

The Consideration for a Sustainable Food Supply

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### **Abstract**

The food supply is one of the most critical global issues. I was interested in this issue, and as I researched this topic essential for life, it revealed that we are facing a new situation. One of the reasons is that there are differences between developed and developing countries of the distribution of food by increasing globalization. I realized the fact after making an investigation into articles about the food supply problem in contrast between the two regions (Nippon.com, 2018; Oxfam, 2011). We can look at the contradiction from regional differences. Climate change is also strongly related to the food supply. According to Sengupta (2019), there is an unexpected connection between them. There are some possibilities that better food supply prevents global warming. COVID19 is the timeliest topic in the contemporary world. This confusion shows us the vulnerability of the food supply chain. Several situations are revealed by Debgupta (2020), Lewis (2020), and Reuters (2020). I thought the unfortunate event turns an opportunity for us to review the food supply system. In addition, I refer to the difference between the past and present food supplies situations in this paper clearly by comparing the cases. Finally, I consider the solution for a sustainable food supply based on my research.

*Keywords:* developed and developing country, climate change, the effect of COVID19, present situation, solutions for sustainable food supply

## The Consideration for Sustainable Food Supply

### **Introduction**

In the past few years, the global population has been growing, and over the next few decades, it is estimated that the population will increase dramatically. It is clear the sustainable food supply is necessary. We must secure adequate food, which can be provided to people all over the world. However, it is difficult for us to imagine what actions we should take for the global food supply because people know only familiar problems from their own lives. Nowadays, if we want to improve the situation, it will need worldwide scale actions. I believe understanding the actual circumstances of the food supply is very important, and I hope to think about what ways are capable for making the ideal world realized. In this essay, overall, I focus on the current food supply situations and consider what is necessary for it to sustain food for the planet.

### **Literature Review**

I refer to the fact there is a two-sided problem between developed and developing countries in relation to the world food supply. After that, I explain why the food supply is closely linked to climate change. I also describe that the Coronavirus shock reveals current food supply problems. Based on the research, I consider what the difference between past and present food supply is. Then, I insist there are ways we can do for a sustainable food economy and the ability to obtain a steady quality of food.

### **The Differences Between the Food Supply Developed and Developing Country**

The food supply has a two-sided problem between developed and developing countries. Some argued that there is enough food in the world; on the other hand, there is hunger in some areas. According to Nippon.com (2018), in Japan, this is the problem that despite heavy dependence on imports because its self-sufficiency rate is only 39%, Japan throw out massive amounts of food. We can say Japan is one of the countries that produces a lot of food loss (it means the unsold food that is past its expiration date and becomes

leftover). Why is Japan wasting so much food? The reasons are caused by the “one-third rule” (Nippon.com, 2018, para. 3) and excessive buying. “One-third rule” expresses a bad habit of Japanese commercial distribution. It is reported by Nippon.com (2018) that the products must be delivered to retailers during the first third of the period of the expiration date. It means food makers and wholesalers cannot avoid throwing out safe food. As I subsequently argue, another reason is excessive buying. Nippon.com (2018) claimed that around half of all food loss comes from households. The Ministry of Agriculture, Forestry, and Fisheries (MAFF) and the Ministry of the Environment emphasized that the initiatives of households to reduce food loss is essential because it encourages citizens to stop excessive purchasing and consume all food products that they buy (Nippon.com, 2018).

On the other hand, there are quite different situations in developing countries. For instance, in Somalia, Oxfam (2011) acknowledged that famine occurs frequently. It is because the three systems of production, access, and response systems are unstable. In the country, people struggle to obtain food. The organization suggested that if a drought occurs, it will cause food inflation, malnutrition, and premature mortality. It is difficult for its citizens to access food because of low purchasing power and conflict, and the government has a lack of investment in social services, infrastructure, and good governance (Oxfam, 2011).

### **The Relation of Climate Change**

In 2019, Sengupta (2019) contended that food supply is closely linked to climate change. We can imagine easily from climate change that global warming connects to poor harvests. It is impossible to produce food by decreasing the amount of rainfall, and social life infrastructure is damaged by unusual weather. Surprisingly, there is the fact that the food production system accounts for about twenty-five percent to one-third of the global carbon dioxide emissions (Sengupta, 2019). Sengupta (2019) suggested that we should do better resource management, eat plants, and not waste food. Additionally, if we limit the use of fertilizers, it will be possible to reduce emissions and add carbon to the soil. Furthermore, the

author suggested that stopping urban development and continuing forest maintenance contribute to preventing forest devastation has the most substantial potential for reducing emissions. Eating more plants has advantages that reducing carbon dioxide by photosynthesis and saving resources because animal protein needs more land, energy, and water compared to vegetable protein (Sengupta, 2019). Sengupta (2019) asserted that stopping producing too much food also has sound effects that save energy and cut down emissions. As a result, we can reduce plant-warming emissions and the reliable removal of the carbon system in trees or soil.

### **The Coronavirus Effect of Three Limitations to the Food Supply**

Coronavirus shock reveals current food supply problems. We could notice the three critical things for our food supply chain. Firstly, it is food trade. According to Debgupta (2020), America depends on foreign suppliers for 20%. However, the countries, which supply the main grain to the United States suspended exports after spreading coronavirus. If trade delay, many countries will be fated by a shortage of food even if they can afford to buy food (Debgupta, 2020). Secondly, I argue about the importance of transportation. There is a problem that products have no place to go. I introduce two examples. “Dairy farmers in the United States are starting to dump milk” (Lewis, 2020, para. 3) and another country in India, farmers cannot supply products to consumers, and they feed iceberg lettuce and strawberries to domestic animals (Reuters, 2020, para. 8). There is enough food in the world, but the most important thing is how do we transport it. Finally, the food industry system is also essential. Debgupta (2020) reported that there is a problem with the concentration of labor in one region. If these food-producing regions have damage, then all areas are in trouble. It is also a problem that the dependence on guest workers, and if they are restricted due to poverty, immigration, or COVID19, the production cannot keep up with demand (Debgupta, 2020).

### **The Present Situation of the Food Supply**

There is a difference between past and present food supplies by comparing the current situation with food crises in 2007-2008 and 2010-2012 (Reuters, 2020). In the past, the world's agricultural yields were not stable, and food price fluctuations often occurred so, we had to focus on how to increase yields itself (Reuters, 2020). By contrast, now that the world's agricultural yield was stable with the development of technology and food price is kept at a certain level, but now the focus is on how to deliver food to the poor people. Reuters maintained that "Supply problems in one place are quickly felt on the other side of the world" (2020, para. 16). The food supply chain has grown to a global scale and has a complex structure.

### **What are the Solutions to the Stable Distribution of Food?**

There are ways we can plan for a sustainable food supply such as the necessity to build trust by sharing information because the food industry system is complicated and difficult to understand (Debgupta, 2020). Sengupta (2019) claimed that to stop excess food production and minimizing waste will help saving energy and cutting down the carbon dioxide emissions. Effective use of resource management has great potential, too because it may not only reduce emissions, but also prevent forest devastation and add carbon to the soil (Sengupta, 2019). The food supply chain needs individual actions at a local and a global scale now. Therefore, it is difficult to control. I would like to claim that we all should be responsible for food consumption, so we must buy food only what we need to live without wasting food.

### **Conclusion**

In conclusion, I discussed the present situation of the food supply. I showed that the food supply has a two-sided problem between the developed and developing countries by comparing two different places as examples. There is an interesting contradiction that there is an interesting contradiction that some countries have plenty of food while others suffer from hunger, which we should solve. I also explained that food supply is closely linked to climate

change, and we can look at what is the current food supply problems from the Coronavirus shock. Then, I made the opinion that there is a difference between past and present food supplies, and there are ways we can improve for a sustainable food supply. The situation of the recent food supply has changed from the past, and we are facing new problems. I believe it is necessary for us to follow the changes and consider the latest facts because this action is sure to contribute to a sustainable food supply.

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