Export Potential Map

Spot opportunities for trade development

Dr. Julia Spies
Trade & Market Intelligence section (ITC)
ARTNeT Conference, Bangkok, 27 November 2018
What is ITC?

**UNCTAD**
The UN body for design of policy recommendations to achieve economic and social development through trade and investment.

**WTO OMC**
The forum to negotiate multilateral trade rules, monitor their implementation and handle trade disputes.

ITC works with local and regional institutions and business people to build trade capacity.

**Our mission**
To foster inclusive and sustainable growth and development through trade and international business development.
ITC’s 6 focus areas and goals towards SDGs

- Providing trade and market intelligence
- Building a conducive business environment
- Strengthening trade and investment support institutions
- Connecting to international value chains
- Promoting and mainstreaming inclusive and green trade
- Supporting regional economic integration and South-South links

SME international competitiveness
Part 1. ITC’s export potential analysis and web tool

Part 2. Looking beyond: using export potential data to inform trade policy negotiations

Part 3. Other customized analyses
Purpose
Optimising resources, achieving results and impact

Which sectors should I prioritize when helping countries connect to international markets?

How can I strategically select products and partners for trade policy negotiations?

How can I best guide the private sector in identifying and entering new markets?

Where can I find competitive suppliers to my industries?
Trade Map: information on exports & imports

- **Products**
- **Value**
- **Growth rates**
- **Global market share**
- **Competition**
- **Average distance**
- **Trade Balance**
Market Access Map: information on tariffs

ITC Market Access Map

Tariff regimes

Applied tariffs and ad valorem equivalent

Find tariffs

Tariffs applied by Algeria

Product: 100119 - Durum wheat (excl. seed for sowing)
Partner: all partners
Data source: ITC (MAMap)
Year: 2015
Nomenclature: HS Rev. 2012
AWE Methodology: AVE based on the World Tariff Profile (WTP)

Selected national tariff line (NTL) code:
10011900 - Froment (blé) et miette: Froment (blé) dur-Autres

<table>
<thead>
<tr>
<th>Tariff regime</th>
<th>Applied tariff (as reported)</th>
<th>Applied tariff (converted)</th>
<th>Total ad valorem equivalent tariff</th>
</tr>
</thead>
<tbody>
<tr>
<td>General tariff</td>
<td>5.00%</td>
<td>5.00%</td>
<td>5.00%</td>
</tr>
<tr>
<td>Preferential tariff for the League of Arab States</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Example: which product(s) should Malawi prioritize?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unmanufactured Tobacco</td>
<td>530,399</td>
<td>482,677</td>
<td>-3</td>
<td>-4</td>
<td>4.6</td>
</tr>
<tr>
<td>Tea</td>
<td>71,561</td>
<td>71,331</td>
<td>-4</td>
<td>0</td>
<td>0.9</td>
</tr>
<tr>
<td>Oilcake</td>
<td>62,033</td>
<td>61,830</td>
<td>305</td>
<td>-9</td>
<td>0.3</td>
</tr>
<tr>
<td>Cane or beet sugar</td>
<td>34,743</td>
<td>34,681</td>
<td>-24</td>
<td>-1</td>
<td>0.1</td>
</tr>
<tr>
<td>Groundnuts</td>
<td>19,725</td>
<td>19,697</td>
<td>-32</td>
<td>4</td>
<td>0.7</td>
</tr>
<tr>
<td>Soya beans</td>
<td>19,410</td>
<td>11,526</td>
<td>11</td>
<td>-2</td>
<td>0</td>
</tr>
<tr>
<td>Dried leguminous vegetables</td>
<td>18,254</td>
<td>9,979</td>
<td>-10</td>
<td>7</td>
<td>0.2</td>
</tr>
<tr>
<td>Other nuts</td>
<td>14,904</td>
<td>14,867</td>
<td>0</td>
<td>2</td>
<td>0.1</td>
</tr>
<tr>
<td>Self-propelled bulldozers etc.</td>
<td>6,683</td>
<td>-6,303</td>
<td>-4</td>
<td>-4</td>
<td>0</td>
</tr>
<tr>
<td>Maize</td>
<td>6,569</td>
<td>-11,606</td>
<td>33</td>
<td>-5</td>
<td>0</td>
</tr>
</tbody>
</table>
Export Potential Assessments: evidence-based decision making

Unique ranking of most promising **suppliers, sectors and markets** for targeted trade support interventions
Export growth and diversification

Trade advisors seek information which products and markets to prioritize for their trade development activities. ITC’s Export Potential Map helps spot and realize export opportunities:

1. **Export Potential Indicator** for traditional export products
   - Potential export value in dollar terms for any exporter × product × market combination
   - Unrealized potential ("gap")

2. **Product Diversification Indicator** for new export products
   - Product Diversification Rank (ranking of horizontal diversification opportunities in a given target market)
Data
Export Potential Map fits into the suite of ITC Market Analysis tools.
Scope

Country coverage

- 226 countries and territories
- Computation at country × product × market level → any type of aggregation possible

Sector coverage

- Starting point is the 6-digit level of the Harmonized System (HS) classification of products, but:
  - Few products excluded products covered by international conventions on waste, pollutants, arms and ammunitions, tobacco, extractive industries, products that cannot be produced (e.g. antiques) or are irrelevant for market intelligence (e.g. commodities n.e.s.)
  - ITC product groups to account for revision changes of the HS:
    - E.g. product code 030212 (salmon, Pacific, Atlantic and Danube) has been split into 030213 (Pacific) and 030214 (Atlantic and Danube) in the 2012 revision of the HS
    - New product group code: 0302Xa

→ Assessments of 4,000+ product groups merged to 16 sectors and 73 sub-sectors
Data treatment & limitations

• Several measures ensure that results are (from a quantitative perspective) reliable and not distorted by “bad” data reports
  - Combination of ‘reliable’ direct and mirror reports
  - Weighted averages over five years (currently 2013-17 with projections for 2022)
• Fully automated methodology to identify export opportunities on a global scale that does not account for
  - Intangible (or for other reasons, unmeasurable) aspects
    - Synergies to existing development plans or export strategies
    - Possibilities of marketing and branding
  - Very recent events like pests, export bans, etc.
  - Sustainability concerns related to deforestation, child labour, etc.
  - Misreported data by presumably reliable reporters

→ Export potential assessments are the starting point in a decision-making process and need to be complemented with further research and stakeholder consultations
The Export Potential Indicator
EPI: simplified framework

The Export Potential Indicator combines measures of export performance, market demand and ease of trade with a given market.

Formally

\[ EPI_{ijk} = \frac{MShare_{ik}}{\sum_k MShare_{ik} \times m_{jk}} \times m_{jk} \times x_{ij} \]

where \( x = \) exports (\( m = \) imports) of a country \( i \) (market \( j \)) in product \( k \).
Quiz: what is country A’s export potential in country B?

<table>
<thead>
<tr>
<th></th>
<th>Product 1</th>
<th>Product 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A exports to B ($x_{ij}$)</td>
<td>500,000</td>
<td>500,000</td>
</tr>
<tr>
<td>A’s world market share ($MShare_{ik}$)</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>B’s imports ($m_{jk}$)</td>
<td>10,000,000</td>
<td>20,000,000</td>
</tr>
</tbody>
</table>

- What is the ease to trade between country A and country B?
- What is country A’s export potential for product 1? And for product 2?
**EPI: complete framework**

Dynamics and market access

\[ EPI_{ijk} = \left( \text{Exp.} \cdot MShare_{ik} \right) \times \frac{\sum_k MShare_{ik} \times MA_{ijk} \times m_{jk}}{X_{ij}} \times MA_{ijk} \times \text{Exp.} \cdot m_{jk} \]

- \( MShare_{ik} \): world market share; world tariff preference; X/M ratio; \( \text{Exp.} \): relative expected growth of exporter GDP.
- \( Ease_{ij} \): bilateral trade corrected to account for complementarity of supply and demand.
- \( MA_{ijk} \): market access: tariff preference in target market and product-specific sensitivity to distance.
- \( m_{jk} \): demand in value; \( \text{Exp.} \): estimated import demand resulting from expected GDP per capita growth.
EPI: unrealized potential

- Combining Supply, Demand and Ease gives a potential export value in $ terms.
- Potential exports are compared to actual exports to identify suppliers, products and markets with room for export growth.

\[ \text{Untapped potential}_{ijk} = \max(EPI_{ijk} - x_{ijk}; 0) \]

- Untapped export potential may be due to:
  - Expected supply and demand growth
  - Non-tariff measure affecting this particular exporter and product (including rules of origin!)
  - Price / quality positioning not in line with market demand
  - Lack of market intelligence
  - Any other friction that affects the exporter’s ability to export a specific product to a specific market

**Dynamic effect**

**Static effect**

**ROOM FOR ACTION FOR TRADE ADVISORS**
The Product Diversification Indicator
PDI: diversification opportunities cannot be inferred from market shares

No information about historic supply performance → must be estimated differently

Formally

\[ PDI_{ijk} = \frac{x_{ij}}{\sum_k MShare_{ik} \times m_{jk}} \times m_{jk} \]

where \( x = \) exports (\( m = \) imports) of a country \( i \) (market \( j \)) in product \( k \).
Product space
(by R. Hausmann, C. Hidalgo)

• Each country exports a set of products with comparative advantage → Set of (country × product) links

• Conditional probabilities describe the likelihood of moving from one product to another

• ‘Close’ products require similar capabilities:
  - Climate conditions, soil, natural resources
  - Infrastructure
  - Specialists, existing firms
  - Legislation framework, institutions, associations & chambers
  - Traditions, know-how
  - …

• Network of products based on how often they are exported jointly by countries

• The Density indicator describes how close the country is to a new product considered for diversification
Example: simplified Product Space

*high ‘density’ around pears, low ‘density’ around transformed products*

- Product with comparative advantage
- Potential product for export diversification
**PDI: Complete Framework**

\[ PDI_{ijk} = Density_{ik} \times \frac{x_{ij}}{\sum_k MShare_{ik} \times MA_{ijk} \times m_{jk}} \times MA_{ijk} \times Exp. m_{jk} \]

- **Density\(_{ik}\)**: average proximity to new export product (subject to filters!).
- **Ease\(_{ij}\)**: bilateral trade corrected to account for complementarity of supply and demand.
- **MA\(_{ijk}\)**: market access: tariff preference and product-specific sensitivity to distance.
- **m\(_{jk}\)**: demand in value; **Exp.** + expected GDP per capita growth.

Same for EPI and PDI
Results
Online tool: Export Potential Map
exportpotential.intracen.org

- Opportunities with export potential and for export diversification
- Export potential, realized potential and product diversification ranks with sorting options according to sub-indicators:
  - Supply
  - Demand
  - Ease
- Results for 226 countries/territories, 16 sub-regions and 5 regions
- Results for 4,000+ products, 73 sub-sectors, and 16 sectors
- Deep links to other Market Analysis tools
- …and many other features
Laos’ products with export growth potential
Looking beyond energy and wood

Export potential

Copper cathodes

Parts of telephone sets & other transmission apparatus

53%

Roots & tubers of manioc

Potassium chloride for use as fertiliser

19%

63%

Natural rubber in primary forms/flat shapes (non-smoked)

Coffee, not roasted, not decaffeinated

Smoked sheets of natural rubber

Technically specified natural rubber

10%

Husked or brown rice

Maize (excl seed for sowing & food)

620343 Men’s trousers & shorts of synthetic fibres

Export potential $44.7 mn

Actual exports $60.0 mn

Untapped potential remaining in individual countries $23.1 mn

For this product find MARKETS EXPORTERS
across different target markets
Part 1. ITC’s export potential analysis and web tool

Part 2. Looking beyond: using export potential data to inform trade policy negotiations

Part 3. Other customized analyses
How can export potential data inform trade policy negotiations after LDC graduation?

1st element
Set up partial equilibrium model to compute trade loss associated with move to non-LDC tariffs

2nd element
Use ITC export potential methodology to compute remaining export potential (proxy for market frictions)

Seek tariff reduction through more advantageous trade regimes
How can export potential data inform trade policy negotiations after LDC graduation?

1st element
Set up partial equilibrium model to compute trade loss associated with move to non-LDC tariffs

2nd element
Use ITC export potential methodology to compute remaining export potential (proxy for market frictions)

Focus on targeted trade advisory / promotion for realization of export potential in new and existing markets
Alternative regimes after Laos’ graduation from LDC status

**CURRENT**

- EU
- Turkey
- Australia
- India
- Japan
- Korea, Republic of
- New Zealand
- Sri Lanka
- Thailand

**AS OF 2024**

- Regional trade agreement
- GSP/GSP+
- GSP
- MFN

**LDC preferences**

- Armenia
- Belarus
- Canada
- Switzerland
- Kazakhstan
- Kyrgyzstan
- Norway
- Russian Federation
- Tajikistan

- Chile
- Iceland
- Taipei, Chinese
Tariff implications of LDC graduation

Share of existing product × market pairs, by tariff change
(total no. = 1,310)

- No change: 79%
- Moderate increase (<10 pp): 17%
- Significant increase (≥ 10 pp): 4%

Share of exports, by tariff change

- No change: 93%
- Moderate increase (<10 pp): 6%
- Significant increase (≥ 10 pp): 1%
Trade losses following LDC graduation

Trade loss, by scheme

- GSP: $79 mn
- GSP+: $18 mn
Impact of Lao’s graduation from LDC status

Trade loss vs. total untapped potential

- GSP: $79 mn trade loss, $6.3 bn untapped potential
- GSP+: $18 mn trade loss, $6.3 bn untapped potential

→ Overall, targeted trade advisory to remove market frictions and measures to leverage expected supply and demand growth are more important than the potential trade losses!
Impact of Lao’s graduation from LDC status

In affected products and markets, the trade losses however are larger than the untapped potential (when moving to EU GSP rather than GSP+).
## Strategy for affected products and markets

### Case 1: trade loss < untapped potential

<table>
<thead>
<tr>
<th>Product</th>
<th>Market</th>
<th>Non-LDC tariff</th>
<th>Trade loss (in $ mn)</th>
<th>Untapped potential (in $ mn)</th>
<th>Untapped potential other markets (in $ mn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trousers</td>
<td>EU</td>
<td>10%</td>
<td>1.1</td>
<td>1.2</td>
<td>1.8</td>
</tr>
<tr>
<td>Footwear</td>
<td>EU</td>
<td>4%</td>
<td>0.9</td>
<td>2.9</td>
<td>4.6</td>
</tr>
<tr>
<td>(leather)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silicon</td>
<td>EU</td>
<td>5%</td>
<td>0.6</td>
<td>3.4</td>
<td>10.1</td>
</tr>
<tr>
<td>Brassieres</td>
<td>EU</td>
<td>5%</td>
<td>0.2</td>
<td>0.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Trousers</td>
<td>Canada</td>
<td>18%</td>
<td>0.1</td>
<td>0.7</td>
<td>20.8</td>
</tr>
<tr>
<td>Fruit stones</td>
<td>Japan</td>
<td>16%</td>
<td>0.1</td>
<td>2.9</td>
<td>17.6</td>
</tr>
</tbody>
</table>

Note: only product × market combinations with export potential > $1 million
## Strategy for affected products and markets

**Case 2: trade loss > untapped potential**

<table>
<thead>
<tr>
<th>Product</th>
<th>Market</th>
<th>Non-LDC tariff</th>
<th>Trade loss (in $ mn)</th>
<th>Untapped potential (in $ mn)</th>
<th>Untapped potential other markets (in $ mn)</th>
<th>Alternative markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 apparel products</td>
<td>EU</td>
<td>10%</td>
<td>43.2</td>
<td>12.3</td>
<td>1.8</td>
<td>Canada, USA, Japan, China, Korea</td>
</tr>
<tr>
<td>Raw cane sugar</td>
<td>EU</td>
<td>40%</td>
<td>16.1</td>
<td>0.4</td>
<td>10.4</td>
<td>Indonesia, Viet Nam, Japan, China</td>
</tr>
<tr>
<td>Footwear (leather)</td>
<td>Japan</td>
<td>12%</td>
<td>4.5</td>
<td>0.0</td>
<td>7.5</td>
<td>EU, China, USA</td>
</tr>
<tr>
<td>Footwear (plastics)</td>
<td>EU</td>
<td>12%</td>
<td>0.8</td>
<td>0.4</td>
<td>0.5</td>
<td>China, USA</td>
</tr>
</tbody>
</table>

**Note:** only product × market combinations with export potential > $1 million
## Strategy for affected products and markets

### Case 2: trade loss > untapped potential

<table>
<thead>
<tr>
<th>Product</th>
<th>Market</th>
<th>Non-LDC tariff (GSP+)</th>
<th>Trade loss (in $ mn) (GSP+)</th>
<th>Untapped potential (in $ mn)</th>
<th>Untapped potential other markets (in $ mn)</th>
<th>Alternative markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 apparel products</td>
<td>EU</td>
<td>0%</td>
<td>0</td>
<td>12.3</td>
<td>1.8</td>
<td>Canada, USA, Japan, China, Korea</td>
</tr>
<tr>
<td>Raw cane sugar</td>
<td>EU</td>
<td>40%</td>
<td>16.1</td>
<td>0.4</td>
<td>10.4</td>
<td>Indonesia, Viet Nam, Japan, China</td>
</tr>
<tr>
<td>Footwear (leather)</td>
<td>Japan</td>
<td>12%</td>
<td>4.5</td>
<td>0.0</td>
<td>7.5</td>
<td>EU, China, USA</td>
</tr>
<tr>
<td>Footwear (plastics)</td>
<td>EU</td>
<td>0%</td>
<td>0</td>
<td>0.4</td>
<td>0.5</td>
<td>China, USA</td>
</tr>
</tbody>
</table>

*Note: only product × market combinations with export potential > $1 million*
Key take-aways

Lao’s untapped export opportunities exceed potential trade losses following LDC graduation

Lao’s has an **export growth potential** across all products and markets worth **$6.3 billion** as compared to **trade losses** worth **$78 million**.

**Put trade facilitation / promotion programmes in place to better exhaust export growth opportunities**

Targeted trade advisory helps **overcome frictions** in existing markets and **diversify into new markets** to compensate trade losses associated with graduation, for instance in leather footwear exports to Japan.

**Target GSP+ for key export sectors to the EU**

Under GSP preferences, apparel exports to the EU would account for 55% of the total trade loss. Sugar accounts for another 20%. **GSP+ covers apparel, but not sugar.**
Part 1. ITC's export potential analysis and web tool

Part 2. Looking beyond: using export potential data to inform trade policy negotiations

Part 3. Other customized analyses
Customized studies

Jordan has $4.2 billion of unrealized export potential. How many jobs could this generate?

What are the best opportunities for Greece’s services exports?

Greek exporters of personal travel services have $1.3 million of untapped export potential in the Turkish market.

What are strategic products for Sri Lanka’s trade policy negotiations with China?

More than $17 million additional exports* possible across these three products

* based on 2015 data

How can Burkina Faso develop a regional value chain?

TRADE IMPACT FOR GOOD
Want to know more?

Export Potential Map

Julia Spies
Yvan Decreux
Maria Cantero
Sylvain Périllat
Julia Seiermann
Anna Jankowska

Website:
http://exportpotential.intracen.org
http://malawi.exportpotential.org

Contact us:
marketanalysis@intracen.org

Follow us on Twitter, Facebook, LinkedIn

Publications

ITC (2018) Realizing Export Potential for Employment and Inclusive Development

ITC (2018) Exploring Malawi’s export potential (with an application of the Value Chain Indicator)

ITC (2016) Export Potential Assessments – a methodology to identify export opportunities for trade development

Export potential assessments are featured in the ITC SME Competitiveness Outlook:
http://www.intracen.org/SMEOutlook/