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GEOG 316, 2011

Tutor: Marianne, Time: Tuesday 12-1

Essay Assignment

12. Discuss the factors underpinning the globalisation of agriculture. With reference to case studies what are the national and local implications of the globalisation of agriculture on Third World countries?

Word Count: 2,185

Introduction

Since the 1980s, international organisations such as the World Bank and World Trade Organization (WTO) have encouraged Third World countries to open their economies to global trade. As a result, agriculture has become more globalised than ever before, with the intercontinental involvement of transnational corporations (TNCs). In some cases successful economies have developed, but how much is globalisation actually improving conditions in Third World countries socially, economically and environmentally? This essay will argue that the globalisation of agriculture has had mainly negative local and national implications on Third World countries. I will back up my argument by focusing mainly on the effects of monoculture – that is, becoming too reliant on one agricultural product – and how it has caused environmental damage. Overlapping with this are negative socio-economic implications, such as the loss of food security and local jobs, and I will refer to these throughout my essay to add a wider dimension to my claim. I will reinforce my argument by examining case studies from Latin America and the Pacific Islands.

Murray (2006) argues that the globalisation of agriculture can be divided into three regimes. It was during the second regime (1945-1980) where today's global fruit system developed. TNCs in the capitalist-core of the world expanded into the resource-periphery countries. Technological developments allowed agriculture to be undertaken more intensively, in quicker time. Developments in refrigerated shipping transport allowed perishable products to be transferred over larger distances without losing quality (Murray 2006). According to Murray (2006): "Many Third World countries ... reoriented their agricultural production systems and became geared towards the satisfying of 'luxury' fruit demands in the core, often at the expense of domestic production of food" (p. 158). In other words, subsistence agriculture declined as monoculture and intensive agriculture dominated.

The 1970s debt crisis: How is it linked to the globalisation of agriculture?

The globalisation of agriculture can be linked back to the oil crises of the 1970s. Oil exporting nations put up the price of oil and this inflation created large amounts of "petro-dollars," which were lent by the World Bank to Third World countries (Murray 2006, p. 281). Another crisis in 1979 resulted in high interest rates, which made it very difficult for Third World countries to pay

off their debt. Third World countries accumulated billions of US dollars of debt, and the ratio of debt to export earnings was very high, especially in Latin America (Murray 2006).

In order to address the concerning state of the Third World, the World Bank and the International Monetary Fund (IMF) needed to take action and put a halt on, or at least slow down, debt increase in Third World countries. They devised a set of initiatives called Structural Adjustment Policies (SAPs). These were a set of guidelines and recommendations that Third World countries would have to follow if they wanted the World Bank and IMF to give them more time, or lend them more money, to pay off their debt (Potter, et al. 2008).

Characteristics of SAPs can be linked to the neoliberal ideas of Milton Friedman: an economist who was influential in helping Chile become an open economy. He believed that too much government interference was causing problems in underdeveloped countries and that the market should determine the allocation of resources. SAPs encouraged privatisation and a reduction in public expenditure in sectors such as education, health and public infrastructure. Also, reductions in trade barriers would create an open economy, increase the inflow of foreign investment and encourage the foreign transfer of technology. Essentially, SAPs encouraged countries to open up their economies if they wanted the IMF and World Bank to bail them out.

The IMF and World Bank recommended that countries adopt the export orientated industrialisation (EOI) model of economic growth. This is based on the belief that countries should increase exports that they have a comparative advantage in. However, Mohan (2000) points out that the World Bank did not put environmental concerns high on their priority list. They believed that it would induce further state expenditure; against the recommendations of the SAPs. In many cases, the implementation of EOI and satisfying the capitalist core, have led to environmental damage and the loss of food security.

Case Study: The negative effects of monoculture in Samoa and Niue

Monoculture can increase economic vulnerability. As Chiras (2009) points out, if an agricultural crop is affected by a pest or disease, there is a high risk of the crop being completely eradicated. This occurred in the Pacific Island country of Samoa. Up until the early 1990s taro was a staple product in the Samoan economy, and farmers relied heavily on taro exports for income. However, a taro leaf blight fungus arrived in 1993 and had an instant effect on the Samoan

economy (see Figure 1). Hunter et al. (2003) point out that within a year of the introduction of the disease, it had caused a major reduction in the supply of taro to the public market and world market. According to Ward and Ashcroft (1998), before the blight over 90 percent of households in Samoa were growing the crop. The blight rendered large areas of land useless and left Samoa, which relied heavily on one export product, with a large gap in its economy.

Niue saw an opportunity to increase their taro exports and subsistence agriculture declined as more people began to use their land for taro production. Murray (2000) notes that the growth in Niue’s taro sector, “occurred largely as a response to the constriction in supply resulting from the taro leaf blight in Samoa” (p. 222). At first, Niue greatly benefited. Figure 2 shows a tremendous increase in taro export value and total export value from 1993. Taro was heavily exported to New Zealand, Samoa, and even to parts of the United States and Australia (Murray 2011). However, Figure 2 shows that taro exports declined soon after. This can be linked to the resurgence of the Samoan economy as well as competition from other Pacific Island countries such as Fiji and Tonga. Because Niue was now unable to effectively compete for market share, individual farmers were left economically vulnerable and without work.

Niue’s natural environment suffered a great deal. “Bulldozer technology” took over the labour intensive “slash and burn” method of land clearance, in order to speed up the process of clearing land for taro production (Murray 2000, p. 224). Large machines disrupt soil structures, leaving them exposed to erosion from wind and rain. Murray (2000) outlines that some land clearance took place near virgin native forest areas. Since native forest is irreplaceable, biodiversity and natural value were lost to Niue. Also, coral reef areas were damaged from soil runoff and chemical use. The examples of Samoa and Niue prove that monoculture is not a sustainable economic activity. It is important to maintain diversity in agricultural production so if, for whatever reason, a particular crop suffers, there are other export opportunities.

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
<i>Production, × 1000 tonnes</i>	15.16	15.18	16.18	16.50	25.51	26.88	22.22	28.24	25.42	29.02	27.60	30.08	1.20	1.80
<i>Price, W\$\$/tonne</i>	470	739	538	538	851	941	986	1008	1096	1171	1350	916	3226	
<i>Value, Million W\$</i>	7.1	11.2	8.7	8.9	21.7	25.3	21.9	28.5	27.9	34.0	37.3	27.5	3.9	

Figure 1. Taro production, price and value in Samoa from 1982-1995.
(Source: FAO 2011).

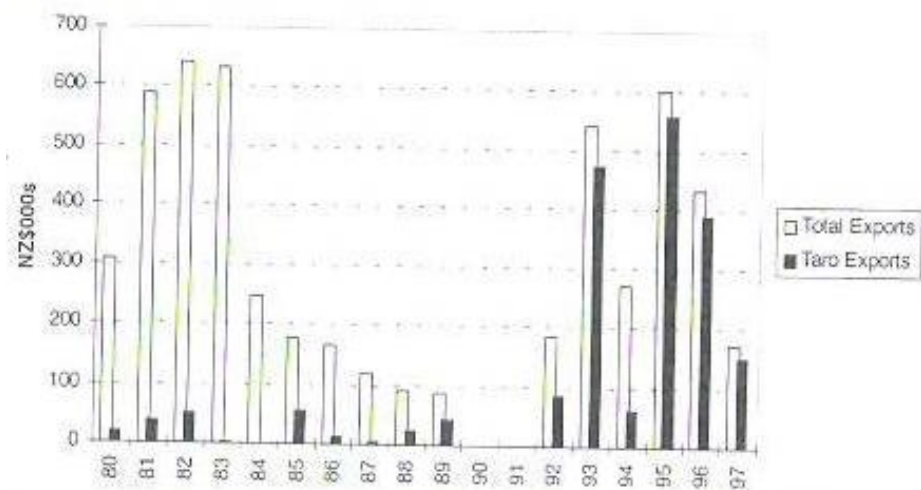


Figure 2. Value of taro and total exports in Niue from 1980-1997 (NZ\$000s).
(Source: Murray 2000)

Case Study: Unsustainable soya bean production in Argentina

Argentina experienced economic reform during the 1990s with the removal of export taxes, the removal of restrictions on imported goods such as technology, and privatisation of domestic grain marketing and transport (Australian Bureau of Agricultural and Resource Economics and Sciences (ABARE) 2002). Argentina was encouraged to expand its agricultural sector and out of Argentina’s main agricultural products, soybean crop area expanded the most (see Figure 3).

Another factor that allowed Argentina to expand its production was the creation of MERCOSUR in 1995: a trading agreement between Argentina, Uruguay, Brazil and Paraguay. This helped to reduce trade restrictions between the member countries (ABARE 2002).

Monsanto, a US-based biotechnology TNC, arrived in 1996 to help Argentina increase its quality of production with Round-Up Ready soya: a genetically modified soya bean crop that was resistant to Monsanto’s powerful pesticide (Branford 2002). This was done with the promise of more cost-efficient farming and increased yields. At first, this was a success as exports

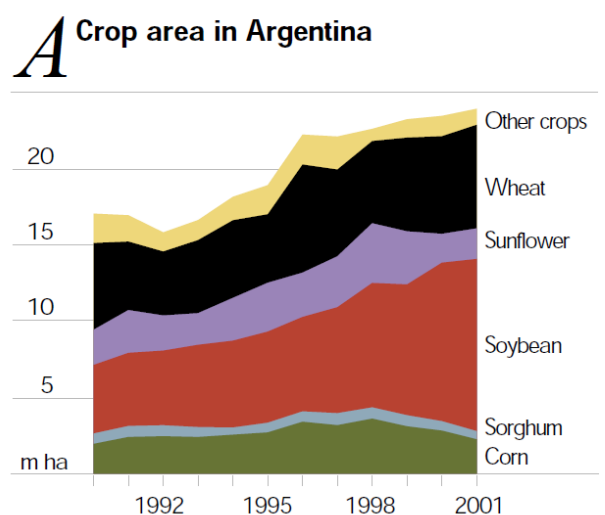


Figure 3. Crop area in Argentina.
(Source: ABARE 2002).

increased dramatically. However, Branford argues that this was due to “an increase in the area of land under cultivation,” and quotes agronomist Adolfo Boy, who says that a “vicious circle” has arisen (p. 23). What Boy means is that the costs of production are actually increasing due to farmers using more chemicals to combat new weeds that were resisting Monsanto’s Round-Up pesticide.

The previous rotational crop system – soya in the summer, wheat in the winter – was perceived as more appropriate as it captured nitrogen and helped the soil retain its fertility and structure (Branford 2002). Small-scale farmers suffered a great deal. Although this method saved time, the mechanisation of soya bean production meant that farmers were no longer needed for “traditional tasks of ploughing and harrowing” (Branford, 2002, p. 23). Therefore farmers were driven off their land, left without jobs and had to migrate elsewhere. This example shows that monoculture, and moving away from a seasonal agriculture system, is not a sustainable practice. Although it can be beneficial economically in the short term, it can have severe effects on the environment and local populations in the long term.

Case Study: Banana production in Latin America

Ecuador is the world’s largest exporter of bananas and, along with Costa Rica, is also among the world’s largest banana producing nations. Latin American countries are involved in the Dollar Banana system (see Figure 4). This system constitutes about 80 percent of world trade and involves countries such as Costa Rica and Ecuador heavily supplying the U.S. market (see Figure 5) (Raynolds 2003). This system is predominantly controlled by the three large banana TNCs: Dole, Del Monte, and Chiquita, who own large plantations in Latin American countries.

Figure 6 shows how the beginning of the neoliberal era can be linked to the expansion of land area used for banana plantations in Ecuador. This has created many environmental problems. The structure of the soil is disturbed when setting up the plantations. This contributes to erosion, especially during periods of rain where the soil is transported to local rivers (Raynolds 2003). Expansion also contributes to deforestation and habitat loss. According to Raynolds (2003), thousands of acres of Costa Rican jungle have been cleared to make way for banana plantations. Ecuador is among the world’s 17 mega-diverse countries, meaning that it is officially recognised as having high biodiversity, including many endemic bird and reptile species (Conservation International 2011)

Chemical use in banana production is high for a number of reasons. Bananas trees do not add to soil fertility because they shed no leaf litter. Therefore herbicides have to be used to improve the nutrient content available to crops. In a 1996 study of Costa Rica’s Cahuita National Park, coral reefs were found to have been damaged by runoff from coastal banana plantations (Hamer 2007). Even though many varieties of banana exist, the Cavendish is the world’s most traded variety. Because it is grown as a monoculture, “outbreaks of pests and diseases” usually affect an entire crop area (Hellin and Higman 2003, p. 15). This is the case with the fungal disease *Mycosphaerella fijiensis* (known in Latin America as sigatoka negra). As Hellin and Higman (2003) point out, controlling this disease involves regular aerial spraying of fungicides. This process is both expensive and damaging to the environment, especially to river systems.

The visual appearance of the actual banana is vital in encouraging overseas buyers (Raynolds 2003). In order to keep insects away from the plants, large amounts of chemicals are used. Although this can be effective in the short term, insects soon develop resistance to these chemicals. Because of this, either more of the same chemicals are used or different, environmentally damaging ones are used. These chemicals eventually deposit in local water and soil systems and can affect the habitats of native flora and fauna species.

There are substantial health risks associated with working on banana plantations. Large amounts of pesticides and fertilizers are used to improve the success of banana production. One alarming fact is that some of the chemicals used on plantations in Third World countries are banned in developing countries such as the USA, because of health concerns that include kidney and liver damage (Hamer 2007). When bananas are internationally shipped they are done so with significant costs. The bananas are stored in energy intensive refrigerators in order to prevent pre-ripening, and the large ships that are involved in world trade are a contributor to carbon dioxide emissions (Hamer 2007). Based on all this evidence, it would be safe to say that banana growing is not environmentally friendly when done so on an intensive and extensive scale.

	Major Exporters	Acres Harvested	Yield (tons/acre)	Holdings	Workers
Ecuador	Noboa; Dole; Del Monte; Chiquita	477,000	12	100% medium	180,000
Costa Rica	Dole; Del Monte; Chiquita	123,000	20	25% medium 75% large	47,000
Colombia	Uniban; Dole	124,000	16	100% medium	40,000
Panama	Chiquita; Del Monte	47,000	24	25% medium 75% large	10,000

Figure 4. Major Dollar Banana Producers, 1999.
Major exporters listed in order of export shares. (Source: Raynolds 2003).

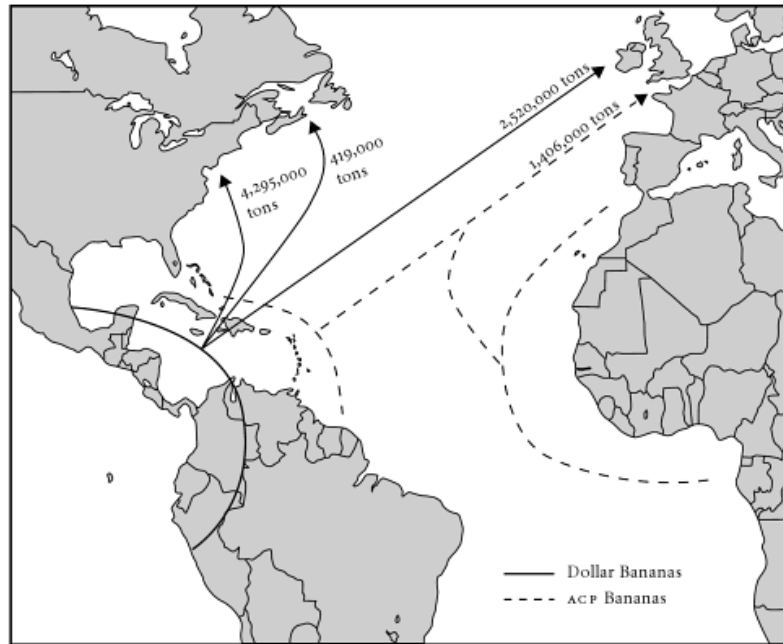


Figure 5. ACP and Dollar Banana trade circuits.
(Source: Raynolds 2003)

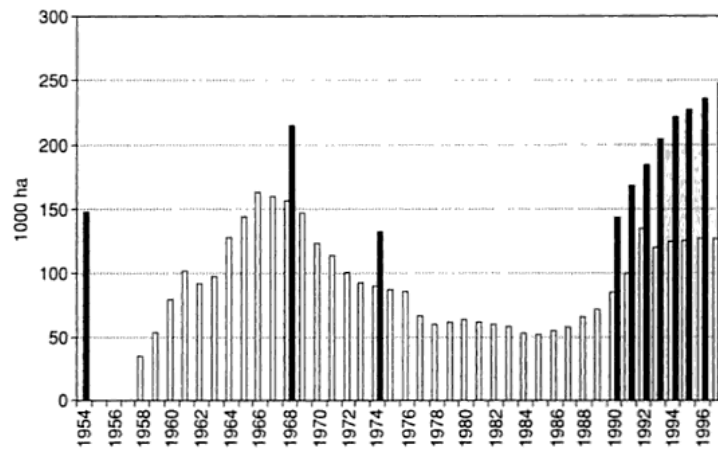


Figure 6. Cultivated area of bananas in Ecuador from 1954-1996.
(Source: Wunder 2001).

Conclusion

It is clear that the globalisation of agriculture – which is linked to Third World countries following the SAPs set out by the World Bank and IMF, and in turn becoming economically reliant on exports and monoculture – has been very detrimental to Third World countries on a local and national scale. As Reynolds (2003) puts it: “The banana trade has historically been forged through global and local forces that simultaneously connect and divide major ... sites of production and major ... sites of consumption.” (p. 23). I believe this argument can also be applied to my other case studies. Essentially, Third World countries are producing for the high-demanding, wealthy and developed countries, and this is being undertaken with many environmental, social, and economic costs. Monoculture and environmental exploitation are not sustainable production strategies and the cases of agriculture over the last two decades, in places such as Argentina and Niue, are proof of this.

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