

**LAND REFORM IN SOUTH AFRICA: EFFECTS ON LAND
PRICES AND PRODUCTIVITY**

A thesis submitted in partial fulfilment of the
requirements for the degree of

MASTERS OF COMMERCE IN FINANCIAL MARKETS

of

RHODES UNIVERSITY

by

JONATHAN VAN ROOYEN

December 2008

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my supervisors, Professor Geoffrey Antrobus and Dr Nhlanhla Mbatha for their exceptional guidance and advice throughout the supervision of the thesis. I am grateful for the time they made available whenever I was in need of assistance, and their continued encouragement to strive for perfection.

I would also like to thank everyone at the KwaZulu-Natal Department of Land Affairs (PLRO) in Pietermaritzburg, who gave of their time and effort in aiding with the data collection. In this regard, special reference must go to Khululiwe Faya and Anwhar Madhanpall.

For the invaluable advice and data supplied by Inkezo Land Company and Cane Growers, I am eternally grateful. Without whose contributions, this thesis would not have been possible.

Finally, I would like to express my appreciation for the continued support of friends and family.

ABSTRACT

South Africa's land redistribution policy (1994-2008) has been widely publicised, and has come under scrutiny of late from the public, private and government spheres, highlighting a need for research in this area. The research examines progress in South Africa's land redistribution programme in two of KwaZulu-Natal's district municipalities, Uthungulu and iLembe. Specifically the research investigates whether the government has paid above market prices when purchasing sugarcane farmland for redistribution in these districts. Moreover, it is illustrated how productivity on redistributed farms has been affected with the changes in ownership.

To investigate the research questions, reviews of theories pertaining to property rights, land reform and market structures were conducted. Moreover, two cases studies were conducted in the districts of Uthungulu and iLembe, with assistance from the Department of Land Affairs, Inkezo Land Company and the South African Cane Growers Association.

The case study data indicate that above ordinary market prices have been paid (2004-2006) by the government for sugarcane farmland in the districts concerned, and further that productivity has been negatively impacted 'during' and 'post' transfer, in the majority of cases.

DECLARATION

Except for references specifically indicated in the text, and such help as I have acknowledged, this thesis is wholly my own work and has not been submitted at any other University or College for degree purposes.

Jonathan van Rooyen

December 2008

TABLE OF CONTENTS

Acknowledgements	ii
Abstract	iii
Declaration	iv
Table of contents	v
List of figures	ix
List of tables	x

CHAPTER ONE

INTRODUCTION

1.1 Context of the research	1
1.2 Goals of the research	3
1.3 Research methods overview	4
1.4 Structure of the thesis	4

CHAPTER TWO

THEORETICAL REVIEW

2.1 Introduction	5
2.2 The tragedy of the commons	7
2.3 Property rights regimes	8
2.3.1 Open-Access property regimes	8
2.3.2 Common property regimes	10
2.3.3 Private property regimes	13
2.3.4 State property regimes	17
2.4 Land reform	20
2.5 Market structure	22
2.5.1 Perfect competition	22
2.5.2 Monopoly	23

2.5.3 Oligopoly	24
2.5.4 Monopsony	24
2.5.5 Oligopsony	25
2.6 Hypothesis	26
2.7 Conclusion	26

CHAPTER THREE

METHODS

3.1 Introduction	28
3.2 Motivation for selected sample area	28
3.3 Data	29
3.3.1 Data collection	29
3.3.2 Presentation and analysis of Prices	30
3.3.3 Presentation and analysis of Productivity	32
3.4 Summary	34

CHAPTER FOUR

CASE STUDY OF KWAZULU-NATAL'S SUGARCANE FARMLAND SALES

4.1 Introduction	35
4.2 Area description - KwaZulu-Natal	36
4.3 Types of land redistribution transactions	39
4.4 The land redistribution price determination process	40
4.5 Trends in the market price of South African farmland	40
4.6 Trends in the market price of KwaZulu-Natal sugarcane farmland	42
4.7 Redistribution price data	46
4.7.1 Uthungulu district's land redistribution: private individuals and small companies	47
4.7.2 iLembe district's land redistribution: private individuals and small companies	49
4.7.3 iLembe district's land redistribution: large corporation	51

4.8 Productivity data	54
4.8.1 Uthungulu district: private individuals and small companies	55
4.8.2 iLembe district: private individuals and small companies	56
4.8.3 iLembe district: large corporation	57
4.9 Conclusion	58

CHAPTER FIVE

DISCUSSION AND RECOMMENDATIONS ON THE PRICES AND PRODUCTIVITY OF KWAZULU-NATAL'S LAND REDISTRIBUTION PROGRAMME

5.1 Introduction	59
5.2 Prices	60
5.2.1 Uthungulu district: private individuals and small companies	60
5.2.2 iLembe district: private individuals and small companies	61
5.2.3 iLembe district: large corporation	63
5.2.4 Government's total annual land redistribution expenditure	65
5.3 Why higher prices are possible	67
5.4 Causality between land redistribution prices and market prices	69
5.5 Productivity	70
5.5.1 Uthungulu district: private individuals and small companies	70
5.5.2 iLembe district: private individuals and small companies	72
5.5.3 iLembe district: large corporation	74
5.5.4 Brief summary of the results on productivity	76
5.6 Why productivity has declined	77
5.7 The fundamental problems	79
5.8 Summary	81
5.9 Recommendations	83

CHAPTER SIX

CONCLUSION

6.1 Conclusion	85
List of references	89
Appendix	97
A-1 Uthungulu- land redistribution transactions of private individuals and small companies	97
A-2 iLembe- land redistribution transactions of private individuals and small companies	98
A-3 iLembe- land redistribution transactions of a large corporation	99
A-4 Historical recoverable value prices of sugarcane per ton	100

LIST OF FIGURES

Figure 4.1: Map of KwaZulu-Natal	37
Figure 4.2: Graph of the movements in KwaZulu-Natal and South African general farmland prices – price (R) paid per hectare	42
Figure 4.3: Changes in KwaZulu-Natal sugarcane farmland market prices based on price (R) paid per hectare – Uthungulu and iLembe districts	43
Figure 4.4: Changes in KwaZulu-Natal sugarcane farmland market prices based on price (R) paid per hectare of yield (tons) – Uthungulu and iLembe districts	45
Figure 5.1: Government's estimated total annual land redistribution expenditure (R) – Uthungulu district	65
Figure 5.2: Government's estimated total annual land redistribution expenditure (R) – iLembe district	66

LIST OF TABLES

Table 2.1: Conditions identified for the success of Communal Ownership	11
Table 2.2: Additional conditions necessary for the success of Communal Ownership	13
Table 2.3: Summary of the advantages and disadvantages of the property rights regimes	19
Table 2.4: Market structures overview	26
Table 4.1: Movements in South African general farmland prices – price (R) paid per hectare	41
Table 4.2: Price index of KwaZulu-Natal sugarcane farmland market prices based on price (R) paid per hectare- Uthungulu and iLembe districts, 2001-2006	43
Table 4.3: Price index of KwaZulu-Natal sugarcane farmland market prices based on price (R) paid per hectare of yield (tons) – Uthungulu and iLembe districts, 2001-2006	44
Table 4.4: Summary of the average market prices (R) for KwaZulu-Natal sugarcane farmland	46
Table 4.5: Uthungulu- land redistribution transactions of private individuals and small companies	47
Table 4.6: iLembe- land redistribution transactions of private individuals and small companies	50
Table 4.7: iLembe- land redistribution transactions of a large corporation	52
Table 4.8: Uthungulu's land redistribution productivity data for sales by private individuals and small companies (Tons produced per hectare)	55
Table 4.9: iLembe's land redistribution productivity data for sales by private individuals and small companies (Tons produced per hectare)	56
Table 4.10: iLembe's land redistribution productivity data for sales by a large corporation (Tons produced per hectare)	57
Table 5.1: Premiums paid by the government for sugarcane farmland in Uthungulu (R,%)	61

Table 5.2: Premiums paid by the government for sugarcane farmland in iLembe (R,%)	62
Table 5.3: Prices paid by the government for sugarcane farmland in iLembe (R,%)	63
Table 5.4: Uthungulu's productivity data for sales by private individuals and small companies (Tons/Ha; %)	71
Table 5.5: iLembe's productivity data for sales by private individuals and small companies (Tons/Ha; %)	73
Table 5.6: iLembe's productivity data for sales by a large corporation (Tons/Ha; %)	74

CHAPTER ONE

INTRODUCTION

Since its conception in 1994, the land reform policy in South Africa has been a topical issue, provoking numerous academic and public debates (Didiza, 2005; Bernstein, 2008:1). Recently the progress of the reform process has come under increasing political scrutiny from various sectors, particularly those driving its implementation. The need for additional research, which needs to shed more light on the policy, is therefore evident. The current study investigates the prices at which land was transferred in the years 2002 to 2006. Further, it investigates the levels of productivity on the farms which formed part of the selected sample.

1.1 Context of the research

Market power is an important determinant of price, and is predominantly attributed to the structure of the market (e.g. Perfect competition, Monopoly, Oligopoly, Monopsony, Oligopsony). Factors such as the size of buyers and sellers, and barriers to entry and exit affect a market's structure, and can create an environment where one or a few buyers or sellers dominate, allowing them to have a major impact on the price of goods (Sutton, 2006:1-17). The result is a market of imperfect competition, which will not be efficient (Black *et. al.*, 1999:35). For efficiency to be maintained a competitive market is required, where no single participant has a major impact on the price of a good. Although market structure is an important theoretical contributor to market power, in reality, however, property rights and legislation play an equally vital role in the price determination process.

At the summit on land reform in 2005, South Africa's then deputy president Mlambo-Ngcuka (2005) held that the 'willing buyer/willing seller' framework was slowing down land reform. She stated that the principle must be reconsidered, as the state was the only buyer of land for redistribution, allowing farmers to obtain excessive prices for their land. The Minister of Agriculture and Land Affairs, Didiza (2005),

mentioned that within such a new mechanism, the state should have the power to influence the markets, and that a land tax should be implemented as soon as possible.

The land reform policy comprises two main categories, namely specific historical Restitution of land rights and Redistribution of land. Restitution involves restoring rights of ownership on land dispossessed after 1913 (van der Walt and Pienaar, 2006:322). Redistribution is a less restrictive category in terms of who can obtain land, focusing on meeting “the general need for land amongst the poor in both rural and urban areas”. The process is not based on historical land claims, but aimed to redress the racial imbalance in land ownership (van der Walt and Pienaar, 2006:322). All ‘willing buyer/willing seller’ land redistribution transactions are expected to have taken place at market related prices (Didiza, 2005).

In general, the process of land redistribution seeks to address the racial injustices of the past. Racial discrimination led to inequalities being experienced by a majority of the population. It can be argued that one of the main symbolic and legislative causes of land injustices was the Native Land Act 27 of 1913 (NLA, 1913), which was enacted by the state to alleviate poverty amongst white individuals at the expense of the black population. By 1994, eighty-seven percent of South African land was owned by a white minority, who constituted less than twenty percent of the total population (Ramutsindela, 1997:102). Hence, the newly elected government, in 1994, sought to reverse the *status quo*. To achieve this, the authorities set a target of redistributing thirty percent of commercial farmland to the previously disadvantaged by 2014 (DLA, 2007b:1).

Under the democratic government, a regime of statutes has been formulated to promote “human dignity, the achievement of equality and the advancement of human rights and freedoms” (Constitution, 1996:6). For example, the Restitution of Land Rights Act 22 of 1994 (RLRA, 1994:1), was promulgated to control the process by which specific persons could claim the return of their land, if it had been taken from them post 1913. The act was followed by a series of similar legislative revisions:

a) The Land Reform (Labour Tenants) Act 3 of 1996 (LRA, 1996:1)

- b) The Interim Protection of Informal Land Rights Act 31 of 1996 (IPILRA, 1996:1)
- c) The Extension of Security of Tenure Act 62 of 1997 (ESTA, 1997:1), and
- d) The Prevention of Illegal Eviction from and Unlawful Occupation of Land Act 19 of 1998 (PIEA, 1998:1).

These Acts regarded the consolidation of security of tenure as an important step to improve the quality and security of existing land rights. Finally, the Communal Land Rights Act 11 of 2004 (CLRA, 2004:1) was enacted, providing a procedure to ensure that stable communal land rights were achievable for the efficient governance of community owned land. The legal framework for land reform has thus been put in place, but as mentioned, the process has faced many challenges. The government contends that market reliance on the current framework, which cites the state as the sole buyer has resulted in practical distortions, such as an inability to meet the reform targets.

The principle of one buyer (i.e. government), has led it seems to a situation where ‘unwilling sellers’ are being offered higher than market prices for their land in an attempt to lure them into becoming ‘willing sellers’. The result may be a breakdown in the land redistribution property market, if it is found that a market operating through supply and demand constraints has led to high profits for sellers and expensive public spending by government for farms that may be inefficient in terms of their productivity. Developing the notion held by government that the ‘willing buyer/willing seller’ principle forms the basis for land redistribution, two questions remain:

- 1) Whether the current redistribution prices are publicly justifiable, and/or
- 2) How to improve productivity to justify those prices

1.2 Goals of the research

- a) To investigate the prices paid in the redistribution market versus the ordinary land market with reference to studies undertaken in Northern KwaZulu-Natal.

- b) To explore and analyse the changes in the levels of productivity ‘before’, ‘during’ and ‘post’ transfer of ownership.
- c) To make recommendations for land redistribution policy.

1.3 Research methods overview

The methods used to answer the research questions are thoroughly discussed in chapter three. Briefly, two case studies were conducted in Northern KwaZulu-Natal, focusing on the main areas where land redistribution is taking place. This incorporated only sales of sugarcane farmland, comprising the dominant land usage.

The prices paid per hectare of yield for sales of sugarcane farmland through ‘the willing buyer/willing seller’ method were compared with the average non-redistributive market price per hectare of yield in the surrounding areas. To that end a number of matrices were constructed, which grouped sales transactions according to district municipality. This permitted an analysis of whether above market prices were paid for sugarcane farmland through land redistribution.

Productivity was assessed by comparing the farms output per hectare ‘before’, ‘during’ and ‘post’ transfer, and how it strayed from optimal levels. Production data was also grouped by district municipality and compiled in comprehensive tables.

1.4 Structure of the thesis

Chapter two provides a review of the relevant theory. The methods surrounding the paper are detailed in chapter three, whilst chapter four comprises a case study, which sets out to address the aforementioned goals of the research. Discussion and recommendations follow in chapter five, and chapter six concludes the study.

CHAPTER TWO

THEORETICAL REVIEW

2.1 Introduction

The definition and imposition of property rights are useful in settling legal and ethical uncertainties surrounding rightful ownership, use and consumption of resources. In an era characterised by overpopulation, the relevance of property rights is made even more pronounced as the world's population continually expands (Mbatha, 2008). The world's resources, however, are finite and can hence support only a limited populace. Amongst others (Kay, 1997:1447; Soroos, 1977:647), Hardin (1968:1243) discussed the concern of overpopulation and explained that within the world's restricted parameters, the growth rate of the population must at some point in time equal zero. This suggests that there is an optimum population number, however difficult it may be to define. If the optimum population is considered to be the maximum population, it would mean that every person would have to give up their unnecessary luxuries in order to allow others to have the basics for survival, that is to say to sacrifice excess resources to allow a greater population to exist. In reality, few would be willing to tolerate such deprivation, and it follows that the optimum population would be considerably less than the maximum (Hardin, 1968:1243). In any event, the effective use of available resources at 'optimum population' levels would involve infinite distribution complexities.

Each individual would demand their maximum utility; but would derive this utility from varying sources, and have different goods they would wish to maximize. Evaluating these different commodities in terms of the utility they provide is virtually impossible, as their differing characteristics would render them incomparable. This theoretical challenge can be realistically met by creating a system of weightings in order to assess goods, thus making them comparable (Hardin, 1968:1244). Hardin (1968:1244) described the criterion of this system in nature as 'survival', but explained that when applied to humanity, the greatest problem was to establish an

acceptable measure of weightings. As yet, no thriving populace has achieved a solution, as evidenced by the inability of any general population to have a growth rate of zero for an extended period. This suggests that a solution to the optimum population problem may not exist (Crowe, 1969:1103 commenting on Hardin, 1968).

Although some countries have experienced negative population growth rates for short periods, these were almost invariably caused by unusual events (war, pestilence), and were not due to planned population control. However, though it could be assumed that a positive growth rate would indicate that a specifically defined population had not yet achieved its optimum (Hardin, 1968:1244), in reality countries with the highest positive ratios are often poverty stricken and considered 'overpopulated' (e.g. India). This argues no support for the assumption that a positive growth rate illustrates a lower than optimum population (Hardin, 1968:1244). Gehrt (1996) and Kay (1997) were both in agreement with Hardin (1968) on the issue of overpopulation. However, Gehrt (1996:901) recognised the solution to the problem as education, whereas Kay (1997:1447) disagreed, saying that education or an appeal to a population's conscience would never solve the problem.

Adam Smith's (1776) contribution to the argument, according to Hardin (1968:1245), of the 'invisible hand' led to the postulation that individual decisions would in turn be the best decisions for society as a whole. If this conclusion is viable, it creates justification for the current total freedom in reproduction, on the theory that humankind will individually and naturally control reproduction to achieve the optimum population. However, if the theory does not hold, possible solutions to the ever-increasing problem of overpopulation need to be postulated and closely evaluated.

It is now necessary to review the theory relating to the maximisation of scarce resources, and how property rights have evolved to address the problem (Section 2.2). The different property rights regimes will be analysed in Section 2.3 in an attempt to discover their strengths and weaknesses, and identify the dominant regime in terms of the minimisation of transaction costs and overall effectiveness. Land property rights will be of particular interest, as the concept of the transfer of land ownership is central to the thesis. In Section 2.4, land reform will be considered, focusing on the

redistribution of agricultural land in South Africa, and is followed in 2.5 by a discussion on market structures and their characteristics. A hypothesis is presented in Section 2.6, and a conclusion follows in 2.7.

2.2 The *tragedy of the commons*

One of the biggest potential difficulties associated with overpopulation is that of the carrying capacity of land. As the population grows, land is being placed under great pressure for crop production, grazing and accommodation purposes. Thus the notion of the '*tragedy of the commons*' develops; where any number of individuals (herdsmen) make use of a common piece of land, to share its resources.

If a piece of land was open to all herdsmen (i.e. open-access resource), each would try to keep as many livestock on the land as possible in order to maximize gain. According to Hardin (1968:1244), the question each would ask is "what utility will I gain by adding an additional animal to my herd?" The answer contains two components; the first being the positive proceeds obtained by the herdsman from the additional animal, which will almost equal + 1 (i.e. the highest positive gain in utility per additional animal). The second component would be a negative one, namely overgrazing. In this case, all of the herdsmen would share the negative aspect collectively, as they all utilized the same piece of land, but the individual herdsman's decrease in utility would be only a small portion of - 1 (Hardin, 1968:1244).

Summation of the two components would lead each rational herdsman to add an additional animal to his herd for his own gain. Thus by acting in his own best interests, he would inadvertently be bringing about the downfall of the whole, and herein lies the tragedy (Hardin, 1968:1244). Although the hypothesis provides a valuable lesson, it has been argued that in reality this situation would be avoided (Crowe, 1969:1104).

Hardin's (1968) conclusion was the need for property rights in land ownership. Although his work dates back to 1968, the concept of property rights naturally developed hundreds of years before, when tribes throughout the world allocated each other areas in which to hunt and inhabit, separated from neighbouring tribes

(Demsetz, 1967:350). Tribes thus identified the need to separate land into bounded areas for their exclusive use, thus combating the problem of overexploitation. This early form of property rights evolved to the legislated property rights of today, while retaining the same basic principles. Property rights characterise the relationship between individuals with regard to specific resources, and allow those holding the rights to exclude others from using and benefiting there-from (Bromley and Cernea 1989:5). This allows for the identification of two vital characteristics of property rights, namely the “rights to be included in, and to exclude others from, particular benefit streams” (Runge, 1984:1).

Four property rights regimes have been identified in the authoritative literature, being open-access property, common property, private property and state property, each of which are individually discussed in order to recognise how they developed and evolved over time. Scott (1983:558) stated that “the common law calls property rights, a holder’s relationship to a parcel of land”. Property rights are therefore identified as essential in society, and refer to the ‘bundle of rights’ which govern any given property (Alchian and Demsetz, 1973:19). They enable owners to use their land as collateral in order to obtain funding, to sell it to another party or to force others to move from the land.

2.3 Property rights regimes

It is clear that disorder, anarchy and even violence would be the penalty for the lack of an equitable system of land rights. The various options justify the following analyses.

2.3.1 Open-access property regimes

Buurman (1986:497) explained that economists subscribe to three conditions of ownership, namely “the right to exclude others from the use of the property, the right to use or change the property, and the right to transfer all or some of the rights in an asset through sale or rent”. In the case of open-access property, the only right that holds is the right to use the property, hence open-access property is said to have *no* defined group of owners, and as such, the benefit stream is available to anyone

(Bromley, 1989:872). Open-access resources can be described more accurately as a situation where no property rights exist, as “everybody’s access is nobody’s property” (Bromley and Cernea, 1989:19). It is to this property rights regime that Hardin (1968) drew attention in his work on ‘the tragedy of the commons’. Hardin’s use of the word ‘commons’ was thus ambiguous, as he actually referred to open-access property, which as will be seen differs somewhat from communal ownership. Failure to identify the difference between open-access and common property led to a misunderstanding of these concepts and to the criticism of communal ownership accordingly.

Open-access represents the earliest form of property regime, where resources belonged to no one, and nobody could be excluded from using them. During the time in which the open-access property regime is thought to have begun, resources of land, wildlife and water were abundant. Man was free to roam where he pleased and harvest as he wished. The problem this freedom created is that the cost associated with each individual’s consumption of the open-access resource was not calculated (Demsetz, 1967:353). If an individual wished to maximize the value of his rights to the resource, - a rational decision - he would tend to overexploit the land, and eventually diminish its fruits beyond repair (Demsetz, 1967:353). In those circumstances, it is possible that communities would get together and negotiate the policing of resource usage. However, the costs associated with such an agreement would be excessive and the enforcement of the agreement even more challenging. Costs would be further increased due to the system’s inability to fully account for the expected costs and benefits available to future generations, which would be borne by current users (Demsetz, 1967:354). Thus, the effects of an individual’s actions on their neighbours and on future generations could not be fully accounted for, explaining how open-access regimes would create large externalities.

Open-access property regimes result from the absence of authority and management, and for this reason, over time, as a region’s resources decline, those that remain are often converted into, and managed under communal property regimes. In terms of transactions costs, this transition occurs when the costs associated with open-access property outweigh those of converting to communal ownership. In modern society, there remains little evidence of true open-access resources, with the air and oceans representing some of the few available examples (Dales, 1968:795). Dales (1968:795)

attributed the lack of the establishment of property rights to certain resources (e.g. the air and the oceans) because they were not divisible or immobile like landed property, thus making it impossible to create an effective system of property rights. To conclude, open-access property regimes will probably not be effective in today's world of diminishing resources, and the only instance where they may prevail is where the costs of creating a more controlled form of property rights regime would outweigh the benefits of doing so (Dales, 1968:795).

2.3.2 Common property regimes

Communal ownership has been defined as a right which all members of a specific community may exercise (Demsetz, 1967:353). This form of ownership reflects private property for the group, as all individuals in the community have rights and duties in the common property, and is characterised by the exclusion of non-owners (Bromley and Cernea, 1989:15). The community owning the common property may vary greatly in size, nature and structure, but will have a method of defining ownership in the commons as well as having interaction and a common interest between its members. Such an ownership structure requires an authority system, to enforce compliance and protection without which the arrangement would collapse. The structure thus differs from that described by Hardin (1968) as 'the tragedy of the commons', in that it is managed, as opposed to the unmanaged open-access structure on which Hardin focused. The management required for common property results in greater transactions costs. For common property to be justified, the costs must not outweigh the benefits associated with this property rights regime.

Three well known and influential studies with regard to common property regimes are those of Wade (1988), Ostrom (1990) and Baland and Platteau (1996), on which Agrawal (2001) focused in his work on the governance of common property institutions. All three of these significant authors conducted their research based on real life experiences over many years of study, and all concluded that community management of common resources *can* be implemented effectively (Agrawal, 2001:5). They further specified conditions that are favourable for the success of common resource management, as summarised in Table 2.1 below.

Table 2.1 Conditions identified for the success of Communal Ownership

- i) Small community size.
- ii) Clearly defined boundaries.
- iii) Effective and appropriate leadership.
- iv) Interdependence amongst the members of the community.
- v) An overlap between the community's residential location, and the location of its resources.
- vi) Locally formulated rules of access and management.
- vii) Easy enforcement of these rules.
- viii) Accountability of the leader and his/her officials to other users.
- ix) A match between the restrictions on harvests and the generation of new resources.
- x) A lack of undermining of community authority by the Central Government.

Source: Adapted from Agrawal (2001:1654)

Although these conditions are of interest, and may well contribute to the success of communal ownership, there are a number of factors that were not sufficiently highlighted by the significant works of Wade, (1988); Ostrom, (1990); Baland and Platteau, (1996). Firstly, there was limited attention paid to the characteristics of the resources to which the common ownership related, as well as climate and environmental surrounds (Agrawal, 2001:1655). An important aspect relates to the mobility and storage of resources, where storage refers to the extent to which the resources can be held subsequent to being collected. For example, wildlife needs to be able to move over large areas, making it difficult to contain, whereas lakes are contained, but are not mobile. In general, problems with storage and greater mobility of resources make the task of common resource management more difficult by increasing the associated transactions costs and the unpredictability of availability.

The second area of omission was that of the external physical, social and institutional environment (Agrawal, 2001:1655). Variation in the population levels of the community links directly to environmental degradation. As a community grows, a larger area is needed to sustain the increased number to be fed. Hence, inevitable population growth would generate a number of pressures on the community's

resources. According to Bromley (1989:873), as the community's size increases, the demand for resources would eventually surpass the rate of regeneration, resulting in the probable collapse of the communal property regime. A further difficulty associated with communal structures is the potentially high cost of decision-making connected with obtaining agreement in a large community, which adds to the overall transactions costs (Bromley, 1989:873). Such size issues would tend to create a free rider problem, as it would be difficult to monitor who is contributing and who is not, further increasing transactions costs (Alchian and Demsetz, 1973:21).

With regard to the institutional environment, the development of roads, which would better connect the community with larger markets, may create a situation where the community would be confronted with cash exchanges with outsiders. This would result in increased production in order to generate cash income in addition to simple subsistence production (Alchian and Demsetz, 1973:24-25). The link to larger markets would also result inevitably in the materialisation of new technologies that would alter the costs and benefits available to the community (Alchian and Demsetz, 1973:24). Generally these kinds of changing conditions result in varying objectives and duties between individuals in the community and power struggles between subgroups may consequently occur. As the community develops, alliances may be created with outsiders in an attempt to control or privatise the 'common' resources. In short, it is clear that changes in market, institutional and population related factors may greatly affect the sustainability of the commons (Agrawal, 2001:1656).

Bromley and Cernea (1989:18) highlighted a further concern with respect to communal ownership. The central Government's attitude towards common property regimes is completely beyond the community's control. If the modern state has little regard for the interests of the groups reliant on common property regimes, external threats to the commons would receive less response than matters in which the government had more interest, such as private property. The state's willingness to attend to and protect certain property regimes can be partly explained by their opinion of the relative importance of the citizens incorporated within these property regimes. If the poorer, subsistence farmers generally associated with communal ownership are regarded as insignificant within the greater economy, as is the case in many countries, then the communal property regimes of which they are part, would receive little

protection against threats from others (Bromley and Cernea, 1989:18). Hence, Table 2.2 identifies the following the additional factors that may be vital for the success of communal resource ownership.

Table 2.2 Additional conditions necessary for the success of Communal Ownership

- | | |
|-------|---|
| i) | Focus on resources with low levels of mobility. |
| ii) | Benefits from the resource should be storable. |
| iii) | Predictability of resource availability. |
| iv) | Low poverty levels. |
| v) | Low levels of demand by users. |
| vi) | Gradual change in the levels of user demand. |
| vii) | Adaptation time for new technologies available to the commons. |
| viii) | Low levels of communication with external markets. |
| ix) | Gradual change in the level of communication with external markets. |
| x) | A degree of support from the Central Government. |

Source: Adapted from Agrawal (2001:1659)

After considering all conditions identified in Table 2.1 and Table 2.2, it is clear that for communal ownership to be successful, a significant quantity of positive requirements have to be met, to promote the effectiveness of the property rights regime. However, as recognized by the studies of Wade (1988), Ostrom (1990) and Baland and Platteau (1996), communal ownership can be successful in reality.

2.3.3 Private property regimes

Increased pressure on open-access resources and growing competition amongst the community for such resources creates greater externalities among users. The general response to these inefficient circumstances is to restrict outsider's access to local resources. However within the confines of a growing population, this option is rarely sufficient, and to prevent further losses or resource exhaustion two alternatives are available (Baland and Platteau, 1998:644). The first involves the regulation of the open-access resource, and the creation of the communal ownership structure discussed above. The second option entails accepting the division of the commons,

and the subsequent emergence of individual private rights that will ensure excludability. Private property rights can therefore be defined as a system where the regulations governing control of and access to resources are arranged around the idea that resources are separate and divisible facilities, each belonging to a particular individual, however not overlooking corporate property, which although governed by a group, is also private property (Waldron, 1985:327). Private ownership further embraces the legal ability to exclude others, and permits owners to force additional interested parties to stay away from their private holdings and search for alternatives (Bromley and Cernea, 1989: 12).

In the absence of transaction costs, the two property rights solutions are in theory equivalent and would lead to Pareto Efficiency. The assumption of zero transaction costs is however unrealistic, and the higher costs generally associated with collective decision-making are said to tilt the balance in favour of the private property regime (Baland and Platteau, 1998:645). The private property rights school thus asserts that as scarcity increases the value of a resource, a point would be reached where the gains from privatisation exceed the costs. An important aspect of these gains arises precisely because all the governance costs associated with communal ownership are avoided (Alchian and Demsetz, 1973:22). These costs specifically refer to the organisation of the group and the reaching of collective agreement, and are thus expected to be higher when a group is large or has conflicting goals (Baland and Platteau, 1998:645).

Private property rights result in fewer users, less room for external effects and therefore lower governance costs and inefficiencies. The reduced number of users decreases the pressure on resources, allowing regeneration and less chance of overexploitation, assuming that the owners do not require a large portion of the resources for subsistence use. Further, due to higher stakes held by owners within the resources, there is more of a profit motive, and efficiency will be optimised as the owners work for their own benefit, as opposed to the benefit of the group as a whole (Alchian and Demsetz, 1973:22). Profitability of private property is enhanced due to greater commercialisation of resources, as owners are less reliant on the resources for personal consumption, increasing their realisable value. In conclusion, the one-to-one relationship between owner's actions and their final effects, which private property

regimes create, enables the internalisation of many of the externalities associated with communal property regimes (Baland and Platteau, 1998:645).

However, the benefits identified above must be weighed against the potential costs of privatisation. Firstly, a large percentage of the world's land shortage cases are not related to a physical lack of land, but rather to the high concentration of land owned by a minority of powerful individuals. This raises normative questions on the morality of such a situation, as the land owned by one individual could otherwise provide accommodation and livelihood for a much larger group of people. Secondly, it is argued that private ownership results in the most efficient use of resources. However, Bromley and Cernea (1989:13) highlighted that in certain countries, the best land is devoted to activities that yield the highest rates of return, like cattle farming, while crop farming and alternative activities must take place on poorer quality lands, placing greater pressures on their success. Privatisation therefore takes place on all the best, most arable land, leaving the inferior land to other property regimes. For this reason, it is often unfair to compare the performance of private property with communal property, as the latter cannot be expected to be equally successful if it is taking place on inferior resource bases (Bromley and Cernea, 1989:13). Situations such as these cast doubts on the validity of the hypothesis that private property regimes automatically result in greater efficiency, although in other cases, where land usage is not skewed, increased efficiency may well occur (Alchian and Demsetz, 1973:22).

Additional costs involved in privatisation include those of defining and enforcing private property rights. As the size of the resource grows, and the number of people overseeing it decreases, the costs associated with monitoring and enforcing private property rise accordingly (Baland and Platteau, 1998:645). Moreover, the actual process of dividing large resources into smaller private holdings involves further costs, and in many cases an additional loss of economies of scale. Many wildlife species require large areas in which to survive, and a decrease in the size of their habitat may hinder their viability. On the other hand if these resources were *not* divided (i.e. there was communal ownership), holders of rights could shift use between alternate areas based on seasonality, and in this way reduce the risk of resource degradation. The process of privatisation can therefore be said to have a

number of potential problems, and a choice between property regimes must weigh up all costs and benefits carefully. However, all the property rights regimes discussed thus far have benefits and pitfalls, but the ability of private property to internalise a greater number of externalities tends to tilt the balance in favour of private ownership.

Private ownership also has a number of different forms that will be briefly discussed in an effort to understand how they may vary, as well as the benefits of each variant. The focus is on private property rights in land management as apposed to all other property, as land is the central focus of the thesis. Firstly, small-scale operations, which would usually be managed as family farms. Kuhnen (1982:6) held that this form of private property has been very effective in terms of production and the social environment of farming in general. The main reason for such success is that all members of the family work towards a common goal, making their own decisions and receiving the benefits of their own work. The result is a greater incentive to succeed and a positive working environment.

Secondly, for large holdings, the owner would often hire others to work the land and still receive a sufficient income, but would be centrally involved, and oversee operations personally (Kuhnen, 1982:7). This close owner-work relationship creates a strong profit motive and explains why this form of private property has been successful in terms of production.

Finally, farm tenancy where land is leased from the owner for a specific period of time, allowing a tenant to harvest its fruits. This form occurs mostly in countries that are densely populated, and are characterised by large privately owned resources, where owners have enough land to lease portions out to others while maintaining sections for themselves (Kuhnen, 1982:7-8). Payment for the rental of such land can occur in various forms, including;

- a) Occupational tenancy, where the lessee works on the owners land, a portion of which time is considered as payment of rent.
- b) Cash tenancy, which involves the payment of a fixed cash rental.
- c) Rent in kind, which refers to payment via a fixed amount of produce from the land, and

- d) Share tenancy, where the overall quantity of produce is divided up between owner and tenant in a predetermined ratio (Kuhnen, 1982:8).

Private property is therefore characterised by a greater degree of complexity and a number of varying structures when compared to alternative property rights regimes. As with all such regimes however, private property involves transactions costs, although authoritative literature (Baland and Platteau, 1998:645) suggests that such associated costs tend to be lower than those within additional property rights arrangements.

2.3.4 State property regimes

Where the state has control over resources, and determines the rules pertaining to their use (Bromley, 1989:872), the state has the right to exclude anyone from using the resource, provided the correct procedure for denying access is followed (Demsetz, 1967:353). Alchian and Demsetz (1973:18) observed that the degree of centralisation in a country is closely linked to the extent to which property rights are owned by the state.

The main arguments against state ownership have been based on the costs and inefficiencies associated with this form of property rights regime. Firstly, when resources are owned by the state, government departments are usually assigned the duties of overseeing them. Government employees have very little incentive to minimise costs or improve the quality of resources, as they have no immediate vested interest. Peters (1981:76) suggests that the absence of a profit motive and the lack of profit as a measurement of effectiveness generate further problems such as managerial dysfunction. In the case of private ownership however, there are strong incentives for owners to reduce costs and increase efficiency, resulting in greater profits. Privately owned resources would thus tend to be more efficient than those controlled by the state, and it would make little sense for the state to opt for management when superior outputs could be produced at lower costs by private firms. Shleifer's (1998:10) evidence on privatisation supported the claim that it produces greater quality and efficiency of output. Bromley (1989:873) concurred, noting that the record of state management had in general been very disappointing, and had in fact resulted in a

degradation of resources. Shleifer (1998:10) highlighted a lack of innovation and an inability within government to try to resolve this matter. Indeed, Peters (1981:70) identified a natural tendency for government to maintain the status quo simply in order to show commitment to procedures. Yet innovation is vital for the success of a property rights regime, because without it, the growth of knowledge and ideas is retarded. The lack of emphasis on innovation strongly mitigates against state property regimes.

One of the strongest reasons for privatisation is to eradicate politically motivated resource allocation (Shleifer, 1998:19). For any government, retaining political support to remain in office is essential and one way to do this is by directing benefits (or political patronage) to their political supporters (Lopez-de-Silanes *et al.*, 1997:468). This form of bestowing favour by influential parties has long been used throughout the world, whether by direct enrichment or unearned preferment. Governments have used their control of state firms to direct benefits to their supporters, with results detrimental to social welfare, and reduced efficiency (Shleifer, 1998:19; Shleifer and Vishny, 1993:616). In addition, the officials within government agencies often succumb to bribery to support their own incomes (Shleifer and Vishny, 1993:616). The resulting corruption provides a government that is unable to regulate, contract or run enterprises for public benefit visibly providing further evidence against state controlled property regimes.

Within a state controlled property regime, where a large degree of centralisation exists, the entire country is viewed and managed as a single unit, meaning that individual, cultural and geographic needs are not readily understood or accommodated (Abedian and Biggs, 1998:93). On the other hand, a decentralised system of private property rights can cater for specific geographic needs, improved resource allocation and efficiency, as the supervising individuals within each area would have better knowledge of its available resources and their sustainability (Black *et al.*, 1999:314).

There are however circumstances where state ownership of resources are appropriate.

In instances where incentives for cost reduction predominate and will greatly reduce the quality and efficiency of services (e.g. police, prisons, emergency services, hospitals), a substantial element of state involvement is essential (Shleifer, 1998:19).

The authoritative literature suggests that both open-access and state controlled resources have the greatest number of deficiencies, leaving communal property and private property as potential solutions to the property rights question. However, as discussed, the higher cost of decision-making associated with communal property tends to shift the balance in favour of private property, although research dictates that communal ownership can be effective given certain conditions (see Table 2.1 and 2.2). Table 2.3 summarises the benefits and pitfalls of the property rights regimes discussed, and attributes these points to particular aspects of each regime.

Table 2.3 Summary of the advantages and disadvantages of the property rights regimes

	Main Advantages	Attributed to	Main Disadvantages	Attributed to
Open-access Property	- None	-	- Overexploitation - Inability to account for future generations	- No defined group of owners - User group is too large
Common Property	- Managed i.e. access is restricted - Less exploitation	- Excludability of non-owners	- Large transactions costs - Overexploitation in the long term as the community grows too large	- Large user group
Private Property	- Reduced transactions costs - Less chance of overexploitation - Greater efficiency and profit motive	- Excludability of non-owners - Small user group	- Large monitoring and enforcement costs - Inequitable i.e. High concentration of land owned by relatively few individuals	- User group may be too small
State Property	- Strict management of resources	- Excludability of any potential user by the state	- Weak incentives to minimise costs or generate profits - Lack of innovation - Politically motivated resource allocation	- Servants of the state have no ownership link to the resource - The need to be re-elected

A society may at any point in time, experience all or some of the varying property rights regimes on different areas of land. Changes in factors such as technology, political struggles and population dynamics, however, could generate alterations to

the assignment of these property rights (Feder and Feeny, 1991:146). Taking into account the problems of overpopulation and resource scarcity, a more even distribution of property rights is justifiable in many countries. One of the main government policies that can result in the transfer and/or redefinition of large quantities of property rights over a relatively short time span is the process of land reform.

2.4 Land reform

The term 'reform' refers to change, or more accurately, "an institutional innovation promoted by the ruling order in an attempt to overcome economic or political contradictions" (de Janvry, 1981:384-385). 'Land reform', which is simply a division of reform, transfers land, authority and status from one component of the community to another through redistribution (Flores, 1970:899). In a narrow sense, land reform is concerned with the changing of land ownership from concentration within the hands of a few, to diffusion into the hands of many (Harris, 1969:49). The process thus undertakes to continuously shift and/or redefine property rights, as well as their trade. Harris (1969:50) further argues that a link exists between land reform and reform within government and society: describing how land reform may act as a catalyst resulting in economic and social improvement. Barlowe (1953:173) concurred stating, "land reform often is treated as a necessary or highly desirable condition of economic development."

Land reforms can be grouped into three main categories:

- 1) Firstly, reforms that encompass some redistribution of land, but do not alter the class of citizen in control of the land or the production dynamics (i.e. type and/or intensity of land usage). The result is purely a transfer of property rights (Tuma, 1963:266; de Janvry, 1981:385).

- 2) Secondly, reforms which not only involve redistribution, but also change the production dynamics of the land (e.g. a shift from subsistence to commercial activities), while no alteration to the class of citizen in control is undertaken (Ground and de Janvry, 1978:93).

- 3) Lastly, reforms where redistribution occurs, production dynamics may or may not be altered but most importantly, land is transferred to citizens from different social classes (i.e. from the wealthy to the disadvantaged) (Ground and de Janvry, 1978, 93). In this case, property rights are not only transferred, but also redefined. Such property may be developed into a communal project, or alternatively distributed to small landowners thus helping transform subsistence livelihoods into commercial ventures through the provision of additional land and guidance (Tuma, 1963:266). This type of land reform constitutes the main component of the South African land reform programme.

In addition to these major categories of land reform, a further far less common form exists. Counter-reforms have the opposite effect of general land reforms in that they aim to reduce the concentration of land, or alternatively transform commercial operations back to subsistence activities (Deere and Leon, 2001:34; de Janvry, 1981:388). Ground and de Janvry (1978:98) held that the only situation which may warrant such a reform is where a serious shortage of labour exists, illustrating why in the modern world, with its ongoing population explosion, such reforms are extremely rare.

Although the discussion of land reform thus far has revealed a number of its goals, a more direct look at the objectives is necessary. The goals can be categorised as follows:

- 1) Economic goals – Include enhanced levels of output and market efficiency, greater incomes, a system of fair prices for both consumer and producer, increased gross domestic product (GDP) and a more favourable balance of payments for the country as a whole (Feder, 1965:116; Flores, 1970:899).
- 2) Social goals – Attempt to achieve a more even distribution of income, resources and wealth, increased access to information and education and more equitable bargaining power amongst purchasers and suppliers of every class (Flores, 1970:899).

- 3) Political goals – May be more complicated, but should generally include the guaranteeing of certain rights, such as the right to land and education, the abolition of feudal or semi-feudal requirements and an end to the mistreatment of minorities or disadvantaged groups (Feder, 1965:116). Further political goals include the fulfilment of outstanding promises made by the ruling party at the time of election and the spreading of political power through a more even land distribution (Nelson, 1993:857).

It is therefore evident that land reforms are complex arrangements, which may differ in many ways. However, they all share the common goals of land redistribution and a more equitable land ownership structure.

2.5 Market structure

Market structure describes the condition of a market with respect to its competition.

The different market structures can be distinguished by the following criteria:

- 1) The number and size of the participants, being buyers/consumers and sellers/producers,
- 2) The characteristics of the goods and services traded,
- 3) The extent to which information is freely available,
- 4) Barriers to entry and exit (Sutton, 2006:1-17; Bnet, 2008:1).

Each of the relevant market structures are discussed below.

2.5.1 Perfect competition

A perfectly competitive market is one in which no individual buyer or seller has a degree of market power. They are characterised by the following aspects:

- a) Many willing buyers and sellers,
- b) Barriers to entry and exit are low,
- c) Products traded by different firms are exactly the same (homogeneous),
- d) Firms aim to maximise profits,
- e) All participants have perfect information (Robinson, 1934:104-105; Chamberlin, 1937:566; McNulty, 1968:642).

The result is that no single participant has any influence over the price of the goods it buys/sells, and firms are thus price takers (McNulty, 1968:641). If a firm were to increase its sales price, consumers would simply move to a competitor, and the firm selling at above market rates would lose profits and market share (Robinson, 1934:113). In the long-term, it is impossible for firms to earn excess profits¹ in a perfectly competitive market. This is because if firms are generating such profits in the short-term, it will signal other firms to enter the market, increasing competition, and driving down profits to a normal level (Robinson, 1934:106-107). Perfectly competitive markets will achieve both productive and allocative efficiency in the long-term, however, in reality due to its assumptions very few (perhaps none) of these markets exist (McNulty, 1968:641-643).

2.5.2 Monopoly

A monopoly exists where a specific firm or participant (seller) has enough market power over a good to determine the price or terms at which others can access this product or service. Monopolies are characterised by the following main attributes:

- a) Large barriers to entry for sellers/producers resulting in a lack of competition,
- b) Poor or no viable substitutes,
- c) Many buyers,
- d) Profit maximisation (Black *et. al.*, 1999:34-37; Economist, 2008b:1).

The result is that the monopolist gains a far greater market share than would be the case in a perfectly competitive environment. In a pure monopoly, a single firm produces the entire supply, and is able to influence the price of the good by adjusting the quantity supplied (Economist, 2008b:1). In this instance, the monopolist is described as a 'price maker'. Monopolies are inefficient because they sell

¹ "Economists distinguish between normal profit and excess profit. Normal profit is the opportunity cost of the entrepreneur, the amount of profit just sufficient to keep the firm in business. If profit is any lower than that, the enterprise would be better off engaged in some alternative economic activity. Excess profit, also known as super-normal profit, is profit above normal profit and is usually evidence that the firm enjoys some market power that allows it to be more profitable than it would be in a market with perfect competition" (Economist, 2008a:1).

comparatively fewer goods at higher prices than competitive markets, and make super-normal profits (Black *et. al.*, 1999:35).

2.5.3 Oligopoly

Similar to a monopoly, an oligopoly is a market in which a small number of sellers dominate, as opposed to one (Probert, 2008:1). Oligopolies are thus characterised by the same main attributes as monopolies, being:

- a) Large barriers to entry for sellers/producers resulting in a lack of competition,
- b) Poor or no viable substitutes,
- c) Many buyers,
- d) Profit maximisation (Black *et. al.*, 1999:40; Economy, 2008:1).

Collectively the few sellers control the entire market share, but none of them necessarily has more power over the others. The result is that each firm's decisions influence, and are influenced by the decisions of every other firm. Hence, individual sellers actions must always take into account the likely response of their rivals (Alston *et. al.*, 1997:1254). Oligopolies are therefore always at risk of colluding and acting as a cartel, allowing them to collectively control production and influence sales prices (Economist, 2008c:1). One of the major reasons for collusion is to stabilise prices, and make revenue more predictable. For example, if prices fall too much, the cartel simply cuts production until prices rise to their desired level. Like monopolies, oligopolies will tend to be inefficient, especially if collusion takes place, as they will make abnormal profits by selling comparatively fewer goods at higher prices than competitive markets (Alston *et. al.*, 1997:1259; Economist, 2008c:1).

2.5.4 Monopsony

A monopsony market structure represents the opposite of a monopoly, as there is only one buyer of a certain commodity or service, who interacts with many sellers (Bhaskar *et. al.*, 2002:156). Monopsonies exist due to the following major characteristics:

- a) Large barriers to entry for buyers/consumers resulting in a lack of competition,
- b) Many sellers,

- c) Profit maximisation (Atkinson and Kerkvliet, 1989:251; Bhaskar *et. al.*, 2002:168).

A Monopsonist has a large degree of market power, because by adjusting its quantity demanded the firm can influence the price of the goods or services purchased (Feldman and Wholey, 2001:8). Like monopolies, they will tend to be inefficient (creating deadweight losses) because relative to competitive markets a lesser quantity of goods will be purchased at a lower price (Alston *et. al.*, 1997:1262).

2.5.5 Oligopsony

Oligopsonies are similar to monopsonies, however as opposed to there being a single buyer; instead, a few dominant buyers exist, and interact with a theoretically large number of sellers (Murray, 1995:486). An oligopsony market structure typically displays the following characteristics:

- a) Large barriers to entry for buyers/consumers resulting in a lack of competition,
- b) Many sellers,
- c) Profit maximisation (Bhaskar and To, 1999:192; Murray, 1995:486).

Oligopsonies generally exist where a few buyers/consumers compete with one another to purchase goods or production inputs (Bhaskar, *et. al.*, 2002:156). The result is that the buyers have a large degree of power over the sellers, and can use this to their advantage (DFIT, 2008:1). They can instruct the sellers as to when they want to take delivery, the quantity required and the specifications of these goods. Their market power also means that oligopsonies pass on most of the risks of stockpiling due to varying demand and other losses to the producers. They have the ability to reduce costs by shopping around, sourcing inputs from different suppliers and playing them off against each other. As is the case of all the market structures discussed thus far (with the exception of perfect competition), oligopsonies represent a form of imperfect competition, and will be inefficient. This inefficiency stems from the fact that fewer goods will be purchased at a lower price relative to a competitive market (Just and Chern, 1980:600).

Table 2.4 illustrates a summary of the market structures discussed, and the important attributes of each.

Table 2.4 Market structures overview

Market structure	Number of sellers	Number of buyers	Entry barriers - Sellers	Entry barriers - Buyers	Who has market power
Perfect competition	Many	Many	No	No	No one
Monopoly	One	Many	Yes	No	Seller
Oligopoly	Few	Many	Yes	No	Sellers
Monopsony	Many	One	No	Yes	Buyer
Oligopsony	Many	Few	No	Yes	Buyers

Source: Adapted from Robinson, 1934:104-105; Black *et. al.*, 1999:34-40; Bhaskar *et. al.*, 2002:168; Bhaskar and To, 1999:192.

Market structures are thus an important determinant of which participants have power in a given environment, and whether it is the buyers or sellers that can influence the prices at which goods and services are traded.

2.6 Hypothesis

The thesis aims to investigate:

- 1) The prices paid in the South African redistribution market versus the ordinary land market with reference to Northern KwaZulu-Natal, and
- 2) The changes in the levels of productivity of redistributed farms 'before', 'during' and 'post' transfer of ownership.

2.7 Conclusion

The current overpopulation of the world, and the potential concerns associated with identifying the optimal population have been presented. Property rights, which evolved to address the resulting competition for scarce resources, were then analysed, and the varying forms of property rights regimes were examined. This analysis concluded that private property rights and communal ownership were the two most

potentially viable regimes to maximise scarce resources, and minimise externalities within the context of the modern world.

The aforementioned combination of overpopulation and resource scarcity has led a number of countries to implement land reform policies in an attempt to more fairly redistribute the country's resources within its population. The varying types of land reform, together with the far-reaching goals that this policy may seek to address have been presented. In this regard, the type of land reform utilised in South Africa has been identified. The concept of market structure has been discussed, the relevant variations briefly explored and a hypothesis presented.

Chapter three follows, discussing the methods employed in the research.

CHAPTER THREE

METHODS

3.1 Introduction

In the chapter the research methods used to collect, analyse and present data are given. A case study is presented on the majority of land redistribution sales transactions involving sugarcane farmland in two of KwaZulu-Natal's municipal districts, Uthungulu and iLembe, with focus on the period 2002 to 2007. The topics of greatest importance were the prices at which farmland changed hands and the productivity on these farms during and after transfers.

The methods surrounding the sample area and the data for the case study are discussed in Sections 3.2 and 3.3 respectively. Section 3.3.2 draws particular attention to the data on prices, while 3.3.3 looks specifically at productivity. Section 3.4 ends the chapter with a summary of the salient methods employed in the research.

3.2 Motivation for selected sample area

The Northern KwaZulu-Natal region was chosen as the site of the study for the following reasons:

- a) A large number of land redistribution transactions have taken place since 2002. For example in the 2002 to 2006 period alone, approximately thirty land transactions took place in the Uthungulu and iLembe districts
- b) Access to farms and public authorities was easier because of previous work experience in this area
- c) Familiarity with geographical, political and business cultures of the area.

Transactions were grouped by way of district municipality, with the Uthungulu and iLembe districts representing the chosen sample regions. The majority of the land redistribution cases in Northern KwaZulu-Natal took place within these two districts.

3.3 Data

3.3.1 Data collection

A combination of assistance from the Department of Land Affairs, Inkezo Land Company, the South African Cane Growers Association and structured formal and informal interviews were the primary methods through which data on land transactions were obtained. It was agreed by the researcher and farmers to keep their identities anonymous. Hence, some business documents and information were modified without compromising authenticity to ensure identities were not revealed.

Data on South Africa's market prices were obtained via the 2008 Abstract of Agricultural Statistics, published by the National Department of Agriculture. Because of a lack of data capturing and archiving, a Department of Agriculture representative acknowledged that data was only available until 2005, and that this lack of information had been an ongoing problem since 2006 (NDA, 2008b).

Data concerning the price movements in the Uthungulu and iLembe districts were obtained from Cane Growers (2008a) and was available until 2006. The data used to establish the market price of sugarcane farmland in each district from 2000-2006 were based on property transfers registered with the Sugar Industry Administration Board. With respect to productivity, data on the sugarcane farms that were included in the study were also obtained from Cane Growers (2008c) for the period 1997 up to and including 2007.

In the case studies, sellers were classified into three categories, namely:

- a) Private individuals
- b) Small companies, and
- c) Large corporations

Small companies were defined as those which were not listed on a stock exchange, local or international, and owned property valued at less than R100 million.

Large corporations were defined as those which were either listed on an exchange or controlled property in excess of R100 million.

3.3.2 Presentation and analysis of Prices

Data from the case studies of the Uthungulu and iLembe districts were presented separately. A single table was constructed for each district, containing sales by private individuals and small companies. An additional table was created for the iLembe district containing data on sales by a large corporation. The Uthungulu district had no recorded land redistribution sales by large corporations. For comparison, prices paid were displayed per hectare of yield, and these were considered only for the sugarcane farmland purchased. These prices were exclusive of the price of any buildings, machinery, equipment and VAT (value-added tax).

To ensure the same measure of comparison and because the land redistribution transactions took place over several years, prices were compared with the market price of sugarcane farmland for the corresponding year of sale (e.g. the iLembe district's 2002 redistribution prices vs. its 2002 market price). From this data, it was established whether a premium or discount in relation to the market price was paid in each case, and the extent of the differences is displayed in percentage form. To account for the differing yields between farms, the average production per hectare (tons) for the year of sale, and the three years prior to sale, was calculated and divided into the price paid per hectare. The result was a land redistribution price paid per hectare of yield (tons) based on a four-year average production performance history. This figure was taken as a true reflection of the land redistribution value placed on each farm, and allowed assessments to be made on comparable bases. The method was then applied to other sugarcane farmland sales in which the government was *not* involved, establishing the market price per hectare of yield (four-year) in each district.

The result was two independent sets of data, with no overlapping transactions. The first set included redistribution transactions involving the government (buyer) and a seller. The second data set was comprised of market transactions involving two independent parties, neither of which was in any way government affiliated.

An additional variable was established in each table giving the value placed on every farm by an independent valuer prior to redistributive sale. During the research process a minimum of ten different valuers were identified as having assessed at least one of

the farms incorporated in the case study. The valuation reports formed part of the documentation submitted to the Department of Land Affairs when assessing whether or not to accept the farmer's asking price. A variable labelled 'year of sale for valuation purposes' was created showing the year in which the majority of the transaction took place, or more specifically the period in which the valuation was conducted. This year was essential in the analysis because the valuations played a major role in determining the final sale prices, and thus presented the link between the land redistribution price and the comparative market price.

A single table for the Uthungulu district was created presenting ten land redistribution transactions involving private individuals and small companies. A total of 1207 hectares of sugarcane farmland were included, representing a sizeable sample area and the sum total of all land redistribution transactions for which there was available data.

Two tables were created for the iLembe district. The first table illustrates redistributive sales by private individuals and small companies. A total of 2488 hectares of sugarcane farmland were included, constituting more than double the sample area that was obtained for the Uthungulu district.

The second data table from the iLembe district presented land redistribution transactions where the seller was a large corporation. Although in the table all seven deals were treated separately, some formed sub-parts of one large farm that was divided up into five portions for sales purposes (Table 4.7). For all practical purposes, this data was analysed using a single observation of transactions involving one large corporation.

A total of 27 land redistribution sales involving sugarcane farmland were analysed over the period 2002-2006, from a total of 32 transactions² which have collectively occurred in the Uthungulu and iLembe districts since 1994. The redistribution deals represent cases where the farming of sugarcane was the primary land usage prior to selling to the government, and remained so subsequent to sale.

² Five of the transactions were not included due to a lack of sufficient data.

In order to determine whether there was any relationship between redistribution prices and market rates, the research intended to make use of causality and correlation analysis. Econometric or statistical causality refers to a relationship between two (or more) variables, where one variable is a direct consequence of the other, or vice versa (Gujarati, 2003:696). Causality is, however, a largely philosophical concept, controversial to say the least, and ranges from an extreme view where some believe 'everything causes everything', to others who deny its existence altogether (Gujarati, 2003:696). Closely related to the concept of causality is correlation analysis, which aims to determine the strength of any linear association between two variables (Gujarati, 2003:23). Correlation analysis presented the perfect tool to determine the extent to which market and redistribution prices were related.

3.3.3 Presentation and analysis of Productivity

The productivity cases correspond directly to those of prices that is to say the same farm units that were analysed for prices were also analysed for productivity. The data presentation and analysis focused on three periods of the land redistribution process, which were:

- a) 'Before' farm takeover i.e. the three years prior to the 'year of transfer', in which production was fully accounted for by the previous owners.
- b) 'During' the year of transfer i.e. the year where output was accounted for by both the past and previous owners, as physical transfer of ownership took place during this period.
- c) 'Post' transfer i.e. the years following the year of transfer, where output was fully accounted for by the new proprietors (in this period, the number of years varied per case).

The variable labelled 'average production prior to takeover' indicated output per hectare (tons) for the three years prior to sale. This average was used to ascertain whether production increased or decreased during or after takeover. Data for this period were available for all cases under study.

The 'production during the year of takeover' variable gave the average output per hectare in the year the farms changed hands. In this period, the previous owners would have been responsible for production for part of the year, while the remainder was accounted for by the new proprietors. 'During the year of takeover' data were presented for 27 original cases excluding one case from the Uthungulu district, the data for which was not available (U9).

The 'average production post takeover' was analysed based on the tons of sugarcane produced per hectare per year. In this case, the number of years included in each case varied, depending on the year in which the new growers took over. Based on whether output increased or decreased 'post takeover', the percentage change in the average production is included as a variable in each table. Production data in the 'post transfer' period were presented and analysed for seven of the Uthungulu district's ten original land redistribution transactions involving private individuals and small companies. The corresponding data for the iLembe district were presented and analysed for nine of a possible ten cases. Post transfer, productivity data based on sales by a large corporation in the iLembe district were presented and analysed separately.

A variable was identified and labelled a 'best observed level of output' for each farm. The variable gave the highest annual number of tons produced per hectare over the period 1999-2007, and acted as a gauge of the productive capability of each farm. By comparing this level of output to that produced for the periods 'before', 'during' and 'after' transfers it was possible to evaluate whether the farms were producing significantly close to, above or below the identified 'optimum' levels. A production of within five tons per hectare was accepted as significantly 'close to' optimum levels. Other levels were identified as either below or above the 'best observed level of output'.

Making use of the published recoverable value ³(RV) per ton of sugarcane for the applicable years, the rand value of any income lost due to a lapse in production could be calculated.

3.4 Summary

By contrasting the redistributive ‘willing buyer/willing seller’ cases with independent market-based transactions, data were generated enabling the analysis of the prices that were paid for sugarcane farmland through land redistribution. The extent to which land redistribution prices were above or below ordinary market rates could then be calculated.

A comparison of output (tons) per hectare ‘before’, ‘during’ and ‘after’ transfer allowed for an assessment of the productivity of the farms in question, and whether it had been positively or negatively affected by land redistribution.

The chapter that follows presents the case studies of the Uthungulu and iLembe district’s sugarcane farmland sales.

³ An indication of the gross income (R) a farmer should receive per ton of sugarcane produced, and is specific to each year.

CHAPTER FOUR

CASE STUDY OF KWAZULU-NATAL'S SUGARCANE FARMLAND SALES

4.1 Introduction

The case study of two of Northern KwaZulu-Natal's sugarcane districts illustrates that in the Uthungulu district, six of the ten land redistribution deals involving private individuals and small companies took place at an average of 42% above the ordinary market price. Whilst in the iLembe district's sales by private individuals and small companies, seven of the ten transactions were concluded at an average premium of 38% above the market rate. Data on sales by a large corporation in the iLembe district deviated from the established trend, and showed that the seven deals concluded took place at an average discount to market of approximately 4%.

Results on productivity show that in the Uthungulu district, output declined 'post takeover' in six of the seven cases by an average of 39%. Farms sold in the iLembe district by private individuals and small companies showed significantly reduced productivity after transfer in two of the nine cases by 33% and 66% respectively. However, 'during the year of takeover', production per hectare dropped in the majority of cases (i.e. 12 of 19) in both the Uthungulu and iLembe district's sales by private individuals and small companies. Data on a large corporation in the iLembe district showed that three of the seven farms included registered declines in output per hectare post transfer, whilst only one showed reduced productivity 'during the year of takeover' thus differing somewhat from the previous cases.

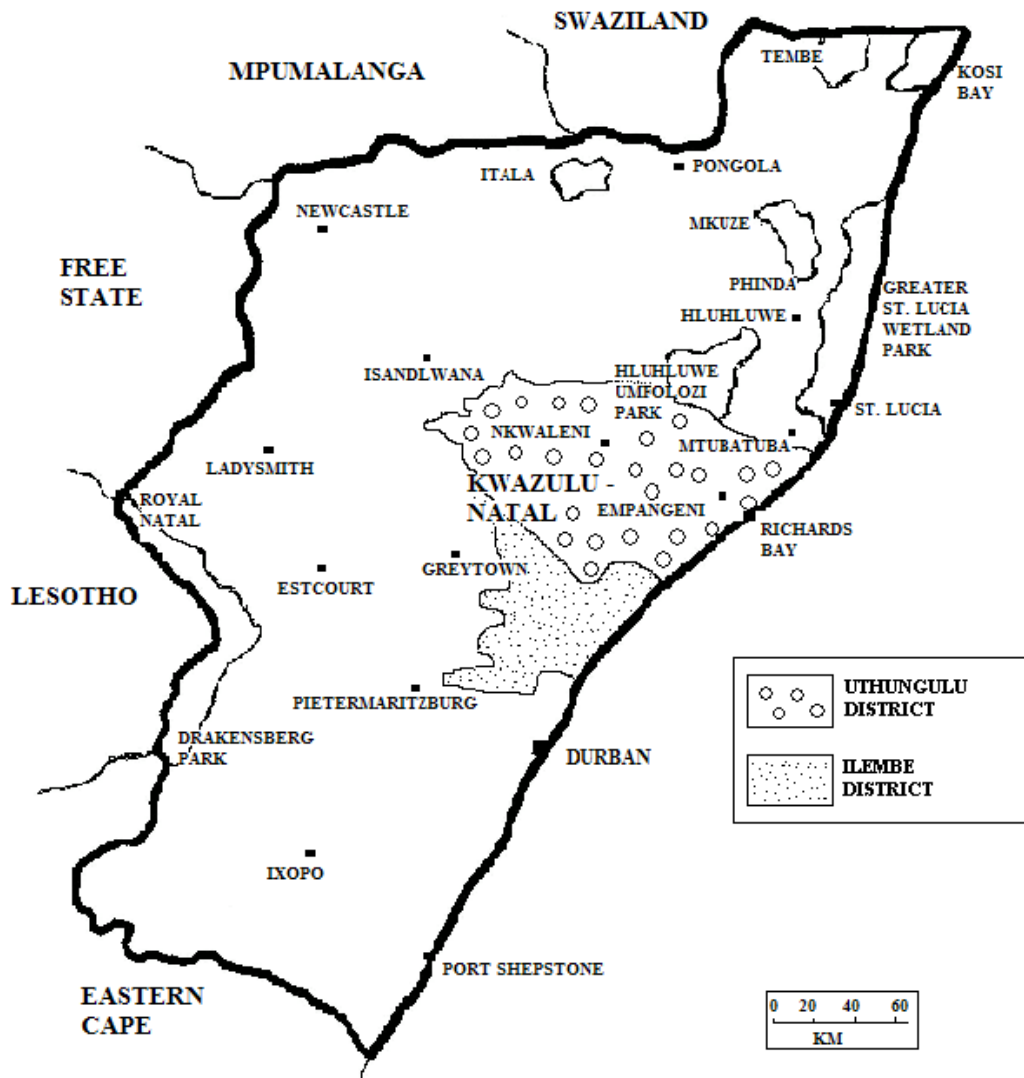
Section 4.2 begins with a description of KwaZulu-Natal and the contribution of its agricultural sector (specifically the sugarcane industry) to the South African economy. Section 4.3 details the two types of land redistribution transactions studied, whilst land redistribution's basic price determination process is then described in 4.4. Trends in South Africa's general farmland prices follow in Section 4.5, and are supplemented

in 4.6 by trends in the price of sugarcane farmland in the Uthungulu and iLembe districts. Sections 4.7 and 4.8 present and analyse the data on prices and productivity respectively, which are followed by a conclusion in 4.9.

4.2 Area description - KwaZulu-Natal

KwaZulu-Natal is situated in the eastern part of South Africa along the coastline that borders the Indian Ocean. Figure 4.1 below shows a map of KwaZulu-Natal, drawing particular attention to the districts of Uthungulu and iLembe.

Figure 4.1 Map of KwaZulu-Natal



Source: Adapted from DTLGA (2008:1)

The map identifies the areas that were studied, and places them within the geography of the province as a whole by identifying some of the main towns and cities in their vicinity. The province boasts a subtropical climate with terrain that ranges from lush bushveld and savannah to the mountains of the Drakensberg. The coastal regions experience summer-rainfall and hot, humid conditions while further inland it is drier, with much colder temperatures prevailing in the Drakensberg Mountains where winter snow fall is common (Government info, 2008:1).

KwaZulu-Natal is relatively small, representing 7.6% of South Africa's total land area but accounting for 16.7% of the country's total GDP, making it the second biggest contributor (Government info, 2008:1, Mkhize, 2008:1). Around five and a half percent of provincial GDP comes directly from agriculture, and KwaZulu-Natal is the country's second largest producer of gross farming income (at a rand value of R8964 million for the 05/06 period), surpassed only by the Western Cape province. When focusing specifically on field crops, which include sugarcane, the province's gross farming income ranks second overall at R1654 million for 2005/2006 (Statssa, 2008a:1). In addition, KwaZulu-Natal employs the second largest work force within the large-scale agricultural sector of 16.6% or over 82 000 paid employees (Statssa, 2008a:1).

The Sugar Industry Agreement 2000 and the Sugar Act 1978 regulate the industry, and all producers of sugarcane and sugar products are bound by this legislation (NDA, 2008a:34). The province's extensive sugarcane plantations constitute a major component of its agricultural production and close to one percent of the economy's total GDP (Mkhize, 2008:1). In areas such as Tongaat on the north coast, the planting of sugarcane can be traced back to 1854 evidencing a long and prominent history of this agricultural commodity (KZN, 2008:1). The South African Cane Growers Association (SACGA) (established in 1927) administers the country's sugarcane growing industry. The number of national registered growers is approximately 45 300 who produce in the region of 21 million tons of sugarcane annually (Huletts, 2008:1; NDA, 2008a:34). The annual added value attributed directly to South Africa's sugarcane production is R4 billion, while the entire sugar industry has an estimated annual direct income of R6 billion (SASA, 2008:1). Although KwaZulu-Natal is a large producer (with over 10 million tons per annum), sugarcane is also grown in the Eastern Cape and all the way up to the Mpumalanga province (Statssa, 2008b:67). About 79% of South Africa's total crop is produced by large-scale growers, while the remainder of production is accounted for by milling companies and small-scale farmers (NDA, 2008a:34).

In producing raw or refined sugar, syrup and other by-products, the South African sugar industry is one of the most cost competitive in the world (NDA, 2008a:34).

Nationally employing, directly and indirectly, an estimated 350 000 individuals, it is a major source of income for many South Africans and hence a vital contributor to overall economic wellbeing through job creation and its contribution to GDP. Because sugarcane represents a key agricultural land usage in Northern KwaZulu-Natal and nationally, the case study is focused on land redistribution transactions that have occurred in this sector. It is argued that an insight into land redistribution requires an understanding of the types of transactions that are taking place and the basic procedure through which sales prices are established, both of which are presented in the following section.

4.3 Types of land redistribution transactions

The land redistribution transactions in KwaZulu-Natal that were investigated were conducted within two programmes, namely Land Redistribution for Agricultural Development (LRAD) and the Proactive Land Acquisition Strategy (PLAS). Both these programmes made use of the ‘willing buyer/willing seller’⁴ framework, but differed in the ownership structures created. Firstly, in the LRAD transactions, the land was redistributed to new owners, who acquired private property rights to the farms (i.e. conditions applicable to a private property regime) (DLA, 2008d). The LRAD beneficiaries who wished to use the farms for commercial agriculture contributed a minimum amount of capital, and then received the farm as a grant. Thus, the purchase price of these farms was not repaid to the government by the newly empowered beneficiaries (DLA, 2008d). Secondly, through the PLAS programme, the government retained ownership of the farmland (purchased from the market), and leased the farms to new proprietors, who paid rent for its use (DLA, 2008d). Hence, the PLAS programme led to a state property regime. LRAD and PLAS deals therefore differed greatly, and those who managed to obtain private property rights to their farms for a fraction of the actual purchase price, through LRAD, had an advantage over PLAS tenants. The process through which the purchase prices of the redistributed farms were determined is discussed below.

⁴ Defined as a market-based approach to land redistribution, which relies on voluntary transactions between willing buyers and willing sellers (DLA, 1997:71). “By virtue of the willing-buyer-willing-seller principle, market value principles are applied when the department acquires land for land reform purposes” (MALA, 2006:30).

4.4 The land redistribution price determination process

Because land redistribution in South Africa has to take place via the willing buyer/willing seller method (Didiza, 2005)⁵, farmers are not compelled to sell their land, and if they wish, they can inform the government that they are not interested in selling. For a sale to take place, full agreement must be reached between the government (buyer), and the seller. Sellers (comprised of private individuals, small companies and large corporations) already in the market would have established an asking price 'equivalent to their perceived' market value of the land. The relevant government departments, however, require valuations to be conducted by independent assessors prior to sale⁶. These farm valuations are then submitted to the Department of Land Affairs, and play an important part of the determination of the final price that the government (buyer) is willing to pay (DLA, 2008d). All willing buyer/willing seller land redistribution deals conducted this way are expected to have taken place at market related prices (Didiza, 2005). Trends in the market prices of South Africa's farmland are discussed in coming sections and represent an important starting point in assessing whether the land redistribution prices paid by the government have been higher than the non-redistributive market prices in KwaZulu-Natal.

4.5 Trends in the market price of South African farmland

The National Department of Agriculture (NDA) publishes the South African Abstract of Agricultural Statistics annually. Of particular interest are the price indices of farmland sold per province, as they enable the tracking of each province's general farmland price trend. Although these prices are not specific to sugarcane, and include various other farming activities, they are an important indicator of how the market has progressed over time. Table 4.1 presents the 2008 price trend data from the start of South Africa's land reform programme in 1994, and indicates the average price per hectare of all farmland sold per year on an index basis. The provinces are ranked from the lowest price per hectare to the highest, using 1994 as the base year.

⁵ Then Minister of Agriculture and Land Affairs.

⁶ During the research process a minimum of ten different valuers were identified as having assessed at least one of the farms incorporated in the case study.

Table 4.1 Movements in South African general farmland prices - price (R) paid per hectare

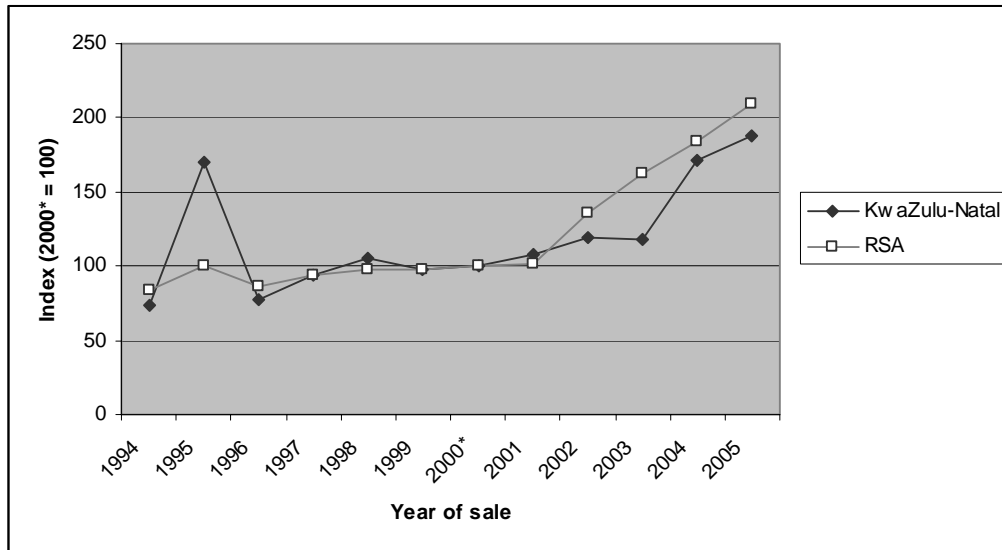
Province	1994	1995	1996	1997	1998	1999	2000*	2001	2002	2003	2004	2005
Limpopo	56.8	57.7	65.6	73.5	81.1	92.2	100.0	96.5	120.1	144.6	170.4	203.7
North West	66.7	75.2	77.4	79.1	87.9	88.4	100.0	103.8	116.5	171.9	205.0	270.0
Free State	68.1	76.5	85.1	82.7	89.1	95.4	100.0	97.0	121.6	156.7	190.2	207.1
Northern Cape	69.4	76.7	78.5	91.8	100.9	95.9	100.0	107.3	141.6	160.7	190.4	214.6
KwaZulu- Natal	73.4	170.1	76.8	93.6	105.1	97.6	100.0	107.5	119.3	117.6	171.3	188.4
Mpumalanga	74.5	78.3	67.8	90.1	113.4	101.5	100.0	101.6	116.4	153.8	143.5	200.4
Western Cape	79.8	96.4	89.1	106.5	79.9	114.3	100.0	102.2	114.0	143.3	173.0	172.3
Eastern Cape	83.0	102.8	103.4	116.4	93.5	94.0	100.0	110.5	148.0	169.8	218.1	216.3
Gauteng	148.1	142.1	250.9	182.1	212.3	188.1	100.0	213.8	269.6	196.6	213.8	461.2
RSA	83.9	100.5	85.9	93.9	97.6	97.1	100.0	101.2	135.4	162.3	183.5	208.8

* 2000 = Base year

Source: Adapted from Abstract of Agricultural Statistics (2008:104)

In Table 4.1, it is evident that the price paid per hectare of South Africa farmland has increased substantially between 1994 and 2005 in each of the nine provinces, and by almost 250 percent, over the same period, when considering the country as a whole. The trends in Table 4.1 are presented graphically in Figure 4.2, and illustrate the prices of farmland for KwaZulu-Natal and the entire South African market over the period 1994-2005.

Figure 4.2 Graph of the movements in KwaZulu-Natal and South African general farmland prices - price (R) paid per hectare



* 2000 = Base year

Source: Adapted from Abstract of Agricultural Statistics (2008:104)

Figure 4.2, illustrates that apart from a very large increase in 1995 (an outlier) and decreases in 1996 and 1999, KwaZulu-Natal displayed an upward trend in farmland prices. The period ranging from 2002 to 2005 is of greatest importance⁷, as it was within this period that the majority of the transactions included in the case study took place. Table 4.1 shows that 2004 and 2005 were years of major growth in KwaZulu-Natal's farmland prices, with the province's 2004 single period growth being the highest of any province. However, when compared with the country as a whole, KwaZulu-Natal's overall price growth remained below average.

4.6 Trends in the market price of KwaZulu-Natal sugarcane farmland

When all other farming activities are excluded and focus is shifted purely to sugarcane farmland, the following trends emerge for the districts under study. Table 4.2 uses an index of the price paid per hectare as a basis to show what market prices have been paid for sugarcane farmland for the relevant period.

⁷ The boom in the price of South Africa's rural immovable property since 2000 is evident, with general prices increasing by over 88 percent.

Table 4.2 Price index of KwaZulu-Natal sugarcane farmland market prices based on price (R) paid per hectare- Uthungulu and iLembe districts, 2001-2006

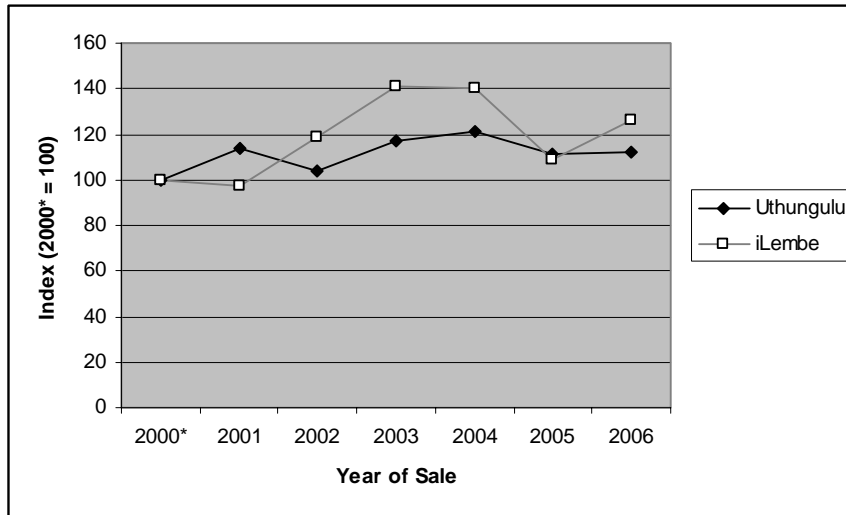
KZN District	2000*	2001	2002	2003	2004	2005	2006
Uthungulu	100	113.8	104.2	116.9	121.4	111.2	111.8
iLembe	100	97.3	118.6	140.7	140.1	108.8	126.3
Average	100	105.6	111.4	128.8	130.7	110.0	119.1

*2000 = Base year

Source: Adapted from Cane Growers (2008a)

The data above varies greatly between the two districts, with the iLembe district displaying far larger movements in its sugarcane farmland price index, while the Uthungulu district's data looks less volatile. Figure 4.3 uses Table 4.2 data to provide graphical trends for the index of market prices of sugarcane farmland in the districts of Uthungulu and iLembe, in the same given period.

Figure 4.3 Changes in KwaZulu-Natal sugarcane farmland market prices based on price (R) paid per hectare - Uthungulu and iLembe districts



*2000 = Base year

Source: Adapted from Cane Growers (2008a)

In Figure 4.3, it is apparent that prices in the iLembe district illustrate a clear, sharp upward movement from 2001 to 2003, followed by a large decline in 2005⁸, and a subsequent recovery in prices in 2006. The changes in prices paid per hectare of sugarcane are consistent with those paid for all general farmland within KwaZulu-Natal (Figure 4.2), except for the 2005 year, where the sharp drop in sugarcane farm prices was not felt within the general farmland market.

Focusing on the Uthungulu district, results on the market price paid per hectare differ somewhat from those in the iLembe district. Apart from a spike in prices in 2001, and a corresponding fall in 2002, the Uthungulu district depicts a more gradual upward movement, with market prices actually dropping slightly in 2005 and 2006. Compared with the price of all general farmland in KwaZulu-Natal (illustrated in Figure 4.2), the Uthungulu district's price growth has been far less exaggerated, and cannot be viewed as consistent with that of the province as a whole.

It is generally accepted that when dealing with sugarcane, a more accurate measure of land prices is that which considers individual production yields, i.e. price paid per ton of yield (Inkezo, 2008). Hence, the following additional table is necessary, as it represents prices paid per hectare of yield (tons), based on a four-year average production history.

Table 4.3 Price index of KwaZulu-Natal sugarcane farmland market prices based on price (R) paid per hectare of yield (tons) - Uthungulu and iLembe districts, 2001-2006

KZN District	2000*	2001	2002	2003	2004	2005	2006
Uthungulu	100	114.6	98.9	100.3	108.1	106.0	113.9
iLembe	100	99.8	114.9	136.9	133.2	101.4	133.1
Average	100	107.2	106.9	118.6	120.7	103.7	123.5

*2000 = Base year

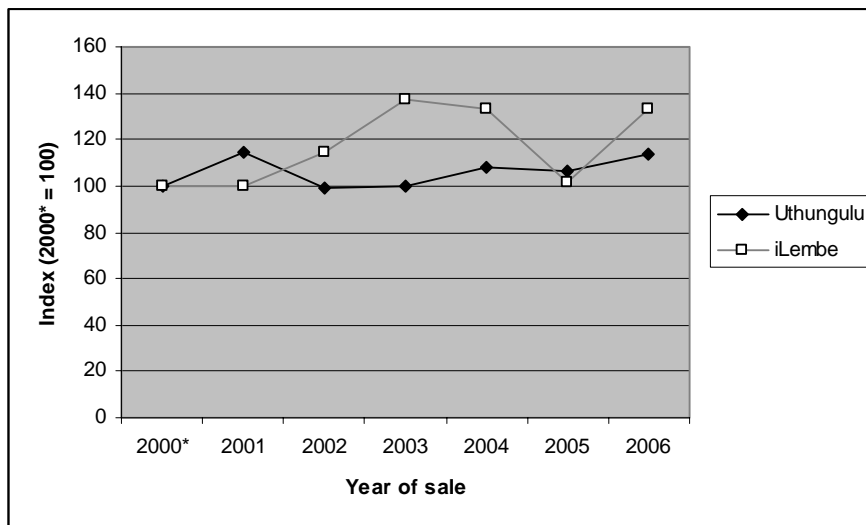
Source: Adapted from Cane Growers (2008a)

In the table, the iLembe district *once again* shows results that are erratic, while in the Uthungulu district a more stable, slow rate of change is evident. Another interesting

⁸ Possibly because of the fall in the recoverable value per ton of sugarcane from R1357.01 in 2003/2004, to R1297.19 in 2004/2005.

observation when comparing Table 4.2 and Table 4.3 is that the level of farmland inflation is consistently higher from 2002 to 2005 when using the price paid per hectare data. This suggests that the use of the price paid per hectare of yield data may be a more conservative measure of sugarcane farmland price inflation. This is likely due to the inclusion of the yield per hectare (tons) produced, instead of simply classing all sugarcane farmland as equal and disregarding productivity. A helpful graphical representation of Table 4.3 is demonstrated in Figure 4.4.

Figure 4.4 Changes in KwaZulu-Natal sugarcane farmland market prices based on price (R) paid per hectare of yield (tons) – Uthungulu and iLembe districts



*2000 = Base year

Source: Adapted from Cane Growers (2008a)

In Figure 4.4, a similar price pattern to Figure 4.3 emerges. Therefore, it can be concluded that whether or not production yields are considered when dealing with *changes* in market prices, the results obtained do not vary significantly for the studied period. However, due to the price paid per hectare data generally overstating nominal annual price increases during the period studied, a more conservative measure of sugarcane farmland pricing should account for productivity per hectare (tons).

It is further apparent that since 2000, the nominal market price of sugarcane farmland has indeed been on the increase in KwaZulu-Natal, in the district of Uthungulu (+ 13.9%) but specifically within the iLembe district (+ 33.1%), as at the end of 2006⁹.

4.7 Redistribution price data

The following data provides some answers to the question as to whether ‘above’ market prices have been paid for sugarcane farmland via the ‘willing buyer/willing seller’ process of the land redistribution programme. Hence, the preceding data on market prices is compared to the forthcoming redistribution price data.

Table 4.4 provides a summary of all market prices, as discussed in Section 4.6. The data was extracted from documented property transfers registered with the sugar industry administration board.

Table 4.4 Summary of the average market prices (R) for KwaZulu-Natal sugarcane farmland

Average market prices for sugarcane farmland (R) from 2000-2006				
KZN District	Uthungulu		iLembe	
	A	B	A	B
2000	18378	332	15135	283
2001	20923	381	14729	282
2002	19149	328	17947	325
2003	21489	333	21289	387
2004	22316	359	21210	377
2005	20431	352	16475	287
2006	20553	378	19120	376

A = Average market price per hectare (R)
 B = Average market price per hectare of yield (R), based on 4 year average yield

Source: Adapted from Cane Growers (2008a; 2008c)

Table 4.4 presents market prices (measured per hectare and per hectare of yield) for the two districts and for the period 2000-2006.

⁹ Note: the annual increases in farmland prices have not been adjusted for general inflation.

4.7.1 Uthungulu district's land redistribution: private individuals and small companies

Table 4.5 presents summarised data on the willing buyer/willing seller transactions which have occurred in the Uthungulu district. The full table can be found in Appendix A-1.

Table 4.5 Uthungulu- land redistribution transactions of private individuals and small companies

UTHUNGULU DISTRICT						
LAND REDISTRIBUTION - PRIVATE INDIVIDUALS AND SMALL COMPANIES						
FARM/ CASE	AUC (HA)	YEAR OF SALE FOR VALUATION PURPOSES	AVERAGE TONS PRODUCED PER HA (4YR)	LAND REDISTRIBUTION PRICE PAID PER HA OF YIELD (R)	MARKET PRICE PER HECTARE OF YIELD (R)	PREMIUM (+) OR DISCOUNT (-) ON MARKET PRICE (%)
U 1	108	2003	47	198	333	40.54 -
U 2	105	2004	30	185	359	48.47 -
U 3	123	2004	33	295	359	17.83 -
U 4	98	2004	33	289	359	19.50 -
U 5	220	2004	29	548	359	52.65 +
U 6	59	2006	35	548	378	44.97 +
U 7	145	2006	68	519	378	37.30 +
U 8	52	2006	62	616	378	62.96 +
U 9	170	2006	63	464	378	22.75 +
U 10	127	2006	33	505	378	33.60 +
TOTAL	1207	-	433	4167	3659	127.89 +
AVERAGE	121	-	43	417	366	12.79 +

AUC = Area under cane, measured in hectares

Note: Both the 'Market price per hectare of yield' and the 'Land redistribution price paid per hectare of yield' are based on an average 4yr production history

Where an average 4yr production history is used, this includes the yield from the 'year of sale for valuation purposes', and the 3 previous years

Source: Adapted from Cane Growers (2008a; 2008c); DLA (2008a)

In Table 4.5, of the ten redistribution sales, one took place in 2003, four in 2004 and five in 2006, with none being concluded in 2005.

Based on the price paid per hectare of yield, six of the ten transactions took place at above market prices. Five occurred in 2006, and one in 2004. Redistribution prices

were at first (2003-2004) below those of the market, but at some point in 2004 started rising, and overtook market rates. Two possible explanations for this rapid price change are, firstly, due to the pool of 'easy' sellers for government to buy from shrinking very fast. The result being a reduced supply of 'willing sellers', meaning that the government may have been compelled to offer higher prices to induce sales. Secondly, farmers may have realised that the government was in a poor bargaining position. Farmers could have used this to their advantage to attain higher prices for their farmland. On average, prices paid per farm for land redistribution were 12.79% higher than in the ordinary market. On the other hand, when cases U1 and U2 (outliers on the discount side) are excluded from the calculation, the number increases dramatically to a premium paid of 27.11% per farm for the remaining cases. The situation is amplified when the 2006 year is considered in isolation, and the average premium paid per farm, compared to the market price for the year, increased to a massive 40.32%. The large average premium in 2006 makes it clear that the general price paid by the government has increased over the researched time period.

Because there is only one buyer of land for redistribution (the government), individual farmers have a large degree of bargaining power, and can influence the sales price by refusing to sell unless and until the price is high enough. This problem is accentuated by the fact that the government identifies specific farms it deems suitable for redistribution, meaning that these owners are fully aware of the demand for their land. Knowing that the government does not necessarily wish to take its business elsewhere the owner may find him/herself in a situation where refusing to sell at a market rate will induce the government to offer an above market price. If there were more buyers of land there would be greater competition, and the individual farmers would not have such a dominant influence on price. This breakdown in the competitive market structure, which by definition requires many buyers and sellers, may well provide an explanation for the above market prices demanded for sugarcane farmland in the Uthungulu district.

It is further evident that prior to 2004 it was not always necessary to pay higher prices for land for redistributive purposes. It is possible that the government only began paying more for farmland when it realised that the redistribution programme was progressing too slowly to meet its own targets on time, and may have offered higher

prices to attempt to accelerate the process. No concrete evidence to support this proposition has been discovered. However, very few alternative explanations exist for the sudden increase in redistribution prices offered. A pattern does emerge, however, showing an increased number of transactions per year associated with higher prices, possibly due to a greater interest by farmers to sell land when higher prices were offered¹⁰. This evidence, if confirmed by additional cases, may support the proposition that the government is tendering higher prices simply to speed up the land reform process. Further support for this view is provided by the fact that since land reform started in 1994 not one land redistribution case involving sugarcane land took place in the Uthungulu district until the 2002 year, in which one transaction occurred but was not included in the current research due to a lack of complete data. Hence, of a total of twelve transactions, ranging from 1994 to 2006, five had their roots in the 2006 year, and all were concluded at above ordinary market rates.

4.7.2 iLembe district's land redistribution: private individuals and small companies

Table 4.6 presents summarised data on land redistribution sales by private individuals and small companies in the iLembe district, as well as comparative market price data. The full table can be found in Appendix A-2.

¹⁰ In support of this, at least two farmers in the study admitted that had it not been for the high prices offered by the government, they would not have sold their farms at all.

Table 4.6 iLembe- land redistribution transactions of private individuals and small companies

ILEMBE DISTRICT						
LAND REDISTRIBUTION - PRIVATE INDIVIDUALS AND SMALL COMPANIES						
FARM/ CASE	AUC (HA)	YEAR OF SALE FOR VALUATION PURPOSES	AVERAGE TONS PRODUCED PER HA (4YR)	LAND REDISTRIBUTION PRICE PAID PER HA OF YIELD (R)	MARKET PRICE PER HECTARE OF YIELD (R)	PREMIUM (+) OR DISCOUNT (-) ON MARKET PRICE (%)
I 1	200	2002	39	250	325	23.07 -
I 2	150	2004	39	474	377	25.73 +
I 3	79	2004	36	465	377	23.34 +
I 4	1108	2004	51	234	377	37.93 -
I 5	93	2004	13	453	377	20.16 +
I 6	55	2004	47	342	377	9.23 -
I 7	95	2005	22	405	287	41.11 +
I 8	211	2005	42	472	287	64.46 +
I 9	45	2005	29	418	287	45.64 +
I 10	452	2005	39	427	287	48.78 +
TOTAL	2488	-	356	3940	3355	198.99 +
AVERAGE	249	-	36	394	335	19.90 +

AUC = Area under cane, measured in hectares

Note: Both the 'Market price per hectare of yield' and the 'Land redistribution price paid per hectare of yield' are based on an average 4yr production history

Where an average 4yr production history is used, this includes the yield from the 'year of sale for valuation purposes', and the 3 previous years

Source: Adapted from Cane Growers (2008a; 2008c); DLA (2008a)

Table 4.6 presents results for the iLembe district. Of the ten redistribution sales, one took place in 2002, five in 2004 and four in 2005, with none taking place in 2003 or 2006.

Based on the price paid per hectare of yield, seven of the ten transactions studied were concluded at above ordinary market prices. Three of these transactions took place in 2004 and four in 2005. On average redistribution prices paid per farm in the iLembe district were 19.90% higher than non-redistributive market prices. Excluding cases I1 and I4 (outliers on the discount side), the average premium paid for the remaining eight cases increased to 32.52%. Moreover, when considering the 2005 year alone the premium per farm is at a remarkable 50.00%. It is thus quite clear that as time has progressed, the annual premiums being paid by the government for land redistribution

purchases have increased substantially. As in the previous cases (in the Uthungulu district), average redistribution prices started below market, then grew rapidly in 2004 and exceeded non-redistributive market rates. Based on the last four years of data it also appears that the upward trend in redistribution price will continue. This trend is illustrated by the Uthungulu and iLembe district's sales by private individuals and small companies.

Over the research period, two transactions, which had their roots in the 2002 and 2004 years, could not be included due to incomplete data. This means that out of a total of twelve land redistribution transactions involving sugarcane farmland sold by private individuals and small companies which have occurred in the iLembe district since 1994, at least seven took place at prices substantially (at least 20%) above market rates. Of the cases mentioned, four share a 'year of sale for valuation purposes' in the 2005 year.

The high prices are to be expected bearing in mind the government's high demand for farmland, and the farmers' dominant bargaining power. The nature of such transactions meant that the government was in the weaker position, and was at a negotiating disadvantage. The government's goal is to redistribute 30% of South Africa's commercial farmland to the previously disadvantaged by 2014. At December 2004, a mere 3% had been redistributed since 1994 (BusinessToday, 2007:1). The motivation to accelerate the land redistribution process is therefore evident. Farmers, acting understandably in the circumstances, used the government's predicament to obtain higher than ordinary compensation for their land.

4.7.3 iLembe district's land redistribution: large corporation

Table 4.7 presents prices for land redistribution transactions that have been concluded in the iLembe district, but in this case, reflect sales made by a large corporation to the government. For a full set of data, refer to Appendix A-3.

Table 4.7 iLembe- land redistribution transactions of a large corporation

ILEMBE DISTRICT						
LAND REDISTRIBUTION - LARGE CORPORATE DEALS						
FARM/ CASE	AUC (HA)	YEAR OF SALE FOR VALUATION PURPOSES	AVERAGE TONS PRODUCED PER HA (4YR)	LAND REDISTRIBUTION PRICE PAID PER HA OF YIELD (R)	MARKET PRICE PER HECTARE OF YIELD (R)	PREMIUM (+) OR DISCOUNT (-) ON MARKET PRICE (%)
I 11a	88	2004	47	333	377	11.67 -
I 11b	95	2004	46	352	377	6.63 -
I 11c	105	2004	48	381	377	1.06 +
I 11d	128	2004	46	316	377	16.18 -
I 11e	82	2004	47	401	377	6.37 +
I 12	93	2004	48	343	377	9.02 -
I 13	123	2004	32	411	377	9.02 +
TOTAL	714	-	313	2536	2636	27.05 -
AVERAGE	101	-	45	362	377	3.86 -

AUC = Area under cane, measured in hectares
 Note: Both the 'Market price per hectare of yield' and the 'Land redistribution price paid per hectare of yield' are based on an average 4yr production history
 Where an average 4yr production history is used, this includes the yield from the 'year of sale for valuation purposes', and the 3 previous years
 Cases I 11a-e represent one farm, which was split into five sections for sales purposes

Source: Adapted from Cane Growers (2008a; 2008c); DLA (2008a)

Only one case was made regarding redistribution transactions by a large corporation. Between government and that corporation seven farm units were sold as shown in Table 4.7.

Using the price paid per hectare of yield only three of the seven transactions took place at above market prices. On average, these deals were concluded at a premium of a mere 5.48% per farm, and cannot be cited as substantially above the market rate. Collectively considering all seven entries, an average discount on the market price of 3.86% per farm was registered.

The large corporation's sales thus represent a special case, differing greatly from the established trend of paying above market redistribution prices for sugarcane farmland in the districts of Uthungulu and iLembe. The conclusion is that not all categories of redistribution transactions are taking place at prices higher than the ordinary market

rate. The circumstances surrounding the sales by the large corporation, and why these transactions may have differed from the individual or small company cases will be discussed in chapter five.

The question that the above analyses beg (specifically sales by private individuals and small companies) is why not all those who sold their sugarcane farmland, did so to the government, if higher prices were possible. The following brief explanations are given:

- 1) Not all the farmers may have been aware of the higher rates being offered by the government.
- 2) In most of the cases studied, the period of each transaction, from evaluation to actual hand over, took over one year. Distressed sellers or those wishing to avoid such transactions costs may have needed to conclude the sale of their land in a much shorter time frame, and as such, the option to sell to the government would not have been viable.
- 3) It is possible that some of the cases used to establish the non-redistributive ordinary market price data set were not arms-length, and may have been purposely conducted at below market prices. Such cases would have placed downward pressure on the established average market rate.
- 4) Although the data set used to establish the average ordinary market price of sugarcane farmland included all transactions registered with the Sugar Industry Administration Board, a larger sample may have been necessary.
- 5) The use of a four-year production history may have covered a period of poor performance of certain farms relative to their production potential. The result is that these farms may have been undervalued by the study, although the independent farm valuers may have seen the farms greater output potential, and valued them accordingly.

4.8 Productivity data

The discussion regarding the research question as to whether there was any change in the productivity of the farms studied 'during' and 'after takeover' by the newly empowered owners is given in this section. It would be expected that the new owners would not be as familiar with the farms as the past proprietors. Without some initial guidance with regard to capital expenditure, maintenance of machinery and general management, production could be expected to drop on these farms. In realisation of this challenge, the KwaZulu-Natal Department of Land Affairs (after some initial planning during 2006) established a mentorship programme in the first quarter of 2007, specifically for LRAD transactions (DLA, 2008c). Fourteen specialist agricultural advisors were appointed and the objectives of their work included:

- Carrying out pre-settlement evaluations (benchmark) of the properties earmarked for transfer;
- Producing a business plan which would serve as a budget for the property; and
- Appointing mentor(s) to oversee the property's operations and check that the mentors were performing their duties correctly (DLA, 2008c).

In summary, all aspects of farming operations would be 'mentored' and the most common cause of failure - poor financial management and control - would be made a priority (DLA, 2008c). The KwaZulu-Natal mentorship programme was characterised by the following three important attributes, for consideration in the discussion chapter:

- a) The programme was established in 2007 while the land redistribution programme was formulated in 1994,
- b) By October 2008, *none* of the official agricultural advisors appointed by the Department of Land Affairs had received a single assignment,
- c) The PLAS programme does not have a similar mentorship programme in place (DLA, 2008d).

The lack of support programmes such as that of mentorship begs an enquiry into how the productivity of the farms included in the case study were affected since transfer of ownership. The investigation on the productivity of the two districts is presented in the following subsection.

4.8.1 Uthungulu district: private individuals and small companies

Data on the productivity of the sugarcane farms included in the Uthungulu district's land redistribution process are presented in Table 4.8 below.

Table 4.8 Uthungulu's land redistribution productivity data for sales by private individuals and small companies (Tons produced per hectare)

UTHUNGULU DISTRICT						
LAND REDISTRIBUTION - PRODUCTIVITY DATA						
FARM/ CASE	START DATE OF NEW GROWER	BEST OBSERVED LEVEL OF OUTPUT PER YEAR (Tons/Ha)	PRODUCTION DURING YEAR OF TAKEOVER (Tons/Ha)	AVERAGE PRODUCTION PRIOR TO TAKEOVER (3 YRS) (Tons/Ha)	AVERAGE PRODUCTION POST TAKEOVER (YRS VARY) (Tons/Ha)	PERCENTAGE INCREASE (+) OR DECREASE (-) IN PRODUCTION POST TAKEOVER
U 1	2004	52.79	34.39	48.39	15.48	68.01 -
U 2	2004	38.96	12.66	36.32	25.04	31.06 -
U 3	2004	38.84	30.12	34.34	24.34	29.12 -
U 4	2005	61.05	49.20	39.77	55.23	38.87 +
U 5	2004	40.91	17.91	32.76	16.10	50.85 -
U 6	2007	67.01	40.51	33.16	-	-
U 7	2006	89.26	47.11	74.30	58.25	21.60 -
U 8	2007	73.07	35.42	58.46	-	-
U 9	2008	87.54	-	70.32	-	-
U 10	2006	50.32	50.32	27.36	17.40	36.40 -
TOTAL	-	599.75	317.64	455.18	211.84	198.17 -
AVERAGE	-	59.98	35.29	45.52	30.26	28.31 -

Source: Cane Growers (2008c)

The table shows that on average, production decreased by 28.31% after the new owners took control of the farms. Only in one (U4) of the seven cases considered did productivity increase. Excluding this outlier, production for the remaining six cases decreased on average by 39.51% 'post takeover'. It is also evident that 'production during the year of takeover' dropped in six of the nine investigated cases, when compared to the 'average production prior to takeover'.

4.8.2 iLembe district: private individuals and small companies

Data on the iLembe district's productivity for the periods before, during and after the land redistribution deals were concluded are presented in Table 4.9.

Table 4.9 iLembe's land redistribution productivity data for sales by private individuals and small companies (Tons produced per hectare)

ILEMBE DISTRICT						
LAND REDISTRIBUTION - PRODUCTIVITY DATA						
FARM/ CASE	START DATE OF NEW GROWER	BEST OBSERVED LEVEL OF OUTPUT PER YEAR (Tons/Ha)	PRODUCTION DURING YEAR OF TAKEOVER (Tons/Ha)	AVERAGE PRODUCTION PRIOR TO TAKEOVER (3 YRS) (Tons/Ha)	AVERAGE PRODUCTION POST TAKEOVER (YRS VARY) (Tons/Ha)	PERCENTAGE INCREASE (+) OR DECREASE (-) IN PRODUCTION POST TAKEOVER
I 1	2002	50.41	43.63	37.25	43.77	17.50 +
I 2	2004	53.16	33.91	40.72	40.36	0.01 -
I 3	2005	65.02	65.02	36.68	56.64	54.42 +
I 4	2004	57.74	52.78	50.39	55.04	9.23 +
I 5	2005	33.13	10.92	13.14	29.05	121.08 +
I 6	2004	62.83	46.46	46.78	48.40	3.46 +
I 7	2006	41.98	5.22	14.96	5.04	66.31 -
I 8	2005	57.51	36.83	43.89	29.12	33.65 -
I 9	2007	38.19	33.47	35.08	-	-
I 10	2005	70.12	33.25	41.02	53.46	30.33 +
TOTAL	-	530.09	361.49	359.91	360.88	136.05 +
AVERAGE	-	53.01	36.15	35.99	40.10	15.11 +

Source: Cane Growers (2008c)

Compared to the Uthungulu district, the table indicates different results for the sales by private individuals and small companies in the iLembe district. 'Post takeover' production increased by an average of 15.11% for the nine cases included. Two cases (I7 and I8) displayed substantial decreases in production, of approximately 33% and 66% respectively. A focus on the 'production during the year of takeover' shows similar results to the Uthungulu district. Six of the cases for which data were available registered noticeably reduced output per hectare, while one case (I6) showed almost no change.

4.8.3 iLembe district: large corporation

Productivity data for the iLembe district's land redistribution sales by a large corporation is presented in Table 4.10.

Table 4.10 iLembe's land redistribution productivity data for sales by a large corporation (Tons produced per hectare)

ILEMBE DISTRICT						
LAND REDISTRIBUTION - PRODUCTIVITY DATA						
FARM/ CASE	START DATE OF NEW GROWER	BEST OBSERVED LEVEL OF OUTPUT PER YEAR (Tons/Ha)	PRODUCTION DURING YEAR OF TAKEOVER (Tons/Ha)	AVERAGE PRODUCTION PRIOR TO TAKEOVER (3 YRS) (Tons/Ha)	AVERAGE PRODUCTION POST TAKEOVER (YRS VARY) (Tons/Ha)	PERCENTAGE INCREASE (+) OR DECREASE (-) IN PRODUCTION POST TAKEOVER
I 11a	2004	53.97	53.14	44.49	41.25	7.28 -
I 11b	2004	60.29	50.13	44.49	51.05	14.74 +
I 11c	2004	59.45	56.79	44.49	56.21	26.34 +
I 11d	2004	53.97	50.43	44.49	29.97	32.64 -
I 11e	2004	70.68	56.29	44.49	60.80	36.66 +
I 12	2004	57.68	42.84	49.59	42.98	13.33 -
I 13	2004	49.90	44.16	27.48	48.05	74.85 +
TOTAL	-	405.94	353.78	299.52	330.31	99.34 +
AVERAGE	-	57.99	50.54	42.79	47.19	14.19 +

Source: Cane Growers (2008c)

On average, the seven farms sold by the large corporation displayed increases in output per hectare of 14.19% each, thus reflecting similar results to the iLembe district's sales by private individuals and small companies. However, three of the farms (I11a, I11d, I12) registered drops in production 'post takeover' of 7.28%, 13.33% and 32.64%. Unlike all previously recorded cases where the majority of farms showed a drop in production 'during the year of takeover', only one (I12) of the above seven farms had a decline in output during that period, depicting an easier transition between new and previous owners. As these cases all involved one large corporation, no general conclusion can be drawn from the results but they do provide an indication that it is possible for productivity to be maintained or even improved after land redistribution. A more detailed look at the circumstances surrounding the large corporation's sales, and a probable explanation of why this special case differed from the others will be presented in the following chapter.

4.9 Conclusion

The recorded data show that the majority of farm sales (by private individuals and small companies) for land redistribution purposes took place at prices that are above those of non-redistributive market prices. The extent of higher premiums compared to non-redistributive market prices increased over the research period, reaching levels of 40%-50% in the most recent cases. It also seems that the growth in both market and redistribution prices as well as the growth of redistribution prices over market prices will continue at least for a few more years. This is principally because farmers continue to enjoy far greater bargaining power than the government in determining prices for farm units identified for redistribution purposes.

Vastly different results can be found in the data from sales by a large corporation, where market or below market prices were paid by government. Although there is no evidence to suggest that this has set a precedent for other large corporation transactions, this special case remains something of an oddity, which cannot readily be explained by the available quantitative data, but will be discussed further in the following chapter.

Data on the productivity of redistributed farms 'post takeover' reflects large reductions averaging 39.51% found in all except one of the Uthungulu district's cases. The results for the iLembe district (combining private, small and large corporations) were less conclusive. Five of the farm units registered lower output per hectare ranging from 7%-66%. However, of a total of twenty-six cases, thirteen portrayed reductions in productivity 'during the year of takeover'. Eleven cases (of twenty-three for which data was available) registered reductions in output 'post transfer'.

The following chapter critically discusses the extent of price differences between the ordinary and redistribution land markets in the various districts and by different participants. A further discussion and analysis is presented concerning the degree of lack of productivity on relevant redistributed farm units, with possible explanations given for the reduced performance.

CHAPTER FIVE

DISCUSSION AND RECOMMENDATIONS ON THE PRICES AND PRODUCTIVITY OF KWAZULU-NATAL'S LAND REDISTRIBUTION PROGRAMME

5.1 Introduction

The case study of KwaZulu-Natal's sugarcane farmland sales established that based on a price paid per hectare of yield basis¹¹, land redistribution in the Uthungulu and iLembe districts has resulted in the majority of transactions involving private individuals or small companies taking place at above market rates. It was further discovered that the productivity during and after transfer declined in the bulk of those deals. This chapter quantifies the extent of redistribution payment over ordinary market prices and the under-production on these farms, and discusses why each may be occurring.

The main findings of the research presented in this chapter are that 'above' market prices were recorded on thirteen of the twenty cases involving private individuals and small companies amounting to R10.7 million. Given the pressure on government to redistribute land timeously, and the advantageous bargaining power afforded to sellers, such 'above' market payments were to be expected. Government's total annual expenditure on land redistribution within the Uthungulu and iLembe districts increased dramatically from 2002 to 2006. This reflects the concerted effort by government to accelerate the redistribution process.

In terms of productivity, under-production 'post takeover' on eleven of the twenty-three farms resulted in a loss of over 48 000 tons of sugarcane output, with a forgone recoverable value¹² of R78 million. The loss of output 'post takeover' was attributed

¹¹ Of the two measures established, the price paid per hectare of yield was utilised primarily because firstly, it accounted for differing production yields. Secondly, based on findings in chapter four, it was a more conservative measure of sugarcane farmland inflation over the period studied.

¹² Income that would have accrued had the farms maintained their previous average levels of output.

to a lack of experience and capacity on the part of the new owners, and the inability of government to assist with after sale mentorship.

Section 5.2 begins with an investigation of the data on prices, focusing on each district independently, and the degree of over or under market payment that occurred. The government's annual land redistribution expenditure is then examined, and lastly, the change in these payments from 2002-2006 is identified. Section 5.3 proposes an explanation as to why such high land redistribution prices were paid, followed by a discussion of the potential for causality between land redistribution prices, and market rates in Section 5.4. In Section 5.5, attention is drawn to the data on productivity, and the extent of under-production on the farms concerned in each district. Section 5.6 then explains why productivity may be declining for the periods 'during' and 'post' transfer. Section 5.7 identifies the fundamental problems affecting KwaZulu-Natal's land redistribution policy, and a summary is provided in Section 5.8. The chapter ends by highlighting a number of recommendations in Section 5.9, which, if implemented may have potential to improve the province's land redistribution programme.

5.2 Prices

The willing buyer/willing seller land redistribution transactions should, by definition, take place at market related prices. The study established a set of non-redistributive market prices based on the price paid per hectare of yield, and compared these with the redistribution prices paid by the government (buyer). From a total of twenty cases involving private individuals and small companies, thirteen did not take place at market related prices. The following sub-section estimates the degree of the over or under-payment, and identifies the rand value attributed to each.

5.2.1 Uthungulu district: private individuals and small companies

Of the ten cases included for the Uthungulu district, six were concluded at prices higher than the non-redistributive market prices. The following table illustrates the above market premiums that were paid by the government for the six farms.

Table 5.1 Premiums paid by the government for sugarcane farmland in Uthungulu (R,%)

UTHUNGULU DISTRICT				
FARM/ CASE	YEAR OF SALE FOR VALUATION PURPOSES	TOTAL MARKET VALUE OF EACH FARM (R)	TOTAL PAID BY THE GOVERNMENT PER FARM (R)	TOTAL VALUE OF GOVERNMENT'S OVER- PAYMENT (R and %)
U 5	2004	2 290 420	3 496 240	1 205 820 (52.7)
U 6	2006	780 570	1 131 620	351 050 (44.9)
U 7	2006	3 727 080	5 117 340	1 390 260 (37.3)
U 8	2006	1 218 672	1 985 984	767 312 (62.9)
U 9	2006	4 048 380	4 969 440	921 060 (22.8)
U 10	2006	1 584 198	2 116 455	532 257 (33.6)
TOTAL	-	13 649 320	18 817 079	5 167 759 (37.9)
AVERAGE	-	2 274 887	3 136 180	861 293 (37.9)

Source: Adapted from Cane Growers (2008a; 2008c); DLA (2008a)

In Table 5.1¹³ it is evident that, viewed in terms of a rand value the five transactions in 2006 cost the government almost an additional R4 million (sum of the over-payment for cases U6-U10) when contrasted with the ordinary market rate of about R11.36 million (sum of the market value for cases U6-U10), corresponding to an over-payment of 34.9%. Although this may not seem like much since the transactions took place over the entire year of 2006, they nonetheless resulted from the redistribution of a mere 553 hectares of farmland. Bearing in mind that South Africa aims to redistribute a total of about 30 million hectares of farmland, if the over-payment occurring in KwaZulu-Natal were to be projected throughout the country, the total excess expenditure could be enormous (in the hundreds of billions of rand). The over-payment for case U5 in 2004 was just over R1.2 million, which brings the total for the six cases in the Uthungulu district to almost R5.2 million (37.9%).

5.2.2 iLembe district: private individuals and small companies

From a total of ten cases involving private individuals and small companies in the iLembe district, seven took place at prices which were higher than the non-

¹³ Table 5.1's calculations can be verified by using Table 4.5 in Section 4.7.1.

redistributive market rate. The government paid the following above market premiums for the seven farms, illustrated in Table 5.2.

Table 5.2 Premiums paid by the government for sugarcane farmland in iLembe (R,%)

ILEMBE DISTRICT				
FARM/ CASE	YEAR OF SALE FOR VALUATION PURPOSES	TOTAL MARKET VALUE OF EACH FARM (R)	TOTAL PAID BY THE GOVERNMENT PER FARM (R)	TOTAL VALUE OF GOVERNMENT'S OVER- PAYMENT (R and %)
I 2	2004	2 205 450	2 772 900	567 450 (25.7)
I 3	2004	1 072 188	1 322 460	250 272 (23.3)
I 5	2004	455 793	547 677	91 884 (20.2)
I 7	2005	599 830	846 450	246 620 (41.1)
I 8	2005	2 543 394	4 182 864	1 639 470 (64.5)
I 9	2005	374 535	545 490	170 955 (45.7)
I 10	2005	5 059 236	7 52 7156	2 467 920 (48.8)
TOTAL	-	12 310 426	17 744 997	5 434 571 (44.2)
AVERAGE	-	1 758 632	2 535 000	776 367 (44.2)

Source: Adapted from Cane Growers (2008a; 2008c); DLA (2008a)

Table 5.2¹⁴, illustrates that by taking the total redistribution payments made by the government (buyer) for farmland and subtracting these from the market value of the land, that for the four farms purchased in 2005 (I7, I8, I9, I10) an additional payment of approximately R4.5 million or 52.8% was made (R13.10 million – R8.58 million). By including all seven of the cases where a premium was paid, the total difference between redistribution and market prices for the period 2002 to 2006 rises to over R5.4 million or 44.2% (R17.74 million – R12.31 million) for the iLembe district. Such payment above the ordinary market price, which accounted for the transfer of 1125 hectares of sugarcane farmland, illustrates the inability of the government to transact within an acceptable ‘willing buyer/willing seller framework’ at market rates. Moreover, it may characterise deals where unwilling sellers (or farmers) who were not in the sales market, were persuaded to become sellers due to the handsome profits they stood to gain by dealing with the government. In support of this proposition, at

¹⁴ Table 5.2's calculations can be verified by using Table 4.6 in Section 4.7.2.

least two farmers¹⁵ in the survey admitted that had it not been for the high prices offered, they would not have undertaken to sell to the government.

5.2.3 iLembe district: large corporation

Results of the large corporate sales in the iLembe district differ somewhat from the cases discussed already, as indicated in the following table.

Table 5.3 Prices paid by the government for sugarcane farmland in iLembe (R,%)

ILEMBE DISTRICT				
FARM/ CASE	YEAR OF SALE FOR VALUATION PURPOSES	TOTAL MARKET VALUE OF EACH FARM (R)	TOTAL PAID BY THE GOVERNMENT PER FARM (R)	TOTAL VALUE OF GOVERNMENT'S OVER (+) OR UNDER (-) PAYMENT (R)
I 11a	2004	1 559 272	1 377 288	181 984 - (11.7)
I 11b	2004	1 647 490	1 538 240	109 250 - (06.6)
I 11c	2004	1 900 080	1 920 240	20 160 + (01.1)
I 11d	2004	2 219 776	1 860 608	359 168 - (16.2)
I 11e	2004	1 452 958	1 545 454	92 496 + (06.4)
I 12	2004	1 682 928	1 531 152	151 776 - (09.0)
I 13	2004	1 483 872	1 617 696	133 824 + (09.0)
TOTAL	-	11 946 376	11 390 678	555 698 - (03.9)
AVERAGE	-	1 706 625	1 627 240	79 385 - (03.9)

Source: Adapted from Cane Growers (2008a; 2008c); DLA (2008a)

As illustrated in Table 5.3¹⁶, seven farms were included, of which three (I11c, I11e, I13) were sold at premiums (on a per hectare of yield basis) ranging from only 1%-9% (average = 5.5%). Bearing in mind the method of calculating averages, overpayments of this size (5%-10%) obviously do not represent large deviations from the average market prices, and were equivalent to a few of the cases used in the average market price calculation. Further considering that the average premiums for the two previous scenarios were 37.9% and 44.2% respectively, the classification of the current cases as market related is justified. The fact that these transactions took place at prices so similar to the market rate is however odd given the unequal bargaining

¹⁵ Previous owners of farms U7 and U8, which were sold at premiums of 37.3% & 62.96% respectively.

¹⁶ Table 5.3's calculations can be verified by using Table 4.7 in Section 4.7.3.

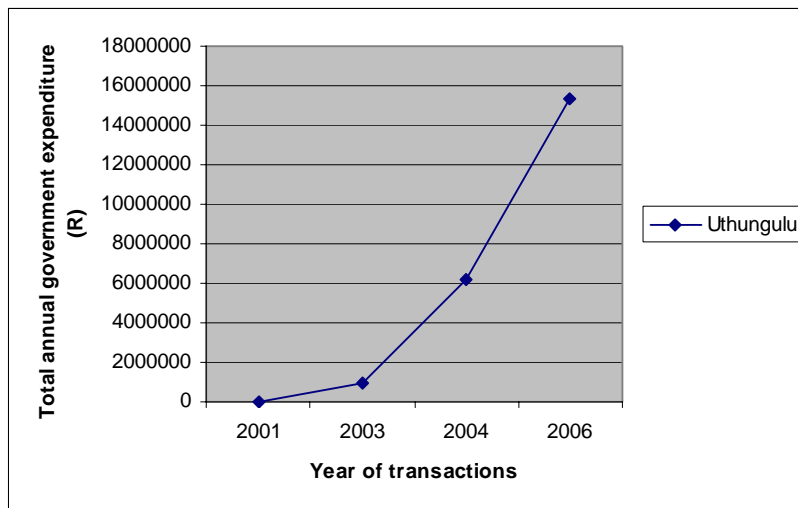
power of the two parties. The four remaining farms from the iLembe district were purchased by the government at discounts to the market price (6.6%, 9.0%, 11.7%, 16.2%), resulting in the average for all seven cases being at a discount of 3.86% to market prices.

By converting the 3.9% discount to a rand value, Table 5.3 shows that a total of over R550 000 was saved by the government on the seven transactions. The large corporation's sales therefore remain an oddity, and do not follow the established norm of paying higher premiums for redistribution purposes. Huletts (2008:1) states "With the growth of economic development and empowerment of previously disadvantaged people, a growing number of medium-scale farmers are continuing to enter sugarcane agriculture on farms made available at market-related prices by the major milling companies". This statement may provide evidence of how and why the large corporation's transactions differed so greatly from the cases of individuals and small companies. Bearing in mind that large corporations such as that in question may consider they have social responsibilities to fulfil (e.g. empowerment of the previously disadvantaged), and a public image to protect, the sales at market-based prices may have been thus motivated. Further, as the large corporation was directly involved in the sugar industry it was within their interests to establish a good relationship with the new owners of farms, as well as with the government. Therefore, the company may have given up the short-term profits from farm sales at higher prices, for the long-term gain of being able to assist the new farmers, and ensure consistently high outputs in years to come. High outputs would mean a more reliable supply of sugarcane essential to the success of the large corporation because of its direct association with the farm industry. In addition, unlike all other cases, the large corporate deals were not once off transactions, as the company in fact undertook seven separate sales with government. This discussion provides some justification for the vastly differing prices paid, as the longer-term relationship between the affected parties was clearly very different to that of the government with the once off private individual and small company sellers, who had no need to be involved in their discarded farms' future wellbeing. It must however be stated categorically that this special case cannot be fully explained by the information available.

5.2.4 Government's total annual land redistribution expenditure

For the districts studied, the government accumulated escalating annual costs in acquiring farmland for redistribution. Figure 5.1 illustrates government's total annual land redistribution expenditure in the Uthungulu district from 2001-2006.

Figure 5.1 Government's estimated total annual land redistribution expenditure (R) – Uthungulu district



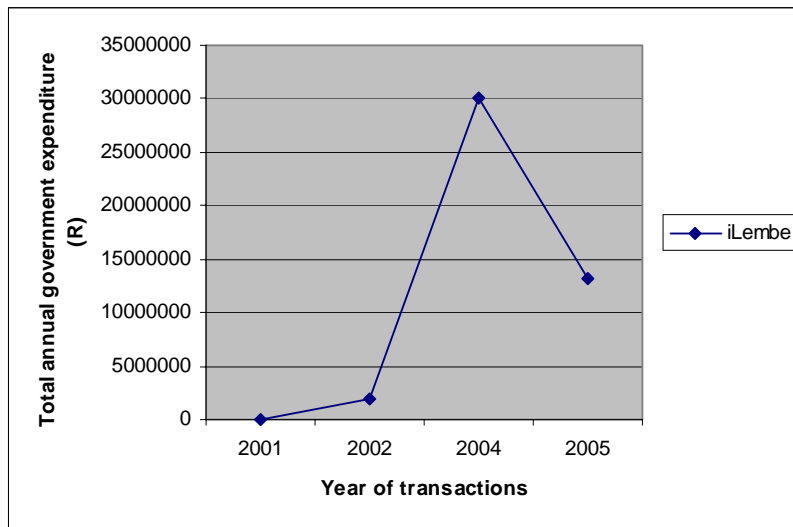
Source: Adapted from Cane Growers (2008a); DLA (2008a)

Figure 5.1 shows that in the Uthungulu district for 2003¹⁷, approximately R997 000 was spent in purchasing sugarcane farmland from private individuals and small companies for the purposes of redistribution. In 2004 this expenditure increased by 625.28% to R6 234 000, and for 2006, a total of about R15 310 000 was paid by the government in the Uthungulu district. Total land redistribution payments by the government therefore show a clear upward movement, rising very quickly from less than R1 million to over R15 million over four years. The annual increases appear to confirm the theory that a concerted effort was made to speed up the redistribution process, especially in the district of Uthungulu.

Figure 5.2 illustrates governments total annual land redistribution expenditure in the iLembe district from 2001-2005 (no expenditure was incurred in 2006).

¹⁷ 'Year of sale for valuation purposes'.

Figure 5.2 Government's estimated total annual land redistribution expenditure (R) – iLembe district



Source: Adapted from Cane Growers (2008a); DLA (2008a)

Making use of Figure 5.2, which illustrates the iLembe district's combined private, small and large corporation sales, it was found that in the 2002 'year of sale for valuation purposes', R1 940 000 was spent. During 2004 expenditure rose by 1551.55% to about R30 100 000 (primarily due to the large number of transactions concluded in 2004), and in 2005 a total of almost R13 123 000 was paid by the government to purchase sugarcane farmland for redistribution purposes¹⁸. The upward movement in total annual costs however remains evident, and although government expenditure was very low in 2002, it soared in 2004 (due to the increased number of deals), and slowed somewhat in 2005. As found in the Uthungulu district case, it is clear that for total annual expenditure to increase so dramatically in the iLembe district over a period of only four years, the government must have actively promoted redistribution transactions to meet political targets. In support of this, it must be noted that the media placed continued pressure on the government to drive the land redistribution process at a faster rate and to meet its targets on time (e.g. Bernstein, 2008:1). The increased annual expenditure recorded has been in response to comments such as:

¹⁸ The costs described do not include the three additional cases that could not be used in the case study due to a lack of complete data, one of which occurred in 2002 and two in 2004.

“Land redistribution is taking place far too slowly to meet government’s target that 30% of commercial agricultural land should be owned by blacks by 2014. In the three years to 2007, state redistribution of formerly white-owned land to black owners increased by less than 0.5%, from 4.3% of commercial land to 4.7%” (Bernstein, 2008:1). With such close attention being paid to the results of South Africa’s land reform process, the government has been pressed to hasten the rate of redistribution.

5.3 Why higher prices are possible

At least two explanations are available for the high redistribution prices that the government has paid private individuals and small companies for their sugarcane farmland to promote the land redistribution programme. Firstly, the government is the only buyer of land for the purposes of redistribution in South Africa. Such a situation would generally be referred to as a monopsony, and should theoretically give the government the majority of the market power, allowing it to determine the price of the farmland purchased. However, this does not mean that there is only one buyer of land in general, as market transactions that do not involve the government obviously do take place. The result being that the government has tried to create a monopsony within a competitive market, meaning that all the market power associated with a monopsonistic market structure has fallen away. The government being the only redistributive buyer however denotes that in most cases, it does not seek wide options, and targets specific farms it deems suitable for redistribution. Knowing that the potential buyer does not want to take business elsewhere, and that the government is in a race to redistribute 30% of the country’s commercial land by 2014, the farm owners are left with a degree of power as to the selling price. Based on this explanation the prices paid by the government can be expected to be above market, as it lacked bargaining power and demonstrated none of the characteristics of a monopsony; the proceeds of sales by private individuals and small companies reflect this circumstance.

Secondly, farmers are not forced to sell their land, and if they wish to do so, can tell the government that they are not interested in selling. This combined with the fact that land redistribution is progressing at a very slow rate (4.7% of commercial land redistributed by the end of 2007), may well be prompting the government not to

challenge the farmers higher asking prices in an attempt to speed up the purchasing process, and conclude an accelerated number of deals (DLA, 2007a:1; *Business today*, 2007:1). The findings in the Uthungulu and iLembe districts discussed below support this latter proposition.

To begin with, of the six transactions involving private individuals and small companies that took place at above market rates in the Uthungulu district from 1994-2006, five had a 'year of sale for valuation purposes' in 2006. Over a period of four years (2003-2006), the average prices per hectare of yield paid by the government grew from being 40% below to 40% above the market price. The weighted average prices it paid increased by over 85% during the 2003/2004 period and by another 36% in 2005/2006 (see Table 4.5). These figures indicate a rapid upward movement in the prices that the government was prepared to pay for sugarcane farmland in the Uthungulu district over a relatively short period (4 years).

Furthermore, with respect to sales by private individuals and small companies in the iLembe district, of the seven above market deals ranging from 1994-2005, four took place in 2005. The government paid prices per hectare of yield from as little as 23% below the market in 2002 to an average premium of 50% above the market price for the 2005 year. The weighted average prices paid by the government grew by 25% during 2003/2004, and a further 40% in 2004/2005 (see Table 4.6). The iLembe district's results are thus commensurate with those of Uthungulu, depicting noticeable, sharp annual increases in the prices tendered by the government for sugarcane farmland. It is doubtful whether such large increases in the prices paid per hectare of yield by the government could have occurred without their realisation, yet they continued to conclude transactions at above market rates.

The above discussion illustrates how the farmer's greater bargaining power allowed them to transact with the government at above market prices, and demanded even higher payment for their land over the years. As shown, the result has been a gradual increase in the number of land redistribution transactions taking place, but at the cost of a far larger capital investment in comparison to the market.

5.4 Causality between land redistribution prices and market prices

The link between normal market and redistribution prices is central to the explanation for the above market rates offered by the government for sugarcane farmland. If an even loosely regulated relationship between these two prices could be ascertained it would greatly assist government buyers to resolve the current above market payment problems by allowing them to cite a compromise procedure. For example if the higher redistribution prices were causing a rise in general market prices, the government would be obliged to pay higher rates for sugarcane farmland in perpetuity, because farmers expectations would not decline. Without some form of regulation, the prices could spiral out of control.

In respect of the redistribution case, causality may be present, i.e. the higher land redistribution prices may well have impacted on the market prices of sugarcane farmland, or vice versa. For example in the Uthungulu district during the 2006 year, the market price per hectare of yield was approximately R378 per ton. However, the five land redistribution deals that took place in 2006 were concluded at an average of R530.4 per hectare of yield (tons), some 40% above the market rate. Other farmers in the area becoming aware of the prices that the government was prepared to pay for sugarcane farmland, may well have upped their asking prices, and in this way increased the market price by concluding non-redistribution sales at higher prices.

Alternatively, in the iLembe district for example, the government may have noted that market prices had been steadily increasing since 2000 from R283 per ton to R377 per ton of yield in 2004, and anticipated further increases in 2005. In order to remain competitive the government may have offered higher redistribution prices based on their perceptions of the market, demonstrating causality opposite to that described in the first example.

Given the lack of available data, however, causality in neither of the two directions can be ascertained. Shifting focus to correlation analysis, perhaps it could be of greater assistance in determining if a relationship exists between redistribution prices and market rates. However, as in the case of causality, the lack of complete (about 30 observations) time series data negates any such quantitative or qualitative econometric

analysis. The relationship between redistribution and market prices is an important possible explanation for the higher prices paid by the government for sugarcane farmland, which cannot, however, be fully addressed in this discussion.

5.5 Productivity

The case study also investigated the average productivity on the farms discussed in the previous section, transferred through the land redistribution process. Attention was drawn to three periods, namely,

- a) Before farm takeover
- b) During the year of transfer
- c) After the year of transfer

In every case, a ‘best observed level of output’ over the period 1999-2007 was also recorded, depicting the probable production potential of each farm (see Table 4.8, Table 4.9 and Table 4.10).

5.5.1 Uthungulu district: private individuals and small companies

Table 5.4 depicts the Uthungulu district’s productivity data for sales by private individuals and small companies, adjusted from Table 4.8.

Table 5.4 Uthungulu's productivity data for sales by private individuals and small companies (Tons/Ha; %)

FARM/ CASE	BEST OBSERVED LEVEL OF OUTPUT PER YEAR (Tons/Ha, Yr of best level)	AVERAGE PRODUCTION PRIOR TO TAKEOVER (3 YRS) (Tons/Ha)	OUTPUT WITHIN 5 TONS PER HECTARE BELOW BEST LEVELS (PRIOR TO TAKEOVER)	PERCENTAGE INCREASE(+) OR DECREASE(-) IN OUTPUT 'DURING YEAR OF TAKEOVER' (%)	PERCENTAGE INCREASE(+) OR DECREASE(-) IN OUTPUT 'POST TAKEOVER' (%)	OUTPUT WITHIN 5 TONS PER HECTARE BELOW BEST LEVELS (POST TAKEOVER)
U 1	52.79 (2003)	48.39	YES	28.93 -	68.01 -	NO
U 2	38.96 (2000)	36.32	YES	65.14 -	31.06 -	NO
U 3	38.84 (2000)	34.34	YES	12.29 -	29.12 -	NO
U 4	61.05 (2004)	39.77	NO	23.71 +	38.87 +	NO
U 5	40.91 (2002)	32.76	NO	45.33 -	50.85 -	NO
U 6	67.01 (2000)	33.16	NO	22.17 +	-	-
U 7	89.26 (2000)	74.30	NO	36.59 -	21.60 -	NO
U 8	73.07 (1999)	58.46	NO	39.41 -	-	-
U 9	87.54 (2001)	70.32	NO	-	-	-
U 10	50.32 (2006)	27.36	NO	83.92 +	36.40 -	NO
TOTAL	599.75	455.18	-	97.91 -	198.17 -	-
AVERAGE	59.98	45.52	-	10.88 -	28.31 -	-

Source: Cane Growers (2008c)

Table 5.4 illustrates that in the Uthungulu district, 'during the year of takeover'¹⁹, production fell in six of the nine cases for which data were available. For these six cases, an average drop in output of 37.95% was recorded compared to the 'average production prior to takeover'. The results represent a less than satisfactory transition between old and new owners in terms of productivity.

Production declined 'post takeover' in six of the seven available cases included in the Uthungulu district's data set by an average of 39.51%. Compared to the average production 'prior to takeover', a loss of output of just over 32 700 tons occurred 'post takeover' for the six cases in question from 2005-2007. Using the published recoverable value (RV) per ton of sugarcane and average production data for the farms before and after takeover, a rand value was calculated for the loss of income attributed to the decline in output from 2005-2007, amounting to approximately R52 642 000. This amount represented a collective reduction in average annual income of approximately 44% for the six farms.

¹⁹ Note: Technology is assumed to remain constant before and after takeover in all cases.

The ‘best observed level of output’ gives some indication of the potential optimal production on each farm, representing as it does the largest output per hectare that the farms managed to produce between 1999 and 2007. From that level, it was possible to ascertain that for the three years ‘prior to takeover’, only three (U1, U2, U3) of the farms sold for redistribution in the Uthungulu district were operating at close to²⁰ their maximum recorded output. After transfer however, none of the seven farms produced within five tons per hectare below their highest historical levels, and overall average output fell by 33.52%. Although output did increase in one of the cases (U4) by 38.87%, the number of farms optimising productivity fell from three (U1, U2, U3) to none ‘post takeover’. From this data, the research question of whether productivity fell post transfer is answered. As mentioned already, output fell by 33.52% on average. Without any after sales mentorship from the government or previous owners, the disappointing transition between proprietors and the poor productivity results post transfer illustrated in the Uthungulu district may have been expected.

5.5.2 iLembe district: private individuals and small companies

Table 5.5 illustrates the iLembe district’s productivity data for sales by private individuals and small companies, adjusted from Table 4.9.

²⁰ Within five tons per hectare

Table 5.5 iLembe's productivity data for sales by private individuals and small companies (Tons/Ha; %)

FARM/ CASE	BEST OBSERVED LEVEL OF OUTPUT PER YEAR (Tons/Ha, Yr of best level)	AVERAGE PRODUCTION PRIOR TO TAKEOVER (3 YRS) (Tons/Ha)	OUTPUT WITHIN 5 TONS PER HECTARE BELOW BEST LEVELS (PRIOR TO TAKEOVER)	PERCENTAGE INCREASE(+) OR DECREASE(-) IN OUTPUT 'DURING YEAR OF TAKEOVER' (%)	PERCENTAGE INCREASE(+) OR DECREASE(-) IN OUTPUT 'POST TAKEOVER' (%)	OUTPUT WITHIN 5 TONS PER HECTARE BELOW BEST LEVELS (POST TAKEOVER)
I 1	50.41 (2007)	37.25	NO	17.13 +	17.50 +	NO
I 2	53.16 (2000)	40.72	NO	16.72 -	0.01 -	NO
I 3	65.02 (2005)	36.68	NO	77.26 +	54.42 +	NO
I 4	57.74 (2000)	50.39	NO	4.74 +	9.23 +	YES
I 5	33.13 (2007)	13.14	NO	16.89 -	121.08 +	YES
I 6	62.83 (2000)	46.78	NO	0.68 -	3.46 +	NO
I 7	41.98 (2002)	14.96	NO	65.11 -	66.31 -	NO
I 8	57.51 (2000)	43.89	NO	16.09 -	33.65 -	NO
I 9	38.19 (2006)	35.08	YES	4.59 -	-	-
I 10	70.12 (2000)	41.02	NO	18.94 -	30.33 +	NO
TOTAL	530.09	359.91	-	39.89 -	136.05 +	-
AVERAGE	53.01	35.99	-	3.99 -	15.11 +	-

Source: Cane Growers (2008c)

Table 5.5 depicts that in the iLembe district, 'during the year of takeover', sugarcane production declined in six of the ten cases²¹. The average drop in output for these six cases when compared to the average production prior to takeover was 23.06%, illustrating a poor transition between current and previous owners in the majority of cases. These results are similar to those from the Uthungulu district, as output also fell in six of its cases 'during the year of takeover' by an average of 37.95%.

'Post takeover', sugarcane production fell by an average of 49.98% in two (I7 and I8) of the iLembe district's nine cases for which data were available. The two farms recorded a total combined loss of about 7175 tons of output from 2006-2007 compared to an 'average production prior to takeover' of approximately 10680 tons per annum. Calculating recoverable value, these farms the total 'area of which under cane' was 306 hectares, forfeited over R12 200 000 worth of income due to reduced output, which was equivalent to a reduction in actual annual income of approximately 35%. On the remaining seven farms, production actually increased by an average of

²¹ Note: Case I6's production was classified as unchanged, as it declined by less than one percent.

33.72% 'post takeover', in vast contrast to the Uthungulu district, where output increased in only one of its cases (U4) by 38.87% during the same period.

'Prior to takeover', only one of the ten farms (I9) was producing close to (within five tons per hectare below) its optimal output, but this number increased to two out of nine farms (I4 and I5) after transfer took place (post transfer production data for case I9 was not available). The number of sugarcane farms realising productive capacity therefore increased slightly in the iLembe district as a result of the land redistribution transfers involving private individuals and small companies. No firm explanation for the large difference in production results 'post takeover' between the districts of iLembe and Uthungulu was discovered. One possibility may be that the 'new' owners had limited cash resources available for the purchase of direct inputs, or were more 'risk averse' than previous owners.

5.5.3 iLembe district: large corporation

Table 5.6 depicts the iLembe district's productivity data for sales by a large corporation, adjusted from Table 4.10.

Table 5.6 iLembe's productivity data for sales by a large corporation (Tons/Ha; %)

FARM/ CASE	BEST OBSERVED LEVEL OF OUTPUT PER YEAR (Tons/Ha, Yr of best level)	AVERAGE PRODUCTION PRIOR TO TAKEOVER (3 YRS) (Tons/Ha)	OUTPUT WITHIN 5 TONS PER HECTARE BELOW BEST LEVELS (PRIOR TO TAKEOVER)	PERCENTAGE INCREASE(+) OR DECREASE(-) IN OUTPUT 'DURING YEAR OF TAKEOVER' (%)	PERCENTAGE INCREASE(+) OR DECREASE(-) IN OUTPUT 'POST TAKEOVER' (%)	OUTPUT WITHIN 5 TONS PER HECTARE BELOW BEST LEVELS (POST TAKEOVER)
I 11a	53.97 (2002)	44.49	NO	19.44 +	7.28 -	NO
I 11b	60.29 (2006)	44.49	NO	12.68 +	14.74 +	NO
I 11c	59.45 (2006)	44.49	NO	27.65 +	26.34 +	YES
I 11d	53.97 (2002)	44.49	NO	13.35 +	32.64 -	NO
I 11e	70.68 (2006)	44.49	NO	26.52 +	36.66 +	NO
I 12	57.68 (2002)	49.59	NO	13.61 -	13.33 -	NO
I 13	49.90 (1999)	27.48	NO	60.70 +	74.85 +	YES
TOTAL	405.94	299.52	-	146.73 +	99.34 +	-
AVERAGE	57.99	42.79	-	20.96 +	14.19 +	-

Source: Cane Growers (2008c)

Table 5.6 focuses on the transactions in the iLembe district involving a large corporation, and illustrates that reductions in output ‘post takeover’ took place in three of the seven cases (I11a, I11d, I12) by an average of 17.75%. Compared to the average output prior to takeover, output on the three farms decreased by over 8200 tons from 2005-2007, amounting to a loss of R13 215 000 worth of potential recoverable income, which corresponded to an actual reduction in their collective income of about 20% per annum.

‘During the year of takeover’, output fell in only one of the seven cases (I12) by 13.61% compared with ‘production prior to takeover’. It seems the transition between the previous and new owners was far better in cases involving the large corporation than in all other transactions discussed so far. An independent authority²² on the iLembe district’s sugarcane farms attributed the ability of new owners to maintain competitive outputs to their general farming attitude, the high quality of the farms in question and some minor financial and informational support from the large corporate involved. As previously noted the large corporation was directly involved in the sugar industry, and it was thus in their best interests to assist new owners, and ensure that they produced consistently high outputs. These high outputs would have resulted in the maintenance of supply, allowing the large corporation to forecast and continue to generate long-term revenue. This explanation also serves to understand why the company was willing to forego the short-term profits, which could have been secured by selling holdings to the government at inflated prices.

Using the ‘highest observed levels of output’ as a reference, it is evident that prior to transfer none of the seven farms was producing within five tons per hectare below their optimum levels. ‘Post takeover’ total output per hectare increased sufficiently for two (I11c and I13) of the seven farms to attain levels of output within five tons per hectare below their highest observed levels. It seems that land redistribution transfers from the large corporation in the iLembe district had a small, but positive impact on the productivity of its sugarcane farms, specifically during the takeover period. The large corporation’s cases thus provide the best overall production results (considering

²² From a private company working in conjunction with the government on the iLembe district’s land redistribution programme.

both ‘during’ and ‘post’ transfer) researched, and for that reason remain a special case.

It is apparent that the relationship between the large corporation, the new owners and the government was very different to any of the private individuals and small companies. The basic²³ mentorship provided by the large corporation and the longer-term repeated sales with the government highlight the differing characteristics between the large corporation’s deals and those of other sellers. The assistance offered may well have resulted in the superior outputs produced on the seven farms, and the smooth transition between new and old proprietors. The effectiveness of a good relationship between owners combined with a degree of mentorship is therefore evident, providing justification for a formal government mentorship programme to be implemented for all other redistribution sales.

5.5.4 Brief summary of the results on productivity

Although the results for the iLembe district are far more encouraging than those of Uthungulu, nevertheless in eleven of the twenty-three cases studied, production per hectare decreased by an average of 35.48% per farm ‘post takeover’. Of the remaining cases, one showed almost no change in yield, while the other eleven farms produced greater outputs per hectare. ‘During the year of takeover’, thirteen of the twenty-six farms included registered declines in output per hectare averaging 29.20%, whilst one farm remained almost unchanged, and twelve showed increased output. With production figures readily available to them, the Departments of Agriculture and Land Affairs must be aware of the decreases in output in a number of farms within the districts of Uthungulu and iLembe. Large corporate sales in the iLembe district recorded the best overall production results, which were attributed to their farming attitude, the high quality of the farms and basic mentorship from the large corporate concerned. A provincial mentorship programme could thus be a critical positive development in correcting the potential productivity dilemma but for reasons unknown has not been properly implemented.

²³ Basic financial and informational assistance, as opposed to an all-encompassing, formal mentorship programme.

Collectively, underperformance ‘post takeover’ on the eleven farms meant a loss of over R78 million, which represents substantial forfeited income and potential GDP, particularly taking into consideration that it was the result of poor production on only 1443 hectares of farmland. ‘Post takeover’ only four of the twenty-three farms studied were producing within five tons per hectare below their historical highs, illustrating that there is scope for large-scale productive improvement. If KwaZulu-Natal’s sugar industry is to remain efficient and competitive, there is a need for immediate managerial assistance to the farms in question. Such assistance must also be extended to any future sugarcane farmland (owners/tenants) transferred under the land redistribution process.

5.6 Why productivity has declined

When compared with output prior to transfer, half of the farms studied showed reduced productivity ‘during the year of takeover’. As mentioned, the years in question represent those in which ownership and management changed hands, and thus total output during this period was partially attributable to each of the parties concerned (being old and new owners). The decline in output could therefore be potentially attributed to either of these parties, or the process itself.

Firstly, the ‘old owners’ would have known for some time²⁴ that their farms were to be transferred, and that payment for the land was pending, but legally guaranteed. If this transfer of ownership were to take place before the cutting season (i.e. before sugarcane is brought to market for receipt of payments), these farmers would have had little incentive to maximise output, as any additional profits from their work would not have accrued to them. Furthermore, the purchase price for the farmland would have already been established, and would thus be unaffected by the farm’s last few months of productivity. The lack of incentive to retain high output levels (for those whose transfer took place before the cutting season) may well have caused a number of farmers to neglect their sugarcane crops and leave the repercussions to be dealt with by the unsuspecting ‘new owners’. If however, the time of transfer coincided with the cutting season, when financial consideration was received, it

²⁴ Average 8-10 months.

would have been within the interests of the old owners to maintain consistent standards, as they would still have received full benefit for their work. If the government had understood that fact, and waited to transfer farms in abundance during or towards the end of the cutting season, it would have dramatically increased the chances of the new owners moving onto farms that were operating efficiently. This would further have improved the probability of the new owners succeeding, as they could have picked up where the previous owners left off, instead of starting at a disadvantage and having to correct weeks or months of earlier poor farming practice.

Secondly, it can logically be expected that a period of transition would occur, while the new owners familiarised themselves with the farms facilities and day-to-day activities. Productivity may have understandably suffered during this period of adjustment. Their degree of experience of sugarcane farming would also have affected the time it took for the new owners to get through this initial uncertain phase. Additionally, output could have been adversely affected if lack of experience on the part of new owners coupled with the onset of the cutting season coincided with the transfer process. Thus, the decline in productivity experienced 'during the year of takeover' in thirteen of the twenty-six cases could be attributed to either the previous or current owners, or a combination of the two, the logistical process itself or even the timing of transfer.

The most significant period is the years 'post takeover', in which operations and productivity were the responsibility of the new owners. During these years, failures to produce comparable levels of output were attributable to the new proprietors. They were expected to have overcome any introductory problems by this stage (6-8 months later) and be fully focused on the running of their farms. Although these assumptions are theoretically feasible, productivity declined 'post transfer' in eleven of the twenty-three cases for which data were available by an average of 35.48%, over an average period of two to three years per farm.

Of the twenty-three available land redistribution cases under study, one was classified as PLAS (Proactive Land Acquisition Strategy) and the remainder LRAD (Land Redistribution for Agricultural Development). As previously explained, in PLAS deals the land remains the property of the state (state property regime) and is leased to

the individuals running the farms, whilst in LRAD transactions, private property rights are assigned to the new owners. The authoritative literature suggests that the owners who obtained private property rights to the land (via LRAD) should have achieved more efficient outputs (compared with alternative property rights regimes). These owners are more likely to be driven by a profit motive because of the direct link between efficient work and ownership.

With the motivation to achieve high outputs established for the twenty-two private property rights empowered LRAD cases, the most logical explanation for a lack of such performance on ten of these LRAD farms 'post takeover' is lack of capability on the part of the new owners. With no formal mentorship or assistance from the government, new owners had only their own knowledge and experience in sugarcane farming on which to rely. At least ten of the new owners were evidently deficient in this area, and their lack of understanding resulted in significant reductions in the productivity of their farms. Assistance from the government may well have helped these farmers to reach greater output levels, but none was forthcoming.

5.7 The fundamental problems

Two fundamental problems can be identified within KwaZulu-Natal's redistribution programme. Firstly, the transfer of land at redistribution prices higher than ordinary market prices and secondly, the apparent inability of government to realise the productivity shortcomings in fifty percent of the transactions studied, and a seeming unwillingness or inability to intervene effectively.

When focusing on the *first* problem three important observations were made:

- 1) To begin with, as a consequence of the current land redistribution market structure (monopsonistic redistribution market within a competitive ordinary farmland market) farmers have the overwhelming bargaining power. The result is that this market structure needs to be amended by creating additional competition for farmland in the redistribution market, and preventing the government from having to continually 'give in', and meet farmers' ever-increasing asking prices.

2) In most cases, the major determinant of each farm's final selling price was the value placed on it by an independent appraiser. In the preceding chapter, it was described how at least ten different valuers were identified between the two districts. In many cases, they assigned different prices per hectare to the same classes of property. This is evident in the findings in cases U7 and U9 (Table 4.5), which both had a 'year of sale for valuation purposes' of 2006, were of a similar size (145 ha and 170 ha's respectively) and produced similar yields of 68 and 63 tons per hectare. However, U7's valuation price was at R35 000 per hectare of sugarcane, 18.76% higher than U9's, which was R29 470. Had these farms been assessed by a common valuer, U7's owner may have received R801 850 less, or conversely U9's owner may have received R940 100 more. Undoubtedly, such a large difference in price per hectare should have been recognised and questioned by the public authorities overseeing the deals. Therefore, it seems the authorities are not fulfilling their responsibilities.

3) The reason why such discrepancies have not been identified can be traced to the administrative difficulties apparent within the Department of Land Affairs. As mentioned in chapter four, when deciding whether or not to approve the land redistribution deals, documentation which includes the independent valuation reports, is submitted to the Department of Land Affairs. That department, however, does not have a division dedicated to agricultural farmland pricing, the purpose of which would be to verify the accuracy of submitted valuations. Hence the land redistribution prices paid by government are unlikely to be equitable failing a basis of valuations prepared using the same criteria. Moreover, such valuations are not properly checked and verified at the crucial final stage of the process.

The situation may lend itself to abuse by both valuers and farmers. It is possible that collusion between the two parties could lead the 'independent' valuer to deliberately over-value the land for a percentage of the farmer's additional profit post settlement. No publicised media reports of such behaviour were found.

The *second* question focuses on why government is not acting to correct the poor results of land redistribution in KwaZulu-Natal. Sugarcane production has been negatively affected in fifty percent of the redistribution cases studied, with losses of

recoverable income reaching R78 million for the 1443 hectares under review. The Uthungulu district's productivity has been particularly badly affected, with output dropping by an average of 39.51% for six of its seven cases, resulting in their collective average annual income declining by approximately 44%. The Uthungulu district is therefore in need of assistance from an external source e.g. provincial government or its appointed agents. It should be of grave concern that land redistribution prices have continued to rise in the Uthungulu district, while performance remains unsatisfactory. It is obvious that the higher prices are not being paid for enhanced productivity. In fact, there are no purely economic reasons outlaying high premiums.

The mentorship programme, which was intended specifically for LRAD transactions, would be a step in the right direction, but surely within a year of the concepts approval agricultural advisors should have been assigned farms to oversee. A lack of evidence cannot be cited as an excuse, as information on the productive performance of land redistribution in the Uthungulu and iLembe districts is readily available to the authorities concerned from national records and the South African Sugarcane Growers Association.

5.8 Summary

The chapter began by discussing the prices data, and the extent of over or underpayment in the districts concerned. Of the twenty farms sold by private individuals and small companies, thirteen were found *not* to have taken place at market related prices, and a total payment over the ordinary market rates of approximately R10.7 million was recorded. Although the prices were found to be very high in comparison to the market rate (up to 50% higher), such prices are to be expected given government's limited bargaining power and their redistribution time constraints. The government's annual land redistribution costs were then researched revealing a major increase in expenditure from 2004-2006 and an effort to accelerate the number of transactions taking place. This concerted effort to hasten the redistribution process was in response to continuous pressure from the media for South Africa's land redistribution policy to meet its targets punctually. The section that followed proposed explanations as to why higher prices were paid for sugarcane farmland in the majority

of land redistribution deals concluded in the districts of Uthungulu and iLembe (sold by private individuals and small companies). In this regard, administrative incapacity, combined with the slow rate of land redistribution and poor market structure (resulting in a lack of competition) were identified as the main contributors. The examination of prices ended with a brief look at the causality between land redistribution prices and those of the market, concluding that any causality is likely to be two way, but could not be confirmed due to the incomplete data. The lack of full time series data (not enough observations) further prevented correlation analysis from being conducted.

Focus then shifted to productivity, and the degree of underperformance on the farms sold through land redistribution in the Uthungulu and iLembe districts. 'During the year of takeover', results were disappointing, as productivity declined in thirteen of the twenty-six farms. 'Post takeover', eleven of the twenty-three available cases recorded a decline in their output of sugarcane per hectare, resulting in the loss of a large sum of potential income. Minor mentorship and a better relationship between past and current owners allowed the farms involving the large corporation to generate the best productivity results. By noting the highest historical 'observed levels of output' per farm, it was further evident that post transfer only four farms were producing within five tons per hectare below these levels, illustrating room for substantial improvement. A discussion as to why the productivity of those farms may be dwindling followed, highlighting a lack of experience on the part of the new owners, an inability of government to assist with after sales mentorship and other weaknesses within the transfer process as the main contributing factors.

The fundamental problems of South Africa's land redistribution were identified as:

- 1) The above market prices paid for farmland, which were attributed to:
 - a) The lack of competition for farmland in the redistribution market affording sellers an overwhelming amount of bargaining power, and
 - b) The incapacity of the Department of Land Affairs to verify the valuations submitted to them before approving redistribution purchases.

2) The inability of government to recognise the productivity shortcomings of the new owners, and ameliorate the situation through the introduction of a mentorship programme.

5.9 Recommendations

To address some of the problems identified in KwaZulu-Natal's redistribution programme, the following recommendations are suggested:

- 1) It may be an option to establish independent institutions with a limited annual budget to fast track the redistribution programme. The institutions would have to compete with each other in terms of their performance to achieve the government's goals. Moreover, instead of having only one buyer in the redistribution market, more buyers would exist. This would hopefully eliminate many of the unequal bargaining powers which were identified in the thesis as inherent to the land redistribution market.

Nonetheless, the establishment of additional public institutions would come at high transactional costs, including time consuming legal processes and administrative costs. Even if an improved and more efficient redistribution market was created in the long run, a Cost-Benefit analysis of this proposal would have to be conducted beforehand as a cautionary measure.

- 2) In the event that future research determined that the potential benefits would far outweigh the costs in setting up the proposed valuation institutions, a division in the DLA would also have to be set up to oversee the valuation activities.

The combined investment costs of establishing new valuation institutions and a verification division within the department would have to be lower than the R10.7 million which was estimated in the research for the period 2002 to 2006.

- 3) The LRAD mentorship programme should be put into action with immediate effect, monitoring all land redistribution transactions and ensuring production levels are maintained and farm management is sound.

By initiating the above recommendations KwaZulu-Natal's land redistribution programme will be substantially uplifted, and its credibility improved among the South African government, public and media.

CHAPTER SIX

CONCLUSION

6.1 Conclusion

The thesis set out to investigate whether the South African government has been paying above or below market prices for sugarcane farmland in the districts of Uthungulu and iLembe. It was found that on average, land redistribution prices were 16.34% above those of the market rates, for sales negotiated by independent private individuals and small companies. In addition the thesis set out to investigate the changes in the productivity on these farms 'before', 'during' and 'post transfer'. It was found that on average farms were not producing close to optimum levels, and that productivity decreased 'during' and 'post' transfer.

Two case studies were presented. Twenty-seven farms were included in the research, and it was discovered that the prices the government has paid to farmers for their sugarcane farmland were, in the majority of cases, above the non-redistributive market rates, and reached excessive premiums of 40%-50% in the more recent cases. Above market price payment on thirteen of the twenty farms studied, which were sold by private individuals and small companies, amounted to R10.7 million. These thirteen farms collectively spanned 1898 hectares. Considering that the Republic's government aims to redistribute around 30 million hectares of commercial farmland, if the payment of above market prices occurring in the Uthungulu and iLembe districts were to extend throughout the rest of the country, the total of such payments could run into the hundreds of billions of rand. One of the explanations proposed for the high premiums in redistribution transactions was that the government has limited bargaining power due to a lack of competition to purchase land for redistribution and onerous time pressures to meet political targets.

Excessive payments were also attributed to the following factors:

- a) The incapacity of the Department of Land Affairs to verify farm valuations submitted to them before approving redistribution purchases,
- b) The large number of independent valuers conducting farm assessments for the Department of Land Affairs,
- c) The use of dissimilar valuations parameters by different independent valuers.

Productivity results showed that:

- a) 'During the year of takeover' data were available for twenty-six farms (out of a total twenty-seven), thirteen of which registered reductions in output per hectare averaging 29.20%. These results depict a poor transition between new and old proprietors in terms of productivity,
- b) 'Post takeover', where output was fully accounted for by the newly empowered owners and lessees, data on twenty-three of the cases existed. Eleven of these farms did not maintain or improve previous output levels, with production dropping by an average of 35.48%, over an average of two to three years. Collectively under-performance on the eleven farms meant the loss of about 48 000 tons of sugarcane, with a forgone monetary value of approximately R78 million. These farms accounted for 1443 hectares of farmland, less than 0.005% of the total amount of commercial farmland to be redistributed by 2014. If losses of income recorded in the Uthungulu and iLembe districts were to be experienced throughout the country, huge losses would accrue to South Africa's agricultural sector.

It was pointed out that the encouraging productivity levels ('during' and 'post' transfer), which were recorded on the farms sold by a large corporation were due to the following major factors:

- a) The superior relationship between past and new owners,

- b) The minor mentorship provided by the large corporation.

It was proposed that these factors may provide a framework through which land redistribution can be handled, given the evidence of benefits experienced.

The levels of under-production on the remaining farms were attributed to the following factors:

- a) The lack of formal after sales mentorship from the government,
- b) Incapacity on the part of the new owners and lessees,
- c) The timing of the transfer of farmland from old to new proprietor.

In light of the productivity challenges and high prices which are being experienced in KwaZulu-Natal's land redistribution programme, the following recommendations were proposed:

- a) The government should establish a number of independent land redistribution entities, all of which compete to redistribute farmland cost effectively,
- b) The current system of using numerous independent valuers to assess farms prior to redistributive purchase should be restructured, reducing the number of these valuers to one accountable institution if possible,
- c) The Department of Land Affairs should establish an independent division the responsibility of which would be to verify the accuracy of submitted farm valuations,
- d) The LRAD mentorship programme must be implemented properly, assigning all agricultural advisors farms to oversee.

In order for the recommendations to succeed, a greater degree of co-operation between farmers and government is necessary. It will take time, and the combined

efforts of national, provincial and local government, as well as institutions such as the South African Cane Growers Association and Inkezo Land Company. If the redistribution policies are not re-evaluated, it is likely that a number of the farms studied will cease operations. The result would be a loss of jobs, output revenue and formerly productive land lying dormant.

Further research should investigate the impact of additional factors on sugarcane farmland prices such as: regional location, proximity to local mills, topography and the value of fixed capital improvements.

Additional research should further identify the shortcomings of existing mentoring programmes and how industry led services provided by institutions like Inkezo Land Company and the South African Cane Growers Association could complement government's LRAD programme.

LIST OF REFERENCES

- ABEDIAN, I. and BIGGS, M., 1998. *Economic globalization and fiscal policy*. Cape Town: Oxford University Press.
- ABSTRACT OF AGRICULTURAL STATISTICS, 2008. The Directorate: Agricultural Statistics of the National Department of Agriculture. [Online]. Available: <http://www.nda.agric.za/publications/publications.asp?category=Statistical+information> [Accessed: 3 April 2008].
- AGRAWAL, A., 2001. Common Property Institutions and Sustainable Governance of Resources. *World Development*, Vol. 29, No. 10: 1649-1672.
- ALCHIAN, A. and DEMSETZ, H., 1973. The Property Rights Paradigm. *The Journal of Economic History*, Vol. 33, No. 1: 16-27.
- ALSTON, J. M., SEXTON, R. J. and ZHANG, M., 1997. The Effects of Imperfect Competition on the Size and Distribution of Research Benefits. *American Journal of Agricultural Economics*, Vol. 79, No. 4: 1252-1265.
- ATKINSON, S. E. and KERKVLIT, J., 1989. Dual Measures of Monopoly and Monopsony Power: An Application to Regulated Electric Utilities. *The Review of Economics and Statistics*, Vol. 71, No. 2: 250-257.
- BARLOWE, R., 1953. Land Reform and Economic Development. *Journal of Farm Economics*, Vol. 35, No. 2: 173-187.
- BALAND, J. M., and PLATTEAU, J. P., 1996. *Halting degradation of natural resources: Is there a role for rural Communities?* Oxford: Clarendon Press.
- BALAND, J. M., and PLATTEAU, J. P., 1998. Division of the Commons: A Partial Assessment of the New Institutional Economics of Land Rights. *American Journal of Agricultural Economics*, Vol. 80, No. 3: 644-650.
- BERNSTEIN, A., 2008. Step up land reform. *Financial Mail*, 13 June 2008:18.
- BHASKAR, V., MANNING, A. and TO, T., 2002. Oligopsony and Monopsonistic Competition in Labor Markets. *The Journal of Economic Perspectives*, Vol. 16, No. 2: 155-174.
- BHASKAR, V. and TO, T., 1999. Minimum Wages for Ronald McDonald Monopsonies: A Theory of Monopsonistic Competition. *The Economic Journal*, Vol. 109, No. 455: 190-203.

- BLACK, P., CALITZ, E., STEENKAMP, T. and associates, 1999. *Public economics for South African students* (2e). Cape Town: Oxford University press.
- BNET, 2008. Business definition for: Market structure. [Online]. Available: <http://dictionary.bnet.com/definition/market+structure.html> [Accessed: 20 December 2008].
- BROMLEY, D. W., 1989. Property Rights and Economic Development: The Other Land Reform. *World Development*, Vol. 17, No. 6: 867-877.
- BROMLEY, D. W. and CERNEA, M. M., 1989. *The Management of Common Property Natural Resources: Some Conceptual and Operational Fallacies*. Discussion paper 57, New York, World Bank.
- BUSINESSTODAY, 2007. 'Willing buyer/willing seller' rejected. [Online]. Available: http://www.southafrica.info/doing_business/businessstoday/economy_update/467695.htm [Accessed: 15 July 2007].
- BUURMAN, G. B., 1986. Henry George and the Institution of Private Property in Land: A Property Rights Approach. *American Journal of Economics and Sociology*, Vol. 45, No. 4: 489-502.
- CANE GROWERS, 2008a. Property transfer values 1999-2006. South African Cane Growers Association, Durban.
- CANE GROWERS, 2008b. Historical RV prices. [Online]. Available: <http://www.sacanegrowers.co.za/RVPrice/tabid/60/Default.aspx> [Accessed: 27 May 2008].
- CANE GROWERS, 2008c. Productivity data 1997-2007. South African Cane Growers Association, Durban.
- CHAMBERLIN, E. H., 1937. Monopolistic or Imperfect Competition? *The Quarterly Journal of Economics*, Vol. 51, No. 4: 557-580.
- CLRA, 2004. Communal Land Rights Act 11 of 2004. *South African Government Gazette*, Pretoria.
- COASE, R. H., 1960. The Problem of Social Cost. *Journal of Law and Economics*, Vol. 3: 1-44.
- CONSTITUTION, 1996. *The Constitution of the Republic of South Africa*. Law Books Press cc, Queensburgh.
- CROWE, B. L., 1969. The Tragedy of the Commons Revisited. *Science, New Series*, Vol. 166, No. 3909: 1103-1107.

- DALES, J. H., 1968. Land, Water and Ownership. *The Canadian Journal of Economics*, Vol. 1, No. 4: 791-804.
- DEERE, C. D., and LEON, M., 2001. Institutional Reform of Agriculture under Neoliberalism: The Impact of the Women's and Indigenous Movements. *Latin American Research Review*, Vol. 36, No. 2: 31-63.
- DE JANVRY, A., 1981. The Role of Land Reform in Economic Development: Policies and Politics. *American Journal of Agricultural Economics*, Vol. 63, No. 2: 384-392.
- DEMSETZ, H., 1967. Towards a Theory of Property Rights. *The American Economic Review*, Vol. 57, No. 2: 347-359.
- DFIT, 2008. Dictionary of Finance and Investment Terms. Oligopsony. [Online]. Available: <http://www.allbusiness.com/glossaries/oligopsony/4949113-1.html> [accessed: 20 December 2008].
- DIDIZA, T., 2005. Opening Address. Summit on Land and Agrarian Reform, Ministry of Agriculture, July, Pretoria.
- DLA, 1997. Department of Land Affairs. White paper on Land Policy. [Online]. Available: <http://land.pwv.gov.za/White%20Paper/whiteta.htm> [Accessed: 21 September 2007].
- DLA, 2007a. Department of Land Affairs. Draft recommendation on the principle of willing buyer-willing seller and governments approach to land reform. [Online]. Available: http://land.pwv.gov.za/Land_Summit/Position_Conference_Papers/Conference_Papers/Draft%20Recommendations_Land%20Summit.doc [Accessed: 10 April 2007].
- DLA, 2007b. Department of Land Affairs. Economic considerations of "Willing buyer, willing seller" approach. [Online]. Available: http://land.pwv.gov.za/Land_Summit/Position_Conference_Papers/Conference_Papers/Economic%20considerations%20of%20land%20reform%2029%20Jun%202005%5B1%5D.doc [Accessed: 10 April 2007].
- DLA 2007c. Department of Land Affairs. Land reform programmes. [Online]. Available: <http://land.pwv.gov.za/home.htm> [Accessed: 1 May 2008].
- DLA, 2008a. Sugarcane farmland sales data - Redistribution. KwaZulu-Natal Department of Land Affairs, Pietermaritzburg.

- DLA, 2008b. Department of Land Affairs. Reopening of restitution lodgement. [Online]. Available: <http://land.pwv.gov.za/restitution/ReOpening%20of%20Restitution%20Lodgement.ppt#279,25>, Implications of the re-opening of 19 June 1913 and 31 December 1998 [Accessed: 27 May 2008].
- DLA, 2008c. Personal communications. Specialist agricultural advisor, KwaZulu-Natal Department of Land Affairs, Pietermaritzburg.
- DLA, 2008d. Personal communications. Information officer, KwaZulu-Natal Department of Land Affairs, Pietermaritzburg.
- DTLGA, 2008. Department of Traditional and Local Government Affairs. *KwaZulu-Natal Local and District Municipalities. The Mercury*.
- ESTA, 1997. Extension of Security of Tenure Act 62 of 1997. *South African Government Gazette*, Pretoria.
- ECONOMIST, 2008a. Profit. [Online]. Available: <http://www.economist.com/research/economics/alphabetic.cfm?letter=P#profit> [Accessed: 10 November 2008].
- ECONOMIST, 2008b. Monopoly. [Online]. Available: <http://www.economist.com/research/economics/searchActionTerms.cfm?query=monopoly> [Accessed: 10 November 2008].
- ECONOMIST, 2008c. Oligopoly. [Online]. Available: <http://www.economist.com/research/economics/searchActionTerms.cfm?query=oligopoly> [Accessed: 10 November 2008].
- ECONOMY, 2008. Economy Professor. Monopoly. [Online]. Available: <http://www.economyprofessor.com/economictheories/monopoly.php> [Accessed: 20 December 2008].
- FEDER, E., 1965. When Is Land Reform a Land Reform? The Colombian Case. *American Journal of Economics and Sociology*, Vol. 24, No. 2: 113-134.
- FEDER, G. and FEENY, D., 1991. Land Tenure and Property Rights: Theory and Implications for Development Policy. *The World Bank Economic Review*, Vol. 5, No. 1: 135-153.
- FELDMAN, R. and WHOLEY, D., 2001. Do HMOs Have Monopsony Power? *International Journal of Health Care Finance and Economics*, Vol. 1, No. 1: 7-22.
- FLORES, E., 1970. Issues of Land Reform. *The Journal of Political Economy*, Vol. 78, No. 4, Part 2: 890-905.

- GEHRT, S. D., 1996. The Human Population Problem: Educating and Changing Behaviour. *Conservation Biology*, Vol. 10, No. 3: 900-903.
- GOVERNMENT INFO, 2008. Agriculture and land affairs. [Online]. Available: <http://www.info.gov.za/aboutsa/landpeople.htm#kzn> [Accessed 5 March 2008].
- GROUND, L. and DE JANVRY, A., 1978. Types and Consequences of Land Reform in Latin America. *Latin American Perspectives*, Vol. 5, No. 4: 90-112.
- GUJARATI, D. N., 2003. *Basic Econometrics* (4e). New York: McGraw-Hill Companies.
- HARDIN, G., 1968. The Tragedy of the Commons. *Science, New series*, Vol. 162, No. 3859: 1243-1248.
- HARRIS, E. R., 1969. Financing Land Reform: The Process of Land Reform in Developing Countries: The Background and Basic Legal Strategy. *American Journal of Economics and Sociology*, Vol. 28, No. 1: 49-58.
- HULETTS, 2008. South African Sugar Industry Structure. Tongaat Hulett Sugar. [Online]. Available: http://www.hulett.co.za/au/sa_sugar_struct.asp [Accessed: 22 May 2008].
- INKEZO, 2008. Personal Communication. General Manager, Inkezo Land Company, Durban. [11 March 2008].
- IPILRA, 1996. Interim Protection of Informal Land Rights Act 31 of 1996. *South African Government Gazette*, Pretoria.
- JUST, R. E. and CHERN, W. S., 1980. Tomatoes, Technology, and Oligopsony. *The Bell Journal of Economics*, Vol. 11, No. 2: 584-602.
- KAY, C. E., 1997. The Ultimate Tragedy of Commons. *Conservation Biology*, Vol. 11, No. 6: 1447-1448.
- KUHNEN, F., 1982. *Man and Land: An Introduction into the Problems of Agrarian Structure and Agrarian Reform*. Germany: Verlag Breitenbach Publishers.
- KZN, 2008. Provincial profiles – Kwa-Zulu Natal. [Online]. Available: <http://www.sa2010.gov.za/southafrica/kwazulunatal.php#North%20Coast> [Accessed 5 March 2008].
- LÓPEZ-DE-SILANES, F., SHLEIFER, A. and VISHNY, R. W., 1997. Privatization in the United States. *The RAND Journal of Economics*, Vol. 28, No. 3: 447-471.

- LRA, 1996. Land Reform (Labour Tenants) Act 3 of 1996. *South African Government Gazette*, Pretoria.
- MALA, 2006. Ministry of Agriculture and Land Affairs. Land and Agrarian reform in South Africa: 1994-2006. [Online]. Available: http://www.icarrd.org/en/icard_doc_down/national_SouthAfrica.doc [Accessed: 5 August 2007].
- MBATHA, 2008. Personal Communication. Economics consultant, Imani Development, Pretoria. [8 April 2008].
- MCNULTY, P. J., 1968. Economic Theory and the Meaning of Competition. *The Quarterly Journal of Economics*, Vol. 82, No. 4: 639-656.
- MKHIZE, Z., 2008. Keynote speech. Sezela Cane Growers Congress, KwaZulu-Natal, March.
- MLAMBO-NGCUKA, P., 2005. Keynote speech. Summit on Land and Agrarian Reform, Johannesburg, July.
- MURRAY, B. C., 1995. Measuring Oligopsony Power with Shadow Prices: U.S. Markets for Pulpwood and Sawlogs. *The Review of Economics and Statistics*, Vol. 77, No. 3: 486-498.
- NELSON, G. C., 1993. Agricultural Policy Reform in Eastern Europe: Discussion. *American Journal of Agricultural Economics*, Vol. 75, No. 3: 857-859.
- NDA, 2008a. Trends in the agricultural sector- 2007. [Online]. Available: <http://www.nda.agric.za/publications/publications.asp?category=Statistical+information> [Accessed 10 March 2008].
- NDA, 2008b. Personal Communication. Telephone conversation with the directorate of the National Department of Agriculture. [4 April Durban].
- NLA, 1913. South African Native Land Laws. *Journal of the Society of Comparative Legislation, New Ser.*, Vol. 15, No. 1: 9-16.
- OSTROM, E., 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.
- PETERS, B. G., 1981. The Problem of Bureaucratic Government. *The Journal of Politics*, Vol. 43, No. 1: 56-82.
- PIEA, 1998. Prevention of Illegal Eviction from and Unlawful Occupation of Land Act 19 of 1998. *South African Government Gazette*, Pretoria.
- PROBERT, 2008. Probert Encyclopaedia. Oligopoly. [Online]. Available: <http://www.probertencyclopaedia.com/cgi-bin/res.pl?keyword=Oligopoly&offset=0> [Accessed: 20 December 2008].

- RAMUTSINDELA M. F., 1997. National Identity in South Africa: the search for harmony. *GeoJournal*, Vol. 43, No. 1: 99-110.
- RLRA, 1994. Restitution of Land Rights Act 22 of 1994. *South African Government Gazette*, Pretoria.
- ROBINSON, J., 1934. What is Perfect Competition? *The Quarterly Journal of Economics*, Vol. 49, No. 1: 104-120.
- RUNGE, C. F., 1984. Strategic Interdependence in Models of Property Rights. *American Journal of Agricultural Economics*, Vol. 66, No. 5, Proceedings Issue: 807-813.
- SASA, 2008. Industry Overview. South African Sugar Association. [Online]. Available: <http://www.sugar.org.za/IndustryOverview43.aspx> [Accessed: 22 May 2008].
- SCOTT, A., 1983. Property Rights and Property Wrongs. *The Canadian Journal of Economics*, Vol. 16, No. 4: 555-573.
- SHLEIFER, A., 1998. *State versus Private Ownership*. National Bureau of Economic Research: Cambridge.
- SHLEIFER, A. and VISHNY, R. W., 1993. Corruption. *The Quarterly Journal of Economics*, Vol. 108, No. 3: 599-617.
- SOROOS, M. S., 1977. The Commons and Lifeboat as Guides for International Ecological Policy. *International Studies Quarterly*, Vol. 21, No. 4, *Special Issue on International Politics of Scarcity*: 647-674.
- STATSSA, 2008a. Summary of Findings: Survey of Large Scale Agriculture 2006. [Online]. Available: http://www.statssa.gov.za/PublicationsHTML/P110112006SUMMARY/html/P110112006_SUMMARY.html [Accessed: 22 May 2008].
- STATSSA, 2008b. Consensus of Agriculture Provincial Statistics 2002 – KwaZulu-Natal. [Online]. Available: <http://www.statssa.gov.za/publications/statsdownload.asp?ppn=Report-11-02-06&SCH=3687> [Accessed: 22 May 2008].
- STATSSA, 2008c. Unemployment rate. [Online]. Available: <http://www.statssa.gov.za/> [Accessed: 29 May 2008].
- SUTTON, J., 2006. *Market Structure: Theory and Evidence*. London School of Economics.
- TUMA, E. H., 1963. The Agrarian-Based Development Policy in Land Reform. *Land Economics*, Vol. 39, No. 3: 265-273.

- VAN DER WALT A. J. and PIENAAR G. J., 2006. *Introduction to the Law of Property* (5e). Juta & Co, Ltd, Lansdowne.
- WADE, R., 1988. *Village Republics: Economic conditions for collective action in South India*. Oakland: ICS Press.
- WALDRON, J., 1985. What is Private Property? *Oxford Journal of Legal Studies*, Vol. 5, No. 3: 313-349.

APPENDIX

A-1. Uthungulu- land redistribution transactions of private individuals and small companies

UTHUNGULU DISTRICT									
LAND REDISTRIBUTION - PRIVATE INDIVIDUALS AND SMALL COMPANIES									
FARM/ CASE	AUC (HA'S)	VALUATION PER HA OF SUGARCANE (R)	PRICE PAID PER HA OF SUGARCANE (R)	PREMIUM (+) OR DISCOUNT (-) ON PRICE PAID (%)	YEAR OF SALE FOR VALUATION PURPOSES	AVERAGE TONS PRODUCED PER HA (4YR)	LAND REDISTRIBUTION PRICE PAID PER HA OF YIELD (R)	MARKET PRICE PER HECTARE OF YIELD (R)	PREMIUM (+) OR DISCOUNT (-) ON MARKET PRICE (%)
U 1	108	18 000	9 275	48.47 -	2003	47	198	333	40.54 -
U 2	105	10 244	5 611	45.22 -	2004	30	185	359	48.47 -
U 3	123	11 000	9 816	10.76 -	2004	33	295	359	17.83 -
U 4	98	18 870	9 561	49.33 -	2004	33	289	359	19.50 -
U 5	220	18 182	15 909	12.50 -	2004	29	548	359	52.65 +
U 6	59	20 000	19 048	4.76 -	2006	35	548	378	44.97 +
U 7	145	35 000	35 000	0.00	2006	68	519	378	37.30 +
U 8	52	38 000	38 000	0.00	2006	62	616	378	62.96 +
U 9	170	29 471	29 471	0.00	2006	63	464	378	22.75 +
U 10	127	16 731	16 731	0.00	2006	33	505	378	33.60 +
TOTAL	1207	215 497	188 422	173.98 -	-	433	4167	3659	127.89 +
AVERAGE	121	21 550	18 842	17.40 -	-	43	417	366	12.79 +

AUC = Area under cane, measured in hectares

Note: Both the 'Market price per hectare of yield' and the 'Land redistribution price paid per hectare of yield' are based on an average 4yr production history

Where an average 4yr production history is used, this includes the yield from the 'year of sale for valuation purposes', and the 3 previous years

Source: Adapted from Cane Growers (2008a; 2008c); DLA (2008a)

A-2. *iLembe- land redistribution transactions of private individuals and small companies*

ILEMBE DISTRICT									
LAND REDISTRIBUTION - PRIVATE INDIVIDUALS AND SMALL COMPANIES									
FARM/ CASE	AUC (HA'S)	VALUATION PER HA OF SUGARCANE (R)	PRICE PAID PER HA OF SUGARCANE (R)	PREMIUM (+) OR DISCOUNT (-) ON PRICE PAID (%)	YEAR OF SALE FOR VALUATION PURPOSES	AVERAGE TONS PRODUCED PER HA (4YR)	LAND REDISTRIBUTION PRICE PAID PER HA OF YIELD (R)	MARKET PRICE PER HECTARE OF YIELD (R)	PREMIUM (+) OR DISCOUNT (-) ON MARKET PRICE (%)
I 1	200	11 500	9 703	15.62 -	2002	39	250	325	23.07 -
I 2	150	19 177	18 510	3.48 -	2004	39	474	377	25.73 +
I 3	79	21 000	16 525	21.31 -	2004	36	465	377	23.34 +
I 4	1108	20 000	11 942	40.29 -	2004	51	234	377	37.93 -
I 5	93	6 022	6 022	0.00	2004	13	453	377	20.32 +
I 6	55	17 500	15 962	8.79 -	2004	47	342	377	9.23 -
I 7	95	9 000	8 789	2.34 -	2005	22	405	287	41.11 +
I 8	211	19 905	19 905	0.00	2005	42	472	287	64.46 +
I 9	45	17 333	11 956	31.03 -	2005	29	418	287	45.64 +
I 10	452	20 000	16 703	16.48 -	2005	39	427	287	48.78 +
TOTAL	2488	161 437	136 017	139.34 -	-	356	3940	3355	199.15 +
AVERAGE	249	16 144	13 602	13.93 -	-	36	394	335	19.92 +

AUC = Area under cane, measured in hectares

Note: Both the 'Market price per hectare of yield' and the 'Land redistribution price paid per hectare of yield' are based on an average 4yr production history

Where an average 4yr production history is used, this includes the yield from the 'year of sale for valuation purposes', and the 3 previous years

Source: Adapted from Cane Growers (2008a; 2008c); DLA (2008a)

A-3. *iLembe- land redistribution transactions of a large corporation*

ILEMBE DISTRICT									
LAND REDISTRIBUTION - LARGE CORPORATE DEALS									
FARM/ CASE	AUC (HA'S)	VALUATION PER HA OF SUGARCANE (R)	PRICE PAID PER HA OF SUGARCANE (R)	PREMIUM (+) OR DISCOUNT (-) ON PRICE PAID (%)	YEAR OF SALE FOR VALUATION PURPOSES	AVERAGE TONS PRODUCED PER HA (4YR)	LAND REDISTRIBUTION PRICE PAID PER HA OF YIELD (R)	MARKET PRICE PER HECTARE OF YIELD (R)	PREMIUM (+) OR DISCOUNT (-) ON MARKET PRICE (%)
I 11a	88	15 518	15 530	0.08 +	2004	47	333	377	11.67 -
I 11b	95	15 647	16 155	3.14 +	2004	46	352	377	6.63 -
I 11c	105	18 154	18 147	0.04 -	2004	48	381	377	1.06 +
I 11d	128	14 523	14 524	0.01 +	2004	46	316	377	16.18 -
I 11e	82	20 000	19 005	4.98 -	2004	47	401	377	6.37 +
I 12	93	16 417	16 417	0.00	2004	48	343	377	9.02 -
I 13	123	13 000	13 000	0.00	2004	32	411	377	9.02 +
TOTAL	714	113 258	112 777	1.79 -	-	313	2536	2636	27.05 -
AVERAGE	101	16 180	16 111	0.26 -	-	45	362	377	3.86 -

AUC = Area under cane, measured in hectares

Note: Both the 'Market price per hectare of yield' and the 'Land redistribution price paid per hectare of yield' are based on an average 4yr production history

Where an average 4yr production history is used, this includes the yield from the 'year of sale for valuation purposes', and the 3 previous years

Cases I 11a-e represent one farm, which was split into five sections for sales purposes

Source: Adapted from Cane Growers (2008a; 2008c); DLA (2008a)

A-4. Historical recoverable value prices of sugarcane per ton

SEASON	PRICE (R)
2007/2008	1701.90
2006/2007	1701.86
2005/2006	1389.80
2004/2005	1297.19
2003/2004	1357.01
2002/2003	1368.79
2001/2002	1352.14

Source: Cane Growers (2008b)