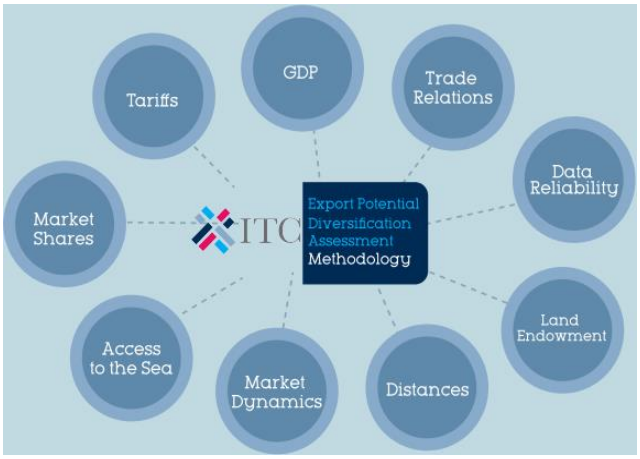
EXPORT POTENTIAL BRIEF

Opportunities for Ghanaian Cocoa



International Trade Centre | ALLIANCES FOR ACTION

Ministry of Foreign Affairs of the Netherlands

About the brief

Netherlands Trust Fund V

The Netherlands Trust Fund V (NTF V) programme aims to contribute to better rebuilding in the targeted countries with a focus on MSMEs in the digital technologies and agribusiness sectors, linking up both for synergies and business opportunities. The programme covers both sectors in Ethiopia, Ghana, and Senegal, as well as a multi-country approach aimed at the digital technologies sector in Ivory Coast, Benin, Mali, and Uganda. Through the project, ITC aims to promote more efficient and sustainable agribusiness and support services that will lead to increased trade, better incomes, and livelihood opportunities, especially for smallholder cocoa farmers.

The agribusiness component of NTF V in Ghana is implemented through the ITC Alliances for Action (A4A) approach that seeks to build resilience and growth for farmers and small and medium enterprises through more mindful and responsible trade, production and consumption systems. A4A works as a network that promotes responsible partnerships for development and better trade and leverages investments and technical support to achieve measurable impact for smallholder farmers and MSMEs. In the framework of NTF V, A4A look beyond sustainable production to work on the enabling environment and target all steps of the value chain from bean to bar. Digital applications are explored to increase the overall competitiveness of the agribusiness value chain as well as to scale up results and reach more partners and beneficiaries.

As part of the project, this export potential brief, prepared by the Trade and Market Intelligence (TMI) section at ITC, presents quantitative information on trade trends and export prospects of Ghana's cocoa sector, based on the TMI tools Trade Map and Export Potential Map.

Acknowledgements

Arushi Vaishnav is the main author of the report. Cecilia Heuser provided guidance and comments. The author thanks Lucas Ouriques Poffo for his valuable research assistance. The team worked under the leadership and supervision of Julia Spies, Senior Market Analyst, and Mondher Mimouni, Chief, Trade and Market Intelligence (ITC).

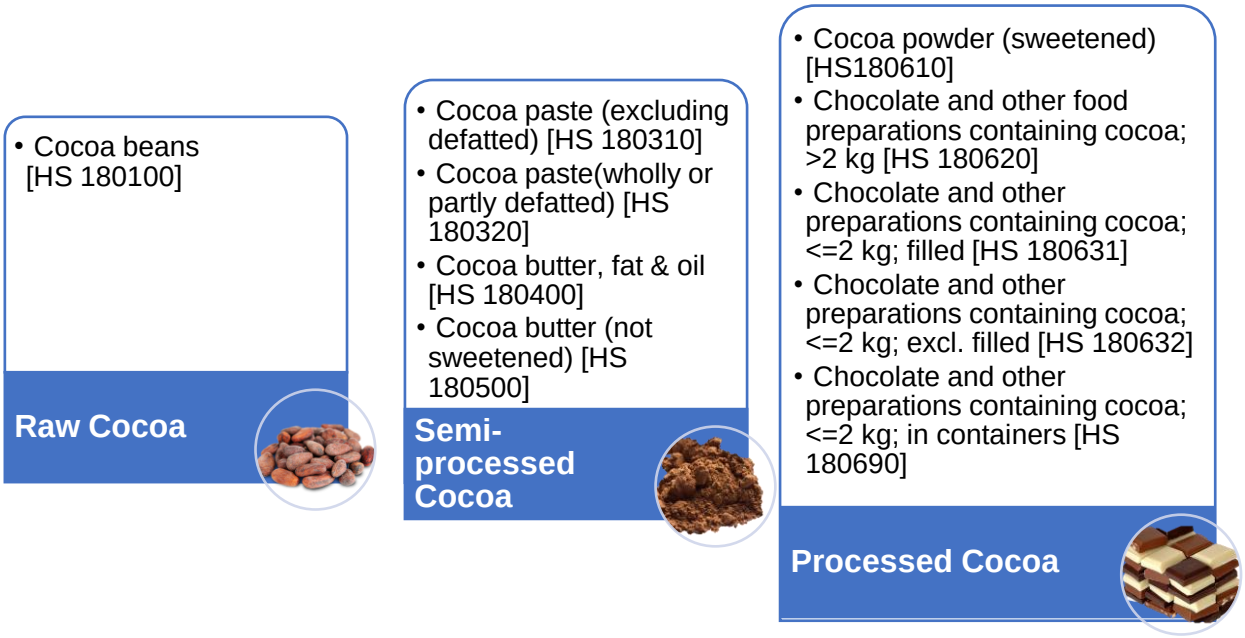
The team managing the "Building Alliances for Action from bean to bar" project under the guidance of Federica Angelucci (NTF V Agribusiness Project Manager) and Lawrence Attipoe (Alliance for Action National Programme Coordinator, Ghana) supported the preparation of the brief and provided useful feedback.

GLOBAL TRADE ALONG THE COCOA VALUE CHAIN

To analyse the export potential of Ghana along the cocoa value chain, this report classifies cocoa products into three categories, namely, raw cocoa, semi-processed cocoa, and processed cocoa, based on the Harmonized System (HS) codes, as shown in Figure 1.

As the first step in the process of transforming raw cocoa beans into chocolate, the cocoa beans are sorted, roasted, winnowed, and milled to produce cocoa liquor, which is then pressed to release cocoa butter and cocoa powder. The cocoa paste is another value-added product obtained later by refining a mixture of cocoa liquor, cocoa butter, and other ingredients, such as sugar and milk. Finally, cocoa butter is used to manufacture chocolate.[1]

Figure 1. Cocoa value chain: bean to bar



Note: The analysis by processing stage does not include 'cocoa waste'.

Source: Trade Map (2023).

Traditionally, the cocoa value chain has been segregated across different regions, as cocoa is grown exclusively in tropical areas, but it is processed and consumed primarily in Europe and North America. Figure 2, which lists the main exporters and markets along the value chain, confirms the traditional pattern but also highlights budding changes, in particular for semi-processed cocoa.

Cocoa production is concentrated mainly in the tropical regions of Africa

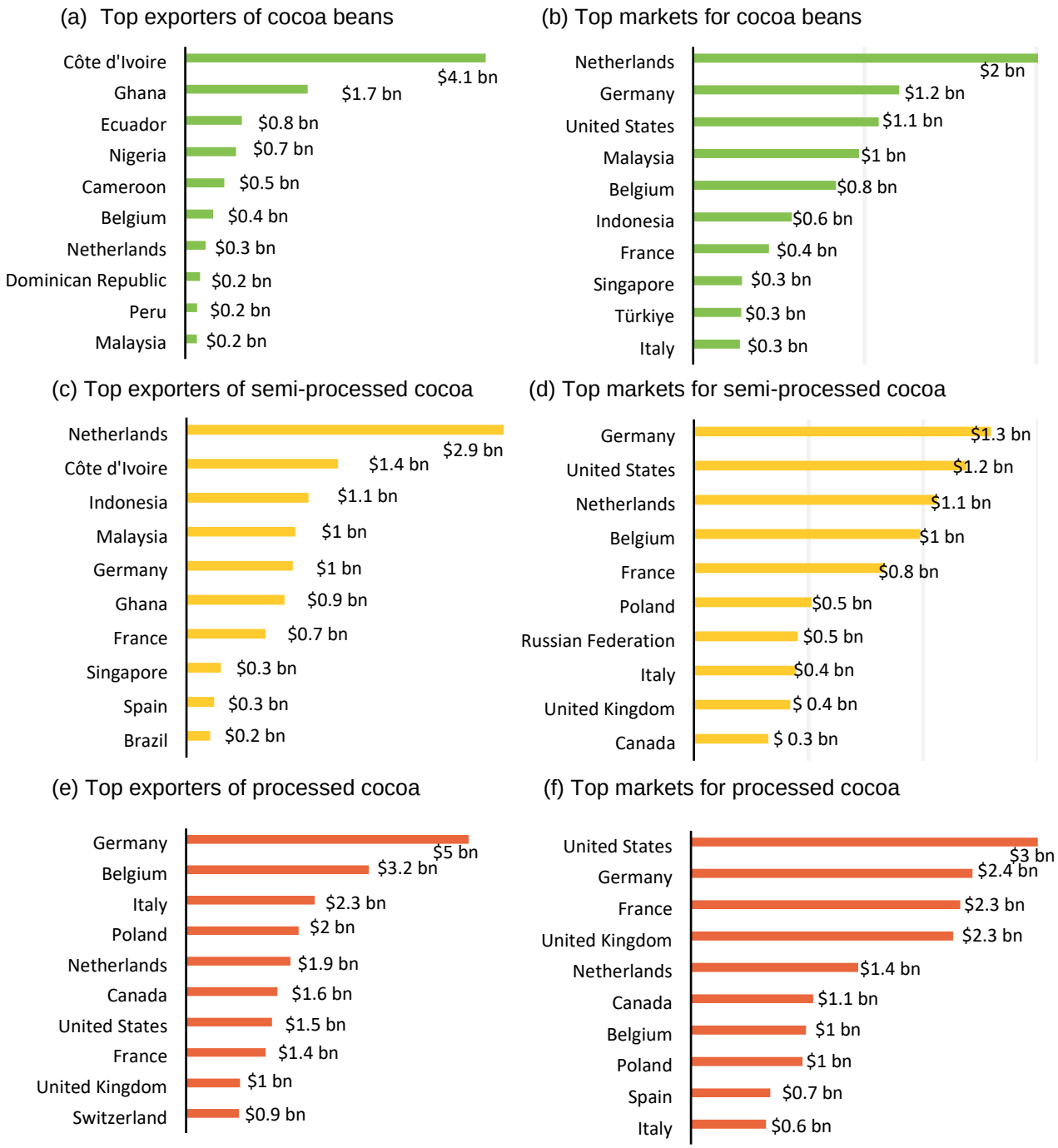
Côte d'Ivoire and Ghana are important countries for the chocolate industry, accounting for almost 65% of the global production of cocoa beans in 2021.[2] Moreover, Côte d'Ivoire and Ghana are the top exporters of cocoa beans globally, accounting for $4.1 billion and $1.7 billion of cocoa bean exports between 2017 and 2021, on average (Figure 2.a).[3]

Origin countries are increasingly engaging in processing

In the past, processing operations were performed entirely by importing countries, but this is changing.[4] Notably, Côte d'Ivoire is emerging as a leader in the cocoa processing and grinding industry and ranks second as an exporter of semi-processed cocoa products (Figure 2.c).

[1] Cocoa Processing Company Limited (2023).
[2] FAO Statistics (2023).
[3] Throughout this brief, trade indicators are sourced from Trade Map (2023), unless otherwise specified.
[4] World Cocoa Foundation (2023).

Figure 2. Global supply and demand of cocoa, by processing stages



Note: The processing stages are distinguished by colour—green for raw cocoa, yellow for semi-processed cocoa, and red for processed cocoa—throughout the first sections of this brief.

Source: Trade Map (2023).

Several factors may have influenced this change. Over the last years, grinding at origin has been a strategy of large multinationals like Cargill, Olam and Barry Callebaut to lower production costs and target regional markets. Local policies also play a role, for example, in Côte d'Ivoire, tax benefits are offered to grinders,[5] and in Indonesia, an export tax is imposed on cocoa beans to facilitate domestic cocoa processing.[6]

[5] CBI (2022).
[6] IOP Conference Series (2022)

Europe continues to be the centre for cocoa processing activities

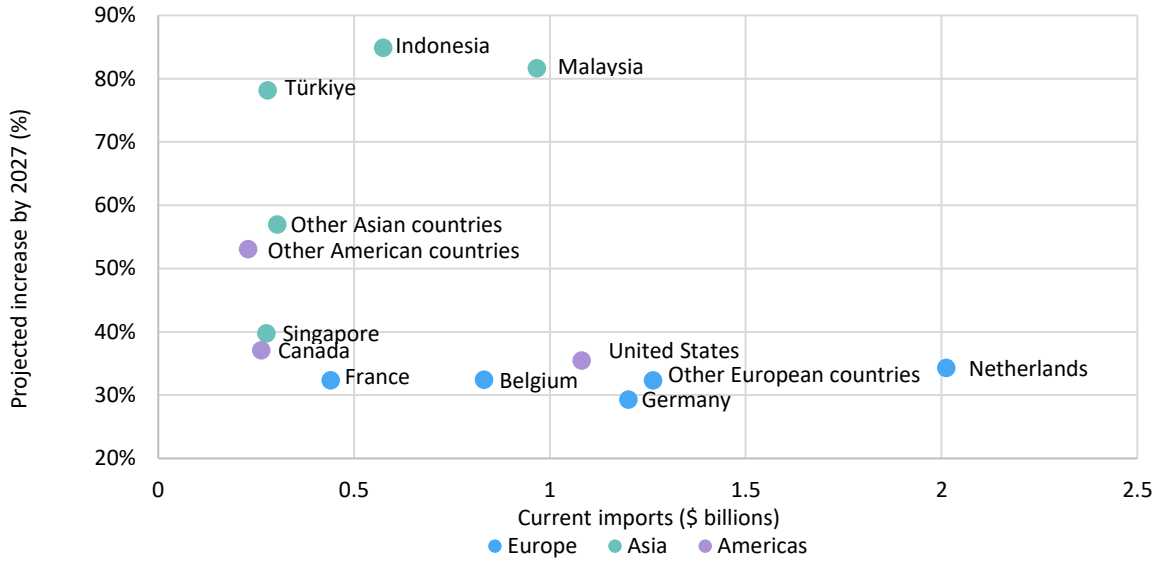
As a region, Europe accounts for the largest share of cocoa grinding activities globally, almost 36% in 2020.[7] The Netherlands and Germany, the top European processors of cocoa beans, jointly import one-third of the world trade of cocoa beans (Figure 2.b).[8] Whereas countries outside Europe such as Côte d'Ivoire, Ghana, and some Asian countries including Indonesia and Malaysia capture some export opportunities for semi-processed cocoa (Figure 2.c), European exporters dominate the market for processed cocoa (Figure 2.e).

Import demand for cocoa products is highest in Europe, but Asian markets are growing fast

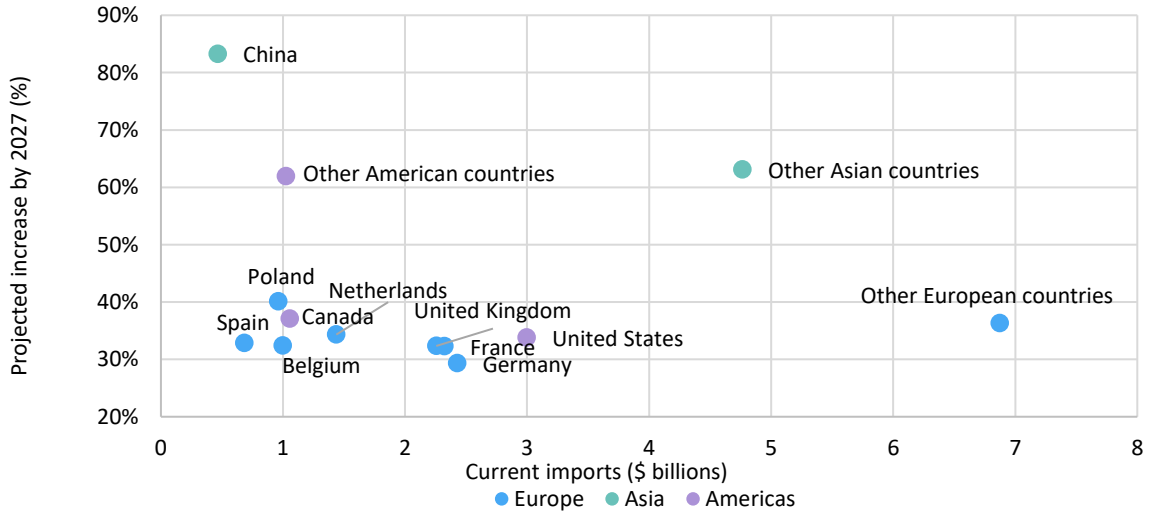
Figure 3 plots current imports and projected increases in imports by 2027 in the main markets and regions—Europe (blue), America (purple), and Asia (green), for (a) cocoa beans and (b) semi-processed and processed cocoa, respectively.

Figure 3. Current imports vs projected increases, by key markets

(a) Cocoa beans



(b) Semi-processed and processed cocoa



Note: Current imports are based on 2017-2021 averages. 'Other American/ Asian/ European countries' reflect the sum of current values and projected increases, for all countries not otherwise marked in the map in the respective categories.

Source: Export Potential Map (2023).

[7] CBI (2022).
[8] Reports also indicate the re-exportation of cocoa beans from the Netherlands to Germany.

As observed in Figure 2.a, Figure 3.a confirms that the Netherlands, Germany, and the United States are currently the largest importers of cocoa beans. Simultaneously, Asian markets are the fastest growing, with the demand for cocoa bean imports expected to increase by 85% in Indonesia, 83% in Malaysia, and 78% in Türkiye by 2027.

As a result, it is expected that in the coming years, Asian markets will gain weight among the top importers of cocoa beans. By 2027, the value of import demand of cocoa beans is expected to reach almost $2.7 billion for the Netherlands, $1.8 billion for Malaysia, $1.6 billion for Germany, $1.5 billion for the United States, $1.1 billion for Belgium, and $1 billion for Indonesia.[9]

A similar trend can be observed for imports of semi-processed and processed cocoa products, with traditional markets continuing to be the largest importers and Asian markets showing the most dynamism (Figure 3.b).

The United States, the European markets, and Canada, currently the top importers, are expected to experience growth rates between 29% and 40% in their demand for imports of semi-processed and processed cocoa products by 2027. The top five importers are expected to remain the same in 2027, with the import demand of the United States projected to increase to $4 billion, Germany to $3.1 billion, France to $3.1 billion, the United Kingdom to $3 billion, and the Netherlands to $1.9 billion.

On the other hand, the import demand for semi-processed and processed cocoa is expected to grow the most in China, from $466 million currently to $855 million in 2027, an 83% increase. Other Asian markets are expected to increase their import demand by 63% and other American countries by 62%.

GHANA IN THE COCOA VALUE CHAIN

The importance of the cocoa sector for the economy of Ghana cannot be understated. Between 2017 to 2021, it contributed an average of $2.6 billion in export values, or 18% of total exports. The cocoa industry employs two-thirds of the agricultural labour force.[10] Approximately 0.8 million individuals work directly on cocoa plantations, but many additional employment opportunities are created indirectly in associated services and manufacturing.[11]

Ghana is a competitive exporter of cocoa beans and semi-processed cocoa products

As mentioned earlier, Ghana is the second largest producer and exporter of raw cocoa globally, with 17% of total exports of cocoa beans, worth $1.7 billion, on average, between 2017 and 2021.

Additionally, Ghana has a high revealed comparative advantage (RCA) in cocoa beans, reflecting its trade competitiveness in the sector, as well as in semi-processed cocoa products (please see the glossary for a definition of RCA).

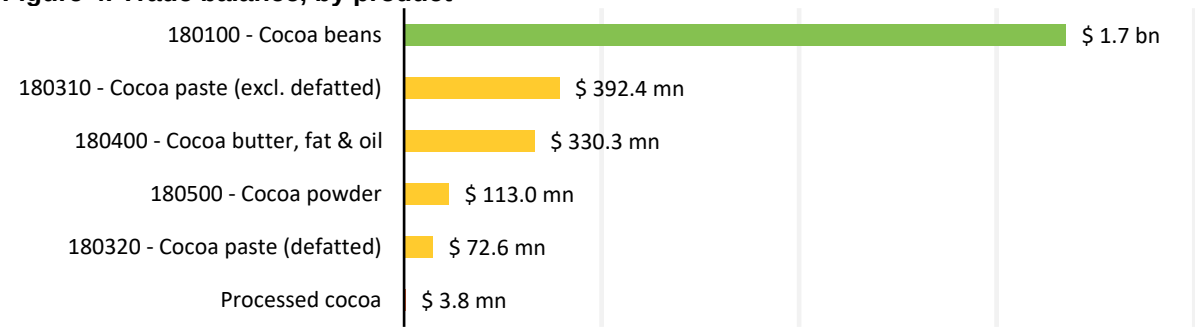
Ghanaian cocoa is known for its high quality, attributed to the country's grading system, which self-selects the top-quality cocoa beans from farmers.[12] Special characteristics of Ghanaian cocoa beans include their relatively low levels of debris and defects, higher than average fat content, and a unique mild flavour.[13]

Recent trends reinforce Ghana's net exporting position along the cocoa value chain

Ghana does not import raw cocoa at all and has, therefore, a trade surplus for cocoa beans of $1.7 billion (Figure 4). Despite lower export values for semi-processed and processed cocoa products, Ghana maintains a net exporting position in these categories. The trade surplus in semi-processed cocoa products is led by cocoa paste (excluding defatted) and cocoa butter, fat, and oil, with a surplus of $392 million and $330 million, respectively. In fact, Ghana hardly imports any semi-processed cocoa. Imports of processed cocoa stood at almost $9 million, for a surplus of $3.8 million.

[9] Note, the value of expected import demand or projected import demand equals current imports (x-axis) multiplied by the projected increase (in %, y-axis).
[10] African Business Exchange (2017).
[11] OPEC Fund for International Development (2022).
[12] World Atlas (2022).
[13] Swiss Federal Institute of Technology (2016).

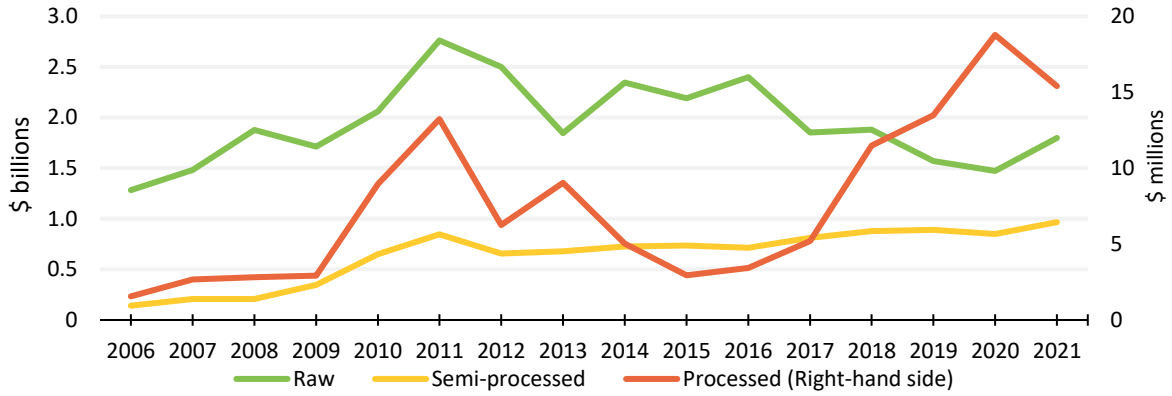
Figure 4. Trade balance, by product



Note: average for the period 2017-2021.
Source: Trade Map (2023).

Export trends over the last decade have reinforced the net exporting positions observed in Figure 4. The quantities of cocoa beans exported by Ghana have remained stable over the past decade, even if export values have fluctuated due to international price changes.[14] Between 2016 and 2017 the rising production of cocoa beans in West Africa led to a surplus in global markets that put downward pressure on international prices and induced a decline in Ghana's export values of cocoa beans (Figure 5).[15,16] This trend was only reversed in 2021, when a global deficit, and rebounding trade markets in general, drove prices up, and with them Ghana's export values.[17]

Figure 5. Evolution of Ghana's cocoa, by processing stage



Source: Trade Map (2023).

Over the last decade, exports of semi-processed cocoa have grown marginally, at a 1% rate per year on average, to almost reach $1 billion in 2021. This increase was driven by imports from the Netherlands, which represented one-third of Ghana's semi-processed cocoa exports, on average, between 2017 and 2021 (mainly cocoa butter, fat, and oil).

Lastly, the processed cocoa industry in Ghana lags in production and exports compared to other cocoa products. However, while still on a limited scale, Ghanaian exports of processed cocoa more than tripled between 2015 and 2020. Notably, exports of processed cocoa are almost entirely sweetened cocoa powder to Nigeria. Ghana's favourable position in the Nigerian market can be linked to the tariff benefits (zero tariffs) enjoyed under ECOWAS.[18]

[14] Appendix I compares Ghana's cocoa bean export quantities with values to capture the impact of price changes on export values.
[15] Reuters (2018).
[16] The International Cocoa Organization estimated a surplus of 335,000 tonnes in the 2016-2017 season.
[17] Reuters (2022).
[18] Market Access Map (2023).

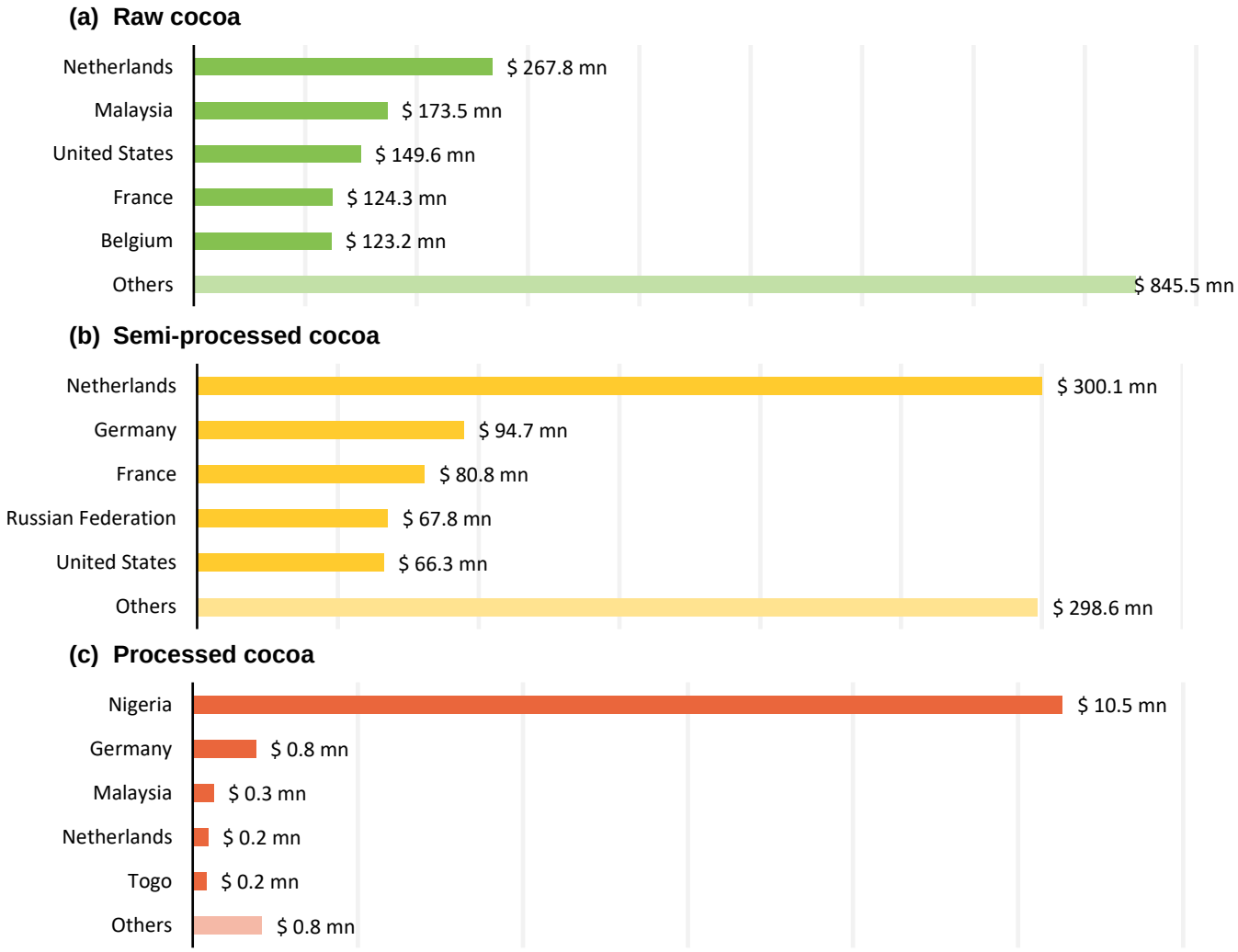
Top markets for Ghana's cocoa products

Ghana's exports of cocoa beans are largely destined to the Netherlands ($268 million or 16%), Malaysia ($174 million or 10%), the United States ($150 million or 9%), France ($124 million or 7%), and Belgium ($123 million or 7%). Notably, the Netherlands is a key trade hub within Europe, not only processing but also re-exporting cocoa beans to other European countries, including Germany and France.[19]

Almost one-third or $300 million of Ghanaian exports of semi-processed cocoa, i.e., cocoa paste, cocoa butter, and unsweetened cocoa powder, is exported to the Netherlands, followed by Germany ($95 million), France ($81 million), the Russian Federation ($68 million), and the United States ($66 million).

As mentioned earlier, Nigeria dominates as a market for processed cocoa, importing 83% of Ghana's total exports worth around $11 million, mostly in the form of sweetened cocoa powder.

Figure 6. Top markets for Ghana, by processing stage



Note: average for the period 2017-2021.
Source: Trade Map (2023).

[19] CBI (2021).

Focus on sustainability

Côte d'Ivoire and Ghana are the largest suppliers of certified cocoa beans to Europe under Rainforest Alliance and Fairtrade certifications (CBI, 2022). Despite this accomplishment, much remains to be done on the path towards sustainability; the European Union, Côte d'Ivoire, and Ghana have recently ratified an alliance promoting sustainable cocoa and striving to terminate deforestation and child labour while improving farmers' livelihoods (European Commission, 2022).

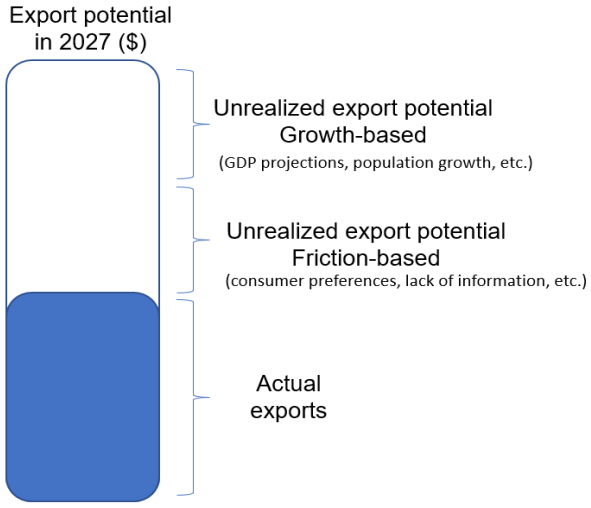
At the national level, and in response to the European Union's sustainability objectives targeting deforestation cessation, Ghana's COCOBOD initiated the Cocoa Management System (CMS) digital database project. While currently cocoa procured in Ghana can only be traced back to a cocoa-growing community and not to the farm of origin, this project endeavours to gather detailed information on cocoa bean origins to mitigate deforestation risks (SWI, 2022).

EXPORT PROSPECTS FOR GHANA'S COCOA PRODUCTS

Key concepts

ITC's export potential methodology quantifies the export potential of a country across products and markets through an assessment of detailed information on trade, tariffs, and other factors.

Figure 7: Components of the export potential



The export potential indicator computes potential values of trade for each exporter-importer-product combination based on supply capacities in the exporting country, demand conditions in the target market and the ease of trade between the two trading partners. Results are computed on a time horizon of three to four years to account for future developments and provide space for governments and companies to take action and realize existing opportunities. The findings presented here are, therefore, estimates of the export potential of Ghana's cocoa products by 2027.[20]

The difference between the export potential of a country and its current exports is interpreted as an opportunity for export growth, referred to as 'unrealized export potential' (Figure 7).

Unrealized or untapped export potential can derive from changes expected for the next few years, in particular, GDP growth of exporters and importers, population growth, or tariff changes. It can also stem from existing trade frictions such as lack of market research, difficulties complying with exporter or market regulations, lack of business networks, or unawareness about consumer preferences. We refer to unrealized potential associated with expected changes as dynamic or growth-based, and unrealized potential associated with existing frictions as static or friction-based.

[20] For details on the methodology, see Decreux and Spies (2016).

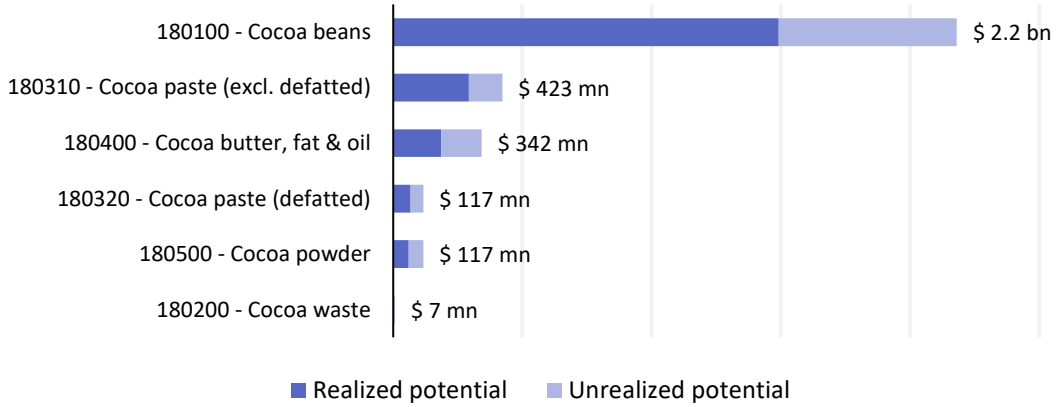
Ghana has untapped export potential in cocoa beans and semi-processed cocoa products

Ghana has an export potential of $3.2 billion in cocoa products in general. Over 34% of that export potential is unrealized, meaning that exports of cocoa products could increase by up to $1.1 billion by 2027 if that unrealized potential is materialized.

Unsurprisingly, considering its position in global markets, Ghana has the largest export potential in raw cocoa or cocoa beans, with $2.2 billion (Figure 8). Despite being a well-established exporter, Ghana still has a large untapped potential for cocoa beans. Of all cocoa products, two-thirds of the unrealized export potential concentrates in exports of cocoa beans, accounting for $689 million.

Semi-processed cocoa products also have a significant unrealized export potential of $393 million. Untapped opportunities exist for cocoa paste excluding defatted ($130 million), cocoa butter, fat, & oil ($156 million), cocoa paste defatted ($50 million), and cocoa powder ($56 million). Additionally, Ghana could increase its exports of cocoa waste by up to $3.5 million.

Figure 8. Ghana's export potential for cocoa, by product



Note: The values in the figure represent the export potential and the lighter shaded sections correspond to the unrealized export potential, for each product. Products with less than a million in export potential were excluded.

Source: Export Potential Map (2023).

In the context of the export potential framework applied here, the potential for growth for Ghanaian exports of processed cocoa products is rather small: $1.1 million untapped export potential across several forms of chocolate and cocoa food preparations.

Opportunities for export growth of cocoa products concentrate in a few markets

Of the $689 million unrealized export potential in cocoa beans, over 67% lies in three markets: the Netherlands ($209 million), Malaysia ($112 million), and Germany ($143 million) (Figure 9(a)).

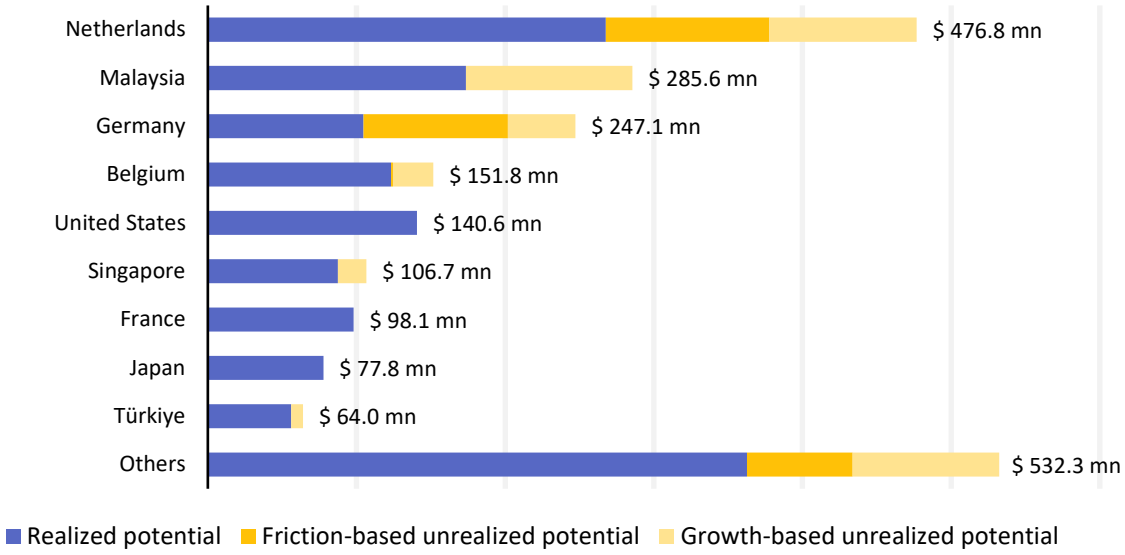
Note that the export potential is entirely realized in some traditional markets for Ghanaian cocoa beans, such as the United States, France and Japan, meaning that we cannot identify opportunities for export growth in those markets in the coming years.

In the Netherlands and Germany, significant shares of the unrealized export potential are friction-based—53% or $110 million and 68% or $97 million, respectively. For other markets, in particular Malaysia, Belgium, Singapore, and Türkiye, the unrealized export potential is entirely growth-based, i.e., driven by an expected increase in the demand for cocoa beans over the coming years.

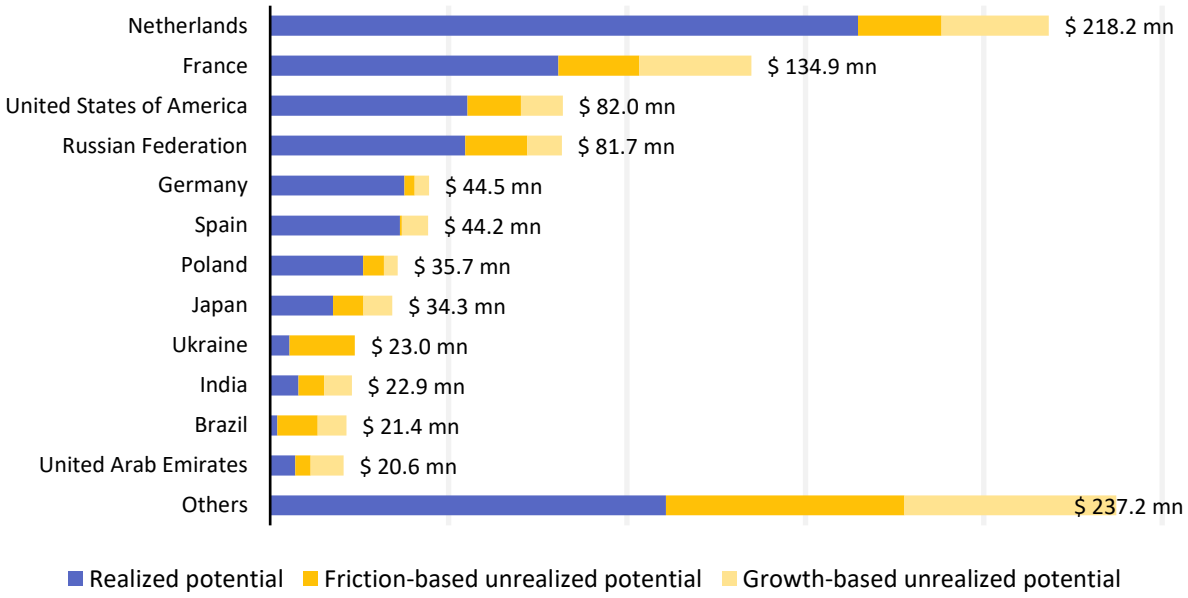
The distinction between the two types of untapped export potential is crucial when formulating strategies to materialize that potential. To unlock the potential that is hindered by frictions, it is necessary to identify and address them. To tap into the potential associated to growth projections, it is necessary to monitor potentially evolving projections and channel investments to leverage that growth.

Figure 9. Export potential for Ghanaian cocoa, by processing stage and key markets

(a) Cocoa beans



(b) Semi-processed and processed cocoa



Source: Export Potential Map (2023).

On the other hand, the unrealized opportunities in the semi-processed and processed products are scattered across several markets, led by France ($54 million), the Netherlands ($53 million), the United States ($27 million), and the Russian Federation ($27 million) (Figure 9(b)). Further information on the key markets with unrealized export potential for each of the four semi-processed products is available in Appendix II. [21]

Except in the case of Spain, where the unrealized potential is mostly growth-based, identifying and addressing frictions is key to unlocking opportunities in all other markets. The corresponding share of friction-based and growth-based unrealized export potential for Figure 9 are included in Appendix III.

[21] In the processed category, Ghana has an export potential of $1.8 million, comprising $804 thousand in 'Chocolate & other cocoa food preparations, <=2kg (excl. in blocks, bar and powder)', $531 thousand in 'Chocolate & other cocoa food preparations in blocks, <=2kg (excl. filled)', and $416 thousand in cocoa powder (sweetened).

OVERVIEW

About the cocoa value chain

- Traditionally, cocoa has always been grown in tropical areas, but processed and consumed largely in Europe and North America.
- While Europe continues to be the centre for cocoa processing activities, origin countries are engaging more and more in processing.
- Import demand for cocoa products is highest in Europe, but Asian markets are growing fast.

About Ghana in the cocoa value chain

- Exports of cocoa products are very important for Ghana, as they represent 18% of total exports.
- Ghana is the second largest producer of cocoa beans globally, as well as a competitive exporter of cocoa beans and semi-processed cocoa products.
- In recent years, exports of cocoa beans have remained stable in quantities, but values have fluctuated with international prices. Exports of semi-processed cocoa products grew at slow rates, while exports of processed cocoa products are still small and volatile.
- The main partners for Ghana's exports of cocoa beans and semi-processed cocoa products are traditional markets in Europe (the Netherlands, Germany, France), as well as Malaysia and the United States. For processed cocoa products, exports are almost entirely destined to Nigeria.

About Ghana's export potential for cocoa products

- Ghana has a large untapped export potential in cocoa beans ($1.1 billion), and in semi-processed cocoa products ($393 million).
- A significant part of the untapped export potential to the Netherlands, Germany, France, the United States, and the Russian Federation is associated to existing frictions.
- Conversely, the untapped export potential to Malaysia, Belgium, Singapore, and Spain is almost entirely associated to the growth projections for the demand of those markets.
- To unlock the potential that is hindered by frictions, it is crucial to identify the frictions and address them. To tap into the potential associated to growth projections, it is necessary to monitor evolving projections and to channel investments to leverage growth.

GLOSSARY OF KEY TERMS

Revealed comparative advantage	The revealed comparative advantage (RCA) of a specific country in the trade of a given industry's products is measured by the industry's share in the country's exports relative to its share in world trade. If the RCA is less than 1, this implies that the country is not specialized in exporting the product (the share of that product in the country's exports is less than the corresponding world share). Similarly, if the index exceeds 1, this implies that the country is specialized in exporting that product.
Projected import demand	Each market's current total imports of a specific product are projected to 2026 based on the country's expected GDP per capita growth subject to estimated revenue elasticities at the HS2 chapter level.
Export potential	The export potential is an indicator developed by ITC. This indicator provides a potential export value for products already exported by the country in new or existing target markets. It combines three components: supply, demand, and ease of trade. The supply and demand components are projected into the future (to 2027) using expected GDP and population growth rates as well as forward-looking tariffs for goods.
Dynamic untapped export potential	The untapped export potential comprises dynamic untapped export potential and static untapped potential. Dynamic or growth-based untapped export potential refers to the untapped export potential deriving from expected GDP growth, expected population growth, or expected tariff reduction.
Static untapped export potential	The untapped export potential comprises dynamic untapped export potential and static untapped potential. Static or friction-based untapped export potential comprises unmeasurable trade frictions such as lack of market research, difficulties complying with non-tariff measures, difficulties in finding buyers, etc.
Tariff advantage	The tariff advantage is an indicator that compares the tariff an exporting country faces in a target market with the weighted-average tariff applied by that market to the world (bilateral imports of the product are used as weights).

Note: for additional details, see Decreux and Spies (2016).

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DATA SOURCES

Data used in this brief was retrieved from the ITC Market Analysis tools (as of 08 May, 2023):

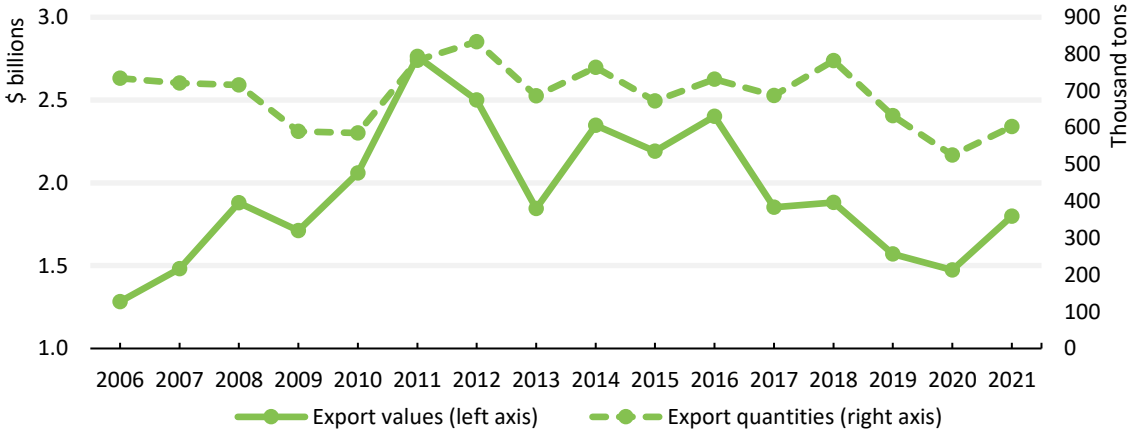
- **TRADE MAP** (www.trademap.org) for trade statistics;
- **MARKET ACCESS MAP** (www.macmap.org) for tariffs and market access requirements;
- **EXPORT POTENTIAL MAP** (exportpotential.intracen.org) for information on new potential market destinations and the untapped export potential.

To discover the ITC Market Analysis tools, visit http://www.intracen.org/itc/market-info-tools/market-analysis-tools/ . For enquiries, contact marketanalysis@intracen.org .

APPENDICES

Appendix I

Figure A.1. Evolution of Ghana's cocoa beans, by export values and quantities



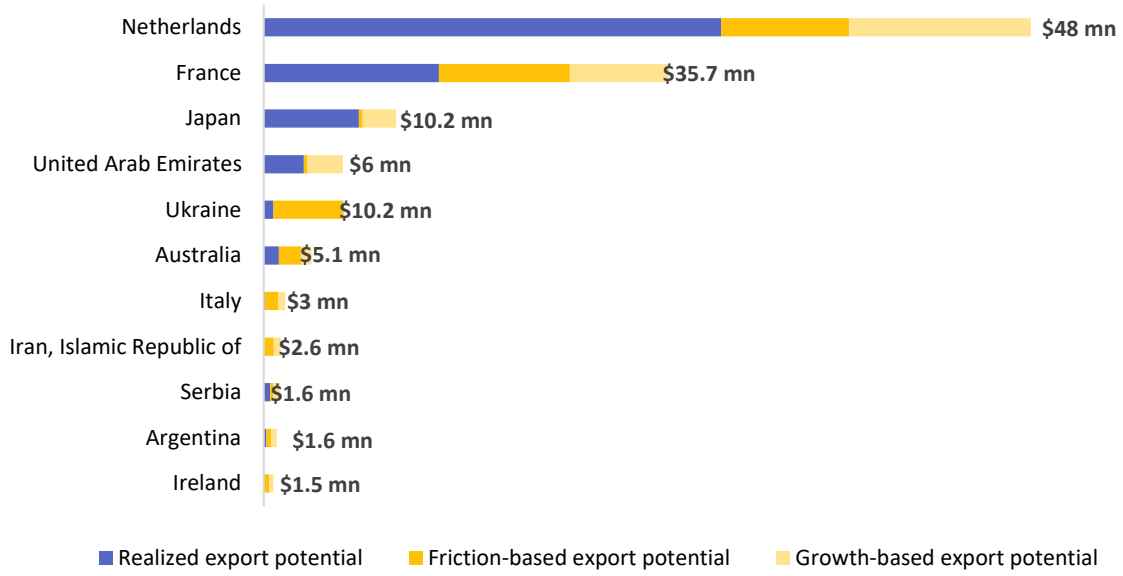
Source: Trade Map (2023).

Appendix II

Figure A.2. Export Potential for semi-processed Ghanaian cocoa, by product

The following figures display markets with the largest unrealized export potential. The respective bars comprise values of realized export potential (in blue), growth-based unrealized export potential (in light yellow), and friction-based unrealized export potential (in yellow). States value indicate the unrealized export potential in the given market.

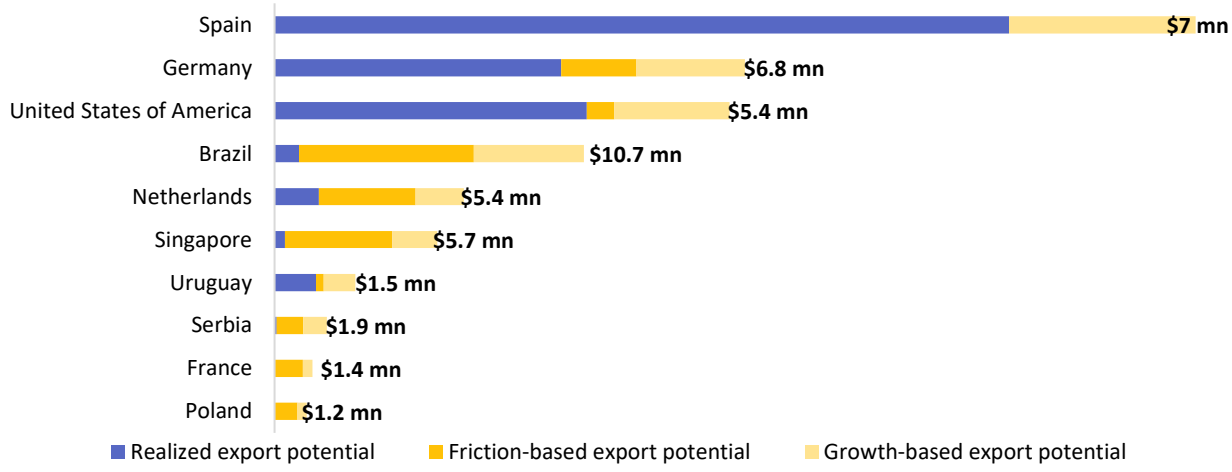
(a) Cocoa paste (excluding defatted) [HS 180310]



Note: Markets in the figure account for 93% of the unrealized export potential of Ghana in cocoa paste (excluding defatted). Labels on the figure display the corresponding unrealized export potential values. Not included in this figure are other markets with large export potential but limited opportunities for growth (no unrealized export potential), namely, the Russian Federation ($36.2 in million export potential), Poland ($25.2 million), and the United States ($25 million).

Source: Export Potential Map (2023).

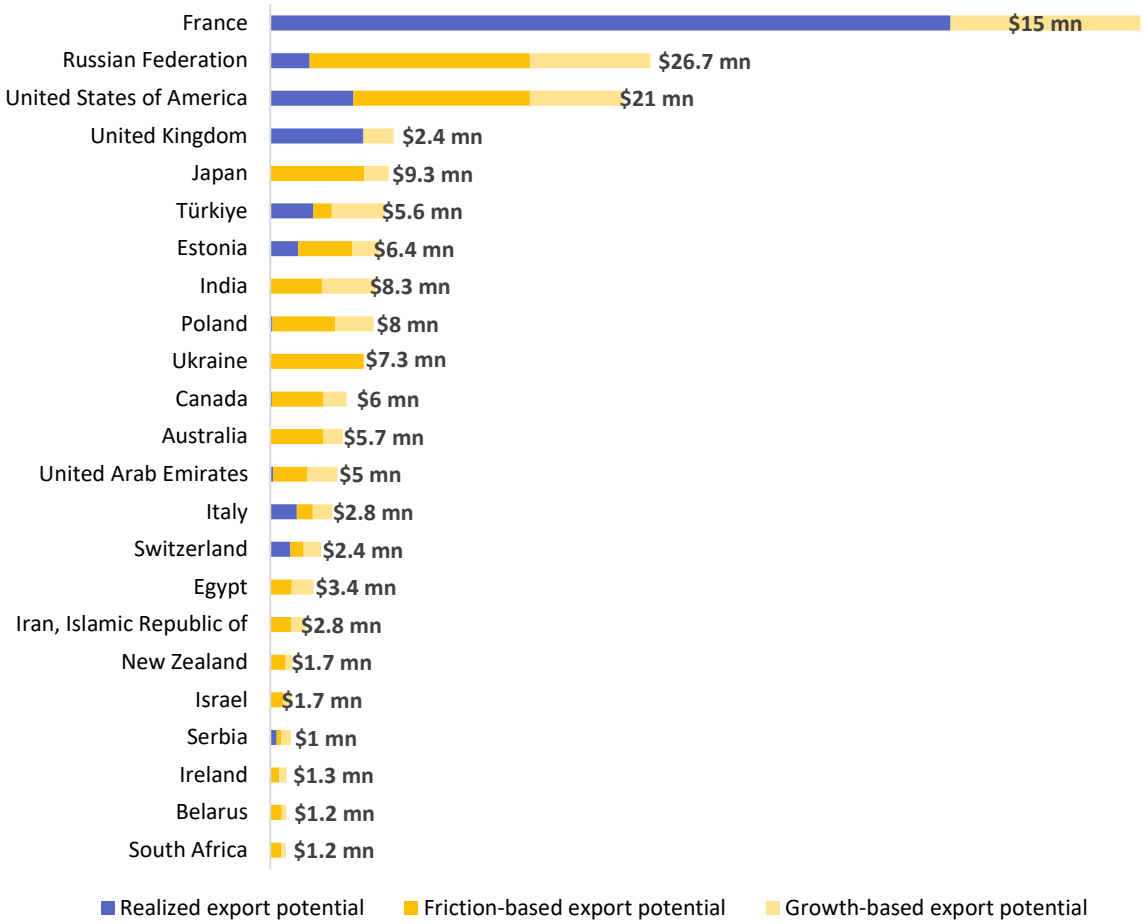
(b) Cocoa paste (wholly or partially defatted) [HS 180320]



Note: Markets in the figure account for 94% of the unrealized export potential of Ghana in cocoa paste (wholly or partially defatted). Labels on the figure display the corresponding unrealized export potential values. Not included in this figure are other markets with large export potential but limited opportunities for growth (no unrealized export potential), namely, Malaysia ($4 million in export potential) and Bulgaria ($1.1 million).

Source: Export Potential Map (2023).

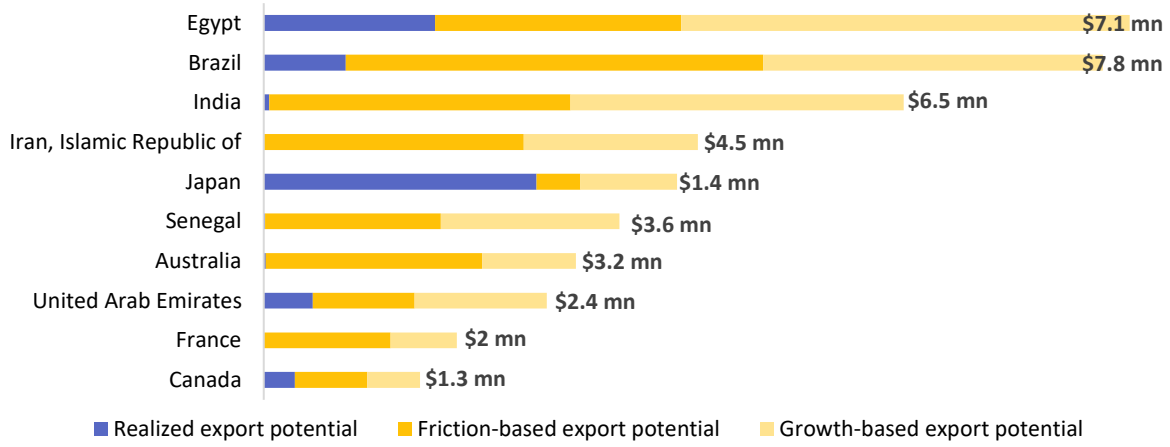
(c) Cocoa butter, fat, & oil [HS 180400]



Note: Markets in the figure account for 94% of the unrealized export potential of Ghana in cocoa butter, fat, and oil. Labels on the figure display the corresponding unrealized export potential values. Not included in this figure are other markets with large export potential but limited opportunities for growth (no unrealized export potential), namely, the Netherlands ($79.6 million in export potential), Germany ($20.5 million), and Spain (2.2 million).

Source: Export Potential Map (2023).

(d) Cocoa butter (not sweetened) [HS 180500]



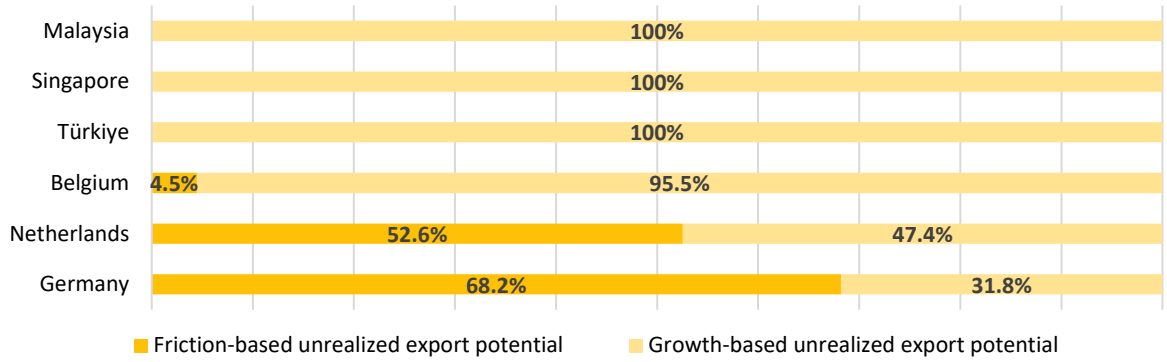
Note: Markets in the figure account for 71% of the unrealized export potential of Ghana in cocoa butter (not sweetened). Labels on the figure display the corresponding unrealized export potential values. Not included in this figure are other markets with large export potential but limited opportunities for growth (no unrealized export potential), namely, the Netherlands ($12.6 million in export potential), the United States ($12 million), the Russian Federation ($12 million), Ukraine ($3.8 million), and China ($1,2 million).

Source: Export Potential Map (2023).

Appendix III

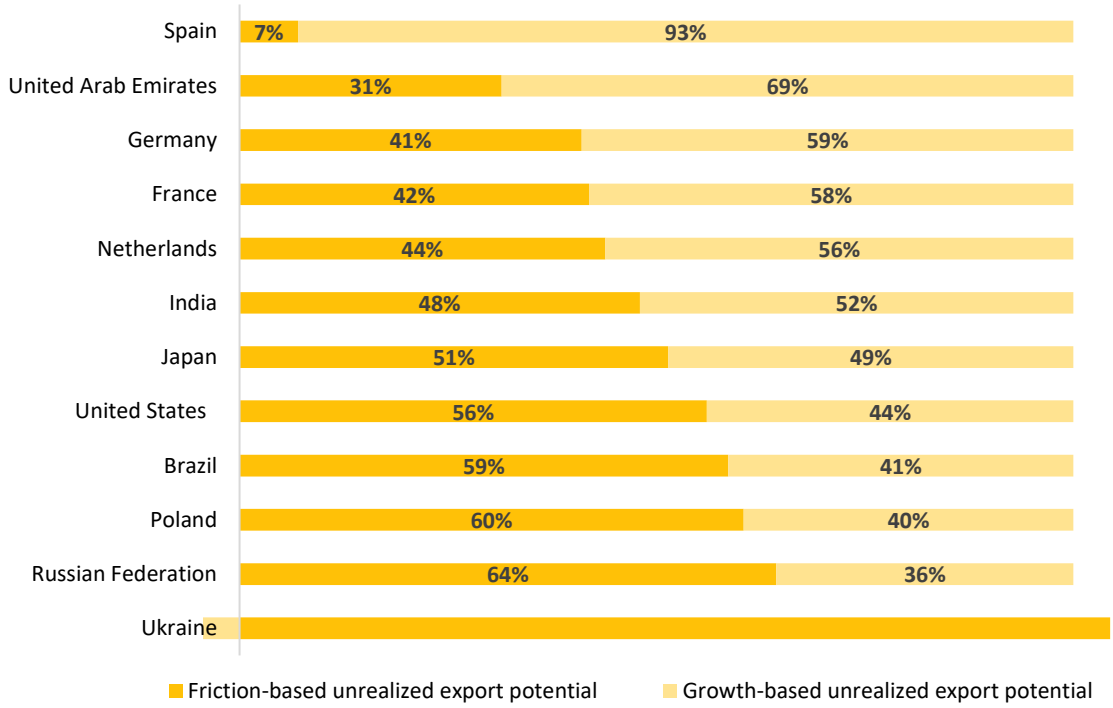
Figure A.3. Shares of friction-based vs growth-based export potential

(a) Cocoa beans



Note: Markets with no unrealized export potential are excluded from this figure: the United States, France, and Japan.
Source: Export Potential Map (2023).

(b) Semi-processed and processed cocoa



Note: Ukraine displays unusual shares because of negative growth-based unrealized export potential value (-$773 thousand), which is possible when GDP or population is expected to lower by 2027.
Source: Export Potential Map (2023).