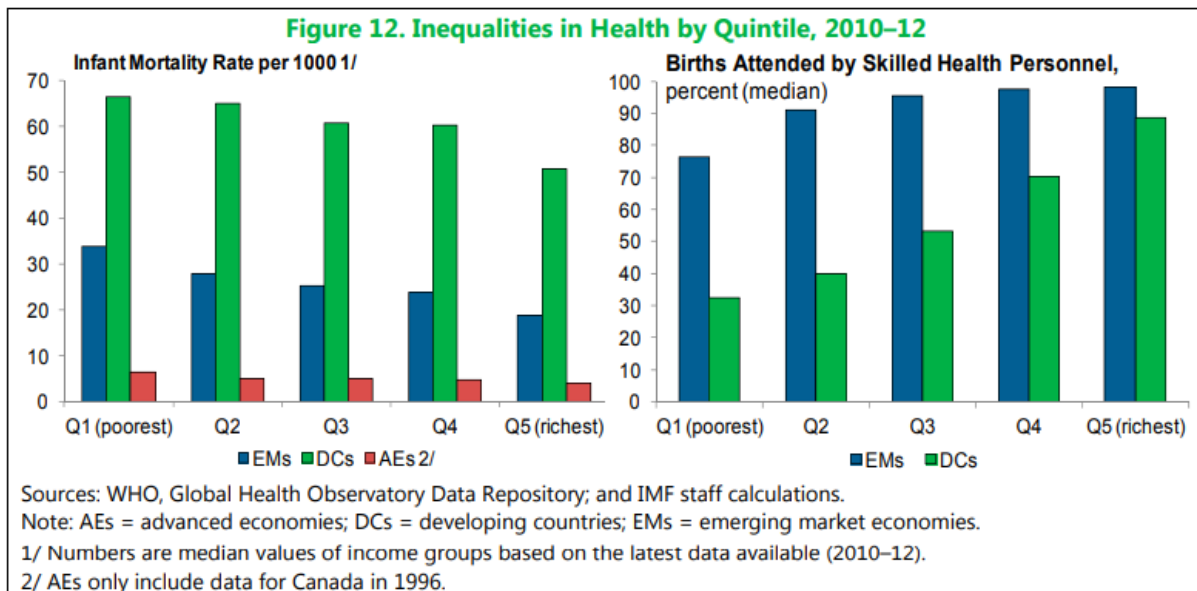
2. Write at least one question you still have about the relationship between global trade and income inequality.
3. When you meet with your mixed group, be prepared to deliver a one or two sentence explanation of your card to the group. Write that statement below.

Activity 10.2: Global Inequality Causes and Consequences Cards

Card 2

Consequence: Uneven access to goods/services

Where there is income inequality, there will be unequal access to goods/services. The resulting downward spiral that comes from this access is not always immediately obvious or discussed. In economic systems that charge for healthcare, for example, greater income inequality within a country has a twofold effect. Wealthier quintiles can afford healthcare, medicine, surgeries, elective procedures, etc. and continue to demand them - which can cause prices to increase further. The less wealthy quintiles, therefore, become less and less able to pay for these services causing even more health problems. As just one example of a consequence of this, the charts below show infant mortality rates and percentage of births attended by skilled health personnel in counties at various levels of economic development.



Access to education follows a similar pattern globally with wealthier quintiles able to access better quality education, leading to better employment opportunities and lifetime earnings potential that perpetuates the cycle. Financial services - access to banking, affordable loans, credit, etc. - also demonstrates this trend.

1. On the spectrum below put an X on the line that indicates how well you feel you understand what you just read.

Don't understand at all-----Perfectly understand

2. Write at least one question you still have about the relationship between uneven access to goods/services and income inequality.
3. When you meet with your mixed group, be prepared to deliver a one or two sentence explanation of your card to the group. Write that statement below/on the back.

Activity 10.2: Global Inequality Causes and Consequences Cards

Card 3

Cause: Technology/Education Gap

Increases in technology development and skill development are strongly correlated with economic growth and productivity. These factors have also contributed to income inequality in both advanced and emerging economies. Higher demand for skills needed to create, develop, and maintain newer technology has led to higher paying jobs in those fields over the last several decades. Examples include innovations in data collection and management, healthcare systems, communications networks, manufacturing technologies, gaming, financial technology, and others.

Specialized education and training is needed for many of these fields, but access to that education and training is not equal, thus resulting in a dilemma where the result of previous inequality is now causing additional inequality.

Just “having” education is not enough, however. A 2015 report from the Brookings Institution found that countries with stagnant GDP and growing GDPs both invested aggressively in education. Despite this, when shown “as an average number of years in school and levels of achievement, the developing world is about 100 years behind developed countries.” This gap indicates that the quality and pace of education around the world is uneven, therefore, the gains from education and the resulting abilities to earn income based on that education is going to vary greatly around the world.

1. On the spectrum below put an X on the line that indicates how well you feel you understand what you just read.

Don't understand at all-----Perfectly understand

2. Write at least one question you still have about the relationship between technology/education gap and income inequality.
3. When you meet with your mixed group, be prepared to deliver a one or two sentence explanation of your card to the group. Write that statement below.

Activity 10.2: Global Inequality Causes and Consequences Cards

Card 4

Consequence: Economic Implications

Multiple studies conducted by the IMF and other researchers have shown a relationship between income inequality with negative economic growth. An example from one study:

“If the income-share of the top 20 percent increases by 1 percentage point, GDP growth is actually 0.08 percentage point lower in the following five years, suggesting that the benefits do not trickle down. Instead, a similar increase in the income-share of the bottom 20 percent (the poor) is associated with 0.38 percentage point higher growth. This positive relationship between disposable income shares and higher growth continues to hold for the second and third quintiles (the middle class). This result survives a variety of robustness checks, and is in line with recent findings for a smaller sample of advanced economies (OECD 2014).”

In addition, the things most commonly associated with economic growth, advances in technology, education, increased productivity, etc., are hindered by inequality since not everyone has equal access to educational opportunities. For example, future productivity is hindered as access to higher education is unavailable for lower income groups.

Another consequence of inequality related to this concept is that government policies that may help address inequality (like greater redistribution of income, higher taxes, more education grants etc.) may be less likely to happen. Wealthier quintiles are disproportionately represented in government and they are more likely to implement policies that protect their wealth rather than equalize wealth among the population.

1. On the spectrum below put an X on the line that indicates how well you feel you understand what you just read.

Don't understand at all-----Perfectly understand

2. Write at least one question you still have about the relationship between economic implications and income inequality.
3. When you meet with your mixed group, be prepared to deliver a one or two sentence explanation of your card to the group. Write that statement below.

Activity 10.2: Global Inequality Causes and Consequences Cards

Card 5

Cause: Country-specific factors

Income inequality is not caused by any single factor and the realities of what causes inequality within countries is sometimes unique to that country. A few specific examples follow:

- 80% of **Saudi Arabia's** national revenue comes from petroleum, yet the vast majority of the population do not see any benefits from these revenues that are tightly controlled by the central government and royal family. There are no clear remedies using elections or voting and the education system largely excludes females and is of low quality so opportunities to advance are limited.
- **South Africa**, often cited as the country with the worst income inequality has a complicated history of racial segregation combined with years of corrupt government, lack of foreign investment, and stagnant unemployment.
- The **United States** has also had a past of racial segregation, but also specific issues with a stagnant minimum wage, decreasing power of labor unions, and complicated immigration policies that have contributed to inequality.

In fact, nearly every country would have at least a few causes of inequality that could be tied to historical or policy-decisions found only within that country. Global income inequality, therefore, is unlikely to have one (or even a few) solutions. Countries that have narrowed their income inequality have mainly done so through more social welfare programs and greater redistribution of income. These policies, however, are only effective in their respective countries because the political and social climate was agreeable to them. There is no guarantee implementing the same policies in other countries would have the same effect.

1. On the spectrum below put an X on the line that indicates how well you feel you understand what you just read.

Don't understand at all-----Perfectly understand

2. Write at least one question you still have about the relationship between Country specific factors and income inequality.
3. When you meet with your mixed group, be prepared to deliver a one or two sentence explanation of your card to the group. Write that statement below.

Activity 10.2: Global Inequality Causes and Consequences Cards

Card 6

Consequence: Political Instability/Civic Participation

Income inequality causes political consequences in a couple of different ways globally. In some cases, income inequality is linked to decreased civic participation (like voting or volunteering), especially by the majority of the population. This occurs by making fewer resources available to the less wealthy and other times it is demonstrated as a sense of helplessness felt by the lower quintiles or by creating a sense of powerlessness. Some countries, of course, maintain income inequality by limiting free elections (or not holding them at all). With less civic participation, policies that could lead to more equal distribution of income are less likely to happen.

In other cases, income inequality is linked to greater civic participation as it can be a catalyst for youth civic engagement or by mobilizing lower classes. In democratic societies this is generally viewed as a positive, but greater civic participation can lead to political instability as it may lead to frequent policy direction changes in more moderate cases or outright protests in more extreme examples.

The one factor that can moderate this consequence is the quality of political institutions in a country. Countries with less corruption, more policy consistency over time, and less extremism are likely to see less political instability from income inequality. If the income inequality persists or increases, however, the likelihood of instability increases.

1. On the spectrum below put an X on the line that indicates how well you feel you understand what you just read.

Don't understand at all-----Perfectly understand

2. Write at least one question you still have about the relationship between political instability/civic participation and income inequality.
3. When you meet with your mixed group, be prepared to deliver a one or two sentence explanation of your card to the group. Write that statement below.

Activity 10.3: Global Income Inequality Discussion Sheet

Name: _____

Part I - Jigsaw. Directions: Listen to the other members of your group describe their cause or consequence. In the first column, circle the corresponding word and write the title of their cause or consequence. In the 2nd column write a short summary of their discussion (bullet points are fine). Answer the questions that follow.

	Summary
Cause/Consequence	
Cause/Consequence	
Cause/Consequence	
Cause/Consequence	

Part 2: Individual Questions. Directions: After discussing the causes and consequences with your group, answer the questions below according to your own beliefs and thoughts.

1. Doctors sometimes choose between treating a disease (cause) or symptoms (consequences). If you had to choose one thing from your list above to “treat” first, which would you prioritize and why?

Activity 10.3: Global Income Inequality Discussion Sheet (cont'd)

2. In a duty-based ethics model, an action is determined to be right or wrong based on a person's obligations.
 - a. Given the causes of income inequality you have learned about today, what is one group/organization/party that has taken an action that is part of the cause of income inequality? What action have they taken (or not taken) that is contributing to income inequality?

 - b. Did the group listed in the previous question (#1) bear any obligation regarding income inequality? If so, what was that obligation? If not, should they be obligated to reduce it?

 - c. Under this ethical model, some people argue that global groups like the International Monetary Fund and World Bank should be doing more to reduce income inequality globally. Even if these kinds of groups were obligated to act in this way, what may be some other ethical problems with having global organizations make policies for all countries to abide by?

3. In an outcome-based ethics model, an action is determined to be right or wrong based on the consequences produced by the action.
 - a. Using at least one of the consequences you have learned today, explain why, under this model, income inequality can be considered unethical.

 - b. Assume an action is taken and one consequence of this action is that income inequality is reduced globally by 10%. Does it automatically follow that this was an ethical action? Explain.

Activity 10.3: Global Income Inequality Discussion Guide (TEACHER ONLY)

1. Doctors sometimes choose between treating a disease (cause) or symptoms (consequences). If you had to choose one thing from your list above to “treat” first, which would you prioritize and why? *Answer: Answers will vary depending on personality preferences. Listen for rationales and reasoning to make sure students are making logical connections. For example, if a student says they’d prefer to treat the causes and then states how there should be policies that help people with lower income get access to services, then that student is conflating a cause with a consequence. Incidentally, this is also part of the struggle here - separating the two.*
2. In a duty-based ethics model, an action is determined to be right or wrong based on a person’s obligations.
 - a. Given the causes of income inequality you have learned about today, what is one group/organization/party that has taken an action that is part of the cause of income inequality? What action have they taken (or not taken) that is contributing to income inequality? *Answer: There are literally hundreds of potential examples so answers will vary. Corporations choosing trade partners based on lower prices, governments of the past choosing colonization policies that were built on dominance and superiority, not prioritizing equal education are a few examples that students could pick up from the cards.*
 - b. Did the group listed in part 2a bear any obligation regarding income inequality? If so, what was that obligation? If not, should they be obligated to reduce it? *Answer: Answers will vary significantly depending on the example given and personal preferences. In general, democratically elected governments are typically seen as having an obligation to promote the general welfare so decisions that go against that are problematic. Private companies in most market-based economics are specifically only obligated to their shareholders but students may view their obligations differently...and this is what makes this discussion so fun!*
 - c. Under this ethical model, some people argue that global groups like the International Monetary Fund and World Bank should be doing more to reduce income inequality globally. Even if these kinds of groups were obligated to act in this way, what may be some other ethical problems with having global organizations make policies for all countries to abide by? *Answer: Making “one size fits all” solutions when there are multiple causes, cultures, and current events is probably the most obvious answer. Deeper answers may include things like the IMF and World Bank are not elected, not representative of the entire world, etc.*

3. In an outcome-based ethics model, an action is determined to be right or wrong based on the consequences produced by the action.
- a. Using at least one of the consequences you have learned today, explain why, under this model, income inequality can be considered unethical. **Answer: Answers will vary, but as in 2a, students should have a logical connection between their answer and reasoning.**

 - b. Assume an action is taken and one consequence of this action is that income inequality is reduced globally by 10%. Does it automatically follow that this was an ethical action? Explain. **Answer: Absolutely not. Solving one ethical dilemma by creating another is one of the broader issues. The Robin Hood analogy is effective here. Just stealing from the wealthy and giving to the poor would solve short term income inequality but would create a separate ethical issue of property violations. This is where prioritizing policies and social goals is important.**

Assessment 10: Podcast Guest

Assignment: You've been invited to speak on an economics podcast on the topic of global income inequality. The host is known for their free-market stances and has said multiple times that income inequality is simply unavoidable in the world as there are too many variables to try to address. They argue that each country just needs to decide how much inequality they are willing to accept. They have asked you for a 2 minute comment on the topic. You may agree or disagree with the host, but you must use some of the causes and/or consequences you learned today to support your stance. You may record your audio response and submit it to me via attachment or link or write it.

While you should use your own creativity and design, something like these examples should give you an idea of what I'm looking for:

<https://open.spotify.com/show/5Bv6a8tjNjZzxAbIgsZae>

Assessment 10

Some sample assessment items:

2. Country A has a Gini Coefficient of 45. Country B has a Gini Coefficient of 72. Based solely on this information, an economist could reasonably conclude
 - a. Country A has a higher GDP.
 - b. Country B has more resources.
 - c. Country A has more income inequality.
 - d. Country B has more income inequality.

3. As the education and technology gap widens among developed economies and emerging economies what would be the likely impact on income inequality and economic growth globally?

	<u>Income Inequality</u>	<u>Economic Growth</u>
a.	increase	decrease
b.	Increase	increase
c.	decrease	increase
d.	decrease	decrease

4. Perfect income equality would mean that all quintiles of the population have what percentage of the total income?
 - a. 10%
 - b. 20%
 - c. 50%
 - d. 100%.

References

1. Cerdiero, Diego, Andras Komaromo THE EFFECT OF TRADE ON INCOME AND INEQUALITY: A CROSS-SECTIONAL APPROACH, IMF, March 2017

<https://www.brookings.edu/research/why-wait-100-years-bridging-the-gap-in-global-education/>