



Developing strategies for export promotion using a Decision Support Model (DSM): Focus on the agricultural sector



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The situation ...



The challenge ...



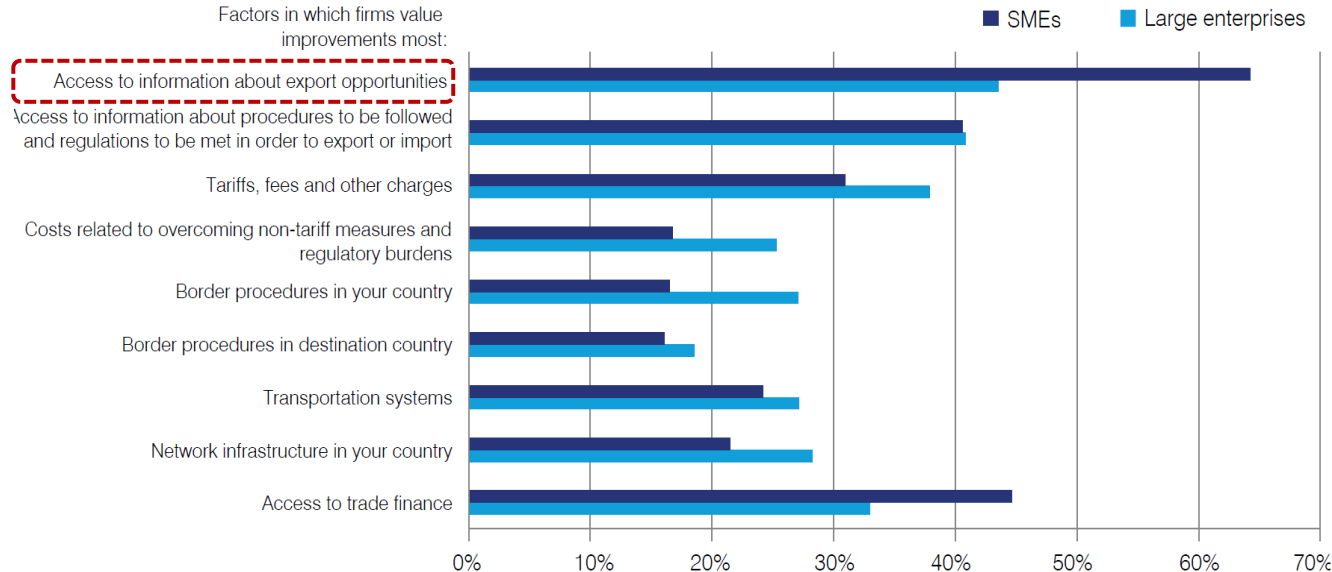
Towards a solution ...

The situation (continued)...



1

Partly why identification of export opportunities continues to matter



Note:

SMEs are defined as firms with < 250 employees.

Survey responses of 418 SMEs and 103 large firms to the question: What are the 3 factors in which you would most value improvements?

Source: OECD and WTO (2015) based on ITC Monitoring Survey (2015).

The situation (continued)...



- ① **Un co-ordinated and ‘ad-hoc’ missions and interventions**
 - Opportunities need to be scientifically determined if they are to generate sustainable returns
 - cannot merely be the result of hearsay or casual analysis

- ② **Information processing and analysis challenges exist - some perspective e.g. international trade data**
 - Product-by-country bilateral basis at the 6-digit HS product level straddling a 6-year period, - theoretical matrix of data requiring processing would comprise close to 4.7 billion cells
 - In practice, though, at the 6-digit level it would amount to around 300 million cells (also see Sadovy 2015).
 - For some – this is “**Big data**”, for others it is “no sweat” ...

The challenge ...



South Africa's National Export Strategy (2007) encapsulates the challenge:

"...the lack of a scientific method to prioritise markets and products resulted in a shotgun approach to export promotion ... the challenge lies in how to select and prioritise markets from a global list of export opportunities ..."

South Africa's Integrated National Export Strategy (INES, 2015) focuses on:

a) increasing exports through diversification of **products**,
markets (Africa and emerging markets) and **suppliers** (exporters base);

and

b) specifically sectors where SA already has competitive advantage:
e.g. agriculture and agro-processing ...

Towards a solution...

Need a **practical way of tackling combined 'big data' and 'fact based decisions' challenge**, i.e. efficiently identifying the most promising export opportunities that will:

- a) **Simplify market selection decisions** by streamlining the process of identifying realistic export opportunities – based on a scientific approach;
- b) **Reveal both shorter and longer-term opportunities** in respect of high 'untapped' potential products (and services);
- c) **Act as an aid to trade facilitation**, helping governments and industry sectors or individual companies to prioritise their trade promotion and expansion efforts;

and

- d) **Can be adapted** to different countries, regions and provinces' circumstances

The TRADE-DSM approach overview



What is a Realistic Export Opportunity?

Product and country combination:

- ✓ for which proven (import) demand exists in target market
 - ✓ that the home market (South Africa) can produce
- and
- ✓ for which the home market (South Africa) has demonstrated export capability

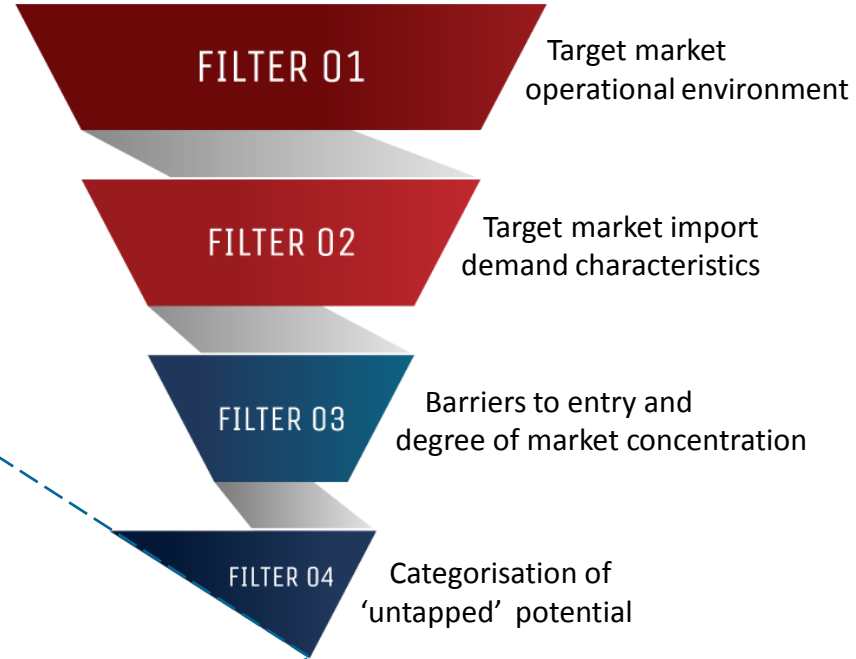
Towards a solution ... our approach

REALISTIC EXPORT OPPORTUNITIES	RELATIVE MARKET SHARE OF TARGET MARKET			
	SMALL	INTERMEDIATELY		LARGE
		SMALL	LARGE	
LARGE	RE01,1	RE02,1	RE03,1	RE04,1
GROWING (Short & Long term)	RE01,2	RE02,2	RE03,2	RE04,2
LARGE AND GROWING (Short term)	RE01,3	RE02,3	RE03,3	RE04,3
LARGE AND GROWING (Long-term)	RE01,4	RE02,4	RE03,4	RE04,4
LARGE AND GROWING (Short & Long-term)	RE01,5	RE02,5	RE03,5	RE04,5

OFFENSIVE
Exploration

OFFENSIVE
Expansion

DEFENSIVE
Sustain and
Maintain



Some examples of technical modelling aspects

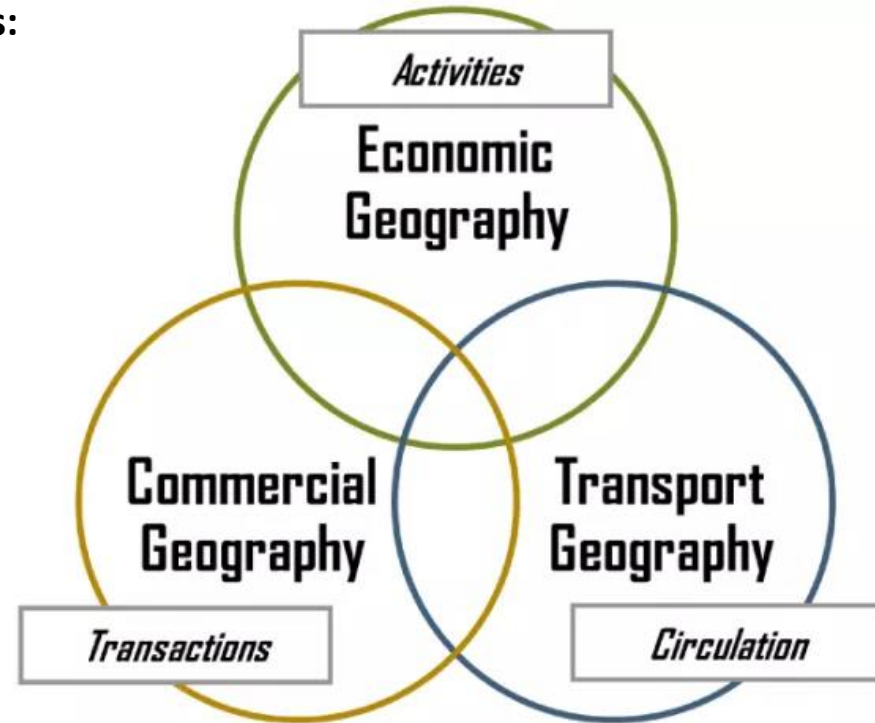


International trade – link with geographic dimensions:

Close relationship between

- a) the sphere of **activities**
(the geographical setting of supply and demand),
 - b) the sphere of **transactions**
(the geographical setting of exchanges/markets)
- and
- c) the sphere of **circulation**
(the geographical setting of movements).

**This implies location costs, transaction costs
and transportation costs ...**

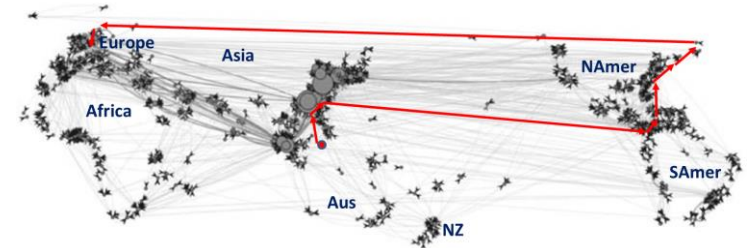
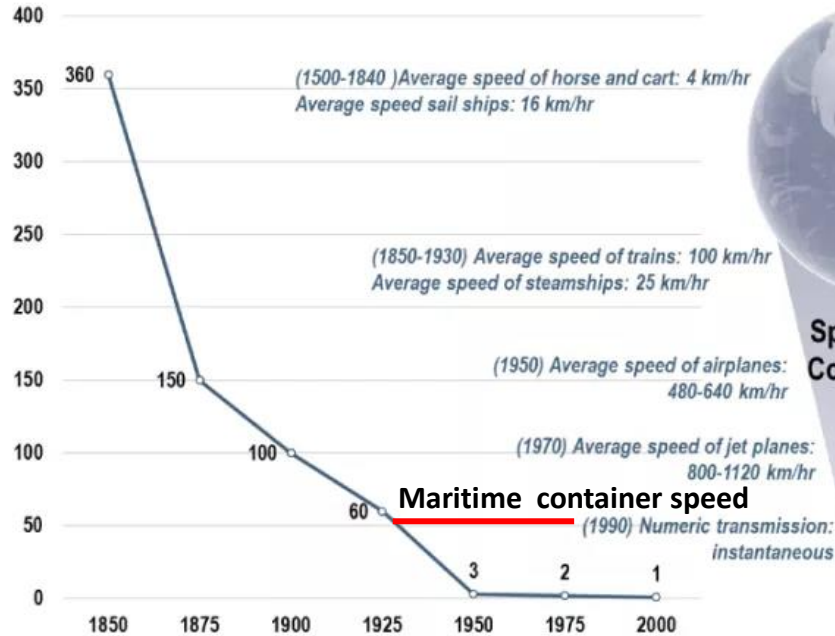


Source: Rodrigue, J-P (2017), The Geography of Transport Systems, Fourth Edition, New York: Routledge.

Some examples of technical modelling aspects



The world has become a *smaller* place but ...

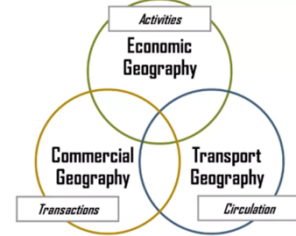
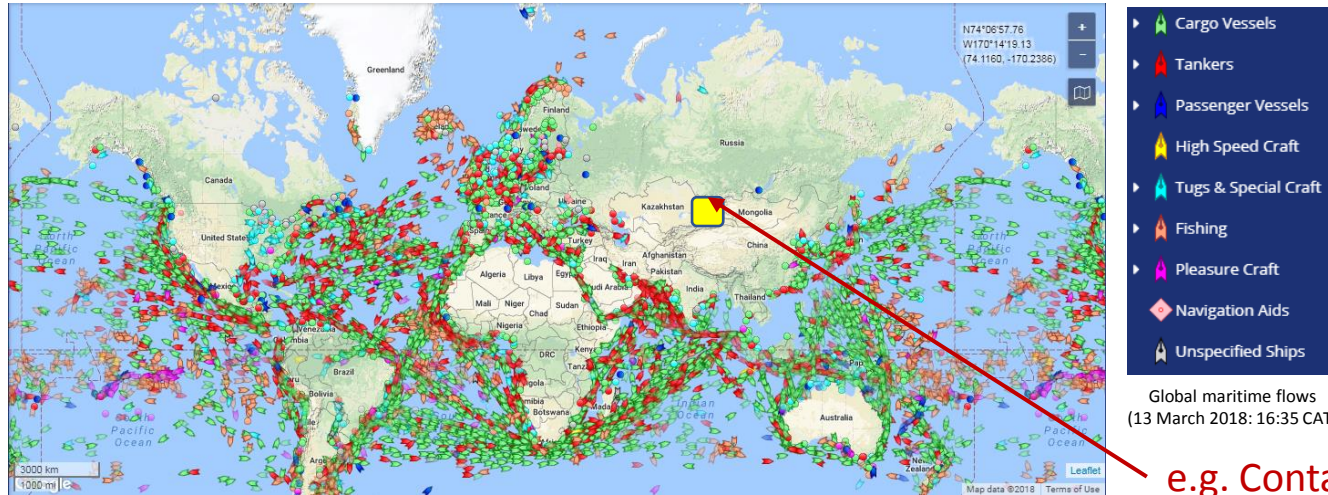


Source: Rodrigue, J-P (2017), The Geography of Transport Systems, Fourth Edition, New York: Routledge.

Some examples of technical modelling aspects



Land-locked destinations = 48/ 246 destinations ...



- 48 countries (including four partially recognized states) are completely surrounded by at least one other country (e.g. Lesotho in South Africa)
- Represents only 3.2% of global GDP but 7.3% of global population
- South America (Bolivia and Paraguay) , rest in Africa, Europe & Asia

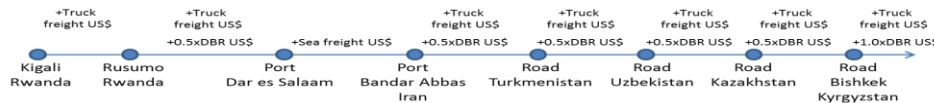
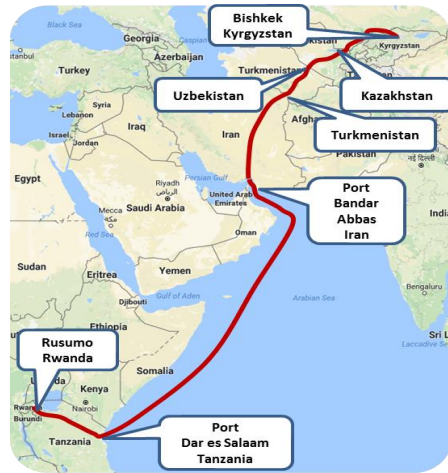
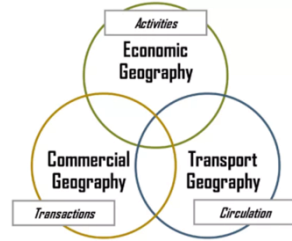
Source: <https://www.marinetraffic.com>

Some examples of technical modelling aspects



TRADE-DSM methodology take into consideration more detailed link between 3 dimensions of geography. Example:

- Shipping routing networks
- Land-locked country / transit treatment

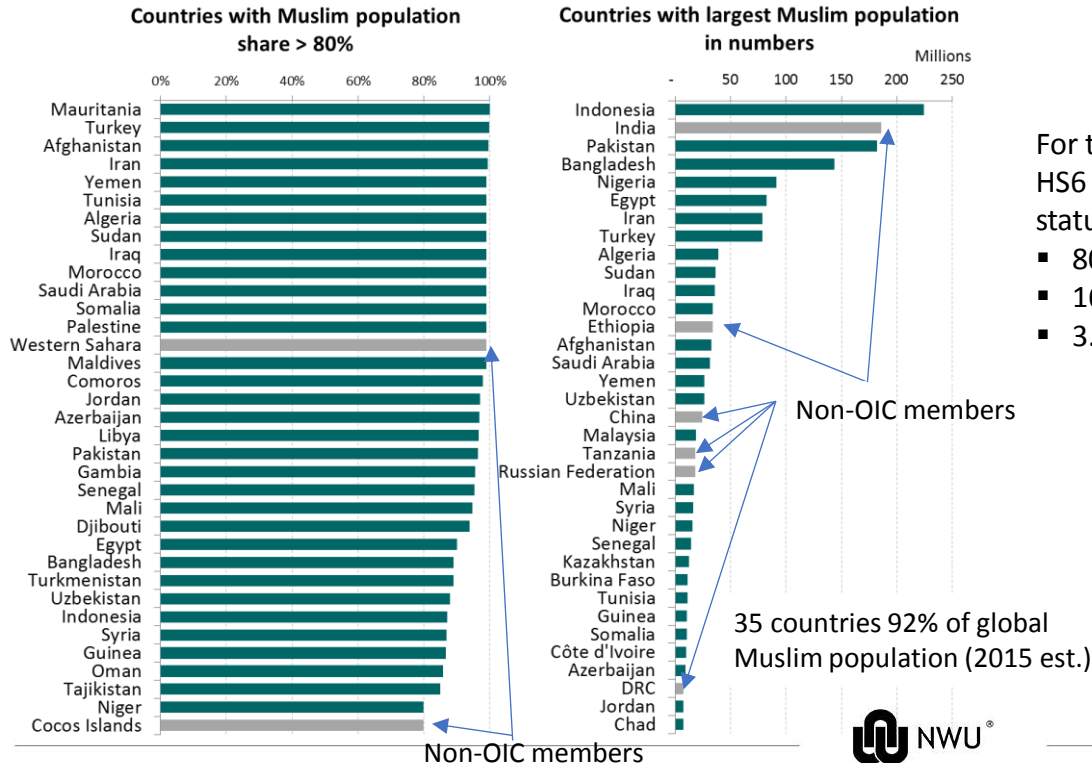
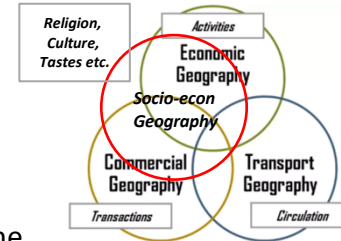


- Transits 3 countries through 4 border entries/exits,
- 2 transport mode switches (from maritime to road)

Some examples of technical modelling aspects



Methodology makes provision for “human” factors such as religion, culture, tastes etc. - example Halal dimension of global demand



For the more than 6000 products at the HS6 digit level detail developed Halal classification status:

- 80.0% Neutral,
- 16.8% Halal,
- 3.2% Haram (not permissible)

Sources:

From Niche to Mainstream, Halal Goes Global, 2015
(International Trade Centre, 2015)
Halal Media [<http://halalmedia.net>]
Canada Halal Examination & Certification (CHEC)
[<http://www.canadahalalec.com>]
Organisation of Islamic Cooperation (OIC) [<http://www.oic-oci.org>]
CIA World Factbook [<https://www.cia.gov/library/publications/the-world-factbook>]
United Nations Population Statistics [<https://unstats.un.org>]
Pew Research Centre (Religion & Public Life)
[<http://www.pewforum.org/>]

Some example outcomes



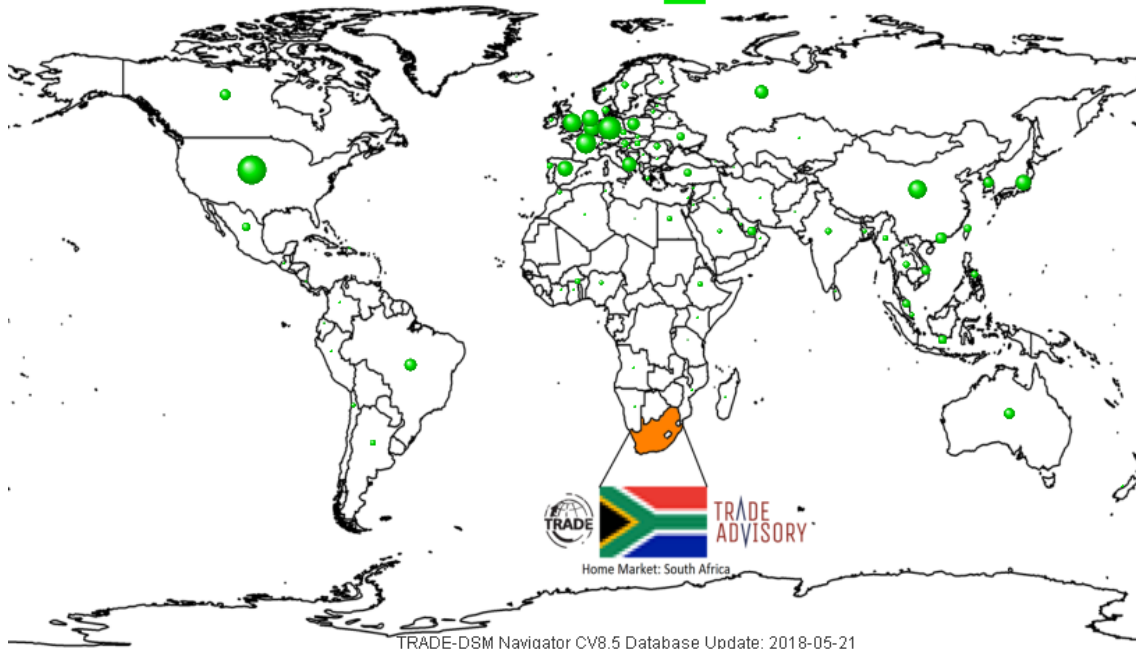
Summarised insights for major agro-value chains...



Current Selection Potential Export Markets for: South Africa (ZAF)

Markets x Products : 185 x 164 Combinations: 6 284 Total Potential (Mn) [USD]: 21 969.19

RSA Companies : 0 Current data displayed in map: 'Untapped' potential



TRADE-DSM Navigator CV8.5 Database Update: 2018-05-21

Main agro-value chain groups:

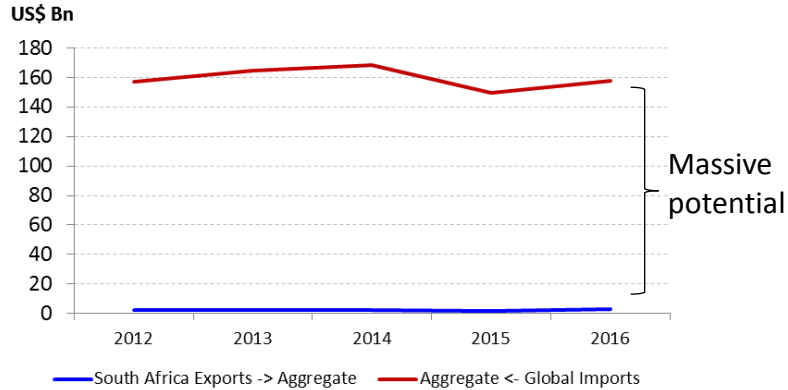
- Primary
- Processed Foods
- Processed Non-Food
- Forestry
- Agricultural Inputs & Equipment

Examples of geographic spread of 'untapped' realistic export opportunity potential for agro-value chain related:

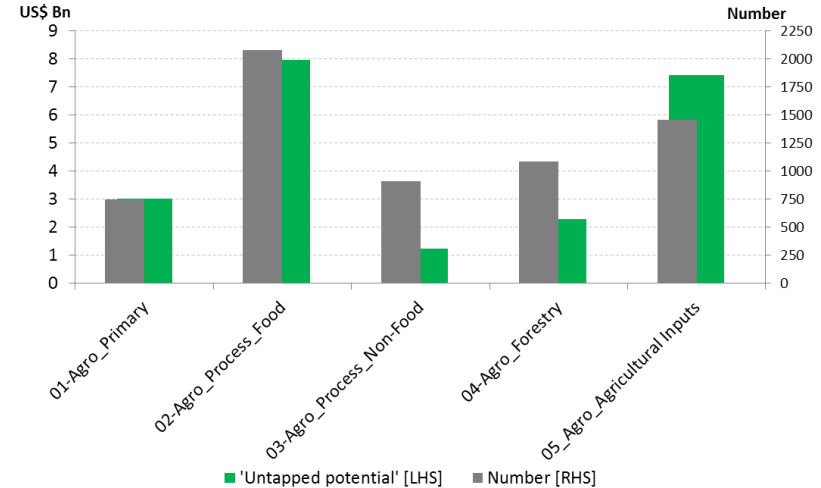
- Single largest market = USA
- Single largest region = Western Europe
- Western Europe = largest Germany
- Eastern Europe = Russia
- Eastern Asia = China
- Western Asia/Middle East = UAE
- South-east Asia = Vietnam
- South America = Brazil
- West Africa = Benin
- East Africa = Ethiopia

Some high level insights...

RSA relative contribution to aggregate import demand for identified REOs



Main value-chain group 'untapped' potential and number of market x product REOs

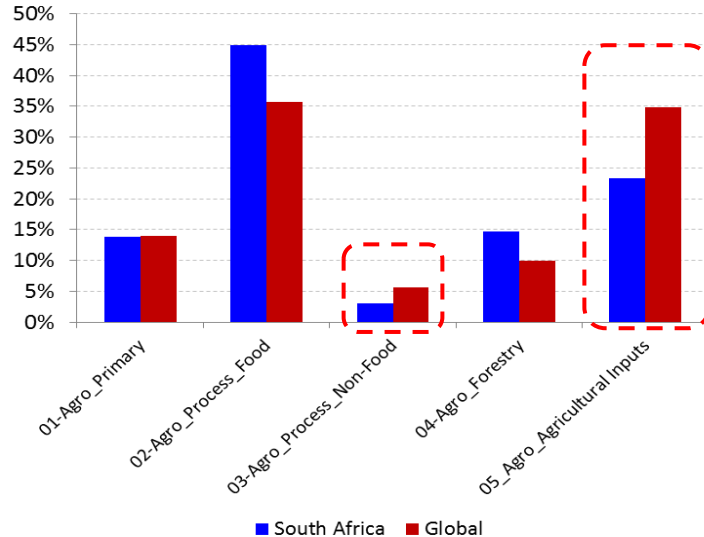


In terms of both number and 'untapped' potential

- Processed food largest, followed by
- Agricultural inputs (fertilizer, equipment etc.)

Some high level insights...

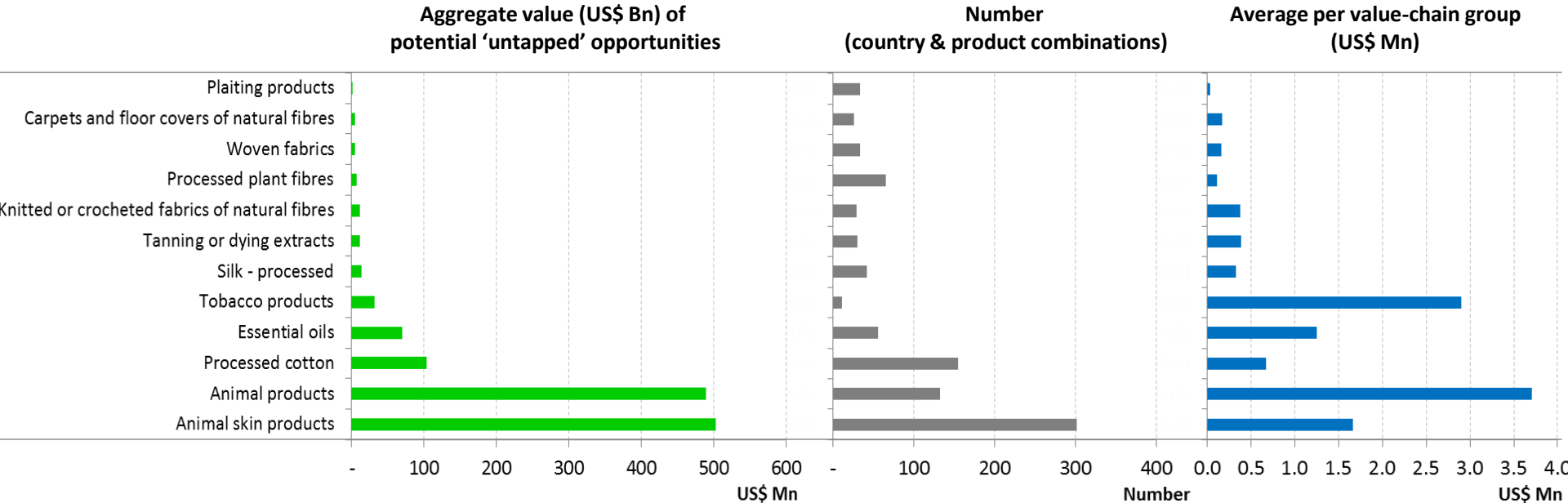
Main value-chain group relative contribution to total
(South Africa and Global)



Relative contributions of value-chain groups for South Africa slightly above global norms in relative terms, except for non-food processed products and inputs - both higher value added more complex production processes.

Some high level insights...

More detail – **non-food** examples



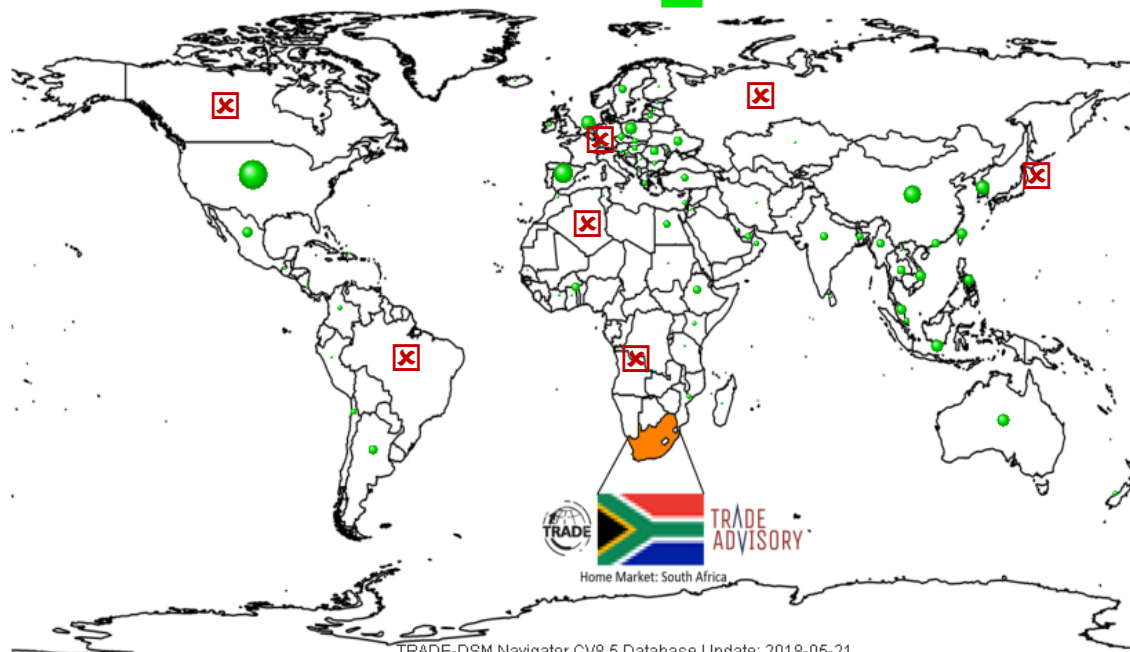
Summarised insights for major agro-value chains...

'More stringent filters' – Target markets & products positive growth projections

Current Selection Potential Export Markets for: South Africa (ZAF)

Markets x Products : 133 x 163 Combinations: 3775 Total Potential (Mn) [USD]: 7 887.54

RSA Companies : 0 Current data displayed in map: 'Untapped' potential



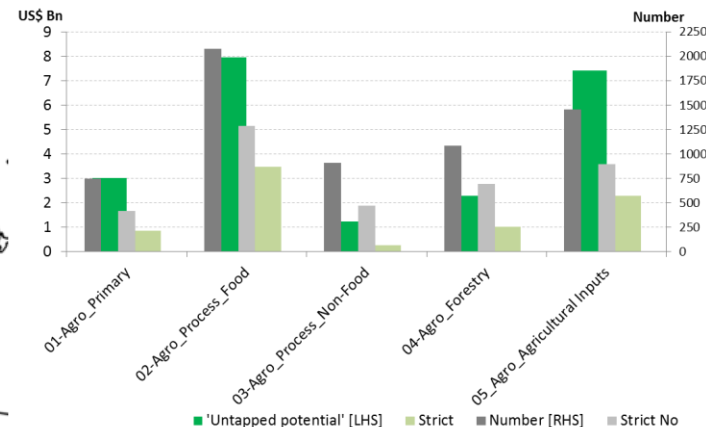
TRADE-DSM Navigator CV8.5 Database Update: 2018-05-21

Further requirements:

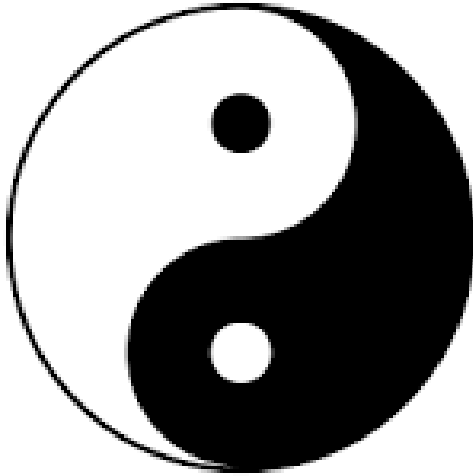
- IMF GDP forecasts Oct 2017 (2017 – 2020)
- Individual country x product growth patterns positive only

Impact

- overall 'untapped' potential value reduction of around 64% (US\$ 21 bn -> US\$ 8 bn) and 40% in number
- Largest impact Primary, Non-food & Agric-inputs



In change lies opportunity...



In Chinese philosophy,
yin and yang
= "dark-bright",
= "negative-positive"

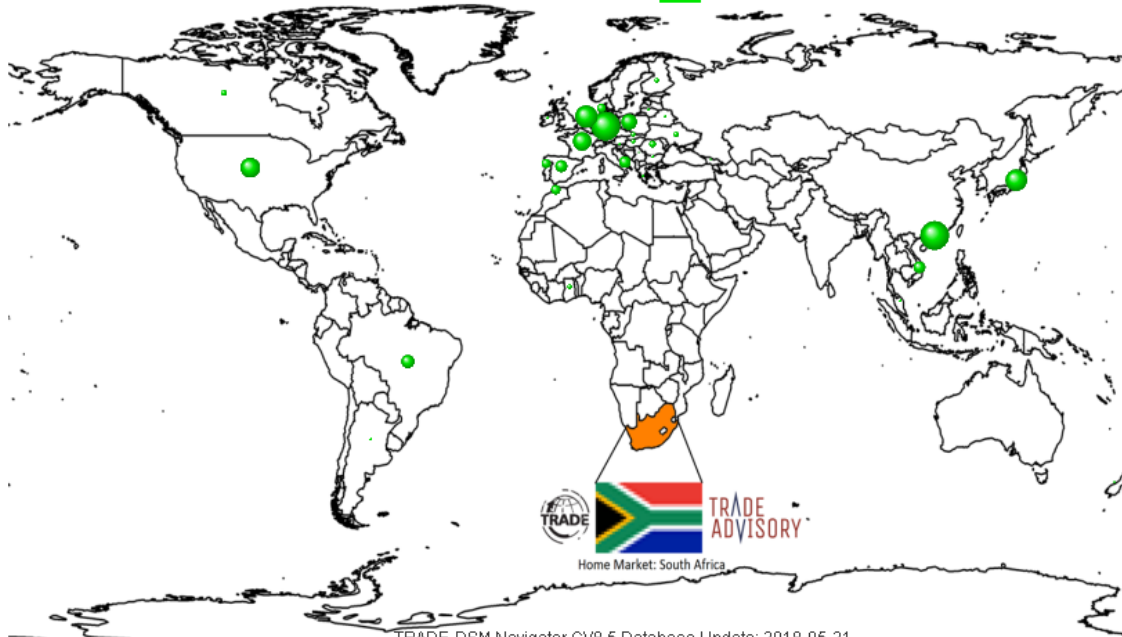
describes how seemingly opposite or contrary forces
may actually be complementary, interconnected,
and interdependent in the natural world,
and how they may give rise to each other as they
interrelate to one another.

In change lies opportunity...



Current Selection Potential Export Markets for: South Africa (ZAF)

Markets x Products : **49 x 1** Combinations: **49** Total Potential (Mn) [USD]: **380.30**
 RSA Companies : **0** Current data displayed in map: 'Untapped' potential



TRADE-DSM Navigator CV8.5 Database Update: 2018-05-21

Main agro-value chain group:

- Processed Non-Food

Example HS Code

- HS050400: Guts, bladders & stomachs of animals (other than fish), whole & pieces thereof, fresh/chilled/frozen/salted/in brine/dried/smoked
- Germany and Hong Kong largest potential

Example application for BREXIT

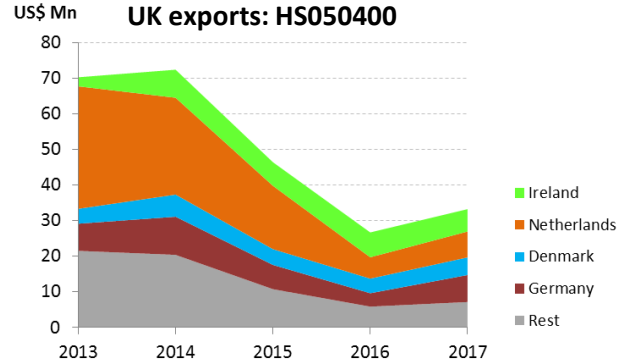
– e.g. who does the UK supply in EU, could be potential future opportunity for SA?

In change lies opportunity...

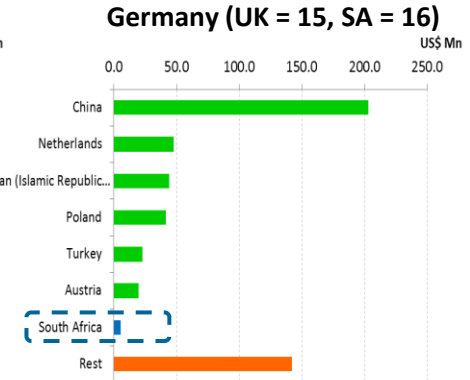
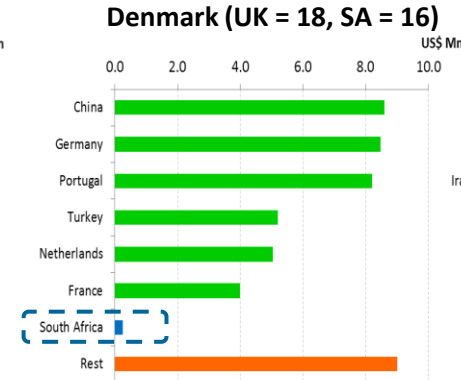
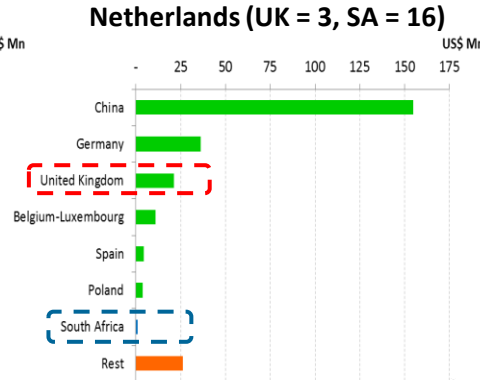
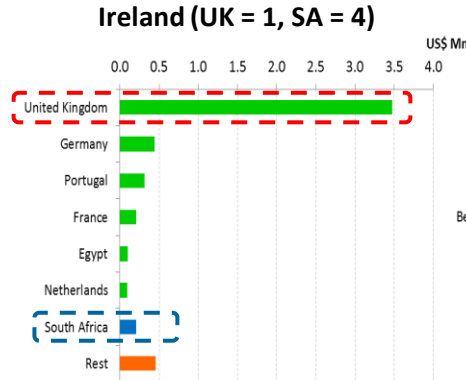


Who does the UK supply into the EU?

- Ireland
- Netherlands
- Denmark
- Germany



South Africa exports* relative to top 6 competing suppliers into target markets



* Based on 5 year time-weighted average calculations 2012-2016

Key observations

While only demonstrative (so further detailed analysis required), the application of the DSM for agro-processing related products revealed:

- South Africa has a “pool” of more than 6 284 (less 40% if ‘strictest filters’ applied) possible agro-processing value chain components product-country opportunities associated
- with ‘untapped’ potential of approx. US\$ 21 billion (US\$ 8 billion if ‘strictest filters’ applied) to explore in more depth;
- In terms of both number and ‘untapped’ potential (aligned with the dti IPAP and INES)
 - Processed food largest, followed by
 - Agricultural inputs (fertilizer, equipment etc.)

In change lies opportunity ...

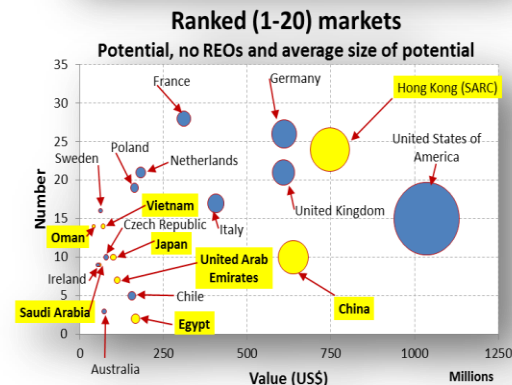
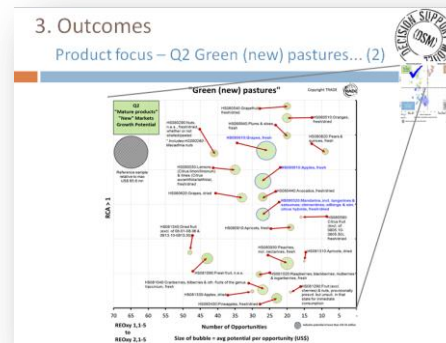
- Demonstrated an example of analysis informed by the TRADE-DSM approach for HS050400 in context of BREXIT and the UK as current competing supplier into existing (for South Africa) EU markets
- If suppliers are pro-active and innovative could potentially gain further market share from UK (subject BREXIT terms) to into e.g. Ireland, Netherlands, Denmark and Germany

Examples - studies on agriculture industries conducted with Department of Agriculture, Forestry & Fisheries



MOU to provide assistance with inputs to formulation of National Export strategies for

- 2015 - Fruit & Nuts
- 2016
 - ☐ Fresh vegetables
 - ☐ Processed vegetables
 - ☐ Fruit and vegetable juices
 - ☐ Canned or frozen vegetables, fruits and nuts
 - ☐ Processed fruit
- 2017
 - ☐ Red meat - bovine (beef)
 - ☐ Red meat - goat and sheep
 - ☐ Red meat - pork
 - ☐ White meat - poultry (Chicken, duck, geese, turkey and others)
 - ☐ Exotic and mixed meats
- 2018 (currently planned)
 - ☐ Fish



In conclusion

Trade facilitation and cost reduction strategies can help to:

- Unlock South Africa's **economic potential through increased exports**
- and **more scientific fact-based market intelligence** should be at the centre of strategic decision making and trade facilitation initiatives to increase trade in goods and services between South Africa and the rest of the world – also for agro-industry related stakeholders

The **DSM approach (a trade facilitation tool)** provides short and longer term benefits to government and industry stakeholders:

- In the **short term**, easier-to-access markets with fairly low barriers to entry
- In the **longer term**, less accessible markets which call for intervention at the strategic/policy level

Reducing trade costs through **focused trade facilitation and policy reform** can help South African agro-industry exports to **diversify** into more both existing and new markets as well as with the development of new potential products

While a useful and productive, the TRADE-DSM approach need to be augmented with further detailed analysis (esp. from production side as well as non-tariff barriers).

Thank you

<http://commerce.nwu.ac.za/trade>
&
<http://www.tradeadvisory.co.za>

