The Philippines in the Cocoa-Chocolate Global Value Chain

Highlights

• The Philippines’ current involvement in the cocoa-chocolate GVC is limited as it primarily acts as an importer of immediate and final products for domestic consumption.

• Despite many competitive advantages, the country’s exports remain low as it ranks 72nd in terms of exports, as its global market share of less than 0.01%.

• The primary challenges to Philippine participation in the chain are the low volumes of cocoa beans and farm-level issues, constraining upgrading into higher processing stages.

• The country’s most pronounced strengths is related to its geographic conditions that allow for growth of higher-value cocoa beans across the country, as well as its location, which is close to emerging markets.

Introduction

The cocoa-chocolate global value chain (GVC) connects cocoa bean producers with manufacturers and consumers of chocolate in a multimillion-dollar industry. The production mostly takes place in developing countries, while the manufacturing and distribution of end products occur in developed nations. Over the last decade, the demand for chocolate has grown rapidly, motivating several countries already in the industry to further improve their production, and for other nations to take part in the value chain. It is in the interest of the Philippines with its capacity to produce cocoa beans, to take advantage of increased global demand and the need for additional players in the value chain.

The Cocoa-Chocolate Global Value Chain

The Cocoa-Chocolate Global Value chain covers the agricultural stages of cocoa bean production, mid-stream manufacturing processing of cocoa beans into intermediate products as well as the production, marketing and distribution of chocolate.
chocolate and other final products. These processes are divided into five main segments namely, production of cocoa beans, roasting and grinding, pressing, chocolate manufacturing, and marketing and distribution.

Cocoa is the key ingredient in the production of chocolate and thus, one of the world’s most highly traded tropical crop. In 2015, this industry is valued at approximately US$9 billion. The cocoa-chocolate GVC, for which cocoa beans is a key product, is also growing rapidly. Total trade in the cocoa-chocolate GVC has doubled over the past 10 years, reaching nearly US$44 billion in 2015. In terms of value, chocolate exports capture 56% of the total exports in the industry, followed by cocoa beans 20%, cocoa butter 12%, cocoa liquor/paste 7% and cocoa powder 5%.

A large number of both developed and developing countries participate in the cocoa-chocolate GVC. On the supply side, developing countries located along the equator are the major exporters of cocoa beans that are later processed into intermediate products in other locations around the world. Final products, like chocolates and other confectionery items, are mainly produced and exported by the EU and North America. Overall, the Netherlands plays a key role in the value chain, importing cocoa beans, processing intermediate products, and producing final products. While the demand for chocolates is still concentrated in developed countries located in Europe and North America, this is beginning to shift towards developing markets, particularly in Asia.

Production is based in hot tropical climates in developing countries, while consumption is primarily concentrated in developed countries in the Northern hemisphere. West Africa is the leading producer with approximately two-thirds of the global supply. Majority of West Africa’s exports come from Cote D’Ivoire and Ghana, which together, supply 61% of global exports.

Overall, a handful of developing countries dominate exports in the early stages of the value chain. Developed countries on the other hand, are primarily involved in the final product stages of the chain. Cocoa beans are mainly used by chocolate manufacturers in Western Europe, which are then exported to world markets.

The cocoa-chocolate GVC evolution is migrating in terms of geography, and shifting in terms of actor engagement and preferences. There is a movement of global consumption towards growth economies, particularly the Asia Pacific, due to rising incomes in the Global South. However, stagnation in supply has
caused rising prices and concerns of sustainability. Global supply concerns have also led midstream traders and downstream chocolate producers to engage more directly in upstream operations. Moreover, many major chocolate manufacturers are shifting to sourcing only certified cocoa beans despite low returns from the current market.

In addition to these, global chocolate confection has become highly concentrated among five global brands: Mondelez International (15%), Mars, Inc. (14%), Nestlé (12%), Ferrero (8%), and Hershey’s Co. (7%). Together, these companies account for 57% of the global market, with each firm having an extensive network of manufacturing operations and various brands marketed in numerous countries around the world. Several of these brands gross over US$1 billion in revenues annually. With this strong market power, these firms have formidable influence over the operations of the cocoa-chocolate value chain.

The Philippines in the Cocoa Global Value Chain

The growing global demand represents an opportunity for the Philippines to grow its economy. However, the Philippines’ participation in the cocoa-chocolate GVC is limited, despite many competitive advantages. The country has produced cocoa for centuries and has good climatic and geographical conditions for its production. However, exports remain low. Globally, the country ranks 72nd in exports with a global market share of less than 0.01%. Despite a history of cocoa bean production dating back to the 17th century, the Philippines’ current output is limited compared with other global and even regional players, generating a total of just over US$24 million in exports in 2015. While exports grew steadily over the last decade, increasing by 288% from 2005 to 2015, the nation’s participation in the GVC remains small compared to other nations in the region.

Production of cocoa beans in the Philippines peaked in the 1990s at 35,000 tons and has since declined due to aging trees, depressed producer prices and climatic conditions. As a result, by 2015, the Philippines produced only 6,020 tons of cocoa beans. Statistics on production are inconsistent. Industry players estimate production to be between 10,000 to 12,000 tons. However, the Philippine Statistics Authority (PSA) places the number lower, reporting approximately 6,000 tons in 2015.

The dwindling supply has also reduced the number of large-scale processors. Most businesses are either small-scale chocolate manufacturers or tablea makers, with few firms having significant export operations. Cocoa-chocolate

GVC exports amounted to US$24 million in 2015. The Philippines instead, was a net importer with imports exceeding US$132 million for all products in the cocoa-chocolate GVC. Overall, only eight Filipino firms exceeded that threshold in 2014.

Securing cocoa beans is a major requirement for participation in the cocoa-chocolate GVC in the Philippines. Cocoa bean aggregators and exporters are the main coordinators of the industry and have most of the market power compared to smallholder producers who are largely fragmented. Cocoa bean aggregators use a variety of sourcing methods to supply beans including contract growing, open market buying, and managed farms.

The largest cocoa bean exporter by volume in 2015 was Kennemer Foods International (KFI). This Dutch-owned company procures cocoa beans through contract growing covering 2,000 ha., open market buying and managed farms. In the open market, KFI purchases wet and dry beans at various buying stations and post-harvest facilities in the country. The firm operates company farms, hiring workers to cultivate cocoa beans and engaging in revenue sharing programs. Many of KFI’s exported cocoa beans go to Malaysia, Singapore, and Indonesia. In addition to cocoa beans export, KFI partners with the global chocolate manufacturer, Mars, in the country.

Meanwhile, Casco Commodities, another cocoa bean exporter, primarily supplies European markets and partners with the global processor Barry Callebaut.

Advantages

The Philippines’ most pronounced strength in the cocoa-chocolate GVC relate to its geographic conditions, which allow for growth of higher value cocoa beans. The country likewise benefits from a climate that permits the growth of a variety of cocoa beans across the nation. Moreover, the Philippine’s proximity to emerging consumer markets presents an opportunity to leverage its geographic location in driving further exports.
The country’s **geographic conditions provide a large potential production area**, as cocoa beans may be widely produced in the Philippines. The majority of production occurs in the southern island of Mindanao, with production increasingly spreading to other parts of the nation. The climate, rainfall, and average temperature across the Philippines promote cocoa bean growth. Moreover, cocoa does well in intercropping schemes with many other agricultural products of the country such as coconuts and bananas.

Likewise, the Philippines has the **ability to grow all of the three main cocoa bean types**. All of the three varieties of beans are present and are grown in the country. The majority of cocoa beans produced are mid-value Trinitario beans. Criollo beans, which are mainly from older trees, have lower yield but are still being produced; while higher value varieties of Forastero beans are beginning to be planted in some farms. The suitability of the country for diverse types of cocoa beans helps in diversification efforts and minimizes the risks and challenges associated with planting a single variety. A strong focus on Trinitario beans in expansion initiatives could be sufficient in making the country competitive on the global market.

The country’s **lack of modern production operations in agriculture undermines the industry’s growth and further participation in the GVC.**

**Challenges**

Growing global demand in the cocoa-chocolate GVC represents an opportunity for the Philippines to expand its presence in the industry. However, the country must first address significant constraints to ensure that the industry can support sustainable long-term engagement in the sector. Low volumes of cocoa beans and farm-level issues are the primary challenges to Philippine participation in the chain, constraining upgrading into higher processing stages.

**The country’s lack of modern production operations in agriculture undermines the industry’s growth and further participation in the GVC.** The cocoa-chocolate industry is dominated by aging, smallholder producers on small plots of land using outdated farming techniques. Many of the farmers are hesitant to adopt new technologies and do not have titles to their land because of incomplete land reform programs. Farmers need access to capital to implement more modern agricultural techniques, upgrade to modern farming equipment, and obtain much needed certifications.
Because production is fragmented among many small farmers, this leads to a lack of economies of scale. Although there are some cooperatives in the country that are coordinating efforts to reduce transaction costs, cooperatives are limited in their ability to aggregate harvest and implement new post-harvest techniques that can improve the quality and quantity of output in production. Lack of quality beans and low production also create problems of access to markets and decreased bargaining power. Furthermore, the country needs to improve post-harvest fermentation and drying techniques to protect quality and prevent post-harvest losses.

Finally, lack of coordination among GVC actors is another constraint. The lack of coordination occurs both among government actors as well as industry associations in the Philippines. While there are a number of programs and initiatives underway to support the growth of the cocoa sector, these efforts are not aligned.

Key lessons from Ecuador and Indonesia: Lessons for Philippine Upgrading from Global Experiences

To effectively participate in the cocoa-chocolate value chain, the minimum requirement for developing countries is to have a stable and larger supply of cocoa. Nations that are able to increase their cocoa production will be able to upgrade and move to other segments of the value chain. For instance, both Indonesia and Ecuador are pursuing process upgrading at the agricultural level, as a response to the global trend of stagnant cocoa production in the past 10 years, while demand continues to increase.

In the case of Ecuador, policies have focused on increasing export gains through increased productivity and quality. This can be seen in the boom of their cocoa beans exports which increased almost three times, a rare phenomenon in an industry where production is almost constant. The nation also sought to diversify beans in-country to enter traditional and niche markets. Indonesia meanwhile, presents a different approach as it implements policies to boost production to ensure sufficient raw materials to support its newly installed processing capacity. In an industry where the main raw material is scarce, it becomes increasingly important for countries to make certain that their local production can supply the processing stages that the country aims to pursue.

The second level of upgrading differs for Indonesia and Ecuador. The Latin American country decided to upgrade by improving and taking advantage of the quality of its beans. In the past decade, Ecuador succeeded in doubling the price of its beans, by focusing on a niche market of fine cacao that faces high demand in European countries. It also sought to establish diverse marketing channels for various beans to capture value from niche markets while still participating in traditional cocoa bean chains.

In contrast, Indonesia’s second level upgrading emphasizes the processing stages of the cocoa-chocolate value chain. The country increased the value of its exports, by processing locally produced cocoa beans through a multi-stakeholder approach led by the government that implemented taxes to encourage the manufacturing of the beans. It further spurred the shift to processing with an agricultural processing focus on islands that generated high levels of cocoa bean production. Five years after the policies were established; the country increased its exports of cocoa liquor four times, and exports of cocoa butter three times. It is worth noting that the country implemented an import tax on cocoa beans to disincentivize the importation of the raw materials that in turn encouraged the processing of local beans.

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1 It is estimated that in the Philippines there are about 10,000-15,000 cocoa bean farmers.
Upgrading Trajectories Recommendations

Proposed upgrading initiatives particularly call for increasing the competitiveness of the Philippines in general, and the cocoa-chocolate value chain, in particular. These require more interaction between multiple stakeholders of the cocoa-chocolate GVC including the private sector, public sector actors, non-government organizations, and educational institutions in addressing issues. These also pertain to improving the skills of farmers and disseminating modern agriculture techniques, with the goal to provide more and better quality cocoa beans; developing and disseminating research on best cocoa varieties according to the specific geographic areas, best practices on cultivation and any other required knowledge to improve productivity and quality of the beans; ensuring the quality of the Philippine cocoa beans using recognized international standards; and promoting cocoa beans and processed cocoa products abroad.

These potential upgrading trajectories are projected for the short and medium term. For the short term, the country should focus on improving production in volume and quality. Once this is achieved, the country can move into higher value processing segments of the GVC.

Process Upgrading: Agriculture (Short Term). The first step is to increase production to meet domestic market demands before moving into the international market. Efforts to boost processing at this stage will likely drive less expensive beans imports from other countries and undermine production efforts at home. By taking the lead from major cocoa bean producers in improving agriculture production, the country can be competitive and participate in the cocoa-chocolate GVC.

Process Upgrading: Certifications (Short Term). The country can work with its lead cocoa bean producers, by seeking certification from international certifying organizations, such as UTZ and Rainforest Alliance. While these certifications will not assure that the beans will command higher prices in the market, it will ascertain the commitment of several global cocoa processors and chocolate manufacturers to source only certified beans by 2020. Now is the time for the country to assist farmers in meeting the requirements of these organizations to ensure competitiveness as production increases.

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The DTI’s Policy Brief “PH in Manufacturing GVCs,” published in 2017, discusses national competitiveness issues which need to be resolved to enable the country to participate in global value chains.
**Product Upgrading (Short Term).** The country needs to sustain the drive to produce multiple varieties of cocoa beans. Producing all varieties minimizes the country’s exposure to high risks with varieties that have different end markets. Focus, however, should be towards diversifying into Forastero beans since the demand for Criollo beans comes from a niche market with relatively small demand. Furthermore, it is advisable to explore high value hybrids to take advantage of new markets and new cocoa bean varieties.

**Functional Upgrading: Manufacturing (Medium Term).** Manufacturing the beans will be the next step after the country is able to meet the minimum requirements of cocoa production. When the Philippines is able to secure quality and stable production volume, moving to higher stages of the value chain will provide additional export revenues and new employment opportunities.

**Conclusion**

The Philippines is strategically located in proximity to growing markets and has been producing cocoa beans for over a century. Its climatic and geographical conditions are suitable for such production. However, several factors limit the country’s competitive advantage. Low volumes of cocoa bean production and farm-level issues are the primary challenges to Philippine participation in the chain, constraining upgrading into higher processing stages.

The first step in upgrading is to increase the quality and quantity of bean production, initially for the domestic market and eventually for the international market. Agricultural process upgrading, producing multiple cocoa varieties, and acquiring international certifications will require interventions such as programs for farmers to access finance, training, research, and the strengthening of farmers associations. Further, cultivating closer and meaningful collaboration among key stakeholders is required to encourage better coordination, information exchange, sharing of best practices that will enhance the overall competitiveness of the industry.

Upgrading trajectories and policy recommendations for the Philippines’ participation in the cocoa GVC are summarized in the table below.

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**Low volumes of cocoa bean production and farm-level issues are the primary challenges to Philippine participation in the chain, constraining upgrading into higher processing stages.**
## The Philippines and the Cocoa-Chocolate GVC: Upgrading Trajectories and Policy Recommendations

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| Short-Term  | Process Upgrading: Increase domestic production of cocoa beans for export and local processing | • Expand volume of cocoa exports  
• Increase backward linkages and local value add in downstream production  
• Employment and revenue creation for smallholders  
• Complements existing production in coconut and banana (intercropping) | • Fragmented system of production—mainly smallholders  
• Slow uptake of GAPs among farmers, including poor use of fertilizer and irrigation  
• Weak access to capital for smallholders  
• Aging farmer population  
• Aging trees | • Develop and implement specific technical training programs for capabilities gaps. Potential Lead: DA  
• Encourage farmers to adopt modern agricultural practices by linking implementation to access to loans. Potential Lead: DA  
• Promote further coordination of farmers under larger farmer associations and cooperatives to facilitate the transfer of knowledge and technology and improve economies of scale. Potential Lead: DA and DOST  
• Assist farmer cooperatives to partner with chocolate manufacturers and cocoa processors. Potential Lead: DTI and DA  
• Facilitate access to finance using buyer contracts as guarantees. Potential Lead: DA | • Improve data collection to accurately track production and planting in the country  
• Create a public-private council with industry stakeholders (including educational institutions) responsible for guiding industry growth, identifying bottlenecks & overcoming constraints  
• Establish a Marketing Board under the public private council to promote the industry through trade promotion and quality reviews as well as supporting farmer associations in export negotiations  
• Support strengthening of industry associations through administrative improvements, connections with the public and private sector  
• Encourage geographic clustering of firms in and around Mindanao, specifically Davao  
• Identify specific human capital needs for different upgrading strategies and identify key individuals for training abroad to address these gaps  
• Reach out to large processors and MNCs on production potential for cocoa in the Philippines  
• Partner with major MNC initiative like Nestle’s Cocoa Plan or Mondelez Cocoa Life to help use best agricultural practices to increase productions and improve quality  
• Set up trade missions to leading producing countries such as Indonesia, Ghana, Cote D’Ivoire and Ecuador to learn from their experiences. |
| Short-Medium Term | Process Upgrading: Certification of production | • Provides long term access to cocoa market which has increased its focus on sustainability and certifications | • Lack of access to finance by smallholders  
• Few certification agencies in the country | • Help farmer secure access to capital to achieve international certifications (Rain Forest Alliance, UTZ, and Fairtrade International) for cocoa beans. Potential Lead: DA  
• Promote grading of beans by quality at the farm-level. Potential Lead: DA  
• Provide financial support to bring in foreign certifying agency auditors. Potential Lead: DA  
• Subsidize payment for certification. Potential Lead: DA  
• Encourage the establishment of direct market linkages with global chocolate manufacturers and cocoa processors through international certification bodies and inviting sourcing managers to the country to see production areas. Potential Lead: DTI | 
| Short-Medium Term | Product Upgrading: Diversify the varieties of cocoa beans produced in country | • Minimize exposure to global price volatility and harvest issues  
• Higher returns for Fine Flavor certified products  
• Reluctance to rejuvenate cocoa trees  
• Some varieties are more susceptible to disease and weather damage than others  
• Lack of human capital with relevant qualifications and experience | • Analyze high value bean varieties & hybrids available globally for potential production in Philippines, including analysis of market demand. Potential Lead: DOST and DA  
• Conduct feasibility studies to identify best regions for selected high potential varieties. Potential Lead: DOST and DA  
• Develop and implement traceability training programs for smallholders like what Ecuador and Peru have done. Potential Lead: DA  
• Promote large scale Forastero expansion for large scale operations processors. Potential Lead: DA | 

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| Medium-Long Term | Functional Upgrading: Move into semi-processed segments of chain on a large scale (Roasting & Grinding) | • Higher unit value from cocoa paste/liquor  
• Strategic location to serve growing markets for chocolate in China and India  
• Semi-skilled and skilled employment generation | • Lack of necessary cocoa bean supply  
• Infrastructure and logistic costs  
• Energy cost  
• Human capital for managing machinery  
• Regional competition from Indonesia and Malaysia | • Promote small scale Criollo planting as a niche market strategy. Potential Lead: DA  
• Begin process of becoming fine flavor cocoa certified. Potential Lead: DTI and DA | • Increase sustainable production capacity in country of quality cocoa beans through process and product upgrading (1 &2). Potential Lead: DA, DTI and DOST  
• Develop SPZ focused on agri-processing near major cocoa production areas to reduce costs of shipping raw materials. Potential Lead: DTI  
• Facilitate connections between grower associations and processors through contract buying programs via a cocoa council and investment incentives for processors who use local bean supply. Potential Lead: DTI  
• Maintain tax incentives to attract MNC cocoa processors who source local cocoa beans. Potential Lead: DTI |
Cocoa-Chocolate Global Value Chain

Annex
This policy brief highlights specific issues and policy implications cited in the study by the authors Danny Hamrick, Karina Fernandez-Starke, and Gary Gereffi of Duke Global Value Chains Center (GVCC). The full study, submitted to the Department of Trade and Industry, can be downloaded at www.industry.gov.ph.

The views and opinions expressed in this policy brief are of the author/s and do not necessarily reflect Philippine government policy.

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