

Econometric Analysis of the Structure of the Regional Maize

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Regional Maize Sector in Southern Africa

by Michela Calcaterra

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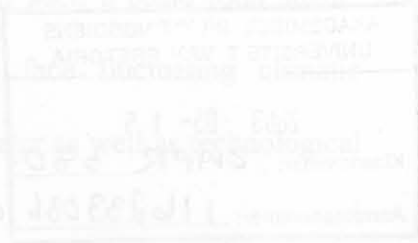
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A thesis in partial fulfillment of the requirements for the
degree of

M. Sc. Agric (Agricultural Economics)

University of Pretoria

2002



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ABSTRACT

The agricultural sector plays a vital role in the economy of the Southern African countries, not only as producer of food, but also as the largest employer of its population. Maize occupies a prominent position in Southern Africa's agriculture being the main food staple grown and consumed by the vast majority of the population. Understanding how the wellbeing of the people of Southern Africa is affected by the supply of and demand for such an important commodity is therefore critical for the design and formulation of agricultural development and trade policies. This is politically important because most of the food demand for maize is satisfied from regional production. In addition, regional maize production contributes substantial direct and indirect economic benefits to the South African economy including export earnings and the supply of an important input for the animal feed and other industrial processes.

Some of the countries in Southern Africa have the biophysical potential and technology to support high production levels of maize. Other countries in the region are major consumers but need to achieve food security through coordinated trade regimes to ensure access to a stable supply and price of such a basic food staple. Major producers of the regional maize supply also face fluctuating climatic conditions, availability of key inputs such as labor and water as well as technological

challenges. Currently however, each country in the region strives to achieve the same collective goal of food security by adopting trade and general economic policies that often indirectly work against attaining these objectives.

It is therefore crucial to understand the various forces that shape and influence patterns of regional maize production and consumption for developing national policies that are consistent with regional goals of economic integration and collaboration. This can only be achieved through the use of models that integrate climate, policy, technology, and institutional determinants of the availability and distribution of such a strategic commodity across the countries of the region.

Structural commodity models provide one tool for providing the necessary information needed for an optimal control of the state of supply and demand of commodities. This study made an attempt to develop and use a regional maize model to understand how the maize sector functions in Southern Africa. The model generated useful information for improving agricultural and general economic policy design towards achieving food security in the region.

The model was used to generate a baseline projection for the period 2002-2007. The baseline projection can be used as a point of comparison with various policy scenarios. Various forecasted values were taken from FAPRI's 2002 outlook, while others macroeconomic variables were assumed to have a forecasted average growth of the previous five years.

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ACKNOWLEDGEMENTS

CHAPTER ONE: Introduction

It has been an honor and privilege to receive advice and support from friends and colleagues. Several of whom need to be mentioned. I would like to thank Dr. D. Poonyth for all the help and guidance he provided with the modeling and structure of the thesis, it certainly wouldn't have been possible without him. Much appreciation goes to Professors Rashid Hassan and Johan Kirsten for the guidance and constructive criticism provided throughout the work.

I would also like to thank my family, in particular my father whose encouragement and support was always well timed. I owe debt of gratitude also to Raymond Cutts whose encouragement and tolerance during the modeling section of this research was admirable.

Figure 1.1 White Maize Production in the SADC Region



Source: FAO 2002 data base

Both yellow and white maize are produced in the SADC region. The percentage of white maize production to total maize production varies from country to country. However, on average more than 80 % of total production is white maize except in