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The market's inability to achieve equity (HL)

0 (https://intercom.help/kognity)

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2. Microeconomics / 2.12 The market's inability to achieve equity (HL)

The big picture

Section Student... (0/0) Feedback Print (/study/app/pp/sid-186-cid-754025/book/the-big-picture-id-30310/print/) Assign

As we have explored, the free market system is a powerful driving force behind many of the positive changes we have experienced in the last two centuries. However, in certain circumstances, markets do require some management, as they can create some unwanted problems that impact the wider society. A serious problem that markets seem unable to address, and can sometimes even exacerbate, is income inequality. It is probably not new information to you that income is not distributed fairly, or equitably, in most countries. There are other aspects of life that are inequitable, such as health care, education and anything else that contributes to a healthy and happy life.

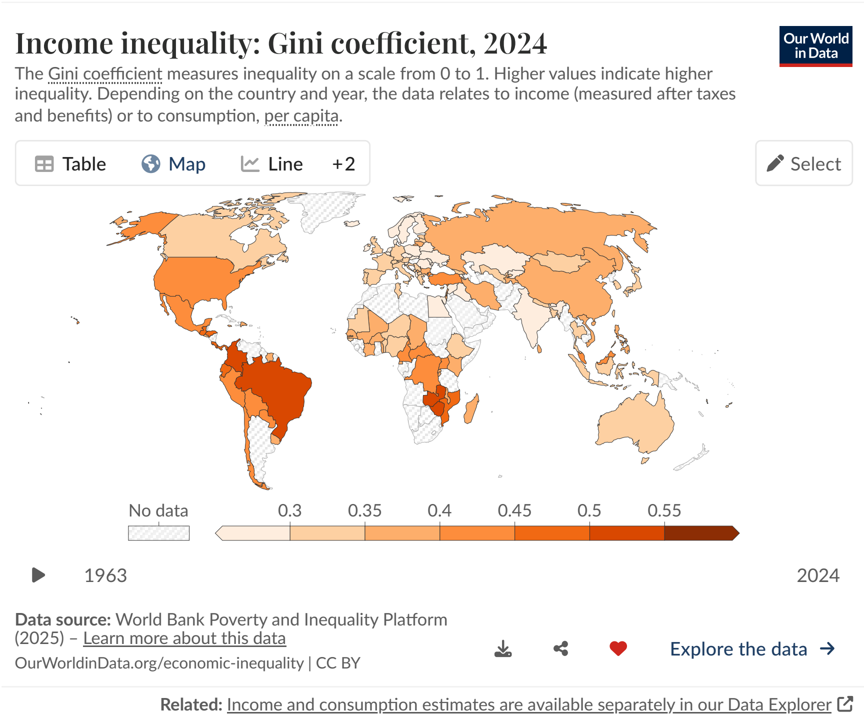

Figure 1. Press the play button to see what has happened to income inequality in various countries. A higher number means worse income inequality.

More information for figure 1

Student view

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This interactive map displays global income inequality for 2023, measured by the Gini coefficient, which ranges from 0 to 1. A value of 0 represents perfect equality, where wealth is evenly distributed, while 1 represents maximum inequality, where wealth is concentrated among a few individuals. The map uses shades of orange to represent different levels of income inequality: darker shades indicate higher inequality, while lighter shades represent more equal wealth distribution.

Users can explore the data in multiple ways. Hovering over a country reveals its exact Gini coefficient and additional details about income distribution. A dropdown menu allows users to filter by country or region for more detailed comparisons. To examine historical trends, users can move the time-lapse slider at the bottom, which tracks changes in income inequality over time. For alternative views, users can switch between table and chart formats using the tabs in the top left corner. These interactive features make it easier to analyze patterns, compare different regions, and track long-term changes in global income distribution.

For example, suppose a user wants to compare Brazil and Norway in terms of income inequality. By hovering over Brazil, they will see a high Gini coefficient and a darker shade, indicating significant inequality. In contrast, hovering over Norway will show a lower Gini coefficient and a lighter shade, representing a more equal income distribution. The user can filter by region to examine inequality trends in South America and Scandinavia, then use the time-lapse slider to observe whether Brazil's inequality has increased or decreased over the years. If more precise data is needed, switching to the table view will provide exact numerical values for comparison.

Some of the key insights from the map are countries with high inequality include Brazil, South Africa, and the United States. Countries with low inequality include Norway and Denmark. Emerging economies like India and China display moderate inequality. Regional patterns reveal that Africa has higher inequality, while Scandinavian countries maintain a more balanced wealth distribution. Notable trends include persistent inequality in South Africa and Brazil, declining inequality in China and France, and stable inequality in Chile and the United States.

By offering interactive features and a clear visual representation, this tool helps users better understand economic disparities worldwide and track long-term income inequality trends.

Why do markets cause income inequality? The reason is an inherent characteristic of the market system, and therefore of capitalism.

Most of us will not start our own businesses, and will instead earn our incomes from working for businesses. Wages earned from working will often be much lower than the profits earned from owning a business. In addition, the people working for the business will outnumber the people who own the business. As a result, the capitalist and market-based system will always have inequality in income distribution.

Student view

In this subtopic, we will explore several ways in which the free market impacts equity. We will look mostly at income inequality, but also consider some other resources and services that are poorly distributed across populations.

Concept

Equity
Economic well-being

With all the accumulated knowledge and resources we have today, you might think that income inequality would not be such a big problem. However, the progress made towards equity in some countries has been too slow and in some places it even seems to be reversing. The market system alone will struggle to improve income distribution because of its inherent structure. People who work for businesses will outnumber the business owners, who take home much more pay because of the risk associated with starting a business. In a capitalist system, there will always be more people earning less money than people earning more money.

To what extent do you agree that income inequality is a necessary feature of capitalism?

The meaning of equity

The word equity is derived from the Old French word *equité*, which itself is derived from Latin *aequitas* and its root *aequus*, meaning 'equal'. As you can see in **Figure 1**, the word *equity* has received steadily more mentions since the 1950s.

In today's use, the word does not mean equal, but instead implies fairness. It is not the ambition of most governments in the world to have everyone earning the same incomes, which is what is meant by equality. Instead, we mean that incomes are fairly distributed across the population. Let us explore what that means.

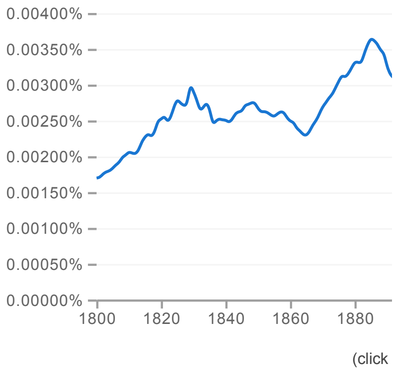

Figure 1. The number of mentions of the word equity since 1800.

Source: https://books.google.com/ngrams/graph?content=equity&year_start=1800&year_end=2019&corpus=26&smoothing=3&direct_ (https://books.google.com/ngrams/graph?content=equity&year_start=1800&year_end=2019&corpus=26&smoothing=3&direct_url=t1%3B%2Cequity%3B%2Cc0) url=t1%3B%2Cequity%3B%2Cc0 (https://books.google.com/ngrams/graph?content=equity&year_start=1800&year_end=2019&corpus=26&smoothing=3&direct_url=t1%3B%2Cequity%3B%2Cc0)

Student view

More information for figure 1

An interactive line graph presenting data on the historical usage of the word equity from the 1800s to the 2000s, tracking its frequency over time. In the given graph, the x-axis represents the years from around 1800 to 2020, while the y-axis represents the frequency or usage of the word equity over time, measured as a percentage. The graph shows a gradual increase in the use of the word equity during the 19th century, peaking around the 1860s. Following this peak, there is a decline until the mid-20th century, after which the term exhibits another notable rise around the 1980s and 1990s, before slightly declining in recent years.

The visualization helps illustrate how discussions around equity have evolved over time, reflecting shifts in economic and social policies. Users can interact with the graph by selecting the line or label for a more focused view.

The table below presents the historical usage frequency of the word equity over time, based on the given graph.

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Year	Frequency of Equity (%) (Approximate)
1800	0.0017
1820	0.0025
1840	0.0025
1860	0.0025
1880	0.0033
1900	0.0029
1920	0.0024
1940	0.0021
1960	0.0015
1980	0.0024
2000	0.0029

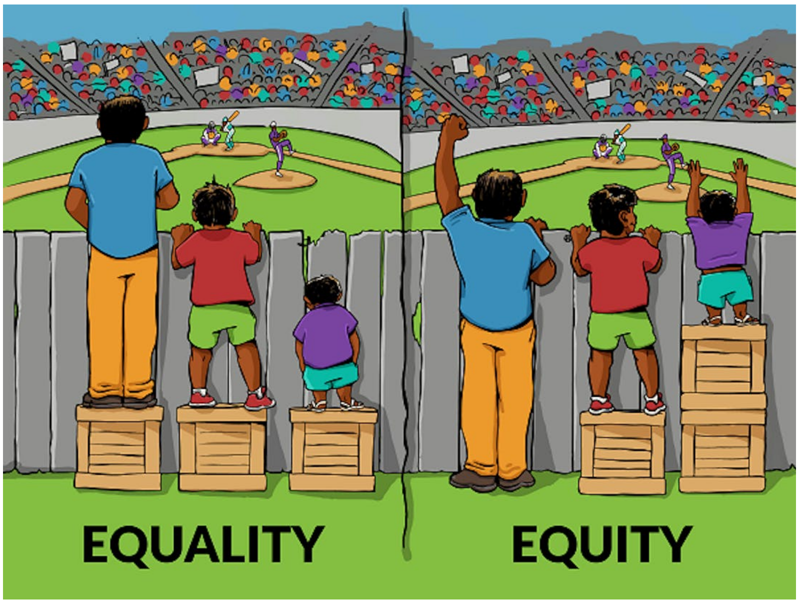

Figure 2. Difference between equity and equality.

Source: "Equality VS Equity" by Interaction Institute for Social Change (http://interactioninstitute.org) | Artist: Angus Maguire (http://madewithangus.com)

Student
view

More information for figure 2

The image illustrates the difference between equality and equity. On the left side labeled "Equality," three individuals of different heights stand on equally sized boxes behind a fence, attempting to watch a baseball game. Despite the equal treatment, only the tallest person can see over the fence, the middle one can barely see, and the shortest cannot see at all. On the right side, labeled "Equity," boxes are distributed

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according to need. The tallest person, who can see without assistance, stands on the ground, the middle person uses one box, and the shortest person uses two boxes to see comfortably. This distribution allows all three individuals to view the game clearly, demonstrating how equity involves adjustment of resources to meet specific needs rather than treating everyone identically.

[Generated by AI]

Be aware

Students often confuse the words 'equality' and 'equity'. Equality means being the same, but equity means being fair.

Equality is a factual concept that can be measured quantitatively, whereas equity is a subjective, normative concept that cannot be measured quantitatively. It is difficult to measure equity directly. However, most people would agree that it correlates to some extent with equality, which can be measured and quantified.

Equity in the distribution of income suggests that people are paid fairly for their work effort. This is different from equality in the distribution of income, which suggests that people are paid the same. In most countries around the world, though, equity in the income distribution is interpreted as greater income equality (or less inequality) and a smaller gap between the highest and lowest pay.

Student view

Figure 3. Wealth has the ability to generate income and be passed to future generations.

Credit: Getty Images Ghislain & Marie David de Lossy

Theory of Knowledge

Income equity means that everyone is paid a fair wage.

How do we know what is a fair wage?

Should people who manage money (hedge fund managers - average salary USD (https://work.chron.com/much-hedge-fund-managers-make-23556.html) (https://www.payscale.com/research/US/Job=Cosmetic_Surgeon/Salary)350 000

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(https://www.businessinsider.com/hedge-fund-pay-is-going-up-2018-1?r=US&IR=T)) earn more money than people who look after children? (Preschool teachers - median salary USD 30 000 (https://www.noodle.com/articles/how-much-do-preschool-teachers-make-salary-earning-potential)). Should doctors volunteering in war zones saving many lives each day (Doctors without Borders - average salary USD 24 000 (https://www.doctorswithoutborders.org/careers/work-field/pay-benefits)) be paid less than a cosmetic surgeon (average salary USD 360 000 (https://www.payscale.com/research/US/Job=Cosmetic_Surgeon/Salary))?

Knowledge question: What criteria would you create to determine what is a 'fair wage'? How could you test that it was fair?

Wealth versus income

It is really important to understand what we mean by income and by wealth, because they do not mean the same thing.

In economics, we have a very precise meaning for income. Income refers to what we receive when we exchange resources or the factors of production. You will remember from section 1.1 that the factors of production are land, labour, capital and entrepreneurship. These are exchanged for rent, wages, interest and profit. These factor payments are all forms of income and, added together for an entire country, will make up the national income of that country.

Wealth is a different concept. Wealth refers to the assets that people accumulate, from which they might be able to derive an income. For example, let's consider a household with two working parents. The salaries that they are paid for their jobs are their income. Those salaries are not included in their wealth. Instead, if they own their own home, that forms part of their wealth, as does any ownership of shares of companies on the stock market, or any other forms of financial investment.

Be aware

Students often use the words income and wealth synonymously. To make it clear to the examiner that you have revised well, make sure that you use these terms correctly and do not confuse them with each other.

Student view

Measuring income distribution

It is fairly easy to measure income distribution if a country compiles enough data on income. To understand how income is distributed, we need to know how much income is earned by different groups in society.

To understand income distribution, we need to measure what share of total income is earned by the wealthiest, the poorest and everyone in between. Imagine that we lined up 100 people in order of the income they earned, and added up the total income for the whole group. Statisticians then divide the group into smaller groups,

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usually of 10 or 20 people, and work out how much each group earns as a share of the total. When divided into 10s, the groups are called deciles, and when divided into 20s, the groups are called quintiles.

Activity

Ask one person, perhaps your teacher, to write random amounts of money on small pieces of paper, and put them in a hat. Each student should choose one at random, which will be their income. Get up out of your seats and line up in order of income earned. Together, work out how much each quintile earns.

Have a discussion about income inequality considering the following questions:

- To what extent is it fair that people don't earn the same?
- Do people really deserve what they earn?
- To what extent do equal opportunities exist?
- Do we have to have income inequality for our economy to grow?

Watch this video (https://www.youtube.com/watch?v=2tCcoSRZqVY) for an explanation of how income distribution is measured and what people consider fair when asked.

How income distribution is measured, and what people think is equitable.

Economists and statisticians take this income data one step further and plot it on a graph called a Lorenz curve. The data is plotted on a graph, along with a 45° line indicating perfect equality of income. The further from the line, the more unequal the income distribution is. A statistic called the Gini coefficient is calculated by dividing area A by area A + B. The higher the Gini coefficient, the more unequal the income distribution is (because the Lorenz curve is further from the line of equality, and hence area A is bigger).

Student view

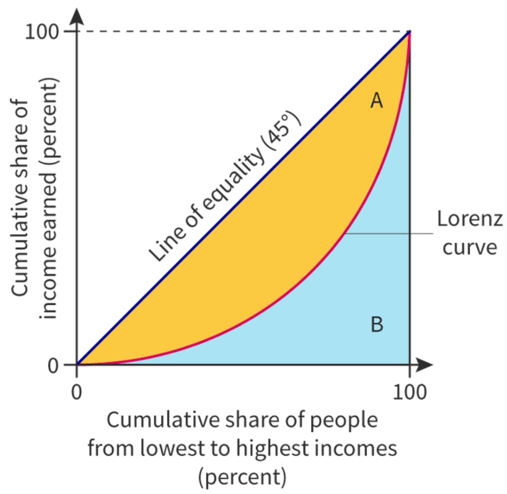

Figure 4. Lorenz curves are used to derive the Gini coefficient, which tells us how income is distributed in a country. These are covered in more detail in section 3.4.2 (/study/app/pp/sid-186-cid-754025/book/measuring-economic-inequality-id-31068/).

More information for figure 4

Overview
(/study/app/pp/sid-186-cid-754025/

The image shows a Lorenz curve graph illustrating income distribution. The X-axis represents the cumulative share of people from lowest to highest incomes (percent), ranging from 0 to 100. The Y-axis represents the cumulative share of income earned (percent), also ranging from 0 to 100. There is a diagonal 45° line labeled "Line of equality" which indicates perfect income equality. The Lorenz curve is plotted below this line, demonstrating the actual income distribution.

The area between the line of equality and the Lorenz curve is divided into two sections labeled as A (above) and B (below) the Lorenz curve. The Gini coefficient, representing income inequality, is calculated as the ratio of area A to the sum of areas A and B. The further the Lorenz curve is from the line of equality, the larger area A becomes, indicating greater income inequality.

[Generated by AI]

How equal is the distribution of income today?

During the first half of the 20th century, income inequality rapidly reduced in many industrialised countries. Simon Kuznets, the Nobel Prize-winning American economist known for developing the gross national product statistic, studied national income data and hypothesised that income inequality would first rise and then fall during the process of industrialisation. At the start of the process, surpluses of rural labour help to keep wages low, while those few with financial opportunity reap the rewards of economic growth. During later phases, an increasingly educated workforce helps to create a high-value service sector that replaces manufacturing, and income inequality improves again. In **Figure 5** you can see the relationship between income distribution and GDP per capita plotted on what is called the Kuznets curve.

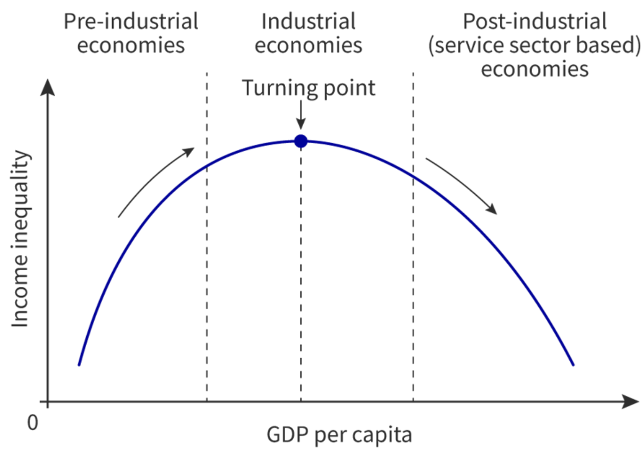

Figure 5. The Kuznets curve — income distribution worsens before it improves during the process of industrialisation.

More information for figure 5

Student view

The graph illustrates the Kuznets curve, which represents the relationship between GDP per capita on the horizontal axis and income inequality on the vertical axis. The curve shows an inverted U-shape. Initially, as GDP per capita increases in pre-industrial economies, income inequality rises. This trend continues until a 'turning point' is reached during the industrial economies phase. Beyond this point, as economies transition to post-industrial (service sector-based) economies, income inequality begins to decline as GDP per capita continues to grow.

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The graph is divided into three sections by dotted vertical lines: 'Pre-industrial economies' on the left, 'Industrial economies' in the middle (highlighting the turning point), and 'Post-industrial (service sector based) economies' on the right. Arrows on the curve indicate the direction of the increasing and decreasing inequality in relation to GDP per capita.

[Generated by AI]

We will cover measuring income distribution in a lot more detail in the Macroeconomics section in subtopic 3.4 (/study/app/pp/sid-186-cid-754025/book/the-big-picture-id-30471/).

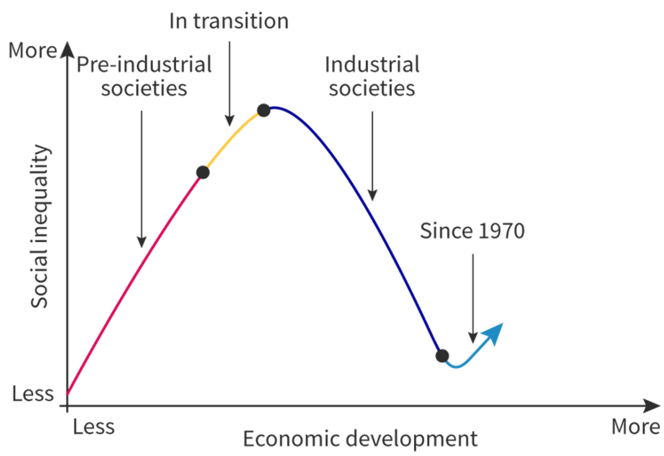


Figure 6. It is thought that income inequality has worsened since the 1970s.

More information for figure 6

The image depicts a Kuznets curve, a graphical representation of the hypothesized relationship between economic development and social inequality. The X-axis represents economic development, ranging from less to more, while the Y-axis shows social inequality, ranging from less to more. The curve starts at the origin, moving upwards through three phases: Pre-industrial societies, In transition, and Industrial societies. Initially, as economic development increases, social inequality rises, peaking during the transition phase. As economies continue to develop, inequality decreases. However, this graph highlights an uptick in inequality since 1970 during further industrialization, signaling a deviation from the original Kuznets hypothesis.

[Generated by AI]

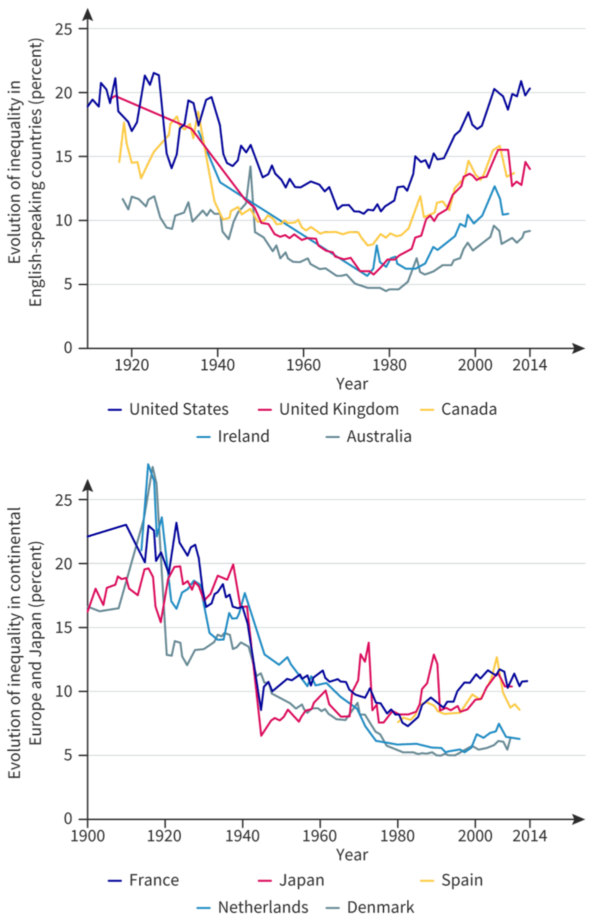
Student
view

Unfortunately, it seems that since 1970, in some places income inequality has increased rather than decreased. As such, the Kuznets curve might not follow a permanent pattern of increasing inequality followed by increasing equality during industrialisation. **Figure 6** shows an uptick in the Kuznets curve at the end of the industrialisation process.

The data collected today suggests that it is not just industrialisation that is responsible for improving income distribution over time. **Figure 7** shows the share of total income going to the wealthiest one per cent of the population for selected countries.

Overview (/study/app/pp/sid-186-cid-754025/...)

On the panel on the left, you can see the chart showing the income share going to the wealthiest one per cent of people in a few countries, such as the United States and the United Kingdom. Here, the trend follows a U-shape. Since the beginning of the 20th century, the income share going to the wealthiest one per cent of people fell from approximately 20 per cent down to just over five per cent in the United Kingdom. This means that the equality of the income distribution improved. However, since the 1970s, the share of income going to the wealthiest has increased again.



Source: " Our World in Data (https://ourworldindata.org/income-inequality) "

Figure 7. Income inequality has worsened since the 1970's.

Student view

More information for figure 7

The image consists of two line graphs illustrating the evolution of income inequality in different countries from 1900 to 2014. The top graph represents English-speaking countries including the United States, United Kingdom, Canada, Ireland, and Australia. The Y-axis measures the percentage of income inequality, ranging from 0 to 25 percent. The X-axis covers the year span from 1900 to 2014. The trends show a general decline in inequality until the 1970s, followed by a rise.

The bottom graph represents continental European countries and Japan, including France, Japan, Netherlands, Denmark, and Spain. The Y-axis and X-axis have the same scales as the top graph. The trends exhibit a similar pattern of high inequality at the beginning of the century, a decrease mid-century, and a relatively stable level post-1970s.

The lines for each country follow a general U-shape, indicating an initial decline in inequality, a leveling off, and then an increase again from the 1970s onwards in the top panel, and a more stable pattern in the bottom panel, suggesting varied levels of economic policy and social intervention.

[Generated by AI]

Overview (/study/app/pp/sid-186-cid-754025/

On the panel on the right in **Figure 7**, you can see the data follows more of an L-shaped pattern. These countries started with more unequally distributed incomes, but this has improved over time. The L-shape also indicates that the improvement in income distribution has stayed relatively stable. Northern European countries tend to tax more heavily than other countries, and use the tax revenue to fully fund education, health care and other public services, to support equitable income distribution. Private education and health care tends to either be non-existent or to have a low level of influence. Education and health care, as we have studied, have positive externalities, and this justifies intervention by the government to maximise those social benefits.

What does this all mean for the poorest of the country? Does it mean that those on low incomes earn less if income distribution worsens? No. In fact, what it means to be poor today is different from what it meant a hundred or more years ago. The gap has widened since the 1970s, mainly because high-income households have experienced comparatively large increases in their incomes, rather than because of a fall in income for those on lower incomes. The effect is that high-income households are pulling away from the lowest income levels.

We will discuss income distribution and what the government can do with income taxes in a lot more detail in section 3.4 (/study/app/pp/sid-186-cid-754025/book/the-big-picture-id-30471/).

4 section questions

2. Microeconomics / 2.12 The market's inability to achieve equity (HL)

How does the free market result in income inequality?

Section Student... (0/0) Feedback Print (/study/app/pp/sid-186-cid-754025/book/how-does-the-free-market-result-id-30620/print/) Assign

Student view

The free market system began its evolution during the Middle Ages in Europe. It finally replaced the dominant economic system of the time, feudalism, by roughly the beginning of the Industrial Revolution. Feudalism was a system in which a monarch ruled, exerting their power over the majority of the population through their lords. Religion also played a dominant role during this time. The majority of the population farmed the land as peasants, with little freedom to move to other areas, and without the right to own land. As populations grew, including more skilled workers and craftsmen, and after a number of shocks such as the Black Death, a growing middle class established itself. Towns and cities grew, and businesses developed around the marketplaces in these commercial centres.

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Figure 1. Under the feudal system, production was controlled through land ownership, which was bequeathed by kings to lords.

Source: "Tax payment to a lord - BNF Fr9608 f11v (https://commons.wikimedia.org/wiki/File:Tax_payment_to_a_lord_-_BNF_Fr9608_f11v.jpg)" by Meister der Apokalypsenrose der Sainte Chapelle is in public domain.

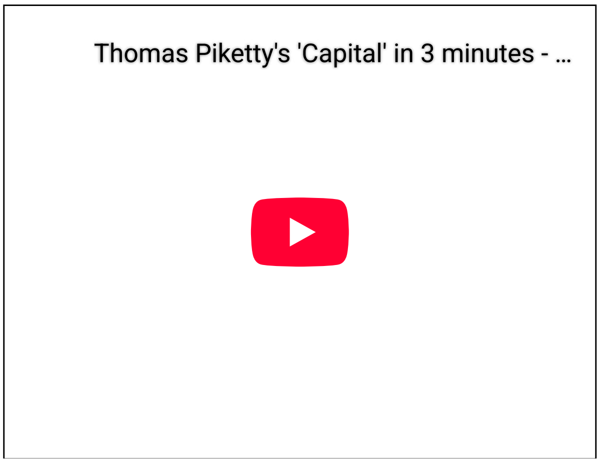
Today, businesses have replaced monarchs as the organisational force of our economies. Business owners are able to deploy capital (rather than land like the kings and queens of the past) to produce goods and services, and sell them to consumers for profit. It is supply and demand that is at the heart of the economic prosperity we enjoy today.

Making connections

Countries have all taken their different routes to establish predominantly capitalist systems to manage their economies. This is an interesting aspect of history to study, and the DP History course in your school may cover the Russian revolution in 1917 and the transition to capitalism in the 1990s, or the Meiji Restoration of Japan, for example.

Student view

So if the market system has created so much prosperity since the Industrial Revolution, how is it responsible for increasing income inequality? Watch the following video for an explanation of Thomas Piketty’s theory, which he published in the successful book *Capital in the 21st Century*.



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If we think about the factors of production, we can see why income distribution is unequal in a market system. It is because the owners of capital are heavily outnumbered by workers or labour. According to Piketty, owners of capital stand to gain at a much faster pace than workers, so they will accumulate more wealth and income over time, and at a faster rate, than workers.

It is important to note that, over time, incomes have risen for everyone. In most countries, poverty today does not look like the kind of poverty people experienced before the mid-1800s. Lower-income households are not worse off today than in the past, but the gap between high incomes and low incomes has widened substantially.

Is income inequality a bad thing?

There is a great deal of disagreement within the world of economics about whether or not income inequality is a desirable feature of the capitalist system. Proponents of the free market system argue that income inequality is a necessary condition of capitalism, and that it is the driving force behind economic growth and improvements in standards of living. Quality of life has, in most parts of the world, never been better than it is today. If people know that they can work to achieve more in life financially, it can serve as a strong motivator for effort.

Others don't necessarily disagree that some inequality will exist in a capitalist system, but they do disagree with the conditions in which income inequality arises in many countries. The fundamental issue from this perspective is the lack of equal opportunities. The countries with the best distribution of income tend to have fewer private schools and universities, better access to health care for all, and a stronger safety net for people who become unemployed or who can't work due to disability or illness.

3 section questions

2. Microeconomics / 2.12 The market's inability to achieve equity (HL)

The circular flow of income

Student view

Section Student... (0/0) Feedback Print (/study/app/pp/sid-186-cid-754025/book/the-circular-flow-of-income-id-30621/print/) Assign

We came across the circular flow of income in section 1.1. A simple circular flow of income model for a closed economy consists of two components, households and firms, which engage in two exchanges. The first exchange takes place in the product market: firms produce goods and services and households pay for those with their consumption expenditure. The second exchange takes place in the resources market: households exchange their factors of production (land, labour, capital and entrepreneurship) for income or factor payments (rent, wages, interest and profit).

However, this simple model ignores one important fact about the structure of our society: most of us have only our labour power to exchange. Very few of us own large amounts of land or capital, or are lucky enough to have been able to get a business off the ground as entrepreneurs.

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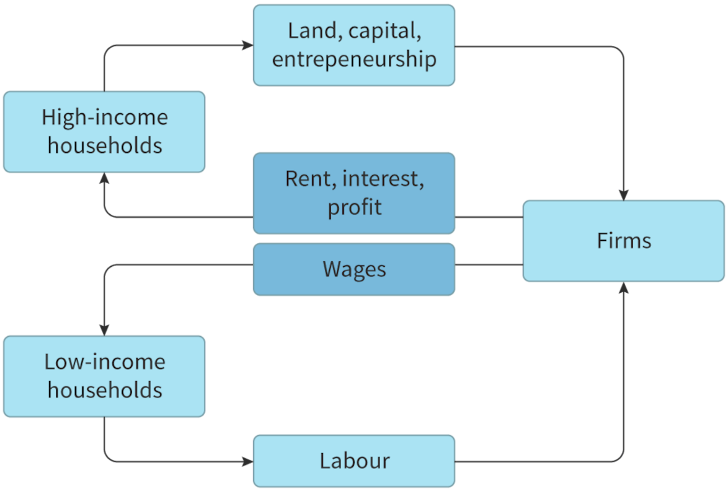

Figure 1. Households who only have their labour power to sell will earn less, and it will be in the form of wages.

More information for figure 1

This diagram represents a circular flow of income model. It illustrates economic exchanges between different groups: high-income households, low-income households, and firms. High-income households provide land, capital, and entrepreneurship, which results in receiving rent, interest, and profit from firms. Firms supply wages to low-income households in exchange for their labor. Arrows indicate the flow of resources: labor moves from low-income households to firms, while land, capital, and entrepreneurship flow from high-income households to firms. Payments in the form of wages, rent, interest, and profits flow from firms back to households.

[Generated by AI]

Figure 1 shows an amended circular flow of income model, showing just the resource exchanges that actually take place. Here we have divided households into two groups, one with higher income and one with lower income. Those in the lower-income group only have their labour to exchange for wages, whereas those in the higher-income group have land, capital and entrepreneurship to exchange.

Student view

Be aware

Income and wealth is a sensitive topic of discussion. It is important to be mindful of the language we adopt when discussing such matters. Try to avoid using words like ‘class’ and ‘poor’, and choose words like ‘high income’ or ‘low income’ instead.

As a result of this inequality of wealth distribution, income distribution will remain unequal, and so will living standards. Higher-income families can afford better-quality food. They probably send their children to be privately educated. These highly educated individuals are likely to be successful in their jobs, and have the networks to be able to start a business more easily than people from low-income families. They can afford to have high-quality relaxation time with more expensive hobbies and more costly holidays. Most significantly, this wealth is often passed onto future generations, keeping that wealth concentrated among a small group of individuals.

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Watch the following short video in which Kate Raworth, author of the successful book *Doughnut Economics*, begins to explain some of her views about income distribution.

Exam tip

The circular flow of income model is one that can be used in different ways to show different things. It is a model that students often forget to revise for their exams, so make sure you spend time memorising it. Take a sheet of paper, and copy it out as many times as is necessary to remember it. Try again in a few days to see if you still remember it perfectly. Repetition like this is key to good exam preparation.

Case study

Cooperatives — one way to redistribute profits?

A cooperative is a form of business organisation with an unconventional ownership structure. Instead of being owned by the people who started the business, or the shareholders who purchased their shares through a stock market, it is owned by its members. According to the International Cooperative Alliance, a cooperative is defined as ‘an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned enterprise’. Sometimes, anyone can join and become a member, or in other cases, the employees of the firm own the company. In every case, one principle remains the same, which is that one member only gets one vote in making any decisions.

Student
view