

An economic evaluation of the National Red Meat Development Programme in the Eastern Cape Province, South Africa

By

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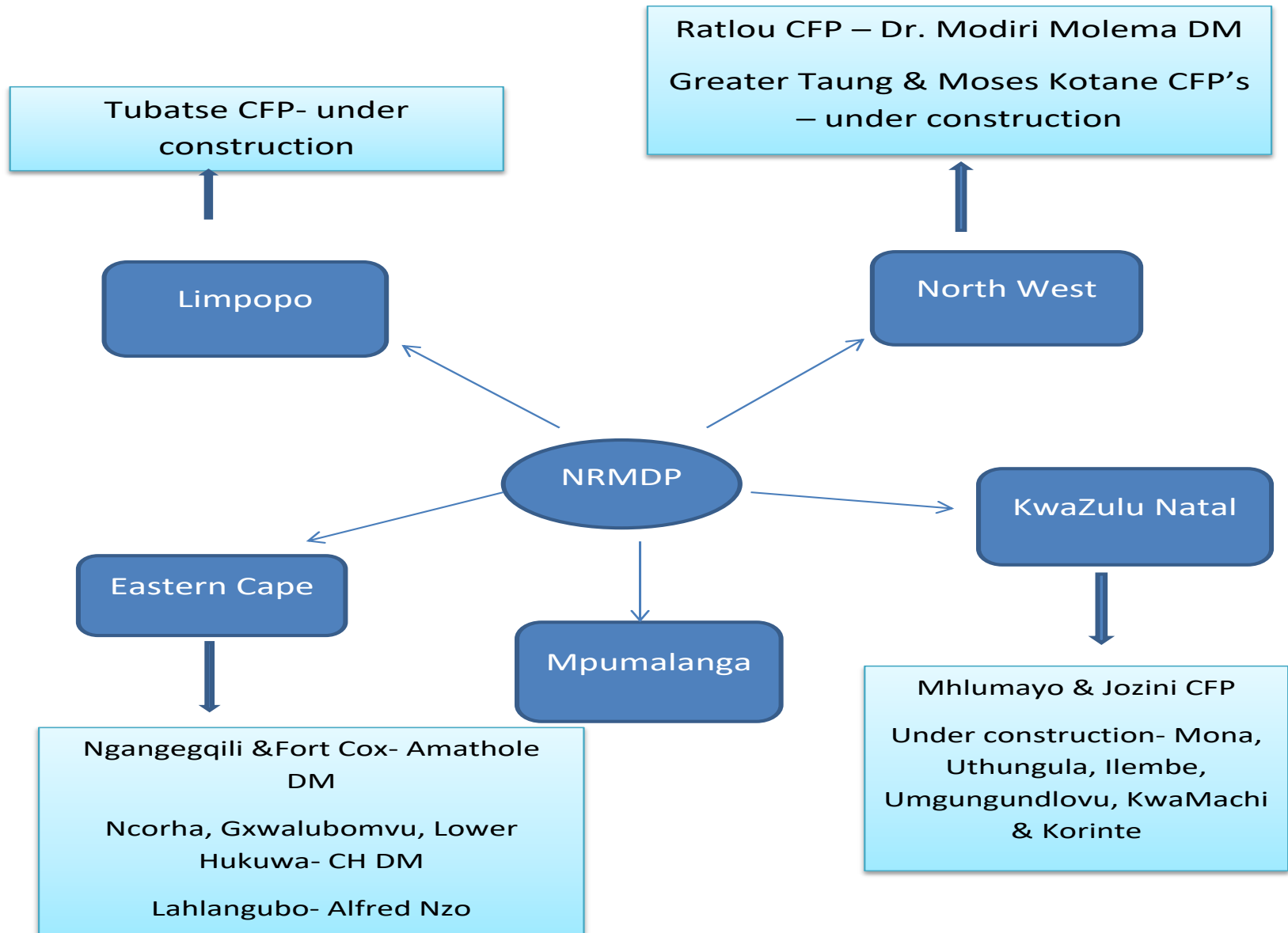
Introduction

- 2014- Eastern Cape had 3.3 million head of cattle
- made up 24 % of the national herd (StatsSA, 2014).
- 5 % cattle owned by emerging farmers –market
- Eastern Cape: they earn far less from their livestock assets, subsistence-oriented mind-set, why prices fluctuate, not collectively organised, little or no skills in choosing more rewarding markets.
- ComMark engaged in a study discovered that there is potential
- The Eastern Cape Red Meat Project was formulated in 2005 (now NRMDP)

Introduction cont.

- NAMC -partnership with ComMark
- AIM- training communal farmers - understand formal marketing processes ,to negotiate effectively with buyers in the formal market.
- With ComMark closure in 2008, project handed over to NAMC -birth of the National Red Meat Development Programme (NRMDP).
- NRMDP was first implemented in Eastern Cape now also in Limpopo, Kwa-Zulu Natal, North West, Mpumalanga

NRMDP Footprint



Aim of the NRMDP

NRMDP -practical farming and marketing assistance to demonstrate alignment to the market requirements & Better incomes -improve rural livelihoods- systemising informal markets

- To enable farmers to understand the structure, operation and requirements of formal red meat markets;
- To provide initiatives to develop marketing channels that will increase their participation in formal red meat markets; &
- To provide training and practical assistance to align the age, health and breeding of animals



Picture 1(a): At arrival in CFP



Picture 1(b): After 60 days

- liberalising the internal market structures, reforming the institutions governing the livestock industry
- not only grooming communal farmers but is also ensuring that there are no elements of irregularities and discrepancy in formal markets.

Objectives of the study

- Unlike most interventions that focus on production, the NRMDP focuses on introducing livestock farmers to commercialisation
- The effectiveness of this intervention in improving the sustainability of the industry has not been evaluated.

The research was, therefore, an attempt to assess the factors that contribute to improved market participation of communal farmers as a result of the NRMDP

- To estimate household income of communal red meat farmers since the implementation of the NRMDP.
- determine if the programme has a positive economic and social return.

Methodology

- E-views and SPSS -regression analysis
- A probit and least squares regression analysis (Jenkins, 2003-binary variables).
- CBA- economic value & justifiable
- $NPV = \sum B_n / (1+r)^n - \sum C_n / (1+r)^n$
- $BCR = \frac{\sum \text{present worth of benefit}}{\sum \text{present worth of costs}}$

Results

Off-take rates

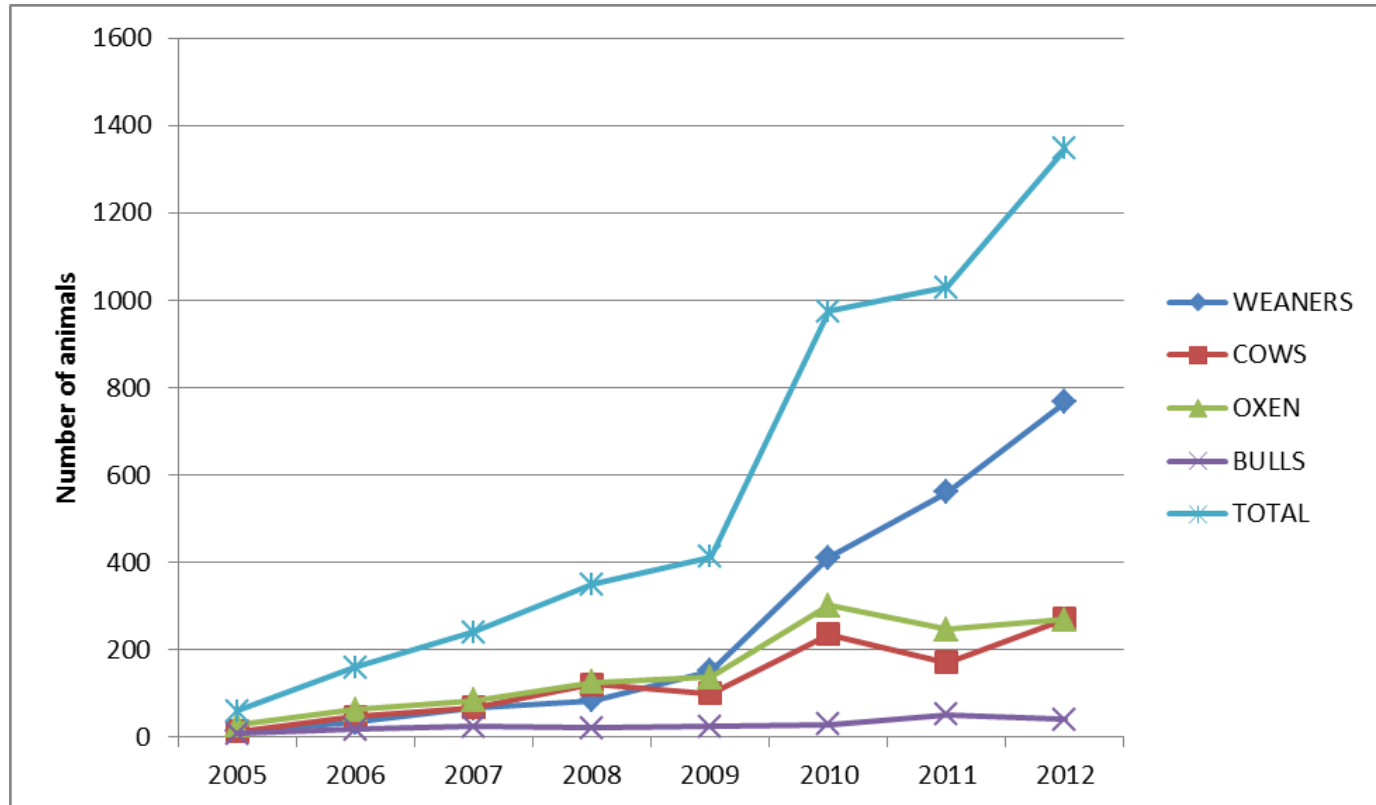
Off-take rates (%)

	Amatole	OR Tambo	Alfred Nzo	Chris Hani	Cacadu	Average
2005	10.9	10.1	13.2	9.8	8.6	10.52
2006	12.8	9.8	15.6	10.2	9.9	11.66
2007	13.9	12.1	15.9	10	10.5	12.48
2008	15.9	12.9	17.1	10.7	8.8	13.08
2009	14.7	12.8	14.92	13.8	11.3	13.504
2010	13.5	11	15.3	12.4	10.8	12.6
2011	13.9	13.5	16.64	12.8	11.1	13.588
2012	14	13.8	17.5	13.9	13	14.44
Average	13.7	12	15.77	11.7	10.5	12.734

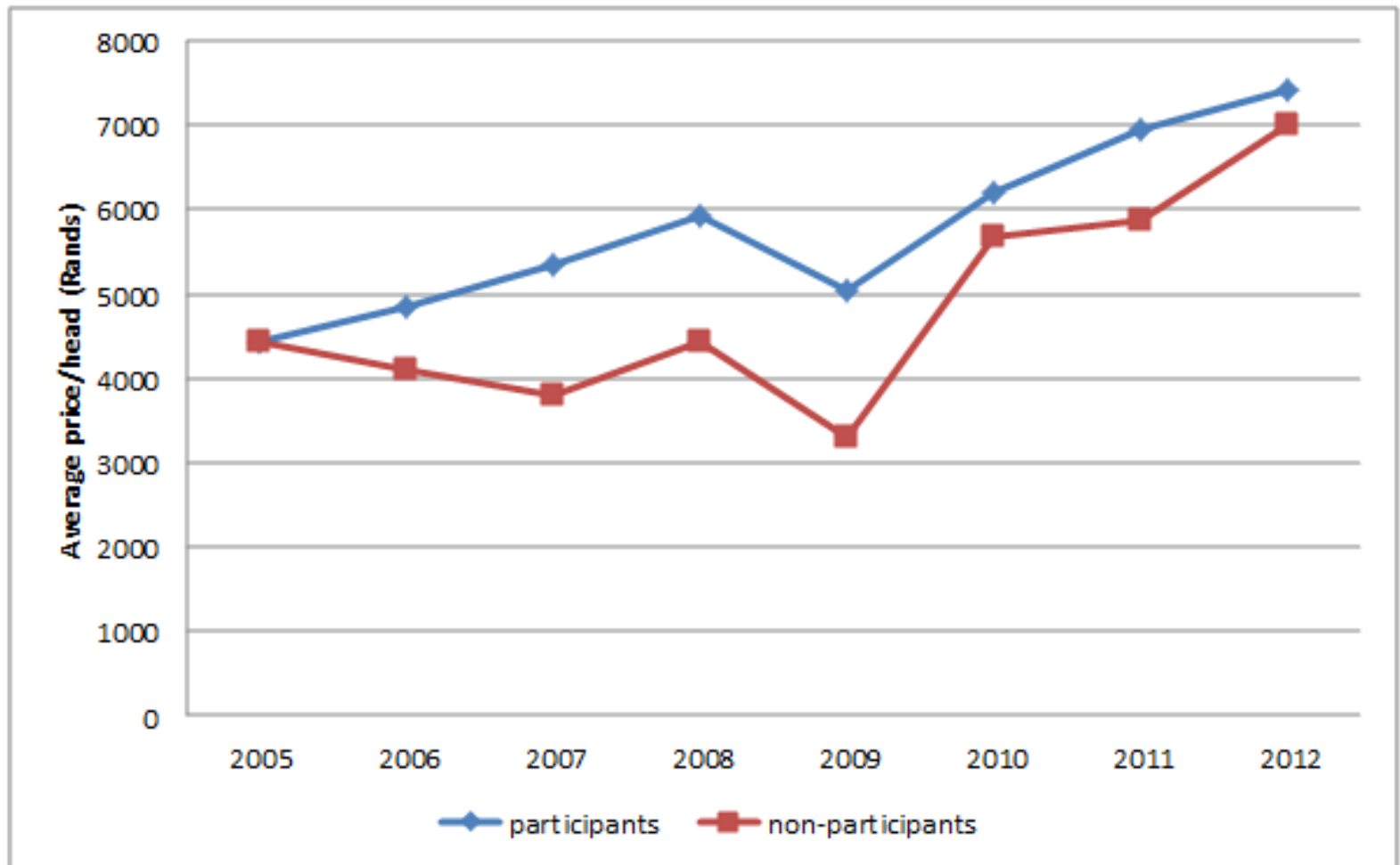
Source: Survey Data (2013)

Results cont.

Livestock Sold



Results cont.

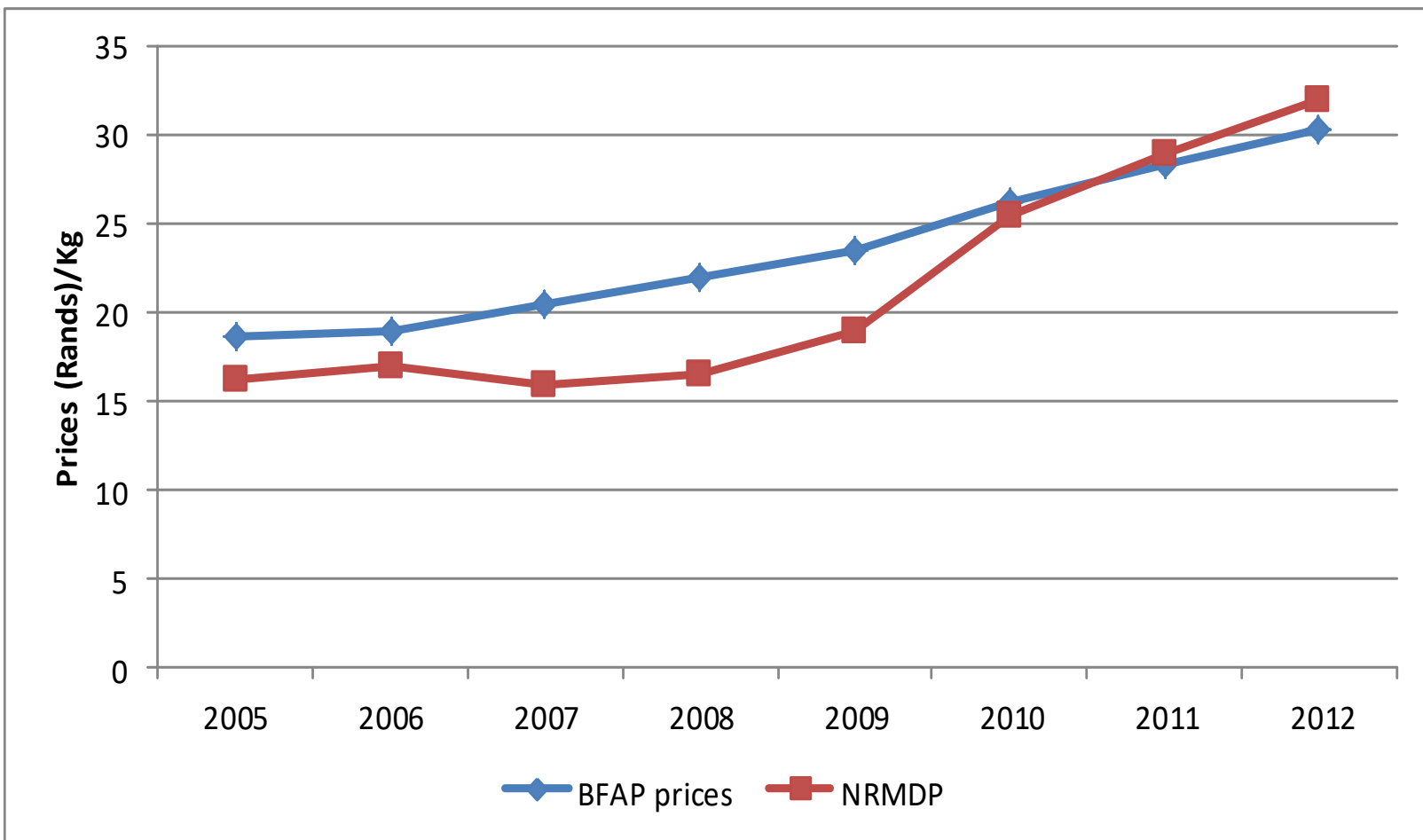


Comparison of price/cow for participants and non-participants in the programme

Source: NAMC (2013)

Average prices of weaners sold at auctions

Source: NAMC (2013)



Factors influencing household income (Ordinary Least Squares)

Source: Own data

Dependent Variable: Log_household Income (income derived from livestock sales.)		
Variables	Coefficient (standard error)	t-statistic (p-value)
Constant	0.426271 (0.388051)	2.463727** (0.0149)
Cattle condition	0.067439 (0.021277)	3.169668*** (0.0019)
Extension services	0.058770 (0.021296)	2.759617*** (0.0066)
Distance to market	0.001196 (0.000321)	3.727070*** (0.0003)
Education level	0.036793 (0.019687)	1.868913* (0.0637)
Stock size	0.040728 (0.022165)	1.837532* (0.0682)
NRMDP participation	0.052852 (0.024405)	2.165620** (0.0320)
Total observation= 150		
*, ** and *** represent significance at 10 %, 5 % and 1 % respectively.		

Determinants of NRMDP participation (Binary Probit)

Source: Own data

Dependent Variable: NRMDP participation(1=Yes; 0 =No)		
Variables	Coefficient (standard error)	z-statistic (p-value)
Constant	5.209265 (1.239933)	4.201247 (0.0000)***
Average price of weaners	0.000474 (0.000215)	2.208046 (0.0272)**
Stock size	0.557305 (0.322242)	1.729462 (0.0837)*
Household size	0.701290 (0.334870)	2.094215 (0.0362)**
Formal market participation	1.981685 (0.323130)	6.132786 (0.0000)***
Price of cattle	0.0127 (0.0021)	5.9112 (0.0000)***
Total observation= 150		
*, ** and *** represent significance at 10 %, 5 % and 1 % respectively.		

Results cont.

CBA


- market related costs and benefit used -intangible/unforeseen costs.
- NRMDP has no undesirable effects on natural resources, - CBA is appropriate
- NPV = R8 464 805.70
- NPV + -programme is profitable at 5.5 % discounted rate
- BCR = 2.0013
- The BCR >1, programme is profitable- 2X investment injected into the programme &worth the costs incurred.
- R=5.5% - composite rate for South African public projects determined by examining sources of government funding (it reflect both the STPR and the SOCC) (Beukes, 2013).

Conclusion

- The empirical analysis -farmers who participate in the programme will definitely participate in formal markets.
- NRMDP farmers are aware and they comply with the requirements of the market.
- Farmers' attitudes are changing and they realise the importance of marketing high-value products in agricultural markets
- The low level of participation of females in formal markets points & NRMDP

Conclusion cont.

- NRMDP is to promote the development of the rural economy through greater participation of communal farmers in formal markets and improved rural livelihoods in the country.
- Given the noted success of the NRMDP through its ability to expand and improve market access for communal farmers- continued investment and expansion of the NRMDP.
- However, the effectiveness of the programme depends to a large extent on how well some of the current constraints facing the communal farmers in accessing markets are addressed.
- Government support is needed to boost the livestock sector, as well as to motivate the establishment of new initiatives to address current and emerging problems in order to enhance the competitiveness of the sector.

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- communal farmers - penetrate global markets -absolute advantage
 - NRMDP-South Africa's success story

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- Thesis available from:

[http://repository.up.ac.za/dspace/bitstream/handle/2263/53492/Fakudze Economic_2016.pdf?sequence=1&isAllowed=y](http://repository.up.ac.za/dspace/bitstream/handle/2263/53492/Fakudze_Economic_2016.pdf?sequence=1&isAllowed=y)

Thank you