

If you want to feed the people of the third world eat chocolate. Discuss.

Human use of the cocoa bean can be traced back to around 600 BC where it was used as part of an ingredient in a hot, liquid beverage consumed by the Mayans in Central America. Around 2 millennia later, in 1491 AD, Christopher Columbus introduced cocoa into Spain. Columbus had discovered these seemingly dull and un-important beans during his expeditions to the Americas where at this time cocoa was being drunk by the Aztecs, in much the same way as it had been by the Mayans. There was one difference though, 'chocolatl' (meaning 'warm liquid') was a regal drink and very few people, mainly only the Emperor, ever had the chance to taste it; let alone the actual people who cultivated the bean.

This situation appears to have remained the same for over 500 years, but just broadened to an international scale. In terms of the chocolate industry we are very much a global microcosm of the Aztec society.

In England the average person will spend \$98 per year on chocolate. 7 years ago the European chocolate industry was valued at \$18,463 billion. Chocolate is a multinational industry and is sold everywhere in the world. However, chocolate has humble beginnings. Grown in many places from The Ivory Coast to Indonesia to Brazil, cocoa often starts its existence in poverty. Poor cocoa farmers in these countries grow acres of cocoa trees in plantations similar to the one in Figure 1. Cocoa farming does not depend on seasons, the countries that grow cocoa tend to have equatorial climates with evenly distributed annual rainfall.

Fig. 1 Cocoa trees in an African plantation.



So, with an all year round growing season it takes an expert eye to recognise by appearance which fruits are ripe. When these pods are identified they are removed one way or another dependant of their location on the cocoa tree. Machetes are now used to open each pod; a

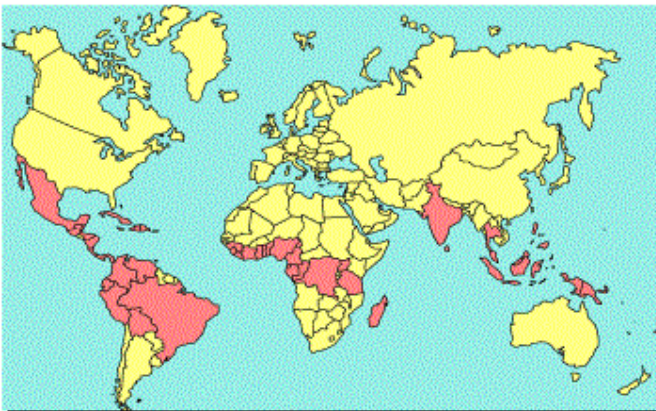
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worker who is proficient with a machete can open up to 500 pods per hour. 20 to 50 cream coloured beans can now be removed from the pods; the husks and membranes are discarded. A dried bean from an average pod weighs around 50g. Around 400 of these beans are needed to make a pound of chocolate. This means that approximately 20kg of dried cocoa beans are needed to make 450g of chocolate (or one pound of chocolate). The beans are then usually piled into heaps in the sun and covered with leaves to ferment for 3 to 9 days, this removes the bitter taste from the cocoa. When the bean appears a rich brown colour they are ready to be dried. Drying varies from country to country depending on the weather they experience but the method tends to be simplistic and natural.

When the beans are dry they are sacked (to the weight of anything from 55kg to 90kg) and stored in the shipping centres to await buyers. Presuming the cocoa is going to a chocolate producer the beans are shipped to the manufacturer and stored very carefully. If the beans come into contact with strong odours they tend to absorb an off-flavour. The beans are thoroughly cleaned as a precaution and then weighed. To develop the beans chocolate taste they are roasted in large rotary cylinders for varying amounts of time at around 140 degrees Celsius. The beans are quickly cooled and have their shells removed by a winnowing machine that passes the beans along serrated cones that crack the thin shell. The product is the 'nib' which is about 53% cocoa butter. The 'nibs' are now ground to create enough frictional heat in order to turn them into chocolate liquor, which is poured into moulds and allowed to solidify. Ingredients are added accordingly at this point depending on the desired chocolate end product. The mixture becomes dough like and is passed under rollers to make it into a thin paste ready for 'conching'. Conching's function is to develop the flavour of the chocolate by mechanical kneading for hours or even days, this is often replaced or supplemented by the emulsification of the mixture to break up sugar crystals resulting in a smoother chocolate. When finished the chocolate is tempered with interval heating, then cooled and then reheated so it can be cast into the shape of the final product. The chocolate is packaged and then distributed.

Two major chocolate manufacturers are Cadburys and Nestle, both of these companies have their names inserted into chocolate history; John Cadbury was the first person to produce solid eating chocolate through the development of fondant chocolate in 1842 and Henri Nestle created the first milk chocolate by adding milk in 1875. Both companies now dominate the chocolate industry internationally. Chocolate manufacture is widespread and there are countless numbers of companies: Lindt, Toblerone, Mars and Aeschbach Chocolatier to name but a few. These companies are all multinational, their various branches (such as supply, manufacture, marketing and distribution) are located throughout the world. Certain individual aspects of the MNCs, however, tend to follow certain inclinations; suppliers of cocoa are always found in equatorial less economically developed countries (LEDCs) such as Ghana and Cameroon, factories of the chocolate MNCs are usually located in more economically developed countries (MEDCs) or the nation of origin, eg. Britain and Switzerland.

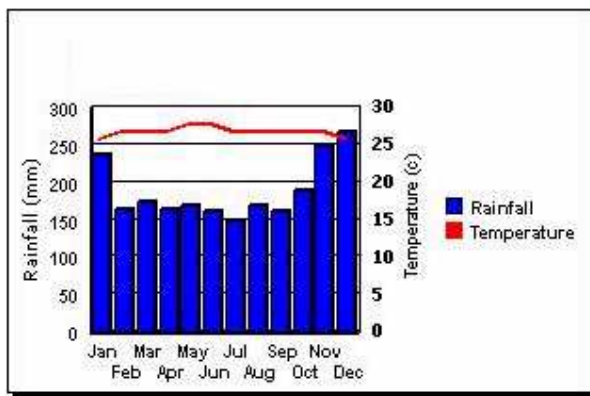
Fig. 3 A world map showing cocoa producing areas of the world



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The production of chocolate, as we know, starts with the harvest of beans in the countries that produce cocoa, these can be seen in Figure 3. I will be analysing three of these countries: Ghana (Central Africa), Brazil (South America) and Belize (Central America), two of which are in the top five cocoa producing nations of the world (Ghana is second and Brazil is fourth). All three of these countries are LEDCs, and they are all situated around the equator as seen on Figure 2. This means that they have an equatorial climate, these climatic conditions produce high temperatures throughout the year, usually with a temperature range of less than three degrees Celsius. Rainfall throughout the year is heavy, normally over 2000mm annually, and most equatorial countries have an intense, punctual and daily precipitation. Figure 4 is a climate graph of a typical equatorial country, we can see how conditions remain much the same throughout the year meaning that plants that can survive under these circumstances can grow all year round.

Fig. 4 A typical climatic graph of an equatorial country.



One of these plants is *Theobroma cacao*, seen in Figure 1, which is commonly known as a cocoa tree. This tree is native to Brazil yet it is now grown along the equator in many different countries. The conditions required for the cocoa tree are fairly demanding and the areas of cultivation lie only within 20 degrees latitude of the equator. Further still within this latitude a temperature range of 21-32 is required, rainfall is largely insignificant as long as the soil is capable of retaining moisture. So we can see from Figure 4 that equatorial countries provide ideal and all year round growing conditions for the cocoa tree.

As mentioned earlier all three of these countries (and every other equatorial country) are LEDCs, or less developed in relation to other nations of the world. Figure 5 presents us with a table outlining the basic properties of Ghana, Brazil and Belize that give an indication of the level of development within them compared with an MEDC; the United States of America.

Fig. 5 A table comparing equatorial LEDCs with an MEDC.

Country	GNP	Life Expectancy	Adult Literacy	Doctors per 1000 people
Belize	\$1,320	67 years	70%	0.652
Brazil	\$2,450	62 years	81%	0.571
Ghana	\$380	53 years	60%	0.095
USA	\$21,800	72 years	97%	1.629

We can see from Figure 5 that the division between LEDC and MEDC is fairly obvious

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(Particularly in the case of GNP), Ghana is the least developed out of our three equatorial countries. We have briefly analysed three cocoa producing countries, but what about chocolate producing countries?

The United Kingdom is an MEDC, it is a major global producer of chocolate and also a main consumer. In the UK people have a comparatively high standard of living, the GNP per capita is \$18,882 and a life expectancy of 77 years. The UK has been producing chocolate well over 100 years, Britain was the first country in the world to create and distribute solid eating chocolate and many modern chocolate MNCs, such as Mars, Cadburys and Nestle, have their headquarters or factories in the UK. The UK produces around 545,095 metric tonnes of chocolate per year, the individual UK chocolate market having been valued at around £6 billion. As a nation the UK spends £3.9 billion per annum on chocolate confectionary. These figures give us an insight as to just how much of an important role Britain plays in the chocolate industry.

We are now familiar with the equatorial LEDC's climatic conditions, which are (excepting Hawaii) the only environmental circumstances that support the cultivation of the cocoa tree. We also know about the level of chocolate consumption and production that currently exists globally. So rationality would infer that these equatorial countries effectively dominating the cocoa market should be 'rolling in it'. Yet we also know that these countries remain LEDCs, some stricken with poverty and disease. At this point reason intervenes and we must realise that somewhere someone or something is cheating these small-scale cocoa producers.

Cocoa production is an unsophisticated, un-mechanised and primitive industry, it is labour-intensive so cacao plantation owners normally employ workers when they are harvesting. Cocoa growers are not always poverty-stricken, some are extremely wealthy if they own enough plantations, but the people who work on the cocoa are plantations are invariably poor. Figure 6 is a house in Accra, the capital of Ghana, this represents the sort of living conditions that Ghanaian cocoa workers have. Behind that house is a Ghanaian luxury villa, of the sort that our rich, cacao plantation owners would inhabit.

Fig. 6 Juxtaposing living conditions in Accra, Ghana.



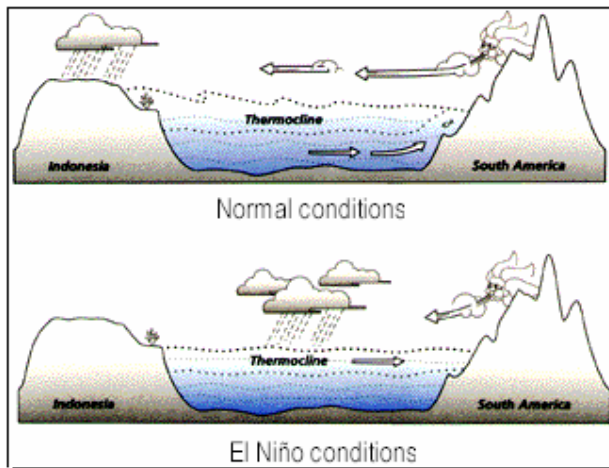
Plantation owners affect their workers quality of existence directly by how much they pay them, whether they themselves are rich or poor. In the equatorial LEDCs of study there is no minimum wage for workers; they are paid as little or as much as employers deem necessary, but there is also no minimum price for cocoa. Cocoa is a freely traded global commodity and its

price is determined by the current supply and demand, previous attempts at establishing a minimum price for cocoa via the International Cocoa Agreements and the World Bank have failed and there were inter-governmental agreements to liberalise the market. This means that like the wages of plantation workers, cocoa prices can be as high or as low as buyers want them. This is a problem for both small and large plantation owners; some plantations are small family run businesses that do not employ workers so the price of cocoa can be directly detrimental or beneficial to them. In Ghana, for instance, the majority of cocoa sales goes through the district government which purchase the cocoa from growers and then sell it to manufacturers. These government organisations cheat the cocoa growers by altering the scales and paying a lower price for the cocoa in order to make a larger profit.

The chocolate MNCs play a massive part in determining the lives of all the previously mentioned people. The cocoa growers depend on their demand for the bean; if the MNCs reduce their demand or turn to suppliers with lower prices then these people can lose their ability to earn money and even their homes. I will return to the MNCs later but we first have to acknowledge that cocoa grower's standard of living is not always determined by factors under human control.

El Niño is a disruption of the oceanic-atmospheric system in the tropical Pacific that can have detrimental consequences both locally and globally. El Niño is the abnormal warming of these oceanic waters, which is on part of a see-saw process called the Southern Oscillation. This is the reversing surface air pressure between the eastern and western tropical Pacific, the opposite phenomenon is called La Niña but is not a damaging to the weather as El Niño. El Niño causes irregular weather patterns across the world, it disrupts water temperatures, changes temperatures and can bring heavy rain or drought.

Fig. 7 A cross section showing the features of El Niño compared with normal weather conditions.



It occurs spontaneously (although scientists are learning to predict El Niño using satellite imaging) every four to five years on the Central-South American coast. El Niño often effects Belize and it has ruined plantations of cacao, which, as we know, are quite un-resistant to temperature changes and adverse weather conditions. This can render cocoa growers penniless for up to six months. El Niño is just one example of many uncontrollable forces that can effect cocoa farmers' lives.

Chocolate MNCs can make a one very significant change that will effect the plantation owners, perhaps even the workers, way of life. Fair Trade, in regards to cocoa, is an organisation that encourages companies to follow certain standards so they can label their products as Fair

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Trade. In the Fair Trade a system a social premium is paid on top of a minimum price for cocoa beans which are bought from farmer cooperatives such as Kuapa Kokoo, Conacado Cooperative and the Toledo Cocoa Growers Association. The premium (around \$150 per tonne above the minimum or world market price, whichever is greater) goes into a social development fund run by the cooperative. This fund will improve conditions in surrounding settlements such as education or water supply. It also provides financial support for farmers who are under the threat of losing their plantation because of low income or those who wish to improve their plantation via loan programs such as Kuapa's Credit Union.

There are many cooperative farms that run under this basis and there are many chocolate manufacturers that purchase off them. Kuapa Kokoo is a large organisation and numbers over 35,000 members, according to MNC Cadburys they are in partnership with each other; working on a social improvement program. Yet Cadburys does not pay Fair Trade prices for its cocoa nor does it offer Fair Trade chocolate to its consumers, in fact Cadburys condemns the process of Fair Trade, stating that a universal adoption would result in a world surplus of cocoa and the market would collapse. Not one chocolate MNC provides adheres to Fair Trade, whereas many smaller scale companies such as Green & Blacks, Traidcraft, Equal Exchange and the Day Chocolate Company have adopted Fair Trade. The problem is that the products these companies provide are extremely difficult to get hold of and aren't widely produced or distributed.

Now to address the statement, I think we can conclude that by purchasing and eating chocolate, however little and whoever from, we are helping the people of the third world. Chocolate contains cocoa, cocoa can only be produced in equatorial countries, equatorial countries are all LEDCs, LEDCs are considered the 'third world' and chocolate companies have to buy this cocoa from the growers to supply the chocolate we are demanding. So by purchasing and eating any chocolate we are sustaining the demand for chocolate and consequently cocoa and thereby giving money, however little, to the third world which feeds them. I think analysing the statement "If you want to feed the people of the third world eat only Fair Trade chocolate" I think this represents the second approach to the situation, boycotting chocolate MNCs such as Cadburys and only buying Fair Trade chocolate in order to:

1. Increase the cocoa growers income and hence their standard of living and quality of life while also increasing the surrounding environment for all inhabitants of the Fair Trade cooperative settlements.
2. Create an incentive for chocolate MNCs to provide Fair Trade products and act respecting Fair Trade policies due to lack of demand for their chocolate.

So while it is correct to say that by eating chocolate we are aiding the people of the third world, it would be ~~best~~ to eat Fair Trade chocolate because it will help them ~~more~~.

By the sustenance of the current chocolate market the chocolate MNCs will flourish and be wealthy because they are taking lots of revenue due to the low cocoa prices. The large cocoa plantation owners who are in long term business directly with the manufacturers will be wealthy because they are not paying their workers much and they sell large amounts of cocoa on a long term contract. The government districts that buy cocoa from Ghanaian farmers will be wealthy because they cheat the small-scale cocoa growers. The small-scale chocolate producers will remain insignificant and their produce widely unavailable. The small-scale growers will live in poverty because they are cheated by the government buyers or because of the internationally low prices for cocoa or because of the inconsistent purchasing from their buyers. The cocoa plantation workers will live in poverty because the plantation owners do not

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pay them enough and there is no minimum wage. The other people in the LEDCs will live in poverty whether you sustain the current chocolate market or not and the consumers in the UK and other MEDCs will be happy because they are eating chocolate that is releasing endorphins and dopamine and have a high standard of living.

By the growth and sustenance of the Fair Trade chocolate market the chocolate MNCs will still flourish but earn a little less because they are cleaning the blemishes from their conscience and paying fair prices for their cocoa. The wealthy, large cocoa plantation owners will be able to join cooperatives and get better prices for their cocoa because of the minimum price and also live in a better area due to the social development fund from the premium. The wealthy government districts will deteriorate and perish, they were a cheating middleman and there is no longer any need for them because the small-scale cocoa producers have joined cooperatives that deal directly with the manufacturers. The small-scale chocolate companies will flourish and become Fair Trade MNCs because their goods will be widely distributed and more renowned as Fair Trade. The small-scale cocoa producers will have an increase in their income and a better standard of living because they will have Fair Trade customers who will buy as much as they produce which will also increase because they have higher yields due to pesticides, etc. The cocoa plantation workers lives will improve because they have an increase in income and their settlements, like the small-scale cocoa growers', are developing because of the minimum Fair Trade wage and social development fund. The other people in the LEDCs will have an increase in their standard of living due to the social development plan and the consumers in the UK and other MEDCs will be even happier because there is a higher amount of better quality cocoa in the chocolate they are eating resulting in the release of even more endorphins and dopamine ~~and~~ they still have a high standard of living.

Maybe Cadburys are right and the second option could create a surplus of cocoa causing a collapse in the global market and catastrophic consequences to all the people in the equatorial LEDCs, but then maybe they are wrong and it won't. Personally I think it's worth risking it if there is any chance of reducing any of the poverty that over 1.5 billion people suffer in this world, poverty which, incidentally, could be completely eliminated by the combined financial power of the worlds seven richest men.

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