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The evaluation of the regional value chain: the case of livestock sector in Southern African countries

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Presentation Outline

- Introduction
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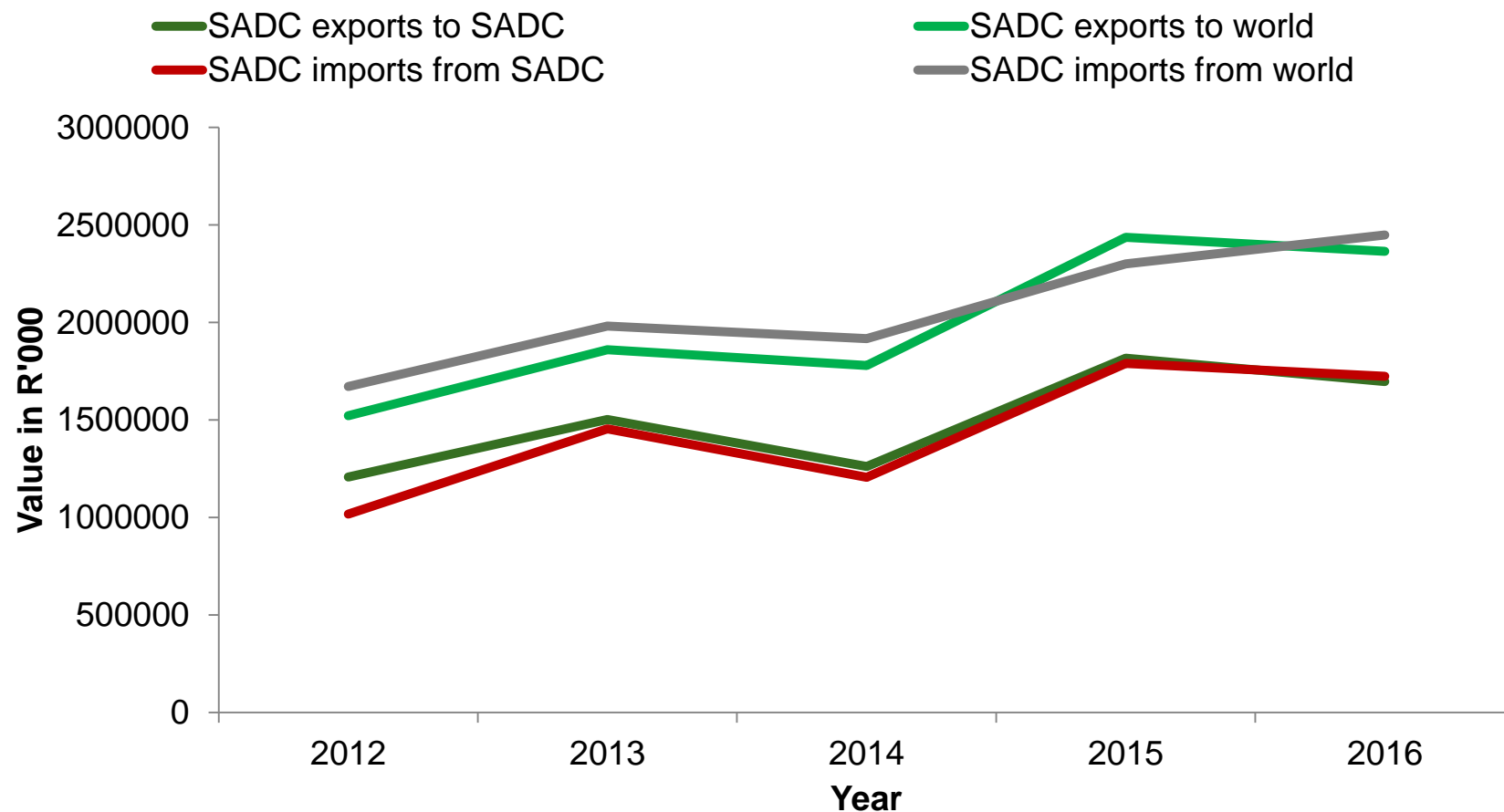
Introduction 1

- The SADC secretariat had developed an industrial developmental framework as the core developmental agenda in SADC region
- The industrial development framework aimed to ensure productive capacity, creation of employment and sustainable growth
- One of the objectives of the of the Industrial developmental framework has identified the need to enhance competitiveness of the existing policy and promote the development of regional value chain for selected sector (Manufacturing, agriculture and textiles)
- It has been noted that about 40% of Southern Africa accounts on Africa's total GVC participation, one-third of which is through backward integration
- On in their backward integration matrix suggest that other regional partners estimated to contribute between 0.01% and 0.1% of imported value added into South Africa's exports
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- The agro-processing in which is about 35% exports by SADC region and South Africa dominating the exports
- The livestock sector contributes about 51% of value added exports from region with poultry meat, beef frozen and milk dominating livestock value added export

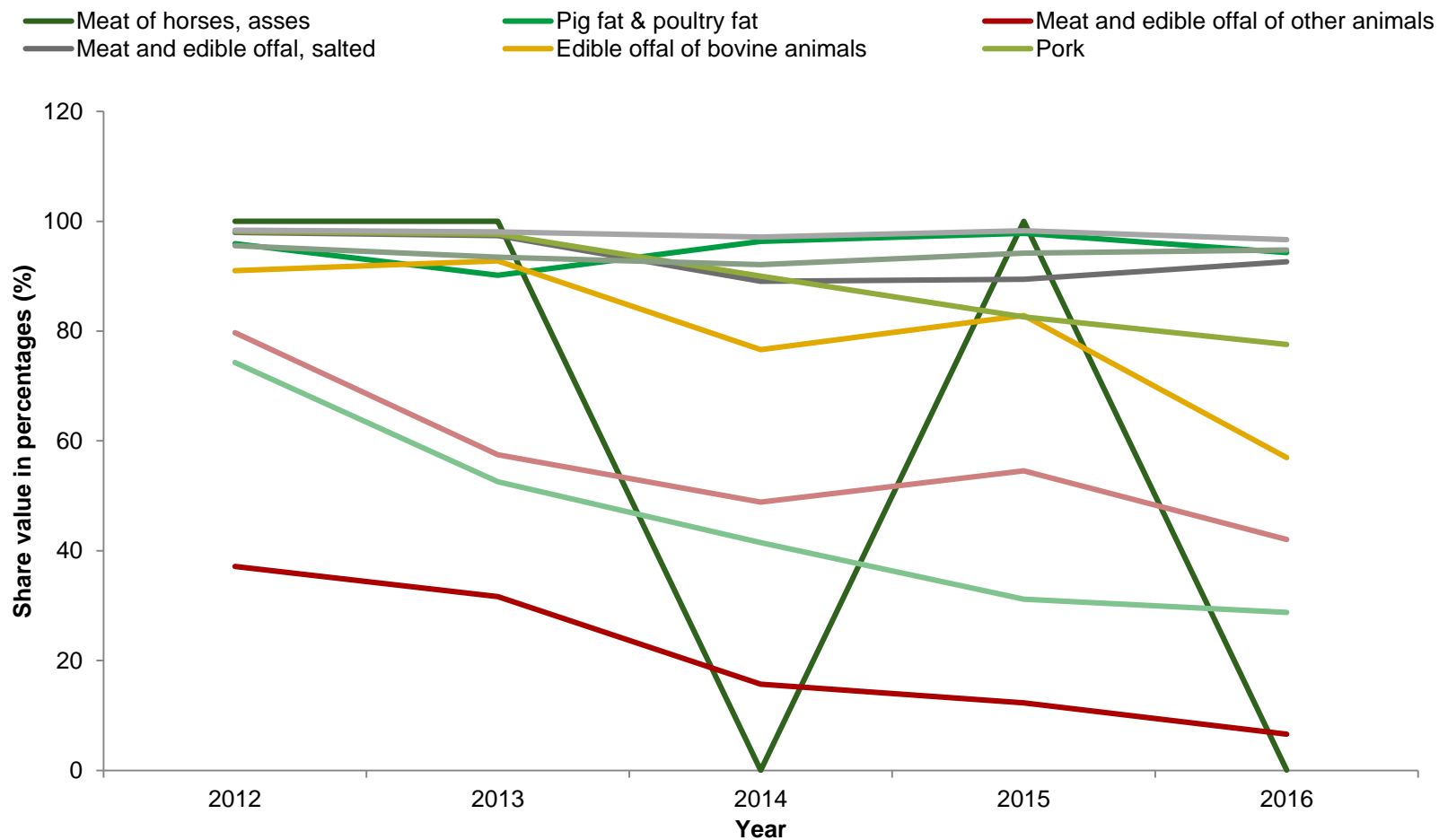
Introduction 2

- The other countries participation countries in the RVC is mainly limited due to the following
 - Regulatory issues
 - Production capacity
 - Road infrastructure
 - Food and safety issues
- Objective of the study
 - to evaluate a role of the regional value chain on the livestock sector using review trade flows based on the determinants of trade and the competitiveness in the region

Intra-regional trade performance for SADC livestock sector

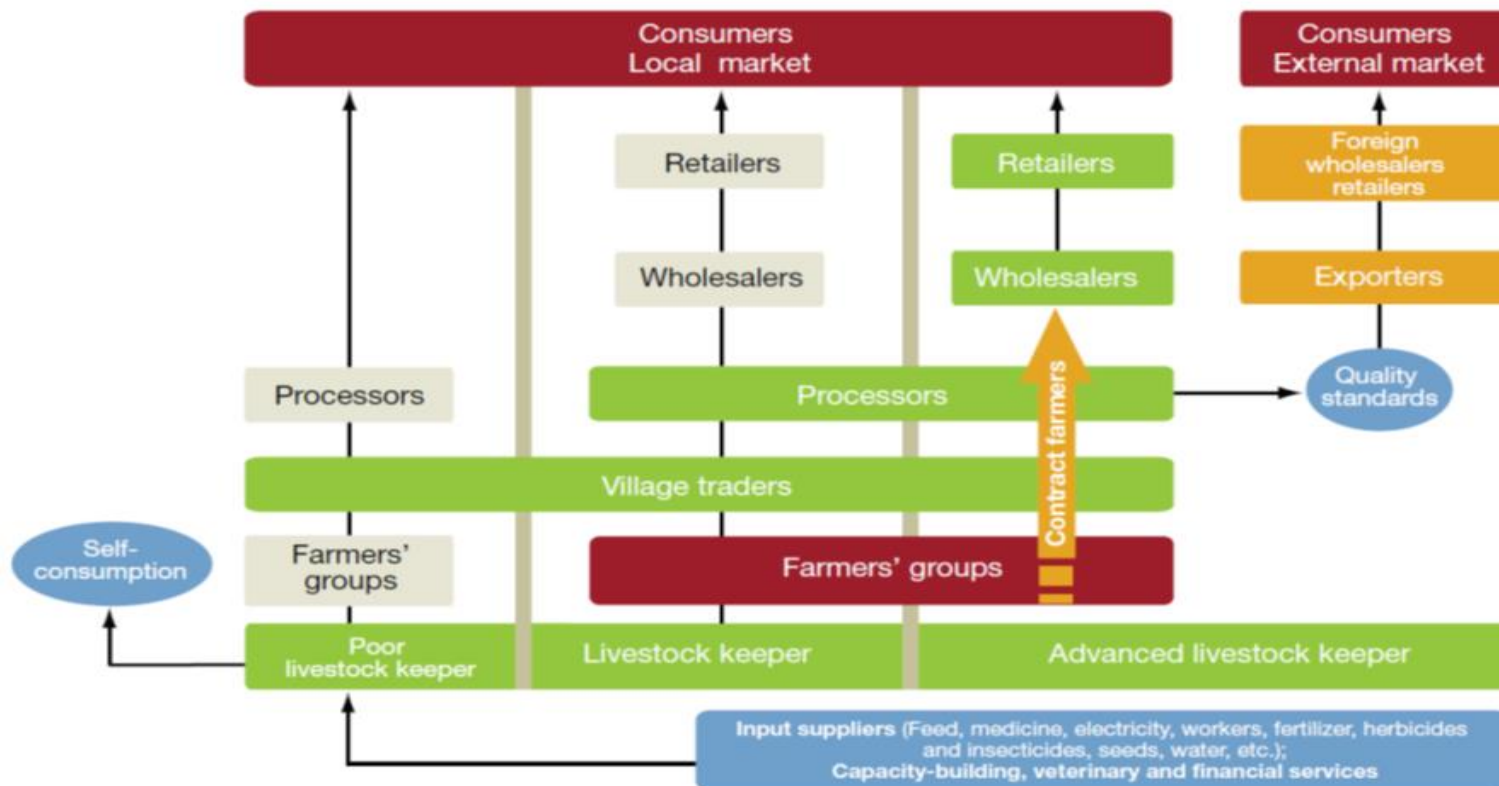


Intra-regional trade performance for SADC livestock sector



Overview of the livestock value chain in SADC

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Overview of the livestock value chain in SAD2C

- The study focus on the following value chain;

Beef value Chain

- Beef value chain represent significant in terms of cross border production
 - South Africa exports live cattle into Namibia (71.1%)
 - Namibia and Botswana exports carcass into South Africa (11 thousand tons and Swaziland (4000 tons) and rest is exported to EU as third country

Poultry value chain

- Poultry production in the Southern African region has been led by large, vertically integrated firms
- The region is the net importer poultry and feed of the animals (animal inputs) and this driven by South Africa's demand of both chicken and feed
- Zambia has shown a capacity in terms of production as shown trade surplus of \$13 million in 2014 and \$5.4 million in 2015

Dairy Value chain

- The integration of this industry is insignificant in the region given to the issues of sanitary measures that distort trade
- The number of SADC countries are reliant on South Africa's milk imports as has developed production capacity

Literature review on the regional value chain

- The literature focus on the development of the indicators on global value chains.
- The indicators include the following :
 - Indirect domestic value added exports,
 - Foreign value added exports
 - And Gross exports
- The gravity model was used by the following authours (Noguera, (2012)(Yucer, Siroen & Guilhoto, not dated), and Montalbano, Nenci & Rotili (2015) to measure)
- The global input-output data is used to measure the connectivity of cross-border production among the region
- However, for this study the SADC input-output data was not used due to the fact that input-output was not readily available the region

Methodology

- The study focus on the livestock sector
- Period – 14 years (2001-2015)
- Data on the global input-output databases
 - Gross exports (million dollars from TradeMap)
 - Value added exports (not applicable for the study)
 - Income (GDP from WBDI)
 - Foreign added exports (not applicable for this study)
 - Imported of inputs/Intermediate goods (thousand dollars from TradeMap)

Methodology

- The gravity model was used for this study that was introduced by Tinbergen, (1962) with the intuitions of measuring the bilateral trade flows between the countries
- The estimation of the model is as follows;

$$\log X_{ij} = \alpha + \log \beta_1 GDP_j + \log \beta_2 PRIMP_i + \log \beta_3 D_{ij} + \log \beta_4 LPI_i + \log \beta_5 R_i + \log \beta_6 OUTP_i + fe + \varepsilon_{ijk}$$

X= Intra-exports

GDP= Gross domestic product

Primp = Primary exports

D = Distance

R=Remoteness

OUTP= Value added domestic production

- Both OLS and Poisson estimation were used
- Dynamic models- lagged imports of inputs/intermediate goods and value added production

Estimation results and discussion

Indicators	Model (1) Possion	Model 2 OLS	Model 3 (dynamic)
LogPrimim	0.104 (0.029)***	0.91 (0.92)***	0.20 (0.13)
LogLPI	0.21 (0.307)	2.45(1.65)	-0.35(1.19)
logOutp	0.20(0.75)	2,003(5.39)	-0.95(1.96)
logD	-0.069(0.09)*	-0.53(0.49)**	
LogR	0.0065(0.25)	0.093(1.65)	-0.27(0.110)
logGDP	0.081 (0.034)**	0.805 (0.25)***	0.34 (0.66)
Intercept	-2.21(6.36)	-14.44(41.81)	
Fix effects	no	No	Yes
Pseudo	0.34	0.0674	0,74
N	110	110	97

Conclusion

- The regional value chain present an opportunity for cross-border production.
- The results of the study presented that the following positive impact regional value chain of of the livestock sector in terms drivers of trade;
 - Gross domestic product
 - The importation of inputs/intermediate
 - The distance has distorting factor given transportation cost between the firms
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- Given with results presented for this study, it is clear the livestock sector has opportunity to integrate its cross-border production value chain in the region given with the capability of production in terms of beef, raw leather and other livestock products

Recommendation

- Therefore, it is recommended that countries with the SADC countries to harmonise the national policies as to participate on the regional value chains. Furthermore, a coordinated industrial developmental policy that speaks to nation policy among the SADC countries.
- The development of the database of the input—output for the SADC countries

Thank you
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TATENDA
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