SPOTTING PRODUCTS WITH EXPORT POTENTIAL

AN ITC ASSESSMENT TO SUPPORT EXPORT PROMOTION ACTIVITIES IN 64 DEVELOPING COUNTRIES

International Trade Centre

In collaboration with CBI Ministry of Foreign Affairs

SPOTTING PRODUCTS WITH EXPORT POTENTIAL

AN ITC ASSESSMENT TO SUPPORT EXPORT PROMOTION ACTIVITIES IN 64 DEVELOPING COUNTRIES

Abstract for trade information services

ID= 43171 2015 F-08.01 SPO

International Trade Centre (ITC)
Spotting Products with Export Potential – An ITC Assessment to Support Export Promotion Activities in 64 Developing Countries.
Geneva: ITC, 2015. xi, 38 pages.
Doc. No. MAR-15-358.E

The study provides regional analysis, country and sector fact sheets to assess the existing export potential and diversification opportunities of 64 developing countries in European, emerging and regional markets. ITC has applied and customized its methodology to support the Centre for the Promotion of Imports from developing countries (CBI) in its selection of value chains with the aim of achieving better targeted and more effective interventions.

Descriptors: **Export Potential, Export Diversification, Product Development, Value Chains, Developing Countries.**

For further information on this technical paper, contact Ms. Julia Spies, spies@intracen.org

English

The International Trade Centre (ITC) is the joint agency of the World Trade Organization and the United Nations.

ITC, Palais des Nations, 1211 Geneva 10, Switzerland (www.intracen.org)

Acknowledgements

The Centre for the Promotion of Imports from developing countries (CBI) has commissioned and funded this study that aims to support the selection of value chains in its appointed target countries. Jobien Hekking (Programme Manager Market Intelligence, CBI) and her colleagues at CBI have continuously provided feedback ensuring that the results meet the expectations of users and were presented in the most user-friendly way.

The study has been prepared by Yvan Decreux (Senior Market Analyst) and Julia Spies (Consultant) with contributions from Sebastian Klotz, Dzmitry Kniahin and Jie Sheng (all Consultants). Kerfalla Conté (Associate Market Analyst) contributed to the data processing steps during the early phase of the project. Mondher Mimouni (Chief, Market Analysis and Research) is to be thanked for his guidance, support and vision.

Special thanks are due to Lionel Fontagné (Professor of Economics, Paris School of Economics) who provided valuable comments on the methodology and its exposition. Further thanks go to a wider group of colleagues at ITC (notably Anders Aeroe – Director, Division of Market Development; Marion Jansen – Chief Economist; Anton Said – Chief, Expot Strategy; Yuliya Burgunder – Consultant; Raimund Moser – Programme Development Adviser; Alberto Pacheco – Economic Adviser; Olga Solleder – Economist and Cristian Ugarte – Consultant) for fruitful discussions and feedback on earlier versions of the methodology. Xavier Pichot (Market Analyst) kindly provided tariff data.

Finally, the quantitative analyses benefited from qualitative feedback from numerous ITC and CBI country experts who took the time to review and reflect upon the identified products and sectors.

Natalie Domeisen and Evelyn Seltier supervised the editorial management and production, with Marilyn Hubble conducting the copy-editing. ITC Digital Services under Serge Adeagbo and Franco Iacovino provided printing services.

Contents

Abbreviations

The following abbreviations are used:

BRICS	Brazil, Russia, India, China, and South Africa
CBI	Centre for the Promotion of Imports from developing countries
CEPII	Centre d'Études Prospectives et d'Informations Internationales
EFTA	European Free Trade Association
EPI	Export Potential Indicator
EU	European Union
GDP	gross domestic product
GTAP	Global Trade Analysis Project
HS	Harmonized Commodity Description and Coding System (Harmonized System)
ITC	International Trade Centre
LDC	least developed country
PDI	Product Diversification Indicator
RCA	revealed comparative advantage
SME	small and medium-sized enterprise
UN	United Nations
WTO	World Trade Organization

Executive summary

This study provides regional analysis, country fact sheets and sector fact sheets to assess the export potential of developing countries in European, emerging and regional markets.

It is based on a customization of the ITC export potential assessment methodology for the 64 countries targeted by the Netherland development cooperation. The analyses are designed to support the Centre for the Promotion of Imports from developing countries (CBI) in its selection of value chains to develop in these countries.

Difficulties in conforming to export procedures, market regulations or consumer preferences are factors that create a gap between what a country could export and what it actually does export. In times of increasing competition for limited public resources, countries cannot afford such foregone export revenues. Together with local firms, trade advisers can address the bottlenecks that prevent trade potential from materializing. To do so, they need to know which projects are most likely to be successful.

ITC methodology

ITC helps bridge the information gap with its export potential assessment methodology, based on detailed trade and market access statistics. ITC assesses existing products with high export potential (Export Potential Indicator – EPI) and diversification opportunities (Product Diversification Indicator – PDI) in existing or new markets.

Potential exports can be decomposed into a supply and a demand (market access) component. The EPI measures supply capacity through existing export performance and combines it with (trends in) market demand and trade costs to estimate a typical trade flow between an exporting country and a target market. The PDI measures supply capacity using the product space approach, which suggests new products that require similar capacities to the ones required for the country's current export basket.

Country fact sheets serve as a first step to evaluate how further to expand and diversify countries' exports and to inform related dialogues on the ground.[1]

The products with high export and diversification potential are specific to each country, and have been reviewed by ITC and CBI country experts. They confirm:

- Most suggested products fit with what the country is able, or may become able, to produce and export.
- Additional indicators – the products' technology content, price stability, involvement of small and medium-sized enterprises (SMEs) and women – are of great interest when selecting projects for export promotion activities.

A starting point for export development

Export potential assessments are a starting point in an export promotion decision-making process. In this particular case, ITC and CBI used the data as a springboard to provide insights into recent policy measures, diseases, missing production facilities or climatic conditions that hamper the export development in the identified sectors in the near future.

How to use country fact sheets depends on country context. Diversified economies may find untapped potential in non-traditional markets. Concentrated economies could benefit from exploring product diversification options.

Guatemala, for example, is a diversified economy for which the methodology detects unrealized regional export opportunities in traditional coffee or fruit sectors. Bangladesh, by contrast, may consider the option to diversify its apparel-centred export basket towards different types of rubber.

[1] Results in full detail have been made available to CBI as well.

Advanced developing countries, like Thailand, could opt to diversify into value-added varieties of existing products. Least developed countries (LDCs) may try to add production capacities in sectors that have some (unused) export potential.

The right export strategy also depends on the target market. The EPI selects promising products among those already exported by the country; it is thus especially relevant when targeting large, competitive markets. The PDI suggests products with low exports, useful when targeting smaller, easier markets like neighbouring countries.

Common findings

Results need to be assessed against specific country background. Yet patterns emerge when grouping exporters together as regions – Africa and the Middle East, Asia and Eastern Europe and Latin America:

Africa and the Middle East

The highest export potential is in the European market – unused intra-regional trade potential exists in fruits and vegetables; metal products; grains and pulses; sanitary products; and ceramic tiles.

African and Middle Eastern exporters, as well as Latin American exporters, find greatest potential for exports to European markets. For Africa and the Middle East, the apparel, fresh fruits and vegetables and cocoa sectors reach the highest export potential value in Europe. Lower but largely unexploited export potentials exist in fishery products and in processed fruits, vegetables and nuts.

Fresh and processed fruit and vegetable sectors also appear frequently on top in the African and Middle Eastern country rankings. This indicates that they promise a high export value, and also are of interest to many countries of the region.

Cocoa, apparel and fruits and vegetables – the sectors that predominate in current export potentials – offer options for diversifying exports to Europe; either through intra-sectorial diversification into new varieties or through diversification into sectors that are well established in other countries of the region.

For intra-regional trade there are several sectors with untapped potential, each worth more than US$ 1 billion. These include fresh and processed fruits and vegetables, metal products, grains and pulses and sanitary products and ceramic tiles.

Market access conditions hinder potential with the BRICS+11 group (here defined as Brazil, Russian Federation, India, China, South Africa and another 11 emerging markets), which is generally below potential with European or regional markets. Diversification opportunities in regional and South-South trade exist in the honey and sweeteners sector.

Latin America

European markets and traditional sectors prevail in export potential. Opportunities also exist in the regional market, as well as in export diversification into value-added varieties of established products.

Traditional sectors, like coffee, fruits and vegetables (both fresh and processed) prevail in Latin America's export potential to Europe. Value-added varieties of these products (such as decaffeinated or roasted coffee) offer good diversification prospects.

The region could also benefit from looking into export opportunities in non-traditional markets. Coffee, fresh and processed fruits and vegetables – well-established sectors with Europe – all promise considerable room for export growth within the region. Since fresh and processed fruits and vegetables are found on top in the rankings of various Latin American countries, they are suitable for region-wide projects.

Potential to export to the BRICS+11 is still limited. The best possibilities exist in rubber and plastic products and in fresh and processed fruits and vegetables.

Asia and Eastern Europe

The highest potential lies in regionally traded electronics, electrical parts, rubber and plastic products. Future trade relations with Europe require diversification into new sectors such as coffee.

The situation of Asian and Eastern European exporters is different to African and Middle Eastern and Latin American exporters. Their highest potential lies in regional trade. Notably, electronics, electrical parts, rubber and plastic products have not reached their enormous potential, followed by natural ingredients for cosmetics and vegetable oils. Export patterns towards the BRICS+11 are very similar; the group consists of many countries from the region. Potential in the European Union and European Free Trade Association (EU and EFTA) markets are comparably low. Apparel ranks highest, though to a large extent it has already realized its export potential.

Due to the huge variety of garments, the apparel sector is the region's number one sector for product diversification towards Europe. Building the countries' economies upon a wider set of production methods requires looking beyond apparel and considering also new sectors. While coffee could be a good option to diversify Cambodia's apparel-centred economy, more advanced economies like Thailand may focus on diversification opportunities above their current technology level, such as electrical capacitators.

More generally, the top sectors for future growth of existing export products – electronics, electrical parts, rubber and plastic products – offer options to diversify into new, upgraded products. Regional markets show the best perspectives for these new varieties, and could be a stepping stone for exports to global markets, like Europe.

Least developed countries

LDCs are recommended to diversify into natural cosmetics ingredients or vegetable oils – sectors that offer opportunities to move up the value chain

Of the 64 countries that were assessed, 30 are least developed countries.

These countries face a two-fold challenge when selecting projects for export promotion activities. On the one hand, LDCs often suffer from a narrow set of export products and underutilized potential. On the other hand, they need opportunities that help them develop stable, value-added exports inclusive to small and medium-sized enterprises (SMEs) and vulnerable members of the society such as women.

Export potential assessments can bring light into both aspects, by combining the list of high potential products with indicators that reflect relevant policy objectives.

The analyses indicate that LDCs find the highest export potential in apparel. Apparel is, however, highly concentrated in few big LDCs, like Bangladesh and Cambodia. Comparison with other countries indicates that grains and pulses and natural cosmetics ingredients are prevalent in LDCs regardless of size.

More than other countries, LDCs should diversify into processed fruits, vegetables and nuts, natural ingredients of cosmetics and pharmaceuticals, rubber and plastic products, and spices and herbs. As these sectors contain raw materials along with products that feature more advanced technologies, they could help LDCs to move up the value chain.

Introduction

1. Purpose

Exports can contribute to economic growth and development by fostering job creation and improving terms of trade. Countries, however, often fall short of utilizing their export potential. Difficulties in conforming to export procedures, market regulations or consumer preferences are factors that create a gap between what a country could export and what it actually does export. Together with local firms, trade advisers can address the bottlenecks that prevent trade potential from materializing. To do so, they need to know which projects are most likely to be successful.

ITC helps bridge the information gap with its export potential assessment methodology, based on detailed trade and market access statistics. Trade between two countries is positively associated with the level of supply and demand and negatively associated with trade impediments in the form of customs duties or geographic distance. Export potential assessments combine these factors to identify products and sectors with (future) export potential. Two indicators are available that respond to the different needs of developing countries:

- The Export Potential Indicator (EPI) serves countries that want to support established export sectors in increasing their exports. It identifies products in which the exporting country has already proven to be internationally competitive and which have good prospects of export success in new or existing target markets.

- The Product Diversification Indicator (PDI) serves countries that want to diversify and develop new export sectors that face promising conditions in new or existing target markets. It identifies products which the exporting country does not yet export competitively but which seem feasible based on the country's current export basket and the export baskets of similar countries.

This study presents the ITC methodology and applies it to 64 target countries of the Netherland development cooperation. The analyses are designed to support the Centre for the Promotion of Imports from developing countries (CBI) in its selection of value chains to develop in these countries.

2. Scope of the study

The analyses are performed for 64 developing countries and 1,299 products distinguished in the CBI product tree.[2] Products are matched to CBI sectors to facilitate the selection of value chains.[3] Services are not part of this study.

Country and sector fact sheets present the 10 existing and the 10 new products with highest potential for exports to three country groups: the European Union (EU) and the European Free Trade Association (EFTA), the BRICS+11 (Brazil, Russian Federation, India, China, South Africa plus another 11 emerging markets) and the country's own region.[4] Detailed results for all products and all country markets have been made available to CBI as well.

The selected products and sectors offer opportunities to increase and diversify a country's exports, but governments and international agencies need more information to decide which projects to support. Countries that simultaneously want to participate and improve their positioning in international value chains can narrow down the list of high potential export products by considering, for example, the technology content and price stability of products or the importance of SMEs and female labour in their production.

---

[2] ITC has processed the CBI product tree which encompasses a range of products defined at the 6-digit level of the Harmonized System (HS), an international product classification. At such a disaggregate level, codes are often affected by revisions of the HS, and since countries can switch to new versions of the HS at different points in time, consistent analyses require building broader product groups that encompass all products linked to revised codes.

[3] For a list of CBI sectors, please refer to appendix II.

[4] For a list of countries by region, please refer to appendix I.

Since even the most thorough quantitative assessment is not able to fully reflect the actual situation of the country, consultations of ITC and CBI regional and sector experts complement the analyses.

3. The explanatory limits of quantitative approaches to export potential assessment

Export potential assessments are a quantitative approach to identify promising export sectors and markets on a global scale, based on trade and market access data. They abstract from intangible or unmeasurable factors that should also be considered when selecting products and sectors for trade development programmes.

Specific buyer requirements within international value chains, affecting the exporting country more than its competitors, may be one reason why exports to a particular market are significantly below the estimated potential. When selecting value chains on the basis of this study, it should be further analysed whether these requirements can be met by the country's exporters. Furthermore, potential may exist for niche products of sectors that are not on top of the ranking but could allow for economic development or poverty reduction. Other omitted factors include the possibilities of marketing and branding and the existence of synergistic development plans or sector strategies. Finally, export potential assessments do not account for the costs related to export promotion activities.

Each of these factors, however, may influence the 'feasibility' of exporting (more of) certain products to a particular target market. Trade advisers should therefore look at results with a critical eye and engage in further investigations.

While the EPI is derived from a decomposition of trade into supply and demand shares and allows estimating potential export values, the PDI relies on the concept of the product space that establishes links between products based on how frequently they are found together in export baskets of countries. The combination of the supply-side distance to new products with demand shares does not naturally lead to an estimate of potential export values. For this reason, the PDI refrains from reporting any potential dollar value that could be associated with the identified diversification opportunities and provides only ranks of products within a market.

The PDI does not consider the possibility to diversify exports within product groups in terms of quality, design or functionality. It also does not capture the possibility that foreign direct investment and related potential infusion of new technologies and processes could bring a country towards an entirely different, possibly more sophisticated, export specialization.

A few measurable indicators shed additional light upon the 'desirability' of the identified products (e.g. does the product allow stabilizing export revenues? Does it support the participation of women?), but most developmental, environmental or social aspects cannot be captured with quantitative trade data. Often, they depend rather on local production practices than on the choice of products.

In light of these limitations, export potential assessment results should be seen as a starting point in an export promotion decision-making process. They have been reviewed by ITC and CBI experts who have enriched the quantitative analyses with their qualitative feedbacks and comments. It is nevertheless recommendable to complement the assessment with consultations of public and private sector stakeholders in the country.

Export potential assessment methodology

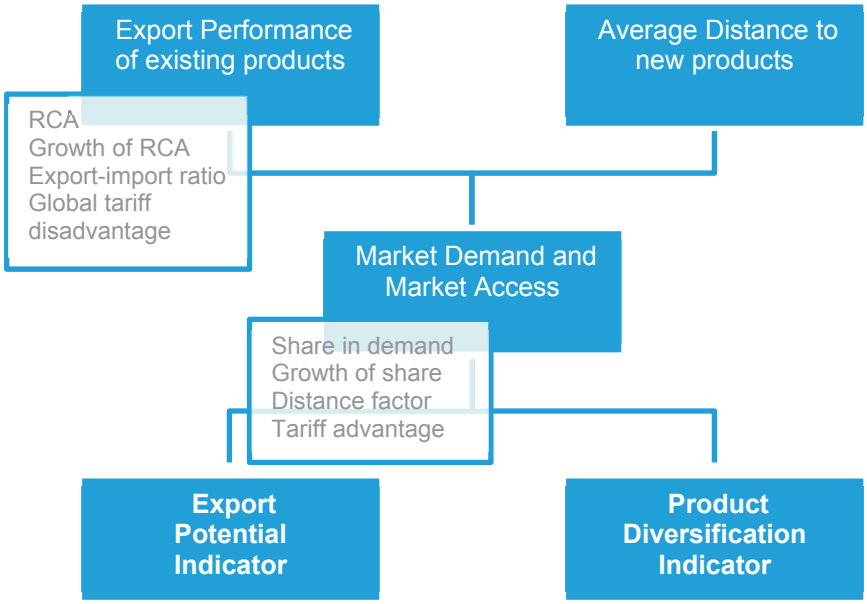
Export potential assessments are based on a decomposition of the share of a product in a country's total exports into a supply and a world demand component. World demand is replaced by demand (inclusive of market access conditions) in a given target market. While a country's capacity to supply existing products (EPI) is captured by a measure of revealed comparative advantage, its capacity to diversify into new products (PDI) relies on Hausmann and Hidalgo's concept of the product space (Hidalgo et al., 2007[5]) that establishes links between products through an assessment of how frequently they are found together in the export baskets of countries. Recombined, the supply and demand component give the potential share of a product in a country's exports to a given target market.

The first approach – the EPI – is based on a structural model that (i) identifies potential shares of products from supply and demand capacities and (ii) converts them into potential values using a projection of bilateral exports. Any gap between what countries could export and what they actually do export results from factors that trade advisers can possibly address together with local companies, such as lacking information about the rules and regulations of the target market or difficulties in complying with them or in meeting the (quality) preferences of its consumers. The indicated (unused) potentials point to short-term opportunities to increase exports.

The second approach – the PDI – relies on the concept of the product space. Export potential assessments improve the trade data-based measure of linkages to new products by accounting for natural endowments that are pivotal for the capacity of a country to produce certain products. The product space does not allow for any meaningful estimate of potential trade values, and hence, only rankings of diversification opportunities in a given country or regional market are presented. This set of products should be perceived as options for diversification that may yield export revenues in the medium- to long-term future.

Figure 1 summarizes the sub-indicators that feed into the Export Potential and Product Diversification Indicators.

Figure 1: Overview of EPI and PDI sub-components



Total exports between the country and the target market are used to convert potential shares into potential export values. Potential values should be understood as a typical value of trade flows given a country's

[5] Hidalgo, C., Klinger, B., Barabasi, A.L., Hausmann, R. (2007), The product space conditions the development of nations, Science 317, 482-487.

export performance and a target market's demand both projected into the short-term future. Thus, while exports to some markets may be well below their potential, exports to other, often traditional markets may already exceed their potential.

4. Data

The source of all the trade data used in export potential assessments is ITC's Trade Map.[6] Various measures ensure that unreliable data reports do not distort results: first, the indicators are calculated based on five year averages (2009-2013). At the same time, the product must be exported at least in the three most recent years and imported in all five years to ensure that only continuously supplied and demanded products are suggested for export promotion activities. Second, a mix of the direct (as reported by the country itself) and the mirror (as reported by the country's trade partners) flow is used to estimate 'true' exports and import values. Third, a thorough reliability check identifies and disposes of unreliable reporters whose reported trade flows are not used in the analyses.

Tariff data is taken from ITC's Market Access Map. All other data come from external data sources. For an overview, please refer to appendix III.

5. Components of the Export Potential Indicator

The EPI starts by decomposing a country's total exports into a supply (revealed comparative advantage – RCA (Balassa's, 1965)[7]) and a world demand component. The potential share of a country's export product in a particular target market deviates from this decomposition because of (i) shortcomings of trade data to correctly reflect supply capacities and (ii) the specific situation in the target market that causes its demand to deviate from world demand.

The EPI accounts for these factors. Based on historical data it allows predicting what a country could export to a given market in the future.

5.1. Supply side

Supply capacities are based on a dynamic and corrected version of Balassa's RCA and comprise:

- RCA

Balassa's RCA compares the share of a product in a country's total exports with the share of this product in world exports. It shows whether the country has a relative advantage (RCA ≥ 1) or disadvantage (RCA < 1) in exporting the goods.

- Growth of RCA

While static comparative advantages indicate which products a country currently exports competitively, the dynamic version of comparative advantage allows predicting competitive export products in the future. A growth factor is computed for each product as the ratio of comparative advantages during two periods of three years (2007–2009 and 2011–2013). An empirical analysis has revealed that on average about one third of moderate RCA growth passes through from one period to the next. This result is used to project RCA.[8]

- Export-import ratio

Declared exports often comprise re-exports that are not linked to any capacity of the country to produce the good (for instance, exports of second-hand products that were imported a few years before). RCAs are

[6] Annual data in ITC's Trade Map comes from UN's Comtrade database.

[7] Balassa, B. (1965), Trade Liberalisation and Revealed Comparative Advantage, The Manchester School, 33, 99-123.

[8] To give an example, Ethiopia's RCA in cardamom has increased by a factor of 1.9 over the past five years. As only one third of this growth seems to pass on to the next period, the current RCA is augmented by a factor of $1.23=1.9^{(1/3)}$.

therefore corrected by the ratio at which imports exceed exports. As a consequence, a product that the country appears to export competitively based on Balassa's RCA will be downgraded if the country's trade balance of the product is negative (note that in the contrary situation of a positive trade balance the correction factor will not apply, i.e. a product is not upgraded if exports exceed imports).

- Global tariff disadvantage

The 'revealed advantage' of a country in exporting certain goods as captured by trade data also encompasses information on tariff advantages. Products for which the country has large tariff advantages in the world market are likely to be important in the country's current trade structure. This does not mean, however, that the product represents an export opportunity also in a particular target market (or region) which may in fact offer less favourable market access conditions. Global tariff advantages therefore downgrade the RCA of the product. Global tariff disadvantages upgrade it. The effect is stronger for products whose demand is price-sensitive.

5.2. Demand side

Demand conditions are captured through a dynamic version of demand shares and account for the openness of the target market to the exporting country's products.

- Share in market demand

The share in market demand captures the relative importance of a product in the total imports of the target market.

- Growth of share in market demand

The growth of the market demand share shows which products have recently experienced a relative change in demand and allows for a projection of potential demand. The ratio of demand shares between two periods of three years is computed for each product. In line with empirical findings, around one fifth of this growth factor is combined with the static demand share.

- Tariff advantage in the target market

If tariffs applied to the exporting country are lower than those applied to other suppliers, the exporter benefits from a tariff advantage in the market that will translate into higher export potential. Conversely, if the tariff applied to the exporting country is higher than the one applied to its competitors, the exporter faces a tariff disadvantage, lowering its capacity to export the product to this particular market.

- Distance factor

Products differ in their sensitivity to distance. Perishable products, for instance, are sensitive to distance and therefore typically imported from neighbouring countries. Distance matters less for durable products. Information embedded in the average distance over which a product is traded can help identifying the best products to export to a given market. An exporter close to the market will favour products for which proximity is an advantage (high sensitivity of trade to distance). These are products that are on average traded over short distances. An exporter far from the market will favour products for which distance is less important (low sensitivity of trade to distance). These are products that are on average traded over long distances. The closer the match (the lower the absolute difference) between the exporter's distance to the target market and the average distance over which the target market imports the product, the higher will be the export potential of the product to the market.

6. Components of the Product Diversification Indicator

The PDI differs from the EPI in the way supply conditions are captured. Comparative advantages can only be computed for existing products. To identify diversification opportunities, linkages from a country's current comparative advantages to potential new ones are established making use of the so-called product space concept (see e.g. Hidalgo et al., 2007). The average distance of a product from a country's current export basket replaces comparative advantage as an estimate of supply capacity. Demand and market access indicators remain identical.

6.1. Supply side

The potential of a country to diversify into a new product is measured through linkages between products as revealed from trade data. Trade data do not always perfectly capture supply capacities, especially if natural resources are required as inputs into the production of the good. The average distance of the country's current export basket to potential diversification opportunities is therefore complemented by filters accounting for the availability of crucial natural endowments in the country.

- Density

The intuitive idea that a country's ability to export one product depends on its ability to export other products originates from Hidalgo et al.'s (2007) concept of the 'product space'. This concept measures the relatedness of products (their 'proximity') based on the observation that similar products are more likely to be produced by the same country than dissimilar products. If a country is currently able to export a product that is often found in other countries' export baskets together with another product, it is assumed that the two products require similar capabilities. Hence, it will be relatively easy for the country to 'jump' also to this other product. By using information on export bundles from all countries worldwide, the average distance of a country to a new potential export product indicates its capacities to supply the product in the future.

- Filters

As the objective is to identify diversification opportunities, only products accounting for less than 0.5% of total exports of the country are kept. Two additional filters correct the trade data-based measure of density:

- Climatic conditions: some moisture regimes and climate zones have been identified as pivotal to export certain agricultural products. If these products are suggested to countries that do not possess any of the relevant climate zones, the product will no longer be considered as a feasible option.

- Sea access: 69 sea-related products that are usually not exported with a positive trade balance by any landlocked country are disregarded if identified as diversification opportunities for landlocked countries. Note that landlocked countries sometimes manage to export sea-related products such as motorboats or freshwater fish on a continuous basis and with a positive trade balance. These products are not excluded if identified for landlocked countries as potential options for diversification.

6.2. Demand side

The demand side in the PDI is exactly the same as in the EPI. Please refer to section 5.2 for a description of indicators.

7. Aggregating results

The combination of modified supply and demand shares gives the potential share of a product in a target market. This potential export share is converted into a potential export value based on total bilateral exports augmented by the expected gross domestic product (GDP) growth of the target market.

The potential export values of every exporter × product × market combination are simply added up to identify for each of the 64 developing countries highest potential export products and best diversification opportunities in trade with three regions, namely the

- EU and EFTA
- BRICS+11
- regional market (Africa and the Middle East, Asia and Eastern Europe or Latin America)

The resulting potentials should not be perceived as once and for all fixed. There are three main channels through which they could rise: first, the country may specialize further in a specific product, increasing its RCA and, hence, its potential to export this product to any market in the world. Second, the government may negotiate more favourable tariff regimes, leading to lower consumer prices and a higher demand share for this particular product. Third, commercial representations could facilitate trade relations with the target market in general, eventually allowing the exporting country to gain market shares in various products.

Potential export values are calculated for both indicators, the EPI and the PDI, for aggregation purposes. As the decomposition is based on real comparative advantages and not on approximations of those, potentials in dollar terms are displayed only for the EPI. For the PDI, ranks of diversification opportunities in each market are shown instead. For all products listed in the EPI, it is also possible to compare that potential to actual export values in order to examine to what extent the potential has already been used. If the EPI is calculated to an individual market, large gaps between potential and actual exports indicate frictions or at least lack of knowledge about rules, regulations or consumer preferences in the market which can be addressed by trade advisers together with local companies. If the EPI is calculated to a group of markets (like the EU and EFTA, the BRICS+11 or the region), gaps often correspond to the fact that exports are geographically concentrated and that many attractive markets of the group are actually neglected. While actual trade often falls short of potential trade, in some cases (often in traditional markets) the existing potential may already be fully used or even exceeded.

8. Assessment of policy objectives

The selected products may entail very different prospects for future economic development. Countries that want to simultaneously improve their participation in international value chains and meet certain policy objectives can narrow down the list of high potential export products through additional indicators that reflect whether the identified products are also ‘desirable’ from a developmental perspective and associated policy considerations. A broad range of topics can be considered in this context. Four of the most common ones for which data[9] are available are:

- Level of technology: the technology content is approximated using Hausmann and Hidalgo (2009)'s[10] notion of product complexity. Complexity comprises two concepts: (i) Diversity: number of products a country exports with a comparative advantage (technologically advanced countries are more diverse) and (ii) Ubiquity: number of countries that export a product with a comparative advantage (technologically advanced products are less ubiquitous).
- Stability of export revenues: price volatility is based on the standard deviation of the deflated average unit value over the time period 2003-2013. The volatility of production (for products sensitive to climate conditions for instance) is not considered.
- Presence of SMEs: how prominent SMEs are in the sector to which the product belongs is calculated using the number of SMEs as a share of the total number of companies.[11] This indicator relies on World Bank Enterprise Survey data where SMEs are defined as companies employing less than 100 full-time people. When data for a country or sector is not available, the world average for that sector is used.

[9] Appendix III lists all data sources.

[10] Hidalgo, C., Hausmann, R. (2009), The building blocks of economic complexity, Proceedings of the National Academy of Sciences of the United States of America 106 (26), 10570-10575.

[11] This indicator is computed based on all companies, including non-exporting ones, as they may export in the future.

- Female labour participation: the participation of female employees is computed using World Bank Enterprise Survey data on the share of women in the sector to which the product belongs. When data for a country or sector is not available, the world average for that sector is used.

Each indicator is calculated relative to the country's trade-weighted median and specifies thereby whether the promotion of a product would assist the country in improving along the measured dimension.

Country results

Country fact sheets summarize results for each of the 64 developing countries. This study presents and discusses three examplary fact sheets – for Bangladesh, Burundi, and Guatemala. Fact sheets of all other countries are available as supplementary material online.[12]

9. How to read the country fact sheets

The fact sheets display for each country the 10 existing (EPI) and the 10 new (PDI) products with highest export potential to each of the three regions.[13] They are structured as follows:

- EPI: Growing your current exports

The EPI table ranks products according to their potential export value in the EU and EFTA region and identifies the three European markets where potential exports are highest. This information is complemented by the product's potential export value in the BRICS+11 and in the region to which the exporting country belongs (Africa and the Middle East, Asia and Eastern Europe, or Latin America). The yellow, blue and green bars are comparable and illustrate in which market the product has a particularly high potential. The percentage gives the extent to which the potential is currently unrealized, corresponding to the white part of the clock-like icons. The black part indicates the realized potential. The last four columns indicate if exporting this product can help a country to improve the technological advancement and revenue stability of its export basket as well as strengthening the SME sector and female labour participation. The dot is green if the product is above the country's trade-weighted median and red otherwise.

- PDI: Moving into new products

The PDI table ranks products according to their diversification potential in the EU and EFTA region. This information is complemented by the rank of the product in terms of its diversification potential to the BRICS+11 and to the regional group. Note that the PDI ranks products within a market and does not allow cross-region comparisons. Similar to the EPI table, the last four columns indicate if exporting the product would improve the country's technological advancement, export revenue stability, SME presence and female labour participation.

Even though products in the PDI are necessarily still small in export value (only products accounting for less than 0.5% of a country's total exports are considered), the EPI and PDI are not fully mutually exclusive and sometimes, a product may appear in both tables. In this case, the product has good prospects to yield export revenues in the short and in the long term.

The example below aims to support the interpretation of the information provided in the country fact sheets.

[12] http://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Countryfactsheets.pdf.

[13] Detailed information about export potentials and diversification opportunities by country market along with different types of aggregations (for example, at sector-level) and the full set of sub-indicators has been provided to CBI separately.

CBI sector code. For sector names, refer to appendix II.

Description of product group. If the first two or four digits are complemented by letters such as "XX" or "Xa", "Xb", etc., several HS 6-digit codes have been grouped together. When the product group coincides with a full HS 4-digit heading, the corresponding 4-digit code is used. In all other cases, the product group corresponds to the HS 6-digit code.

Ratio of actual to potential exports. If above 0%, unexploited potential remains that trade advisers can help realize. The white part of the clock-like icon corresponds to this unused potential.

Additional indicators. Green dot indicates that the product would help the country improve along the respective dimension. Red dot indicates the opposite. If empty, data was not available.

CBI sector	Product description	potential value (in US$ thousand) in...?							Would this product help Afghanistan improving its...?			
		EU & EFTA	% of unused potential	Top 3 markets	BRICS + 11	% of unused potential	Asia & Eastern Europe	% of unused potential	level of technology	stability of export revenues	SME presence	female labour participation
S23	080620 Grapes, dried	9,884	63%	United Kingdom, Germany, Netherlands	21,114	22%	19,034	6%				
S23, S8	080420 Figs, fresh or dried	3,806	100%	France, Germany, Switzerland	45,900	29%	46,022	29%				
S16, S17,	130190 Natural gums, resins, gum-resins and balsam, except arabic gum	2,829	100%	Germany, France, Spain	111,352	77%	87,665	70%				
S8	080610 Grapes, fresh	2,786	98%	Netherlands, United Kingdom, Finland	9,188	34%	9,162	34%				
S23	080212 Almonds,fresh or dried,shelled or peeled	2,552	95%	Spain, Germany, Italy	2,267	34%	2,258	34%				
S10	570110 Carpets of wool or fine animal hair, knotted	2,255	32%	Germany, France, Italy	8,665	29%	7,501	18%				
S23	0802Xb Pistachios	1,852	61%	Germany, Belgium, France	5,124	42%	5,269	44%				
S17	1211XX Other medicinal plants	578	42%	Germany, France, Spain	8,162	83%	4,839	72%				
S26	091020 Saffron	521	34%	Spain, Sweden, Italy	637	100%	636	100%				
S23	081310 Apricots, dried	465	86%	France, Germany, United Kingdom	2,463	51%	2,740	56%				
S29, S9	120740 Sesamum seeds, whether or not broken	318	100%	Germany, Netherlands, Poland	7,272	45%	5,898	32%				
S8	070310 Onions and shallots, fresh or chilled	316	100%	Germany, Netherlands, United Kingdom	10,279	18%	10,455	19%				
S26	0909Xa Seeds of anise, badian, caraway or fennel; juniper berries	177	99%	Germany, Netherlands, United Kingdom	7,703	69%	7,428	68%				
S23, S9	0713Xa Dried bambara beans, cow peas and other beans, shelled	164	99%	Spain, France, Belgium	11,622	65%	11,058	64%				
S23, S9	071331 Urd,mung,black/green gram beans drid shelld,whether/not skinnd/spli	61	81%	United Kingdom, Netherlands, Belgium	14,846	80%	14,855	80%				

EPI to the EU & EFTA. The length of the bar corresponds to the export potential value. Bars are comparable across products and target regions.

Three most important EU & EFTA markets according to potential export value.

10. Exemplary country fact sheets

Table 1a: Bangladesh – products with export potential

EPI: Growing your current exports		What is the product's export potential value (in US$ thousand) in…?							Would this product help Bangladesh improving its…?			
CBI sector	Product description	EU & EFTA	% of unused potential	Top 3 markets	BRICS + 11	% of unused potential	Asia & Eastern Europe	% of unused potential	level of technology	stability of export revenues	SME presence	female labour participation
S1	610910 T-shirts, singlets and other vests, of cotton, knitted	2,735,024	3%	Germany, United Kingdom, France	185,195	25%	308,701	39%				
S1	620342 Mens/boys trousers and shorts, of cotton, not knitted	2,318,876	27%	Germany, United Kingdom, France	260,699	28%	347,096	28%				
S1	620462 Womens/girls trousers and shorts, of cotton, not knitted	1,103,119	20%	Germany, United Kingdom, France	109,623	20%	158,800	33%				
S1	611020 Pullovers, cardigans and similar articles of cotton, knitted	994,864	4%	Germany, United Kingdom, France	83,658	14%	129,840	35%				
S1	620520 Mens/boys shirts, of cotton, not knitted	932,336	41%	Germany, United Kingdom, France	149,213	35%	184,795	38%				
S1	611030 Pullovers, cardigans and similar articles of man-made fibres, knitted	635,827	1%	Germany, United Kingdom, France	57,253	8%	86,421	27%				
S1	610510 Mens/boys shirts, of cotton, knitted	405,939	0%	Germany, United Kingdom, France	55,873	46%	68,422	59%				
S1	610462 Womens/girls trousers and shorts, of cotton, knitted	283,719	9%	Germany, United Kingdom, France	17,590	34%	31,915	57%				
S1	611120 Babies garments and clothing accessories of cotton, knitted	273,397	34%	United Kingdom, France, Germany	16,132	19%	18,748	24%				
S7	0306Xa Frozen shrimps and prawns	246,578	44%	Spain, France, United Kingdom	36,502	72%	84,403	63%				
S1	620630 Womens/girls blouses and shirts, of cotton, not knitted	215,431	33%	Germany, United Kingdom, France	24,823	13%	33,268	36%				
S1	610990 T-shirts,singlets and other vests,of other textile materials,knitted	166,326	9%	Germany, United Kingdom, France	17,264	28%	32,748	11%				
S1	620193 Mens/boys anoraks and similar articles,of man-made fibres,not knitted	122,117	65%	Germany, Italy, France	25,997	7%	31,287	4%				

Note: Ranking according to EPI to EU & EFTA. Empty cells for additional indicators are due to missing data.

Table 1b: Bangladesh – diversification opportunities

PDI: Moving into new products		What is the product's diversification potential rank in…?			Would this product help Bangladesh improving its…?			
CBI sector	Product description	EU & EFTA	BRICS + 11	Asia & Eastern Europe	level of technology	stability of export revenues	SME presence	female labour participation
S24	400122 Technically specified natural rubber (TSNR)	1	2	2	●	●		
S24	400121 Natural rubber in smoked sheets	2	1	1	●	●		
S23	080132 Cashew nuts, without shell, fresh or dried	3	4	4	●	●		
S17, S29	151311 Coconut (copra) oil crude	4	6	9	●	●	●	●
S24	400129 Natural rubber in other forms nes	5	11	14	●	●		
S23	200820 Pineapples nes,o/w prep or presvd,sugared,sweetened,spirited or not	6	10	8	●	●	●	●
S8	071410 Manioc (cassava), fresh or dried, whether or not sliced or pelleted	7	3	3	●	●		
S1	611241 Womens/girls swimwear, of synthetic fibres, knitted	8	12	12	●	●	●	●
S4	090111 Coffee, not roasted, not decaffeinated	9	30	24	●	●		
S3	180100 Cocoa beans, whole or broken, raw or roasted	10	9	11	●	●		
S23	080111 Coconuts, dessicated	14	7	7	●	●		
S29, S9	120740 Sesamum seeds, whether or not broken	27	5	5	●	●		
S27	090240 Black tea (fermented) & partly fermented tea in packages exceedg 3 kg	36	15	6	●	●		
S23	080131 Cashew nuts, in shell, fresh or dried	97	8	10	●	●		

Note: Ranking according to PDI to EU & EFTA. Empty cells for additional indicators are due to missing data.

Table 2a: Burundi – products with export potential

EPI: Growing your current exports		What is the product's export potential value (in US$ thousand) in...?						Would this product help Burundi improving its...?			
CBI sector	Product description	EU & EFTA	% of unused potential	Top 3 markets	BRICS + 11	% of unused potential	Africa & Middle East	% of unused potential	level of technology	stability of export revenues	SME presence	female labour participation
S4	090111 Coffee, not roasted, not decaffeinated	46,402	8%	Germany, Switzerland, Belgium	457	32%	2,017	39%				
S27	090240 Black tea (fermented) & partly fermented tea in packages exceedg 3 kg	3,629	94%	United Kingdom, Germany, Poland	6,264	26%	8,399	51%				
S8	0810XX Fruits nes, fresh	53	62%	Netherlands, Switzerland, Germany	8	100%	52	28%				
S23, S8	0803 Bananas and plantains, fresh or dried	32	60%	Belgium, Germany, United Kingdom	1	100%	2	95%				
S17	1211XX Other medicinal plants	27	42%	Germany, Switzerland, France	6	99%	104	96%				
S8	0709Xa Vegetables nes, fresh or chilled	23	96%	Switzerland, United Kingdom, France	0	100%	5	100%				
S8	070930 Aubergines(egg-plants), fresh or chilled	10	98%	Switzerland, Germany, France	1	100%	0	100%				
S22	060290 Plants live, nes	8	88%	Switzerland, Germany, France	0	100%	6	12%				
S8	080440 Avocados, fresh or dried	8	84%	Netherlands, France, Switzerland	0	100%	0	100%				
S14	731100 Containers for compressed or liquefied gas of iron or steel	7	97%	Germany, United Kingdom, Switzerland	7	100%	39	62%				
S8	080520 Mandarins(tang&sats)clementines&wilkgs &sim citrus hybrids,fresh/drid	6	100%	Germany, United Kingdom, Netherlands	1	100%	1	25%				
S27	090230 Black tea (fermented)&partly fermentd tea in packages not exceedg 3 kg	4	89%	France, Germany, Switzerland	1	96%	12	87%				
S7	0305Xb Other cured fish; fins, heads, tails, maws and other edible fish offal, exce	2	100%	Germany, Switzerland, France	1	100%	34	2%				
S24	392310 Boxes, cases, crates & similar articles of plastic	2	91%	Switzerland, Germany, France	0	100%	12	60%				
S9	1007 Grain sorghum	0	100%	Germany, France, Switzerland	0	100%	28	13%				

Note: Ranking according to EPI to EU & EFTA. Empty cells for additional indicators are due to missing data.

Table 2b: Burundi – diversification opportunities

PDI: Moving into new products		What is the product's diversification potential rank in…?			Would this product help Burundi improving its…?			
CBI sector	Product description	EU & EFTA	BRICS + 11	Africa & Middle East	level of technology	stability of export revenues	SME presence	female labour participation
S3	180100 Cocoa beans, whole or broken, raw or roasted	1	1	8	●	●		
S17, S29	150810 Ground-nut oil, crude	2	8	63	●	●	●	●
S26	0907 Cloves	3	3	7	●	●		
S23	080132 Cashew nuts, without shell, fresh or dried	4	5	3	●	●		
S23	080122 Brazil nuts, without shell, fresh or dried	5	6	38	●	●		
S23	080131 Cashew nuts, in shell, fresh or dried	6	2	5	●	●		
S29, S9	120740 Sesamum seeds, whether or not broken	7	10	2	●	●		
S5	0603XX Cut flowers and flower buds for bouquets, fresh	8	4	10	●	●		
S28	440722 Virola, imbuia and balsa, sawn or chipped lengthwise, sliced or peeled	9	12	40	●	●	●	●
S16, S17,	130120 Gum arabic	10	11	1	●	●		
S28	440726 Lumber, Meranti nes, Lauan, Seraya, alan sawn >6mm	11	7	28	●	●	●	●
S23, S9	0713Xb Dried pigeon peas and other leguminous vegetables, shelled	17	9	6	●	●		
S23, S9	071331 Urd,mung,black/green gram beans drid shelld,whether/not skinnd/split	18	15	9	●	●		
S8	070820 Beans, shelled or unshelled, fresh or chilled	23	40	4	●	●		

Note: Ranking according to PDI to EU & EFTA. Empty cells for additional indicators are due to missing data.

Table 3a: Guatemala – products with export potential

EPI: Growing your current exports		What is the product's export potential value (in US$ thousand) in…?						Would this product help Guatemala improving its…?			
CBI sector	Product description	EU & EFTA	% of unused potential	Top 3 markets	BRICS + 11	% of unused potential	Latin America	% of unused potential	level of technology	stability of export revenues	SME presence	female labour participation
S4	090111 Coffee, not roasted, not decaffeinated	198,801	10%	Germany, Italy, Belgium	56,362	72%	121,180	91%				
S23, S8	0803 Bananas and plantains, fresh or dried	97,743	92%	Belgium, Germany, Italy	17,428	82%	228,900	92%				
S17, S29	151110 Palm oil, crude	80,279	72%	Netherlands, Italy, Spain	82,787	20%	174,893	48%				
S8	080719 Melons, fresh, other than watermelons	24,959	94%	Netherlands, Spain, United Kingdom	10,721	100%	27,917	98%				
S11	1701XX Raw cane sugar	15,521	38%	Croatia, United Kingdom, Portugal	126,895	14%	80,108	23%				
S24	400122 Technically specified natural rubber (TSNR)	14,358	96%	Spain, Germany, Netherlands	29,535	76%	33,708	8%				
S26	0908Xc Cardamons	11,115	17%	Netherlands, United Kingdom, Germany	12,867	10%	2,229	96%				
S1	610910 T-shirts, singlets and other vests, of cotton, knitted	10,308	80%	Netherlands, Spain, Germany	6,130	4%	19,530	62%				
S1	611020 Pullovers, cardigans and similar articles of cotton, knitted	9,826	89%	Spain, Netherlands, Germany	1,289	52%	7,044	88%				
S1	620463 Womens/girls trousers and shorts, of synthetic fibres, not knitted	9,712	100%	United Kingdom, Spain, Germany	2,309	99%	10,235	97%				
S17, S29	151321 Palm kernel or babassu oil, crude	9,656	88%	Netherlands, Germany, Spain	15,889	10%	18,607	22%				
S24	400110 Natural rubber latex, whether or not prevulcanised	4,547	25%	Belgium, Italy, Netherlands	19,293	27%	19,239	3%				
S25	690890 Tiles, cubes and sim nes, glazed ceramics	821	100%	France, Netherlands, Germany	1,727	76%	29,140	32%				
S14, S21	7306Xc Other welded tubes and pipes, of a kind used for oil or gas pipelines, of i	617	100%	Netherlands, Germany, Spain	2,431	100%	26,108	25%				
S24	392330 Carboys, bottles, flasks and similar articles of plastics	473	99%	Netherlands, Spain, United Kingdom	2,707	85%	38,286	40%				
S21, S24	391723 Tubes, pipes and hoses, rigid; of polyvinyl chloride	328	98%	France, Netherlands, Spain	9,913	99%	113,834	77%				

Note: Ranking according to EPI to EU & EFTA. Empty cells for additional indicators are due to missing data.

Table 3b: Guatemala – diversification opportunities

PDI: Moving into new products		What is the product's diversification potential rank in…?			Would this product help Guatemala improving its…?			
CBI sector	Product description	EU & EFTA	BRICS + 11	Latin America	level of technology	stability of export revenues	SME presence	female labour participation
S3	180100 Cocoa beans, whole or broken, raw or roasted	1	1	4	🔴	🔴		
S8	080430 Pineapples, fresh or dried	2	16	2	🟢	🔴		
S7	160414 Tunas,skipjack&Atl bonito,prepard/preservd,whole/in pieces,ex mincd	3	15	3	🔴	🔴	🟢	🔴
S17, S29	151311 Coconut (copra) oil crude	4	18	30	🔴	🔴	🟢	🔴
S17, S29	151190 Palm oil and its fractions refined but not chemically modified	5	2	1	🟢	🔴	🟢	🔴
S7	0304Xb Fish fillets, frozen	6	4	13	🔴	🔴	🟢	🔴
S5	0603XX Cut flowers and flower buds for bouquets, fresh	7	44	9	🟢	🟢		
S7	0304Xc Fish meat, frozen	8	10	14	🔴	🟢	🟢	🔴
S1	621210 Brassieres and parts thereof, of textile materials	9	20	8	🔴	🟢	🔴	🟢
S1	611030 Pullovers, cardigans and similar articles of man-made fibres, knitted	10	22	29	🔴	🟢	🔴	🔴
S7	030611 Rock lobster&oth sea crawfish,frozen in shell/not,incl boild in shell	12	7	59	🔴	🟢	🟢	🔴
S29	151319 Coconut (copra) oil&its fractions refined but not chemically modified	16	9	17	🟢	🔴	🟢	🔴
S23	2009Xd Pineapple juice, unfermented	23	40	5	🟢	🟢	🟢	🔴
S28	4407XX Other wood sawn/chipped lengthwise, sliced/peeled	25	3	22	🔴	🔴	🟢	🔴
S8	071410 Manioc (cassava), fresh or dried, whether or not sliced or pelleted	30	14	10	🔴	🔴		
S17, S29	151321 Palm kernel or babassu oil, crude	31	5	38	🟢	🔴	🟢	🔴
S7	160413 Sardines,sardinella&brislg o sprats prep o presvd,whole o pce ex mincd	42	17	6	🟢	🔴	🟢	🔴
S24	392321 Sacks and bags (including cones) of polymers of ethylene	44	11	7	🔴	🟢	🔴	🔴
S24	400599 Compounded rubber, unvulcanised in primary forms nes	61	6	32	🟢	🟢	🔴	🔴
S2	854430 Ignition wirg sets&oth wirg sets usd in vehicles,aircraft etc	64	8	61	🟢	🟢	🔴	🔴

Note: Ranking according to PDI to EU & EFTA. Empty cells for additional indicators are due to missing data.

11. Validation with country experts

> The choice of sectors is adequate […] the wood sector, even though lucrative, can be challenging for trade development due to environmental issues such as deforestation.
>
> ITC expert for Gambia

> Currently a fairly wide-spread ginger root disease has wiped out ginger production. […] Turmeric though not affected.
>
> ITC expert for Ethiopia

Each of the 64 country fact sheets has been reviewed by country experts in ITC and CBI. Overall, the feedback was positive and in many cases, the identified products correspond to sectors targeted in national export strategies and sector development programmes. The country experts were able to shed additional light upon recent events such as disease outbreaks or export bans that have not yet been reflected in trade data.

They sometimes questioned the sustainability of the identified products, for example, when wood and wood products were suggested to countries suffering from deforestation. As sustainability often depends on the particular circumstances of production in the country, it has not been possible to consider these aspects by the globally applicable methodology.

Another set of remarks revealed reporting problems of the underlying trade data that in a few cases may lead to unrealistic results. For example, for Sierra Leone, inspection of raw data revealed that in the past, Poland reported continuous imports of centrifugal pumps and other advanced products from the country, even though Sierra Leone does not have any capacity to supply them.

The feedback shows that despite utmost efforts to carefully check and process data, the in-depth knowledge of country experts is essential. Further desk research and stakeholder consultations are recommendable to complement the quantitative analyses before selecting value chains.[14]

12. Interpretation of results

The outcomes presented in the 64 country fact sheets are specific to each country – the exemplary fact sheets presented above help to highlight the strengths and limits of the analysis:

12.1. Country example 1: Bangladesh – a large but concentrated economy that may focus on the identified diversification opportunities to expand its export basket and adhere to a higher level of technology

> In addition to apparel, the agro-food industry offers a good potential for future exports.
>
> ITC expert for Bangladesh

Bangladesh's economy is concentrated on the large apparel sector that accounts for 80-90% of its export revenues. Much of the sector's potential is already used, especially in trade with EU and EFTA countries. Some untapped export potential remains in men's anoraks to Europe and in South-South and regional trade, but the values are comparably low.

The only non-textile product with high (unused) export potential is frozen shrimps and prawns. The possibility to expand these exports, however, may be limited by the availability of livestock – a factor which

[14] All comments made by country experts have been passed on to CBI and can be made available upon request.

this analysis does not consider. The product is furthermore unlikely to help Bangladesh move up the value chain or stabilize its export revenues.

Best opportunities to diversify the export basket comprise different types of natural rubber, unshelled cashew nuts, and in South-South and regional trade also manioc (cassava). All these products appear to raise the country's current level of production complexity. Since the overwhelming part of Bangladesh's exports consists of garments which are themselves often found in the export baskets of poor, hardly diversified economies and are thus associated with a low level of technological advancement, other, even little processed agricultural goods seem to allow the country to improve along this dimension.

According to data from the Food and Agricultural Organization (FAO),[15] Bangladesh already produces natural rubber and the country seemingly possesses the right climate to move into manioc and cashew nuts. Investment into these sectors may thus be a means to reach international markets, thereby reducing the country's dependency on the textile sector where European markets at least seem to be becoming saturated.

12.2. Country example 2: Burundi – an underdeveloped economy that could benefit from trade advisery to fully utilize its potentials in existing and new sectors

Burundi is one of the poorest economies in Africa and continuously exports only 50 products. The highest potential by far lies in coffee exports to Europe but almost all of this potential has materialized already. Some unused potential still exists in exports to other regions and in black tea exports. To grow exports further, investment into currently small or entirely new sectors will be needed. Even though the identified potentials in existing export sectors are very limited, it may be recommendable to exploit options for building up current production capacities, for example in the fruits or vegetables sectors, before venturing into new areas.

Advice of trade support institutions will be helpful in finding out why the potential for export growth has so far not been realized and which of the identified diversification options – among those cocoa beans, groundnut oil, cloves, cashew nuts, gum Arabic and sesame seeds – are feasible and fit the policy objectives of the Government.

12.3. Country example 3: Guatemala – a diversified economy with untapped opportunities in non-traditional markets

> Coffee is Guatemala's most valuable export product. However, over the past two years (2013 and 2014) the country faced lots of problems with the leaf rust (a fungus of the order Pucciniales) a disease/pest that had tremendous negative impact on the yields.
>
> ITC expert for Guatemala

Guatemala is a well-diversified economy that continuously exports 999 out of the 1,299 products specified in the CBI product tree. On top of the products with high potential are the country's traditional export sectors, such as coffee and bananas or plantains. The extent to which export potentials are used differs greatly. While possibilities to further expand current coffee exports to European markets are limited (unless through a more aggressive pricing policy that would make European markets less profitable than other markets), untapped opportunities exist in South-South and regional markets.

[15] http://faostat3.fao.org/home/E.

Even though the study was not designed to compare across different suppliers, detailed results reveal that other big coffee producers of the region have similar or greater export potentials (e.g. Colombia has a potential to export more than four times the value of Guatemala to the region (US$ 538 million versus US$ 121 million). Note that these two countries alone would meet current regional coffee demand. Some caution is therefore needed when setting quantitative targets for future export growth.

Large and generally untapped export potentials across all importing regions also exist in bananas/plantains. Palm oil – a product often accused of damaging the environment and livestock – ranks high as well. Additional desk research and stakeholder consultations are therefore needed to shed more light upon the particular circumstances and production methods in the country.

Regional and sector results

Country results inform the selection of national value chains. Yet, to make use of synergies, it can be of interest to work beyond country borders and design regional or sector-specific projects. The following sections present results by region and for the group of LDCs. Sector fact sheets that list all products with high export or diversification potential on the European market by sector are available online[16] (please refer also to appendix IV).

13. Export opportunities of regions

Large projects sometimes require the selection of value chains that offer export opportunities to several countries of a region. Similar to country fact sheets, regional fact sheets present (i) the export potential value of a sector along with the degree of unused potential and (ii) the rank of the sector in terms of diversification potential in each of the three markets. Since large countries are likely to dominate these results, the tables also indicate how many countries have high export or diversification potential products in each sector.

13.1. Africa and the Middle East

When planning regional development projects, stakeholders may either select sectors that promise high future export revenues or sectors that include a large number of countries.

Exporters from Africa and the Middle East overall have the greatest export potential in European markets, notably in the textile sector. Potential apparel exports are about 50% higher than potential fresh fruits and vegetables exports and almost twice as high as potential cocoa exports. None of these potentials have up to this point been fully realized. Comparison with actual exports reveals that a potential export value of US$ 6.2 billion is yet to be exploited in these three sectors' trade with the EU and EFTA alone. Room for action also exists in fishery products and processed fruits, vegetables and nuts, where another US$ 2.5 billion of export potential has not materialized so far.[17]

More frequently on top of country rankings other than apparel are fresh and processed fruits and vegetables, natural cosmetics ingredients and grains and pulses. Even though not maximizing export potentials in value terms, projects targeting these sectors would encompass a high number of countries.

Cocoa, apparel and fresh fruits and vegetables offer best diversification opportunities in the EU and EFTA market but processed fruits, vegetables and nuts are most often found on top of countries' PDI rankings. The overlap of sectors with potential for growing current exports and diversifying the countries' future export baskets indicates that the methodology tends to favour (i) for existing exporters, intra-sectorial diversification into new varieties and (ii) for new exporters, diversification into sectors that are established already in other countries of the region.

Africa and the Middle East's potential to export to the regional market and notably to the BRICS+11 is lower, but since actual exports are lower as well, there is still scope for trade advisery to help realize the indicated potentials. In trade with the region, highest potential exists in fresh fruits and vegetables and in metal products with more than US$ 3 billion each. Hardly half of these potentials are currently met.[18] Grains and pulses – the sector which appears most frequently on top of African and Middle Eastern countries' rankings – and processed fruits, vegetables and nuts are also promising options particularly for regional export growth.

---

[16] http://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Sectorfactsheets.pdf.

[17] Please note that especially fruits and vegetables are often assigned to several CBI sectors, and hence there is double counting when summing up export potentials across sectors.

[18] While it is possible that the potential in all regional markets is to 50% exploited, it is more likely that current exports meet or exceed their potential on some markets and are much below their potential on others. A low degree of potential used in exports to a group of countries often points to possibilities of market diversification rather than to room for intensifying trade with existing partners. The detailed results tables made available to CBI help determine the right strategy.

In trade with the BRICS+11, processed fruits, vegetables and nuts and grains and pulses seem most promising and reach an export potential of US$ 1.7 billion and US$ 1.6 billion respectively (less than half of it is used at the moment). Honey and sweeteners – a sector with currently still low export potential – is the number one diversification opportunity in trade with the region and the BRICS+11.

Table 4: Sector export potential of Africa and the Middle East

	What is the sector's export potential in...?								
	EU & EFTA			BRICS+11			Africa & Middle East		
CBI sector	EP value (in US$ million)	% of unused potenti	# countries with high EPI	EP value (in US$ million)	% of unused potenti	# countries with high EPI	EP value (in US$ million)	% of unused potenti	# countries with high EPI
Apparel	6,475	37%	13	374	51%	8	695	79%	7
Fresh fruit & vegetables	4,903	48%	24	822	47%	16	3,331	56%	19
Cocoa	3,368	44%	9	801	71%	7	473	97%	6
Automotive parts	2,884	29%	6	383	68%	9	685	49%	7
Fishery products	2,561	54%	15	385	72%	15	1,004	62%	14
Processed fruit & vegetables, nuts	1,793	63%	23	1,725	57%	28	1,643	66%	23
Metal products	1,390	57%	8	675	77%	13	3,016	50%	15
Coffee	1,193	24%	16	63	48%	12	319	55%	12
Vegetable oils	1,187	73%	16	932	46%	18	1,300	70%	19
Pipes & process equipment	1,050	26%	4	588	76%	9	1,324	56%	9
Rubber & plastic products	995	46%	12	632	74%	13	1,551	54%	13
Electronics & electrical parts	941	35%	7	209	65%	9	319	68%	6
Home deco & textiles, toys	772	62%	5	148	77%	4	1,034	54%	6
Nat. ingredients for cosmetics	598	55%	20	368	86%	19	424	76%	18
Grains & pulses	553	79%	19	1,572	52%	23	2,028	66%	24
Wine	539	32%	1	93	60%	2	277	68%	1
Tea	513	51%	7	783	25%	8	1,075	50%	8
Timber (products)	461	66%	11	878	64%	17	1,092	79%	12
Cut flowers & foliage	424	21%	8	38	35%	2	18	27%	1
Honey & sweeteners	371	53%	7	428	90%	9	1,273	62%	10
Spices & herbs	265	76%	6	201	51%	9	428	80%	10
Sanitary products & ceramic tiles	242	53%	1	56	89%		1,482	78%	2
Motion, drives, control & automation	212	43%	1	95	74%	1	286	61%	
Medical devices	206	46%	1	19	81%	1	22	43%	1
Nat. colours, flavours & thickeners	205	51%	9	57	69%	9	54	43%	8
Plants & young plant material	181	45%	5	11	87%		33	89%	3
Personal Protective Equipment	171	60%	1	12	70%	1	78	50%	2
Nat. ingredients for pharmaceuticals	101	57%	8	35	73%	8	37	31%	8
Paints & coatings	88	92%		57	83%	1	203	35%	
Jewellery	42	62%	2	10	90%	2	129	90%	2

Table 4b: Sector diversification opportunities of Africa and the Middle East

	What are the sector's diversification opportunities in …?					
	EU & EFTA		BRICS+11		Africa & Middle East	
CBI sector	PD rank	# countries with high PDI	PD rank	# countries with high PDI	PD rank	# countries with high PDI
Cocoa	1	27	3	29	15	18
Apparel	2	4	13	1	9	2
Fresh fruit & vegetables	3	20	7	14	2	21
Coffee	4	16	12	10	11	8
Processed fruit & vegetables, nuts	5	33	2	32	4	33
Cut flowers & foliage	6	11	6	6	17	2
Fishery products	7	20	4	16	5	19
Grains & pulses	8	14	5	29	3	33
Nat. ingredients for cosmetics	9	25	11	26	8	25
Honey & sweeteners	10	9	1	18	1	18
Timber (products)	11	22	8	28	7	18
Rubber & plastic products	12	22	14	19	13	12
Home deco & textiles, toys	13	4	18	2	12	3
Vegetable oils	14	24	10	30	6	21
Automotive parts	15		22		23	
Spices & herbs	16	16	9	17	14	14
Nat. colours, flavours & thickeners	17	11	15	8	18	9
Plants & young plant material	18	1	26		21	
Tea	19	2	16	5	10	8
Nat. ingredients for pharmaceuticals	20	11	17	8	24	9
Personal Protective Equipment	21		25		26	
Metal products	22		19	1	16	2
Wine	23		24		22	
Sanitary products & ceramic tiles	24		20		20	
Jewellery	25		29		28	
Pipes & process equipment	26		21		19	
Electronics & electrical parts	27		23		25	
Medical devices	28		30		30	
Paints & coatings	29		27		27	
Motion, drives, control & automation	30		28		29	

13.2. Asia and Eastern Europe

In Asia and Eastern Europe, the highest potential for growing current exports lies in the regional market. Electronics and electrical parts have an enormous regional export potential of US$ 58 billion, followed by rubbers and plastic products with US$ 41 billion and natural cosmetics ingredients as well as vegetable oils with almost US$ 26 billion. Around half of these potentials are currently unexploited, indicating considerable space to increase future export revenues.

Because 11 of the 16 emerging countries are located in Asia and Eastern Europe, the sector pattern is very similar for the BRICS+11 markets. Potentials reach between 33% (fishery products) and 84% (grains and pulses) of those in the regional market. The rubber and plastics sector also offers good diversification opportunities in regional and South-South trade.

Export potentials in the European market are comparably low, the only exception being the apparel sector. 15 Asian and Eastern European countries have a high potential to export at least one garment product to Europe. 70% of their potential value is, however, already exploited. Future trade relations with Europe require a sound diversification strategy.

A look into the sector fact sheets available online[19] reveals that coffee and rubber could, for example, help the highly concentrated economies of Bangladesh and Cambodia diversify away from apparel. More advanced economies, like Thailand, may focus on products above their current level of technology, such as electrical capacitators. Diversification into sophisticated products is usually easier on regional markets. Once successfully introduced there, global markets, like Europe, can be targeted as well.

[19] http://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Sectorfactsheets.pdf.

Table 5a: Sector export potential of Asia and Eastern Europe

	What is the sector's export potential in...?								
	EU & EFTA			BRICS+11			Asia & Eastern Europe		
CBI sector	EP value (in US$ million)	% of unused potenti	# countries with high EPI	EP value (in US$ million)	% of unused potenti	# countries with high EPI	EP value (in US$ million)	% of unused potenti	# countries with high EPI
Apparel	35,701	30%	15	6,492	45%	9	14,751	55%	10
Rubber & plastic products	8,524	52%	10	24,501	48%	10	40,751	55%	12
Nat. ingredients for cosmetics	6,898	46%	7	18,009	42%	7	25,684	52%	7
Home deco & textiles, toys	6,456	31%	6	2,237	54%	5	4,455	54%	7
Electronics & electrical parts	6,324	40%	3	29,777	45%	5	58,379	39%	5
Vegetable oils	6,120	45%	4	17,913	42%	2	25,808	53%	5
Fishery products	6,087	52%	9	3,574	50%	7	10,550	47%	8
Automotive parts	4,548	42%	5	10,213	46%	7	15,112	39%	5
Processed fruit & vegetables, nuts	3,986	65%	9	3,598	41%	9	5,822	45%	10
Coffee	3,822	56%	4	352	18%	2	834	20%	2
Jewellery	3,563	58%	3	1,256	78%	2	6,301	62%	3
Metal products	2,906	38%	3	6,164	50%	6	8,777	44%	6
Personal Protective Equipment	2,511	33%	4	903	62%	3	1,667	60%	3
Timber (products)	2,184	41%	7	4,157	40%	7	8,107	40%	7
Fresh fruit & vegetables	1,967	87%	6	6,001	52%	10	7,717	49%	12
Grains & pulses	1,621	58%	5	12,480	57%	12	14,833	56%	12
Pipes & process equipment	1,412	44%	3	2,892	45%	4	4,194	45%	5
Tea	861	69%	2	1,048	40%	3	1,312	38%	4
Nat. colours, flavours & thickeners	827	48%	1	956	56%	2	1,155	56%	2
Medical devices	729	48%	1	396	55%	2	815	43%	
Motion, drives, control & automation	692	45%	1	2,047	36%	2	3,297	34%	1
Cocoa	587	84%	1	157	53%		481	33%	
Nat. ingredients for pharmaceuticals	516	49%	1	699	59%	2	757	58%	2
Spices & herbs	508	62%	3	1,022	62%	6	1,762	68%	6
Paints & coatings	392	24%		1,540	45%	1	1,865	47%	2
Honey & sweeteners	374	87%	1	2,005	36%	2	2,838	26%	1
Wine	159	74%	3	37	20%	3	91	29%	3
Sanitary products & ceramic tiles	123	69%		154	59%		290	43%	
Cut flowers & foliage	44	58%		12	49%		34	25%	
Plants & young plant material	19	50%		3	34%		7	28%	

Table 5b: Sector diversification opportunities of Asia and Eastern Europe

	What are the sector's diversification opportunities in …?					
	EU & EFTA		BRICS+11		Asia & Eastern Europe	
CBI sector	PD rank	# countries with high PDI	PD rank	# countries with high PDI	PD rank	# countries with high PDI
Apparel	1	13	7	7	3	13
Coffee	2	9	10	4	12	4
Rubber & plastic products	3	11	1	12	1	12
Fishery products	4	13	8	9	6	11
Nat. ingredients for cosmetics	5	15	3	15	5	12
Processed fruit & vegetables, nuts	6	16	9	15	9	16
Vegetable oils	7	16	2	19	4	16
Home deco & textiles, toys	8		15		11	6
Fresh fruit & vegetables	9	9	6	14	8	16
Personal Protective Equipment	10	1	12	1	15	1
Cocoa	11	16	14	16	16	10
Electronics & electrical parts	12	1	4	1	2	1
Grains & pulses	13	7	5	15	7	13
Automotive parts	14	1	11	2	13	1
Nat. colours, flavours & thickeners	15		19	2	20	
Nat. ingredients for pharmaceuticals	16		20	2	22	
Jewellery	17		23		14	
Timber (products)	18	7	16	7	18	6
Spices & herbs	19	2	13	5	17	4
Tea	20		18	2	10	7
Metal products	21	1	21	1	19	2
Honey & sweeteners	22	2	17	10	21	5
Sanitary products & ceramic tiles	23		24		24	
Pipes & process equipment	24		22	1	23	
Medical devices	25		27		27	
Motion, drives, control & automation	26		26		25	
Paints & coatings	27		25		26	
Plants & young plant material	28		29		28	
Wine	29		30		30	
Cut flowers & foliage	30		28		29	

13.3. Latin America

Overall, European markets offer the highest potential for exports from Latin America. Most promising are traditional sectors of coffee and fresh or processed fruits, vegetables and nuts. More than one third of the potential export value of these top three sectors has not yet materialized corresponding to possible future revenues of up to US$ 2 billion (in reality, total unused potentials are lower because several products are assigned to both the fresh and the processed fruits and vegetables sector).

Coffee is also the sector with the highest potential in the regional market and this potential has hardly been used in the past. The fresh and processed fruits and vegetables sectors offer similar unexploited opportunities. For Latin America, it may hence be promising to follow a two-fold strategy: (i) continue exporting traditional goods to the EU and EFTA while also exploring the possibility to move to value-added varieties, for example, in the coffee sector and (ii) aim to establish these sectors in regional trade as well.

Processed fruits and vegetables rank high in at least five out of six Latin American countries (depending on the market), making it an interesting sector for a regional development project.

The BRICS+11 play a comparably minor role with the highest potential in rubbers and plastic products merely reaching US$ 0.3 billion.

Table 6a: Sector export potential of Latin America

	What is the sector's export potential in...?								
	EU & EFTA			BRICS+11			Latin America		
CBI sector	EP value (in US$ million)	% of unused potenti	# countries with high EPI	EP value (in US$ million)	% of unused potenti	# countries with high EPI	EP value (in US$ million)	% of unused potenti	# countries with high EPI
Coffee	2,459	39%	4	224	47%	5	1,130	89%	4
Fresh fruit & vegetables	1,599	33%	4	256	70%	6	768	86%	4
Processed fruit & vegetables, nuts	1,398	37%	5	275	68%	6	993	77%	5
Apparel	647	76%	3	140	43%	4	596	42%	1
Fishery products	369	52%	4	131	47%	4	288	73%	3
Nat. ingredients for cosmetics	240	47%	3	207	32%	3	363	46%	4
Vegetable oils	189	53%	3	189	38%	4	336	41%	4
Cut flowers & foliage	188	56%	1	43	28%	1	103	88%	1
Rubber & plastic products	108	88%	4	329	64%	1	999	40%	3
Grains & pulses	93	63%	3	166	87%	3	364	66%	3
Cocoa	85	44%		15	81%		17	63%	
Timber (products)	58	71%	1	77	41%	2	65	43%	3
Home deco & textiles, toys	52	79%	1	43	50%		310	53%	
Nat. colours, flavours & thickeners	42	26%	1	25	32%		62	58%	1
Spices & herbs	42	30%		24	23%	1	17	42%	1
Honey & sweeteners	36	44%	4	243	36%	1	693	47%	4
Automotive parts	32	89%	1	67	58%		190	33%	
Jewellery	29	81%		7	72%	1	53	35%	
Metal products	25	83%	1	80	72%		240	46%	
Sanitary products & ceramic tiles	16	100%	2	13	83%		167	38%	
Plants & young plant material	10	54%		1	62%		3	81%	
Pipes & process equipment	7	89%	1	50	79%		266	52%	1
Paints & coatings	7	80%		39	68%		142	54%	
Nat. ingredients for pharmaceuticals	7	59%		5	64%		11	53%	
Medical devices	6	77%		7	56%		16	25%	
Personal Protective Equipment	3	89%		1	62%		12	41%	
Electronics & electrical parts	2	80%		6	78%		47	33%	
Motion, drives, control & automation	1	78%		4	47%		6	21%	
Tea	0	71%		0	97%		0	61%	
Wine	0	41%		0	39%		0	49%	

Table 6b: Sector diversification opportunities of Latin America

	What are the sector's diversification opportunities in …?					
	EU & EFTA		BRICS+11		Latin America	
CBI sector	PD rank	# countries with high PDI	PD rank	# countries with high PDI	PD rank	# countries with high PDI
Coffee	1	2	1	2	1	2
Fresh fruit & vegetables	2	2	3	4	2	6
Cocoa	3	6	7	6	10	6
Processed fruit & vegetables, nuts	4	5	2	5	3	5
Vegetable oils	5	6	4	5	4	6
Nat. ingredients for cosmetics	6	6	6	5	5	5
Fishery products	7	6	8	5	7	5
Honey & sweeteners	8	4	5	4	6	1
Apparel	9		12	1	8	1
Timber (products)	10	6	9	2	13	5
Rubber & plastic products	11	3	11	2	11	2
Grains & pulses	12	4	10	5	9	2
Cut flowers & foliage	13	1	14	2	12	2
Home deco & textiles, toys	14		17		14	
Plants & young plant material	15		21		19	
Spices & herbs	16	2	18	2	21	2
Automotive parts	17	1	13		17	
Nat. colours, flavours & thickeners	18		19	1	20	
Tea	19		16		27	
Jewellery	20		26		24	
Nat. ingredients for pharmaceuticals	21		22	1	22	
Electronics & electrical parts	22		20		25	
Metal products	23		15		15	
Personal Protective Equipment	24		25		23	
Sanitary products & ceramic tiles	25		23		16	
Wine	26		28		28	
Pipes & process equipment	27		24		18	
Medical devices	28		29		29	
Paints & coatings	29		27		26	
Motion, drives, control & automation	30		30		30	

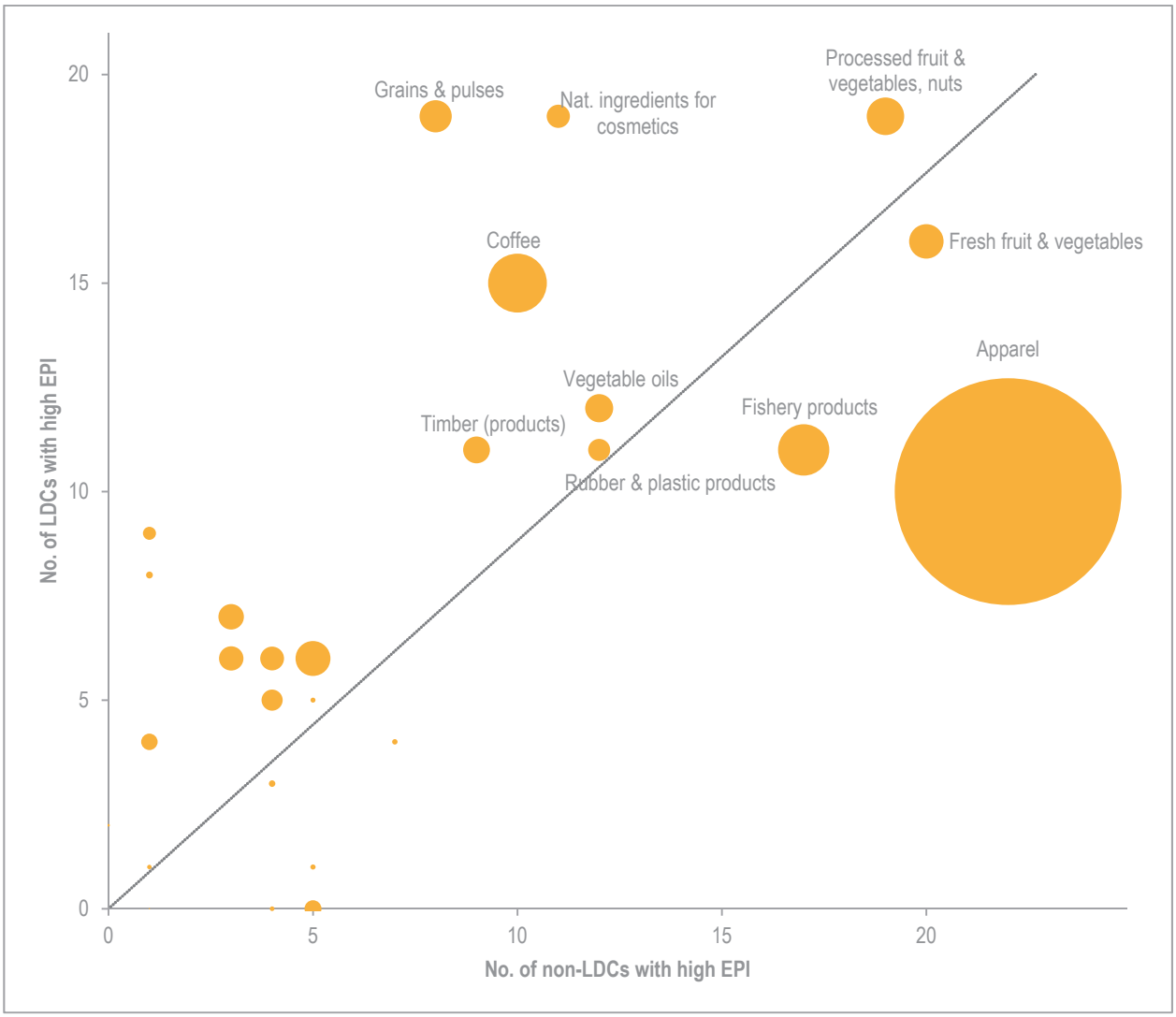
14. Export opportunities of LDCs

Thirty out of the 64 Netherlands development cooperation's target countries are LDCs. More than other countries, LDCs need to find promising opportunities to grow their exports. The European market, attractive because of high demand and preferential tariff regimes but also often difficult to access for LDC producers because of non-tariff rules and regulations, plays a critical role for LDCs' future export success.

Figure 2 shows which types of products dominate the export and diversification potentials of LDCs as compared to those of other developing CBI countries in the EU and EFTA market. The size of the bubble represents the export potential value. The position of the bubble represents the number of countries having at least one product from the sector among their top 10 export potential products to EU and EFTA market – in the LDC group (y-axis) and in the non-LDC group (x-axis).

The diagonal takes the total number of countries in each group into account. Sectors above the line more often rank high in LDCs relative to the total size of the group. Sectors below the line are comparably more often found on top of other developing countries' rankings.

Figure 2: Number of countries with high export potential products in the EU and EFTA by sector (LDCs vs. non-LDCs)



Note: only sectors comprising at least one product with high EPI in more than five countries of each group are labelled.

Unsurprisingly, apparel, by far the biggest among all CBI sectors encompassing 179 different items, offers the highest export potential and is frequently found on top for LDCs and non-LDCs likewise. However, while products of this sector appear in the top 10 of 22 non-LDCs, 'only' 10 LDCs have a high export potential in at least one garment.

Zooming in reveals that textile exports are very concentrated on a few countries of the LDC group: in the country fact sheets of Bangladesh and Cambodia, 9 out of 10 products with high potential to the EU and EFTA are garments, but 20 LDCs do not have any high potential textile product. Developing CBI countries are therefore on average more specialized in apparel. They are also relatively more specialized in fishery products and fresh fruits and vegetables, both situated below the diagonal. On the contrary, grains and pulses, natural ingredients for cosmetics, coffee and processed fruits, vegetables and nuts are more often among the products with high export potential in LDCs.

Even though the size of the two country groups is similar (30 LDCs versus 34 non-LDCs), note that the absolute potential export value to European markets is higher for non-LDCs in all sectors (table 7). The difference is lower in apparel and plants and plant materials where LDCs reach more than half of the export potential of developing CBI countries. This again shows that a few big LDCs, like Bangladesh, are very concentrated on the textile sector and drive up its potential, whereas across all LDCs, apparel does not play an exceptional role.

Table 7: Export potential values in the EU & EFTA by sector (LDCs vs. non-LDCs)

	What is the sector's export potential value (in US$ million) of…?			
CBI sector	**LDCs**	**% of unused potential**	**Non-LDCs**	**% of unused potential**
Apparel	15810	23	27013	37
Coffee	1062	25	6412	49
Fishery products	809	49	8209	53
Processed fruit & vegetables, nuts	434	86	6744	57
Home deco & textiles, toys	374	34	6906	35
Fresh fruit & vegetables	363	87	8107	53
Grains & pulses	321	80	1946	60
Metal products	271	55	4050	43
Vegetable oils	242	80	7253	49
Timber (products)	221	90	2481	42
Spices & herbs	199	80	615	60
Honey & sweeteners	182	43	598	77
Cocoa	175	46	3865	50
Nat. ingredients for cosmetics	165	65	7571	47
Rubber & plastic products	148	95	9479	51
Cut flowers & foliage	137	41	519	31
Personal Protective Equipment	88	33	2597	35
Plants & young plant material	84	34	126	53
Tea	63	47	1312	63
Nat. colours, flavours & thickeners	52	59	1022	47
Nat. ingredients for pharmaceuticals	14	60	610	50
Pipes & process equipment	13	97	2456	36
Automotive parts	9	93	7455	37
Jewellery	8	84	3626	58
Electronics & electrical parts	8	84	7259	39
Motion, drives, control & automation	6	95	899	45
Wine	6	100	691	41
Medical devices	2	81	939	47
Paints & coatings	1	99	486	37
Sanitary products & ceramic tiles	0	99	381	60

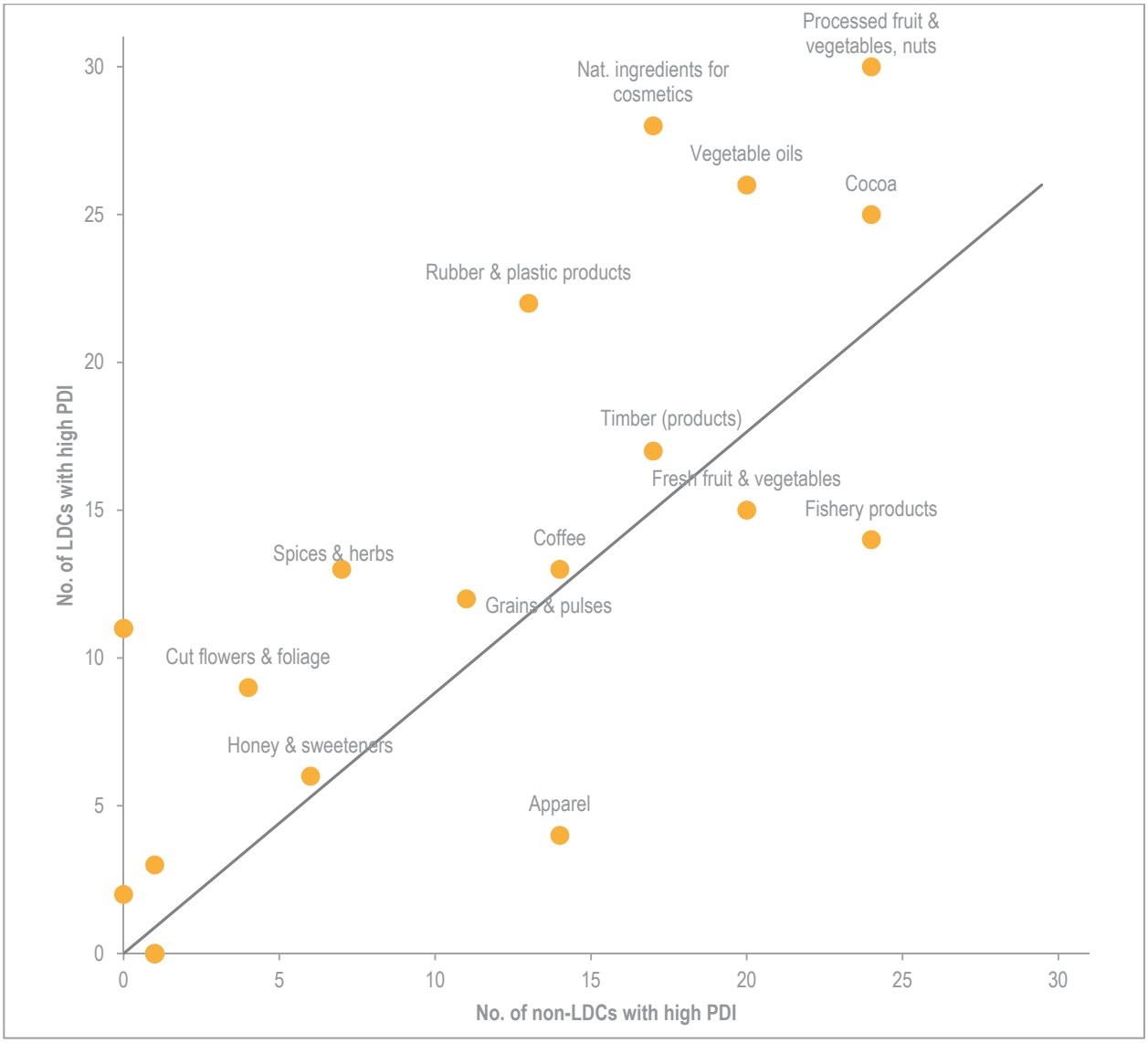
Results are similar for diversification opportunities on the European market (figure 3). Developing countries are often advised to diversify into new varieties of apparel, fishery products and fresh fruits and vegetables – the same sectors that are already established in the countries and that dominate the export potential value. LDCs are frequently recommended to expand their export basket towards other varieties of processed fruits, vegetables and nuts, again a sector often found on top in terms of existing products' export potentials. Natural ingredients of cosmetics, natural ingredients of pharmaceuticals (note that the latter sector is suggested to 11 LDCs but not to any non-LDC), rubber and plastic products and vegetable oils also offer options for diversification on the European market.

This sector pattern reveals structural differences between the two country groups. Developing countries have advantages in

- producing labour-intensive garments on a large scale
- complying with rules and regulations of getting fresh produce into the European market and
- due their geographic position, giving them more often access to the sea.

On average, smaller, poorer, and more often landlocked LDCs switch to sectors where they have comparative advantages. As these sectors may actually offer better possibilities to move up the value chain (e.g. for Mali from shelled to unshelled cashew nuts or from groundnuts to groundnut oil), the 'forced' specialization in processed goods could in the long run be to the advantage of LDCs.

Figure 3: Number of countries with good diversification opportunities in the EU and EFTA by sector (LDCs vs. non-LDCs)



Note: only sectors comprising at least one product with high PDI in more than four countries of each group are labelled.

Conclusions

This study has applied ITC's export potential assessment methodology to identify (i) existing products with further export growth potential and (ii) new products for export diversification for 64 developing countries in trade with European, emerging and regional markets. Based on comprehensive and thoroughly checked trade and market access data, the methodology combines supply, demand and market access indicators to infer potential export values and diversification opportunities. Results are presented in country fact sheets that allow comparing potential export values across products and markets or selecting diversification options within a given market. For each product, additional indicators inform about its technology content, price volatility, and the presence of SMEs and female labour participation in the sector.

Results are highly specific to each country. ITC and CBI country experts confirm that the identified products are in line with the countries' reality and have complemented the findings with insights into sustainability concerns, recent disease outbreaks and other aspects for which global data is not available. The analyses support the selection of national value chains and can be used to develop sector or regional programmes across several countries.

General conclusions for exporters from three world regions are as follows:

1) Africa and the Middle East:

   - The highest potential for growing current exports exists on the European market. Apparel and fresh fruits and vegetables both offer untapped potentials. Cocoa, fishery products and processed fruits, vegetables and nuts are promising sectors for future export growth to Europe as well. Diversification strategies may consider developing new varieties of existing high potential products or venturing into new products that are successfully exported by neighbouring countries.

   - In regional trade, fruits and vegetables, metal products, grains and pulses and sanitary products and ceramic tiles offer scope for export growth. Honey and sweeteners, a sector with a currently low export potential, offers best opportunities to diversify exports in South-South and regional trade.

2) Asia and Eastern Europe:

   - Highest export potentials of Asian and Eastern European exporters lie in regional trade. Electronics and electrical parts and rubber and plastic products show huge and partly untapped potentials with possibly more than US$ 22 billion of additional export revenues. About US$ 13 billion of export potentials are yet to be exploited in the natural cosmetics ingredients and in the vegetable oils sector. Sector patterns with emerging markets of the BRICS+11 are similar but potential exports are smaller in value.

   - Apparel is by far the most important sector in trade with Europe but the relatively small gap to actual exports points to the need of exploring options for diversification. In addition to new varieties of garments and rubber and plastic products (a sector already well established in regional and South-South trade), coffee could be a diversification option for less developed Asian economies. Advanced economies may try to introduce sophisticated varieties of electronics and electrical parts first in regional and later in global markets.

3) Latin America:

   - The region finds the highest export potentials in traditional sectors' exports to Europe. These sectors offer good prospects also in regional trade where the existing potentials have hardly been exploited yet. A two-fold strategy aiming to diversify into value-added varieties on the European and exploring new sales channels on the regional market could be promising.

Appendix I Country list

Target countries of the Netherlands development cooperation

Africa and the Middle East	Burundi, Cabo Verde, Democratic Republic of the Congo, Benin, Ethiopia, Eritrea, Djibouti, Gambia, State of Palestine, Ghana, Jordan, Kenya, Libya, Madagascar, Malawi, Mali, Morocco, Mozambique, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Somalia, South Africa, Zimbabwe, Tunisia, Uganda, Egypt, United Republic of Tanzania, Burkina Faso, Yemen, Zambia, South Sudan*
Asia and Eastern Europe	Afghanistan, Albania, Bangladesh, Armenia, Bhutan, Bosnia and Herzegovina, Myanmar, Cambodia, Sri Lanka, Georgia, Indonesia, Lao People's Democratic Republic, Maldives, Mongolia, Republic of Moldova, Nepal, Pakistan, Philippines, India, Viet Nam, Thailand, the former Yugoslav Republic of Macedonia, Kosovo*
Latin America	Bolivia (Plurinational State of), Colombia, Guatemala, Nicaragua, Peru, Suriname

Note: * No trade data available.

Regional markets

Africa and the Middle East	Countries listed above + Bahrain, Botswana, Cameroon, Central African Republic, Chad, Comoros, Congo, Equatorial Guinea, Gabon, Guinea, Iraq, Israel, Côte d'Ivoire, Kuwait, Lebanon, Lesotho, Liberia, Mauritania, Mauritius, Oman, Namibia, Guinea-Bissau, Qatar, Saudi Arabia, Seychelles, Western Sahara, Sudan*, Swaziland, Syrian Arab Republic, Togo, United Arab Emirates
Asia and Eastern Europe	Countries listed above + Azerbaijan, Brunei Darussalam, Belarus, China, Hong Kong, China, Islamic Republic of Iran, Japan, Kazakhstan, Democratic People's Republic of Korea, Republic of Korea, Kyrgyzstan, Macao, China, Malaysia, Chinese Taipei, Montenegro, Timor-Leste, Russian Federation, Serbia**, Singapore, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan
Latin America	Countries listed above + Antigua and Barbuda, Argentina, Bahamas, Barbados, Brazil, Belize, British Virgin Islands, Cayman Islands, Chile, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat, Aruba, Panama, Paraguay, Saint Kitts and Nevis, Anguilla, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos Islands, Uruguay, Venezuela (Bolivarian Republic of)
BRICS+11	Bangladesh, Brazil, China, Indonesia, Islamic Republic of Iran, Republic of Korea, Mexico, Nigeria, Pakistan, Philippines, Russian Federation, India, Viet Nam, South Africa, Turkey, Egypt
EU and EFTA	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland

Note: * Includes South Sudan. ** Includes Kosovo.

Appendix II CBI sectors

Code	Sector	Code	Sector
S1	Apparel	S16	Nat. colours, flavours & thickeners
S2	Automotive parts	S17	Nat. ingredients for cosmetics
S3	Cocoa	S18	Nat. ingredients for pharmaceuticals
S4	Coffee	S19	Paints & coatings
S5	Cut flowers & foliage	S20	Personal Protective Equipment
S6	Electronics & electrical parts	S21	Pipes & process equipment
S7	Fishery products	S22	Plants & young plant material
S8	Fresh fruit & vegetables	S23	Processed fruit & vegetables, nuts
S9	Grains & pulses	S24	Rubber & plastic products
S10	Home deco & textiles, toys	S25	Sanitary products & ceramic tiles
S11	Honey & sweeteners	S26	Spices & herbs
S12	Jewellery	S27	Tea
S13	Medical devices	S28	Timber (products)
S14	Metal products	S29	Vegetable oils
S15	Motion, drives, control & automation	S30	Wine

Appendix III Data sources

Variable	Source	Link
Export and import values	ITC Trade Map	www.trademap.org
Ad valorem tariffs	ITC Market Access Map	www.macmap.org
Price elasticities	GTAP database (Hertel et al. (2004))	https://www.gtap.agecon.purdue.edu/resources/download/2931.pdf
Distances	CEPII GeoDist database (Mayer and Zignago (2011))	www.cepii.fr/CEPII/fr/bdd_modele/presentation.asp?id=6
GDP growth projections	World Economic Outlook (WEO) database	www.imf.org/external/pubs/ft/weo/2014/02/weodata/index.aspx
Prices	CEPII Trade Unit Values (TUV) database (Berthou and Emlinger (2011))	www.cepii.fr/cepii/en/bdd_modele/presentation.asp?id=2
SMEs	World Bank enterprise survey	www.enterprisesurveys.org
Female employment	World Bank enterprise survey	www.enterprisesurveys.org

Appendix IV Sector fact sheets: export opportunities in the EU and EFTA

Sector fact sheets, available online,[20] summarize results from the perspective of each of the 30 CBI target sectors. They list per sector the corresponding products that rank among the top 10 in terms of export or diversification potential in any of the 64 Netherlands development cooperation's target countries in their exports to Europe.

The tables are sorted alphabetically by country and within each country by (i) export potential value and (ii) product diversification rank. As in the country fact sheets, the length of each bar reflects the value of export potential expressed in US$ thousand. The bars are comparable across products and countries. The clock-like icons indicate the degree of unused potential (white part). Since the EPI and the PDI are not mutually exclusive (the only criterion for the PDI is that the product accounts for < 0.5% of total exports of the country), a product may be listed in both columns. Three scenarios are possible:

- EPI rank ≤ 10, PDI rank > 10:

The product has a high short-term potential (used or unused) but longer-term prospects are less bright. An example is refined sugar (HS 170199 – sector fact sheet: honey & sweeteners) for Algeria.

- EPI rank > 10, PDI rank ≤ 10:

The product has good longer-term prospects even though in the short term, potentials are low. In the case of knitted synthetic fibre shorts and trousers, Albania has fully used its current potential but the product may still be an option for future diversification of the country's export basket (HS 610463 – sector fact sheet: apparel).

- EPI rank ≤ 10, PDI rank ≤ 10:

The outlook for growing these products' exports is good in the short and in the long term. For Indonesia, it seems, for instance, recommendable to focus on coconut oil as the product's current export potential is high and not yet fully used. At the same time, the product is also considered to be a good future diversification opportunity. (HS 151311 – sector fact sheet: nat. ingredients for cosmetics).

The last four columns indicate whether the product would help the country to improve its level of technology, stability of export revenues, SME or female labour participation. Note that the colours (green or red) are relative to the country's current situation, thus the same product may be green for one country and red for another one (see e.g. HS 071333 – sector fact sheet: processed fruit & vegetables, nuts: the level of technology of dried beans is green for Burkina Faso and red for Bolivia (Plurinational State of) meaning that expanding dried beans' exports would lift the economic complexity of Burkina Faso but not of Bolivia (Plurinational State of).

[20] http://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Sectorfactsheets.pdf.

Printed by ITC Digital Printing Service on FSC paper, which is environmentally-friendly paper (without chlorine) using vegetable-based inks. The printed matter is recyclable.

A free pdf is available on ITC's website at:
www.intracen.org/publications

Street address
International Trade Centre
54-56 Rue de Montbrillant
1202 Geneva, Switzerland

P: +41 22 730 0111
F: +41 22 733 4439
E: itcreg@intracen.org
www.intracen.org

Postal address
International Trade Centre
Palais des Nations
1211 Geneva 10, Switzerland