

The Case for FDI into the Ethiopian Coffee Industry

Abstract

Despite the steady growth in the Ethiopian coffee industry, it is underperforming compared to other coffee producing nations. The lack of access to technology is in part responsible for its shortcomings. The enormous tariff imposed on imported automobiles in Ethiopia has resulted in inefficiencies in the market through deadweight losses. German FDI into the Ethiopian coffee industry in return for the abolition of tariffs on German cars will benefit both parties. The coffee industry in Ethiopia will grow due to growth in productivity and German car industry will benefit from free trade resulting in net gain for both parties.

Introduction

Ethiopia is the biggest coffee exporter in Africa and 8th largest in the world (Minten, 2017; ICO, n.d.). The Ethiopian economy heavily relies on its coffee industry as coffee takes up 22 percent of the country's commodity exports and about 4 million small farming households produce 95 percent of country's coffee (Minten, 2017). Although export values and quantity of coffee exported have seen incremental increases, yields remain very low compared to other coffee growing countries partly due to the lack of access to technology and capital that would increase productivity in the sector (Minten et al., 2014).

The domestic car industry in Ethiopia is protected through excessive import tariffs imposed on foreign cars. Ethiopia is one of the largest growing economies, yet they have the world's lowest rate of car ownership (Igunza, 2017). Thus, there is an opportunity for a foreign car industry to penetrate the growing market demand for cars in Ethiopia if the tariffs are reduced or abolished.

Foreign Direct Investment (FDI) into the Ethiopian coffee industry in return for abolition of import tariff on German cars will yield welfare for both nations. Inflow of capital will grant Ethiopian coffee sector access to technology that will allow an increased and cheaper production through economies of scale which will increase coffee export into Germany. Abolition of import tariffs on German cars would allow German car manufacturers to penetrate the Ethiopian car market to meet local demand for automobiles. Thus, open trade between the two nations will result in net gains for both parties.

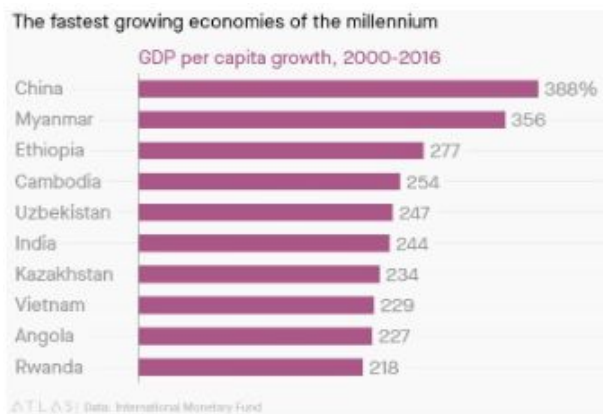
Research & Analysis

I. Overview of Country

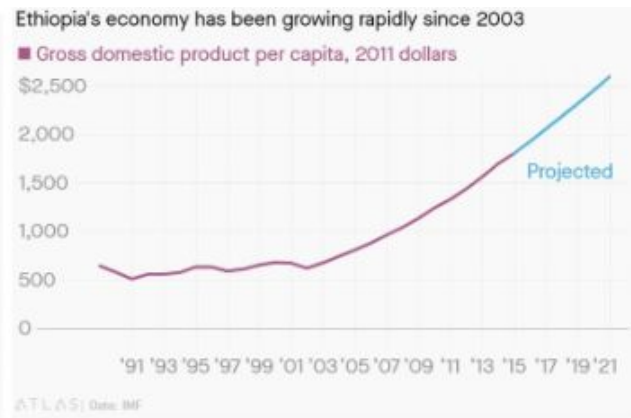
A. Ethiopia

Ethiopia is a developing country with GDP growth of 356% between 2000 and 2016 and GDP per capita projected to double over the next 4 years (Kopf, 2017). The World Bank estimates that of the 10.8% average annual growth recorded by Ethiopia between 2004 and 2014, agriculture accounted for 3.6% of that growth (Kopf, 2017). It is the second most populous country in Africa with population of 102 million, and is expected to reach 190 million by 2050 (Kopf, 2017). It is also one of the poorest with a per capita income of \$783 (Kopf, 2017). However, this simultaneously means cheap and plentiful labor for foreign markets, allowing a labor intensive goods such as coffee beans to be produced in large quantities. There are an estimated 15 million people, or approximately 15 percent of the country's total population, who derive their livelihoods from coffee, and they have to live off of just one \$1 a day (Africa, 2016). Ethiopia is the single largest African producer of coffee and exports about half of its total production (Tefera, 2015). Coffee production itself is a labor intensive process from the planting and

harvesting of the seeds, which farmers in Ethiopia still do by hand, to the processing of the bean, which takes place in processing facilities that are too few and far away from the farms.



(Figure 1)



(Figure 2)

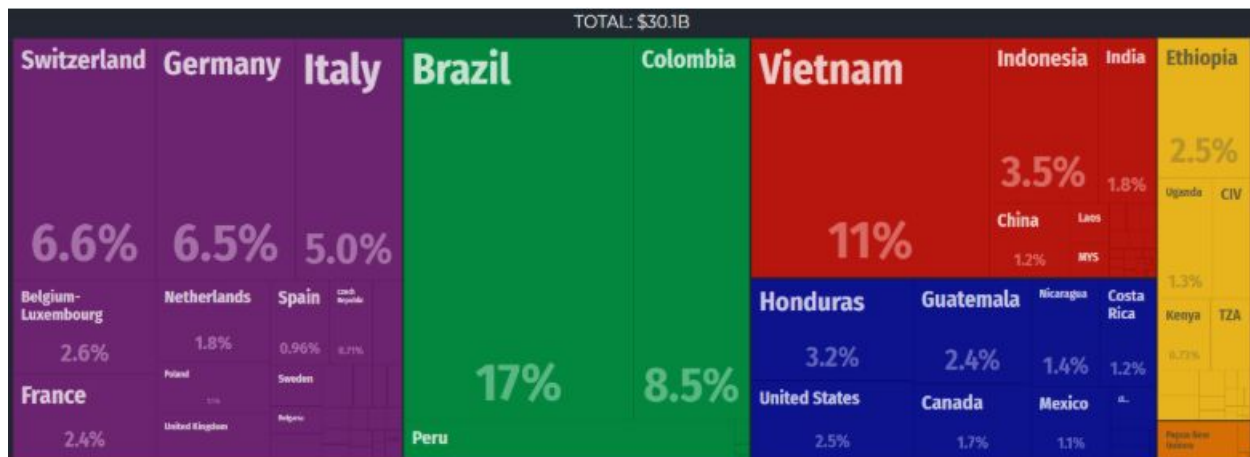
B. Germany

Germany is a developed country with population of 82.7 million and its GDP is growing strong with a 5.2 percent increase over the past three years (Bozoyan, 2018). Germany is the largest economy in Europe as it constitutes 21 percent of European GDP and German companies represent 10 percent of European manufacturing companies generating 28 percent of total EU turnover in the sector. “SMEs, such as Volkswagen (a car company), constitute 99.6 percent of all companies, employing around 60 percent of the German workforce” (Bozoyan, 2018).

II. Market Competition and Structure

A. Ethiopia’s Coffee Industry

The comparative advantage of a low-income country like Ethiopia comes from the export of labor intensive, low-skill agricultural goods (World Bank, 2012). However, there are many countries that share those similar attributes with Ethiopia, that also export coffee, making the international coffee industry very competitive; that is why Ethiopia exports 2.5 percent of the worlds coffee exports (The Observatory of Economic Complexity, 2016). The global industry displays the markings of perfect competition with many countries across the world producing coffee beans. The revealed comparative advantage for Ethiopia’s coffee industry is 56.7 meaning that it has a high comparative advantage, because it is essentially exporting 56.7 times its ‘fair share’ of coffee exports (The Observatory of Economic Complexity, n.d.). Ethiopia exports 3.3% of Germany’s total imported coffee beans with an import value of \$115M (The Observatory of Economic Complexity, n.d.). Brazil has a sizable lead in the German coffee market followed by Vietnam and Honduras, and Ethiopia comes in 8th in the list of leading exporters of coffee into Germany (UN Comtrade, n.d.)



(Figure 3: Ethiopia’s coffee exports relative to the world)

B. Germany’s Car Industry

The car industry in Germany is very strong, exporting 22 percent of the world’s cars adding up to an export value of \$154B of the global \$711B (The Observatory of Economic Complexity. n.d.). German engineering has for long been held as the height of engineering quality, especially when it comes to manufacturing cars. In 2016, German car exports to Ethiopia added up to \$11 million (The Observatory of Economic Complexity. n.d.). The revealed comparative advantage for Germany’s car industry is a low 2.26 meaning that it does not hold a very high comparative advantage against the rest of the international car industry, this only reinforcing their need for Ethiopia to abolish their tariffs on cars (The Observatory of Economic Complexity, n.d.). Ethiopia as of right now only imports 3.8% of its total car imports from Germany with a total import value of \$11M (The Observatory of Economic Complexity, n.d.). Japan has a sizable lead in the Ethiopian car market followed by India and South Africa, and Germany comes in 6th in the list of leading exporters of cars into Ethiopia (The Observatory of Economic Complexity, n.d.).

III. Effects of FDI on the Ethiopian Coffee Industry

Coffee production is a major cash crop in Ethiopia, nevertheless, its production and productivity are hampered by different constraints such as:

1. Poor access to market information
2. Lack of physical infrastructure
3. Limited technical know-how
4. Long distances to too few processing facilities
5. Lack of access to tools, machines and capital
6. Diseases

These factors lead to low coffee yields in Ethiopia compared to other countries. However, this poses “huge potential to increase coffee production as it is endowed with suitable elevation, temperature, soil fertility, indigenous quality planting materials and sufficient rainfall in coffee growing belts of the country” (United Nations, 2018). Through foreign direct investment there are ways to capitalize upon these characteristics to improve productivity, such as:

1. Giving support and materials to farmers to keep coffee production sustainable

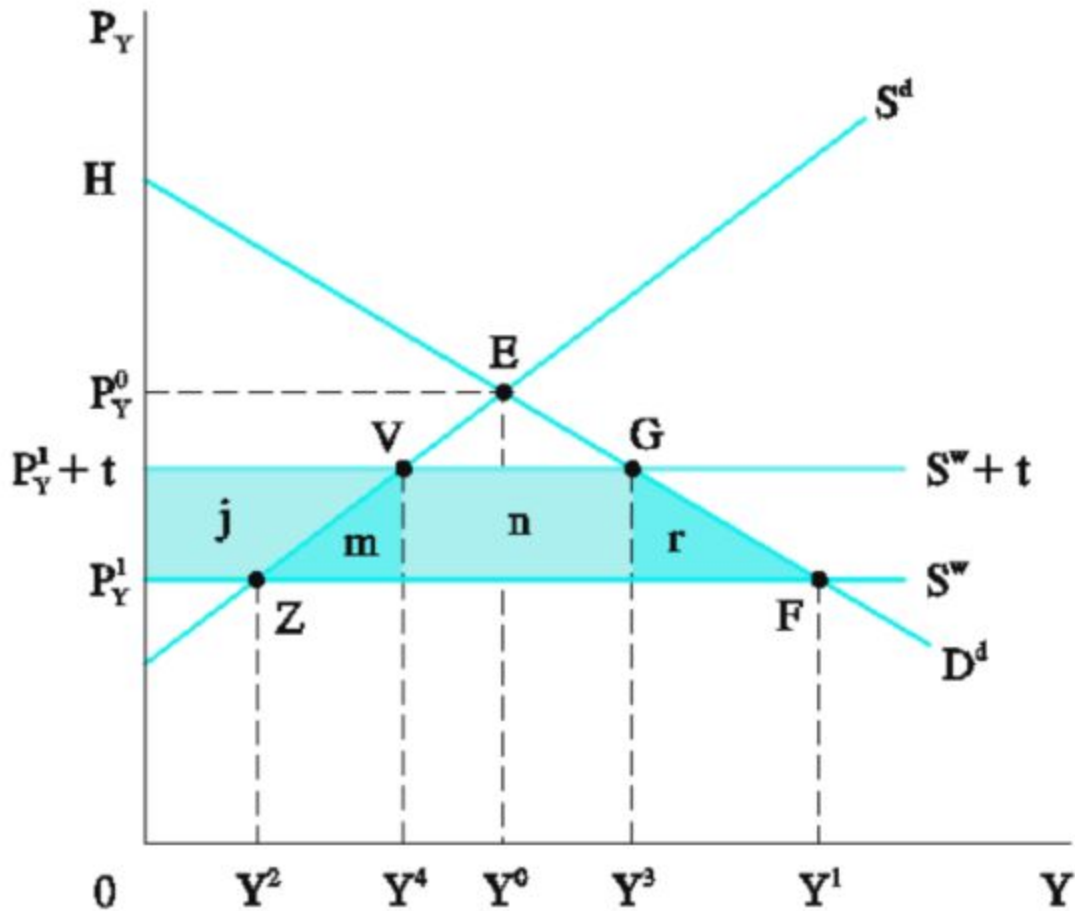
2. Creating more processing facilities in the region to make transportation less costly
3. Providing special extension services for growers to improve their coffee production through improved education and quality of life for households
4. Provision of financial resources to purchase the requisite equipment, some farmers do not even have access to some of the bare minimum equipment necessary for coffee production
5. Training for the technical, financial and commercial skills necessary for the sustainable management of coffee processing facilities
6. Investment in infrastructure projects and health facilities to improve farmers' quality of life
7. Training coffee farmers towards higher adoption of improved technologies, such as mulching, pruning, rejuvenation of trees, planting of improved varieties, and modern input use

(Musebe, Agwanda and Mekonen, 2007)

The use of these practices will lead to higher local supply and, therefore, to increased quantities of coffee exported.

IV. Stage of Economic Integration

The current economic integration between Ethiopia and Germany can be seen as unilateral. Germany is part of the EU's single market, which requires its member states to comply with EU's rules and regulations on trade. Under the EU's Generalised System of Preferences (GSP), Ethiopia is categorized as a beneficiary of the Everything but Arms (EBA) scheme (Trade Helpdesk, n.d.). As part of EU's effort to assist developing nations integrate into the world economy, the EBA provides a selected number of least developed countries (LDCs) "fully duty free and quota-free access to the EU for all their exports with the exception of arms and armaments" (Trade Helpdesk, n.d.). Thus, Germany as with the rest of the EU does not impose import tariffs and quotas on Ethiopian coffee, allowing easy access to the German coffee market. On the other hand, Ethiopia imposes heavy tariffs on imported goods primarily as a way to generate government revenue (Export.gov, 2018). The customs duty for automobiles is at 35 percent, a rate which the Ethiopian government justifies "on the grounds that it is imported for personal use" (Imports and Taxes in Ethiopia). Furthermore, vehicles imported into Ethiopia can face five different taxes (Igunza, 2017). Such excessive taxing on vehicles results in import cars costing more than twice the amount than it would be in a neighboring nation and three times the original retail price (Igunza, 2017). It comes as no surprise that Ethiopia has the lowest rate of car ownership in the world, with only two cars in every 1,000 people (Igunza, 2017). However, despite the heavy taxation on cars, Ethiopia imported 110,000 cars in 2016, which is more than 50 percent growth compared to previous two years (Igunza, 2017). Although the government claims that it is trying to lure foreign car manufacturers into Ethiopia to provide cheaper and locally made cars, the growth in imports questions such claim. It is likely that the true motive behind the heavy taxation on import vehicles is a mixture of government revenue and protection of domestic automobile manufacturing industry.



(Figure 4: Welfare Effects of Tariff on Small Economy)

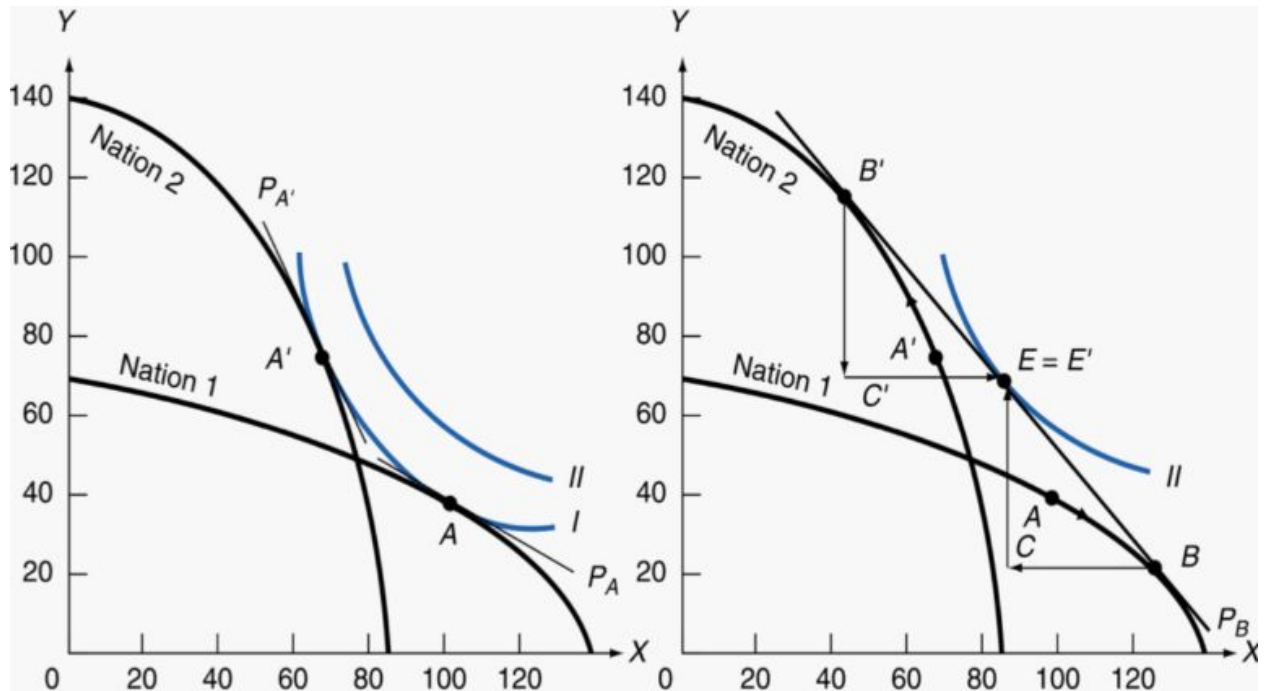
Lowering import tariffs will not only be beneficial for Germany and but also Ethiopia through driving economic growth. Neoclassical theory suggests that opening up trade will generate economic growth through more efficient allocation of resources (Yarbrough and Yarbrough, 2013). Empirical study done on the effectiveness of globalization concluded that globalization is good for economic growth as countries that have reduced barriers of trade have seen higher growth rates than those that did not (Dreher, 2006). Moreover, the optimal tariff theory states that for a small economy like Ethiopia, the optimal tariff is zero since the terms-of-trade effect is nonexistent (Yarbrough and Yarbrough, 2013). Ethiopian economy is too small to have significant influence on the terms-of-trade through increased protectionist policies. Although import tariffs generate government revenue, they are inefficient as they reduce consumer and producer surplus and creates deadweight loss through artificially increased prices and lower demand (Yarbrough and Yarbrough, 2013). With a reduced tariff or abolition of the tariff, the consumers in Ethiopia will benefit from lower car prices and the car producers in Germany will benefit from increased demand for their products. However, implementation of a reduced tariff or free trade deal with Germany would not result in pareto efficiency. The import-substitute industry, or the car manufacturing industry, in Ethiopia will take a hit as it will not be able to compete with the lower priced imported cars. Thus, the Ethiopian government will have to implement policies to distribute the gains from the growth in the coffee industry to the stakeholders in the domestic automobile manufacturing industry to avoid social

and political opposition. This can be done through collecting income taxes from the coffee exporters and appeasing the domestic car manufacturers through direct handouts and funding programs to help them transition to the coffee industry.

V. Application of Relevant Economic Theories

The current economies of Ethiopia and Germany do not allow the use of the H-O Theorem because they do not meet all the assumptions that the H-O theorem requires. Firstly, contrary to the H-O theorem, both of these countries do not produce both of the commodities, as Germany has no market in agricultural coffee production (Bean, 2018). This means that there is no increasing opportunity cost for Germany's production of coffee, because due to their climate, it is not a feasible allocation of their resources. Ethiopia however, does face increasing opportunity costs as when the Ethiopian coffee industry grows, it would be taking away labor and capital from their car manufacturing industry, making coffee production relatively more expensive in terms of car production. Additionally, there are no constant returns to scale in the production of coffee, because as resources and capital are put into the coffee industry in Ethiopia, the lower the average cost of each unit of coffee production becomes. This is also true for Germany with their production of cars. Another assumption that the real world does not follow is that there are no transportation costs, tariffs, or other barriers to trade. There are transportation costs for both goods, and tariffs on German cars in Ethiopia. The H-O Theorem also wrongly assumes that both countries have the same technology, as there are differences in the investment and productivity between the Ethiopian and German economies.

Assuming that these assumptions are met, the H-O Theorem can explain some of the trade patterns that can exist between the Ethiopian coffee industry and the German car manufacturing industry. Ethiopia will export coffee, the commodity which is labor intensive good, because it is beneficial for Ethiopia which is a labor abundant country. It will want to import cars from Germany, as cars are a capital intensive good, and capital is relatively scarce for Ethiopia. When Ethiopia specialises in coffee, and Germany specialises in cars, each country is specialising in the production of the good that is intensive in the factor which they are abundant in because it presents a comparative advantage in the production of that good. Relative commodity price differential between the two nations allows this to work in the coffee and car manufacturing industries. This reflects a basis for mutually beneficial trade because it is more expensive for each country to produce the other good given their own resources. If both countries produce the products which are cheapest for themselves to produce, it provides for the greatest efficiency in the production of goods. This means that each nation is specialising in the commodity that it can produce at the lowest possible cost (Yarbrough and Yarbrough, 2013). When specialisation occurs, the production of cars in Ethiopia will decrease and the production of coffee in Germany will decrease, because it will make trade a much more economically beneficial option for both countries. Assuming that the increasing cost condition is met, the production of each good will move along their respective production possibility frontiers towards the comparative advantage good high causes a change in the relative costs which ultimately impacts the gains from trade. The specialisation would continue until the relative prices of both goods equalise in both nations.



(Figure 5: H-O Theorem in Context)

According to the Stolper- Samuelson Theorem, this specialisation leads to the magnification effect in both countries (Yarbrough and Yarbrough, 2013). This means that because of free trade, each output price changes which alters the real factor rewards in each country. In Ethiopia, the price of labor intensive goods will increase causing wages to go up, whereas in Germany, the price of capital intensive goods will increase, meaning that rents will go up. This makes the labor owners in Ethiopia much more well off, while leaving the capital owners worse off. Conversely, in Germany, the capital owners will be better off, whereas the labor owners will be worse off. In order to counter this, some forms of redistribution of the gains of trade would need to be implemented to compensate the capital owners in Ethiopia, and the labor owners in Germany.

Following the same assumptions, the example between Ethiopia and Germany would follow the Factor- Price Equalisation Theorem, because it will allow each state to export the good with the lower relative price so that the pressure of the external demand will modify autarky prices until they equalise, causing the equalisation of the payment to wages and rents in both economies (Yarbrough and Yarbrough, 2013). Trade would cause wages to rise in Ethiopia and fall in Germany, while decreasing the price of rent in Ethiopia and increasing it in Germany. These effects would cause a reduction in the pre-trade differences in wages and rents between the nations. This shows how international trade causes a redistribution of income from the scarce factor to the abundant factor.

Conclusion

With conditions that don't abide by the assumptions for the H-O Theorem, in order to foster an environment that promotes investment, Ethiopia will have to capitalise on the internal economies of scale

in coffee production. For Ethiopia and Germany to have a mutually beneficial trade agreement, the Ethiopian government would have to lift the tariff on German cars, in exchange for German investment in the Ethiopian coffee industry. Before foreign direct investment, the average cost of coffee production from competitors is lower than Ethiopia's. With investment, the average cost of Ethiopian coffee production decreases, enough to make the average price of Ethiopian coffee production less than the average international market price for coffee. This then allows Germany to get access to cheaper Ethiopian coffee, and makes it a loyal customer of Ethiopia. Ethiopia can then gain back the lost income from lifting the tariffs, as the coffee industry will substantially grow. This allows for cheaper production of coffee, and investment into better resources to produce higher quality coffee. While the Ethiopian car industry may still exist, with the lifted tariff, German car manufacturing will gain by having an increased market of buyers in Ethiopia. Germany will also gain from the investment into the vastly growing Ethiopian coffee industry. This is all possible due to the increased production that the economies of scale of the Ethiopian coffee industry demonstrates, resulting in increased welfare for both nations.

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