

Assessing the impact of trade facilitation on SADC's intra-trade potential

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Presentation Outline

- Introduction
- Objectives
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- Recommendations



Introduction

- Increases in trade volumes and complexity have significantly changed the operating environment for trading community (OECD, 2005).
- Import tariff rates have fallen, but NTMs or NTBs have taken centre stage in being some of the policy tools used by countries to shape their trade policy in one way or the other
- Change in trade environment has also highlighted the negative impact of inefficient border procedures on governments, businesses and ultimately on the customer and the economy as a whole.
- In SADC, although tariff rates have declined due to FTA, NTBs have increased

Objective

- The main objective of the study is to estimate or assess the impact of trade facilitation.

Defining Trade Facilitation

- No standard definition of trade facilitation (TF) in public policy discourse.
- Grainger's (2011) is the definition adopted in this study and it considers trade facilitation (TF) as “... *how procedures and controls governing the movement of goods across national borders can be improved to reduce associated cost burdens and maximise efficiency while safeguarding legitimate regulatory objectives*”.

Why does trade facilitation matter?

- 1) Any economic efficiency and gains from trade will come from among others TF
- 2) Reduction in tariff and NTBs have increased trade growth. Hence focus has been on TF
- 3) Experienced has shown that trade facilitation can generate “win-win” opportunities for consumers, legitimate businesses & governments
- 4) Increased ICT has made simplifying border procedures and lowering transshipment costs easier and more cost effective to achieve.



SADC's trade transaction costs

Figure 1: Easy of doing Business – trading across borders (Rank)

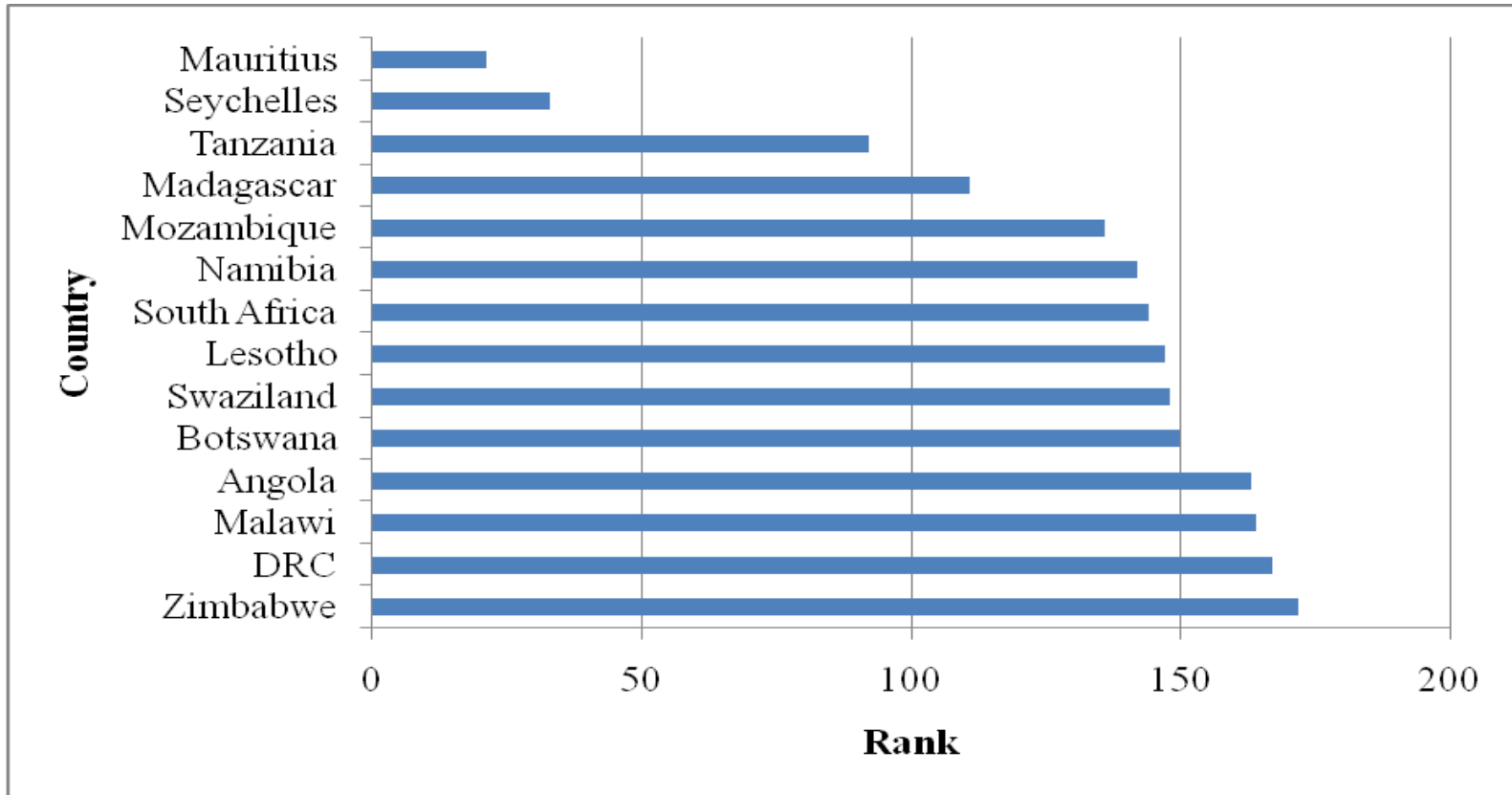


Figure 2: Documents required to export and import

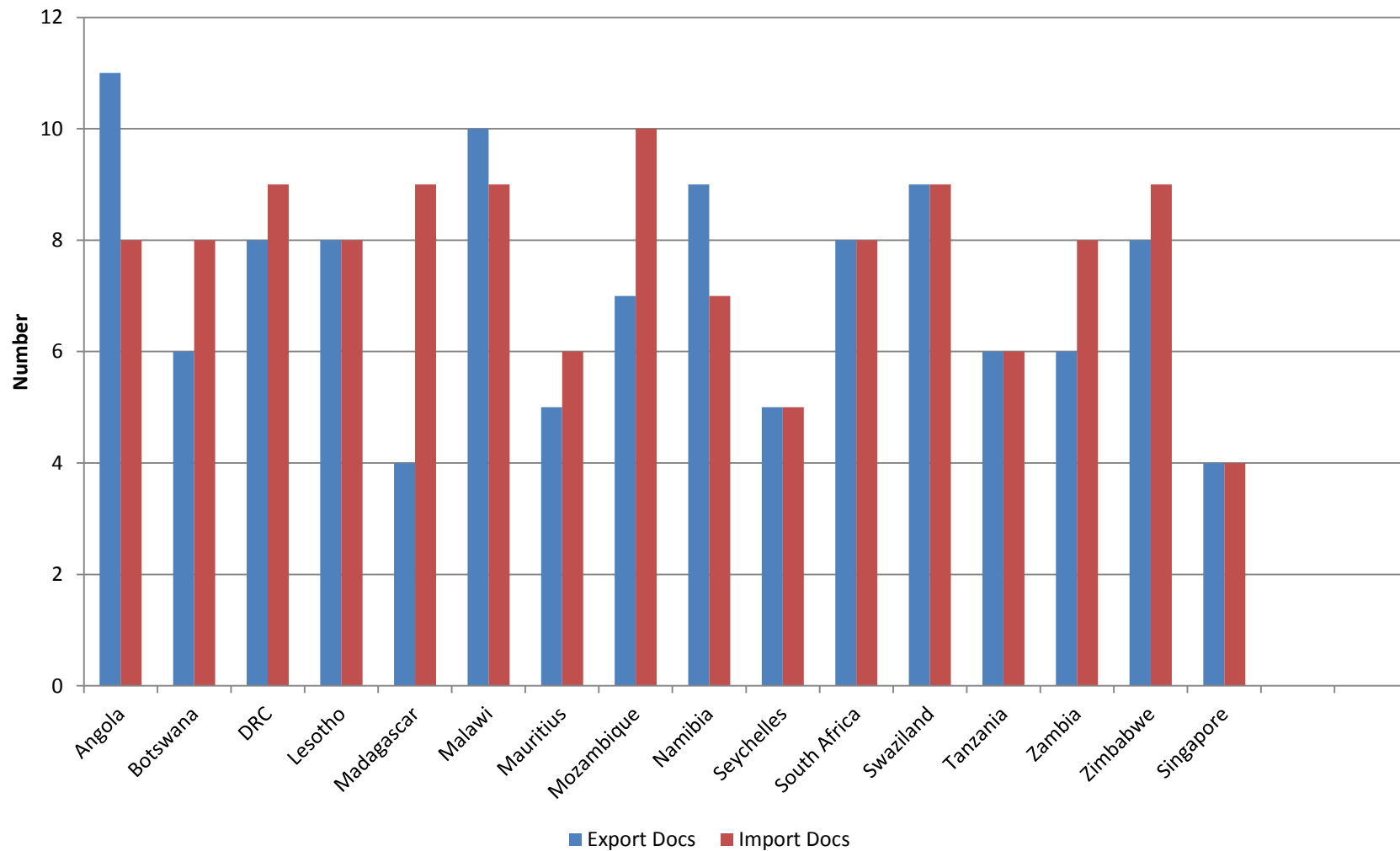
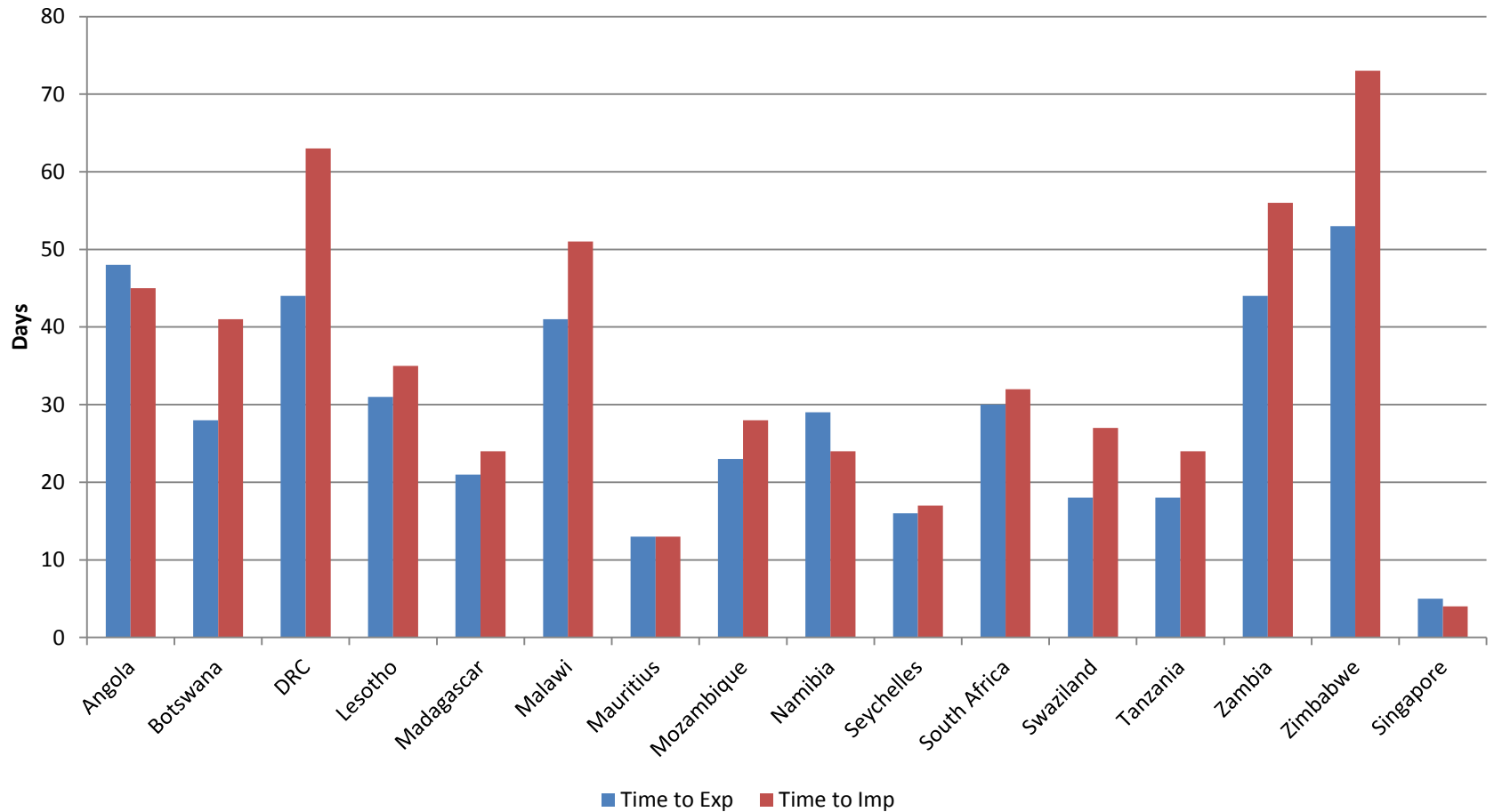


Figure 3: Number of days required to complete export/import formalities



Literature review

- A 2000 study by Australian Department of Foreign Affairs and Trade and Chinese Ministry of Foreign Trade and Economic Cooperation found that moving to electronic documentation for trade would yield a cost savings of some “1.5 to 15 percent of the landed cost of an imported item.”
- Freund and Weinhold (2000) employed a gravity model to estimate the role of e-commerce in promoting bilateral trade. The study found that a 10 percent increase in the relative number of web hosts in one country would have increased by one percent trade flows in 1998 and 1999.
- The study by Simwaka (2011) investigated what the SADC countries could gain by way of increases in intra-regional trade if all trade barriers were to be removed. The paper found that observed intra-regional trade was lower than its potential, thus suggesting existence of trade potential in the sub-region.
- The paper by Cassim (2001) employed a cross section econometric gravity to investigate the potential for trade among SADC countries. The research found existence of unrealized potential trade mostly between South African and Zimbabwean.

Methodology – Gravity model

$$\ln(\text{Exp}_{ij}^t) = \alpha_0 + \alpha_1 \ln(100 + \text{tariff}_{ij}^t) + \alpha_2 \ln PE_I + \alpha_3 \ln CE_I + \alpha_4 \ln EB_I + \alpha_5 \ln GDP_I^t + \alpha_6 \ln GDP_J^t + \alpha_7 \ln DIST_{IJ} + \alpha_8 LANG_{IJ} + \alpha_9 CB_{ij} + \varepsilon_{ij}$$

- Where I and J = exporter and importer respectively
 - Exp_{ij} = value of exports from country I to J
 - tariff_{ij} = denotes applied tariff rate in the percent
 - PE_I , CE_I , and EB_I = importing country J 's indicators of port efficiency, customs environment, and e-business usage.
 - GDP = gross domestic product
 - $DIST_{IJ}$ = distance between economic centres of I and J
 - $LANG$ language dummies include English, French and Portuguese.
 - CB_{ji} = adjacency dummy or common border

Methodology – Trade potentials

- This section will rely on the gravity model results from Equation (4). The ratio of export trade potential (P) as simulated/predicted by the gravity model and actual export trade (A), i.e., (P/A), will be used to analyze the future direction of export trade for each of the countries.
- In terms of interpretation, in a case where the value of the ratio (P/A) exceeds 1, that will indicate existence and evidence of unrealised (or untapped) trade potential between each SADC member countries' trade with other regional member countries.
- For instance, if the value of (P/A) is greater than 1 for a given country, say Malawi's export trade with Tanzania, it will imply that Malawi will be having untapped or unrealized trade potential with Tanzania.
- On the other hand, if the value of (P/A) is less than 1 for a given country, say Botswana's export trade with Mozambique, it indicates that Botswana has exceeded its trade potential with Mozambique.

Data and data sources - *Trade facilitation measures*

- The study include three indicators of trade facilitation that measure three different categories of trade facilitation effort and these are: (Wilson et al 2003, 2005),
 - 1) **Port efficiency (PE)** is designed to measure the quality of infrastructure of maritime and air ports.
 - 2) **Customs Environment (CE)** is designed to measure direct customs costs as well as administrative transparency of customs and border crossings and
 - 3) **E-business usage (EB)** is designed to measure the extent to which an economy has the necessary domestic infrastructure (such as telecommunications, financial intermediaries, and logistics firms) and is using networked information to improve efficiency and to transform activities to enhance economic activity..

Data and data sources - *Trade facilitation measures*

Port Efficiency (PE) for each SADC member J will be the average of four indexed inputs:

- i. Port Efficiency Index (MDX).
- ii. Quality of port infrastructure (GCR)
- iii. Quality of roads (GCR)
- iv. Quality of air transport (GCR)

Customs Environment (CE) for each SADC member J will be the average of four indexed inputs :

- i. Irregular payments and bribes (GCR)
- ii. Burden of customs procedures (GCR)
- iii. Prevalence of trade barriers (GCR)
- iv. Corruption Perceptions Index (Transparency International)

E-business (EB) for each SADC member J will be taken from GCR:

- i. Number of estimated Internet users per 100 population (GCR)
- World Economic Forum Global Competitiveness Report (henceforth GCR). Transparency International (TI), and Micco, Ximena and Dollar (2001), Maritime Transport Costs and Port Efficiency, World Bank Group (henceforth MXD).

Table 4: Regression results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	5.32	12.84	0.41	0.6789
Tariff	4.21	2.73	1.54	0.1235
Port Efficiency (Importer)	0.71	0.55	1.28	0.2009
Port Efficiency (Exporter)	1.34	0.59	2.27	0.0239
Customs Environment (Importer)	-2.03	1.09	-1.85	0.0645
E-business Usage (Importer)	0.43	0.13	3.31	0.0010
E-business Usage (Exporter)	0.31	0.12	2.70	0.0072
Exporter GDP	1.50	0.09	16.02	0.0000
Importer GDP	1.19	0.07	16.58	0.0000
Distance	-3.32	0.24	-14.07	0.0000
Language	1.52	0.21	7.26	0.0000
Common border	1.11	0.24	4.57	0.0000
Number of observations	580			
Adjusted R ²	0.671			
F-Test	108			

Discussion of Gravity Results

- **Tariffs**, though they have an unexpected positive sign, are however not significant and as such, they do not play any significant effect on intra-SADC trade. The fact that tariffs do not affect intra-regional trade is not a surprise given that all member countries in the gravity trade model sample (excl. Angola, Madagascar and Seychelles) have been implementing tariff phase downs which started in 2000
- **Port efficiency** for the exporting country has the largest elasticity among the trade facilitation indicators, about 1.34. In this instance, a percentage point increase in exporter's port efficiency will result in 1.34% increase in regional-intra export trade (ceteris paribus).
- Policy wise, port efficiency results implies that the greatest gains to intra-SADC exports trade would come from improvements in this dimension of trade facilitation.
- **E-business usage**, both for the exporter and importer has a positive and significant effect on intra-SADC export trade. The coefficients suggest that the benefits of having facilitating domestic infrastructures and increasing engagement in e-commerce are very important in enhancing intra-regional trade.
- Specifically, a 1% increase in use of e-business in both importing and exporting SADC countries will cause intra-regional export trade to increase by 0.43% and 0.31%, respectively.

Discussion of Gravity Results

- *Customs environment* of the importing country is significant, but have a wrong sign. This surprising result may be due to corruption which is significant in most SADC borders
- Considering the traditional gravity trade model variables, a 1% increase in *gross domestic product* (GDP) of both the exporter and importer countries will increase intra-SADC export trade by 1.5% and 1.19%, respectively. This positive relationship is, as pointed earlier, according to theoretical expectations.
- The negative coefficient on distance is according to theoretical expectation, whereby an increase in distance will increase such things as transaction and transportation costs, among other expenses, thus resulting in a reduction in exports of meat and meat products. According to Table 4, a 1% increase in distance reduces intra-SADC export trade by 3.3%.
- The coefficient of *common border* is positive and statistically significant at 1% level of significance. This, as said before, this is according to theoretical expectations which assumes that countries which shares a common border are more likely to trade with each other than countries which do not share a common border.

Trade Potential Results

■ Table 5: Average (2006 – 2010) trade potentials with within SADC countries in ratios (P/A)

Rep/Partner	ANG	BW	LSO	MAD	MAU	MOZ	MWI	NAM	RSA	SWZ	TZA	ZAM	ZW
Botswana	7.2	-	22.2	142.4	2.7	1.8	1.8	3.4	20.6	23.6	2.1	2.9	0.9
Madagascar	12.7	65.1	7.1	-	0.3	0.9	63.2	10.1	0.5	15.7	2.4	3.7	2.1
Mauritius	0.2	4.1	18.4	0.1	-	0.2	3.7	34.9	0.6	146	1.6	2.4	0.6
Mozambique	1.6	9.9	34.2	0.7	0.2	-	0.1	21.9	0.4	5.2	1.5	1.4	0.1
Malawi	312	0.5	15.6	13.6	1.6	72.5	-	4.0	0.4	0.6	1.3	1.8	0.3
Namibia	0.1	3.4	2.2	7.3	0.4	0.0	3.5	-	1.5	0.6	0.9	1.5	0.2
South Africa⁺	0.5	-	-	0.2	0.3	0.5	0.5	-	-	-	0.5	0.8	4.6
Tanzania	1.1	11.9	87.4	0.1	0.5	0.1	0.6	2.2	0.2	0.5	-	0.8	2.5
Zambia	23.2	4.4	1.1	15.8	1.6	3.2	0.8	1.5	0.6	0.7	1.0	-	4.0
Zimbabwe	1.2	1.6	0.4	5.5	0.1	0.1	0.3	0.4	0.9	0.5	1.8	2.3	-

Trade Potential Results (UP)

- For a country like Botswana, the country has ratio values of greater than one with 11 out of the 12 SADC trading partners (except Zimbabwe), with the highest unrealized trading potential suggested with Madagascar. Botswana and its 11 SADC trading partners are trading much less than what the gravity model predicts and this implies that Botswana has untapped trade with countries.
- This scenario suggests that it will be to the advantage of Botswana if the country continues to make all efforts to improve trade facilitation efforts. The benefits of trade facilitation will be further enhanced if, on the other hand, the 11 SADC member countries with which Botswana has untapped trade potential also implement regulations to improve trade facilitation from their respective trade regimes.
- Countries such as South Africa and Zimbabwe, among others, have exhausted their respective trade potentials with regional trading partners. Exhaustion of trade potentials is an indication of a successful partnership among trading countries (International Trade Centre (ITC) (2005, 2003)).
- Exhaustion of trade potential does not imply that these countries should not trade, but only implies that it may be difficult to increase the levels of trade between such trading partners. As such, the best that can be done especially by the reporter partners is to ensure they try to maintain that level of trade.

Conclusion

- This study, unlike most previous studies which used costs of transport as a measure of trade facilitation in the gravity model, sets itself apart by the fact that it includes a variety of indicators of trade facilitation.
- The set of indicators includes country-specific trade facilitation indicators for port efficiency, customs environment and e-commerce use by business.
- **Findings 1:** The research found that improvements in port efficiency and increased use of e-business are some of the factors which boost intra-SADC trade in exports.
- Thus, SADC policy makers should implement strategies which improves port efficiency and also encourage use of e-business.
- **Findings 2:** Overall, the potential trade simulations shows mixed results, with some reporting countries seems to have exhausted their trade potentials, while other still indicated as having untapped trade potentials with their respective regional trading partners.

Thank you!

Meci!

Matendwa

Ke a leboga

Zikomo

Amasegnalo

Asante