



COFFEE INDUSTRY

“Of all global strategies, agriculture is probably the most unsustainable” Simons (2015), the agricultural sector is the one who resists change the most and the most critical, with the global population growing at a fast pace, whose middle class is growing alongside their disposable income, making them demand more and better quality products; this critical factor makes growing any kind of crop in a sustainable way a big challenge which can only be accomplished with a market transformation in which a change in the agricultural and food producing systems is made.

The coffee industry is an economic force for many countries who are largely dependent on exporting this commodity, it is in fact after crude oil, the most sought commodity in the world whose worth is over \$100 billion worldwide and over 500 billion cups are drunk every year (Gold, 2011).

Even though coffee growing has a positive environmental impact compared to other economic and agricultural activities because it contributes to carbon sequestration which is an effective soil stabilizer and allows the preservation of the original biodiversity in planted areas, it also has negative impacts such as water pollution which occurs during the water washing process of the coffee beans (International coffee organization, 2015).

Deforestation and the use of chemicals to chop down forests in order to increase the output is another issue; in the beginning coffee has been traditionally grown in the shade but in order to increase yields, coffee growers have been pushed to plant their crops in the sun. When coffee is grown in the shade, it provides a varied habitat for different species, allows the soil to replenish its nutrients and serves as natural pest control; sun-grown coffee has a negative effect on the environment, firstly because forests are chopped down, it diminishes biodiversity due to the clearing of the forests which leads to the soil's decreased ability to yield good crops, it also leads to the use of pesticides and fertilizers which are used to try to replace the nutrients in the soil (Solidaridad, 2014).



It also has a social impact because many coffee growers make very little money because they use inefficient growing methods, due to this fact, their families live in precarious circumstances where they suffer from poverty, malnutrition, diseases and an overall bad living situation (Solidaridad, 2014).

All of the above mentioned factors are issues that lead to the coffee industry being such an unsustainable sector. But how can coffee beans be grown in a sustainable way? It is not about higher productivity where more crops are produced per hectare because there is not enough land to grow enough crops; coffee can only be sustainably produced once there is a fundamental change in which it is produced in a smart, more efficient and more sustainable way.

The reason why the agricultural sector is failing can be explained because individuals follow a behavioral pattern, which means that people are unable to learn from past experiences, they can therefore not do anything to try and prevent a certain situation to happen again and act proactively to stop it from reoccurring which leads to a failure in the system. This can also be explained with a third person point of view, in which action-reaction patterns are seen and the reason why this happens is also explained.

It is also because individuals have a self-serving behavior and are seeking short-term gains not caring if it affects others negatively; this is caused because there is no effective authority, when an enforcement mechanism that should ensure that people act thinking of the common good instead of a short-term individual gain doesn't exist, the race between the short-term benefits against long-term gains intensifies. Therefore, there is a need for an authority who acts on behalf of the community that is in charge of enforcing rules, implementing quality and safety standards and enables better conditions for the community through infrastructure and knowledge.

The following reasons better explain why the agricultural market is failing (Simons, 2015, p. 31):



1. Markets are designed in such a way that all actors are rewarded for seeking short-term benefits
2. There is a gap between their actions and the consequences of their actions
3. These markets operate in the context of failing or ineffective government systems
4. The basic conditions for change are not present, keeping the system stuck in its negative momentum

In the specific case of the coffee industry, the cultivation of global coffee has grown tremendously in the past decades and this has come in hand with declining levels of diverse shade grown coffee which leads to damaging the soils due to the increased crops being cultivated in the sun, once this happens nothing can recover the soil and no crop can be cultivated in that land due to soil erosion (Gold, 2011).

Coffee growing is one of the main causes of deforestation, forests are being cleared and coffee is planted which leads to the soil lacking nutrients due to the use of unsustainable coffee growing practices and the farm is forced to move to a different place where the deforestation cycle starts all over again.

Deforestation is a serious risk also to coffee farm owners due to flood control, forests prevent excessive rain as well as keeping greenhouse gases at healthy levels where carbon dioxide is recycled and it also provides food for humans and animals.

A research conducted around the world which focused in globe-travelling products such as coffee showed that the heaviest impacts of growing coffee are not seen at the end of the line once a product is bought, instead at different points in the trade chain whose effects on the environment are negative, in developing countries, one-third of the animal species are threatened by coffee distribution this is seen in the loss of up to 65% of the biodiversity in different countries such as Honduras, Sri Lanka and Madagascar among others (Hamilton, 2015).



Another aspect that makes the coffee industry fail is that there is a clear difference in countries where coffee is being grown against countries where it is being consumed, coffee growers are poorly paid which not only affects their families, but also the environment, this bad financial situation makes them grow less sustainable crops and use bad farming and growing practices. Coffee farmers are smallholders and have a low bargaining power compared to coffee traders (Landes, 2015).

The big sustainability issue for the coffee industry is that despite the fact that it is a commodity for many people and important for many economies, it keeps people in poverty which leads to environmental degradation mainly massive deforestation, coffee growers don't have the capacity to differentiate in the coffee market and like it is mentioned before it leads to a low bargaining power which means low profit margins and little to no investment in their business (Simons, 2015).

In short, the coffee industry is unsustainable causing it to be failing due to under investment, bad growing practices and the terrible effects of deforestation in coffee growing countries.

Dynamic systems which explain why the coffee market is failing are the hogs-cycle theory and the tragedy of the commons theory, where again a behavioral pattern is seen in terms of flooding the market (hogs) or overexploiting a common land (tragedy of the commons) people think of their own short term benefit and everybody is worse off at the end.

There are four principles that need to be present before there is a system failure (Simons, 2015, p. 31):

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This situation can be seen in small coffee growers who use a piece of land to grow coffee, they chop down the forest which leads to the loss of biodiversity, soil irreparable damage, use of bad fertilizers, water waste among other bad growing and farming practices; they have in mind their short-term gain which is to sell their coffee beans (for a little price) once this land is no longer able to grow coffee they just find a new place to grow coffee in, and the soil and biodiversity damaging process starts all over again.

According to Simons (2015) coffee growers since they don't need any specific talent or set of skills are undifferentiated among themselves which means that the law of demand and supply will determine their salary and makes them easy to replace them for other people who are willing to get the job done for little money. Most of the coffee farmers still own very little pieces of land which makes them smallholder farmers who are unorganized, uneducated and hardly dependent on the sale of their crops (cash crop). A completely different situation is faced by buyers or exporters who are a part of big international companies (who are mostly the biggest companies in the world).

This is the typical scenario of a market that has been planned to offer downstream companies maximum profitability, while the condition for the actors in the upstream part of the value chain is worse and whose profits are the minimum (Simons, 2015).

This situation is triggered by the inefficiency of some governments, while governments in developed countries intervene with different measures to help their farmers survive and invest, mainly in the form of subsidies while providing them with rural development, nutrition, trade and food aid (the biggest example is the FarmBill passed in 1973 in the USA) in developing countries the situation is usually the complete opposite where agriculture is not a sector that should be supported, instead it has to be exploited this is seen in the form of taxes; these governments are also ineffective in ensuring good social and environmental conditions to protect their farmers as well as their natural resources; there is no safety net, standards and legal enforcements.



The consumer behavior that influences this problem can be summed up in one word: Price! Consumers seek to pay the lowest possible price, which can be understood from the perspective of each individual who tend to maximize their profits however, this short-term self-serving behavioral pattern leads to the “exploitation of the farmer base, resulting in millions of farmers being pushed into poverty” (Simons, 2015, p. 39).

Cheap coffee is not sustainable, it affects the farmer as well as the environment, farmers who get less than \$0.25 a pound for \$5 a pound people pay at the grocery store, cannot make a living, impoverished farmers have more reasons and are more probable to exploit the environment by using poor and not ecological friendly methods to grow their crops (Craves, 2007).

The market transformation process can be divided in four phases:

1. The awareness and project phase, which raises general awareness in the sector about the problems and elicits an initial response
2. The first mover and competition phase, which mainly addresses the market failure by creating incentives for the market to compete on doing the right thing
3. The critical mass and institutionalization phase, which addresses the lack of conditions for change and involves governments
4. The level playing field phase, which addresses the institutionalization and legalization of the new normal and new norms

The moment the coffee industry started failing was when the International Coffee Agreement (ICA) collapsed, this organization was in charge of deciding how much coffee each country would produce in order to maintain high prices as well as to stabilize the coffee market. This collapse led to a scenario where each country decided how much coffee it would produce (thinking of its own short-term benefits) instead of agreeing on a set quantity per country; this situation led to an increased coffee supply which caused a fall in the prices and all coffee farmers ended up worse off, “coffee was cheap, life was good for



the downstream coffee industry, but increasingly difficult for the farmers, who were trapped in poverty” (Simons, 2015, p. 77).

However not everyone pretended they were blind when this happened, NGOs and several projects mainly done in different churches decided to help coffee farmers, which is how the fair trade sustainability started (1988) this initiative included a code of conduct that aimed to help farmers better organize and insure they would be paid a minimum price for their crops which also included a payment in advance; even though this movement started small with coffee being sold in small charity shops or churches is what started the fair trade movement. This led to other campaigns and an increased awareness of the different issues being faced by coffee farmers Solidaridad (2014) is working on creating long-lasting solutions to the different challenges faced by coffee farmers and growers all over the world to help them increase their production, food security and safeguarding soil fertility while working diligently with coffee roasters, exporters, reserachers and producers organizations. Thier work goes beyond certification labels (Fair trade, UTZ, etc.) they work closely with farmers helping them acquire different capacities that enable this people to sustain themselves and the land they work on by teaching them different growing methods (climate-smart agriculture) encouraging them to continue farming coffee, train them in different agricultural and specialized growing methods while including their local governments who are cooperating with them to make their solutions a reality.

They address the food insecurity issue by teaching them growing practices that are able to bring fast results at a little price, which makes them more motivated to take up sustainability this is done by making the farmers grow different crops that are able to generate food for their families and a little extra income by selling whatever is left. The climate change problem is addressed by decreasing the pressure that has been put on their farming practices by working with different NGOs, banks and governments to help the farmers adapt to climate change and reduce greenhouse emissions as well as offering them credit lines that are long-term that enable them to invest in their land (Solidaridad, 2014).



Consumers should not be unconscious about the impact of their choices, in order to close this gap, all products being bought and sold should include clear sustainability labels who help better inform the buyer of the true cost of the product they want to purchase; this will obviously involve a radical change in the way individuals think, but in this specific case, knowledge is power (Hamilton, 2015).

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it’s the only thing that ever has” (Simons, 2015, p. 182).

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