

The global food challenge caused by Globalisation

As a key player in the evolution of the world scene, globalization is at the heart of the transformation of international relations. In economic, cultural, political and military terms, it aspires to the creation of an international society through the application of free trade and the acceleration of the movement of people, goods, theories, information and others. Linked but different, the term globalization advocates the creation of an interdependent and liberal world in different aspects such as industrial, commercial or financial. Globalisation mainly defends the ideologies of the globalisation system. The phenomenon is the cause of the functioning of human food, it has developed quickly in the past, and continues to spread.

Food is the act of eating. It is essential to human life and is one of man's primary needs. This is why the search for raw materials to nourish oneself has always existed. Trade, barter and globalization have taken shape in the past, pursuing the same objective: to nourish people. We will then ask ourselves here how globalization plays a role in the process of human food, and what are the consequences today. We will discern the evolution of globalization and food exchange processes, its advantages, disadvantages and future progress.

1) The history of globalization

The evolution of exchanges:

The beginning of the globalization process is not really clearly delimited since it is essential to take into account several economic, demographic, cultural, epidemiological, political and other factors. From a global point of view, the beginning of the 16th century would mark the beginning of international exchanges and the connection between the different continents and countries. The latter are the main actors of globalization. Some have a much more important place than others, such as England or the United States, which have built their power on this model. While other countries have only adopted this model in recent years, such as India or China (BRICS), which are gradually emerging as rising powers.

Globalization is taking shape through the creation of cycles, where long periods of product exchange can be observed. The human exchanges took place initially. The discovery of the lands, and their conquests, allowed the spread of the human species over the entire terrestrial territory. Thus, migratory phenomena are the source of the development of the human species. The economy was gathering and hunting at that time. The agricultural revolution then took place slowly. Food production then spread rapidly and was distributed via maritime networks. In effect, the discoveries and modernity of transport allow the occupation of the seas (1500). The straits then became real strategic links for international trade and the capitalist model flourished. This was followed by the period of the Industrial Revolution and Democracy (1800). From 1980 we entered a digital era, with the rise of the global connection. Changes, innovations and developments are rapid and constant.

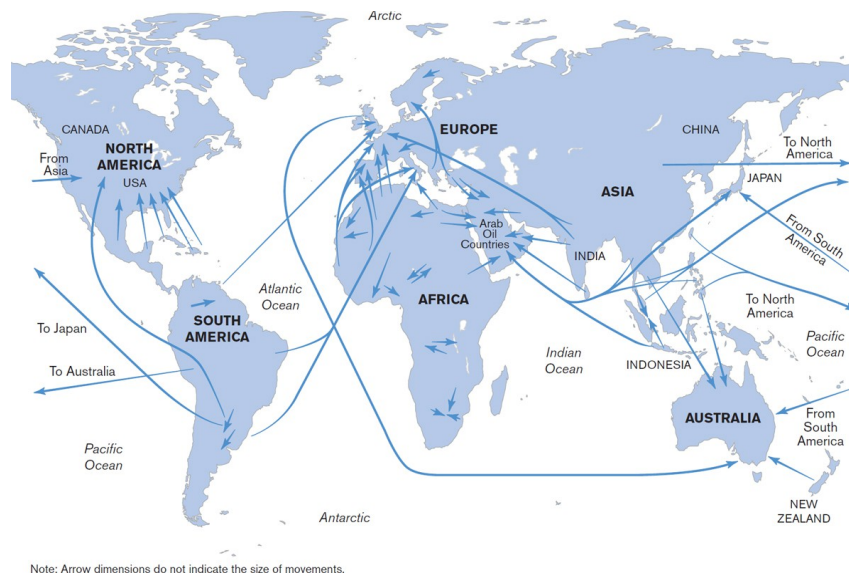
The comparative advantages of the territories:

Since prehistoric times, people have traded goods for other goods. As money had not yet been created, bartering was a very effective means of exchange. In addition, it allowed men to obtain goods that were rare to them, against other goods that they possessed in abundance. On this principle, trade was created, with a new means of exchange: currency. Let us take the example of the Franco-British treaty created in 1860. Great Britain had many fabrics, silk, coal, industrial and metallurgical products that it imported into France. While, France exported mainly agricultural products to England, including wine, champagne, cereals and livestock products. Each country has stronger resources than others, in which

they have specialized and acquired experience. Thus, exchanging goods is beneficial to them since they sell the products they have in abundance and even create a reputation for know-how. With the money from this transaction, they can in turn buy goods from other countries, in order to offer a diversity of products to its population. Everyone benefits from their comparative advantage. It should be noted that each territory had its own agricultural products. This is how man buys passion fruit in Brazil and finds dates in North African countries because the weather allows it. He also finds the best wines in France because the quality of the terrain offers him this opportunity.

Migration flows:

It should also be noted that human migration flows have become more and more frequent. For various reasons, people try to move, especially for work, lack of labour in certain territories, political refugees, accessibility to travel, etc. The reasons can be very numerous, and diverse. The author Castles schematized the major migration flows on the following map. We realize that migration is frequent and numerous. Exchanges of food and culinary culture are easily created when humans move around, because it is part of the knowledge and culture that is anchored in a person. This phenomenon also makes it possible to justify the increase in trade and products specific to certain territories.



Pursuing the objective of peaceful trade and world peace, it can, on the contrary, be the cause of many crises, or even war.

2) The agri-food system influenced by globalization

The major players

We can thus evoke the three primordial dimensions, which the triad pursues. First, the primary objective is growth in terms of knowledge, information, product trajectories, people, technologies, innovation, etc. Second, the distribution of gains and losses between participants is an objective pursued by all countries. But the term "distribution" also refers to the distribution of power, the weight of countries in the market, the influence, prestige, human and technological capacities and capital, etc. of each country. Each territory seeks an individual advantage, which can be achieved by creating relations with external countries. Thirdly, the stability dimension is required, both socially and ecologically. Thus, human rights must be respected, as well as nature and the environment, when trading between countries. However, the cohesion of the three dimensions is very difficult to achieve

and implement. This is why the Triad alliance is highly criticized, as it imposes economic imperialism and is said to cause many forms of pollution.

The term Triad is commonly used to refer to the three major regions of the world economy: the United States, Western Europe, and East Asia. These regions control the major flows of communication and transport, and are often specialised in high-growth sectors of activity, such as aeronautics, the automotive industry, the agri-food industry and the oil industry.

The arrival of mass distribution and mass production

The agri-food system is affected by the principle of globalization since its entire organization is disrupted by mass production and the arrival of mass distribution. In effect, the agricultural system that was supposed to produce 10 tonnes on 100 hectares must now produce 100 tonnes on 10 hectares. The image is grotesque, but the industrialization of the countryside contributes to this enthusiasm. Through this overproduction, companies can offer much lower prices to customers. The principle of globalization has led to the financialization of food. This means that the global trading system ensures that a primary need becomes an easy source of profit.

Standardization of means of transport

In 1956, Malcolm McLean decided to send the first containers from New York to Houston, Texas. He realizes that maritime transport is much cheaper than road transport of goods. This is how the container has become the flagship tool of globalization to transport large quantities of goods to foreign countries by sea. With lower transport costs, companies no longer store goods but deliver them at the last minute. In this way, they reduce their storage costs, and can offer even lower prices. As proof, in 2005, 376 million containers were reported to have travelled the globe. In 2012, there were more than 600 million of them. And this number has been increasing ever since.

The standardization of trade

But of course, given the rapid development of this market, it was necessary to create rules and limits to be able to manage its exchanges. In 1947, the General Agreement on Tariffs and Trade was created. It will then become the World Trade Organization. Thus, in 1995, the World Trade Organization was created. In 2011, 153 countries are members of the organization. The objective of the Act is to lower customs duties between countries and thus regulate and control the phenomenon of free trade. Each country has the right to speak out and veto and has the same weight in decisions, regardless of the amount of its contribution to this organization. The WTO brings countries together to take major decisions related to international trade, subsidies, taxes, and security. However, the WTO is much criticized because it can be beneficial for developed or developing countries that more or less agree on their points of view. Dominant systems can then stand out and leave little room for other countries with fewer resources to face this strong competition. In addition, some groups of countries such as Europe have developed their own trading rules, i.e. they benefit from much more favourable customs duties between countries that are part of the European Union. But these practices can also be observed in MERCOSUR (South America's common market), NAFTA (between 3 North American states), etc. Tariff preferences are first granted to neighbouring countries.

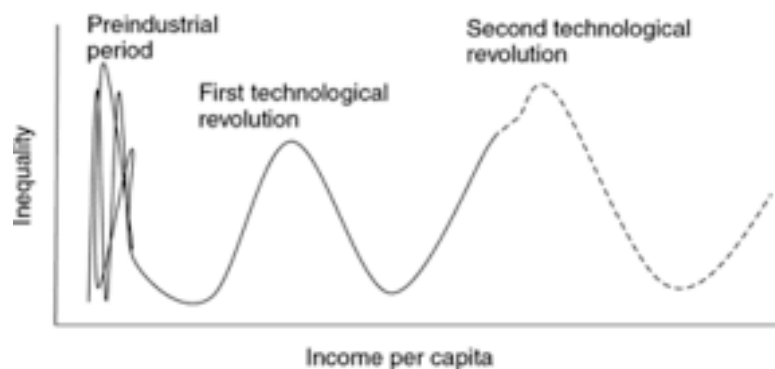
3) Consequences of such a system: Global destructive growth, the paradox of the 21st century

a) Positive way

Globalization is a process that has many advantages. First, it allows the enrichment of certain states through the possibility of entering a huge global market, where demand is constant. Some populations then emerged from poverty, and globalization has contributed to the dimension of equality between

countries. It allows the sharing of products present in certain lands (e.g. wine in France), the exchange of knowledge, the economy of scale and the sale between countries at very competitive prices. It is then consumers who benefit from this price war between states, since they will be able to enjoy cheaper products by going to the super market. It must also be taken into account that globalization allows for the exchange of information and knowledge. In addition, the capitalist system results from it. It has several advantages since it allows growth, production gains, the evolution of production models, technological progress and innovation. However, it may not be considered an advantageous system for all countries.

In his theory, Kuznets in his work demonstrates the primary quality of globalization; that of reducing inequalities between different populations. Indeed, Kuznets insinuates that as a country's economic development progresses, inequalities will be reduced. First, some sectors are expanding and becoming very profitable. Thus, a minority of countries or agents can invest in certain sectors and generate profits and create wealth. Inequalities are then formed between agents who benefit from the positive results obtained with a developed sector of activity, and agents who have not invested in it. Secondly, the business sectors being exploited are becoming less and less profitable, and are therefore accessible by the majority. This is where the Kuznets curve comes down, proving that the inequality gap is narrowing as we can see in the following figure.



b) Negative way

But there are necessarily dark sides. This production system has as many negative consequences in terms of health, the economy, pollution and over-consumption of the resources offered by our planet.

The increase in pollution:

First of all, the growth of trade by sea or other transport generates a lot of CO₂ emissions into the atmosphere. But it must also be considered that in order to meet world demand, causing over-consumption, mass production has become established and agricultural processes are the cause of a very high CO₂ emission. Waste rejected by man and the use of energy are no longer enough to sustain human life and affect it. We waste resources and raw materials to be able to guarantee non-stop production. This is followed by pollution and global climate change. Warming temperatures are a real problem today, which can put human well-being and health at risk. In fact, many diseases result from it. This phenomenon, which is supposed to cause a positive development of human life, may ultimately lead to its future extinction.

Inequality of wealth and deterioration of nutritional quality

It must be added to this that the benefits generated by this economy do not benefit everyone and that wealth is very poorly distributed. First of all, mass production implies economies of scale as well as lower production costs. But employee wages are also affected by this phenomenon. The purchasing

power is then reduced. Exploitation is taking place in some countries, and the gap between rich and poor is growing. The current system pushes the masses has consumed in a certain way, and has used the same nutrition schemes, i.e. to move towards the same type of products. This comes down to the principle of mass distribution, which in fact includes purchases, so that consumers from rather disadvantaged classes or with few resources can buy food and have access to a diversity of products. It should be suggested here that since the margins of large distribution are low, stores can offer a more affordable price to their customers. However, a decrease in prices suggests a decrease in quality at the same time.

The health of man in danger:

This loss of quality is continued by the creation of many diseases, related to the functioning of the heart, the production system, many cancers, weakening of the body, etc. Nutritional qualities are no longer found in low-cost foods, resulting from the mass production system, and humans suffer the consequences. The loss of taste is also an important element to note. Many raw materials become genetically modified organisms, and lose all their benefits in terms of taste and quality. But there is also a new disease that is currently very frequent, and due to the impoverishment of product quality, it is overweight. In 2016, 1.9 billion adults were overweight, 650 million of whom were obese. As this figure continues to rise, it is mainly due to the increase in the consumption of high-calorie, high-fat foods that are accessible throughout the world and generally very inexpensive.

The impoverishment of society:

In reality, the impoverishment of quality, in order to acquire price impoverishment, also has repercussions on the impoverishment of yields and consequently of wages. The objective is to offer an even lower price. However, this has an impact on the purchasing power of the population, and a real vicious circle is developing.

Non-respect for the animal race:

Mass production is carried out at the expense of respect for the dignity of the animal. The objective of farming methods is to increase productivity, to the detriment of respect for animals. Animals are stored in warehouses, where they do not always have the space to move. In addition, they are subjected to stressful and painful transport and cutting conditions. Their well-being is not considered. Their diet is also a major weakness. Let's take the example of the chicken, which is eaten exclusively with soya and corn. It will succeed in laying an egg that looks like an egg, but it will not provide all the nutritional and taste qualities that an egg from an outdoor chicken, when properly eaten, could offer. This pattern is reproduced on the cow that makes milk, but also on stressed and tense meat, and so many other foods.

The phenomenon of free trade also forces producers to align themselves with prices, because the prices offered by neighbouring countries are very low. They are then very vulnerable to competition from countries. Thus, in order for the customer to choose his products rather than those of the neighbouring country, farmers must lower their prices, to the detriment of the quality of the product.

4) The arrival of a new era?

Re-educate the new generation

Man now knows that he consumes poorly, and that he over-consumes by using the resources of the next generation. Thus, we must re-educate future generations to consume according to their needs, not by wasting and over-consuming. If man accepts to lose a little of his comfort, he could claim to restore a balance between his consumption and his nutrition. It is urgent to make the consumer responsible for

his consumption. It is also essential to limit food waste, both in terms of production and consumption of the product.

Promote local food agriculture

In order to allow equal access to food, we could develop food agriculture, i.e. an agriculture of "self-consumption" directly linked to food, the bulk of whose production is consumed by the farmer and his family. Only the surplus would be sold on local markets. This would also reduce greenhouse gas emissions due to the transport of crops from the country of production to the country of consumption. This way could become a way to get to know the products to eat. The problem is that men are increasingly living in cities, in buildings. So, it can be complicated to grow your own products yourself, and create your own garden at home.

The information area and new consumption methods

New eating patterns are emerging today, and more and more people are adopting them. Thus, we can compare vegetarians, who exclude meat, fish and seafood from their diet. While veganism is a real way of life. Vegans do not consume any food or products that could cause the animal to be hurt. They do not consume meat or fish, or what they produce such as milk or honey, and do not buy any clothing or other products that require the use of materials from the animal (cotton, wool, leather, etc.)

This way of life is attracting more and more people in our time. It would seem to be a real solution to reduce the consequences of production on health and pollution in the future. In fact, a study by Oxford University shows that if all humans were to go vegan, greenhouse gas emissions would decrease dramatically, since about 15% of the planet's gas emissions are due only to livestock. Second, there would be much more land to cultivate to feed humans. In effect, livestock are fed with a lot of plants. For one calorie of meat produced, we have to spend 7 vegetable calories. So, the land could feed humans directly, if we no longer produce meat in the future. That way, we could feed many more people. In addition, such a diet could improve men's health and reduce the incidence of cardiovascular disease and other diseases. Vegans make food choices that have less impact on the environment,

However, going vegan could not be the solution to everything, since many animals will die. The number of bees would decrease enormously without the presence of beekeepers, there would also be fewer cows and chickens that would not survive without the breeding of men, etc. The breeds would not completely die out, but the number of animals would decrease dramatically.

In recent years, the consumption of organic products has been growing rapidly, and is constantly raising awareness among new consumers. Based on a solidarity and responsible approach, organic farming promotes production systems that respect the environment, human health, the soil and the economy of the country. Organic farming is expanding as a result of the expansion of information exchange between consumers and ever-expanding health knowledge.

Sustainable agriculture

Less demanding than organic farming, sustainable agriculture in the European Union under the Common Agricultural Policy (CAP) requires, among other things, that the use of fertilizers and pesticides be limited, that water resources be saved and that waste be sorted.

The quality-price dilemma

The problem is that not all populations are willing to spend more money to get more quality, i.e. many consumers will more easily turn to cheap meat, or low quality products because they offer a more attractive product. It is this logic that must be reversed in the future among consumers. Responsible consumption means choosing to spend your money better, and perhaps eat less in quantity, but give priority to quality.

In view of the change in mentalities, and the growing fear of consumers, companies have had to adapt. Designing tomorrow's food is a market that will make itself profitable. Thus, companies are trying to offer new natural and organic brands that respect the environment. These qualities are put forward to attract the customer who pays particular attention to this asset. In addition, it results in product quality and taste.

Conclusion

The principle of globalization at the beginning of its expansion did not present a danger to human food because this principle has always existed, but it is all human behaviour that causes it. Globalization has resulted in an increase in migratory flows, means of transport, trade and the confrontation of information. Food production systems have adapted to the market as well as to demand, at the same time trying to generate very high profits and influence consumer behaviour. But this large-scale production has many negative consequences on the atmosphere, human and environmental health, as well as on the situation of the main agents. However, a new era of hope is coming, new and more responsible consumption patterns are influencing customers' purchasing behaviour, and companies are trying to produce in a way that respects nature and the environment. However, the solidarity and concordance of the different agents may not be enough to save our planet and nourish all the inhabitants in the future.

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