The international trade and the effect on wages

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1. The theoretical framework of international trade

What-is-international-trade?
If you can walk into a supermarket and find South American bananas, Brazilian coffee and a bottle of South African wine, you're experiencing the effects of international trade.

International trade allows countries to expand their markets for both goods and services that otherwise may not have been available domestically. As a result of international trade, the market contains greater competition, and therefore more competitive prices, which brings a cheaper product home to the consumer.

How international trade works
International trade gives rise to a world economy, in which supply and demand, and therefore prices, both affect and are affected by global events. Political change in Asia, for example, could result in an increase in the cost of labor, thereby increasing the manufacturing costs for an American sneaker company based in Malaysia, which would then result in an increase in the price charged at your local mall. A decrease in the cost of labor, on the other hand, would likely result in you having to pay less for your new shoes.

A product that is sold to the global market is called an export, and a product that is bought from the global market is an import. Imports and exports are accounted for in a country's current account in the balance of payments.

Key takeaways

- International trade is the exchange of goods and services between countries.
- Trading globally gives consumers and countries the opportunity to be exposed to goods and services not available in their own countries, or which would be more expensive domestically.
- The importance of international trade was recognized early on by political economists like Adam Smith and David Ricardo.
- Still, some argue that international trade actually can be bad for smaller nations, putting them at a greater disadvantage on the world stage.

Seven advantages of international trade

The advantages of international trade rest on international division of labour.

There is world-wide specialization in industries which results in increased total production and other advantages.

1. The productive resources of the world are utilized to the best advantage. Every country Concentrates on the production of goods for which it is best fitted. There is economy of effort and a consequent fall in prices. Thus, every country receives the highest return from its resources.
2. A country is able to consume goods which it cannot produce at all, or only at an impossibly high cost. Thus consumers can enjoy a large variety of products. Commodities produced in the tropics find their way to the temperate zone, and vice versa. This provides greater economic welfare and a higher standard of living.

3. Violent price fluctuations are toned down. As the area of markets is enlarged by trade, the effects of the disturbing factors are spread over this large area and prices become more stable. If, at any time, the price of a commodity goes up abnormally, it can be imported from abroad and its price brought down.
4. Shortages in times of famine and scarcity can be met from imports. Surplus produce can be sent out to needy countries, the world thus tends to be united into one economic unit. Food scarcities in India and Europe have often been relieved by imports of surplus food-grains from the U.S.A., Canada and Australia.
5. Countries economically backward but rich in unused resources are able to develop their industries. Japan provides a good example. India is also adopting the same methods. In the early stage, the industries of a backward country have to be protected but once they develop, free trade stimulates them still further.
6. Trade develops racial sympathies and creates common interests. Man gains culturally and the cause of world peace is promoted. Exchange of goods is accompanied by exchange of ideas. This promotes international understanding. Since a war is bound to interrupt international trade and put the people to loss, every effort is made to avoid it.
7. The existence of international trade promotes peace. No country, however big, can be self-sufficient. To achieve self-sufficiency, it will have to undertake expensive wars, conquer free areas and convert them into colonies. This is horrible. Free international trade supplies the essential needs of nations, and thus checks their greed and desire to conquer.

Three classical trade theories

Mercantilism

Mercantilism was an economic system of trade that spanned from the 16th century to the 18th century. Mercantilism banked on the principle that the world's wealth was static, and consequently, many European nations attempted to accumulate the largest possible share of that wealth by maximizing their exports and by limiting their imports via tariffs.

Key takeaways

- Mercantilism was an economic system of trade that spanned from the 16th century to the 18th century.
- Mercantilism was based on the idea that a nation's wealth and power were best served by increasing exports and so involved increasing trade.
- Under mercantilism, nations frequently engaged their military might to ensure local markets and supply sources were protected, to support the idea that a nation's economic health heavily relied on its supply of capital.

Free trade vs. Mercantilism

Free trade provides several advantages over mercantilism for individuals, businesses, and nations. In a free trade system, individuals benefit from a greater choice of affordable goods, while mercantilism restricts imports and reduces the choices available to consumers. Fewer imports mean less competition and higher prices.

While mercantilist countries were almost constantly engaged in warfare, battling over resources, nations operating under a free-trade system can prosper by engaging in mutually beneficial trade relations.

In his seminal book "The Wealth of Nations," legendary economist Adam Smith argued that free trade enabled businesses to specialize in producing goods they manufacture most efficiently, leading to higher productivity and greater economic growth.

Today, mercantilism is deemed outdated. However, barriers to trade still exist to protect locally entrenched industries. For example, post-World War II, the United States adopted a protectionist trade policy toward Japan and negotiated voluntary export restrictions with the Japanese government, which limited Japanese exports to the United States.

Absolute advantage

Absolute advantage is the ability of an individual, company, region, or country to produce a greater quantity of a good or service with the same quantity of inputs per unit of time, or to produce the same quantity of a good or service per unit of time using a lesser quantity of inputs, than another entity that produces the same good or service. An entity with an absolute advantage can produce a product or service at a lower absolute cost per unit using a smaller number of inputs or a more efficient process than another entity producing the same good or service.

Key takeaways

- Absolute advantage is when a producer can produce a good or service in greater quantity for the same cost, or the same quantity at lower cost, than other producers.
- Absolute advantage can be the basis for large gains from trade between producers of different goods with different absolute advantages.
- By specialization, division of labor, and trade, producers with different absolute advantages can always gain over producing in isolation.
- Absolute advantage is related to comparative advantage, which can open up even more widespread opportunities for the division of labor and gains from trade.

Understanding absolute advantage

The concept of absolute advantage was developed by Adam Smith in his book Wealth of Nations to show how countries can gain from trade by specializing in producing and exporting the goods that they can produce more efficiently than other countries. Countries with an absolute advantage can decide to specialize in producing and selling a specific good or service and use the funds that good or service generates to purchase goods and services from other countries.

By Smith’s argument, specializing in the products that they each have an absolute advantage in and then trading products, can make all countries better off, as long as they each have at least one product for which they hold an absolute advantage over other nations.

What is comparative advantage?

Comparative advantage is an economic term that refers to an economy's ability to produce goods and services at a lower opportunity cost than that of trade partners. A comparative advantage gives a company the ability to sell goods and services at a lower price than its competitors and realize stronger sales margins.

The law of comparative advantage is popularly attributed to English political economist David Ricardo and his book “On the Principles of Political Economy and Taxation” in 1817, although it is likely that Ricardo's mentor James Mill originated the analysis.

Understanding comparative advantage

One of the most important concepts in economic theory, comparative advantage is a fundamental tenet of the argument that all actors, at all times, can mutually benefit from cooperation and voluntary trade. It is also a foundational principle in the theory of international trade.

Key to the understanding of comparative advantage is a solid grasp of opportunity cost. Put simply, an opportunity cost is the potential benefit that someone loses out on when selecting a particular option over another. In the case of comparative advantage, the opportunity cost (that is to say, the potential benefit which has been forfeited) for one company is lower than that of another. The company with the lower opportunity cost, and thus the smallest potential benefit which was lost, holds this type of advantage.

Another way to think of comparative advantage is as the best option given a trade-off. If you're comparing two different options, each of which has a trade-off (some benefits as well as some disadvantages), the one with the best overall package is the one with the comparative advantage.

Comparative advantage is a key insight that trade will still occur even if one country has an absolute advantage in all products.

As an example (adapted from Farnam Street), consider a famous athlete like Michael Jordan. As a renowned basketball and baseball star, Michael Jordan is an exceptional athlete whose physical abilities surpass those of most other individuals. Michael Jordan would likely be able to, say, paint his house quickly, owing to his abilities as well as his impressive height. Hypothetically, say that Michael Jordan could paint his house in 8 hours. In those same 8 hours, though, he could also take part in the filming of a television commercial which would earn him $50,000. By contrast, Jordan's neighbor Joe could paint the house in 10 hours. In that same period of time, he could work at a fast food restaurant and earn $100.

In this example, Joe has a comparative advantage, even though Michael Jordan could paint the house faster and better. The best trade would be for Michael Jordan to film a television commercial and pay Joe to paint his house. So long as Michael Jordan makes the expected $50,000 and Joe earns more than $100, the trade is a winner. Owing to their diversity of skills, Michael Jordan and Joe would likely find this to be the best arrangement for their mutual benefit.

Key takeaways

- Comparative advantage suggests that countries will engage in trade with one another, exporting the goods that they have a relative advantage in productivity.
- The theory was first introduced by David Ricardo in the year 1817.
- Absolute advantage refers to the uncontested superiority of a country to produce a particular good better. Comparative advantage introduces opportunity cost as a factor for analysis in choosing between different options for production.

COMPARATIVE ADVANTAGE VERSUS ABSOLUTE ADVANTAGE

Comparative advantage is contrasted with absolute advantage. Absolute advantage refers to the ability to produce more or better goods and services than somebody else. Comparative advantage refers to the ability to produce goods and services at a lower opportunity cost, not necessarily at a greater volume or quality.

To see the difference, consider an attorney and her secretary. The attorney is better at producing legal services than the secretary and is also a faster typist and organizer. In this case, the attorney has an absolute advantage in both the production of legal services and secretarial work.

Nevertheless, they benefit from trade thanks to their comparative advantages and disadvantages. Suppose the attorney produces $175 per hour in legal services and $25 per hour in secretarial duties. The secretary can produce $0 in legal services and $20 in secretarial duties in an hour. Here, the role of opportunity cost is crucial.

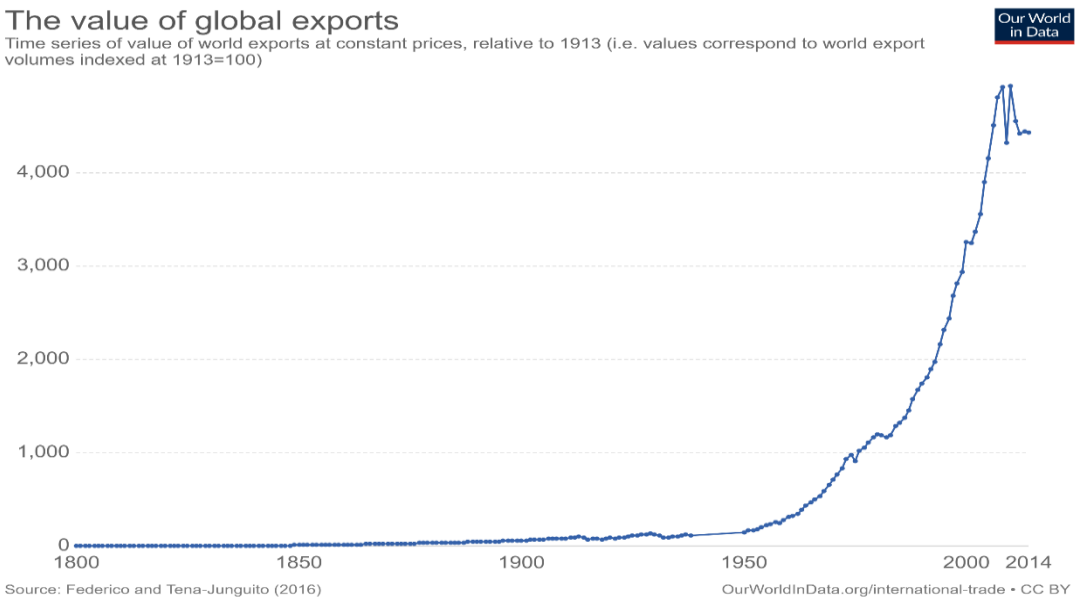
To produce $25 in income from secretarial work, the attorney must lose $175 in income by not practicing law. Her opportunity cost of secretarial work is high. She is better off by producing an hour's worth of legal services and hiring the secretary to type and organize. The secretary is much better off typing and organizing for the attorney; his opportunity cost of doing so is low. It’s where his comparative advantage lies.

2. Key figures of International trade

The world trade plays major role in the economy the last century

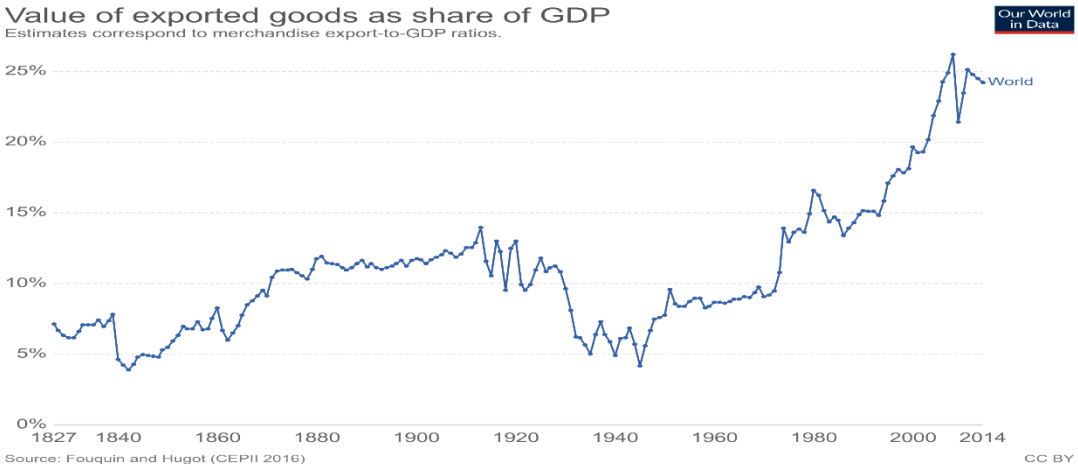
The integration of national economies into a global economic system has been one of the most important developments of the last century. This process of integration, often called Globalization, has materialized in a remarkable growth in trade between countries.

The total value of export is over 44 times bigger in 2014 than in 1913. The highest value of export in the world has in 2010 where the value was 4.928,65 (the value is corresponding to world export volumes indexed at 1913=100). The average annual rate of change from 1801 until 2014 is +3,7% which saw us the rate of growth the world trade over the last two centuries.



Trade has grown more than proportionately with GDP

In addition, the value of exported goods as share of GDP has shown big growth over the last decades. Up to 1870, the sum of worldwide exports accounted for less than 10% of global output. At 1970 the value was only 9,07% and that was the starting point for the eruption of the exported goods as share of GDP. Today, the value of exported goods around the world is close to 25%. This shows that over the last hundred years of economic growth, there has been more than proportional growth in global trade. The highest point was in 2008 when the ratio of export-to-GDP was over 26%.



Exports in real dollars

Expressing trade values as a share of GDP tells us the importance of trade in relation to the size of economic activity. Let's now take a look at trade in monetary terms – this tells us the importance of trade in absolute, rather than relative terms.

The main takeaway here are the country-specific trends, which are positive and more pronounced than in the charts showing shares of GDP. This is not surprising: most countries today produce more than a couple of decades ago; and at the same time, they trade more of what they produce. European union is by far the biggest exporter in goods and services with

the value of average annual rate of change from 1961 until 2018 over 5,5%. United states of America also has an average annual rate of change (1971-2016) over 5,5%.

The conceptual link between trade and household welfare

When a country opens up to trade, the demand and supply of goods and services in the economy shift. As a consequence, local markets respond, and prices change. This has an impact on households, both as consumers and as wage earners.

The implication is that trade has an impact on everyone. It's not the case that the effects are restricted to workers from industries in the trade sector; or to consumers who buy imported goods. The effect of trade extends to everyone because markets are interlinked, so imports and exports have knock-on effects on all prices in the economy, including those in non-traded sectors.

Economists usually distinguish between "general equilibrium consumption effects" (i.e. changes in consumption that arise from the fact that trade affects the prices of non-traded goods relative to traded goods) and "general equilibrium income effects" (i.e. changes in wages that arise from the fact that trade has an impact on the demand for specific types of workers, who could be employed in both the traded and non-traded sectors).

Considering all these complex interrelations, it's not surprising that economic theories predict that not everyone will benefit from international trade in the same way. The distribution of the gains from trade depends on what different groups of people consume, and which types of jobs they have, or could have.

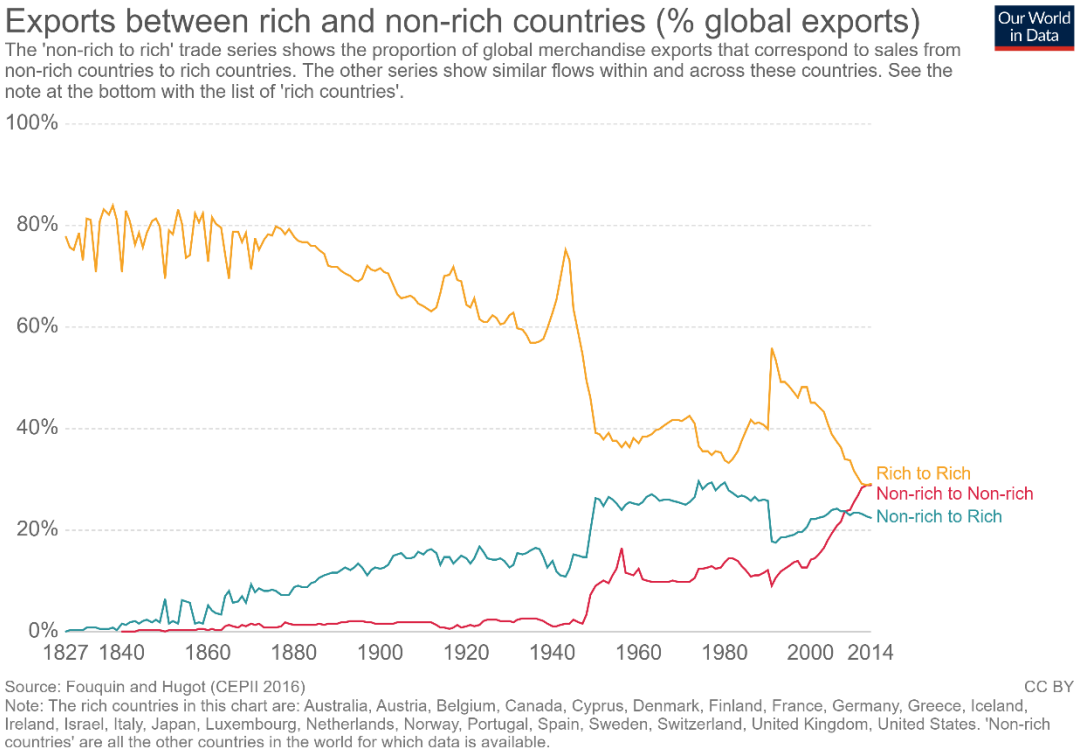
Export between rich and non-rich countries

The following visualization shows the share of world merchandise trade that corresponds to exchanges between today's rich countries and the rest of the world.

The 'rich countries' in this chart are: Australia, Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and the United States. 'Non-rich countries' are all the other countries in the world.

As we can see, up until the Second World War the majority of trade transactions involved exchanges between this small group of rich countries. But this has been changing quickly over the last couple of decades, and today trade between non-rich countries is just as important as trade between rich countries.

In the past two decades China has been a key driver of this dynamic: the UN Human Development Report (2013) estimates that between 1992 and 2011, China's trade with Sub-Saharan Africa rose from $1 billion to more than $140 billion.



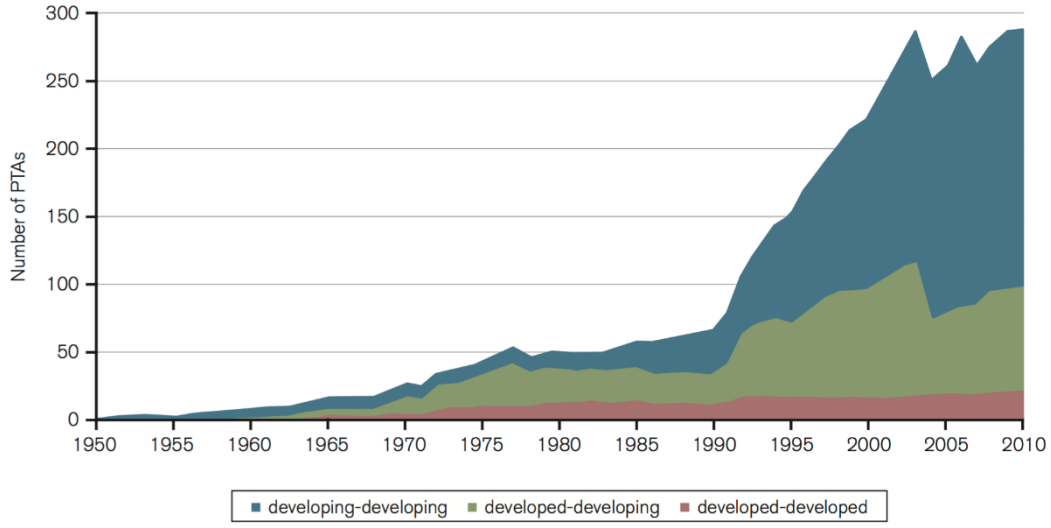
The majority of preferential trade agreements are between emerging economies

The last few decades have not only seen an increase in the volume of international trade, but also an increase in the number of preferential trade agreements through which exchanges take place. A preferential trade agreement is a trade pact that reduces tariffs between the participating countries for certain products.

The following visualization shows the evolution of the cumulative number of preferential trade agreements that are in force across the world, according to the World Trade

Organization (WTO). These numbers include notified and non-notified preferential agreements (the source reports that only about two-thirds of the agreements currently in force have been notified to the WTO), and are disaggregated by country groups.

This figure shows the increasingly important role of trade between developing countries (South-South trade), vis-a-vis trade between developed and developing countries (North-South trade). In the late 1970s, North-South agreements accounted for more than half of all agreements – in 2010, they accounted for about one quarter. Today, the majority of preferential trade agreements are between developing economies.



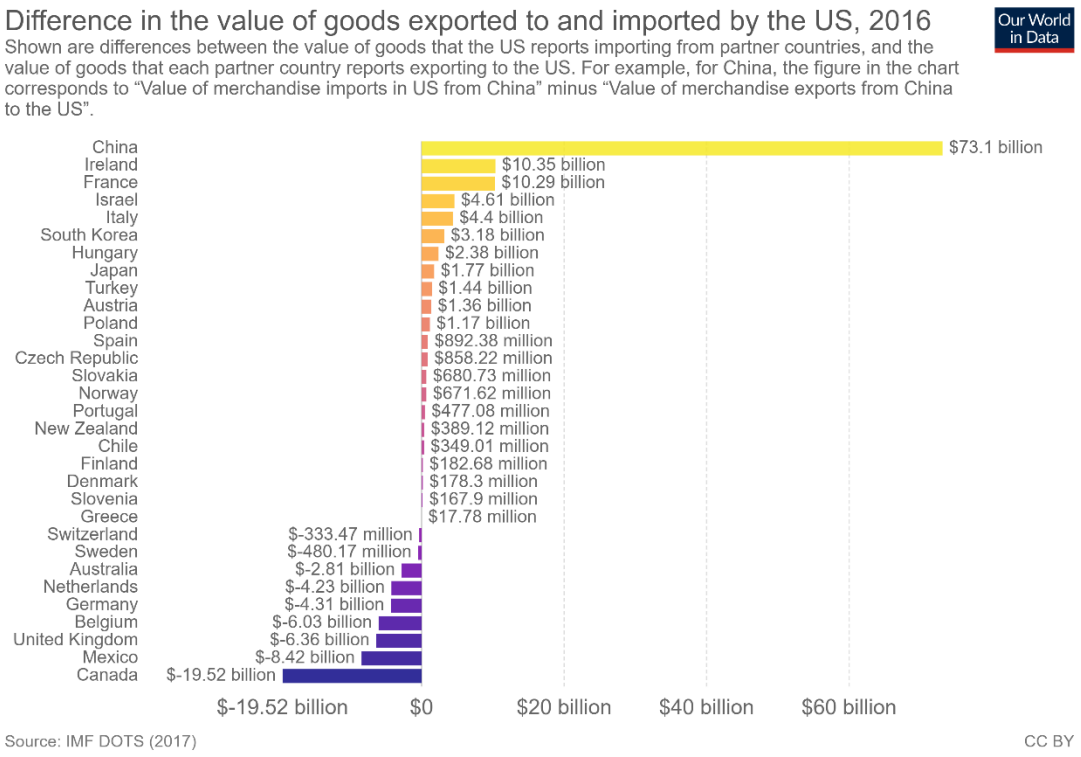
Source: WTO Secretariat.

Positive and negative trade balance for each country

Another common source of measurement error relates to the inconsistent attribution of trade partners. An example is failure to follow the guidelines on how to treat goods passing through intermediary countries for processing or merchanting purposes. As global production chains become more complex, countries find it increasingly difficult to unambiguously establish the origin and final destination of merchandise, even when rules are established in the manuals.

And there are still more potential sources of discrepancies. For example, differences in customs and tax regimes, and differences between "general" and "special" trade systems (i.e. differences between statistical territories and actual country borders, which do not often coincide because of things like 'custom free zones').

Even when two sources have identical trade estimates, inconsistencies in published data can arise from differences in exchange rates. If a dataset reports cross-country trade data in US dollars, estimates will vary depending on the exchange rates used. Different exchange rates will lead to conflicting estimates, even if figures in local currency units are consistent.



Top Export Countries

Below are the world's top export countries that shipped the highest dollar value in exports during 2018. Also shown is the change in the total value of exported products for each country from 2017 to 2018.

Rank	Country	2018 Export sales	2018/2017
1.	China	$ 2.494.230.195.000	+ 10,2%
2.	United States	$ 4.665.992.032.000	+ 7,7%
3.	Germany	$ 1.557.176.334.000	+ 7,6%
4.	Japan	$ 738.188.768.000	+ 5,7%
5.	South Korea	$ 605.169.190.000	+ 5,5%
6.	Netherlands	$ 585.622.815.000	+15,7%
7.	Hong Kong	$ 569.105.740.000	+ 3,5%
8.	France	$ 568.448.540.000	+ 8,6%
9.	Italy	$ 543.466.795.000	+ 8%
10.	United Kingdom	$ 487.069.299.000	+ 10,2%

By value, the top 20 largest exporting nations supplied well over two-thirds (70.7%) of total exported products sold during 2018.

While all 20 of the listed countries grew the value of their export shipments from 2017 to 2018, six posted double-digit gains over the latest one-year period. The leading gainers were Russia (up 25.1%), Netherlands (up 15.7%), Singapore (up 10.3%), China (up 10.2%), United Kingdom (also up 10.2%) then Mexico (up 10%).

The most modest year-over-year increases among the leading 20 exporters belong to Hong Kong (up 3.5%), Switzerland (up 3.7%), South Korea (up 5.5%), Taiwan (up 5.7%) and Japan (also up 5.7%).

The USA example

The USA is the biggest economy in the 20th century. After 1970 the deregulation of USA (and developed countries in total) market made easier for international companies to export USA's goods in order to maximize their profits. The effect of international trade in USA was enormous. The USA's GDP annual growth per year from 1961 until 2018 is +6,5% and the USA's export value growth is 8,0% for the same time.

	GDP	Exports Value
1960	543.300.000.000	27.000.000.000
1970	1.073.303.000.000	59.709.000.000
1980	2.857.307.000.000	280.772.000.000
1990	5.963.144.000.000	551.873.000.000
2000	10.252.345.464.000	1.096.255.000.000
2010	14.992.052.727.000	1.846.280.000.000
2018	20.494.100.000.000	2.350.175.000.000

Running a regression between GDP and exports value from 1960 to 2018 we see that $R^2 =$ 0,973982438 which show us that exports value is correlated over 97% with USA's GDP.

3. International trade and wages

Trade generates efficiency gains

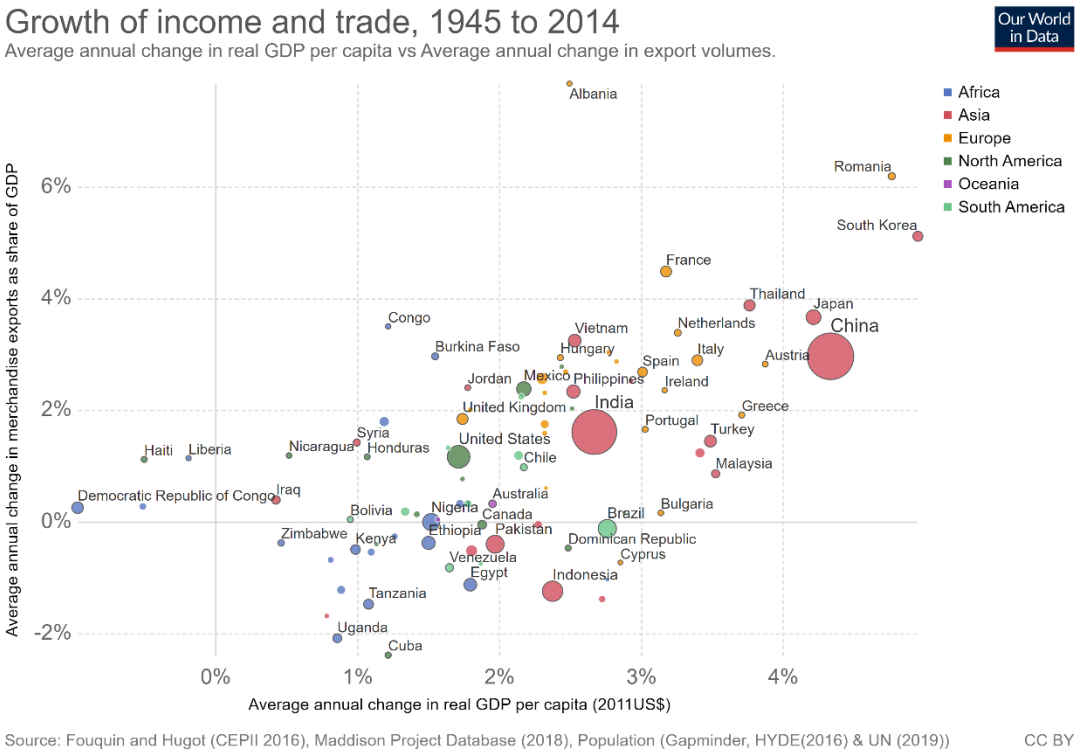
As we saw before international trade has a significant role in the modern economic structure. If we look at country-level data from the last half century we find that there is a correlation between economic growth and trade: countries with higher rates of GDP growth also tend to have higher rates of growth in trade as a share of output.

This basic correlation is shown in the chart below, where we plot average annual change in real GDP per capita, against growth in trade (average annual change in value of exports as a share of GDP).

Among the potential growth-enhancing factors that come from greater global economic integration are: Competition (firms that fail to adopt new technologies and cut costs are more likely to fail and to be replaced by more dynamic firms); Economies of scale (firms that can export to the world face larger demand, and under the right conditions, they can operate at larger scales where the price per unit of product is lower); Learning and innovation (firms that trade gain more experience and exposure to develop and adopt technologies and industry standards from foreign competitors).

The empirical literature suggests that indeed increased trade causes higher economic growth. Some of the most cited papers in this field (e.g. Frankel & Romer 1999 and Alcalá & Ciccone 2004) rely on long-run macroeconomic data and find evidence of a causal relationship: trade is one of the factors driving economic growth.

Other important papers in this field have focused on microeconomic evidence, exploring the causal impact of specific trade liberalization policies on firm-level productivity within countries. These studies also find that trade liberalization has led to growth in the productivity of firms.



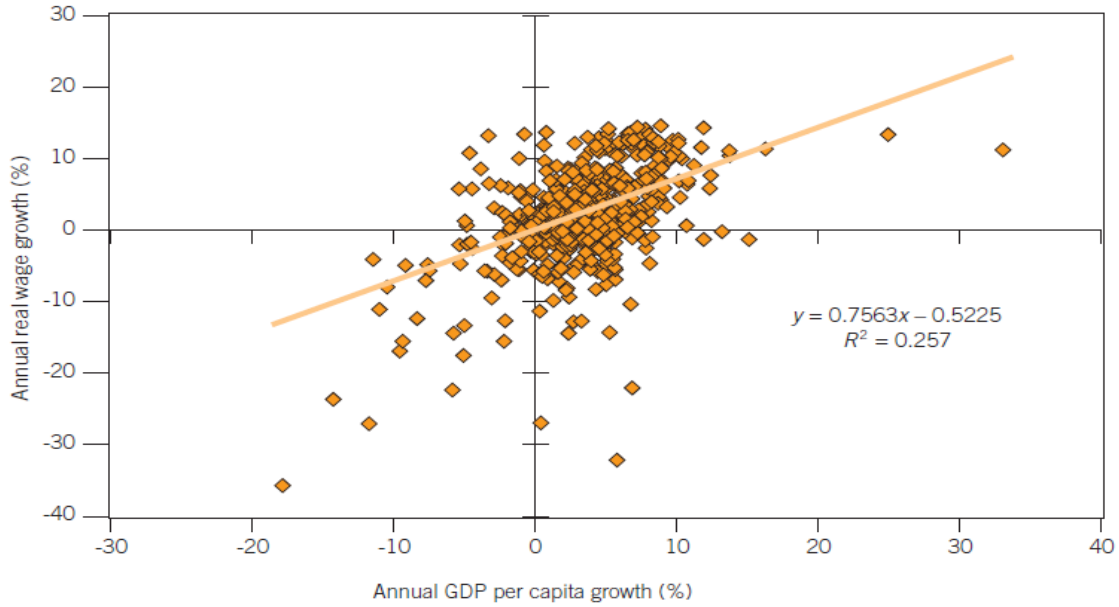
Source: Fouquin and Hugot (CEPII 2016), Maddison Project Database (2018), Population (Gapminder, HYDE(2016) & UN (2019)) CC BY

In this Chapter we study the relationship between International Trade and wages. There are more theories which gave shown that as International Trade are increasing the wages are increased too. There are many factors which affect International Trade and factors which affected the wages.

Wages and productivity

In general, despite some negative experiences, the economic growth during the period 1995–2007 was associated with growth in average wages. This positive link between economic growth and wage growth is illustrated in the following chart. We see that, on average, a country's wages grow faster when its GDP per capita grows faster. This confirms that sustained wage growth over several years is normally only possible when the economy is expanding and when labour productivity is growing. One example is China, where real wages grew on average about 11 per cent per year thanks to double-digit economic growth. Conversely, it is simply not realistic to expect sustained wage growth when the economy is shrinking.

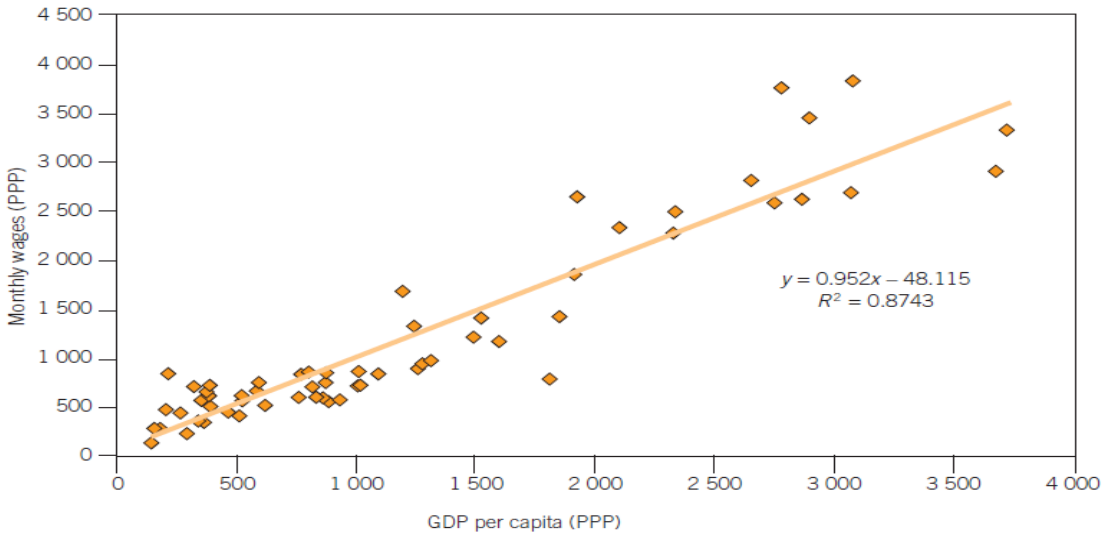
Figure: GDP per capita growth and change in real wages



Another way to look at the link between productivity and wages is to observe that the level of average wages is higher in countries in which labour productivity is higher. From a comparative perspective, it has been shown in various studies that international differences in wages across countries mainly reflect differences in economic development and labour productivity.

This is illustrated in the following figure, which plots the level of wages and the level of GDP per capita for 60 countries in 2006. We see that a large proportion of the differences in average wages across countries can be explained by international differences in labour productivity, as measured by GDP per capita (although GDP per capita is not always a reliable indicator of productivity). This again shows that it is not realistic to expect wages "beyond what the productivity of the economic machine was capable of furnishing". In other words, the solid and sustained wage growth which is hoped for in all societies requires sound economic performance.

Figure: Level of GDP per capita and level of wages (purchasing power parity, PPP)



However, the relationship between economic growth and wages is not as straightforward as one might assume. Indeed, while shows that economic growth is overall positively correlated with changes in real wages, the relationship does not appear to be very strong. The slope of the regression line can be called the "wage elasticity to GDP" (or in short, "wage elasticity") – it shows the typical percentage change in real wages in response to a 1 per cent change in GDP per capita. Hence, if GDP per capita and wages grew at exactly the same rate, we would find that the slope (wage elasticity) was equal to 1. Our statistical analysis, however, shows that the wage elasticity is about 0.75, which indicates that on average, over the whole period 1995–2007, real wages increased at a slower rate than economic growth. Each additional 1 per cent increase in the annual growth of GDP per capita is associated, on average, with a 0.75 per cent increase in the annual growth of wages.

Factors which affected International Trade

Factors influencing international trade:

Impact of inflation: Inflation is the rate at which the general level of prices for goods and services is rising and, consequently, the purchasing power of currency is falling. If a country's inflation rate increases relative to the countries with which it trades, its current account will be expected to decrease, other things being equal. Consumers and corporations in that country will most likely purchases more goods overseas (due to high local inflations), while the country's exports to other countries will decline.

Impact of national income: The total amount of income accruing to a country from economic activities in a year's time is known as national income. It includes payments made to all resources in the form of wages, interest, rent and profits.

If a country's income level (national income) increases by a higher percentage than those of other countries, its current account is expected to decrease, other things being equal. As the real income level (adjusted for inflation) rises, so does consumption of goods. A percentage of that increase in consumption will most likely reflect an increased demand for foreign goods.

Impact of government restrictions: Government will impose some trade restrictions on certain products for health and safety reasons. Governments restrict international trade to protect domestic producers from competition by using three main tools: 1. Tariffs 2. Subsidies 3. Quotas.

Tariffs: A tariff is a tax that is imposed by the importing country when an imported good crosses its international boundary. SUBSIDY A subsidy is a payment made by a government to a domestic producer based on the quantity produced QUOTA A quota is a limit on the quantity of a good that may be imported.

Impact of exchange rates: The price of a nation's currency in terms of another currency. An exchange rate thus has 2 components, (1) Domestic currency and (2) Foreign currency and can be quoted either directly or indirectly. In a Direct quotation, the price of a unit of foreign currency is expressed in terms of the domestic currency. In an Indirect quotation, the price of a unit of domestic currency is expressed in terms of the foreign currency.

If a country's currency begins to rise in value, its current account balance will decrease as imports increase and exports decrease. When currency appreciates, exports will be expensive for the other countries Demand for such products will decrease.

Geographical location: The geographic location of the trading country's also affect the international trade The ease of transportation, climate, presence of coastal areas, etc.

Lack of restriction on piracy: In some cases, a government can affect international trade flows by its lack of restrictions on piracy. The manufacturing of products that looks almost exactly as the original product υ It will greatly affect the country which produces the original products

Level of economic development: Economic development level can directly affect a country's foreign trade commodity structure and the position in international trade. Developing countries relatively backward economy, foreign trade is relatively less.

Competitiveness: In current environment, with growing interdependence between the markets and in increasing competition, it is more difficult to maintain current enterprise market position υ Competitiveness is a measure of the relative ability of different countries to provide different products or services. Competitiveness takes into account the efficiency, costs of employment, level of government regulation and the ease of doing business. Competitiveness effects international trade because the more competitive countries will tend to attain a higher level of global trade.

Globalization: Globalization is the term used to describe a general tendency for national economies to become more integrated with each other. This happens because of a combination of advanced communication technologies, logistic technologies, increased capital flows and reduction of trade barriers by national governments. Globalization is a general trend that has caused an increase in international trade over the last three or four decades.

Factors which affect wages by the International trade

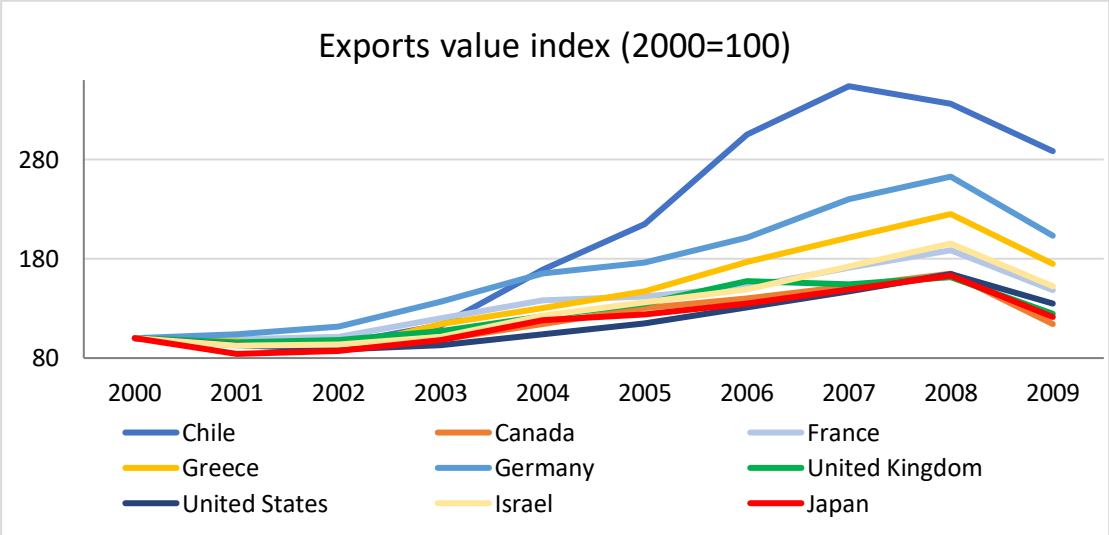
Traditional trade theories, such as the Hecksher-Ohlin model, predict that trade integration should generate wage differences across industries. Recently, theoretical analyses of the labor market effect of trade integration have been enriched to account for the strong firm heterogeneity within industries that a number of empirical papers have documented. Within one narrowly defined industry, exporting and offshoring firms tend to outperform purely domestic firms in many dimensions including size, productivity and wages. This line of theoretical work, based on the seminal paper by Melitz (2003), predicts that trade liberalization should enhance the dispersion of revenues across firms and generate wage dispersion between firms in a given industry. A first group of models attributes such dispersion to trade-induced changes in workforce composition. Another strand of the literature highlights rent-sharing mechanism that arise in the presence of labor market frictions (see Harrison, McLaren and McMillan 2011 for a detailed survey). Theoretical studies highlight an a priori ambiguous effect of offshoring on wages. On the one hand, using cheaper goods produced abroad might improve the efficiency of the production process, which can then lead to higher wages. On the other hand, offshoring may allow firms to replace production

previously made by local workers, which exerts a downward pressure on their wages, especially for unskilled workers whose production can be more easily substituted by offshoring.

In the following table, we observe the percentage on the wages by year. It is an outstanding fact that the wages were increased year by year. This is happening due to International trade. The international trade creates more job opportunities due to huge production which satisfy the requirement of people.

The change of wages in 2000-2009

Time/ Countries	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2000-2009
Canada	1,6%	0,9%	1,7%	4,1%	5,7%	4,3%	3,9%	3,3%	1,3%	23,9%
Chile	7,5%	4,5%	5,7%	4,3%	3,8%	1,0%	4,2%	9,2%	8,4%	39,7%
France	2,6%	3,4%	2,5%	3,7%	3,0%	3,2%	2,4%	2,5%	1,6%	22,3%
Germany	2,7%	1,8%	1,7%	1,0%	1,3%	1,1%	1,4%	2,3%	0,0%	12,5%
Greece	4,8%	10,3%	6,6%	4,9%	2,6%	4,3%	3,5%	2,6%	5,4%	37,1%
Israel	2,3%	0,3%	-3,2%	-1,0%	1,8%	5,3%	3,1%	2,7%	-0,4%	10,6%
Japan	-2,4%	-3,5%	-1,0%	0,2%	1,3%	-0,6%	-0,5%	0,6%	-3,3%	-9,5%
United Kingdom	5,1%	2,2%	3,8%	3,7%	1,8%	4,9%	4,7%	1,3%	2,6%	26,5%
United States	2,7%	2,1%	3,1%	4,2%	2,9%	4,2%	4,4%	2,6%	0,7%	23,9%

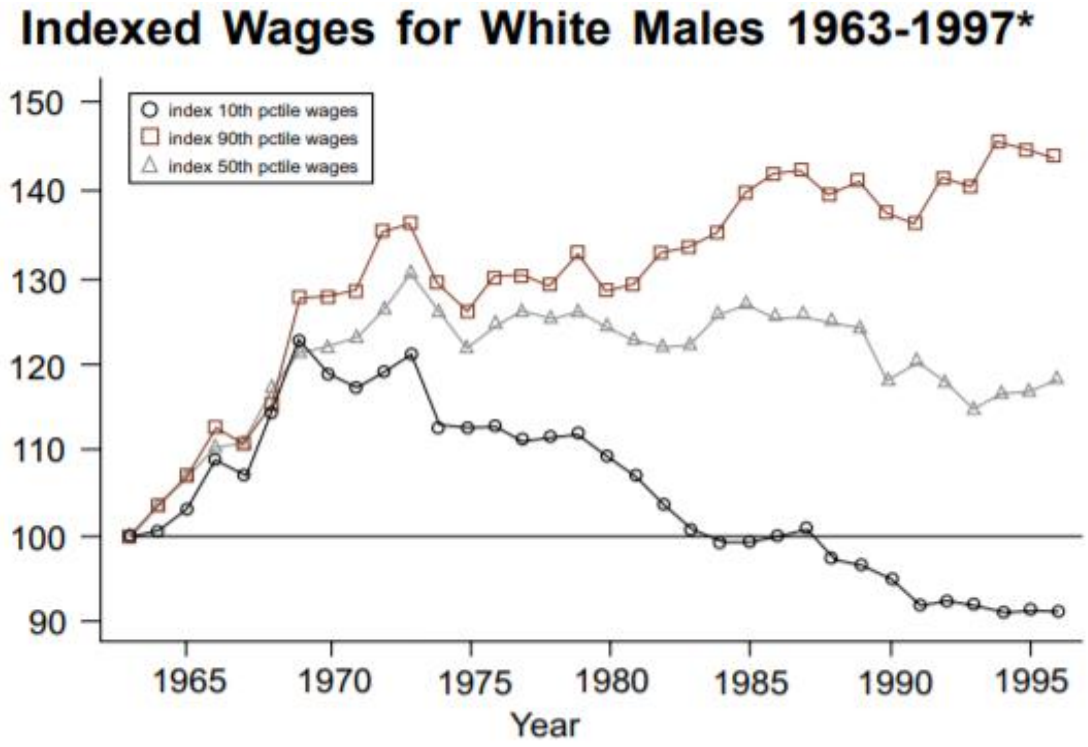


In this graph we observe the increasing of exports (International trade) from 2000 to 2009. In the start of century until the 2008 we observe that international trade is increased among the world. In the 2009 the global economy affected by the economic crisis. Some countries must reduce the exports and their economy was started to reduce.

4.Wage inequalities

Distribution of Wages

We can summarize wage disparity by examining the distribution of wages across workers, which shows the frequency with which wages of a certain level are likely to occur in the population of workers. For example, we would expect to find relatively few workers who make over $200,000 a year, but many more workers who make around $40,000 a year. We can then use this distribution to examine how the wages of the richest and poorest workers change over time. In fact, the wage differential between workers whose earnings are in the top 10 percent of the wage distribution (the richest workers) and workers whose earnings are in the bottom 10 percent of the wage distribution (the poorest workers) has increased dramatically since the 1970s. So has the wage differential between the average worker (50th percentile) and workers in the lowest 10th of the distribution. Wages of high-earning white males and low earning white males rose in tandem during the 1960s. Beginning in the 1970s, wages began to diverge. By 1995, top earners' wages were about 40 percent higher than they were in the early 1960s (that is, the index rose to 140), while earners at the bottom of the distribution saw real wages fall 10 percent (the index fell to 90). Workers in the middle of the distribution fared somewhat better than those at the bottom: The average worker saw his wage rise about 15 percent from the early 1960s until 1995.



Explaining the increase in the skill premium

The rise in the skill premium could be due to rising wages for skilled workers or falling wages for unskilled workers, or both. The data show that the real wages (wages adjusted for inflation) of skilled workers generally have risen since the mid-1970s. However, the real wages of unskilled workers fell from the mid-1970s to the early 1990s, then began to rebound. Thus,

part of the story for the rise in the skill premium since the 1970s is that real wages for unskilled workers fell over much of the period. Several theories have been proposed to account for the increase in the skill premium in the United States.

Globalization

One commonly proposed explanation highlights globalization and increased trade with less developed countries. In less developed countries, low-skill workers are more abundant than high-skill workers because workers in poor countries tend to have less training and education and to work in industries not as technically advanced as those in developed countries. When the U.S. increases its trade of goods and services with less developed countries, the lowskill workers in poor countries put downward pressure on the wages of lowskill workers in the U.S., since the two sets of workers often produce comparable items. Similarly, the goods that high-skill workers produce in the U.S. are scarce in less developed countries.

So, when less developed countries import more of those goods, demand increases, and there is upward pressure on the wages of high-skill workers in the U.S. Empirical support for the globalization theory is weak, though. For the U.S., trade with less developed countries represents, at most, 2 percent of gross domestic product (GDP). Because it contributes such a small part to U.S. GDP, trade with less developed countries is unlikely to be driving the trend in the skill premium. Furthermore, the trade-liberalization story implies that the prices of less skill-intensive goods in the U.S. economy should fall relative to the prices of more skill-intensive goods because the U.S. would import the goods produced by low-skill foreign labor and export goods produced by high-skill U.S. labor. But the data contain little evidence for this price behavior. If trade were the main force behind the rise in the skill premium, we would find that increased production of skill-intensive goods (to meet increased demand for these goods from foreign countries) would be drawing workers away from other sectors of the economy.

However, some studies have indicated that all sectors, even those that produce less skill-intensive goods, have increased their demand for skilled workers, that is, production of many goods is becoming more skill-intensive. Thus, we do not see the across-industry shift in employment implied by the trade story.

Advances in Technology

The most promising theory to account for the rise in the skill premium ties the change in wages to the advancement of technology. When advances in technology increase demand for skilled workers more than demand for unskilled workers, economists say that technical change is skill-biased.

New technologies are constantly being developed, and firms have been investing heavily in equipment that uses these new technologies. The new high-tech equipment, such as computer-controlled machines, industrial robots, and flexible manufacturing systems, performs more efficiently in the hands of skilled workers. As this advanced technology becomes more common in the workplace, it tends to replace unskilled workers; at the same time, it requires additional skilled workers to operate it.

Directly measuring the amount of technological progress in the U.S. economy is difficult. Indirect measures, such as the amount of spending on research and development and the amount of spending on computers, are available. A 1994 study by Eli Berman, John Bound,

and Zvi Griliches found that spending on research and development and computers accounts for about 70 percent of the shift of the manufacturing labor force from production workers to nonproduction workers from 1979 to 1987. Conceptually, production workers are typically associated with “blue-collar” jobs and nonproduction workers with “white-collar” jobs. In addition, the classification of workers into blue-collar and white-collar jobs closely reflects their classification into those with a high-school education and those with a college education. Hence, the shift from production workers to nonproduction workers indicates a shift from low-skill to high-skill workers. By this measure, spending on new technologies has helped boost demand for skilled.

Other studies have found that the share of college-educated workers has increased substantially in all sectors of the economy since the mid-1970s. The demand for skilled workers must have been increasing even faster than the supply, however, since the skill premium has been rising.

The data suggest that new technologies, new capital (machines), and skilled labor go together and that new machines are more likely to replace unskilled workers. As firms invest in new technologies, the demand for skilled workers increases relative to the demand for unskilled workers, and the workers. relative wage paid to skilled workers rises.

Remember, though, that not only have the wages of skilled workers increased, but also those of unskilled workers have decreased. Can technological change lead to lower wages for unskilled workers at the same time that it increases wages for skilled workers? Under certain conditions, the answer is yes. Suppose there are two production sectors in the economy: One sector uses capital and skilled workers to produce goods, and the other uses capital and unskilled workers. A new technology that works well with skilled labor might induce a flow of capital from the sector with unskilled workers to the one with skilled workers in order to take advantage of skilled workers’ increased productivity. As capital flows out of the unskilled sector, workers in that sector will have less capital to work with, making them less productive and leading to a decline in wages paid to unskilled workers. Hence, technical change that favors skilled workers could lead to a drop in the wages of unskilled workers and a simultaneous rise in the wages of skilled workers.

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