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Agricultural Overproduction and the Deteriorating Environment: Reevaluating Global Agriculture Trade Practices

Recently, the Natural Resource Defense Council (NRDC), a leading US environmental NGO, came out with the shocking statistic that 40% of the total US food supply is wasted (Gunders, 2015). Despite the statistics and warnings demonstrating the prevalence of agriculture overproduction, it has continued for many years. Overproducing food, while allowing for food security, also disrupt world markets as well as causes immense environmental damage to soil and water supplies. The natural question that arises is why food is continually overproduced in specifically the United States and European Union. While Marxist philosophy has its own faults, Karl Marx's particular concept of the crisis of overproduction does offer a new dimension to the discussion when examining current agriculture trade. Free market economies operating in the US and EU show how governments and producers often encourage production to increase economic growth. While this guiding doctrine has long been the backbone of these countries, the environmental impact of the policies indicates it is important to revisit the logic of food overproduction.

The crisis of overproduction offers insight into this logic. In order to counter overproduction, producers will act in three ways: exploit old markets, i.e. finding new ways of making profit with old consumers; create new markets; and/or dispose of the excess productive forces. Aspects of Marx's crisis of overproduction surface in the European Union's Common Agriculture Policy (CAP) and in various aspects of the US' agricultural market. This paper will examine several specific instances where the crisis of overproduction has seemingly appeared in the US and EU, including the introduction of the organic food label, the introduction and rapid growth of free trade agreements, and protectionist policies to preserve domestic markets, leading to food surplus and waste. While Marxist doctrine certainly has its flaws, the essential idea introduces a new perspective on agricultural markets. With food waste and hunger continually, and paradoxically, being global problems, Marx's concept offers a new way to understand these challenges. If the current system continues to use overproduction as a way to stimulate domestic economic growth, it will become increasingly difficult to solve urgent global issues, such as water and soil degradation as well as global hunger. Overproduction should thus be considered the core issue when discussing the multitude of issues caused by the interactions in the global agriculture market.

Marx's Crisis of Overproduction

While Marxist theory has generally gone out of fashion in current political discourse, applying his crisis of overproduction to modern day agricultural production illuminates a little addressed problem when assessing the issues with agriculture trade. Thus, this paper analyzes his work in order to bring the issue of overproduction to the discussion. In a crisis of overproduction, there are too many productive forces, and the bourgeoisie are unable to control them, or as Marx writes, bourgeois society is "the sorcerer, who is no longer able to control the power of the nether world, which he has called up by his spells" (McLellan, 2003, p.250). In essence, with the rapid creation of more means of production, the bourgeoisie have lost control of the market, and concurrently, the primary ideological base of society. He argues that throughout history, there have been crises of overproduction, which threaten the base of society (McLellan, 2003, p.250). There are, however, three ways to combat this crisis. First, they destroy the productive forces. Second, they create new markets. Finally, they can exploit old markets. If the bourgeoisie fail to combat the crisis, then the entire capitalist system could fall apart. Marx's theory indicates that producers are led to waste more food, create products that vary only slightly from previous ones, or look for new markets in order to counter overproduction and maintain control over the system that benefits them. These actions can destabilize global and domestic agriculture markets.

Exploiting Existing Markets

As aforementioned, Marx argues capitalists will exploit established markets, or in other words, find a way to revitalize consumer markets. Turning to the US' agriculture market, this process indeed emerges. Due to years of domestic lobbying and other historical factors, US farmers have benefitted from a less competitive internal market, meaning the market is quite established and difficult to enter. With the advent of the organic food label, US farmers have successfully widened their old market with the growth in popularity of organic food. In the past decade alone, the organic market has grown exponentially. In 1997, retail sales of organic products were $3.6 billion, and by 2008, sales had increased to $21.1 billion (Dimitri & Oberholtzer, 2009, p.iii). The overall increase in purchasing organic food has risen from 54% in 1997 to 63% in 2008 (Dimitri & Oberholtzer, 2009, p.6). Moreover, the health benefits to organic food have not been proven conclusive, and debates among the scientific community continue (Organic food, 2012). Organic foods aim to use more 'natural' pesticides, but natural does not mean better. For instance, a popular natural pesticide is copper sulfate, but it is not better for humans or the environment (Wilcox, 2012). In fact, some are postulating that organic farming actually creates a larger negative impact on the environment, as organic farms are only 80% as productive as conventional farms (Wilcox, 2012). The lower efficiency reduces the total amount of agricultural products. In addition, organic food produces more carbon emission per unit (Wilcox, 2012). In essence, organic foods have not been conclusively proven to be better for human health or the environment, yet sales have rapidly increased in recent years.

Organic food opened up a new avenue in an old market for farmers, manufacturers, retailers, and officials. One distinct trend among consumers of organic food; the more education a person has, the more likely it is that the person will buy organic products (Dimitri & Oberholtzer, 2009, p.4). Organic foods tend to cost 10-30% more than regularly labeled food, and 73% of consumers claim that organic food is too expensive (Dimitri & Oberholtzer, 2009, p.5). Yet, about 27% of more educated individuals have now created a new channel of revenue. The organic food market has essentially created a new consumer. The creation of the organic food label, therefore, benefits producers disproportionately more than consumers, as there is little evidence showing a difference between organic and non-organic food and the impact on the environment is, if anything, negative. Instead, farmers gain a new consumer out of an old one, or in Marx's words, they exploit an old market. The potential negative environmental and health impacts are secondary to the producers' economic growth.

Creating New Markets

Marx proffered the idea that capitalists would create new markets as well to counter the crisis of overproduction. With the current wave of predominant political discourse, neoliberalism, which took hold in the 1970s and rapidly grew in the 1990s, it has been easier to accomplish this. Perhaps unsurprisingly, the United States and the European Union have been major proponents of neoliberalism. Indeed, the US relies on the Washington Consensus, written in 1989 by John Williamson, for structuring its financial assistance to countries. The Consensus is comprised of ten key points on how a suffering government should restructure its economy in order to stabilize and eventually become a developed, capitalist country. It promotes free trade, cutting public spending, privatization, a small government, and a focus on export-led production (World Bank). Institutions, such as the World Bank, the International Monetary Fund (IMF), and the World Trade Organization (WTO), also use the Washington Consensus in order to know how to aid developing countries, as the US has a sizable voting majority in both institutions. Unfortunately, the US often times uses the institutions to implement specific policies in other countries, while sometimes ignoring guidelines, rules, and procedures. For instance, according to Ha-Joon Chang (2008), author of *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism,* the "rich nations" give out an estimated $100 billion worth of agricultural subsidies every year, which is technically against WTO rules. In addition, the institutions will grant loans in exchange for a country's internal economic restructuring along neoliberal lines. Supporting free trade, particularly for agriculture, has created a new market for the US and EU. Simultaneously, they do not abide by the same rules. This has caused serious difficulty in global trade negotiations, the most notable of which is the DOHA Round, a trade negotiation sponsored by the WTO. The deadline to comprise passed in 2005, leading to a stalemate between developed and developing countries over agricultural trade regulations.

New Markets for the US: the North American Free Trade Agreement

The North American Free Trade Agreement (NAFTA) was signed in 1993, came into effect 1 January 1994 for Canada, the United States, and Mexico. At the time, Mexico was heavily in debt and saw an economic partnership with Canada and the US as beneficial. The US was attracted by the plentitude of cheap labor in Mexico, as it was worried about competition from Japan and Europe (Payne, 2013, p.174). Under NAFTA, protective trade policies are illegal, such as tariffs and subsidies. Mexico even reformed its agricultural sector to align more with US policy. It abolished the *ejido* law, or the law allowing for the communal ownership of farmland among Mexican peasant farmers. Carlos Salinas, the Mexican president at the time, claimed that the *ejidos* were old fashioned and inefficient, and he privatized the land (Kingsnorth, 2004, p.14). With the influx of corn from the US and Canada, millions of Mexican peasants lost their land, as the *ejidos* were no longer protected or profitable (Kingsnorth, 2004, p.15). The United States, however, continued and continues to enact protective policies, such as subsidies to its farmers (Farm Subsidies, 2015). The subsidies allow US farmers to flood the Mexican market with cheaper food products with which Mexican farmers cannot compete (Baumann, 2013). Mexico, like most developing countries, cannot afford to subsidize its farmers and usually rely on quotas or tariffs (James, 2011). A study by Timothy Wise estimates the cost to Mexican producers at around $12.8 billion from 1997-2005. He concludes that approximately 2.3 million people left Mexico because they lost their agricultural jobs (Baumann, 2013). Due to the US subsidies, many Mexican farmers did not benefit from NAFTA but rather lost their jobs and the competitive edge on a main export.

On the other hand, US farmers benefitted greatly from NAFTA. As Wise (2010) writes, "High U.S. farm subsidies for exported crops, which compete with Mexican products, have prompted charges that the level playing field NAFTA was supposed to create is in fact tilted heavily in favor of the United States". With NAFTA, the US created a new agricultural market. According to Richard Payne, agricultural subsidies have caused overproduction, and "this overproduction problem is solved partly by encouraging Americans and Europeans to consume more food and by dumping agricultural products in developing countries' markets, selling them for below-cost prices" (168), which aligns precisely with Marx's theory. By implementing NAFTA and heavily influencing many of the trade regulation institutions, such as the WTO, the US was able to maintain its high agricultural subsidies, which appeased the domestic agriculture lobby, and dispose of excess foodstuffs. According to the Office of the US Trade Representative, in 2010, the US sold $31.4 billion agricultural products to Mexico and Canada, and imported only $29.8 billion from Mexico and Canada. The US does not provide specific amounts to and from which country, but either way, the US benefits from a trade surplus for agricultural goods. Through NAFTA, the US created a new agricultural market where there had not been one previously. In this instance, Marx's concept aligns with the creation of the new market. The US looks to sell its surplus, and rather than produce less, it subsidies US agricultural products to stimulate more exports.

New Markets for the EU: the Common Agriculture Policy

The European Union's Common Agricultural Policy (CAP) became a part of EU legislation in 1957. The five main goals of the CAP were to improve agricultural efficiency, improve the standard of living for agricultural workers, stabilize the markets, guarantee a steady food supply, and provide food at a reasonable price for consumers, for the members of the European Union (Payne, 2013, p.168). In general, these goals have been met, and indeed, in the 1980s there was an enormous surplus of food, so much so that the EU rapidly passed regulations and legislations on the amount of subsidies and support farmers received; additionally, consumers were severely hurt by high prices for food due to this system (Bureau, 2012, p.316). Now the EU only gives direct payments for dairy and wheat products (Bureau, 2012, p.316).

However, citizens still lose the most while farmers gain the most. The EU's direct payments distort the prices of its agricultural goods, essentially dumping them onto the world market, driving the world price down, harming developing countries, and sustaining a permanent economic loss to the EU (De Shutter, 2011). In addition, agricultural exports tend to be the main exports of most developing countries (Molle, 2006, p.163). As of 1993, the EU has made efforts to reform export subsidies, which had been the most offending part of the CAP, and refused to buy past a certain number of agricultural goods from EU farmers (Bureau, 2012, p.316). This has encouraged farmers to produce less, but they still receive direct payments to subsidize their incomes, which can artificially create more farming jobs than are necessary. The EU also plans to create environmental payments in the CAP. While on the surface, this appears beneficial, most scholars agree, "the political aim appears to be to maintain as much of the existing payments as possible by suggesting a new, though phony, justification and making the payments impossible to criticism" (Tangermann, 2012, p.326). The EU has created a new market by exporting agriculture to developing countries to counter the excess agricultural goods, and it does not intend to change its approach, despite increasing criticisms both in global trade and by environmentalists. Once more, Marx's crisis of overproduction reveals the motivations behind both the EU and US' agricultural policies. Both intend to create new markets in order to combat overproduction caused by their own domestic need to encourage the production of agricultural products.

Destruction of Productive Forces

According to Marx's theory of the crisis of overproduction, the producers must dispose of excess productive forces in order to maintain the capitalist system. In the case of the EU and US, the level of food waste is alarming high, and their agricultural excesses are disregarded by giving donations or destroying goods. Until recently, the US had not even measure or study the amount of domestic food waste (Gunders, 2012, p.16), although environmental NGOs have conducted their own studies. Only 10% of edible surplus is recovered in the US (Gunders, 2012, p.17). The EU's CAP, as aforementioned, not only floods the market with cheaper agricultural products, but it also physically eliminates extra produce (Arguments, n.d.). The EU also pays farmers to keep part of their land uncultivated, destroying the potential productive forces (Yumi, 2006). Lately, the EU has somewhat addressed these problems, and it has made 2014 the "European year against food waste" (Gunders, 2012, p.16). Yet, by creating a new market, the EU has actually intensified its crisis of overproduction, and must physically destroy agricultural goods or eliminate the possibility for the production of new crops.

Developed countries also have a long-standing history of donating food abroad. In principle, the idea of donating food to starving or impoverished people is generally seen as a good act. However, the basis for food donations came from an overproduction of agricultural goods. Frederic Mousseau, an economist focused on international relief, has stated:

International food aid was initiated at a time when a policy of price support for agricultural commodities generated large surpluses of cereals. The disposal of surpluses through food aid made it a crucial instrument to support North American farmers because it reduced storage costs and opened access to new overseas markets (Shah 2007).

Mousseau makes it clear that food aid was initiated because North American farmers were facing a crisis of overproduction. The US to this day buys the agricultural surplus and pays to ship it abroad. Initiating food aid not only destroyed the excess in the domestic markets, but also created new markets overseas. Mousseau also commented on how the some of the CAP surpluses make up food aid, with the EU being the second largest food donor since the 1970s (Shah, 2007). He also commented that an increase in food aid tends to correspond when food prices are low and supply is high (Shah, 2007). In other words, due to the massive overproduction of foodstuffs, developed countries dispose of their surpluses via food aid. As a bonus, the countries can profit from donating food relief. For instance, in the United States, the government passed the 1985 Farm Bill, which requires 75% of all food aid to be shipped via US shipping companies, making US food aid the most expensive in the world (Shah, 2007). The shipping companies make a profit, while the US unloads its agricultural surplus. From this, it is evident that the US is not merely being charitable, but it has serious economic benefits from donating food abroad, not in the least, eliminating its excessive food products.

To combat world hunger, the World Bank, World Trade Organization, US Department of Agriculture, and other neoliberal actors prescribe, "increased food aid, de-regulated global trade in agricultural commodities, and more technological and genetic fixes" (Holt-Giménez, 2008). However, food aid and free trade often hinder the local agricultural market. In fact, food aid from the US in particular causes developing countries to become more reliant on aid in this five-step process:

1. Cheap (highly subsidized) American grain and other foods would be dumped onto the local economy;
2. Small domestic producers would be unable to compete fairly (as governments of recipient countries are often encouraged to remove such protections in their own farming sectors);
3. Small producers lose/sell their land and become jobless or laborers or move to the big cities;
4. As such economies are encouraged to be exporters of cash crops, and food from food "aid" is so cheap, other work is on the cheap and people struggle to make a living;
5. Poverty, food insecurity, and hunger increases (Shah, 2007).

According to Mousseau, "food aid is integrated into policies leading to structural food deficits and increased dependency on food imports. For the poorest countries, such dependency combined with scarce resources to finance imports has resulted in increased poverty and hunger" (Shah, 2007). In general, food aid does not actually aid foreign countries in the long-term, but instead makes a new market for aid-distributing countries, while giving them a chance to unload surplus agricultural products. For example, in the 1960s, on the whole, the continent of Africa was an agricultural exporter, exporting about $1.3 billion a year, while today, African countries import approximately 25% of their food (Holt-Giménez, 2008). Aid-dependent countries lose the infrastructure necessary to support their populations' food consumption. Therefore, developed countries benefit from donating food aid because they are able to both dispose of excess and open a new market. By introducing this disposal system, once again, it becomes clear that Marx's proposals to countering the crisis of overproduction are employed in capitalist countries.

Conclusion

Neoliberal policies promoted by the United States and international institutions do not often benefit developing countries that would be natural agriculture exporters. The primary cause is the fact that the United States and the European Union implement protectionist policies in order to bolster their free market economies. Both economies depend on consumerism and the creation of more productive forces. Production is additionally used to prompt economic growth and satisfy strong domestic agricultural lobbies. However, this creates a surplus of agricultural products, and according to Marx, a crisis of overproduction.

The US and the EU do act similarly to Marx's crisis of overproduction in terms of agricultural trade. They have developed organic farming as a way to reopen an old market, created new markets by using subsidies to make themselves exporters of agricultural goods, and finally, have physically destroyed agricultural surpluses and discarded the rest of their surplus in the form of aid. These methods to combat the crisis of agricultural overproduction often help the developed countries and have real consequences for the environment as well as the economies of developing countries. While the EU has taken hesitant steps to correct certain issues, the US continues to dangerously and cyclically overproduce. Continuing this pattern to attempt to combat gross overproduction will continue to lead to halting trade negotiations with developing countries and spur growing environmental issues. While free market economies require growth, present realities of food waste, land and water degradation, as well as other environmental issues caused by over-farming, need to be recognized as serious issues that are the result of overproduction. Continual overproduction, the root of the problem, needs to be addressed as the core issue.

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