Department
of
Economics and Management

Course of Microeconomics

WHAT ARE THE EFFECTS OF THE GLOBALIZATION OVER THE EVOLUTION OF THE PRICE OF GOODS AND HOW THE CONSUMER REACTS TO THIS EVOLUTION?

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Academic Year 2019/2020

INTRODUCTION

Since the beginning of the industrial revolution, the issue of free trade has seen several opposing theories. Within Western societies, the idea that trade liberalization is beneficial to all countries has led to many disputes. For most, globalization is bound to bring positive effects to the country engaging in such trade. Can it be said that free trade is a source of development? To answer this question, it is necessary to identify the benefits and harms of the implementation of free international trade and to see whether these changes have had a real impact on the development of countries.

First of all, globalization is a phenomenon that consists of the opening of economic borders between countries. Thus, national economies can be present in the various world markets making it possible to exchange goods and services, financial and human capital. Most theories in favour of free trade have been based on economic growth as a positive effect of globalization. Proving that globalization has had a positive effect on economic growth in most of the world's countries is relatively straightforward and difficult to dispute. On the other hand, linking a country's economic growth to its development is more complicated and even completely wrong for some economists. This is because a country's economic growth is observable and quantifiable so that a certain evolution can be proven by comparing data. As for development, it is a much broader definition. The concept of development can be quantitative but is also qualitative, based on the idea of progress from an economic, social and cultural point of view. To claim that globalization was a source of development for a country, it would be necessary to prove that the effects of its implementation had been positive overall for each of its three points. The idea of progress is therefore crucial.

Since this revolution in international trade, many changes have been observed in the different countries of the world. The benefits of globalization appear to be globally economic. The development of international trade has had a strong impact on the prices of goods and services, in particular thanks to increased competition. This evolution of prices is one of the notable factors of economic growth, but it is also reflected on the well-being of consumers, which is an essential element to be taken into account for the development of a country. The opening of borders to trade in human capital will have repercussions on the social progress of each country in a positive way, with the creation of jobs for example, but also in a negative way, with a certain decline in social protection to cope with the competition.

The economic growth of countries thanks to globalization from the 1980s onwards was rapid and intense. Exchanges between the different countries of the world multiplied at an unhoped-for speed, thus favouring the economic activity of each one. However, the repercussions and limits of this strong globalization have begun to emerge in recent years. For a long time, world trade has been favoured but new challenges must now be taken into account to pursue such exchanges properly. Indeed, some countries have recently begun to change their policies towards free trade. The lack of regulation and sanctions has led some countries and companies to put in place practices that prevent free competition. These practices such as dumping represent colossal economic losses for many countries, each of which is trying in its own way to counter and put an end to them. Besides, other issues are added to these limits, such as environmental problems that have accelerated with the implementation of free trade. All countries must adapt for globalization to continue positively.

1 THE EMERGENCE OF THE FREE TRADE AND THE ECONOMIC DEVELOPMENT

1.1 Historically

Across the different currents of economic thought, free trade has been a key point, many economists have based their research and advancements on this principle. In Europe, the writings of François Quesnay dating from the last half of the 13th century are among the first to present an economic policy where sovereignty does not intervene. Belonging to the physiocratic movement, the latter wanted to present a plea in favor of free trade and more particularly for agriculture and wheat. The 18th century is seen as a period of transition. In every country and for more than two centuries before this first revolution, mercantilism dominated economic thinking, and free trade was in total opposition to it. Indeed, the founding principle of this current is that the power and wealth of a state are based on the reserve of precious metals, gold and silver, that it possesses. State interventionism in trade is essential for the country's economic development. Exports of goods are favored to enrich the country, but imports of goods from other countries are limited or even prohibited for certain goods, thus leading to the impoverishment of these exporting countries. At that time, protectionist policies reigned by imposing tariff barriers at the borders, the principle of customs, which were also put in place within each country, between different regions. In addition, regulations are drafted concerning import and export between the different countries. These are often unequal and imposed on the weakest nations to the benefit of the strongest. Another solution found by states to regulate trade is the setting of quotas for goods, the aim being to encourage local trade. These policies stem from the thesis of mercantilists who believe that trade is war, that in trade there is necessarily a winner and a loser.

According to the physiocrats, a first problem arises, that of the neglect of agriculture by the States, particularly France. Vincent de Gournay, a physiocratic figure, then undertook the idea of "laissez-faire, laissez-passer"[1], thus opposing state interventionism, which he believed would promote agricultural activity. At the same period, another idea appeared in opposition to medieval thinking, which put forward the principle of hierarchical authority where the people were placed in the background. This was the idea of Adam Smith, a supporter of the Enlightenment, who believed that the enrichment of the nation was possible through the principle of the division of labour. This principle, explained in his book *The Wealth of Nations* published in 1776, allows industries to grow and develop, thus creating more profit and therefore more wealth for the nation. According to this economist, it is in the interest of each country to specialize and open its borders to trade. In the midst of the industrial revolution, the development of machinery and the division of labour makes the different markets very competitive. According to what a country masters

[1] French expression meaning "let do, let pass"

best, in terms of production, it is preferable for it to specialize in that production. For example, England quickly developed and mechanized the textile industry, leaving the possibility of offering more than attractive prices for export. A treaty was then signed between France and England. Free trade was then strongly advised. It is often defined as "the economic policy of not discriminating against imports from and exports to foreign jurisdictions. Buyers and sellers from separate economies may voluntarily trade without the domestic government applying tariffs, quotas, subsidies or prohibitions on their goods and services. Free trade is the opposite of trade protectionism or economic isolationism" (Investopedia.com).

Despite all its advances for the enrichment of nations, the multiple wars in Europe have promoted a return to protectionist policies. It was only in 1815 with the Anti-Corn Law Leagues, initiated by David Ricardo, that the idea of trade liberalisation resurfaced. Faced with the critical political situation at the end of the 18th century between France and England, Great Britain had decided to increase its cereal production capacity. To this end, the nation invested heavily in machinery in order to be able to increase the amount of land under cultivation. But what the government had not foreseen was the fertility of the cultivated land, poor quality land is less productive land. As a result, production stagnated or even decreased for a demand for cereals that continued to increase, leading to a sharp increase in the selling price of this good. To deal with this problem, the British Parliament passed a law, the Corn Law, the principle being that it was once again possible to import cereals to meet demand and when the price of domestic crops fell below a certain threshold, these imports were made impossible to protect local agriculture. It was following the introduction of this new law that the advocates of free trade joined forces to convince people of the benefits of their doctrine. In their opinion, opening up international trade would be beneficial to them, since the lower prices of essential goods would allow them to have a better standard of living.

Ricardo tried to demonstrate these positive effects with his theory of comparative advantage. It was in his book *Principles of Political Economy and Taxation* that he demonstrated that every country has an interest in entering international trade regardless of its competitive value. It takes up the foundation of specialization of industry which will be a vector of enrichment for all countries. Countries must be able to identify the production where they are most advanced and efficient in comparison with other countries. Or, if a country is not efficient in any production, it will have to identify the production in which it is least bad in comparison with foreign production. In this case, it will obtain the most important relative advantage to trade. According to its model and under conditions of perfect competition, a combination of prices between goods from different countries will always be possible for free trade to benefit the countries involved in the trade. This is the principle of comparative advantage. This idea is in direct opposition to the mercantilists for whom in an exchange there was necessarily a winner and a loser, whereas with his theory, David Ricardo proposes two winners for each exchange. Unfortunately, the reality is such that the conditions of perfect competition cannot be applied because of the political pressures that can be exerted and the imbalances in development between the countries of the world. On the one hand, countries importing certain products then become dependent on the countries that export these products to them, which can cause problems. On the other hand, a poor country that decides to specialize in the production of staple foods will have to dispose of part of its production, thus reducing the supply for its population. The demand for these staple foods being the same, their price will increase, and the problem will be that the people of that country will no longer be able to buy these products, so the result is inevitable famine.

In England, after years of fighting by the Anti-Corn Law League, a pressure group created against Corn Law, and with the support of the middle class, this law was abolished in 1846 and trade liberalization was allowed. In Europe, free trade was democratized in the 1860s with the Cobden-Chevalier Treaty. But contrary to what the proponents of this doctrine announced, an improvement in the quality of life, the period that followed was not one of growth. The growth of the gross national product of European countries was slowing down. On the other side of the Atlantic, the United States decided to strengthen its protectionist policy, which resulted in strong economic growth. These policy positions are visible in the following graph showing the evolution of the average rates of customs duties on imports from 1830 to 2010. For the United States, there is a strong increase in the average rate of customs duties from 1860 onwards, while for the United Kingdom and France, European countries, there is an overall decrease in this rate from 1830 to a quasi-stagnation from 1860 to the early 1900s. (Figure 1)

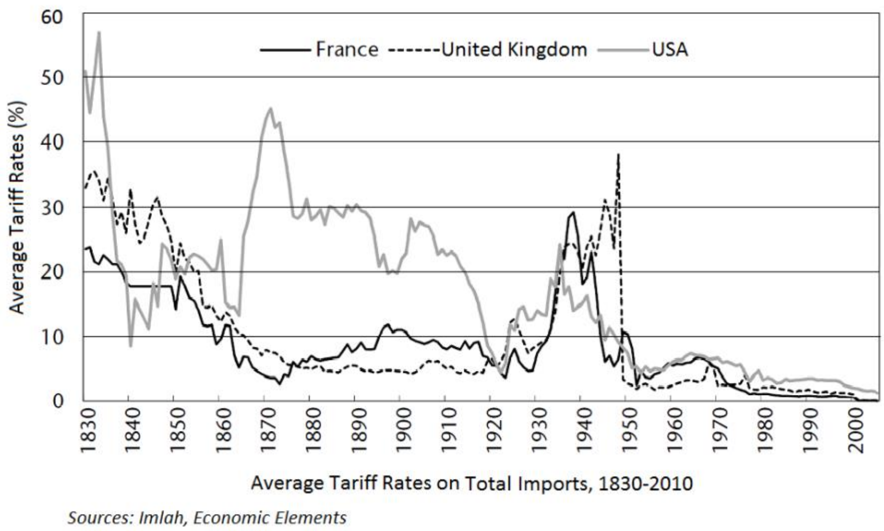

Figure 1. Average tariffs rates on total imports in percentage from 1830 to 2010
Source: Imlah, Economic Elements

It was only towards the end of the 19th century and the beginning of the 20th century that European countries began to react to this economic situation by reintroducing protectionism through trade policies. The observation is the same for all European countries that have changed their free trade policy: a rising growth rate. But the situation in Europe and North America, alternating between periods of protectionism and liberalism, is only an exception. In the rest of the world, countries are forced to follow the rules imposed by Western countries, lowering their customs duties on imports while their exports had to undergo very high customs duties. According to economist Paul Bairoch, the 19th-century Third World was "an ocean of liberalism with no protectionist islands. This imposed liberalism resulted in a decrease in economic growth and production in these countries for the benefit of the West.

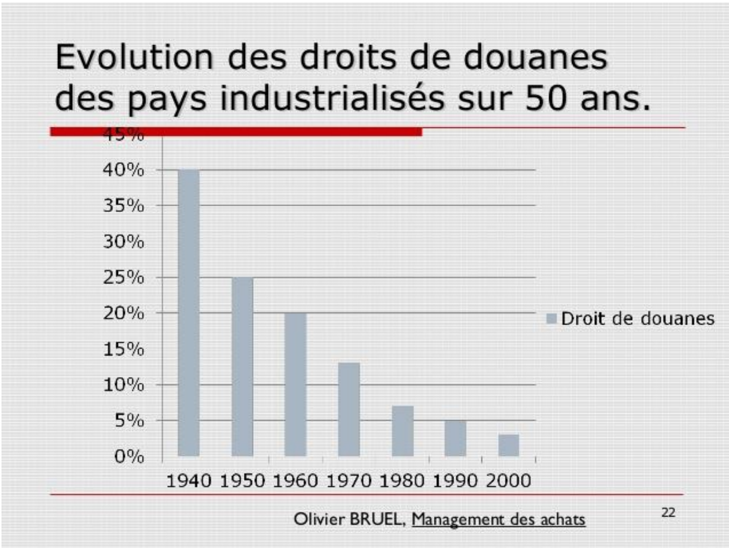

Figure 2. Evolution of tariff rates of industrialized countries over 50 years
Source: World Trade Organization

Free trade as we know it today was born after the Second World War with the General Agreement on Tariffs and Trade, GATT, signed in 1947 in Geneva. From this period onwards, there was a sharp reduction in the customs duties imposed on exports by the industrialized countries, as shown in Figure 2. Customs duties fell from 40% in 1940 to less than 5% in 2000. Following this ideology, European countries decided, in 1951, to create a union to facilitate the exchange of certain goods between them. This is the European Coal and Steel Community (ECSC), which includes France, Italy, Belgium, West Germany, the Netherlands and Luxembourg. This first alliance of six countries is considered to be the birth of the European Union. Six years later, the European Economic Community is established by the Treaty of Rome, including six countries in addition to the ECSC, Denmark, Spain, Great Britain, Greece, Ireland and Portugal. This treaty was a great step forward in the liberalisation of trade, as the project consisted of the creation of a customs union, an area where people, goods and capital could move freely. A few years later, this community is associated with 18 African states, thus strengthening free trade between the continents. Around the world, there are several associations of countries facilitating trade, for example, ASEAN or Mercosur. Most industrialized countries have maintained interventionist policies for international trade, particularly in the setting of customs duties. This is, moreover, a simple means of political pressure. Each country has the right to set higher or lower customs duties depending on the goods imported. Western countries offer the lowest rates of customs duties on imports, generally less than 4.77%, unlike some South American and African countries that offer high rates that sometimes even exceed 9.62%. (Figure 3) Trade around the world has increased by a factor of 30, while world GDP has increased by a factor of 5.

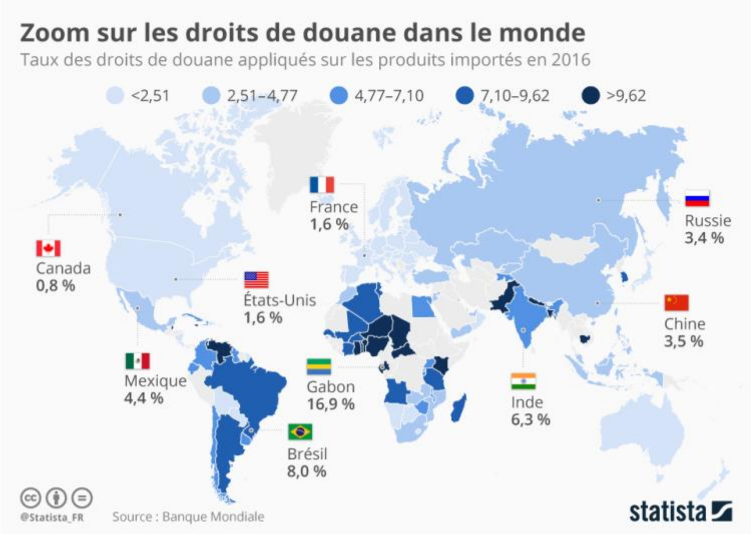

Figure 3. Tariff rates applied on products imported in the world in 2016
Source: World Bank

1.2 From an economic sight: the free trade enables development

The introduction and abandonment of liberal policies have been very thought-provoking and leaves much room for questioning about their effectiveness. Over the last few decades, many theories have been opposed, the debate is mainly: are periods of liberalism a vector of development? To answer this question, we must first understand what the term development means and implies. According to the French economist François Perroux, development is "the combination of mental and social changes in a population that make it capable of growing, cumulatively and sustainably, its real global product."[2] (François Bourguignon, 2012). This means that a country's development does not stop at its economic development. Thus, if trade liberalization has resulted in a country's economic growth, it does not necessarily mean that it has led to that country's development. Here, the development also represents an idea of progress, social and cultural, in addition to its economic vision. Since the beginning of globalization, the advocates of protectionism and those of free trade have been proposing theories to prove the harmful results of opposing ideologies. Despite the negative data on the economic growth of European countries during the second part of the 19th century pushing governments to return to more protectionist policies, the second part of the 20th century resulted in significant economic growth with a sharp increase in GDP per capita worldwide. Indeed, according to a first observation, the share of world GDP representing world trade was less than 30% in the 1970s, while this share was more than 50% in the 1990s, which corresponds to an increase of more than 20%. At the same time, world GDP has also increased sharply. Faced with this positive trend in economic growth, many theories have emerged demonstrating that free trade is a source of economic growth and a factor in

[2] Ct. from *La mondialisation de l'inégalité*, François Bourguignon, 2012, in which the author describes the evolution of social inequalities both globally and nationally in particular as a result of globalization.

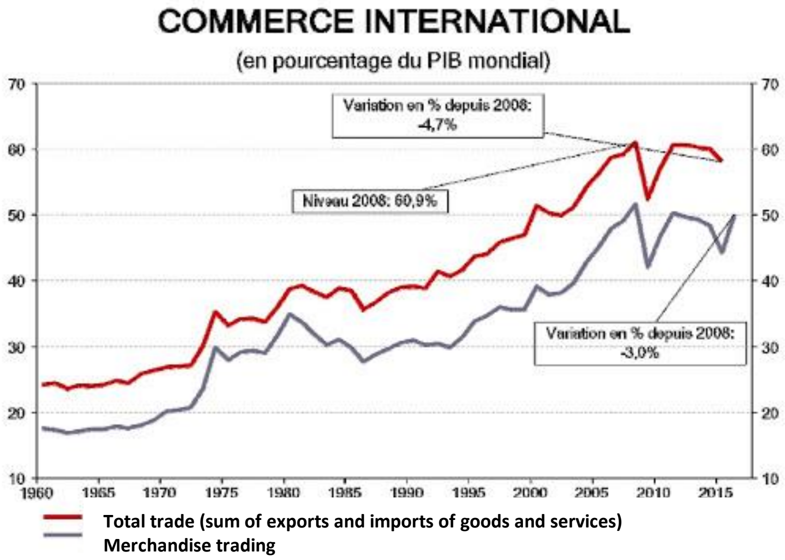

Figure 4. Evolution of international trade as a percentage of world GPS between 1980 et 2016
Source: Thomson Reuters Datastream

development. Trade liberalisation makes it possible to increase the size of industries, in particular through the specialization of nations and the idea of comparative advantages, and thus the creation of economies of scale. Prices can then decrease; competitiveness is thus strengthened, and economic growth is achieved. This economic progression will allow the development of Nations. Indeed, the fall in prices, possible thanks to the increase in competition, will lead to an increase in the purchasing power of consumers, consumption will then be favored. In addition to economic development, social and cultural developments took place. One of the important theories on this subject is the one led by Eli Heckscher, Bertil Ohlin, and Paul Samuelson, known as the H.O.S. theorem[3]. These three economists took Ricardo's principle of comparative advantage and improved it. According to them, it is imperative for countries to specialize not only in the industry where they are most efficient but also in the industry for which they have the most abundant production factors. Factors of production include labour, capital and resources. Thus, the least developed or developing countries will specialize in production requiring a lot of labour without any particular qualification, unlike developed countries which will specialize in activities requiring skilled labour or heavy investment. This principle of specialization would make it possible to reduce certain inequalities and would, therefore, be favorable to both the countries of the North and the countries of the South.

Another point on which free trade theorists have argued in favor of free trade as a factor of growth is the development of technology and innovation. The development of industries and the increase of capital in developed countries has led to a lot of innovation. The opening of international borders has allowed large companies to relocate, taking their technological advances with them. The export of such technologies to developing countries such as China and South Korea has played in their favor to develop. From the consumer's point of view, their well-being and satisfaction has been improved, resulting in increased

[3] This model takes its name from the three economists who developed it in 1941, Eli Heckscher, Bertil Ohlin, and Paul Samuelson. Their goal was to prove the superiority of free trade and the benefits of specialization. They tried to explain the presence of international trade based on Ricardo's comparative advantage.

consumption. The quantity of products and services offered on the world market has been increasing steadily since the beginning of globalization and this is due in particular to innovation and growing competition. On the contrary, protectionist policies would have had the opposite effect, as the absence of competition would have led to higher prices resulting in lower consumption and lower consumer welfare.
Thus, one of the important results of globalization, in addition to the reduction of global inequality, the creation of jobs around the world and overall economic growth, is the reduction of poverty. Indeed, according to François Bourguignon, more than 500 million people have been lifted out of poverty thanks to globalization. He explains that inequalities between the countries of the world have considerably decreased since the 1990s, the beginning of the most consequent and still relevant globalization. In his book, the French economist uses different measures of living standards to measure global inequality, average income in terms of consumption, i.e. GDP per capita, relative income distribution and purchasing power parity. It can be seen that since the 1820s, international inequality has increased almost continuously. According to Theil coefficient[4], it was 0.6 in 1850 compared to 0.85 in 1990. Then, from 1990 onwards, this inequality began to fall, and this was the beginning of globalization. (Figure 5)

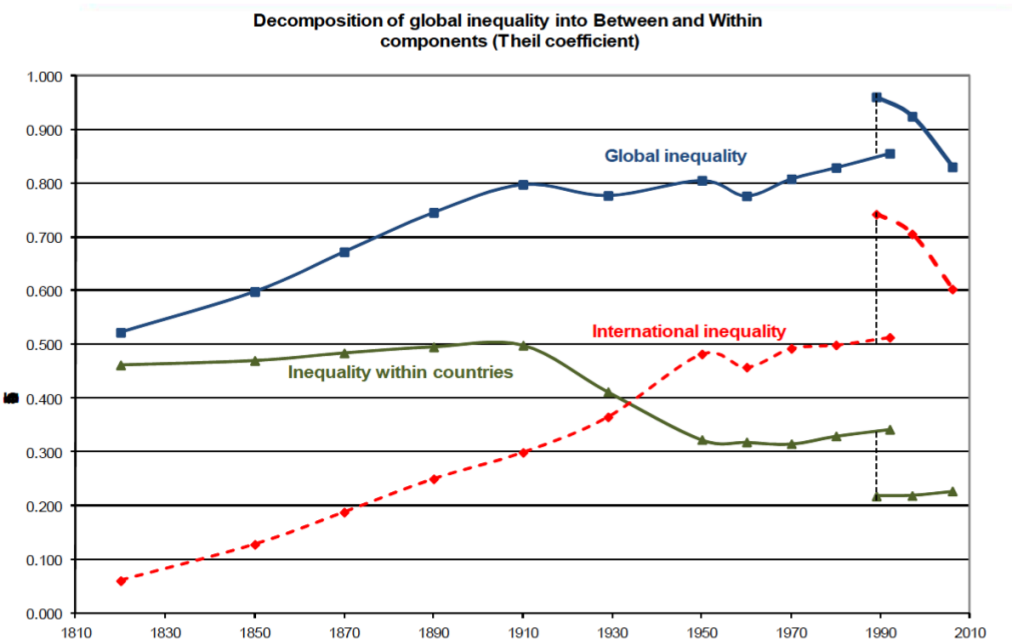

Figure 5. Decomposition of global, international and intra-country inequalities between 1820 and 2010 according to the Theil coefficient
Source: Bourguignon and Morrison, 2002

Inequality within countries changed little from 1820 to 1910 and then decreased until 1910, from 0.5 to 0.35 according to the Theil coefficient. From 1990 onwards, however, a slight increase in these inequalities can be observed. Thus, even if at the international level inequalities decreased with trade liberalization, this

[4] The Theil index is an economic indicator that measures economic inequality. It can be calculated by taking the difference between an individual's weight in relation to the population to which he or she belongs and the weight of his or her income in the total income.

led to an increase in inequalities within countries. This can be seen by observing the evolution of the Gini[5] coefficient for developed countries between the mid-1980s and the mid-2000s. This coefficient, equivalent to the Theil coefficient, increased in most developed countries over this period. (Figure 6) This creation of inequality at the national level is one of the first reflections of the problems associated with globalization. Indeed, national economies have had to integrate into a global economy. Large companies have relocated some of their activities abroad, which has led to the loss of jobs at home and aggravated the situation of low wages. As for the highest incomes, they have risen sharply, which has widened the gap between the two categories of population.

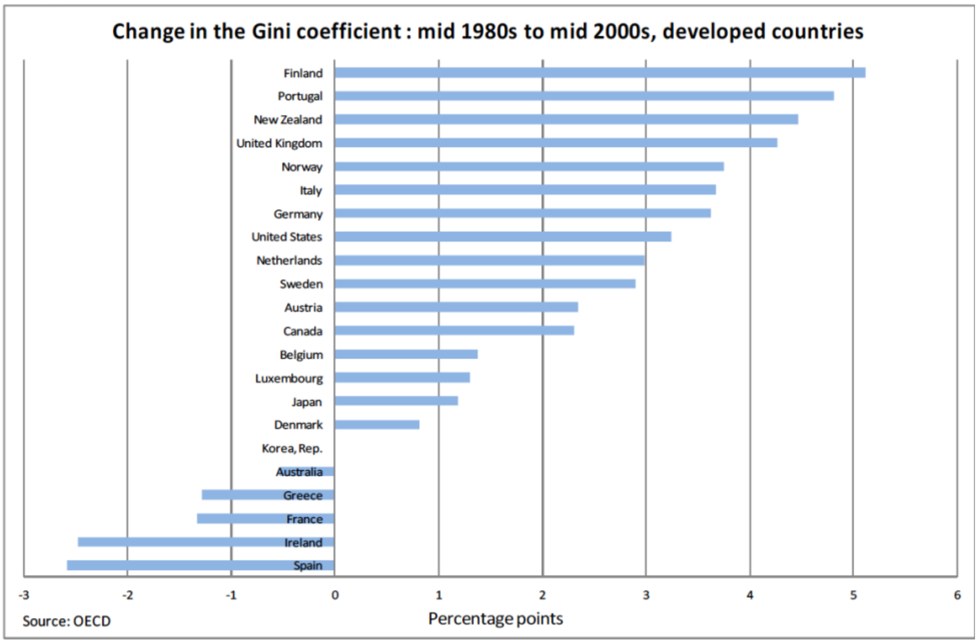

Figure 6. Evolution of inequality in developed countries between the mid 1980s to mid 2000s according to the Gini coefficient
Source: OECD

Even though most economists today, of different ideologies, are in favor of free trade, this has not always been the case. Many criticisms have been made in response to claims made in order to advocate the positive effects of opening up world trade. First of all, the statistics relating to the evolution of GDP and the assertions that flow from them need to be reviewed. First, the strong global economic growth experienced between 1970 and 1990, demonstrated and explained by economists Jeffrey Sachs and Andrew Warner in their article "Economic reform and the process of global integration", is not so true. This does not mean, however, that it is false, but that this growth is not so strong. Indeed, if we look at the historical changes that took place during this period, we can see two important events that may have distorted the data related to the evolution of world GDP. The first important event was the dissolution of the USSR in 1991. This gave way to the creation of fifteen independent states that continued to trade among themselves

[5] The Gini coefficient is another economic indicator to measure the level of inequality within a country. It is calculated in relation to the distribution of a variable such as income within a population.

and with other countries in Europe and the world. Trade was then no longer counted as national trade but as international trade. This explains the increase in the share of world GDP corresponding to world trade. The second event to be taken into account is the fact that within the Soviet Union the prices of trade in goods and services were much lower than those on the world market. Thus, the revaluation of these flows considerably increased the amount of world trade. Moreover, proponents of liberalism have considered economic growth as a factor of economic development by making calculations in relation to global and national GDP. But the various elements taken into account in determining these economic indicators evolved towards the end of the 20th century. By definition, GDP is an indicator that reveals the wealth produced by a country, so it should be calculated via the goods and services circulating on the market. However, this is problematic in developing countries, where most economic activities that used to take place outside the market have shifted to the market sphere. The same phenomenon can be observed in developed countries, particularly with the inclusion in the market sphere of services provided by large companies. This phenomenon of commodification also distorts the observed increase in world GDP. The economic growth observed was real but without the creation of new goods and services.

In addition to economic development, the social development of countries has also been called into question. Competition is the essential element that countries entering globalization must face. The opening of borders is synonymous with the opening of competition between developed, developing and underdeveloped countries. From a human and social point of view, free trade is a brake on development. In order to remain competitive with less developed countries, developed countries will be forced to offer reasonable prices. In order to do so, some countries will not hesitate to reduce existing social security cover. The principle of the welfare State[6], although necessary since the end of the 20th century with the decline in growth, is in slight decline. States want to make a place for themselves in world trade that favors economic rather than social development. As far as developing countries are concerned, they see their lack of social protection measures as an advantage in the face of competition.

A low level of social protection that should not be called into question and this translates into a very low-wage workforce. Thus, globalization is responsible for a decrease in the development of social measures, which are nevertheless undertaken in most developed countries, and for a refusal to implement such measures, which are nevertheless necessary, in poor countries. There is even talk of "social dumping".

[6] A welfare State is a conception of the State that intervenes and regulates its economic and social fields.

2 SINCE THIS REVOLUTION: THE EVOLUTION OF THE PRICES OF GOODS AND SERVICES

2.1 The effects of globalization over investment, research and development and income

The opening of borders to trade between all countries of the world was a great step forward. Despite all the theories supporting the negative aspects of this revolution, the overall conclusion is that globalization has been a major actor in the development of both developed and developing countries. The world economy has developed in particular through trade in goods and services and foreign investment, creating financial flows between countries. The development of countries is also visible from a social and cultural point of view, with an improvement in living standards, a reduction in inequalities throughout the world and open-mindedness, through changes in consumer behavior. Free trade has not led to direct but gradual development by changing the overall functioning of countries, leaving room for new opportunities. The main effects of its implementation are observable through investment, which has made possible a great deal of technological and industrial progress, research and development, and income, which has been responsible for a definite improvement in the living standards of many countries. All these developments are directly linked to international trade and have an impact on market prices.

Since the end of the 2000s, trade has grown steadily over time. An important factor behind this growth is the development of enterprises. The principle of specialization has been rapidly applied by a large number of companies. The logic is simple, the opening of borders implies an increase in demand for certain products because, in addition to domestic demand, there is also demand from foreign countries. Firms increased their sales abroad and therefore, in the same way, consumers began to want more foreign goods. In order to be able to satisfy this demand and thus continue to be present in the different markets, it is necessary to increase production, and one of the means to achieve this is specialization. Indeed, concentrating on the production of one or more products or services in very large quantities is more interesting for companies. It is essential to be able to respond to demand, but to offer several products on different markets without being able to meet the expectations of those markets is a mistake. Several large companies have thus been forced to discontinue some of their activities. Otherwise, if globalization had not taken place, the number of customers for each company would have been much lower. Indeed, without trade liberalisation, the size of a firm's possible customer base would have been limited to the national population, which can be very small depending on the country. Firms would, therefore, have been forced to diversify their activity into other sectors. The example of the Swedish telecommunications company Ericsson is a good illustration of this phenomenon. Sweden currently has a population of about 10 million, but only 8.5 million in 1990, at the beginning of globalization. In 2010, the telecom group's exports amounted to about EUR 9.5 billion, which is double the company's total turnover 20 years earlier. Another important statistic is the geographical distribution of sales. In 2010, 25% of total sales were made to Asia, compared to 6% in 1990. Growing demand, therefore, makes the need for specialization inevitable. Specialization allows a company to concentrate all its resources and skills on a single activity in order to make it more efficient. This is how their capital and the capital allocated to research and development have been constantly increasing. We have to do better than others. The solution is therefore innovation. The more innovative a company is, the better the results will be. Being able to produce more, better and more innovatively makes it possible to remain competitive and gain market share. The increasing competition since the beginning of globalization is reflected in the prices offered for goods and services. As price is one of the most important elements in trade, companies need to redouble their efforts to offer prices that are as attractive as possible, and therefore often the lowest. To this end, high output and therefore economies of scale are key.

The increase in competition is also explained by the increase in the number of companies within each country. Entrepreneurship has been encouraged for several years, leaving room for the creation of a large number of new enterprises. It has been made possible and simpler for everyone to start their own business. Even today, States still encourage their citizens to undertake, to create and they even offer subsidies to help them. The creation of a business is an element of a country's economic development. There has been a marked increase in the number of businesses around the world. One tool that allows us to see the trend of this development is the number of ISO 9001 certificates[7] held around the world. This certificate is a management standard issued to companies. The study of this evolution is not completely exhaustive because there are other certifications of this kind but this one is the most common.

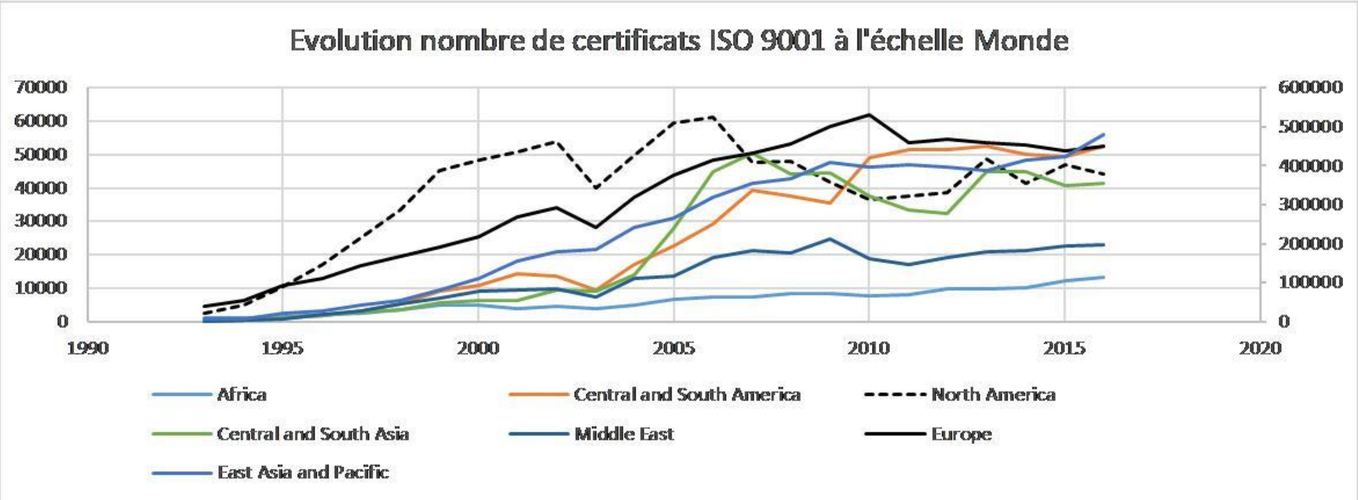

Figure 7. Continental evolution of the number of ISO 9001 certificates in the World from 1993 to 2016
Source: ISO (International Organization for Standardization)
Note: The “black” curves (Europe and North America) are to be read on the secondary axis.

[7] ISO 9001 certification is a standard issued by the International Organization for Standardization that sets the requirements for quality management.

Between 1993, the number of ISO 9001 certificates was well below 10,000 for the two most developed continents, Europe and North America, and was zero for some continents. There has been a gradual increase in this number around the world. Europe followed by North America are the two areas with the highest number of certificates with respectively 450,000 certificates and nearly 400,000 certificates in 2016. East Asia and the Pacific and Central and South America follow this ranking with nearly 60,000 and 52,000 certificates respectively, which represents a significant gap with the first two continents. Within less developed continents such as Africa, the evolution of this statistic has been on the rise since 1993 but remains low. (Figure 7) The overall picture is therefore the same: thousands of new companies are created every year, and competition is therefore very present and strengthened over time. The further one moves away from a monopolistic situation, the lower the prices offered on the market will be. Thus, with the increase in competition, the evolution of the prices of goods and services have decreased, thus becoming more accessible to all.

The development and creation of enterprises throughout the world have led to the creation of many jobs in the trade sector both for exports and imports. Within the very enterprises that have developed as a result of trade liberalization, the number of people employed has had to be increased to meet production needs and the organization of the enterprise. Indeed, firms have been forced to recruit to fill the shortage of staff for some of their activities and even to create new jobs. This is the case for jobs related to research and development and new technologies created over time. But employment opportunities do not stop at commercial enterprises that export or import. They also apply to all companies involved in international trade. This includes firms providing goods and services to these companies, such as raw material companies, those involved in product delivery, transit, etc. A new company will call on all kinds of other companies, thus leading to the development of the latter. In France, for example, 2.8 million jobs are attributed to exports outside Europe, i.e. more than 4% of the French population. Economists estimate that around 13,000 jobs are created every time the value of EU exports increases by a billion euros. This explains why the number of export-related jobs rose from 21.7 billion in 2000 to 36 million in 2017. Even if the overall effect of globalization is the creation of jobs, one must also take into account the disappearance of many jobs. This may be due to increased competition between companies, which has led to the closure of many businesses. It is also mainly present in developed countries because the opening of borders has made it possible for companies to relocate and thus employ people in foreign countries where labour is cheaper. This is particularly the case for jobs in the clothing and manufacturing industries.

Another effect of globalization is the overall improvement in incomes. The OECD has similarly found that trade leads to higher wages. Through specialization, outsourcing and offshoring, human resource management have been turned upside down. Jobs that do not require special skills have been relocated, freeing up human capital to perform more complex tasks. The advent of new technologies, such as in the industrial sector, has necessitated the employment of more skilled workers who are capable of using such technologies. The change in the qualifications of these workers has increased their earnings. In his book Global Inequality: A New Approach for the Age of Globalization (2016), Branko Milanovic describes the evolution of real disposable household incomes worldwide since 1980 and thus the evolution of inequality over time. The economist, known for his elephant graph, explains that globalization has mainly benefited two types of classes. Firstly, the middle class in emerging countries, 90% of which come from Asian countries, especially China, which has seen its income almost double. Then, the wealthy class, the richest 5% of the developed countries, who have been able to get even richer with an average 44% increase in their salaries. On the contrary, the two big losers are those in the poorest class, for whom income has changed

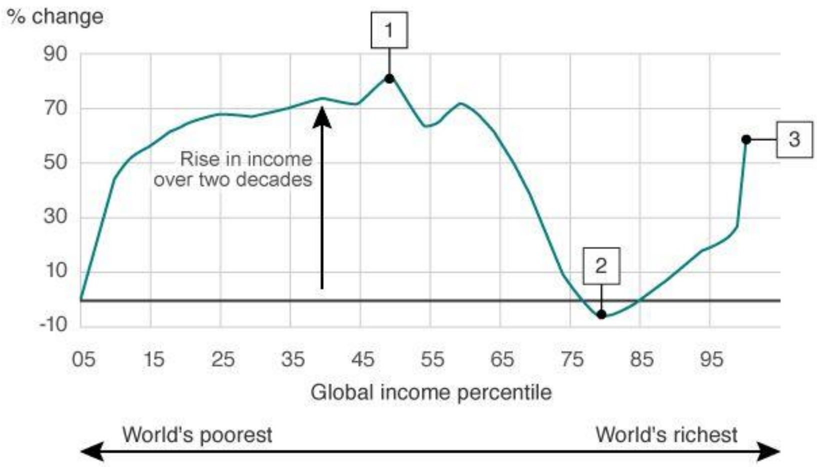

Figure 8. Change in real income between 1998 to 2018
Source: Branko Milanovic, Global Inequality: A new Approach for the Age of Globalization

little or not at all, and those whose income is between the 75th and 95 percentiles, representing the middle class with rather high incomes depending on the country, but which have changed little or even decreased. The latter are mostly from developed countries. (Figure 8) The manufacturing sector is one of the most affected by these changes. Compared to countries that have not chosen to open up to international trade, the increase in wages in the most open countries is 3 to 9 times higher for this sector. Moreover, within these countries themselves, there are wage differences between firms that are involved in trade and those that are not. In the United States, this difference is around 10%. For Chile, an emerging and exporting country, it is 25% on average.

Another observation made about the benefits of free trade is the reduction of gender wage discrimination. The wage gap between men and women has improved considerably in the space of a quarter of a century. Globalization has been an important part of this change. Between 1997 and 2007, the number of women in formal employment increased by almost 18%, or 200 million, to 1.2 billion. This increase could be explained by the development of economies and employment around the world. Social development is also an important factor to take into consideration. Indeed, the most developed States have ensured social protection for their populations and those through the provision of social protection, particularly in terms of employment, wages and the reduction of inequalities. Although the gender wage gap has been relatively stable in recent years, it has increased considerably since the 1970s. The ratio between the average wage of women and men at that time was about 65%. This means that for the same job, women earned 65% of a man's salary. In 2015, this ratio was 83.5%, which represents a significant improvement of 24.5%, a victory for the restoration of gender parity. (Figure 9)

Figure 9. Ratio between women's average wage relative men's average wage for full-time employees in the private sector
Source: Insee – Inequality observatory

Three years later, this statistic increased slightly, with women earning 15% less than men. The fight to reduce inequality is therefore still on. Another way of translating these data is to say that a woman would have to work 39 more days to get the same pay as a man. On the other hand, we note that this gap varies according to the age of the workers, so it would be reduced according to experience and seniority. The parity for workers aged between 25 and 34 is 89%, compared to 85% for those over 16. Despite this, the balance remains positive, with an overall reduction in pay inequalities between men and women since the introduction of free trade.

2.2 A global decrease of price for an increase of the quality

Globalization has brought many benefits to the world economy since its inception. Indeed, it is one of the factors responsible for world economic growth, particularly for developed countries but even more so for emerging countries such as China, India and other Asian countries. The integration of these countries into international trade has made it possible to considerably increase their production capacity. This phenomenon has had several positive effects on the economies of countries, including the member countries of the Organization for Economic Co-operation and Development, which have seen their inflation rate fall. Inflation is an economic phenomenon that occurs when there is a generalized increase in the prices of goods and services that translates into a decrease in the purchasing power of money. In the OECD countries, the inflation rate has fallen sharply since the 1980s, when it averaged 10%, until 2018 when it is around 2%. In addition to the decline in the inflation rate, the opening up of trade to the world has led to a reduction in the volatility and dispersion of inflation among these countries. There was an uneven distribution of the inflation rate among its countries in 1980 and a harmonization around 2% lately. The great beneficiary of globalization is the United Kingdom, which had a percentage inflation rate of almost 17% in 1980, compared to 2% in 2018. France and the United States are also winners from globalization with a decrease in the inflation rate of 11 points between 1980 and 2018. This trend is less obvious for countries such as Germany and Switzerland, which had inflation rates of 5.5% and 4% respectively in 1980. (Figure 10) The trend in the inflation rate in recent years remains the same, with a positive rate of around 2% overall. The increase in real incomes is complementary to this decrease in inflation. Western countries that are more open to trade have seen their incomes grow faster, thus improving the standard of living of the population.

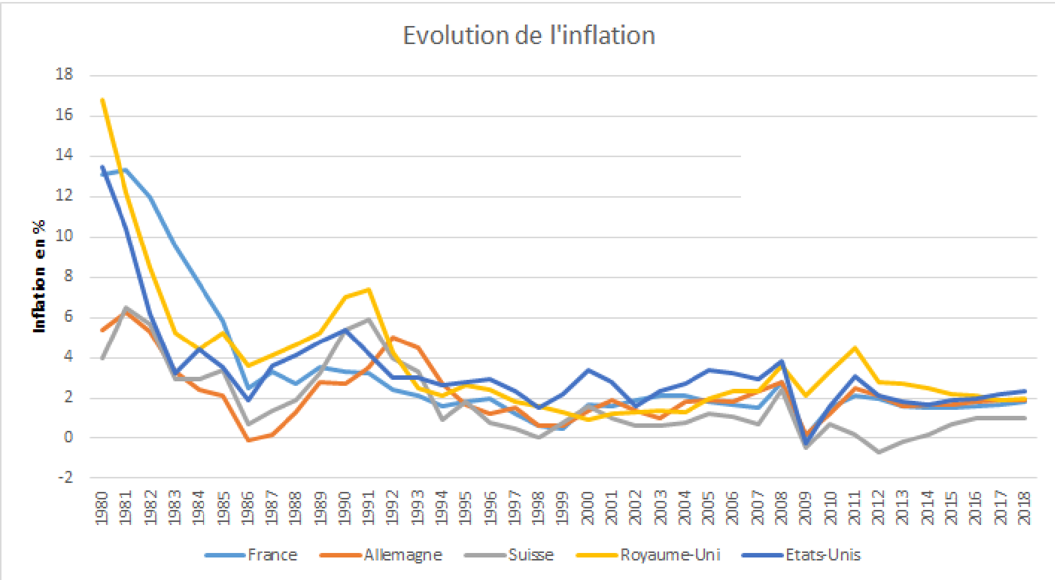

Figure 10. Evolution of the inflation in some OECD countries between 1980 and 2018
Source: World Economic Outlook for the International Monetary Fund

In other words, the rise in the prices of goods has generally been moderate or even declined. This is due to various factors such as the less inflationary economic policies implemented by the governments of emerging countries but above all increased competition and lower production costs. The rapid integration of the emerging countries into world trade is the main reason for the increase in competition and thus competition within the various markets. The opening of markets has favoured the reduction of goods and services through fragmentation of production, specialization and easy access to markets for newcomers. All these factors make it possible to reduce production costs, and it is in the interest of companies to lower their prices, which is beneficial for consumers. Lower prices increase consumer welfare and purchasing power. On the other hand, the price of goods consumed within a country no longer depends only on domestic factors but also on external factors. The possibility of purchasing raw materials on external markets also makes it possible to reduce production costs. The integration of emerging countries such as China or India, rich in low-cost labour and resources for raw materials, is an advantage for Western companies.

To understand the effects of globalization on the evolution of the prices of goods and services, it is important to base oneself on what are known as globalized goods. These are goods that used to be produced in industrialized and developed countries, but which have lost this production with the arrival of competition and the concept of comparative advantage. These are the most traded goods in the world. We can thus compare their price before globalization with their current price. Industrial goods are most likely to be affected by globalization. Industries such as the automotive, capital goods and consumer goods industries are the most affected. The overall result for these goods is a decrease in their price. To calculate the real evolution of the prices of its goods, it is necessary to take into account inflation, which is calculated using the consumer price index (CPI). It makes it possible to estimate the change in the prices of products consumed by households between two periods. Within euro area countries and the United Kingdom, there was a marked improvement in the price of globalized goods between 1998 and 2008. Between these dates, the price of the basket of goods rose by 0.6% while the CPI rose by 21%. Taking these two data into account, the real price of the basket decreased. To understand this evolution, economists have imagined the hypothetical price of certain products, mostly household goods, in European countries, if globalization had not taken place. To do this, they calculated the price in 1970 and their price in 2005 if they had followed

	France			Germany			Sweden			United Kingdom		
	Real price	Hypothetical price	Difference %	Real price	Hypothetical price	Difference %	Real price	Hypothetical price	Difference %	Real price	Hypothetical price	Difference %
Men's Suit	253,40	271,00	-6,50	273,40	592,60	-53,90	268,90	302,30	-11,00	276,50	432,10	-36,00
Bra	17,60	16,30	7,00	22,60	35,60	-36,60	20,30	22,60	-10,20	19,80	25,90	-23,60
Men's Underwear	6,20	5,60	10,70	7,70	12,30	-37,40	7,40	7,90	-6,30	6,80	8,90	-23,60
Washing Liquid	2,50	2,50	0,00	2,90	5,40	-46,30	2,70	2,80	-3,60	3,10	3,90	-20,50
Detergent	3,60	2,70	33,30	3,30	5,90	-44,10	3,40	3,60	-5,50	3,60	4,30	-16,30
Hairspray	3,70	5,50	-32,70	4,10	12,10	-66,10	3,50	6,00	-41,70	3,70	8,80	-57,90
Glasses	6,50	11,60	-43,90	8,80	25,40	-65,40	8,40	12,90	-34,90	8,20	18,50	-55,70
Enamel Paint	8,70	4,60	89,00	9,70	10,10	-4,00	9,80	7,10	38,00	11,20	7,40	51,30
Table Knife	16,20	49,80	-67,50	17,30	108,20	-84,00	17,80	53,20	-66,50	18,20	78,90	-76,90
Kitchen Knife	10,10	7,30	38,30	7,30	16,00	-54,30	7,50	9,90	-24,20	8,70	11,60	-25,00
Hammer	8,50	6,70	26,80	9,60	14,70	-34,70	10,20	7,20	41,70	11,00	10,70	2,80
Iron	36,60	42,10	-13,10	40,00	87,80	-54,40	40,60	47,40	-14,30	42,10	64,00	-34,20
Vacuum Cleaner	283,40	366,10	-22,60	265,40	800,60	-66,80	269,00	412,30	-34,80	273,40	583,80	-53,20
Refrigerator	291,80	393,20	-25,80	267,00	859,90	-68,90	261,00	498,50	-47,70	294,50	627,00	-53,00
Washing Machine	401,20	1138,90	-64,80	397,30	2490,50	-84,00	406,80	1325,00	-69,30	437,30	1816,00	-75,90
Sewing Machine	368,90	1276,20	-71,10	364,40	2790,70	-86,90	377,20	1472,80	-74,40	376,40	2034,90	-81,50
Light Bulb	0,50	0,80	-37,50	0,70	1,80	-61,10	0,48	0,90	-46,70	0,60	1,30	-53,80
Windsor -style Chair	27,70	27,30	1,40	32,50	59,60	-45,40	30,70	31,80	-3,50	28,60	43,50	-34,30

Figure 11. Real and hypothetical prices in 1970 and 2005
Source: Statiski Centralbyran; European Central Bank; Eurostat; OECD; and national statistical offices

the evolution of consumer prices. Depending on the goods and countries, the results differ, they are either advantageous or disadvantageous.

For so-called durable consumer goods such as vacuum cleaners, irons, refrigerators, washing machines and sewing machines, the difference between the real price and the hypothetical price is largely negative for the four European countries studied. (Figure 11) This means that globalization has been beneficial for these products. For French, German, Swedish and English households, it has made it easier to obtain such goods when they often had to take out a loan to acquire them. Production of this type of product is no longer local and involves emerging countries such as China and India. Prices are lower due to reductions in production costs within these countries, where raw material and labour prices are low. However, this does not mean that the quality of the products is reduced. On the contrary, in addition to this positive price development for the benefit of consumers, quality has also developed positively. Indeed, globalization has been favourable to creation and innovation, not least thanks to increased competition. With the aim of doing better than others, companies taking part in world trade have embarked on a race for quality and price. The free movement of capital between the different countries of the world, and more particularly between developed and developing countries, has made investment possible. This has made it easier for companies to finance their innovation projects. It is not only a question of producing on a large scale, but also of constantly offering new, better and more efficient products. Innovation is encouraged by technological advances and discoveries.

3 THE EXCESSES AND LIMITS OF GLOBALIZATION

3.1 Dumping

The introduction of trade liberalisation does not mean the unification of world trade. On the contrary, the establishment of such a system has given way to mini-trade wars between countries. The major world powers quickly tried to secure a global presence within this unity and to become the strongest. The agreements of the World Trade Organization were signed by most of the countries of the world, agreeing to follow common rules for international trade. Despite its agreements to promote world trade, help resolve disputes between countries and assist companies involved in free trade, there is no real regulation or jurisdiction to set the limits of such an organization. Open borders have led to increased competitiveness among all companies and countries. It is therefore important to do better, to make better offers to the market, and in order to do this, the various players in this globalization process do not hesitate to forget the principle of fairness. It is from this desire to sell at all costs and to gain market share that the principle of "dumping" was born. When a company sells its products on a foreign market at a lower price than the price offered on its domestic market, that company is resorting to dumping. It is considered unfair competition and is not regulated by the WTO Agreement. Indeed, it only consists of advising countries on how to act or not to act in the face of this competition. In this way, the product offered on the external market will be more competitive and it will be difficult for other companies present on this market to compete with it. This may occur when companies produce in excessive quantities and thus sell at reduced prices or even below the cost of production, thus not making any profit from its sales. The incentive for firms using this practice is to gain market share abroad and to gain customer loyalty in order to be able to raise prices in the future. The problem is that dumping is beneficial for the companies practicing it but represents unfair competition for other companies and especially for small companies for which it is impossible to offer such competitive prices. It is therefore important to put in place anti-dumping measures to combat these practices and protect local economies. The problem is that it is difficult to prove that a company is dumping. In order to exercise anti-dumping duties, it is necessary to prove that the four conditions for dumping are applied. It has to be shown that there is material injury, loss, to the louse industry in the country or countries concerned, that there is a causal link between the two and that the imposition of these measures is not detrimental to the interests of the countries concerned. If these conditions are proven, the measures applied will consist of the application of taxes, either specific or ad valorem[8], and negotiation of a price undertaking.

[8] These two taxes, known as specific (or fixed) excise duty and ad valorem (or proportional) excise duty, are applied differently. The first applies to a quantity of products or a weight and has the advantage of directly changing the price of the product. The second represents a percentage of the selling price of the product.

In addition to the health of companies, the social protection of workers is also jeopardized by globalization and the lack of a higher authority whose role would be to monitor dubious practices. Indeed, the principle of dumping is also used from a social point of view, for the workforce. Some countries and companies take advantage of the lack of labour laws and regulations in other countries. They thus employ foreign workers with much lower incomes than workers from their own country and who can work under conditions that do not follow any particular standards. This social dumping allows companies to reduce their production or service costs and thus gain a comparative advantage over their competitors. This practice was denounced in Europe in 2013, where thousands of workers, mostly from Eastern European countries, in the construction sector were exploited and forced to live in poor conditions. Within the European Union, many wage inequalities persist over time, for example, in Denmark the hourly wage is 8 times higher than in Bulgaria. This social dumping goes against the social principles of the continent and leads to unemployment of many workers in the countries exploiting this labour force. Former European Commission, President Jean-Claude Juncker, reacted to this by saying that he would “ensure that the Posting of Workers Directive is strictly applied [...] to ensure that social dumping has no place in the European Union.”. Social development, through social advances and benefits, in addition to the economic development of countries is therefore slowed down by this kind of practice, which calls into question the free movement of workers in the world.

Another form of practice that undermines free competition is tax dumping. A country may decide to implement tax incentive policies, i.e. policies offering a low corporate tax rate. Implementing such policies enables states to increase their competitiveness by attracting foreign companies to their territory. A company is a source of financial and human capital. The arrival of several foreign companies will therefore promote the country's economic growth. But like all forms of dumping, this too is carried out to the detriment of other countries and companies. Throughout the world, a competitive war is being waged to attract as much capital as possible. In recent years, many countries have lowered their corporate tax rates. They include world powers such as China, the United Kingdom, Japan and Australia. All in all, since 2003, a 30% reduction in the global corporate tax rate has been recorded. Within the European Union, this has been a major concern in recent years, particularly in the case of Ireland. Indeed, the Irish government imposes one of the lowest corporate tax rates on the continent and in the world with a rate of 12.5%. Compared with the rest of Europe and the United States, most countries offer corporate taxation, in some cases well above 25%. This is the case for Australia, France and the United States with rates ranging from 30% to 35%, i.e. 2.7 times higher than those applied in Ireland. (Figure 12) Despite its reduction, Australia's corporate tax remains among the highest in the world. The problem of fiscal dumping is that it works and attracts many foreign companies, especially large multinationals in the high technology sector. This is the case of Google, Intel, Microsoft and Hewlett-Packard. Other countries are in the sights of MEPs who

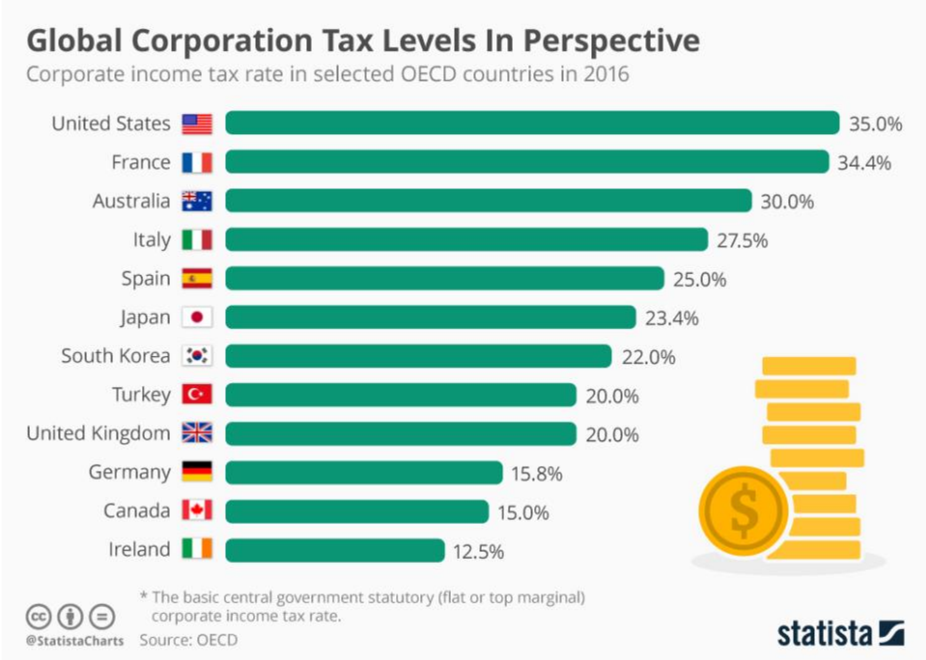

Figure 12. Nominal corporate tax rate in percentage in 2016
Source: OECD

denounce an estimated loss for France of 15 billion euros per year. Luxembourg, for example, has a low corporate tax of 21.8% compared to its European neighbors and is negotiating agreements with foreign companies. Among the big winners of its tax advantages with Luxembourg are the food giants Coca-Cola and Pepsi, companies such as Apple and Amazon, or luxury groups such as LVMH and Burberry. The solutions proposed to deal with this practice are diverse. Most countries of the Organization for Economic Co-operation and Development have implemented a common strategy of lowering their tax rates to reduce competition and broadening their tax bases. France is one of the few countries to have chosen the opposite strategy. Moreover, it is necessary for the country to improve its attractiveness. To do so, the country has an interest in communicating the profitability of investments on its territory that offer higher tax rates.

3.2 Protectionist wave lately

It is with the rise of practices that run counter to free competition that globalization is threatened. For several years now, many political movements and associations have been emerging intending to counter free trade by denouncing the excesses associated with it, which disadvantages many countries and companies. The WTO nevertheless tries to continue to uphold the ideologies of globalization. The observation is the same for all, trade in the world must persist because it is indispensable to all nations. Today's world is made in such a way that no country has all the resources necessary to meet its national demand. Imports are therefore compulsory and to import, goods and services must be exported. Free trade is the open door to competitiveness, but this system is full of loopholes that are increasingly being discovered. Abuses are therefore multiplying, offsetting the initial benefits of globalization which are linked to the economic development of countries. Faced with this situation, more and more supporters of protectionism are emerging, many of whom are leading the major world powers. Their aim is not to stop international trade completely, which would be impossible, but to regulate trade through the internal policies of each country. This may be due to the lack of WTO regulations that do not sufficiently prevent fair competition. It can be observed that many major world powers have forced the line on these protectionist policies. The United States, which led the ranking of countries with the most protectionist measures between 2008 and 2009, is the most reactive with 790 past measures. India, a developing country, also wants to protect itself and has passed 566 measures. Next come major economic and industrial powers such as Russia, Germany, the United Kingdom and Brazil, a major exporting country. (Figure 13) This represents a rise in protectionism on the part of the main players in international trade, which worries the WTO but can be explained by the apprehension of these countries and their desire to protect themselves.

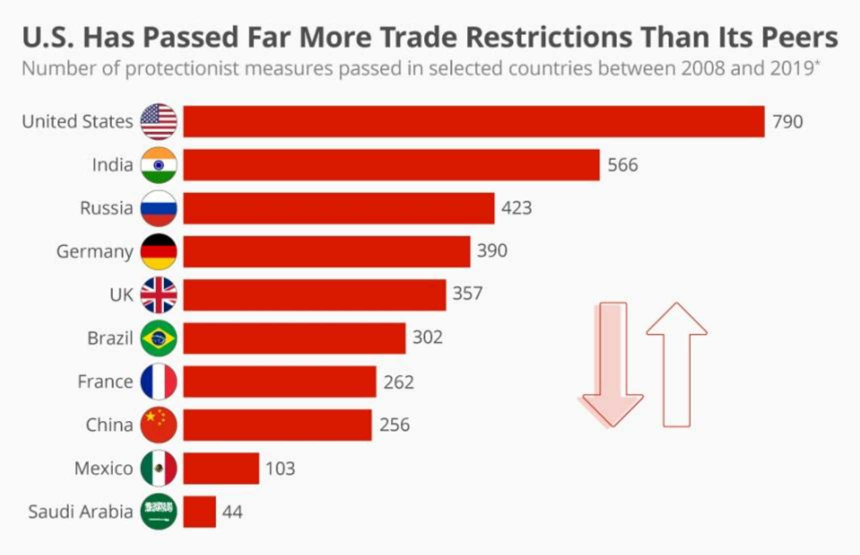

Figure 13. Number of protectionist measures passed in selected countries between 2008 and 2019
Source: Global Trade Report by Euler Hermes

The loss of jobs, the closure of companies, the difficulty of entering certain markets, the loss of profit shares, all these elements aggravate the way of thinking of politicians who want to gradually close their borders. A return to total protectionism would be catastrophic for global growth and economic development. But there are still some measures that can limit its taking of excessive liberties that hinder the free trade of other countries. There are six of the most common. The ones we have already talked about and which are the most widespread throughout the world are the application of customs taxes. They can be of two types, applicable to a percentage of the price, ad valorem excise duties, or additional to the price of the product through a fixed price. Customs taxes are introduced by governments and applied to imports. For governments wishing to curb trade-related excesses and protect their industries, this tax is the most direct and it is advantageous in one sense because it allows these countries to increase their income related to these imports. The impact of these taxes is to increase the prices of imported products and thus reduce consumer surplus, demand will decrease. This measure is used to protect local industries against dumping for example and low-priced imports. Imports subject to customs duties will then see their quantity decrease. The problem is that the application of such taxes may be targeted for certain products and countries, which may lead to retaliation by the industries or countries targeted by these policies. This is the case of the United States and China, which have embarked on a trade war, in particular through the application of a special tax in question. The objectives of applying protectionist tariffs are to save jobs, reduce competition within protected industries and increase government revenues. But the apparent benefits of this measure for one industry may have negative economic consequences for other domestic industries.

Another effective means of curbing injurious imports is the application of quotas. This measure makes it possible to limit the number of products imported into a territory. There are different types of quotas. The most common is the absolute quota, which limits the quantity of a product by an authorized number. The second type of quota used combines the use of quotas and customs duties, known as a tariff-rate quota. The principle is simple, up to a certain quota of imported products the customs duties imposed are lower, when the quantity of imported products exceeds this threshold the additional products will be subject to higher customs duties. The advantage of implementing quotas is to boost local industries. The demand for the imported good will be the same but the supply will not be sufficient to meet the needs of consumers, who will turn to domestic suppliers. The domestic economy of the country will therefore benefit. For exporting countries, this practice is disadvantageous. Foreign companies will see their sales decrease, so their reaction will be to raise the prices of exported products to make up for the loss of profit. The increase in prices reduces the welfare of consumers in the country applying the quotas. In addition, like tariffs, quotas can lead to retaliation by the countries subject to them. In order to avoid such retaliation, some exporting countries anticipate the reaction of other countries by putting in place voluntary export restrictions. The latter consist of the application of quotas on exported products. The benefits of applying quotas are the same as for customs duties, i.e. job protection and reduced competition within protected industries. On the other hand, between quotas and customs duties, the latter are more favorable for governments because they increase their income, which is not the case with quotas. The application of quotas therefore causes a greater loss of economic welfare for the country. An example of application is the setting of an import quota for Japanese cars by the United States in order to encourage the sale of American cars within their territory.

There are also other measures that are more radical than those mentioned above. This is the case of embargoes, which consist of a total ban on the import of a certain product or a ban on trade with a country or group of countries. The objectives of trade embargoes are either to exert political pressure with the country concerned or to prevent the circulation of dangerous products. The best-known product embargo concerns the sale of armaments and applies mostly to politically unstable countries. The application of such a ban can have very serious economic consequences for the country concerned. That is why it is important to understand why certain political pressures are exerted and to take them into account. That was the case with the economic and financial embargo imposed on South Africa in 1984 by several countries to put an end to its policy of racial segregation and apartheid. Eight years later, apartheid was stopped. The introduction of embargoes has the positive aim of changing the policies of the targeted countries. However, this can lead to economic hardship for the population of those same countries and on the other hand encourage smuggling.

Other instruments are used by governments to intervene in trade policy. Production and export subsidies are among those instruments that are less direct. A subsidy, unlike a tax, is a financial assistance offered by the government. A production subsidy is intended for certain industries in order to increase their production. Whereas the export subsidy is intended to promote their exports by offering a lower sales price to foreign countries wishing to import than the domestic one. As with customs duties, it can be applied differently, ad valorem, i.e. as a percentage of the sales price, or specific, fixed price per exported unit. The problem with the latter measure is that it is tantamount to dumping, because offering lower sales prices abroad puts companies in foreign markets at a competitive disadvantage. Unlike customs duties, export subsidies are not regulated by the GATT agreements and are even prohibited by the WTO. Moreover, production subsidies can be frowned upon and penalized countries are allowed to introduce countervailing customs duties as a defense.

In order to limit as much as possible the export of their goods, some countries put in place non-tariff barriers that are binding on exporting countries. Administrative barriers are among the instruments used to discourage industries wishing to export goods or services to external markets. These types of measures are barriers to free trade and economic growth of countries, but they are allowed. For example, in China, the government requires foreign-branded cars to have meter readings in Chinese, or to have operating instructions in Mandarin and the dialects of the different parts of the country. All of these requirements represent a lot of work and additional costs for manufacturers, who are therefore discouraged and abandon the idea of exporting their goods to certain countries. Administrative obstacles also include the application of mandatory environmental standards. These rules are intended to link trade policies with environmental policies, but they can be unfavorable to some countries, particularly developing countries. The WTO therefore wants to be able to examine its measures to see whether the balance is being respected and whether they will not undermine free trade. It is therefore necessary that these measures meet the objectives of the importing country while ensuring that they take into account the capacities of developing countries.

The countries most affected by the loopholes of globalization are the developed countries that are suffering from the practices of developing countries such as China, which has become a major player in world trade and is now the world's second-largest economy. China owes this position in part to trade liberalization and it intends to continue its rapid rise by overtaking the world's leading economic power, the United States. And this is what has prompted the current US President to react. Indeed, the Republican candidate in the 2016 U.S. elections won many votes by basing his program on more protectionist policies.

His goal is to protect the American economy and its people. In particular, he promised these voters a trade war with China and customs reprisals with Mexico. Little by little, the United States is closing itself off to the world of trade. It is the only country that does and can do that. Indeed, to be able to engage in such protectionist policies without fear of huge retaliation from other countries, one must be able to be self-sufficient. A country such as Germany could not do the same thing because by limiting imports, their exports, especially of cars and machinery, would be slowed down and it would be an economic disaster for the country. But the giant of North America has almost all the resources and wealth necessary for the proper functioning of its economy, so it would be self-sufficient.

Overall, the implementation of protectionist policies is a danger to the proper functioning and continuity of globalization. The measures taken lead to a reduction in competition, which is the very essence of free trade. If competitiveness decreases, markets tend to become monopolies and thus prices would rise. The trend would be reversed, and instead of prices falling, they would gradually begin to rise again. This would stop the development of countries and reduce the benefits to consumers.

3.3 Environmental degradation

A final recent brake on globalization is the issue of the environment, which could have been anticipated. It was not the priority of the WTO, which for many years focused on the organization of world trade relations. The environmental problems directly linked to development and the increase in international trade did not seem to be important, to the point that, when the GATT was signed, no regional agreement raised these problems. This can be explained by the fact that at the time no one thought that free trade could have negative impacts on the environment. All that was needed was for all governments involved in international trade to put in place policies within their own countries to protect the environment in the face of production and exports. But this is impossible, as environmental problems are a global preservation challenge, a unit in which all must participate. The strong economic growth resulting from globalization has led to environmental degradation throughout the world. Among the most alarming problems are deforestation, global warming, increased emissions of greenhouse gases that pollute the air, the depletion of certain natural resources, water pollution, the disappearance of protected animal and plant species and many others. Faced with this, it is essential to react and take effective measures to limit or even stop these

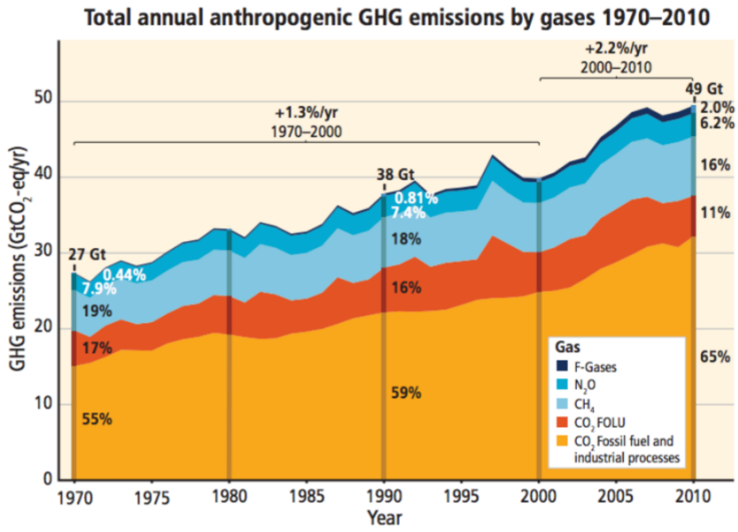

Figure 14. Evolution of total greenhouse gas emissions by gases between 1970 and 2010
Source: Global Warning Observatory

harmful effects. The opening of borders has made it possible to produce goods in very large quantities, to exchange them with different countries in the world and then to consume them. This is often referred to as an increased carbon footprint[9]. The main finding of environmental damage is the increase in greenhouse gases. The latter is generated by various activities that have accelerated with globalization, including industrial production, transport and deforestation. The Global Warming Observatory has drawn up a graph showing the different sources of greenhouse gas emissions as a proportion of total greenhouse gas emissions. Firstly, it can be seen that between 1970 and 2000, these emissions increased by 48%, from 27 gigatons of CO2 equivalent per year in 1970 to 40 gigatons in 2000. This represents a constant increase of 1.3% per year over 30 years. This process accelerated during the 21st century, with the annual increase rising from 1.3% per year to 2.2% per year. Thus, in ten years, greenhouse gas emissions have risen from 40 to 49 gigatons of CO2 equivalent per year, an increase of 22.5%. Another very large country with a population of more than 1 billion, India, accounts for 7.3% of these total emissions and this country is in full emergence, its economy and its industries continue to grow every year (Figure 14).

Most of these greenhouse gases emitted are carbon dioxide, CO2. The main causes of these carbon dioxide emissions to date remain the combustion of fossil fuels and production processes, forestry activity and soil transformation. Industrial activity, which is at the center of globalization, is the most polluting sector. The production of electricity is essential for this activity. Power plants producing electricity from coal, gas or oil and its derivatives release an astronomical amount of polluting gases every year. But they alone account for 65% of total annual greenhouse gas emissions. After production comes trade, both within and between countries around the world. Import and export and human flows require the use of means of transport. The transport sector accounts for 15% of carbon dioxide emissions. The most widely used means of transport

[9] The carbon footprint is the measure of greenhouse gas emissions that accounts for the impact of human activities on the environment.

and therefore the most polluting are airplanes and cars. Air transport increased by 86% between 1990 and 2004 and is today responsible for almost 9% of the harmful gases released into the atmosphere. The industrialization of the world started in the developed countries, which for a long time remained the world's biggest polluters. Today, the trend has been reversed and it is mainly the emerging countries that emit the most polluting gases. The United States is in second place in the ranking of the most polluting countries with a share of total CO2 emissions of 15.2%. Today, despite the presence of the world's leading economic power at the beginning of this ranking, the trend has been reversed and it is mainly the emerging countries that emit the most polluting gases. We find China at the top of this ranking, and for good reason, with a population of nearly 1.4 thousand people and a highly developed industry, they are at the center of world trade. It accounts for 28.1% of total carbon dioxide emissions in the world with 9.5 billion tons emitted. (Figure 15)

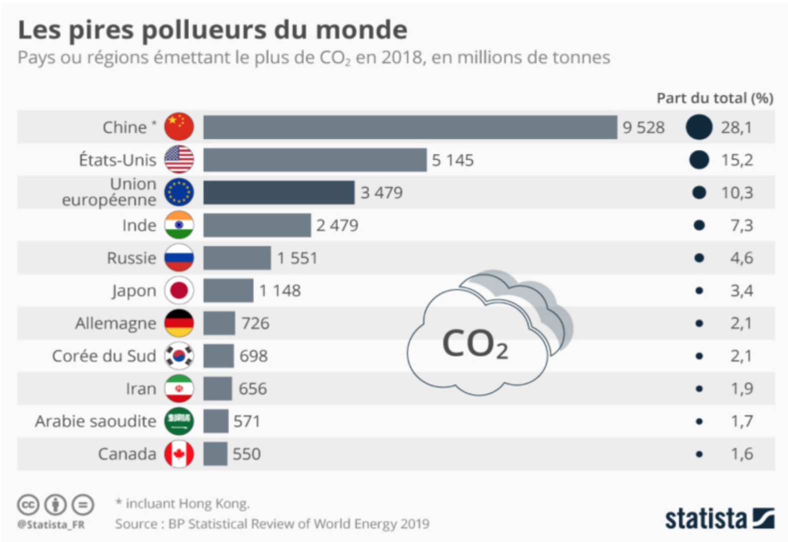

Figure 15. Countries or regions with the highest carbon dioxide emissions in 2018, in million tons
Source: BP Statistical Review of World Energy 2019

Another major degradation caused by globalization is the loss of biodiversity. In recent decades, many species have become extinct. One of the indirect reasons for this degradation is the growth of the world's population. Indeed, the world population has increased by 47% in three decades, the planet had about 5.3 billion inhabitants in 1990 and today, in 2020, 7.8 billion. Population growth has led to the need to expand cities and farms, which has been responsible for the eviction of species from their land. But this growth is not a direct cause of globalization. On the contrary, the need to provide for this growing population is one. Demand for products has exploded around the world. One of the consequences is the overexploitation of resources, including fishery resources, for example. Overfishing is one of the scourges of globalization, millions of fish are caught every day, then killed and finally thrown back into the sea without being offered for sale. Bluefin tuna is an endangered species. The flora is also not spared, and some plants are disappearing because the demand for them is excessive, such as teak, an exotic wood species grown on the island of Borneo, which is currently threatened.

All these challenges appear to be at odds with the environmental challenges of the 21st century. That is why it is imperative to act quickly. The WHO must take into account the new challenges of this world. It must put in place regulations aimed at reconciling globalization, i.e. growth in trade and economic growth, with green growth, ecology. The fight against global warming was launched in 1997 with the signing of the Kyoto Protocol, which the United States, a major industrial power, never signed. This protocol is an international treaty aimed at reducing greenhouse gas emissions. Today 195 parties and the European Union have approved or accepted this treaty but only 37 industrialized countries have committed themselves to this protocol and agreed to reduce their emissions by at least 5%. This commitment for the first period of the protocol, from 2008 to 2012, has been largely respected as the total reduction has exceeded 20%. The European Union and Japan are the two parties most involved in this project as they have agreed to reduce their emissions by 8% and 6% respectively. The results of the second period of the protocol whose objectives were set at the Doha summit are not yet known because this period runs from 2013 to 2020. The 37 industrialized countries (including the 27 EU member states, Norway, Switzerland, Australia, Ukraine, Belarus and several smaller states) are committed to reducing their total emissions by 18%. Despite a significant number of countries having approved and/or agreed to participate in this protocol, there are no sanctions. The agreements of the Kyoto Summit therefore call into question major aspects of globalization. Indeed, on a global scale, principles that were much developed since the liberalisation of trade, such as relocation, need to be revised downwards. It is important to limit transport, i.e. the exchange of goods and human flows, between countries because transport, particularly air transport, is highly polluting. The international division of labour must therefore be called into question. At the national level, it is in the interest of governments to take pro-environmental measures and this has an impact on the internal trade of countries. The consumption of local products must be encouraged to limit the transport of goods as much as possible. On the other hand, to limit or even stop the use of pesticides that are harmful to the planet, to the land and that pollute the water, the consumption of seasonal products must also be promoted. All these rules that can be taken by States independently of each other would ultimately make it possible to effectively reduce total greenhouse gas emissions. However, the introduction of such measures can have significant economic consequences and may be reflected in the prices of goods and services.

CONCLUSION

Globally, globalization was strongly promoted after the Second World War, but it accelerated and intensified during the last two decades of the 20th century. Despite the many theories promoting the importance of protectionist policies for the benefit of each country's economy, liberalism has gained global prominence. The periods during which developed countries intensified their policies to limit trade to protect their production and thus their economies were periods of declining economic growth in those countries. As a result, these policies have gradually given way to a new borderless era where each country is free to trade with other countries. The main motivation for the implementation of free trade is the idea of benefit for all the countries involved. Many economists advocate free trade, and to support their arguments, he tries to show that since the beginning of globalization, all countries have developed. A country's development is assessed according to three different criteria that determine whether or not development has taken place. These are the economic, social and cultural spheres of development. It was simple for its economists to prove the strong economic growth achieved thanks to trade liberalisation, in particular by observing the evolution of global and national GDP, which has progressed enormously since the 1980s. Thus, economic development was ensured. Opinions on social and cultural progress are mixed. The development of industries also had a strong impact on the social development of countries because it generated the creation of many jobs. In developed countries, these jobs created usually require a higher level of qualification, which leads to higher wages, which is beneficial from a social point of view. Similarly, a sharp decrease in inequalities has been observed between the different countries of the world. On the other hand, it would be wrong to claim that globalization has been a source of global development. Social progress and significant economic growth are factors that have contributed to the countries' development. Besides, such claims as the calculation of GDP are sometimes distorted and contradicted. From a social point of view, since trade liberalization, there has also been a reduction in the social security cover set up within countries to cope with the low prices of labour available in foreign countries.

Despite some negative effects, globalization has had a strong positive effect for most countries and especially for consumers. One of the main consequences of this opening is the decrease in the prices of goods and services. Increased competition in all markets and thus increased competitiveness has led to pressure on companies to lower their prices. The capital movements made possible between countries facilitate investment for companies, which can thus increase their share of capital allocated to research and development. This improves and lowers production costs while improving product quality. Lower prices and improved quality benefit consumers and increase their well-being. Globalisation is therefore positive from the consumer's point of view, there is an overall relative improvement in the standard of living.

Nevertheless, despite all the positive developments brought about by free trade, its effectiveness continues to be questioned. For several years now, more and more opponents of free trade have been appearing within political parties and even managing to impose their ideologies as leaders of countries. This skepticism is due to an awareness of the limits and excesses of globalization. The dumping practices carried out by some governments and companies undermine free competition between countries. It is difficult to prove the exercise of such practices, which remain little sanctioned, so some leaders decide to put in place measures specific to their country to protect their economy. To this end, a wave of protectionism has emerged and has been growing in recent years. Other challenges are also important reasons for slowing down the progress of globalization, such as environmental challenges. Indeed, the multiplication of trade is an aggravating factor in terms of ecology and has irreversible consequences on the planet.

Globalisation has therefore had largely positive effects in the world, but it needs to be more controlled to limit its negative effects as much as possible.

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