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UNIVERSITY OF NATAL DURBAN

NKANDLA REVISITED: A LONGITUDINAL STUDY OF THE STRATEGIES ADOPTED TO ALLEVIATE POVERTY IN A RURAL COMMUNITY

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by

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The Rural Urban Studies Unit was founded in 1983 by the Human Sciences Research Council for the purpose of studying the dynamics of the links between the rural and urban areas of South Africa. It is situated at the University of Natal, Durban and works in close co-operation with the Centre for Social and Development Studies (previously the Development Studies Unit).

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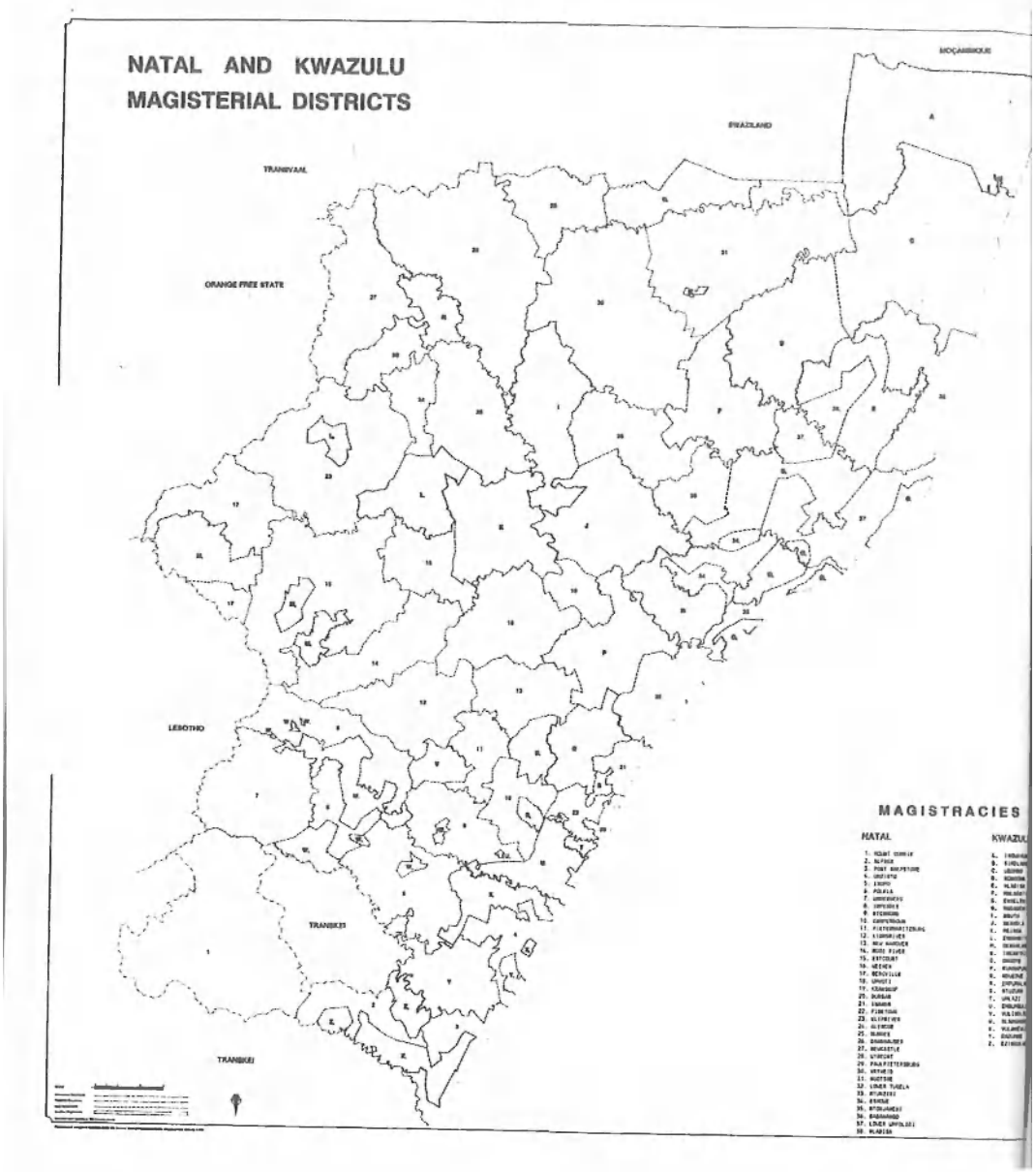
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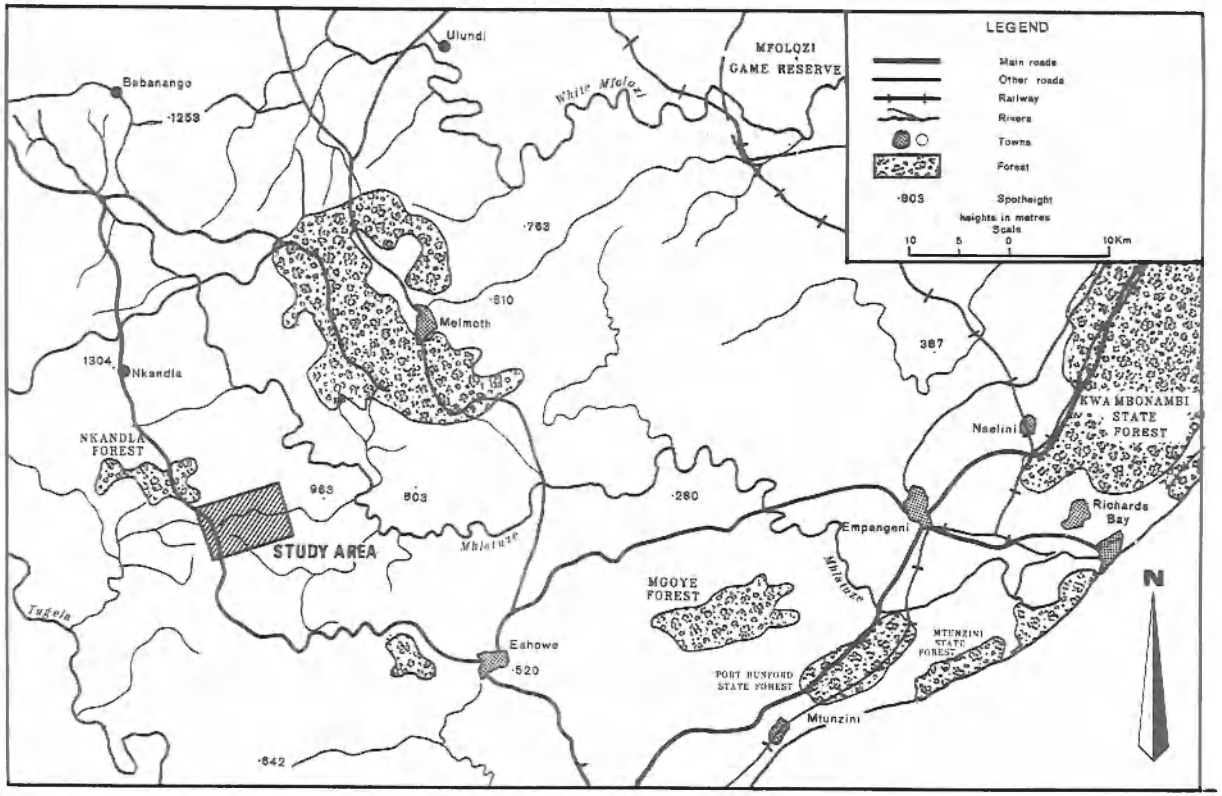
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NKANDLA REVISITED: A LONGITUDINAL STUDY OF THE STRATEGIES ADOPTED TO ALLEVIATE POVERTY IN A RURAL COMMUNITY

CHAPTER ONE : NKANDLA REVISITED

1.1 Introduction

This paper relates the findings of a survey, conducted in 1985, of rural households in the magisterial district of Nkandla in KwaZulu to a survey of the same households conducted in 1982 as part of the Second Carnegie Inquiry into Poverty and Development (Ardington, 1984). The resurvey was conducted to establish, through the investigation of certain randomly selected households over a period of three years, what strategies those households adopted in reaction to the changing social and economic circumstances in which they found themselves. Since the original survey the area had experienced yet another serious drought and, along with the rest of the country, was suffering the impact of the general economic recession. The initial survey had shown clearly how the fortunes of this peripheral rural area were governed by the way in which the meagre resources (chiefly pensions and remittances) allocated it by the core industrial community were distributed. Local lifestyles were shown to be largely determined by the levels of migratory employment (or unemployment) and national social security policies. Within these externally defined constraints, the strategies which households, or individuals within them, could adopt to alleviate their poverty or

improve their lifestyles were seen to be extremely limited.

The area is a remote one in which there has been comparatively little disturbance of the traditional lifestyle and no forced population re-settlement. Relatively plentiful water and fuel supplies mean there has been no need to depart from traditional practices or to incur expense in procuring them. Human pressure on the land is below average for a black rural area in South Africa. It is an area which has neither benefitted from proximity to industry and urban development nor suffered abnormal disadvantages from resettlement, recurrent drought or extreme overgrazing. Its very rugged terrain is its one natural disadvantage.

The area surveyed is situated at approximately 28°50'S and 31°15'E at an altitude varying between 600 and 1 000 metres. By road it is 30 kilometres from Nkandla and 50 km from Eshowe. It is described as coast hinterland which is the strip of country in Natal/KwaZulu inland of the coastal strip which generally runs parallel to the coast. It is fragmented by numerous incised valleys, lies along the Natal monocline and has very rugged topography. All the land is steeper than 1:6 but in the area actually surveyed tended to be far steeper - e.g. 1:2,5.

The area is criss-crossed by many streams and springs are found throughout it. The rainfall varies between 1 000 and 1 200 mm per annum with most falling between November and February. The climate is humid to subhumid and the vegetation would have naturally been forest

and scrub forest. Although the forest area has declined[1], there are pockets of indigenous forest remaining in the valleys throughout the area surveyed, and immediately to the north of the area is the magnificent Nkandla forest which is now protected.

The natural pasture has deteriorated to become Ngongoni veld. Most of the grass is today aristida junciformis. The themeda triandra and tristachya aristida that should naturally be found in the area have almost disappeared. The soil is badly eroded and large dongas are found throughout the area.

The population density in the area is low. Thorrington-Smith et al (1978) state that in most of the area it is between 50 - 100 per square kilometre and less on the fringes.

1.2 Method of Survey

The households originally surveyed had been selected by a random sampling technique and marked on aerial photographs. It was therefore possible to return to them for the resurvey. In 1982 seventy of the 480 households in the area were surveyed. Seven hundred and sixty four individuals lived in those households. In 1985 four of the original households no longer existed, their inhabitants having died or left the area. Another four households had split up - one into four households and the other three into two. In 1985 all the sub-

1. Cetewayo's grave which was originally hidden in the forest is now a couple of kilometres from the nearest piece of forest.

divisions were interviewed, as were three new households which were selected to replace those no longer existing. There were thus in the 1985 survey 75 participating households with a total of 831 members.

The questionnaire administered in 1985 was not as comprehensive as that of 1982. Generally questions relating to the quality of life were omitted and the resurvey concentrated on the demographic and economic characteristics of the households. The intention of the resurvey was to highlight and analyse any change which had occurred since 1982 and not to determine in detail social and demographic conditions as was done in the original report.

Further information was obtained from interviews with significant persons in the area. Information was thus obtained from the magistrate, the assistant magistrate, indunas, the labour officer, the circuit inspector, the stock inspector, the extension officer, the hospital superintendant and other doctors and nurses, the KwaTeba recruiting officer, several teachers and principals and two storekeepers and their wives. In the text it will be made clear whether information given was obtained from answers to the questionnaires or individual interviews. General information was obtained from observation during residence in the area for the survey periods.

Both surveys were conducted during the months of September, October and November.

CHAPTER TWO: THE HUMAN POPULATION

2.1 Introduction

The area surveyed was the point at which three tribal wards meet - the three chiefs were **Gwazabangiwe Khanyile, Fangelakhe Biyela** and **Bhekabelungu Biyela.**[1] However, most of the area falls within one ward - that of **Fangelakhe Biyela.** Two of the wards are in the Nkandla magisterial district and one in Inkanyezi. The area covered by the three wards is approximately 287 square kilometres in extent and according to the 1980 Census 12 980 people lived in these wards resulting in a population density of 45 per square kilometre. The 1985 Census showed the population density to have increased to 49 per square kilometre. The area actually surveyed was 60 square kilometres in extent and contained 480 homesteads. As the average homestead surveyed had 9,1 residents the population density in the area surveyed was 73 per square kilometre - 60 percent higher than that shown by either Census count for the three wards. As the area surveyed was closer to the main road, shops and junior secondary school than much of the balance of the three wards, it is probable that the population was denser there than elsewhere but this could hardly account for all of the discrepancy in density figures which may well point to a significant undercount in the area in the 1980 and 1985 Censuses.

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1. By the time of the resurvey the first two chiefs had died but no successors had as yet been appointed.

The population appeared to be very stable. 95 percent of those surveyed were living where the head of the household had been born. Almost without exception the homesteads were traditional in structure - both as to the arrangement of the huts and as to the structure of the huts themselves. There were some rectangular huts but the vast majority were round. Almost all married adults had their own huts but not necessarily their own homesteads.

The only immediately obvious changes which were observed to have occurred between surveys were that the central store had acquired a telephone and the odd person had added a toilet to the cluster of buildings that constituted the homestead.

2.2 Age, Sex and Household Membership

Although the number of persons surveyed was larger in 1985 than in 1982 (831 as opposed to 764 individuals), the structure of the surveyed community with regard to age and sex remained unchanged. The average age of all surveyed was 23 and 50 percent were under eighteen years of age. 53 percent of those surveyed were females and 47 percent males. Excluding all migrants the surveyed population was 39 percent male and 61 percent female. According to the 1985 Population Census the sex ratio of the KwaZulu population was 45:55 and that of the magisterial district of Nkandla 40:60.

Table 1 below, which indicates the distribution of age groups for KwaZulu, the magisterial district of Nkandla, the total population surveyed and the resident (i.e. excluding all migrants) population

surveyed, reflects the impact of migrancy and urbanization upon the KwaZulu population. The survey area contained (on a permanent basis) an above average share of the very young and very old - the natural dependents in any community.

Table 1: Distribution of Age Groups

Age Groups	KwaZulu*	Survey		Nkandla*
		Total Population	Resident Population	
0 - 14	44,0	46,7	53,3	46,7
15 - 64	51,4	48,1	40,3	45,9
65+	4.6	5.2	6.4	7.4

* Population Census of the Republic of South Africa 1985, Central Statistics Services 02-85-02

Households in the area were traditionally structured and large. Although average household size had increased marginally between surveys from 10,9 to 11,1 members, when one excluded migrants it had decreased from 9,1 members in 1982 to 8,7 in 1985. Apart from an overall increase in the number of migrants there was an increase in non-working migrants - persons who accompanied migrants but did not intend seeking work (chiefly migrants' wives and children) - which would explain the difference. Whether this was a genuine increase, or a fact unearthed through more perceptive questioning in 1985, is not certain. Although the resurvey occurred before the official removal of influx control it may reflect the more relaxed and realistic

attitudes of the authorities preceding the repeal of the legislation. The largest household had 34 members and the smallest 1.

2.3 Household Structure

In 1985 78 percent of households consisted of extended families. Five percent of households contained someone who was not related to the household head. Nineteen percent consisted of a nuclear family (parents and children only) and four percent of individuals or couples. Forty three percent of household members were extended family members - i.e. they were neither the head, his spouse, nor his children. Those who lived alone or as couples tended to have homesteads close to relations - enabling them to obtain assistance with chores more easily.

2.4 Household Heads

Although the majority of households were in theory, or de jure, headed by males, the absence of many of them as migrants meant that in effect half of the de facto heads were females.

The overall position with regard to household heads changed little between 1982 and 1985. The number of heads who were migrants grew as did the number who were unemployed. Those who remained at home tended to be retired or at least of retirement age. Male heads who lived at home were on average 61,7 years old, whereas migrant heads were 47,7. Of those who said they were involved in agriculture at home only two

Table 2 : Household Heads

	De Jure Head (Percentage)		De Facto Head (Percentage)	
	1982	1985	1982	1985
Males	87,2	86,7		
Resident Male	51,4	44,0	51,4	44,0
Absent Male	1,4	2,7		
Migrant Male	34,4	40,0		
Female	12,8	13,3	48,6	56,0
Widow	11,4	12,0	11,4	12,0
Single	1,4	1,3	1,4	1,3
Married			35,8	42,7

were below 60 years of age. It appeared that as subsistence income and the opportunity to make a living from informal sector activity declined household heads, along with the rest of the community, were forced to migrate in search of employment even if the likelihood of obtaining employment was simultaneously declining due to the recession.

During the years between surveys 3 male heads died. Two were replaced as heads by their widows. The household of the third split and each section was headed by one of the deceased head's sons in 1985.

Three other households split between 1982 and 1985. Two of the households were replaced by six new households all headed by males who had been members of the original households. The original head of the third household which split continued to act as the head of both households although in one he was obviously an "absentee head".

Two households which had been headed by widows in 1982 were by 1985 headed by the widows' sons although both widows were still alive. In another a son had replaced his father who in 1982 had been an "absentee head".

In the original survey one respondent had been dubious as to who the head of the household in which she lived was. Although she said her husband was head she clearly felt her mother-in-law played a dominant role. In 1985 she unhesitatingly stated that her mother in law was head of the household. Members of the household were extremely critical of her husband's recent failure to remit money to his family who were very short of food.

The only other household recording a change in headship between surveys was one where a son had left to live permanently in Durban and his widowed mother had replaced him as head.

2.5 Changes in Household Structure since 1982

A number of changes were found to have taken place in the composition of individual households in the three years between surveys. Nineteen people had died and 73 people had been born into the surveyed homesteads. Six of these new babies had already died. Ninety household members had left their homes and 59 new members had joined them.

Many of the moves related to the setting up of new homes. A number of unmarried mothers who had been living at home with their parents in

1982, had in the intervening period married the fathers of their children and moved with the children to the husbands' homes.

A significant number of the changes in household composition, and often the form of household structure itself, can only be explained by reference to current sources of income and support. Traditionally the advantages of many hands to perform daily chores - fetching water and fuel, housebuilding, the care of children and the aged, cooking, agriculture and stock management - encouraged the maintenance of extended families. Today with subsistence agriculture playing an ever declining role and many households surviving almost entirely on cash transfers (in the form of remittances and social pensions)[1] it might be expected that extended households would have broken down to the point where a migrant's or pensioner's contribution would be shared solely amongst his immediate family. This would no doubt be the ideal situation but the presence in the area of relatives who have access to neither of these major sources of income and the persistence of some traditional values, has prevented a more significant development along such lines.

Many of the changes in household composition occuring between surveys could be traced to destitute persons joining households which had access to income, or to part of a household breaking away and setting up on its own when it obtained independent access to some source of income or when a source of income in the household to which they had previously belonged dried up. Thus when a pensioner died, relatives

1. See Table 34.

who had benefited from the pension might either leave and set up their own household or join some other household in which there was a regular source of income. There were a number of cases of persons who, on being successful in obtaining an old age pension or disability grant, broke away from a household and established an independent one.

Although there were a few small households which existed successfully without access to either pensions or remittances, whenever a family contained a large number of dependents it appeared essential for them to obtain access to one of the chief sources of income (remittances or pensions) if they were not to experience dire poverty.

Changes in the composition of two specific households illustrate well the impact of income sources on household structure. Other examples are mentioned in subsequent chapters.

> In the first the household had for sometime been dependent on the widow's pension. When her brother-in-law started to receive his own pension he and his immediate family left and established their own household. Their places were however soon taken by the widow's daughter-in-law and grandchildren who were left without any source of income when her son suddenly died.
>
> In the second household friction had been observed between the two wives in 1982 and in 1985 the household was found to have split. In 1982 the household had been largely dependent upon one of the wives' disability grant, although the mother-in-law had recently started receiving an old age pension. Shortly after the first survey the household split leaving one wife, her children and the mother-in-law dependent upon the old age pension while the balance of the household remained dependent upon the second wife's disability grant.

2.6 Occupation

Table 3 below indicates that there was remarkably little change between 1982 and 1985 in the categorization of individuals by occupation with the exception of the percentage unemployed which had increased by almost 50 percent. Fluctuations in the levels of employment and unemployment are discussed at greater length in Chapter 3, section 5.

Table 3: Household Structure by Occupation

Occupation	Percentage of Total Surveyed Community in Particular Category		Average Number of Persons per House hold in Particular Category		Percentage of Households having a Member in Particular Category	
	1982 N=764	1985 N=831	1982	1985	1982 N=70	1985 n=74
Preschool	22,6	22,1	2,5	2,5	80,0	72,0
Scholar	12,8	14,6	1,4	1,6	61.4	58,7
Not at School*	12,0	11,8	1,3	1,1	58,6	60,0
Domestic duties	25,3	22,0	2,7	2,4	97,1	92,0
Agricultural duties	1,4	1,6	0,2	0,2	26,0	16,0
Employed	16,7	15,3	1,8	1,7	77,0	77,3
Self employed	0,7	0,4	0,1	0,1	6,0	4,0
Unemployed **	5,8	8,6	0,6	1,1	45,7	61,3
Retired	2,7	3,6	0,3	0,4	24,3	34,7
Average Household Size			11,1	10,9		

* Children between the ages of 7 and 16 who were not at school.

** This figure does not include unemployed persons aged 15 or 16 who have been classified as being "not at school".

2.7 Parenthood

Of the 404 children surveyed who were aged 16 or less only 7,7 percent lived permanently with both parents. A further 9,1 percent were living with both parents at the time of the resurvey either because illness or unemployment had led to their father being temporarily at home or because they had accompanied their migrant parents to the workplace.

Although 35 percent of the children might legally have been referred to as illegitimate, approximately 10 percent of the parents of these children, stated that they intended marrying at some future date. Most of the unmarried mothers who had stated in 1982 that they intended marrying the father of their children had done so by the time of the resurvey in 1985. All these illegitimate children were fully absorbed as members of their households. No resentment against their presence was expressed by the families housing them despite the fact that only 14 of these children received any maintenance from a parent who was not part of the household in which the child was living.

Table 4 below gives a general view of the access of children to their parents.

Of those who lived with their mother only, the fathers of 4,9 percent had died. Most of these men would, no doubt, have been migrants so that their death would have only marginally increased the percentage living with their mother only. The fathers of 54 percent of the legitimate children who lived with mothers only, were migrants,

whereas almost half of the fathers of illegitimate children who lived with mothers only, had deserted. Twenty nine percent of all the children had been deserted by one parent and 7,7 percent by both.

Table 4: Children's Access to Parents

Child's Place of Residence	Legitimate Children	Illegitimate Children	All Children
With both parents	25,9	0,0	16,8
With mother only	63,9	52,5	59,9
With father only	1,1	0,7	1,0
Without either parent	9,1	46,8	22,3
N	263	141	404
Percentage	65,1	34,9	100,0

2.8 Birth and Mortality Rates

Information on birth and mortality rates was obtained from 142 mothers whose ages ranged from 19 to 79 and whose average age was 40. Seventy three percent of the mothers had had no education and only 11,2 percent had been educated beyond Standard 2. Twenty nine percent of the mothers were unmarried.

On average each mother had had 4,6 children. Fifty one percent of the mothers interviewed had had children die and 24,5 percent of the children born to all mothers had died. Of those mothers who had lost children the average number lost was 2,2.

The deaths enumerated in the survey include the deaths of all juveniles and while most deaths probably occurred within the first five years of the child's life this means the survey's figures are not directly comparable with national statistics which refer to deaths within the first or first five years of a child's life. In 1985 the under five mortality rate for all of South Africa was 104 per 1 000 (Wilson, 1987). This figure conceals significant racial and geographical differences. The rate in urban areas tends to be consistently lower than that in rural areas and that for blacks many times that of whites. Figures from the Transkei in 1980 give an infant mortality rate of 130/1000 and an under five rate of 190/1000 (Ingle, 1982).

A child mortality rate for each mother was calculated by dividing the number of deaths while a juvenile by the total number of live births and multiplying by 100. The average rate thus calculated was 18 percent.

As the younger mothers may yet have further children and as more children (born and unborn) may still die, it was not possible to calculate accurate or final mortality rates for all mothers surveyed or relate these to other factors such as education or age. The most that could be done with the survey data was to look for trends. The following tables should, therefore, be viewed with this limitation in mind and be seen to reflect the position as at the time of survey only. They would seem to indicate that the child mortality rate was declining over time. The child mortality rate of those mothers who were currently younger (not necessarily those who had given birth at a

younger age) was significantly lower than that of mothers who were currently older suggesting that each year the rate was falling. The implication that one of the reasons for this fall was the better education of younger mothers is supported by Table 6 which indicates a child mortality rate which falls as the level of the mother's education rises.

Table 5: Mortality Rate and Mother's Age

Current Age of Mother	Average Child Mortality Rate (Percentage)
15 - 34	8,9
35 - 54	17,8
55 +	36,5

Table 6: Mortality Rate and Mother's Education

Education of Mother	Mortality Rate (Percentage)
None	25,9
1 - 4 years	13,6
4 + years	10,7

2.9 Marriage and Fertility

The surveys showed that marriage was still the norm even if it only took place relatively late in life. In 1985 there were only four men and two women over the age of forty who were not and never had been married. However, it was only at the age of 30 that the majority of

women were married and at 33 that this was true of the majority of men. No men under the age of 25 were married and only 4 women were.

Of those who were married, 42,7 percent of females amd 30,9 percent of males were parties to polygamous unions.

Worldwide, marriage and fertility appear to follow certain patterns. Marriage at a relatively young age is normally accompanied by high fertility rates and is found in societies where marriage is almost universal (Simkins:1986). Where changes occur in such societies resulting in later marriage it usually happens that the fertility rate declines and marriage is no longer universal. However, where the changes are related solely to economic causes and do not reflect cultural change, later marriage may not be accompanied by delayed childbearing and marriage may remain universal although occurring later. Thus, in the survey area it seems that whilst economic circumstances, the wage employment of some young women, the migrant labour system and other factors have led to a postponement of marriage, marriage has nevertheless remained almost universal and childbearing has not been delayed. Almost one third of the surveyed mothers were unmarried at the time of the survey and it is likely that the majority were unmarried when they actually gave birth - at least to their eldest children.

As the younger mothers in the survey group may yet have more children it is not possible to determine whether the fertility rate is declining without knowing the ages of the mothers at the time of each

child's birth. Table 7 merely indicates the average number of births for the mothers in each age group at the time of the survey. It cannot be said to indicate a decline in fertility but merely the possibility of one. This might be expected as a result of, amongst other factors, the improved educational levels of the younger mothers, the declining availability of agricultural land which has reduced the value of children as agricultural labour, the perceived need to educate children and the costs associated therewith and the increased entry of women into the wage labour market. As the status of women improves in response to cultural, economic and legislative changes the fertility rate may be expected to decline.

Table 7: Mothers Age and Number of Births at the Time of Survey

N	Age	Mean No. of births	Median No. of births
29	19 - 27	1,86	2,0
29	28 - 33	3,41	3,0
31	34 - 43	5,39	5,0
25	44 - 53	6,52	7,0
28	54 - 79	6,43	6,5

2.10 Migrancy

Twenty two percent of the members of surveyed households were away at the time of the resurvey. Although they included scholars and wives and children who accompanied the migrants, over 90 percent of the absentees were employed migrants or workseekers. Of migrants desirous of participating in wage labour 80 percent were employed and 20 percent unemployed and together these 2 groups constituted 18 percent

of the surveyed population. The 6,7 percent of the population who were at home but unemployed, should probably be viewed as potential migrants as the chances of their finding employment in the survey area were extremely small. Many of them had been previously employed as migrants. Had half of them been able to find employment as migrants, a quarter of the population of the area would not have been resident on a permanent basis at the time of the survey.

Table 8 below shows the age distribution of the migrants (workers and work seekers only) and the age specific migration rates. The data

Table 8: The Age Distribution of Migrants and the Age Specific Migration Rates

	Migrants				Age Specific Migration Rate			
	Males		Females		Males		Females	
	Cumulative Percentage				Percentage			
	1982	1985	1982	1985	1982	1985	1982	1985
10 - 14	1,9	1,6	4,5	4,5	9,8	4,0	2,1	2,9
15 - 19	12,4	11,8	31,8	18,1	31,4	31,0	19,4	7,3
20 - 24	30,5	28,3	72,7	49,9	70,4	75,0	21,4	20,6
25 - 29	48,6	51,9	81,8	77,2	82,6	81,1	5,9	13,9
30 - 34	61,9	66,1	90,9	90,8	70,0	90,0	9,5	12,0
35 - 39	74,2	77,9	-	95,3	65,0	83,3	-	5,0
40 - 44	81,8	85,8	95,5	-	47,0	71,4	2,3	-
45 - 49	87,5	88,9	-	-	85,7	44,4	-	-
50 - 54	93,2	94,4	100,0	100,0	66,6	63,6	11,1	6,2
55 - 59	97,0	-			66,6	-	-	-
60 - 64	100,0	99,1			30,0	66,7	-	-
65 +		100,0			-	5,9	-	-
N =	105	126	22	22	105	126	22	22

indicates that, whereas at no point were more than 21 percent of any one female age cohort away as migrants, from the age of 20 until the age of 60 the majority of men were away. In the 30 - 34 age cohort, 90 percent of the men were away whilst 77 percent of men between the ages of 20 and 60 were away. These percentages could well have been considerably higher if the levels of unemployment had not been as serious as they were. The number of migrant men grew at 6,3 percent per annum over the three years between surveys notwithstanding the decline in the probability of a migrant obtaining a job.

Less than 15 percent of the migrants were female and 90 percent of female migrants were under 35 years of age. Only 13 percent of female migrants were married. On the other hand 50 percent of male migrants were under the age of 30 and 37,3 percent were married.

Seventy six percent of employed migrants had remitted money to their families at home during the 12 months preceding the resurvey, as had 62,1 percent of unemployed migrants. In addition 14 percent of the unemployed resident at home had remitted money in the 12 months preceding the resurvey indicating that they had probably been employed during this period.

Table 9 below gives mean and median annual remittances for different categories of migrant and reflects inequalities in male and female earnings and the impact of marriage upon male remittances. As 9 percent of the migrants had only just begun working, there is a possibility that they might have started remitting after the time of

the resurvey and that the percentage who remit would accordingly have increased.

Table 9: Remittance Patterns of Migrants (1985)

	N	Percentage Remitting	Mean Annual Remittance (Remitters only)	Median Annual Remittance (Remitters only)
Employed Migrants	120	75,8 *	555,14	480,00
Unemployed Migrants	29	62,1	482,00	260,00
Employed and unemployed migrants	149	73,1 *	543,44	480,00
Employed male migrants	102	75,5 *	605,30	480,00
Employed female migrants	18	72,2 *	276,36	120,00
Employed married male migrants	41	94,7	870,28	730,00
All remitters	112	100,0	533,77	445,00

* Eleven migrants had only recently started work and it was unknown whether they would remit.

Although the percentage of migrants who remitted barely altered between 1982 and 1985 being 77,2 and 75,8 respectively, in 1985 22,2 percent of remittances had come from persons unemployed at the time of the survey as opposed to a mere 6,6 percent in 1982. This reflection of growing unemployment suggests a higher degree of instability of remittance income.

Table 10 compares the annual contribution to household income of

migrant remittances over time and with the contribution from local employment. It indicates that the average remittance increased substantially in money terms between 1982 and 1985 and, even in real terms, (1980 prices) increased by 11,6 percent - from R248,30 to R277,15 which gives an average annual growth rate of 3,7 percent. The total value of remittance income into the area grew at an annual average rate of 20 percent over a period in which the average inflation rate was 13,4 percent.

Table 10: Contribution of Migrant Remittances and Local Employment to Household Income

	Migrant Employment		Local Employment	
	1982	1985	1982	1985
Total amount contributed	R34 453	R59 772	R1 560	R5 520
Percentage of total household income	38,1	38,2	1,73	3,53
Average contribution of contributors	R328,00	R533,77	R1560,00	R920,00
Average contributions in 1980 terms	R248,30	R277,15	R1180,92	R477,67
Number contributing	105	117	1	6

Interestingly, notwithstanding the increase in both the number of migrants and the real value of their average remittances, the percentage contribution of remittance income to total household income in the area remained constant at 38 percent. In other words household income, like remittances, had grown by 3,7 percent in real terms.

2.11 Pensioners and Pensions

Of the population surveyed in 1985 7,7 percent were pensionable - that is they were women aged 60 and older or men aged 65 and older. Seven percent or 82,8 percent of pensionable individuals actually received an old age pension. These pensioners were distributed amongst 56 percent of the surveyed households. 13,3 percent of households contained a person who although pensionable was not in receipt of a pension. Half of those who were not in receipt of a pension had applied for one but as yet had received nothing. The balance had taken no steps to obtain a pension.

Data relating to pensions is given in Table 11 below which demonstrates that between 1982 and 1985 there was a significant improvement in pension coverage. Of the eighteen pensionable persons who were without pensions in 1982, 14 were receiving pensions in 1985. Increased pension coverage had resulted in pensions making an even greater contribution to household income than was the case in 1982 when 5,4 percent of the surveyed community contributed 29 percent of the cash income in the form of old age pensions and disability grants. In 1985, 7,5 percent of those surveyed were old age or disability pensioners and they contributed 39 percent of the total cash income of the households surveyed.

Households containing pensioners achieved some of the highest household incomes per capita amongst those surveyed (Table 35). In

Table 11: Comparison of Pension data for 1982 and 1985

	1982	1985
Percentage population pensionable	7,5	7,7
Percentage population receiving old age pensions	4,9	6,9
Percentage households containing old age pensioner	46,0	56,0
Percentage households containing pensionable person without a pension	20,0	13,3
Percentage households containing pensioner or pensionable person	58,6	61,4
Percentage pensionable individuals in receipt of pension	66,7	82,8
Percentage pensionable individuals who have applied	17,5	7,8
Percentage pensionable who have either not yet applied for a pension or been rejected	15,8	9,4

order to demonstrate that these high levels of income were largely attributable to pensions, we deducted pension monies from the households' incomes and then recalculated incomes per capita. On average the incomes in all households containing pensioners were half of what they had been including pension monies. Where such households were headed by widows (who of course had no possibility of receiving any remittances from husbands) they fell to a quarter of what they had been.

On a personal level the value of a pension was illustrated by the fact that in 1985, although 268 persons or 33 percent of those surveyed made a cash contribution to household income, only 34 or 4 percent made a contribution equivalent to or larger than a pension. Most

women only contributed as pensioners and even the contributions of women migrants never approximated those of pensioners. The average female migrant remitted R305 per annum while the female pensioners contributed at least R780 per annum.

The benefits of pensions were not confined to pensioners. As pensions were often the only reliable and regular source of household income pensioners were depended upon for the payment of school fees, hospital charges, transport costs, debts and a major share of the expenditure on foodstuffs for the household. Frequently it was only the presence of a pensioner that enabled his household to obtain credit at the local store. Non-family members benefitted from pensions by being able to sell goods and services to pensioners. The enormous value of a pension however also made pensioners open to exploitation by the rest of the community at the same time as it gave them an importance and influence in the community that would perhaps have been more constructively and progressively exercised by a younger age group.

2.12 The Human Implications of a Changing Society

Although the structure of the family, homestead and local administration of the survey area was superficially "traditional", as a consequence of its inevitable and increasing involvement in the modern or core economy, changes had occured in this peripheral "traditional" community which had serious implications for leadership roles and the relative importance of certain individuals. Change had undermined the leadership of traditional chiefs, had physically

removed from the area many men whose roles had to be taken by women or left unfilled, had increased the roles, if not the power, of women, had greatly enhanced the position of the aged and had introduced a new power base altogether - that of the trader or shopkeeper.

Officially the chiefs and their headmen still administered the area and no action could be taken or approaches made to the State other than through them. They were however neither educated nor church members and did not (and indeed were not expected to) take the lead in any "non-traditional" activity such as school or road building. Their lack of the necessary attributes for leadership in a changing society meant that their dealings with the community and the State had become mere formalities, legalising action that had already taken place, and their importance in the community had decreased accordingly.

The role of men on the other hand had been diminished by their physical absence from the area. Although the need for migrancy and the resulting absence of men had been accepted there had been no formal reallocation of men's roles to other members of the community. In some cases there had been a de facto transfer to women or pensioners but in others their roles were simply left unfilled. For example, amongst the individuals cited as responsible for founding schools there was not one woman and it still seemed unlikely that a woman could initiate a project requiring the co-operation and financial support of the community. The alternate male substitute - pensioners - also suffered from shortcomings. They were neither physically or mentally suited to initiate the progressive responses

called for by the changing community. The result was that many needs remain unfilled where with the presence of men, or the development of others to take their place, they might have been filled.

In the survey area the church did not, except in the field of education, appear to be playing a leadership role or supplying people to fill the vacuums created by ill-equiped chiefs or absent men. Although there were churches in the area, there had never been a mission there and seldom had a priest been resident in the area.

The role of school teachers in the area was limited by the facts that they were not "locals", tended to be transferred after a few years and generally left the area each weekend to join their families who remained in town. The same was true of the extension officers.

It seemed to be only the storekeepers who settled permanently and brought their families and they appeared to have become the pivots of the changing society. Their education enabled them to comprehend the modern bureaucratic state and their literacy, telephones and vehicles to communicate with the outside world. There was little for which the community did not turn to the storekeeper and little for which he did not accept responsibility.

The surveys showed the legacy of influx control and the migrant labour system to be a community with abnormal family structure. Most of the men in the 20 - 60 age group who were present in the survey area were

only there because they were unemployed. Certain age cohorts were 95 percent female and the position would have been worse if employment prospects had been better. In general young wives lived without their husbands, and children without their fathers. The absence of the men affected income levels, agricultural production levels, the ability to introduce progressive change and the general effectiveness of decision making.

The survey area was little more than a dormitory for the families of workers in the core economy and for workers themselves when their services were no longer required. Migrants drifted between this very private, personalized world and the impersonal, demanding industrial core. Few members of their families ever experienced the core or had the opportunity to study the forces there which determined their lifestyle on the periphery.

The fact that no respondents, when listing problems they experienced, referred to a lack of control over their lifestyles, migrancy or influx control is probably explained by their feeling of powerlessness to influence the policies, practices or legislation which emanate from the core, rather than resignation to or acceptance of them.

CHAPTER THREE: ECONOMIC ACTIVITIES

3.1 Introduction

Chapter Three describes the various economic activities undertaken by respondents in the survey area while Chapter Five is concerned with the actual incomes derived from these activities and their distribution. The economic activities encountered are described in some detail, as are changes related to them which took place during the three years between surveys. Studies often attribute income or implied levels of wealth to households simply because they have access to certain assets. The contention of this paper is that this implication may be incorrect and it is argued that it is only when the dynamics of economic activities are studied over time that it can conclusively be stated that access to certain assets will or does result in certain incomes for a particular household or an increase in the value of its assets. Access to land may lead to a negative income flow where, for example, the household has no cattle or members to work the land and has to spend money on ploughing and labour. Similarly in marginal agricultural areas, where certified seed is not used and plant not fertilized, costs may often exceed the value of the resultant low yields.

Similar fallacies may derive from attributing a value to the ownership of stock without determining whether the herd is increasing or decreasing in value, what the cost of holding stock is and whether it is realistic to attribute a value to cattle which the owner would

never be prepared to realize.

Misconceptions may arise from considering only the agricultural potential of land and not making a thorough appraisal of marketing realities. Problems with simple wealth index type analyses may arise where, for example, the mere ownership of cattle is held to increase ability to use land regardless of how many and what type of cattle are owned. Thus the use of such an index may imply that the ownership of one calf improves the ploughing potential of a household (even if only marginally) whereas, in fact, it does nothing of the sort.

Attributing wealth to a household on the basis of its assets is no substitute for actually determining whether a household can or does derive income or wealth from a particular source.

The section on agriculture thus considers not only access to land but also the ability to make use of it, whether in fact it was made use of, its potential as well as the costs incurred, and income received as a result of land use.

The section on stockholding discusses in detail the type, age and sex of stock held, fertility and mortality rates, cattle movements etc. This is necessary if any realistic assessment is to be made of the economic value of stockholding. A value attributed to stock held on the day of survey gives limited economic information, and may in fact be misleading, particularly where there is no breakdown of the herd, no knowledge of the use to which the cattle or their products are put, or of whether the herd is increasing or decreasing in value.

3.2 Agriculture

The survey area is one which, in terms of climate, rainfall, soil types and soil condition, compares favourably with other areas of KwaZulu but the terrain is extremely rugged which makes cultivation dificult and irrigation impossible except in the very small relatively level patches next to the streams. For decades people have tilled the soil there and fed their families. Today the levels of subsistence off the land are continually falling and there has been almost no development of cash cropping or marketing of surpluses.

3.2.1 Access to Land

The resurvey found the position with regard to access to land little changed from that in 1982. Only two households (as compared with one in 1982) claimed to have no land. Had they requested land from their indunas they would most probably have had land allocated to them, just as if those who had land, had requested more they too would probably have had their request granted. Land suited to crop production in the survey area was, however, very limited. Much of the land in use was extremely steep. It was difficult to work, likely to be eroded (with consequent seed loss etc) by rain and unlikely to produce satisfactorily without expensive inputs such as fertilizer and conservation measures. It is probably factors such as these, along with other constraints, for example, shortages of labour, capital and infrastructure, that limit the application for and use of land in the area, rather than a straightforward shortage of land. Unallocated land was being used for communal grazing (for which it is far better

suited). However, were the incentives and necessary inputs available there is no reason to believe that a request by residents for the allocation of more or larger areas of land would be refused.

It was not possible to obtain a clear definition of the nature of respondents' rights to the land they had been allocated. Eighty eight percent of respondents claimed to have had to pay something for the **right to plough.** The annual amount paid varied between R1 and R20 but over 50 percent claimed to have paid R2. An induna when questioned about the fee levied stated that the money constituted Inkatha membership fees,[1] which were collected annually between September and November - the same period during which ploughing began.[2] A number of persons stated that as pensioners they were not required to pay anything for the use of land.

Respondents were asked questions about the forms of land tenure found in the survey area in order to establish whether land could only be held on allocation by the chief or induna or whether other forms of tenure co-existed. Ninety seven percent of respondents stated that it was impossible to lease land. However, ninety four percent stated that land might be borrowed. There was generally no cost involved in borrowing although there might be some transfer of produce to the lender in recognition of his status. Borrowing land was generally considered unnecessary and the only evidence of it was where someone had ploughed another's land in return for being allowed to "borrow" a certain portion of it.

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1. Inkatha's joining fee was R3 and the annual renewal R2.
2. Similar confusion was encountered about the need to pay certain monies to tribal authorities for school fees, building rights etc.

3.2.2 Size of Landholdings and the Ability to Subsist

Important as access to land may be it is the size of the landholding and its yield that will determine the household's ability to subsist off it - providing it has the ability to utilize it. Erskine (1982) states that the average holding of cultivated land in KwaZulu is 1,5 hectares. According to the surveys the mean holding of surveyed households was 1,48 hectares in 1982 and 1,02 hectares in 1985. The median for both surveys was one hectare. It should however be pointed out that the land was not carefully measured in either survey and that the data gathered consisted of rough estimates of size that were made after the land allocated had been pointed out. The estimates indicate that two thirds of individual land allocations were either unchanged or had altered by less than half a hectare between 1982 and 1985.

According to the rough estimates the total area allocated to surveyed households declined by 25 percent between 1982 and 1985.

Table 12: Comparison of Land Allocations: 1982 and 1985

Size of Land Holding (Hectares)	Percentage of Households in Category	
	1982	1985
None	1,4	2,7
0,5 - 1,0	50,8	66,6
1,0 - 2,0	29,0	28,0
2,0 - 3,0	13,0	1,3
3,0 +	5,8	1,3
N =	69	74

If an annual yield of 6 bags of mealies per hectare (Appendix B) and a minimum subsistence requirement of 2 bags per person per annum is assumed, one hectare in the survey area could not produce sufficient to meet the subsistence needs of the average household which had 8,7 resident members. This was clearly shown to be the case by the fact that in September 1985 (approximately five months before anyone could expect to begin reaping green mealies) over 80 percent of households surveyed reported having no dry maize left from the previous crop. Most households had managed to save some seed but 26 percent had not even managed to do this. Sixty percent of households claimed to have consumed over half of their maize crop green and less than 30 percent picked green mealies for longer than a three month period.

3.2.3 Land Utilization

Table 13 which compares the percentage of land ploughed by those respondents for whom data was available both in 1982 and 1985 indicates a slight increase in 1985 in the percentage ploughed which is probably attributable to better rainfall that year. Fifty seven percent of respondents ploughed the same amount as they had in 1982, 24,5 percent more and 18,5 percent less. However with there being less land available overall to households in 1985 than there was in 1982 rough estimates indicate that the total area ploughed in 1985 was only three quarters of that ploughed in 1982.

Half of those who had not ploughed all their land said they had been unable to do so because of ploughing problems. They either could not

Table 13: Comparison of Percentage of Land Ploughed in 1982 and 1985

Amount Ploughed	1982		1985	
	Percent	Cum.Percent	Percent	Cum.Percent
None	6,5	6,5	1,5	1,5
Less than half	21,5	28,0	29,2	30,8
More than half	18,5	46,5	4,6	35,4
All	53,5	100,0	64,6	100,0
N =	65		65	

get hold of oxen to plough their land or could not afford to hire them.

Overall eighty percent of households had their land prepared wholly or partially by oxen in 1985 and yet only 19,4 percent of landholders had a full team of four animals and 11,1 percent a team which consisted solely of oxen and who were therefore not forced to make use of cows, bullocks or heifers. Fifteen percent of landholders had half a team. The number of households with their own oxen had decreased slightly since 1982. A quarter of those who had had full teams in 1982 had only half teams by 1985. Some of those who had oxen nevertheless incurred expenses ploughing or partially prepared their land by hand either because their animals were untrained, because they were too weak and thin following the drought to be used or because they lacked labour to drive the team. Two thirds of respondents had someone else do their ploughing for them. The limited numbers of teams, the "mixed" nature of the teams, their weakness following successive droughts and the fact that everyone wants their ploughing done at the

same time severely limits the amount of ploughing that can be done and the economic use that can be made of the teams.

Tables 14 and 15 below which relate the ownership of oxen and the method used to prepare land to the percentage of land ploughed indicate that access to traction power influences the ability to produce.

Table 14: Ownership of Oxen Related to Percentage Land Ploughed

Amount of land plouged		Households with No Oxen	Households with Half Span	Households with Full Span
Less than half		40,4	27,3	14,3
More than half		59,6	72,7	85,7
Households in Category	N= 72	47	11	14
	%=100	65,3	15,3	19,4

Table 15: Method of Land Preparation Related to Percentage Land Ploughed

		Method of Land Preparation				
Amount Ploughed		Hand	Hand/Ox	Ox	Tractor/Ox	Tractor
Less than half		54,4	42,9	27,9		
More than half		45,5	57,1	72,1	100,0	100,0
Households in Category	N= 72	11	14	43	2	2
	%=100	15,3	19,4	59,7	2,8	2,8

Half of those who had oxen ploughed for others. Where the person had only half a span the hirer might provide the other half or the ploughing would simply be done with half a team. One third of those who ploughed for others charged nothing - either because the hirer provided half the team or because he was a relative or neighbour. The total income earned from ploughing in the twelve months preceding the 1985 survey by all households surveyed was R318. A quarter of those who had ploughing done for them were not charged and the balance paid out a total of R1350 - an average of R36,50 each. The price charged per isikofu [1] ranged from R2,66 to R13 and averaged R8,33.

Access to traction power clearly influenced the amount of land ploughed. The availability of male labour did not appear to have the same impact. Only three households had no one who worked the land. Eighty two percent of those involved in agricultural work were women and only 21 percent of households contained men who performed agricultural duties. In only 12 percent of households were men always available and half of these men were either retired or only available because currently unemployed. Table 16 implies that the availability of male assistance did not adversely affect the amount of land ploughed. However, when it came to ploughing for others, male assistance did seem to make a difference - twice as many oxen owners ploughed for others when males were at home to help as did those owners with no men at home.

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1. The area ploughed by a team of oxen in a morning which in the area surveyed was approximately ,12 Hectare.

Table 16: Male Assistance and Land Utilization

Amount Ploughed	Male Help		
	Never Available (Percent)	Sometimes Available (Percent)	Always Available (Percent)
Less than half	25,00	50,00	44,4
More than half	75,00	50,00	55,6
N	40	10	9

All those households (14 percent) which hired labour to assist in food production were without any male assistance with the exception of two households where the male assistants were retired persons. With women doing the bulk of agricultural work other demands upon them, such as housebuilding or childcare, were seen as limiting factors upon food production as was the ill health of some women.

3.2.4 Production

In 1985 all households planted maize and 72 percent planted beans, 65 percent pumpkins, 46 percent madumbes, 19 percent potatoes, 18 percent corn and a few planted sweet potatoes and other vegetables. Only half the households were satisfied with their harvest and 10 percent claimed to have reaped nothing. Production was almost entirely directed towards subsistence needs. However 6,7 percent of respondents reported that they had planted certain crops with the

intention of selling some of the produce. Although the average landholding was too small to produce enough to meet the subsistence requirements of the household, and although only 2,7 percent of respondents produced more of one product than was in fact required by their household, in the end 20 percent of households actually sold some of their produce. They sold either because they produced an excess, needed cash or simply because people asked them to. The total income from crop sales for all households in 1985 was R1 432. In 1982 it had been R1 560. This represents a fall off of 30 percent in real terms.

It was not possible for either survey to establish the exact costs of production. However information concerning expenditure on wages, seed and fertilizer was collected in 1985 and a value placed upon the ploughing people did with their own oxen which had not been done in 1982. Wages paid to labour (which totalled R926), seldom exceeded R1 per day and labourers were sometimes paid in kind or worked for nothing where there were no able-bodied persons in the household. Most households used their own seed and very few bought any fertilizer in the year preceding the resurvey. In total R1117 was spent on seed and fertilizer. 27 percent of households carried manure into the fields but it was not possible to value this, just as it was not possible to value the labour of household members. The surveyed households spent R1350 paying others to plough for them and the ploughing they did using their own oxen was valued at R1612,68 (see Appendix B).

Appendix B describes in detail how agricultural production was

valued. The final value of agricultural production less known costs was R2341,68 in 1985. Thirty percent of households reflected a negative income from agriculture. Table 17 below reflects a break down into quintiles of the income received by households from crop production.

Table 17: Value of Crop Production 1985

Quintile	Income Range (Rands)
1	-431,40 to - 6,60
2	- 6,20 to 20,34
3	20,60 to 43,20
4	53,90 to 98,65
5	110,00 to 587,75

N = 64

In order to compare the value of agricultural production in 1985 with that of 1982 it was necessary to recalculate 1985 production according to the formula used in 1982. The total value of agricultural production thus calculated was shown to have declined (in constant terms) by 30 percent between 1982 and 1985. Mean household incomes from subsistence production had declined by a third and in 57 percent of households incomes (in constant terms) from agriculture were lower in 1985 than they had been in 1982. As the area of land available to households and the area prepared declined by approximately twenty five percent between 1982 and 1985 it appears that the yield and productivity remained relatively constant.

3.2.5 Gardens

The number of households with gardens (in addition to their fields or lands) increased from 30 percent in 1982 to 50 percent in 1985. The increase is probably explained by the better rains in 1984/5. These gardens were either positioned close to the homestead on the hilltop or in the valleys next to the streams. In view of the fact that only 15 percent were fenced this gave rise to an inherent problem - gardens could either be close to the homestead where they could be protected from unherded cattle, wild pigs and other animals or next to the stream where they could be irrigated. The cost of fencing and the labour required to make a fence of thorn branches prevented most gardeners from protecting their planting. Community gardens, where people through combining have been able to afford fencing and, indeed, the purchase of seed and provision of irrigation, provide an answer to the problem of animal damage. However the number of households with community garden members had only increased from 2 in 1982 to 4 in 1985 and the gardens themselves were not nearly as productive in 1985 as they had been in 1982. It was not clear what had happened but respondents stated that it had been so dry that people had become lazy and that the extension officer, who had encouraged the gardens, was no longer in the area.

Those who made use of their gardens (31,1 percent of respondents) planted chiefly cabbages (92 percent) tomatoes (88 percent), onions (48 percent), spinach (44 percent) and beans (37 percent) along with small plantings of carrots, potatoes, bananas and avocados.

3.2.6 Conclusion

Apart from the innovation of ploughing a very small percentage of the land by tractor in 1985 there appeared no improvements or even changes in agricultural practice between 1982 and 1985. The same factors as were evident in 1982 continued to inhibit production and output continued to decline despite the considerably higher rainfall in 1985. Although current land holdings are too small to allow for subsistence it would seem that the immediate cause of the surveyed community's inability to subsist off local production was not a shortage of land as was indicated by the fact that at the time of both surveys almost a third of respondents had ploughed less than half their land the previous season. The inadequacy of land allocations and an accompanying absence of infrastructure - particularly marketing facilities - may have originally driven many to become migrants in order to provide their dependents with certain basic needs but in the short term it is labour shortages, the absence of capital, expertise and markets and the means to plough that limit production. As many of these deficiencies flow from the migratory labour system production problems are perpetuated.

The only successful and relatively extensive farmer surveyed was an induna who had access to the largest (over 4 hectares), flattest and most productive piece of land. He was the only person who made substantial use of fertilizer and the only person who hired labour on a regular basis.

Aside from traction power and labour shortages or the inability to pay

for them, respondents blamed drought or late rains for their failure to complete ploughing or to reap a satisfactory crop. Threat of damage by wild animals or others' cattle also led some to consider the risk of planting too great. Scorching heat and hail were also blamed for crop failure. The destruction of crops by heat and hail and the commonly occurring rotting of pumpkins and melons all point to winter as a more successful growing period. However, before crops could be grown in winter, some form of irrigation would have to be instituted and arrangements made to herd cattle.

Uncontrolled cattle have always created problems for crop producers but normally only in the winter when unherded. Today with most men away as migrants and more and more children attending school, cattle may be unherded, and thus constitute a problem, throughout the year. Farmers in the area are clearly unable to afford the cost of fencing their lands and stand to suffer serious losses through cattle damage. Here one sees the combined impact of the tradition of leaving cattle unherded in winter, the problems caused by a shortage of labour and the inability to cope with both due to a lack of capital.

The same restraints (i.e. labour and capital shortages) surface again and again in different combinations and guises. Lack of capital means that farmers do not use certified seed or fertilizer but this is also the consequence of inadequate expert advice. Even if advice and capital were available the necessary transport infrastructure is lacking to bring the fertilizer into the area. The absence of the transport infrastructure also prevents the successful marketing of any

excess produce or cash crops. In short, the risks of agricultural endeavour far outweigh the potential reward.

Despite the extreme gradients of the area and its distance from markets there is the agricultural potential both to improve subsistence levels and produce certain cash crops (e.g. tea and timber) in the survey area. This potential will not be realized while the State views the area as a human dormitory and accordingly fails to supply the necessary infrastructure and support systems for agricultural development. Moreover, before any developments are undertaken or even proposed in the survey area, it should be clearly understood that agriculture does not have the potential to support the entire community. It could never become the major source of income. This should be borne in mind before decisions are taken to spend public funds in the support of agriculture or which impact on the wider community - those who do not stand to benefit from agricultural development.

As is made clear in Chapter 5 the fortunes of the survey area are almost entirely externally determined in the core economy. Decisions relating to agriculture in the area cannot be taken in isolation. The success or failure of agricultural projects there and, more importantly, the effects they may have upon the community will in a very large measure be determined by the area's subservient relationship to the core economy.

3.3 Stockholding

The resurvey found that cattle continued to play an important role. However, the wide incidence of cattle ownership and the importance attached to stockholding should not be seen as a reflection of their economic value to the community - something which, in fact, often did not extend beyond their value as draught animals.

3.3.1 Herd Breakdown

In 1985 two thirds of surveyed households had cattle. This represents a slight decline from the 70 percent of households which had cattle in 1982. The average herd, which consisted of 7,9 in 1982 consisted of 7,5 head in 1985. This means that although a higher percentage of surveyed households owned cattle than is true of all KwaZulu households, the herds were in general a little smaller than the average KwaZulu herd of 10 head (Erskine, 1982).

In 1985 30 percent of cattleholders had a bull, 94 percent cows, 50 percent oxen, 72 percent heifers, 56 percent young bulls and 60 percent calves. With only one third of herds having a bull and a mere 28 percent a full span of "oxen"[1] these herds were not well structured commercially.

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1. Twenty two percent had half a span of oxen. "Oxen" spans frequently contained cows, young bulls etc.

Table 18: Cattle Surveyed by Type, Value and Herd

Animal type	Total Number	Percent of total	Value[1] (Rands)	Average number per herd	Average Value per herd (Rands)
Bulls	16	4,28	6800	0,32	136,00
Cows	126	33,69	23560	2,52	882,00
Oxen	62	16,58	44100	1,24	595,20
Heifers	62	16,58	17360	1,24	347,20
Young bulls	55	14,71	13750	1,10	275,00
Calves	53	14,17	5300	1,06	106,00
TOTAL	374	100,0	110870	7,48	2341,40

1. See Appendix C

Table 19: Distribution of Herd Size Amongst Cattle Owners 1982 and 1985

Herd Size	1982			1985		
	N	Percent	Cumulative	N	Percent	Cumulative
1	3	6,2	6,2	-	-	-
2	5	10,2	16,4	6	12,0	12,0
3	3	6,2	22,6	3	6,0	18,0
4	1	2,0	24,6	3	6,0	24,0
5	10	20,4	45,0	3	6,0	30,0
6	5	10,2	55,2	10	20,0	50,0
7	2	4,1	59,3	2	4,0	54,0
8	2	4,1	63,4	7	14,0	68,0
9	2	4,1	67,5	4	8,0	76,0
10	1	2,0	69,5	-	-	-
11	4	8,2	77,7	3	6,0	82,0
12	3	6,2	83,9	1	2,0	84,0
13	1	2,0	85,9	4	8,0	92,0
14	1	2,0	87,9	2	4,0	96,0
15	2	4,1	92,0			
16	1	2,0	94,0			
17	1	2,0	96,0	1	2,0	98,0
18				1	2,0	100,0
22	1	2,0	98,0			
30	1	2,0	100,0			
	49	100,0		50	100,0	

Table 18 above gives a breakdown by type, value and herd of the cattle surveyed in 1985 and Table 19 a comparison of the distribution of herd sizes among cattle owners in 1982 and 1985.

3.3.2 Births, Deaths and Take Off Rates

During the twelve months preceding the resurvey 71 calves were born into the surveyed herds. At the time of the resurvey 53 had survived giving a death rate among calves of 25 percent. As some of the calves had only recently been born and may have died before they were a year old this is probably an underestimate of the first year death rate. Among all the cattle surveyed the death rate was 15,19 percent and among all cattle except calves, 13,24 percent. At the time of the survey there were 126 cows. Assuming a death rate of 13,24 percent, twelve months previously there would have been 143 cows. A total of 71 calves born from these 143 cows gives a calving percentage of 49,65 percent for all the cows surveyed.

On average 33,69 percent of each herd consisted of breeding stock (cows) and 42,06 percent of the cows in each herd had a calf surviving at the time of the survey. Table 20 indicates the range in percentages of cows in each herd which had calves alive at the time of the survey. In 38 percent of the herds there were no calves alive at the time of the survey and in more than half the herds only a third of the cows had a calf.

In a commercial herd a calving percentage of 42,06 percent would be considered unacceptably low. A comparison with the figures for the

Table 20: Percentage of Cows in Individual Herds with Calves

Number of Herds	Percentage of Total Herds	Cumulative Percentage of Total Herds	Percentage of Cows in the Herd With Calves
17	38	38	0
6	13	51	25
1	2	53	33
5	10	63	50
3	6	69	66
2	4	73	75
1	2	75	80
12	25	100	100
N = 47			

magisterial district of Nkandla in the KwaZulu Report of the Department of Agriculture and Forestry for 1984/85 however indicates the percentage to be well above the local average. The report states that 49,99 percent of the cattle in Nkandla were cows over 3 years old (i.e. breeding stock) and that the calving percentage was 25 percent. It is not clear why the figures for the resurvey and for the magisterial district should be so different but the degree of difference would seem to imply some definitional differences in the 1984/85 Report. According to the 1983 Departmental records the herd at Nkandla had consisted of 39,4 percent breeding stock and a calving percentage of 40 percent was achieved.

The Departmental Report puts the death rate for 1984/85 in Nkandla at 5,6 percent and the slaughter rate at 3,4 percent as opposed to the 15,19 percent and 5,6 percent found in the resurvey.

The sales rate among the surveyed cattle was 2,3 percent giving a take off rate of 7,9 percent (5,6 percent slaughtered, 2,3 percent sales).

As was the case in 1982 lobola accounted for a third of the changes in the makeup of individual herds resulting from births, deaths, sales, slaughter and lobola.

The death rate for cattle appears to fluctuate a great deal over time and to be chiefly dictated by weather patterns. Valid comparisons can therefore only be made with figures from the same area and period. Erskine (1982) states that the average death rate in KwaZulu is approximately 10 percent per annum which means that the twelve months preceding the resurvey show an above averate rate. In the 1982 survey the death rate was 6,73 percent but a lower rate was to be expected in the years immediately following the very high death rate in 1980/81 which resulted from the 1980 drought.

During 1984/85 the surveyed herd decreased by 5,6 percent in number. There was an excess of births over deaths of 1,6 percent but the numbers sold, slaughtered and transferred out as lobola exceeded those purchased and received as lobola. Sales although showing an almost 300 percent increase over 1982 were still insignificant and only occurred where money was needed because of illness or a loss of employment in the household. As in 1982 many of the cattle purchased were purchased specifically for the purpose of slaughter. Where there was a need for an animal to be slaughtered households which had the means to purchase one appeared to prefer to do so, rather than

slaughter one of their own animals even where theirs were of a lesser economic value or potential thah that purchased.

3.3.3 Changes in Herd Value

In order to comment upon the commercial value of cattle to the surveyed community it was necessary to ascribe a particular value to each animal. The basis on which this was done is discussed in Appendix C. Using these figures, the herd at the time of resurvey was worth R110 870. Valuing individual animals at the same prices twelve months previously the herd's value had been R119 550,37 in constant price terms. Overall the number of cattle held by the surveyed households had decreased by 24.

In the severe drought of 1980 many households had lost cattle. By 1982 at the time of the first survey some were re-establishing their herds and 70 percent of the households surveyed had some cattle. By 1984 the percentage of households holding cattle had risen to 73,3 percent but there was a decline during the following twelve months and at the time of re-survey only 66,7 percent of households still had cattle.

There was little change in the average herd size - 7,88 in 1982, 7,24 in 1984 and 7,48 in 1985 - although the number held declined by 22 (5,7 percent) between 1982 and 1985 and by 24 (6,7 percent) between 1984 and 1985. The average change in herd size during 1984/85 was 2 head but one herd decreased by 15 and another increased by 9. Thirty

six percent of herds increased in size, 29,1 percent remained unchanged and 34,5 percent decreased in size. The changes occurring between 1982 and 1985 were very similar. During the three years there was no change in the stockholding of 25,7 percent of households. Stockholdings increased in 35,4 percent of households and decreased in 37,9 percent. The average change in herd size was 3,5 percent with the largest decrease being 13 and the largest increase, 10 animals.

Table 21 below indicates the changes which took place in the total herd during the twelve months preceding the survey. The table is based on the data giving a herd breakdown at the time of the resurvey. The number of births, deaths, sales etc occurring during the year have been used to calculate herd breakdowns twelve months previously. Where it was not recorded what type of animal died etc, deaths etc were attributed amongst the different types of animal having taken into account the proportion of the herd that that type of animal constituted and the comparative likelihood of that type of animal dying, being transferred as lobola, etc. During the 12 months preceding the survey, in 65,5 percent of herds calves were born, in 18,2 percent animals were purchased and 28,2 percent received cattle under lobola transactions. During the same period cattle were sold from 10,1 percent of herds, died in 50,9 percent and were transferred from 28,2 percent under lobola transactions.

Apart from recording changes in herd composition, Table 21 reflects the fact that the 303 head which were held throughout the period grew or matured and accordingly appreciated in value. Thus, for example, calves became heifers and heifers became cows. The table reflects their enhanced values.

Table 21: Herd Structure and Value in 1984 and 1985

Animal Type and Value (Rands)	Number		Percent of Herd		Value (Rands)		Changes in Herd structure 1984-1985							
	1984	1985	1984	1985	1984	1985	Births	Appreciation over time	Purchases	Lobola In	Deaths	Sales	Lobola Out	Slaughter
Bulls @ R425	18	16	4,5	4,3	7650	6800		+ 1	1	2	3	1	2	1
Oxen @ R380	65	62	16,3	16,9	24700	23560		+ 6	3	6	8		8	2
Cows @ R350	134	126	33,7	33,7	46900	44100		+15	5	16	23	4	11	6
Heifers @ R280	65	62	16,3	16,9	18200	17360		-15 +30	3	7	8	2	15	3
Young Bulls @ R250	60	55	15,1	14,7	15000	13750		- 7 +26	2	9	8	2	15	10
Calves @ R100	56	53	14,1	14,2	5600	5300	+71	-56			18			
Total	398	374	100,0	100,0	119550	110870	+71		14	40	67	9	51	22
Estimated Total Value (Rands)					119550	110870	7100	11305	4655	12940	17980	2885	17190	6625
Actual Total Value where available (Rands)									4658			2500		
Estimated Value per animal (Rands)									332,50	323,50	268,36	320,56	337,06	301,14

Table 21 indicates that during the twelve months preceding the survey the value of the entire herd fell by 7,25 percent. Looked at herd by herd the following picture emerges. In 1985 only 50 of the 55 households which had cattle in 1984 still had any. Thirty percent of the herds had decreased in value. On average herds had decreased in value by R158,96. Only 20 percent increased in value by more than R444. In terms of percentage change in values we find that 9 percent decreased by 100 percent and 3,6 percent increased by more than 100 percent. The mean increase was 2,25 percent and the median 6,73 percent.[1]

Table 22 below indicates the percentage change by decile.

Table 22 Percentage Changes in Individual Herd Values

Decile	Range in Percentage Change in Herd Values in 1984/85
1	-100,00
2	- 79,99 - -40,44
3	- 26,91 - -14,11
4	- 10,42 - 4,18
5	4,37 - 6,73
6	9,15 - 12,22
7	12,43 - 14,57
8	15,10 - 17,81
9	20,22 - 63,03
10	78,58 - 109,48

N = 50

1. The occurrence of a 7,25 percent decline in the value of the entire surveyed herd in conjunction with a 2,25 percent increase in the value of the average herd is explained by the fact that the mean for herds is an unweighted mean - it does not take herd size into account. The fact that all means relating to individual herds are unweighted should be borne in mind throughout this section.

The method of calculating herd appreciation is explained in Appendix C and when considering the increases/decreases in herd value it should be borne in mind that the appreciation through physical growth (maturation) alone on a herd of 7,24 head (the average cattle holding in 1984) would have amounted to R270,12. Seventy percent of cattle owners' herds appreciated by less than this sum. Although it is true that beef production as an economic activity is dependent on the sale or consumption of assets, where this results in an overall decline in the value of assets or an increase which is less than the value placed upon the natural maturation of the asset, the long term prospects for it as an economic activity cannot be good.

3.3.4 Returns on Stockholding

In order to assess the commercial value of stockholding it was necessary to establish not only whether herds were increasing or decreasing in value but also what levels of return stockholders were realizing on their investments. Apart from placing a value on the appreciation of existing herds, and adjusting herd values to allow for acquisitions or losses, a value had to be placed upon the current disposable income realized as a consequence of stockholding. Cattle owners used their animals to plough for themselves and others and took milk from cows; they also received income on the sale of animals and benefitted from the consumption of meat and use or sale of the hide on the death or slaughter of an animal. In Appendix B the methods used to evaluate current disposable income from stockholding are explained. The majority of the subsistence income realized by the

surveyed community consisted of the current disposable income realized from stockholding (see 5.2.3). Individual households received substantial incomes from this source. It will be shown that most of this income was achieved through the consumption or sale of an asset as is inevitable in the case of beef production. However, where this occurs at a rate which exceeds replacement this implies declining returns in the future and of course a general decrease in herd value.

3.3.4.1 Calculating Returns

By adding the value of herd appreciation, the value of calves born and the current disposable income realised from stockholding together and relating the total to the value of individual herds or the total herd surveyed, a return on stockholding might be calculated but this would make no allowance for the facts that not all calves lived and that much of current disposable income was achieved at the cost of the loss of a productive asset. A more realistic assessment of the value of stockholding is made by subtracting the 1984 value of herds from their 1985 value and then adding current disposable income and subtracting the cost of purchases. The sum thus calculated may be considered a net return on stockholding, and Table 23 below, which demonstrates net returns on stockholding, indicates that 23,6 percent of stockholders had negative net returns. The mean return was R168,37 and the median R215,45. The methods of calculation used are described in greater detail in Appendix C.

A percentage return was calculated by relating net returns to the 1984

value of herds. Percentage returns on individual herds ranged from -73,41 percent to 233,51 percent with the median being 14,23 percent and the mean 17,87 percent. The percentage return for the surveyed herd considered as a whole was only 7,24 percent.

Table 23: Net Return on StockHolding (Households holding cattle in 1984 only)

Value in Rands	N	Quintile
-3484,87 - -106,36	11	1
- 106,36 - 111,93	11	2
137,31 - 253,28	11	3
254,81 - 708,12	11	4
749,91 - 2570,43	11	5
	55	

3.3.4.2 The Cost of Returns

When reference is made to net rate of return on stockholding and the percentage change in herd value in those households which achieved the highest current disposable incomes from stockholding it becomes clear that much of current income is being achieved at the price of a capital loss.

Table 24 below gives details for those households which achieved

current disposable incomes from stockholding which were above the average. One third of cattle holders achieved such incomes and their incomes accounted for 72 percent of the current disposable income achieved from stockholding.

These stockholders achieved an average percentage return on stockholding of 6,02 percent and an average percentage change in herd value of -24,56 percent. In order to achieve above average current incomes from stockholding they were consuming capital and consuming it faster than the average herd owner who achieved a percentage return of 17,87 percent and whose herd increased in value by 2,25 percent. Sixty six percent of the herds which produced above average current disposable incomes decreased in value whereas only 38,7 percent of all herds did.

Superficially it may appear that cattle owners are achieving a reasonable return on their herds but a closer look at the sources of current disposal income from cattle shows that less than 10 percent of this income is achieved without consuming or decreasing the capital from which it flows - i.e. that which is realized from ploughing (See Table 38).

The fact that current income is being realized at a capital cost is confirmed by comparing the 1985 stockholding of those households which achieved above average incomes from stockholding in 1982 with their 1982 stockholding. As in 1985, in 1982 one third of stockowners achieved above average current disposable incomes from stockholding. The stockholdings in 75 percent of these housholds decreased between 1982 and 1985 with the average herd decreasing from 10,3 head to 7,3

head. These figures indicate that these stockowners were consuming capital and consuming it faster than the average stock owner. Over the same period only 37,9 percent of all herds decreased in size and the size of the average herd declined from 7,9 to 7,5.

Table 24: Current Income, Percentage Returns and Percentage Changes in Herd Values for Stockholders Achieving Above Average Current Disposable Incomes During the Twelve Months Preceding the Survey

Annual Current Disposable Incomes from Stockholding (Rands)	Net Rate of Return on Stockholding (Percentage)	Percentage change in herd values
2 782,00	- 22,09	- 48,50
1 944,00	- 39,63	-100,00
1 084,50	- 7,14	- 26,91
1 035,00	33,35	15,10
874,00	51,63	4,37
810,00	17,47	- 25,78
804,00	3,85	- 51,66
787,00	22,62	- 14,11
754,06	35,93	9,68
716,00	9,36	- 18,64
624,00	3,61	-100,00
616,25	- 31,08	- 40,44
610,00	- 44,38	- 57,01
581,00	88,70	78,87
513,75	2,44	- 15,50
474,00	24,00	42,15
474,00	11,83	6,31
460,00	- 52,17	-100,00
Mean	6,02	- 24,56

N = 18

3.3.5 Future Prospects for Economic Stockholding

The method of accounting used in this report highlights the difficulties associated with viewing stockholding, such as that occuring in the survey area, as an economic activitiy.

The cattle owners themselves do not view cattle primarily in economic terms and therefore do not adopt the breeding or management practices of a commercial farmer. Although in recent years there has been a growing acceptance of the fact that traditional cattle owners do not view their stock as a source of income it is still widely considered that as a method of saving stockholding has proved most effective. This belief is not supported by this study which shows a mean annual increase in herd value of only 2,25 percent.

As long as the reasons for stockholding remain primarily "non-economic" cattle owners should not be expected to adopt practices which are essentially economic. However as the capacity to hold stock for non-economic reasons seems certain to decline, there would seem to be some point in establishng those factors which currently act as constraints on stockholding as a source of income, and in determining what changes might be introduced to ensure not only an increased income from stockholding but also that stockholding might prove an effective way to save.

Existing herds are too small to be economic. One man cares for less than eight animals on average. Many herds are without bulls, and none of the bulls have sufficient cows. The size of herds will either have to be increased (and therefore the number of herds decreased) or herds will have to be run co-operatively.[1] Non productive animals

1. The use of artifical insemination by individual stockholders would be difficult if they were unable to keep their cattle apart from those of other stockholders.

(infertile cows, oxen too weak to plough etc.) will have to be culled and productive ones spared from unnecessary slaughter or sale.

If the veld in the survey area were allowed to recover and improved management practices followed it could probably carry double the number of cattle it is struggling to carry at present. If the quality of animals were improved, the structure (bull:cow ratio) of herds rationalized, fertility rates increased, death rates decreased and herd health improved the numbers would automatically increase. These improvements would have to be accompanied by an increase in the take off rate (sales and slaughter) if they were not merely to result in restarting the vicious cycle of overstocking, veld and herd deterioration etc. This in turn would be impossible without the introduction of reliable and regular marketing mechanisms. The changes in attitude amongst cattleowners required to achieve these improvements would be wide ranging and fundamental.[1]

Perhaps the most difficult requirement of the changes necessary is that all these changes will have to be made by **all** cattleholders and made simultaneously. The communal tenure of the grazing land and the fact that the cattle all run together make this essential. This is made all the more difficult by the fact that although there is undoubted potential for increased income and saving from stockholding the capacity, even under ideal conditions, to do this for the entire local population is definitely not there.

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1. Traditional attitudes to stockholding and the difficulties associated with changing them either individually or collectively are discussed in Ardington (1984, p.108).

3.4 Small Stock

The numbers of small stock held by households in 1985 were similar to those in 1982. Only 7,3 percent of households sold small stock in 1985. Table 25 below gives the numbers of stock held in 1985 and the percentage increases or decreases since 1982 for households owning the various types of animal.

Table 25: Small Stock Holding

Type	Number	Percentage Households Owning Stock	Percentage Change in Households Owning Stock Since 1982	Average No. per Household (Owners Only)
Goats	183	40	- 1,4	6,1
Chickens	1119	92	- 5,0	16,2
Pigs	21	16	+ 9,0	1,7
Sheep	27	68	- 2,0	5,4

3.5 Informal Sector Activity

As in 1982, although a large number of persons was involved in informal sector activity almost all did so on a part time basis and no economically thriving small businesses were encountered. The range of activities encountered was similar to that in 1982 and the only real differences were the overall decline in the importance of informal sector activity as a source of income (see Table 31) and in particular the fall in the incomes of herbalists. The number of persons and households involved in such activities remained constant. As is made clear in Table 26 below most of the activities were

undertaken to provide the goods or services for the household members themselves and not with the intention of selling the product or service. Seventy five individuals made some contribution to household income from their informal sector activities. The amounts ranged from R2 to R1 165 per annum. The mean was R94 and the median R32. Only 8 persons made contributions larger than R200.

The numbers involved in each activity appear inversely related to the economic rewards to be obtained. Although relatively large numbers were involved in grass cutting and grasswork the returns that were achieved were negligible. The average price realised for a bunch of thatching grass was 40 cents. Operators claimed to cut between two and six bundles in a day. Grass bowls sold for approximatly R1, hanks of rope for R2 and icansi mats R3 each. The prices obtained locally for goods and services were extremely low and did not act as an incentive to producers or operators.

Table 26: Informal Sector Activities

Activity	Percent of Households with Members Participating in Activity	Percent Participating with intention of marketing
Grasscutting	49,0	14,7
Grasswork	44,0	25,3
Thatching	37,3	8,0
Housebuilding	21,3	5,3
Sewing, knitting etc	16,0	9,3
Herbalism	9,3	9,3
Hawking	6,7	6,7
Pottery	6,7	4,0
Trading	5,3	5,3
Grinding	1,3	1,3

Although one surveyed household had contracted to pay someone R300 to build a cattle kraal the average prices received by some of those surveyed for performing tasks associated with building a house which are listed below, do not make the tasks involved attractive.

Cut and supply 15 poles	= R15
Cutting only (poles)	= R 3
Erection of frame	= R30
Supply Thatching grass	= R15
Thatching	= R28

Generally tasks were performed or goods produced in response to a particular request. The only opportunity for general marketing occurred at the bi-monthly pension day. People otherwise had to hawk goods in order to conclude a sale. The costs involved in travelling to obtain raw materials and travelling to hawk frequently made the operation uneconomic although few took travelling expenses into account when calculating prices. It was the exception rather than the rule where the operator made a profit after deducting all expenses. Although higher prices could be obtained where goods were sold out of the area (eg. in KwaMashu) the difficulties and expense of transporting the goods generally made this impossible. Lack of experience in trading, particularly with regard to costing, frequently resulted in small businesses being operated at a loss - although generally the operator seemed unaware that this was the case.

The range of skills in the area was limited and those that there were tended to be in over-supply. Thus some claimed that although they could thatch, for example, no one had asked them to do so that year and others that their attempts at hawking were unsuccessful because

too many others were doing the same thing.

The problem of acquiring new skills in an isolated area frustrated some of those surveyed in their attempts to generate income. There were a few households which had sewing machines but none was fully utilized. None of the owners had ever had the opportunity of learning to operate a machine properly. There were others who expressed a desire to raise chickens but did not know how to go about it.

The woman who conducted by far the most profitable operation was raising day old chicks. She had watched a relative raise chicks elsewhere but required considerable initiative to obtain chicks by mail order which were eventually delivered by railway bus. The food she fetched bag by bag from Eshowe (50 km away) having to buy a bus ticket not only for herself but also for the bag!

Apart from oxen, ploughs and a couple of sewing machines no income generating capital equipment was found in any of the surveyed households.

A lack of operating capital often prevented people from getting involved in any type of informal sector activity and some businesses which had appeared successful in 1982 were found to have collapsed in 1985 because the source of capital had dried up. One woman's husband (who used to buy her wool) had died and another had had to use all her capital on hospital fees. In some cases where capital was available, materials were in short supply or difficult to obtain without travelling long distances which made the operation uneconomic.

Certain women who visited their migrant husbands in Durban from time to time related how this gave them access to waste materials they would otherwise have been unable to obtain. Others (including a number of herbalists) explained how ill health and old age prevented their obtaining the raw materials they needed.

Competing claims for labour limit the input into the informal sector. Most operators are women who have agricultural, housekeeping, housebuilding and childrearing tasks, which demand much of their time, to perform. Where there are no others in the household to share these responsibilities informal sector activities have to be foregone.

There was little evidence of any plan to make use of such activities to provide a regular source of cash income. Whether it was cattle, goats, pigs, chickens, handwork or grasswork that was being sold, the transaction was generally initiated by the buyer and agreed to by the seller only because he was in dire need at the time. It was frequently concluded at a price which bore little relation to the costs incurred and did not encourage the seller to repeat the transaction unless unavoidable. For example the average price realised for cattle sold was R170 and for cattle bought R333.

3.6 Employment and Unemployment

One of the reasons for choosing the area surveyed was its degree of remoteness from the modern core economy. It offered no employment

opportunities not normally found in a rural area. Moreover, the transport available to Eshowe (50 kilometres) and Nkandla (30 kilometres) made it impossible for people to commute to these centres daily so that if one wished to obtain employment, the choice was between what employment there was in the area or migration out of it.

There are very few opportunities for local wage employment in the average rural area - those that there are tend to be restricted to people with some education with the result that teachers, agricultural extension officers, priests, nurses and storekeepers in rural areas all tend to be immigrants into the area rather than local people.

Table 27 below indicates the percentage of households containing people participating in various types of employment at the time of both surveys. It should be read in conjunction with Table 32 which relates the occupations of the 15 - 60 age group. Extremely limited local opportunities explain the high migrancy rate. Sixty two percent of migrants were employed in Durban. Forty four percent were employed in service industries, 20,8 percent in agriculture, 15,8 percent in manufacturing, 9,6 percent in construction, 5,0 percent in mining and 4,6 percent in commerce reflecting the low average educational levels of the population. The chances of obtaining casual employment in the area were limited and primarily restricted to agriculture.

Table 27 shows the percentage of households containing a migrant to have decreased slightly between 1982 and 1985 which was to be expected owing to the increase in the percentage of households with unemployed

Table 27: Employment trends

Category	Percentage of Households with Person in Category	
	1982	1985
Migrant Employment	75,7	73,3
Local Employment	1,4	8,1
Casual Employment	13,0	6,7
Informal Sector	71,4	67,0
Unemployment	45,7	61,3
Agricultural Duties	26,0	16,0
Domestic Duties	97,1	92,0

persons. The average number of migrants per household fell from 1,8 to 1,6. The increased numbers of unemployed persons resident at home had clearly reduced the opportunities for permanent residents to obtain casual employment locally - the unemployed could do the hoeing, weeding or housebuilding that people had had to be hired to do previously. Although the number of persons involved in informal sector activity remained high the income earned therefrom fell sharply - again probably due to increased numbers of unemployed who could perform such activities for themselves, and declining incomes which made it impossible to pay others for such services.

The increase in the number in local employment was all related to employment at stores (some of which were new in the area) - serving, nightwatch, delivery etc.

Forty two percent of those who were unemployed in 1982 and remained

part of the surveyed community[1] were still unemployed in 1985. Twenty five percent had obtained jobs, five percent retired and eighteen percent said they were occupied with domestic duties or agriculture. However, as all except one of those involved in domestic duties or agriculture were very young and unmarried they were probably only thus occupied because they could not find any employment and accordingly more correctly should have been classified as unemployed. If this had been done almost sixty percent of those unemployed in 1982 would have still been unemployed in 1985. It is probably an indication of the hopelessness of their situation that young unmarried women who said they were unemployed in 1982 in 1985 said they were occupied in the home.

Looked at in reverse, 37,8 percent of those who were unemployed in 1985 (and had been part of the community at the time of the first survey) had been employed in 1982. Seven percent had been at school in 1982 and 17,6 percent had been involved in domestic or agricultural activities. Although only 37,8 percent of the unemployed in 1985 stated that they were unemployed in 1982 many of the 17,6 percent who said they were involved in domestic or agricultural duties were probably only so involved because they were unemployed. If these people are considered to have been unemployed then over half of those who were unemployed in 1985 were also unemployed in 1982.

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1. Twenty two percent of those who were unemployed in 1982 had either died or left the community by 1985.

CHAPTER FOUR

QUALITY OF LIFE

4.1 Introduction

This chapter deals with the survey community's access to basic amenities and the factors determining their availability or non-availability. In certain spheres this was a relatively favoured community with ready access to, for example, water and fuel. But with regard to the amenities associated with a developing society, such as education and health, this was a seriously disadvantaged community both in real terms and in relation to their fellows elsewhere in the country.

4.2 Education

Education in a developing community is a matter to which people attach particular importance. It is generally considered an essential pre-requisite for the progressive development of the area and any improvement in the quality of life of the inhabitants. The survey area was no exception to this rule. Although the majority of those surveyed over the age of 20 have had no education the value placed upon education by the community was evidenced by their communal efforts to erect more schools and additional classrooms, the ever increasing number of children attending school and the general improvement in literacy by age group over time.

Table 28 below which relates to the years 1982-85 indicates the growth in pupils and schools for the entire magisterial district of Nkandla and reflects a pupil growth rate of over 10 percent per annum.

Table 28 : Educational Statistics for Nkandla 1982-85

Year	Pupils	Primary Schools	Junior Secondary	High Schools
1982	28 349	100	15	3
1983	32 457	113	17	5
1985	38 147	130	21	6

In 1982 in the area surveyed there were 4 schools - all of which drew children from beyond the survey area. They provided education from Sub-standard A to Standard 7. In 1984 the junior secondary school acquired a Standard 8 and in 1985 two additional primary schools were established in the area. The total number of pupils attending these schools grew from 781 in 1982 to 1 407 in 1985. The rate of growth in school and pupil numbers far exceeded that in both the whole of KwaZulu and in the magisterial district of Nkandla. Despite this fact there was in 1985 still a surprisingly large number of children of school going age (7-16) who were not at school. The percentage of surveyed households with children in this age group who were not at school rose from 58,6 percent in 1982 to 60,0 percent in 1985, although the percentage of children not at school in the 7 - 16 age group fell from 54,0 percent to 49,3 percent. Table 29 below shows

the educational levels in the survey area in 1985 to be markedly worse than those in the wider areas of Nkandla or KwaZulu. Although they had improved between 1982 and 1985, they do not appear to have kept pace with improvements in Nkandla or KwaZulu. However, the population figures for KwaZulu and Nkandla, which have been taken from the 1985 Population Census, do not allow for the undercount (which the HSRC has estimated to average 20,4 percent for blacks) and therefore imply that a higher percentage of KwaZulu and Nkandla's population was at school than was the case.

Table 29 : Comparison of School Going Population in KwaZulu, Nkandla and Survey Area

	KwaZulu		Nkandla		Survey	
	1980	1985	1980	1985	1982	1985
Size Community	3 377 240	3 738 334	99 380	96 866	764	831
Percentage in 5-14 cohort	29,0	29,2	30,6	33,06	27,1	27,1
Percentage of Total Population at School	24,7	31,4	28,8	39,4	12,8	14,6
Number at School as % 5-14 age cohort	85,3	107,6	93,0	119,1	47,3	49,4

Note : The 1985 figures for KwaZulu and Nkandla have been taken from the Population Census of RSA 1985 Report No. 02-85-02. They do not allow for the undercount which the HSRC estimates averaged 20,4 percent for blacks.

Table 30 : Education Levels

Educational Level	Total Population						5 - 24 Age Group			
	KwaZulu*		Nkandla*		Survey Area		Survey Area		KwaZulu*	Nkandla*
	1980	1985	1980	1985	1982	1985	1982	1985	1985	1985
No Education	52,5	39,7	68,7	52,4	67,7	65,1	50,9	48,4	24,0	34,1
SSA - Std 5	24,6	29,9	19,9	29,4	24,1	24,8	39,2	31,1	42,1	42,6
Std 4 - Std 5	9,7	12,5	5,8	8,7	4,3	5,2	6,4	14,3	14,0	11,1
Std 6 - Std 8	10,5	13,5	4,9	7,7	3,3	3,3	2,9	5,1	14,8	10,1
Std 9 +	2,7	4,4	0,7	1,8	0,6	1,1	0,6	1,1	5,1	2,1

* 1980 and 1985 Population Censuses

A comparison of the educational levels of all those surveyed with the total population of KwaZulu and that of Nkandla, and of the 5 - 24 age groups for the three areas illustrates the markedly lower levels of education in the survey area. However, the same trends towards improvement which are illustrated in the figures for kwaZulu and Nkandla are also evident in the survey figures.

In 1985 there was still no high school in the area. There were no centres of adult education and the agricultural extension officer who alone, in 1982, could be said to be involved in adult education, was no longer in the area in 1985. The nearest high school was in Nkandla, 30 kilometres away.

In 1982 the 781 pupils were taught by 25 teachers only 6 of whom were qualified. Together the schools had 11 classrooms. In addition they

made use of 4 nearby church buildings. Pupils had to walk varying but considerable distances to reach schools and no public transport was available. Sixty nine percent of households surveyed were estimated to be more than 1 hours walking time from the nearest primary school.

Although school fees were not high (they varied from R1.20 to R4.00 in 1982) and uniforms were not compulsory both in 1982 and 1985 a t test indicated that incomes per capita in households where children of school going age were not at school were lower than in households where all children of schooling age were at school. This may be explained by the fact that pupils were required to purchase almost all of their text and exercise books and contribute approximately R10 per annum to the school building fund.

School building funds are required because all schools in the area are community schools. The State plays no part in their establishment. When funds permit, the State will reimburse the school with up to 50 percent of the cost of the building, but it is the community or some interested individual who has to take the full initiative in the proposing, planning and building of a school. This system does not lead to the rational positioning of schools in relation to population density, transport routes, growth points etc., but instead places them where communities or individuals have money and initiative. Poor rural communities where the majority of able bodied men are away and many of the chiefs uneducated must evitably come off worse under such a system. The survey area illustrates just this.

4.3 Health

There were no permanent health facilities within the survey area (60 square kilometres) although mobile clinics from Nkandla and Mbongolwane hospitals visited the area on a monthly basis. There was a clinic just north of the survey area but although the surveyed community appeared to use it for ante-natal and immunization purposes, they tended to bypass the clinic in medical emergencies and travel either to Eshowe or Nkandla hospitals - involving themselves in a round trip of a minimum of 60 kilometres. There were a surprising number of traditional healers or inyangas in the area who appeared to be well supported by the community. A permanent clinic based in the survey area would appear justified by the numbers it would serve and services it might deliver. Until such a clinic is provided the surveyed community would benefit if the existing clinic just outside the area were upgraded and the community itself educated as to the services it does and could provide.

4.4 Water

Water was always available from the numerous perennial streams and springs in the area. Respondents reported that even in the 1980 drought they had drinking water although the irrigation of gardens next to streams became impossible. Over 70 percent of respondents obtained their water from streams and the balance from springs. There were no other sources of water. There was no piped water in the area and no attempt had been made to protect springs. No water tanks were

observed. Despite the fact that water sources were unprotected most appeared not to have become polluted and the hospital reported very low levels of cholera and other water related diseases. Although the daily collection of water inevitably involved a steep climb back to the homestead, most households were within 15 minutes walking time from the source.

4.5 Fuel

Most people in the survey area had a ready access to plentiful supplies of free wood from natural forests or their own small plantations. Obtaining fuel did not therefore give rise to difficulties or constitute a major item of expenditure. However wood gathering is very time consuming and the natural forests are rapidly being depleted.

4.6 Transport and Communication

The transport infrastructure in the survey area in 1985 remained totally inadequate. There were few roads and fewer cars. Apart from those belonging to store keepers no cars were based in the area. The cars owned by migrants were only in the area during the brief periods when the migrants were home. Two buses a day travelled to Nkandla and two to Eshowe along the main gravel road but owing to the gradients and condition of the other roads no buses travelled along them. The construction and maintenance of all roads other than the main road were entirely the responsibility of the community with the result that few had a passable road within easy reach of their homes.

The area was relatively well served by taxis. The nearest rail link was in Eshowe 30kms away. Transport was most frequently required for medical reasons. It was possible to call an ambulance but as they were little cheaper than taxis and could only be summoned by telephone the community generally resorted to public transport in medical emergencies.

At the time of the first survey there were no telephones in the survey area. The central store had acquired a telephone by the time of the resurvey. There was only one telephone within 12kms of the boundary of the area surveyed and even the local clinic had no telephone. There were no post offices within 30 kms of the area; none of the local stores sold newspapers and although there were a number of households with radios they seldom seemed to use them - perhaps because of the cost of batteries.

4.7 Shops, Savings and Credit

There were three stores within the survey area in 1982 and four in 1985. Three larger stores with a far wider range of goods were within 15kms of the boundary of the area but the surveyed population still found it necessary to shop in Nkandla or Eshowe from time to time. The local shops have a very limited range of foodstuffs (none had electricity) and few soft goods. They stocked no fertilizer and almost no seed.

There appeared to be no savings clubs or credit unions in the area at

the time of the surveys although some had existed in the past. Cash for credit could not be obtained within the area but all the stores offered varying but limited credit facilities for the purchase of foodstuffs. Pensioners were the group most likely to be granted credit - being the only people with a regular income.

CHAPTER FIVE: INCOME LEVELS, DISTRIBUTION AND SOURCES

5.1 Introduction

The difficulties associated with estimating rural incomes, their consumption and distribution are immense and unresolved. They are discussed at length in Appendix A. In order to understand the significance of the evaluations made in this chapter it is essential that Appendix A be read first.

Cross sectional income studies give rise to additional difficulties in that they reflect only current annual incomes which may be strongly influenced by random and transitory factors, such as droughts or recessions, as well as by the phase of lifecycle in which the household is placed at the time and by prevailing social or political forces.

The relation of income levels to the development cycle of the household is only appropriate where households experience similar progress through the various stages of the life cycle. These are usually considered to be the initial formation, the subsequent growth in size and the number of dependents as children are born into the household, the change in dependency ratio as children who were previously consumers became contributors to household income, and finally the contraction in size as children leave to establish their own households. In order to apply the development cycle theory it is

also necessary to be able to distinguish the "cyclical process from either shorter term or longer term processes of social structural change" (Murrary: 1987). Studies over time which claim that trends in the level of households income may be related to the phase of household lifecycle imply that what, in a cross sectional study, may appear to be differences in levels of income between various households may be merely reflections of the different phases of the lifecycle in which individual houses are at the time (Kuznets, 1976).

Although it is true that cross sectional studies reflect income at one point only and give no indication of the overall lifetime levels of income achieved by the household studied, the variety and complexity of forces influencing income levels in Southern Africa make the exclusive application of the life cycle theory inappropriate. The common occurrence of large extended households in rural Southern Africa makes a comprehensive application of this theory impossible. In this study over three quarters of the households surveyed consisted of extended families which could not be readily allocated to any one particular phase of a household's lifecyle. Indeed in many cases all the various phases in the usual household lifecycle were simultaneously represented by different sections of these extended households. If there is some relationship between the level of household income and the phase in household lifecycle such extended households might be expected to show less variation in the levels of household income realized throughout their existence than simple households which can be firmly categorized as belonging to a particular phase of the lifecycle at a particular time. For this reason the incomes recorded in this survey may be more generally

representative of the long term incomes of the households surveyed than is usual in a cross section study.

5.2 Sources of Income

The sources of income in the survey area proved to be typical of black rural areas. Overwhelming reliance was placed upon remittances and pensions. The economic options available to the surveyed community were extremely limited. Table 31 which gives the total annual income received by the households surveyed by source, and Table 32 which relates the occupations of all those in the 15 - 60 age group, illustrate the dominant role of pensions and remittances and the minimal possibilities for income creation in the survey area.

Table 31: Sources of Annual Household Income (All Households)

Source	1982		1985	
	Amount (Rands)	Percent	Amount (Rands)	Percent
Remittances	34453,00	38,1	58772,00	38,2
Pensions	21160,00	23,4	50100,00	32,0
Subsistence	16896,60	18,7	28179,78	18,0
Informal Sector	14557,00	16,1	6959,00	4,5
Local employment	1984,00	2,2	6137,00	3,9
Other	1292,00	1,4	5390,00	3,4
TOTAL	90342,60	100,0	156537,78	100,0

Table 32: Occupations of 15 - 60 Age Group by Sex

Year	Number or Percent	Scholar	Domestic/Agricultural Duties	Informal Sector	Employed Migrant	Locally Employed	Unemployed	Total Number or Percent	Sex
1982	N	13	10	4	99	1	37	164	Male
1982	%	7,9	6,1	2,4	60,4	0,6	22,6	100	
1985	N	19	5	1	95	4	58	182	
1985	%	10,4	2,7	0,6	52,2	2,2	31,9	100	
1982	N	6	154	1	21		15	197	Female
1982	%	3,1	78,1	0,5	10,6		7,7	100	
1985	N	11	158	1	19		22	211	
1985	%	5,2	74,9	0,5	9,0		10,4	100	

The tables further show the levels of contribution by individuals to be extremely uneven. Pensioners who in 1985 constituted a mere 7 percent of the surveyed population contributed 32 percent of household income. Remitting migrants who constituted 15 percent of those surveyed contributed 38,2 percent. On the other hand the 23 percent of the population who were involved in the production of crops or care of livestock contributed only 18 percent.

The tables indicate that certain changes took place over the three years between surveys. During this time total income grew by 20

percent per annum while the contribution from migrants grew by a similar amount and that from pensioners by 33 percent per annum. Although local employment grew by 46 percent per annum it remained relatively insignificant both as a source of income and as an occupation. Subsistence only maintained its position as a source of income as a result of the different method of evaluation used in 1985 (See section 5.2.3 below). A comparison of the two sets of figures confirms the limited possibilities for generating income other than through migrancy or welfare transfers. The contribution from informal sector activity declined absolutely as well as relatively. The growth in "other income" over the three years does not reflect a trend but merely the fact that in 1985 15, as opposed to 6 in 1982, children received maintenance payments and that one household received payments totalling R800 from TEBA as compensation for the death of a household member on the mines and another received regular payments (totalling R480 during year year) from a household member's boyfriend.

The tables indicate that certain changes occurred between 1982 and 1985. These were not the result of fundamental changes in the surveyed community but reflections on the periphery of events occurring in the core society. Pretoria increased pension payments and pension coverage improved. Real wages in the core economy increased despite the recession and growth in unemployment. The increased numbers of unemployed who returned home restricted the opportunities for informal sector activity in the survey area both because they could perform for themselves tasks they might have paid others for and because they lacked the funds to pay for goods or services.

5.2.1 The Chief Sources - Remittances and Pensions

In 1985 as in 1982 the two main sources of income were remittances and pensions. Remittances as a percentage of total income had remained static but pensions were seen to be playing an increased role. With regard to the average individual remittance or pension both had increased in actual and real terms. In real terms remittances increased by 11,6 percent and pensions by 11,5 percent. However, whereas the number of pensioners in the community increased over the three year period, although the number of persons involved in, or desirous of being involved in, wage labour remained constant, the number of employed migrants fell while the number of unemployed grew. By 1985 whereas 56 percent of households were in receipt of old age pensions as opposed to 46 percent in 1982, almost a quarter of those who had remitted money over the previous twelve months were unemployed and therefore would be unable to remit in the future unless they found new employment which was unlikely in the recessionary climate. The percentage of income derived from remittances was therefore likely to fall as, although the average amount remitted may have increased further since the resurvey, the percentage remitting will most probably have continued to decline. Pension payments have been increased again since the 1985 survey, and the percentage of income derived from this source is likely to have grown further.

In 1985 seventy nine percent of households contained a migrant (73,3 percent an employed migrant). Eighty percent[1] contained a migrant who

1. Includes some unemployed ex-migrants who were at home at the time of the survey.

had remitted money during the 12 months preceding the survey. In just over half the households all employed migrants remitted. The remittance patterns of migrants are referred to at greater length in 2.10.

5.2.2 Informal Sector

Between surveys there was a serious decline in informal sector income which fell in percentage terms from 16,1 percent of total household income from all sources in 1982 to a mere 4,5 percent in 1985.

Contributions to income from informal sector activities were exceedingly unequal. The top 10 percent of contributors accounted for 63,5 percent of informal sector income in 1985 and 88,4 percent in 1982. The death or departure from the district of one or more of the top income earners in this sector will, therefore, have a disproportionate impact on the importance of incomes from this source as would ill health which prevents a person from operating. In 1982 64,5 percent of informal sector income was contributed by herbalists and the top 5 contributors to informal sector income were all herbalists. In 1985 herbalists contributed only 30,5 percent of a much decreased income from this sector. By the time of the 1985 survey one herbalist had left the area, one had died and one was too ill to collect medicines. Another claimed a dramatic decline in income from this source. Indeed, only the fifth claimed a modest increase (in constant terms). Nevertheless three of the four top contributors to this source of income in 1985 were still the

herbalists.

The departure from the area (on her marriage) of the only woman with a knitting machine, who alone contributed 12 percent of informal sector income in 1982, was another important cause of the decline in income from this source. The general recession and growing unemployment in 1985 may also have meant that the local community was less able to support a herbalist or other informal sector operator and, moreover, an individual's unemployment would have freed him to perform certain tasks or services he may have been prepared to pay others to perform when he was employed.

Although over 30 percent of those who contributed to the cash income of households in 1982 and 1985 did so as informal sector operators the majority of them - chiefly women grass workers or potters - contributed negligible amounts. The dramatic decline in income from this source does not indicate a fall off in this type of activity but merely reflects events (some of a personal and some of a national nature) overtaking informal sector operators and, in particular the top contributors who contributed so much of income from this source.

5.2.3 Subsistence Income

The contribution of subsistence farming to household income might appear from Table 31 to have remained constant over the three years between surveys. Unfortunately this is not the case. It is a reflection of a change in the basis on which these incomes were

estimated. In 1985 agricultural income was debited with the costs of production which were not taken into account in 1982. As a percentage of subsistence income the contribution from agriculture fell from over 50 to 12,2 percent. This decline was not solely the result of taking costs into account. A real decline in agricultural production occurred which was demonstrated by calculating the value of 1985 agricultural production according to the 1982 formula. This showed the value of agricultural production to have fallen by 30 percent in constant terms.

Reference to Appendix B where the methods of calculating subsistence income are explained at length will indicate that the maintenance of the level of subsistence contribution is largely explained by the values placed in 1985 upon the consumption of small stock and the value placed upon hides neither of which were considered in 1982, upon the increased values placed upon the meat consumed from dead and slaughtered animals and upon the fact that more cattle died in 1985 than in 1982. An appreciation of the methods used to attribute economic values to subsistence production and consumption, and the implications of consumption and sales for future subsistence income is essential to the understanding of the significance of subsistence income. The methods and the implications are discussed in Appendices B and C. It is made clear that the level of the subsistence contribution in 1985 was only being maintained by placing an increased reliance upon the consumption of capital or dissaving. In 1982 half of subsistence income was derived from field production. In 1985 this source contributed only 12,2 percent of subsistence income. Although the different methods of estimation used in 1985 account for some of

the decline in the value of agricultural production, the fact remains that 86 percent of subsistence income was achieved through the consumption or sale of assets. As has been stated beef production is by definition dependent upon the consumption or sale of assets. However, its successful continuation is reliant upon an overall increase in the value of assets (or at least maintenance of their value) despite the consumption or sale of some. The income earned from ploughing was the only subsistence income achieved from sources other than field production which did not involve the consumption of assets.

Although subsistence may appear to have maintained its importance as a contributor to household income it has done so in a way which would seem to ensure that in future its importance as a contributor must decline unless there is a sharp improvement in the fertility rate and a sharp decline in the death rate of stock of all types or a dramatic turn around in agricultural production.

5.3 Income Levels and Distribution of Income

In this chapter we refer to both household and household per capita income. It is however felt that, chiefly as a consequence of the great variation in household size and structure, the household per capita measure is a more accurate reflection of the levels of individual poverty in the surveyed community (Appendix A). This study is concerned with the measurement of levels of poverty rather than the nature of and reasons for certain income flows, and what is

required from the measurement of income is a tool for determining a household's ability to supply its members with certain basic needs rather than the size of its income. The reasons why this is better done by the per capita than the household measure are discussed at length in Appendix A. To determine household per capita incomes total household income was divided by the number of resident household members. The figures thus obtained are the mean or average annual per capita incomes in particular households. Section 5.3.1 refers briefly to household incomes so that comparisons may be drawn with those studies which refer only to household incomes. In the balance of this study references to income are generally to household per capita incomes.

5.3.1 Household Incomes

Total household incomes from all sources ranged in 1985 from R141,20 to R7 804,60 with a mean of R2 115,37 and a median of R1 845. In 1982 household incomes ranged from R100 to R8 460 with the mean being R1309,31 and the median R1 125. In order to make a direct comparison both sets of figures were converted into 1980 prices according to the Consumer Price Index. Table 33 which contains these figures indicates that except at the extremes household incomes were slightly higher in 1985 than in 1982. The distribution of incomes (as reflected in the column showing the percentage of total income received by each decile) was very similar in 1982 and 1985 with the richest decile receiving more than twenty percent of the total income while the poorest decile received just over 2 percent or a tenth of the share received by the richest decile.

Table 33: Distribution of Annual Household Incomes: 1982 and 1985 Surveys

1982 Survey				1985 Survey			
Decile	Annual Household Income (Rands) 1980 Prices	Percentage of Total Income	Cumulative Share of Total Income	Annual Household Income (Rands)	Percentage of Total Income	Cumulative Share of Total Income	Annual Household Income (Rands) 1980 Prices
1	76 - 385	2,4	2,4	141 - 801	2,2	2,2	73 - 416
2	386 - 540	4,6	7,0	802 - 1056	4,2	6,4	417 - 548
3	541 - 624	6,0	13,0	1057 - 1289	5,4	11,8	549 - 669
4	625 - 750	6,7	19,7	1290 - 1576	7,4	19,2	670 - 700
5	701 - 852	8,1	27,8	1577 - 1845	7,9	27,1	809 - 958
6	853 - 933	9,0	36,8	1846 - 2186	10,1	37,2	959 - 1089
7	934 - 1157	10,6	47,4	2187 - 2424	10,3	47,5	1090 - 1259
8	1158 - 1365	13,1	60,5	2425 - 3039	12,3	59,8	1260 - 1578
9	1366 - 1632	15,2	75,7	3040 - 3661	17,3	77,1	1579 - 1837
10	1633 - 6404	24,3	100,0	3662 - 7805	22,9	100,0	1838 - 4052

5.3.2 Household Per Capita Incomes

The calculation of annual average household per capita incomes in 1985 showed a range of incomes from R14 to R1 059 with a mean of R315 and a median of R264. The range of household per capita incomes in 1982 was

R16 to R886 with a mean of R183 and a median of R144.

Table 34: Distribution of Annual Household per Capita Incomes

	1982		1985	
Decile	Range of Annual Per Capita Incomes (1980 Prices	Range of Annual Per Capita Incomes	Range of Annual Per Capita Incomes	Range of Annual Per Capita Incomes (1980) Prices
1	16 - 38	21 - 50	14 - 81	7 - 42
2	39 - 57	51 - 75	82 - 165	43 - 86
3	58 - 73	76 - 97	166 - 184	87 - 96
4	74 - 89	98 - 118	185 - 222	97 - 115
5	90 - 109	119 - 144	223 - 264	116 - 137
6	109 - 125	144 - 165	265 - 301	138 - 156
7	126 - 151	166 - 199	302 - 355	157 - 184
8	152 - 173	200 - 229	355 - 388	185 - 201
9	174 - 267	230 - 353	389 - 617	202 - 320
10	268 - 305	354 - 403	618 - 801	321 - 416
	306 - 886	404 - 1170	802 - 1059	417 - 550

Despite the real increase in average household per capita incomes over the three years between surveys the 1985 figures confirm that as in 1982 there was widespread poverty in the surveyed community with half the households surveyed achieving average household per capita incomes of R264 per annum or less and 30 percent incomes of less than R185. At the other end of the scale, only 2,6 percent achieved incomes of over R1 000.

When household per capita incomes for both 1982 and 1985 were converted to 1980 prices (using the Consumer Price Index) it became clear that, except at the extremes, incomes were consistently lower in

1982. The improvement in real per capita average household incomes in 1985 can chiefly be attributed to remittances which, in real terms, had increased by 11,6 percent and receipts from old age pensions which had grown, in real terms, by 11,5 percent and were received by 56 percent of households in 1985 as opposed to only 46 percent in 1982.

5.4 Income Differentiation and Household Structure

Tables 33 and 34 above illustrate the income inequality found in the survey area. In an attempt to establish the causes of this inequality the levels of income of different groupings of households were investigated. Thus factors such as size of landholding, number of cattle, number of migrants etc. were related to income levels. In most cases no link between the factor and the level of income could be established. Those in which the factor tested appeared to have some relevance are listed in Table 35 below.

Table 35 gives both household and household per capita incomes and indicates clearly how differently they reflect the situation. Reference to household per capita incomes in Table 35 indicates that of all the groupings of households listed there small households were best able to meet dependents' needs although their incomes were amongst the lowest in household terms. Although there was no definite relationship between household income per capita and household size the chance of enjoying a high income was significantly greater when one was a member of a household which was below average in size. Conversely membership of a household with above average membership tended to ensure a comparatively low income.

Table 35: Annual Income by Household Structure and Source of Income 1985

Household Sub Groups	Mean Percentage of Total Annual Household Income Derived From Particular Source					Mean Total Annual Household Income	Mean Annual Household Per Capita Income	Median Annual Household Per Capita Income	No. of Cases
	Agriculture	Stock	Remittances	Pensions	Informal Sector				
All Cases	2,2	15,7	38,2	32,0	4,4	2115	315	264	74
With No one Unemployed	2,1	13,2	41,7	33,2	2,5	2155	391	331	29
With No one Employed	8,0	20,0	14,3	40,1	11,7	1137	369	289	17
With No Migrants	7,4	18,2	13,3	26,8	10,8	1113	348	295	20
With Migrants	1,3	15,4	42,3	30,4	3,4	2487	303	264	54
With Pensioners	1,7	14,5	32,8	42,7	2,9	2663	336	292	42
With No Pensioners	3,5	19,2	51,8	5,2	9,0	1397	287	209	32
With No Pensioners or Migrants	6,4	21,7	24,2	8,0	24,2	811	225	173	12
With Unemployed Person	2,3	17,5	35,9	30,5	5,7	2090	226	266	45
With Widowed Head	3,5	23,7	18,4	41,9	7,4	1242	272	184	9
Small Households	4,8	15,0	31,1	33,8	6,5	1597	413	348	38
Large Households	0,5	16,3	42,2	30,3	2,9	2662	211	197	36

As in 1982 both the structure of the household itself and the extent of its access to the different sources of income in the area were contributors to its members' ultimate position in the household per capita income hierarchy. An analysis of the different groupings of households given in Table 35 indicates that the chief determinants of

poverty in 1985 were the same factors as those observed in 1982. Households without migrants or pensioners were the poorest. They were followed by households in which there were unemployed persons (where the head of the household was amongst the unemployed incomes fell even lower). The third poorest group was the households headed by widows.

Outside of the grouping by size, the group of households which achieved the highest household per capita incomes was that in which no one was unemployed. However, somewhat anomalously, this group was closely followed by those in which no one was employed either locally or as a migrant. Thus although unemployment or its absence is probably the chief determinant of an individual's position in the income hierarchy, there is a significant group of households, in which people achieve relatively high incomes, whose fortunes are uninfluenced by unemployment rates since their members do not participate in the labour market.

Amongst those with the highest household per capita incomes were members of households headed by an old age pensioner closely followed by those containing a pensioner. Recent increases in the amount of pension payments and the improvement in pension coverage means that not only does a larger share of the community's total income come from pension transfers than in 1982 but also that part of the reason for the overall improvement in household per capita incomes is that pension payments have increased faster than inflation. In 1982 pension payments per person were R480 per annum whilst by 1985 they had risen to R780 per annum. When these amounts are converted into

1980 prices according to the Consumer Price Index they still reflect an increase. In 1980 terms pension payments rose from R363,36 per annum in 1982 to R404,98 in 1985.

Even more important than the increase in the real value of social pensions was the fact that the number of pensioners and the number of households in the area which contained pensioners had also increased. In 1985 old age pensions were received by 56 percent of households as opposed to 46 percent in 1982. Although, the pensionable percentage of the surveyed community had hardly altered between 1982 when it was 7,5 percent and 1985 when it was 7,7 percent, the percentage who actually received pensions rose from 4,9 percent in 1982 to 6,9 percent in 1985.

5.5 Income Differentiation and Income Sources

Although there were differences in the percentage of income derived from various sources between the differing levels of income in general the differences were not significantly large or consistent to be able to relate differential incomes to access to the particular source of income. Table 36 shows sources of income by quintile in the hierarchy of households per capita incomes and Table 35 the percentage of income derived from various sources for the groups of households listed there.

As might be expected those in the lowest income group were the most

dependent upon subsistance income. The percentage of income derived from subsistence altered little - ranging from 16,0 percent to 21,1 percent - for the other quintiles. Although subsistence made the biggest contribution (26,1 percent) to the bottom quintile the actual

Table 36: Sources of Annual Household Income by Quintile (1985)

Annual Household Per Capita Income (Rands)	Percentage Contribution to Household Per Capita Income By Source					
	Subsistence	Remittance	Pensions	Informal Sector	Local Employ-ment	Other
14 - 165	26,1	36,5	21,8	10,9	0,4	4,3
166 - 222	16,0	37,6	36,8	4,6	0,0	5,0
223 - 301	21,1	32,7	20,5	10,1	9,7	5,9
302 - 388	19,8	39,6	31,2	1,6	6,8	1,0
389 - 1059	18,5	21,6	46,9	8,8	0,0	4,2
Mean Contribution to Total Income	18,0	38,2	32,0	4,5	3,9	3,4

amounts contributed were very small. Subsistence contributed a mean R20 per capita per annum to the incomes of those in the bottom quintile as opposed to R124 per capita per annum to those in the top quintile.

The percentage of subsistence income derived from crop production was minimal except in the lowest and highest quintiles. The percentage derived from stockholding was fairly consistent. The bottom two quintiles derived a far larger percentage of subsistence income from small stockholding than any other group.

Table 35 shows clearly how households which receive no income from one particular source compensate by receiving larger than average contributions from other sources. In those households where no one was employed 40,1 percent of total household income was derived from pensions as compared with 32,0 for all households. Averaging the percentage contribution amongst all households in the group disguises the extent to which some households which have no employed members are dependent upon pensions as a smaller percentage of these households (46 percent) than all households (56 percent) received any income from this source. Similarly a lower percentage of these households (48 percent) than all households (58 percent) received any income from informal sector activity. Those who are in receipt of informal sector income are therefore deriving a far larger percentage of their income from this source than the 11,7 percent received by the whole group. Such persons have probably taken a decision to participate in informal sector activity in preference to the labour market. They may, of course, have been forced to this decision because they were unable to find employment. Similar reasoning may explain the very much larger contribution of agriculture to the incomes of these households.

The influence of pension monies is clearly shown by the fact that those in the lowest quintile receive the smallest percentage from this source and those in the highest income the greatest. In the quintile in which almost half household income is derived from pension money the highest incomes are achieved with the smallest percentage of incomes derived from remittances. Remittances showed the least variation contributing between 30 - 40 percent to incomes in all categories other than the top category of per capita incomes.

5.6 Conclusion

Despite the geographical remoteness of the survey area and the apparently traditional nature of its structure income data provided by the surveys indicates that the community's lifestyle is almost entirely externally determined. The industrial core of South Africa and the policies of Pretoria hold the keys to most aspects of most of the community's life most of the time.

Only 9 percent of the households surveyed were neither in receipt of migrants' remittances nor social pensions. These two sources accounted for over 70 percent of the total income of surveyed households. Households in receipt of neither generally achieved pitifully low incomes. Only one household appeared to be in this position by choice. This was a household consisting of only two persons. The wife realised a considerable income through the sale of clay pots which she made. The only other household in this group which achieved an above average income was one which had been forced to sell cattle to meet medical expenses and had received compensation payments for the death of a son on the mines. The remaining households which were neither in receipt of remittances or pensions were dependent upon subsistance income and tiny sums they received from selling grasswork etc.

There was a further 7 percent of households which were really in the same position as those receiving no income from remittances or pensions in that although they had received some remittance income

over the twelve months preceding the survey no one in the household was employed at the time of the survey. All those who had remitted had been retrenched or were ill and therefore unable to work. These households averaged an annual household per capita incomes of only R197 despite the fact that 45 percent of the households' total income was derived from migrant remittances. Incomes in these households were set to fall even lower if none of the unemployed found work.

Table 35 which classifies together the above two groups as households containing no migrants or pensioners indicates that as a group they achieved the lowest annual household per capita incomes (R225) recorded in that table. It also indicates that although no household members were employed at the time of the survey almost a quarter of total household income was derived from remittances.

Non-farm employment in the area remained extremely limited and largely restricted to people with some education or skill (e.g. teachers, nurses, extension officers and storekeepers) whereas the people left in the area after the migrants had departed were those with the least education or skills.

The restraints upon the development of informal sector income will remain until the necessary changes are made in the area's infrastructure and local incomes rise. Similarly the development of subsistence income cannot take place before the infrastructure is developed, and the other restraints upon its growth removed (see 3.2.6).

Almost all these requirements (like the area's income itself) are externally determined. No progress is likely to be made while current policies persist in the core economy. But equally, no change is likely in these policies while the people affected by them have no means of bringing pressure to bear on the policymakers.

CHAPTER SIX: A COMPARISON OF INCOME LEVELS OVER THREE YEARS: CHANGING FORTUNES IN FIFTEEN HOUSEHOLDS

6.1 Introduction

In order to compare the annual household per capita incomes realized by the surveyed community in 1985 with those achieved in 1982 both sets of figures were converted to 1980 prices according to the Consumer Price Index. This adjustment showed mean annual household per capita incomes to have risen from R138 in 1982 to R164 in 1985. Median annual household per capita incomes rose from R109 in 1982 to R137 in 1985. On a household basis one third of incomes decreased and the average increase in per capita income in 1980 terms was R26.

In Chapter 5 and Appendices A and B the difficulties associated with estimating rural incomes are discussed. On account of these difficulties it was felt that a more valuable comparison of income levels discovered by the two surveys would result from an examination of comparative rankings in a household per capita income hierarchy than from a comparison of estimated household incomes achieved. A comparison of ranking would be less dependent upon price changes, inflation, different methods of evaluation etc. In order to determine the causes of rising or falling income it was decided to investigate thoroughly the changing fortunes of the fifteen households whose rankings had altered most over the three year period. Although it was decided that ranking would be a more relevant measurement it should be noted that there was more than a 50 percent overlap between the fifteen households whose rankings had altered most and those whose incomes had altered most. Whether actual incomes or rankings are

compared the danger remains of attaching too much importance to a shift which, although it may appear large in percentage or position terms, when expressed in terms of rands or purchasing power may not seem as significant.

6.1.1 Allocating Rank

In order to create an income hierarchy it was necessary to rank all household per capita incomes in 1982 and in 1985. The incomes for each household were ranked and numbered in descending order for 1982 and 1985. By subtracting each household's 1985 ranking from its 1982 ranking it was possible to determine which households' positions in the income hierarchy had altered most over the three year period. Certain households surveyed in 1982 were no longer in existence in 1985 and were replaced in the resurvey. None of these households could be used for comparative purposes. Four households split into two or more between 1982 and 1985 and all such new households were compared with the single household from which they originated. It was possible to compare incomes in 65 households and accordingly 65 rankings were allocated to 1982 and 65 to 1985. Thereafter the households (fifteen in number) whose rankings altered through more than 30 percent of the positions between 1982 and 1985 were selected for further analysis. In eight cases rankings had improved dramatically and in seven cases fallen.

6.2 Causes of Changes in Income Levels

Table 37 below indicates the number of positions (out of a possible 65) shifted by the fifteen households whose positions shifted most, their household per capita incomes for 1982 and 1985 (in 1982 terms)

and the probable causes for the shifts in position.

Table 37: Rising and Falling Incomes of the 15 Households Whose Income Ranking Altered Most Between 1982 and 1985

Incomes	Number of Positions Shifted in Ranking (Maximum Number: 65)	Annual household per capita incomes (in 1982 terms)		Possible Cause for Change				
		1982	1985	Increase in Employment	Reduction in Household Size	Increase in Informal SectorActivity	Abnormally Large Current Income from Cattle Holding	Abnormal Income from Workmen's Compensation.
Rising	55	34,00	423,20	✓		✓	✓	
	48	50,00	401,25		✓			
	38	75,00	295,62		✓		✓	✓
	29	132,00	358,96		✓✓			
	27	149,00	726,37		✓✓			
	25	111,00	289,42					
	23	83,00	211,94	✓				
	22	47,00	155,01				✓	
Falling	34	162,00	55,56	✓✓	✓✓	✓		
	32	165,00	80,25	✓✓	✓		✓	
	30	149,00	65,85	✓✓				
	29	376,00	180,39	✓✓		✓✓	✓	
	28	353,00	167,36	✓✓	✓			
	23	184,00	138,55	✓✓	✓			
	22	170,00	131,69	✓✓			✓	✓
				Loss of Employment	Increase in Household Size	Decrease in Informal Sector Activity	Loss of Oxen	Lobola Payment

6.2.1 Employment

It was hardly surprising to discover that in a community where the majority of income is derived from migrant remittances (Table 31) the

securing or loss of a job by a member of the household should be the chief factor affecting rising or falling incomes in a household. Where incomes fell it was found that members of the household had either lost jobs or been unable to find employment as first time job seekers.

6.2.2 Household Size

Of secondary importance in determining alterations in household income rankings were changes in household size. Where the household decreased in size incomes tended to rise, provided the decrease did not result in the departure from the household of a pension-holding member or one who remitted regularly. In one case a sharp decline in income could be traced to the departure from the household of one of the most successful small business operators encountered in the original survey. Conversely a growth in household size generally led to falling incomes particularly if it led, as it inevitably did, to an increase in the percentage of dependents in the household. Closely allied to a decrease in household size is the breakdown of an extended family unit into households which basically consist of nuclear families only. Where this occurred in a situation where the head of the nuclear family was an employed migrant, it appeared that incomes rose not only because remittances were shared amongst fewer persons, but also because the knowledge that the remittance was to be spent solely on his immediate family appeared to lead the migrant to remit a larger proportion of his wage. The average annual remittance to households which consisted of a nuclear family only was double that to a household whose structure was that of an extended family. In the

former the average remittance was R1 039,63 per annum and in the latter R516,27 per annum.

With remittances constituting the major share of household income and changes in employment the major determinant of falling or rising income rankings, it followed that in almost all cases where rankings fell dramatically household cash income in 1985 was lower than that in 1982 even without inflation being taken into account. There were two cases where a fall or rise in ranking was not accompanied by a fall or rise in cash income. In one case (where ranking fell) the household had doubled in size and in the other (where ranking rose) the household had halved in size.

6.2.3 Cattle Movements

Amongst the households where rankings rose or fell markedly there was above average activity associated with cattle holding. This can be explained by a number of factors the combined implications of which are sometimes confusing. Thus where household members were ill or lost employment the household may have been forced to sell an animal. As explained in Appendix 8 the price realised for any animals sold was included in current disposable income obtained as a result of stockholding, although such monies are not true income but rather money received in return for the transfer of a capital asset. The consequence of their inclusion is a temporary abnormal increase in incomes in a situation which has essentially been brought about by falling incomes. Similarly where an animal is slaughtered as a

consequence of the death of a household member or where animals die and the household consumes the carcass, the value attributed to the consumed meat will increase current "incomes" in a situation which results in a decrease in assets and heralds decreasing incomes in the future. [1]

There were a number of notable cases where "income" derived from cattle holding cushioned what were in reality economically disastrous situations. Improved ranking in one household was achieved as a consequence of compensation payments from TEBA for the death of a son on the mines and the proceeds of the sale of three head of cattle sold to pay for expenses associated with the mother's illness. Ranking was maintained in another household by the sale of a cow when the head lost his job (and was therefore no longer able to remit regularly). Through the sale of an asset the household was temporarily able to maintain their disposable income level. Another household's ranking appeared to improve dramatically where little else changed. The size of household remained similar as did the cattle holding. Agricultural production levels were unchanged and employment levels the same. During the year, however, two head of cattle were sold to meet expenses associated wtih illness and lobola payments. Attributing the sale proceeds to household incomes caused an apparent increase in income levels.

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1. In this connection it is interesting to note that households with a widowed head derived the largest percentage of their income from stockholding. Most of this income was probably accounted for by the value attached to the consumption of meat from animals slaughtered in connection with the head's husband's death.

Cattle movements tend to be associated with changes in household structure. Bethrothals and marriages result in persons joining or leaving households, cattle being transferred as lobola and cattle being slaughtered in celebration of the marriage. Deaths likewise are followed by ritual slaughters and where preceded by illness may have necessitated sales to meet expenses. The loss of a household member who used to remit may also lead to sales in order to replace the lost income. The impact of lobola transfers on household income is difficult to measure - where a household receives cattle it loses the input of a productive member and conversely where a household parts with cattle it acquires a new productive member in their place. The need to pay lobola may also lead to a household member remitting less than he did when not involved in lobola payments.

The effect of cattle sales and deaths is also not clearcut - what initially appears to be a boost to household incomes in fact probably heralds a fall in incomes. Those cases where falling or rising ranking can be traced to cattle movements should therefore be viewed with caution.

Where households lost oxen with which they had previously ploughed there was a serious drop in the value of agricultural production. In the few cases where the level of production was maintained this was generally achieved through incurring ploughing costs which exceeded the value of the production. There did not appear to be any firm link between declining and increasing agricultural production and declining and increasing incomes. Where there was a marked decline in

the value of agricultural production this was generally the result of the household having lost oxen with which to plough. However, overall, increasing agricultural incomes were not necessarily found in households where incomes rose or the household's ranking improved. Neither was the converse true.

6.2.4 Informal Sector Activity

Although there is undoubtedly scope for the development of small business or informal sector activities in the survey area, the dispersed nature of the community and its poverty will always act as brakes upon informal sector growth. A number of households reported serious falls in income from this source between 1982 and 1985 which probably should be attributed to the general economic recession and growth of unemployment in the area.

6.2.5 Pensions

It is interesting that although pensions constitute a significant part of household incomes none of the significant changes in ranking could be directly traced to the granting or cessation of a pension. There was no automatic improvement in ranking where a household member was granted a pension nor was there a corresponding decline in ranking where a household lost a pension. Indeed it often seemed that the granting of a pension led to a fall in ranking and the cessation of a pension to a rise. A reason for this unexpected consequence (of the

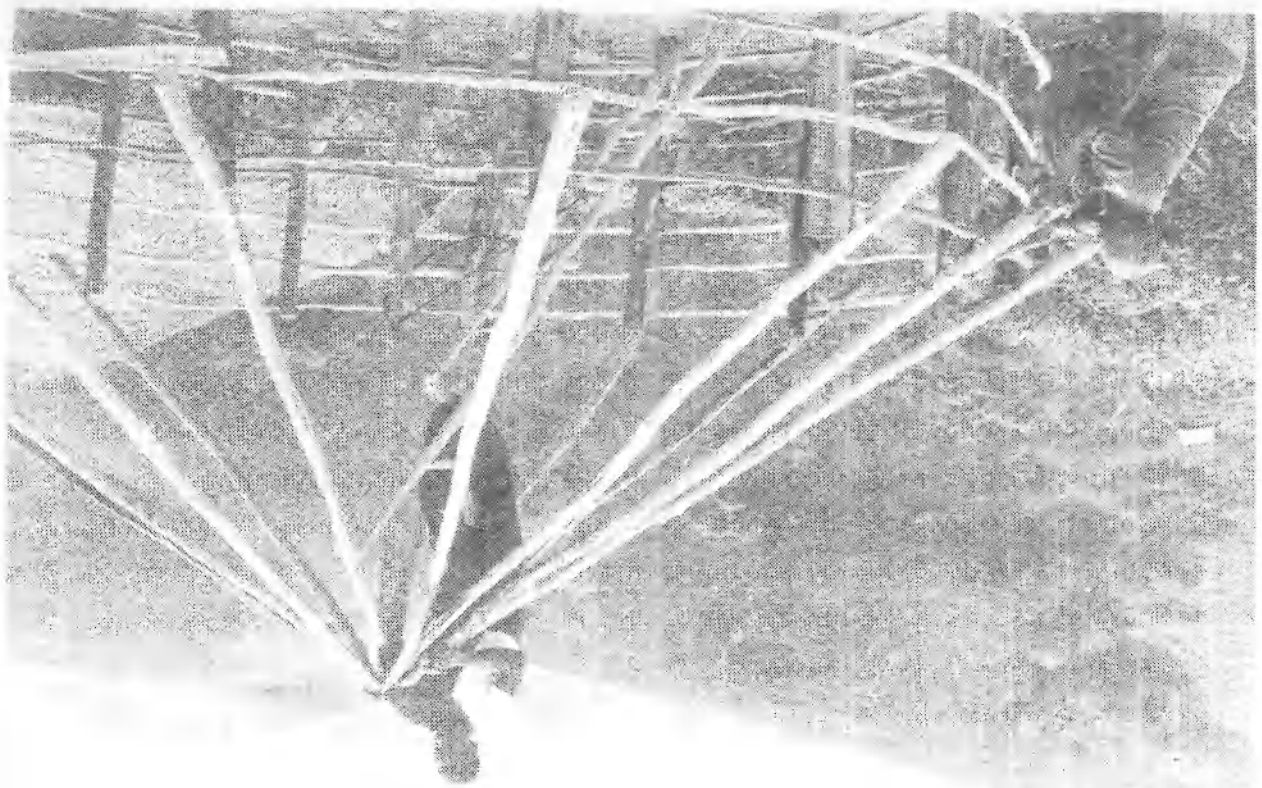
granting or withdrawal of a pension) only becomes apparent when accompanying changes in household size and structure are investigated.

It appears that dependent relatives are frequently drawn to households which contain pensioners in the hope that they will be able to share the pension benefit. Conversely when a pensioner dies and the benefit ceases such relatives may well depart in search of another relative who is still in receipt of a pension. The attraction of dependent relatives to the household increases its size and accordingly decreases per capita incomes whereas the departure of such dependents decreases size and may lead to an increase in incomes despite the loss of the pension.

6.2.6 Split Households

Further information on the dynamics of rising and falling rankings may be discovered by looking at the varying fortunes of the constituent parts of households which split between 1982 and 1985. Some of these cases have already been dealt with in that they were amongst those 15 households whose ranking had altered most over the period, and a closer look at the balance produces no new causes for falling or rising ranking. Employment, household size, availability of oxen and declining informal sector activity are the factors which again appear to explain the changes. In 6.4 the differing fortunes of the various components of households which split are discussed in detail.

In the following section the case histories of the fifteen households



which experienced the greatest changes in income ranking are discussed in detail.

6.3 Case Studies of the Fifteen Households Experiencing the Greatest Change in Income Ranking

1. This is the household whose ranking according to household income per capita changed most between the time of the first and second surveys - it moved from the bottom 10 percent of households to the top 10 percent. There is no dramatic explanation for this change in rank. The case is however a good illustration of how the various stages in the life cycle of an extended family affect the income levels of the household.

   Membership of the household changed little over the period - one person left it and two (a wife and child) joined. However the household moved into a new era as the head who had for years supported his family as a migrant worker returned home to have his place taken in the labour market by his five sons. Three of the sons had just started working in 1982 but had not yet begun remitting money on a regular basis. By 1985 all five were working and remitted money every month.

   One son and one daughter had married in the interim and there had been significant movements in the cattle herd. During the twelve months preceding the 1985 survey five head had been transferred out as lobola, two had died, two had been slaughtered, eight

head were received into the herd as lobola and one was purchased. As the sons and daughters of the household were all of marriageable age this movement in cattle was to be expected. The increase in slaughterings which is associated with the marriages has the effect of increasing current disposable income from cattle holding. The value of the meat from slaughtered animals should not strictly speaking be considered income as it is income achieved at the cost of the loss of a productive asset. In this case however the income so achieved does not form a significant part of the houshold's income[1] - the overwhelming majority of which consists of migrants' remittances.

The number of cattle held by the household had increased by seven between 1982 and 1985. The value of agricultural production in 1985 exceeded that in 1982.

2. The household whose income ranking had changed the second most places was an unusual one. The household consisted solely of man and wife. They had no children, no relatives sharing their homestead, no land and no cattle. The husband had been a ship's cook who had taken the unusual step of building his home close to his wife's family rather than his own. When surveyed in 1982 the husband had recently been discharged from hospital where he had been for some months with a leg injury. The couple were at that stage living off his savings which the wife supplemented in a small way with the proceeds of the sale of clay pots. At the

1. Subsistence income from agriculture and cattleholding constituted only 17,6 percent of household income.

time the head gave the impression that he would find work again as a migrant once he had recovered - although he said he would not be returning to sea. In 1985 the head had made no move to find employment and stated that he no longer had any intention of doing so. His savings were depleted but his wife's pottery business had grown so that their income had increased manifold. The business was almost their sole source of income - they had no land, cultivated only the smallest of gardens and had a few chickens. There were no elaborate marketing arrangements for the pots and it appeard that most were in fact made to order.

3. Another household which showed a remarkable improvement in ranking was one which illustrates very well the need to differentiate between capital and income.

The household decreased in size by 14 persons between 1982 and 1985. A son and daughter in the household died. Two daughters, who had previously left their children at home with their parents while they were living with their boyfriends, removed their children when their mother became ill. Another two daughters left home to live with their boyfriends. In 1982 both the father and son were migrants; in 1985 the son had died on the mines, the father was unemployed and the head's wife was in hospital with cancer. In order to meet the medical expenses incurred in connection with the mother's illness all the household's cattle had been sold. Despite this tale of woe incomes in the household appeared to have improved dramatically. A closer look at the

components of the income show them to be chiefly of a "one off" nature - the proceeds of the cattle sales, and the money received from TEBA in compensation for the son's death - and in fact not income but the realisation of capital. Apart from these two sources the household produced food to the value of R30 but had no other income. In 1986 the household looked set to achieve one of the lowest incomes in the area. The proceeds of cattle sales are only acquired at the loss of productive assets. Compensation for a son's death is an infinitely more tragic illustration of current "income" achieved at the cost of future income.

4. This was the household which showed the most significant fall in ranking. Although a number of factors no doubt contributed to the household's decline in fortune it is chiefly explained by the head's loss of job. In 1982 the head remitted R140 per month. Since losing his job he had only been able to find temporary jobs and remit small sums of money from time to time. The household had acquired five new members since 1982 - a baby and four relatives who joined the household - thus increasing the demand upon decreasing resources. Apart from putting an end to remittances the loss of the head's job appeared to have demoralized the family. Whereas in 1982 a number of members of the household were involved in a variety of activities, in 1985 only one was doing grasswork and one selling chickens. In 1982 they had obtained additional income by ploughing for others, selling piglets and large quantities of grasswork and chickens. Their cattle herd had increased by seven since 1982 although three died in 1985. The meat from the dead animals constituted

most of the "current income" obtained from cattle in 1985.

The household said they had harvested almost nothing that year because someone had come in the night and let their cattle out of the cattle kraal with the result that their crop was destroyed. They had not actually seen this happening (the cattle were "back" in the kraal when they awoke the next morning) and their explanation may be another example of their demoralized attitudes in 1985.

5. This household whose ranking had fallen substantially had a number of characteristics which could explain the fall. Whereas there were five working migrants in 1982, in 1985 there were only two - one of whom had only just started working. No one was unemployed in 1982. Two were unemployed in 1985. One son and his wife and children had left the homestead. Both he and a sister who also left the household had been employed in 1982 and remitted to the household. The head was no longer working, one son had been knocked down by a car and badly injured, another was unwell and temporarily unable to work. Another daughter had stopped working and returned home.

In 1982 the household had had a male at home who undertook agricultural duties and a full span of oxen. In 1985 no men assisted with agricultural duties and they had no oxen. As a result the household spent a large sum of money hiring tractors although they ploughed less land than in 1982. As a result they

actually made an agricultural loss whereas agriculture had made a significant contribution to income in 1982.

6. This household was one part of a household which had split into four since 1982. In 1982 the household had 19 members, four head of cattle, two persons in receipt of old age pensions, four employed migrants and one unemployed person. The household achieved incomes per capita which were close to the median.

   The household in 1985 had eight members, three of whom were migrants - all unemployed. It no longer had access to a pension and incomes had fallen dramatically.

7. This household formed part of one which split into two between 1982 and 1985. In 1982 the household consisted of a three generational extended family of 23 members. There were four employed migrants none of whom remitted more than R20 per month. Average incomes per capita were achieved.

   On the head's death two of his sons set up their own households. Their wives, who had sometimes accompanied them to the work place, returned home to build new homesteads. This household which had eight members, was receiving R400 per month from its migrant head with the result that incomes per capita in the household changed from average in 1982 to close to the highest in 1985. It would seem that knowing the money was going directly to his immediate family led to the migrant remitting a far higher

proportion of his salary. The amount he remitted was also no doubt influenced by the return home of his wife and the fact that she was involved in the expense of building a new home.

The other half of the original homestead showed similar increases in income levels.

8. Although a number of factors no doubt contributed to this household's fall in fortune undoubtedly the greatest depletion in income resulted from the departure of one daughter on her marriage. She had a knitting machine and had made considerable sums knitting to order. Her departure unfortunately coincided with the loss of job by the migrant in the household who had remitted most in the past. As the migrant had only recently lost his job the economic position of the household was likely to deteriorate further as he had remitted money for most of the twelve months preceding the survey. There were at the time of the second survey two unemployed migrants in the household. The only person in the household who was employed was a fifteen year old farmworker. The position for food production had also deteriorated in that the family had lost their oxen and had had to hire oxen to plough for them. They had as a result ploughed considerably less land than in 1982 and the value of agricultural production dropped significantly. The head of the house who lived at home and practiced as an inyanga claimed to make less in 1985 than in 1982.

Despite the marriage of two daughters the number of cattle

attached to the household had fallen from twelve to five.

9. This large household grew by eight members (26 - 34) during the three years between surveys - all the additional members were economically inactive which significantly increased the burden on the income earners who decreased during the period from two to one. Unemployment increased from one to three persons and informal sector earnings dropped significantly. The value of agricultural production was negated by the cost of hired labour which the head insisted upon using despite his large unemployed household. Significant amounts of "income" were attributed to the household to account for the value of meat taken from dead or slaughtered animals and for milk used for household purposes. All this "income" was achieved at the cost of assets. During the year nine animals died and two were slaughtered. Another nine head were transferred out as lobola. During 1985 the household's cattle holding decreased by fifteen and they had thirteen less head in 1985 than they did in 1982.

10. This household was one part of a household which had split into four since 1982. In 1982 the household had nineteen members, four head of cattle, two persons in receipt of old age pensions, four employed migrants and one unemployed person. The household achieved incomes per capita which were close to the median.

In 1985 this household had only two members - an old age pensioner and an employed migrant. The migrant's wife and

children had recently been struck dead by lightning. This household achieved the highest incomes per capita of all surveyed.

11. This was a household where incomes increased although the circumstances of the members could hardly be termed cheerful. An old man of 66 lived alone with his 29 year old son. The old man had no pension and his feet troubled him making him unable to continue practicing as a herbalist as he had in the past. His sole income was obtained from the sale of pineapples which he grew. He paid the people who worked his fields with pineapples and he paid someone R20 to plough two isikofu for him so that he could plant mealies. His son (who was in hospital with tuberculosis in 1982) was at home, still ill and unable to assist the old man in any way but he was, by 1985, in receipt of a disability grant.

In 1982 the household had contained in addition the head's wife, a daughter and three grandchildren. The wife who had been in receipt of a pension died in 1985 and the daughter and her children left to join her mother (the head's second wife) who had left the home some time ago.

Despite the loss of the wife's pension, and the fact that both members of the household were unemployed, the reduction in the number of dependents in the household and the fact that the invalid son obtained a disability grant led to an improvement in ranking.

12. The improvement in this household's fortune can be attributed almost entirely to employment. Little else had changed apart from the fact that in 1982 the household was entirely dependent on the mother's pension whereas in 1985 her son had managed to obtain employment and remitted money regularly to his family.

13. This household's decline in fortunes despite the fact that in 1985 it contained two pensioners in place of the one it had in 1982, is attributable to its increase in dependent members and the fact that two members had lost their jobs. In addition two sons were in the process of paying lobola and if it were not for this fact they might have remitted more to their families.

14. This household whose ranking improved dramatically is another example of the false impression that can be created by considering the money from cattle sales as income.

    The household was one which had split since 1982. Three new members had joined the household which now had eight in place of twelve members. The household still had one employed and one unemployed member, had thirteen as opposed to fourteen head of cattle and continued to plough with its own oxen.

    During the year the household had been forced to sell three head of cattle to meet expenses incurred in connection with the son's illness and certain lobola payments. If this money had not been included in income the household would have barely altered its

ranking. The improvement in ranking was almost totally attributable to the sales which represent a long term decrease in assets even if they had the effect of improving the immediate income flow.

15. Although this household had fallen 34 percent on the income ranking this is probably not the full reflection of what had happened to it. The head of the household had only recently lost his job and had remitted regularly while still employed. The remittances for the part of the year during which he was employed were included when calculating incomes. The household had also sold a cow to meet household expenses when the remittances dried up and this too was included in income.

    Whereas previously they had ploughed their own land the oxen they had in 1985 were untrained with the result that they had had to hire a tractor to plough their land. They had also ploughed considerably less land than they had in 1982.

6.4 The Changing Fortunes of Households Which Split

Four households split betwen 1982 and 1985. It is informative to compare the different fortunes of the component parts after the splits.

1. In 1982 this household had 29 members who achieved annual incomes per capita of R57,00. Sometime before the resurvey the household

split and in 1985 one of the new households realized incomes of R39,10 (in 1982 terms) and the other R127,57 (in 1982 terms). In 1982 there had been six employed and three unemployed persons in the household. There were no pensioners in the household and over 80 percent of household income consisted of migrant remittances. The household had three head of cattle.

In 1985 the household in which income had fallen had 25 members of whom three were employed and four unemployed. The three who were employed comprised the head, who although 72 had not yet applied for a pension, one son who had started work a month previously and another who had not been heard of for months. The chief income contributor had lost his job two months previously. Despite the fact that they had thirteen head of cattle they had no oxen with which to plough. They had had to pay someone to plough their land and had only ploughed less than half of it.

The household in which incomes had risen had twelve members, four of whom were employed. The head who had not worked for years had not, although pensionable, applied for a pension because he had not paid his taxes. His wife who was disabled said she could not apply for a disability grant because she could not afford to go to a doctor. They had no cattle.

The combination of a decrease in household size and an increase in employment ensured that one household's income rose whereas a fall in employment accompanied by a number of dependent relatives joining what would otherwise have been a smaller household led to

a decline in incomes in the other household.

2. This was a house in which a man, his mother, two wives and seven children lived. The mother had an old age pension and one of the wives a disability grant. One son was a migrant worker but remitted nothing. The head of house occasionally built house frames and one wife did the odd thatching job but basically there was no income in the household other than the two pensions. In 1982 there had clearly been tension between the two wives and when we returned in 1985 we found the household had split. The husband was living with the wife with the disability grant and her children and the other wife had set up a separate home with her children and her mother in law who had an old age pension. In the first house the migrant son continued to remit nothing and the man and his wife no longer did any building or thatching. In the new house one son had found employment locally at a shop. In the first house incomes fell marginally whereas in the new house the son's locally earned salary had the effect of increasing incomes.

3. In 1982 this household was headed by a very old man who was deaf and blind. Both he and his wife had old age pensions. The household had 23 members and 9 head of cattle. There were four migrant workers in the household but none remitted more than R20 per month. The sons' wives often accompanied their husbands to their work place, sometimes with some of their children. Before his death the head instructed his sons to establish their own

homesteads. In 1985 we found two households, one with eight members and the other with nine. One of the son's second wife and two children had left home. One household had nine head of cattle and the other two. Both households were busy building new homes and in one an outsider was being paid R300 to build a cattle kraal. One head was remitting R400 per month to his wife. It is possible that once the building was complete the head might reduce the amount he remitted but it would seem that where a household consists of a man's immediate family only, he is likely to remit a far larger percentage of his salary knowing that all he sends is going direct to his family (see 6.2.2). In this case, although the people involved were basically unchanged following the split, incomes in both households increased markedly. It appears that when migrant workers are accompanied by their wives to the work place they remit very little to their rural homes even if their children are left there. One of the heads in this case had a house in Johannesburg but feeling he would be unable to retire there he was concerned to establish a decent home in the country.

4. In 1982 the household consisted of nineteen members. The head had recently died but his two widows, their sons and wives and children were still all living together. The homestead had four head of cattle, two members (the widows) who received old age pensions and five migrants, four of whom were employed and remitted money to ther families at home. The one unemployed migrant was ill and unable to work at the time. Although it was a relatively large household average incomes per capita were

achieved - R149 per capita per annum when the median income per capita for all surveyed was R144.

Before his death the head had instructed his sons to establish their own homesteads and this they did sometime before the return survey in 1985. In 1985 four households with a total membership of 22 had replaced the single 19 member household. None of the households had any cattle. The level of income achieved in two of the households was similar to that achieved in 1982 in that it was close to the median income of all surveyed but in one the highest per capita incomes of all surveyed were achieved and in the fourth incomes close to the lowest.

One of the two households where income levels were unchanged had five members, one of whom was a migrant who had recently been retrenched and had been unable to find other employment. The household at the time of survey was living off income saved during the last year while the head was still employed and remitting. Incomes in this household are thus likely to fall in ensuing months unless one of its members finds employment.

The other household where incomes were similar to those achieved in 1982 had eight members, two of whom were employed migrants. One member of the household was in receipt of an old age pension. The household head stated that as he was the only son of his mother there was no need to share her pension with his brothers who were the children of his father's other wife.

The household which following the split received the highest income recorded in the re-survey had two members one of whom was an employed migrant. The migrant's mother who lived alone at home had an old age pension. The migrant's wife and two children had recently been struck dead by lightning.

The household in which incomes had fallen dramatically had eight members - three of whom were migrants - all unemployed. The head of the hosehold who was ill in 1982 was still ill and unemployed.

The fate of the members of the original household subsequent to the split clearly indicates the importance of access to employment or pensions, or both. All four households which were situated next to one another, had access to land. They had all made use of their land the previous season and all had had to pay someone to plough their land for them - none of the households had oxen or indeed any cattle. None had any male assistance with agricultural chores. Indeed, in each household there was only one woman who worked the land except in the household which achieved the lowest incomes where there were three women and one girl who worked the land.

CHAPTER SEVEN:

7.1 The Future: Is There One?

The original survey in 1982 indicated that incomes, living conditions and lifestyles in the survey area were largely determined externally in the core economy. The 1985 resurvey not only confirmed this but showed that most changes which occurred between surveys were likewise externally sourced.

The general recession in the core economy resulted in growing unemployment. Increased real wages led to an increase in the level of remittances and, similarly, a real increase in pension payments and improved coverage led to an increase in income from this source. The growing numbers of unemployed reduced the opportunities for those normally resident in the area to earn incomes from casual employment or informal sector activities. Subsistence income continued to decline in the face of, amongst other factors, the persistence of government policies in regard to commercial agriculture in the core economy, the migratory labour system and the continued absence of any agricultural support mechanisms in the area. In short the surveyed community's dependence on the core economy, and with it its vulnerability, had increased.

It is not only lifestyles and income levels in the area which have been determined by the policies of Pretoria. This is also true of the very structure of the population itself. Numerous legislative measures such as the Influx Control laws, the Group Areas Act and the

Land Acts have unnaturally determined the composition of rural societies. Proposals for the development of such areas which do not take both existing and possible future legislation and policies of the central government into account are accordingly valueless.

Development recommendations which are not premised, for example, on the likely effects of the government's policy towards 'normal urbanization' or the role foreseen by Pretoria for homeland agriculture will bear little relation to reality. Rural communities may be physically isolated from the core economy but there is no aspect of their lives which is not dominated by it.

Past legislation and economic policies have prevented agricultural development in the periphery. However, even if these policies were to be reversed and agriculture given the support it requires to grow, the development of the majority of existing rural populations could not be agriculturally based. Realization of this fact might be expected to lead some rural dwellers to urbanize if they were legally able to and if conditions in town were comparable to (even if not preferable to) those in the countryside. Others, appreciating that agriculture held no future for them, might be expected to adopt new land use and settlement patterns within the area in an attempt to facilitate their participation in some other form of development or to gain improved access to certain amenities. Without some knowledge of the legality and likelihood of such developments it will be impossible, for example, to attempt to provide adequate facilities for the current community in such a way that will not lead to unnecessary

or misplaced facilities in the future.

One of the most immediate and important needs of the survey area is improved educational facilities. At present these are erratically and illogically dispersed across the countryside. Their location is determined by the presence of persons with initiative and fundraising ability in a particular area and not, either by where there are concentrations of children of schoolgoing age who are without a school, or by accessibility to existing or future transport routes or growth points. If educational facilities were to be increased to acceptable levels for the current population, future likely population densities and settlement patterns should be taken into account so that where facilities currently required appear likely to exceed future demands mobile or temporary facilities could be provided and permanent facilities centralized and positioned where future growth points are likely to develop.

While the area is forced to accommodate the density of population it currently holds on the presumption that the community subsists off the land little development other than in the spheres of education and health seems possible. If, however, there was some alteration in this premise other developments would be facilitated. Productivity levels from stockholding could be improved and crops such as timber or tea, whose cultivation would be possible and economic in the rugged terrain and whose development would not lead to the degradation of the environment, could be introduced. Agricultural projects do not, however, hold out opportunities for the majority of the population and

projects, other than agricultural ones, will have to form the basis for the development of the majority of the community. Such projects might of course be based upon processing the product of agricultural projects.

The impact of any project upon the community and its economic success or failure will be dependent on the context within which it is introduced. This remains entirely in the hands of the central government. Until local communities have at their disposal a democratically based mechanism through which they can bring pressure to bear on the central government, it is unlikely that changes will be introduced which place homeland agriculture or industry on an equal or competitive footing with the core economy, or which will ensure equality of access to any new development to all members of rural communities. Inequalities in rural incomes and lifestyles may only be exacerbated by projects which are introduced without consideration of the implication for the entire community. Developments which benefit males at the expense of females, the old at the expense of the young or those with access to capital at the expense of the destitute may in the long term do damage to the wider community despite the fact that they may lead to increased production. Such an outcome is quite possible where changes are introduced not as a result of community based responses to needs but as part of a plan to increase, for example, 'agricultural output'.

APPENDIX A: DIFFICULTIES ASSOCIATED WITH ESTIMATING RURAL INCOMES AND THEIR DISTRIBUTION

The difficulties associated with obtaining estimates of incomes from extended families in rural areas were well illustrated in the resurvey. The experience of the first survey led to certain changes in methodology in the resurvey, and the resurvey itself revealed further shortcomings. The particular difficulties encountered in rural areas are those associated with placing a value on subsistence output (Appendix B) and with quantifying produce of which there is ongoing consumption. A number of refinements were introduced with regard to the evaluation of crops and stockholding, but the resulting figures are still only 'estimates' and many factors remain unaccounted for.

Apart from the inherent unreliability of "income" figures a number of other difficulties are encountered defining rural incomes. Firstly it is necessary to define the recipient units of such incomes (Martin, 1987; Russell, 1984). Arguments in favour of the selection of the household as the recipient unit were particularly acceptable in the survey area where households constitute clearly identifiable and discrete units, where almost all households derive some income from jointly held assets, where most households are involved in joint efforts to produce resources subsequently shared by all members, where the majority of households are dependent on remittances from individual migrant members, where no one lived in an institution and where even those very few who lived alone lived in households which in other respects resembled those with many members.

The second difficulty relates to determining whether the different levels of income and degrees of poverty resulting from that income distribution are more accurately reflected when incomes are measured per household or per person. Table 35 which gives both household and household per capita incomes shows that the two measures frequently reflect very different pictures. Such differences between the two measures would seem to be the rule rather than the exception (Kuznets, 1976). This makes it necessary to decide which is appropriate in the circumstances or whether both are required, with one being relevant in some instances and the other in others.

It may be argued that per capita or per person income figures are meaningless where per person expenditure patterns are not known. Expenditure studies generally reveal only the amounts spent on various items by households and not individual members of those households (Kuznets, 1976). Very few such studies have been conducted in rural areas and there is no data available indicating on behalf of which members of the household expenditure on clothes, medicine etc was incurred (May, 1987; Cragg, 1984). It is an undoubted shortcoming that such information is not available but just as the impossibility of attributing certain items of income to individual members of an extended family need not prevent the addition of that income to the household's total from which per person income is subsequently calculated, so the inability to allocate expenditure to individuals need not undermine the validity of the per capita measure. Household per capita income figures reflect merely the mean personal income in a particular household and make no pretence to reflect individual incomes.

Where expenditure data is available it may be possible to develop a formula reflecting the different consumption levels of persons of different ages, sexes and occupations and to calculate household per capita incomes accordingly. Even where such data is not available, people may, on the assumption that juveniles consume a fraction of what adults consume, develop a formula which may simply differentiate on a 2:1 basis between adults and juveniles or which may be adjusted for age. However if such a formula is to have real value it must be related to the facts of the cases to which it is being applied. As the needs and nature of dependents and consumers differ in urban and rural situations and in different societies or countries, it is not possible to develop a formula which is generally applicable. Although no expenditure data was collected in this study, much of the information which was collected indicates that it would be wrong to assume that the amount expended on juveniles was significantly less than that spent on adults.

Children's clothes may be cheaper than adults', but children grow out of and wear out clothes which therefore have to be replaced more often than adults' clothes. In a traditional rural environment, where very few are locally employed, adults in general need fewer and less expensive clothes than they would in an urban environment. Children in such areas still however require school uniforms which generally are more expensive in rural stores than urban hypermarkets.

Medical expenses often loom large in the expenditure of rural households. These are more likely to be incurred in connection with

children than adults with the possible exception of the aged and pregnant women. An important item of expenditure linked to medical expenditure is transport costs. These are also incurred travelling to shops and magistrates courts and occasionally to school. Most of this expenditure could be attributed to juveniles (who anyhow constitute over half of the surveyed population) and not as in an urban environment to adults who almost all incur transport costs travelling to and from work. If migrants are excluded when calculating household per capita incomes in a rural area, all monies normally expended in the course of employment - on clothes, travel, refreshment etc - become irrelevant.

School fees and expenditure on school books are only incurred in respect of juveniles as are the administrative and travelling expenses incurred registering births, obtaining identity documents etc.

In areas such as that surveyed there seems little justification for assuming that expenditure on juveniles is only a fraction of that on adults. In the absence of such evidence, the lack of data on expenditure patterns and the consequent impossibility of calculating "adult equivalents" need not preclude the use of per capita income measures. Although the consumption of household income by household members undoubtedly varies widely the differences are probably not so great as to undermine the value of the per capita measure.

The equal division of household income amongst members in order to achieve a household per capita figure is not only criticised for

making no allowance for the varying levels of consumption of different members but also for making no allowance for economies of scale and pooling of expenses. These may be significant where houses are bought or rented, where rates, water, electricity, etc have to be paid for or where people share an asset such as a fridge, stove or car. However in a rural area none of these costs is incurred and there are no such savings with regard to food, clothing, medical attention or public transport. In rural areas houses, fuel, etc are generally obtained without any cash outlay. However, the large household does of course have greater access to labour for housebuilding, water and fuel gathering, crop planting etc.

The calculation of income by household which allows for economies of scale and does not necessitate the calculation of adult equivalents may be the preferable measure where the households under consideration are similar in size and structure, but where these vary widely some recognition must be given to these differences. If what is being measured is the extent of poverty rather than the nature of and reasons for certain income flows, and poverty is defined by reference to ability to fulfil certain basic needs, then it must be the household's ability to meet those basic needs that should be measured and not its income. This ability is determined by the number of persons reliant upon that income to meet their basic needs. Ranking a household with 25 members and an annual income of R2000 above a household consisting of a lone pensioner who receives only his pension of R780 per annum makes no sense in a poverty study and yet this would be the result in the large number of cases where the size and structure of households surveyed vary widely. In this study the mean

household size was 8,68 but half the households had less than six or more than eleven members. It is for these households that household income figures may give a false impression. Where there are only a few outliers this may not be important but in this survey almost half the cases can be considered "outliers".

In order to test the discrepancy between household incomes and incomes per capita all households were ranked according to both scales and the first ranking was then subtracted from the second. It was found that on average the 74 households for which incomes were calculated in 1985 changed 19,5 places between the two rankings and that half the households changed more than sixteen places. All the households which moved nineteen or more places were found to have either four or less members or eleven or more - in other words they were all abnormally large or abnormally small households. With a few exceptions it was also true to say that all abnormally large and small households moved an above average number of positions. The average move for households with four or less or eleven or more members was 29,8 places. Only five percent of households appeared in both the top quintile of household and household per capita incomes.

It is the presence of this significant number of very large and very small households which causes the two measures to come up with different results in specific cases. A field inspection of households would appear to indicate that as a measure of individual poverty rather than household income the per capita measure reflects the facts more accurately. Household incomes show households where there are no

migrants to have exceedingly low incomes and yet these households include a number of small households which are in receipt of pensions and above average incomes from agriculture and the informal sector. The health and prosperity of the household members belies their low rating in the household income hierarchy.

Households with migrants rank high in household income terms. Average per capita incomes in households with migrants were however a little lower (R263,50) than in those without migrants (R295,00). The household measure is insensitive to the number of dependents reliant upon a remittance which in per capita terms shows itself to be more important than the number of migrants although the test showed both measures to be influenced positively by the presence of migrants in the household.

Generally the household measure is less sensitive. Where incomes are as low as they were in the survey the loss of a migrant's job may have a devastating impact on those dependent upon his remittance. In household terms the loss of one remittance may not make a significant difference. Its real significance will be determined by the number of people dependent upon the income and any alternate sources of income - both of which are reflected in the per capita measure.

The household income measure will also be found to be unsatisfactory when comparing rural and urban incomes or the incomes of households containing persons from different countries or race groups because there is generally a large variation in the average number of members

in the households belonging to these different groupings.

APPENDIX B : EVALUATING SUBSISTENCE PRODUCTION

B.1 Introduction

The problems associated with the economic analysis of subsistence production are multifaceted. Economic analysis may reflect, albeit in cash equivalents, all the misconceptions which may be encountered in any other form of analysis (e.g. biological or nutritional) and in addition is only practical where there exist markets which assign numerical values i.e. prices, to goods and services (Behnke: 1985). Subsistence production by definition never reaches the market and numerical values therefore have to be assigned. Apart from the price, measurement of the product itself is difficult as there is frequently ongoing consumption and no formal records of the total harvest are likely to be available. Further complications result from the fact that the cultivators and consumers of subsistence production are frequently the members of complicated extended families whose relationships with one another cannot be readily determined.

There is no generally accepted rule for assigning cash values to subsistence crops and livestock production. At times use is made of farm gate prices, at others opportunity or replacement cost. In subsistence based communities items may be infrequently traded both because self-sufficiency is the aim and because the farm gate price does not reflect the value of the commodity to the subsistence farmer. A cattle price which only reflects the animal's red meat value may be unrealistic to the subsistence farmer who in addition obtains milk and manure from his cattle and uses them to plough. Sales will

nevertheless occur from time to time at this "unacceptable" farm gate price where the farmer has no other means of financing essential purchases but this would not justify valuing his entire herd at farm gate prices. Similarly certain crops may have greater value as animal fodder than as marketable produce or the farm gate price may simply be below the farmers replacement cost. The use of the products' replacement value in preference to farm gate prices allows for more accurate evaluation of the product to the subsistence household. It is not however always clear how the replacement cost should be calculated and the figures used vary widely from one study to another and one area to another. This makes comparisons difficult and necessitates explanation of how the values in a particular study were calculated. In Section 6.0 of this Appendix the values placed on agricultural production in this survey are explained and in Appendix C the values placed upon stockholding.

B.2 Agricultural Production Evaluation

As no records of agricultural production were available for the households surveyed estimates had to be made so that the value of subsistence income could be added to income from other sources in order to determine total household income. The figures thus derived are essentially estimates and make no allowance for differences in yields between different farmers or indeed different fields.

In both 1982 and 1985 field sizes were estimated "by eye" and no accurate measurements were made. Respondents were asked what percentage of their land they had ploughed and in 1985, they were also

asked whether the yield had been good, fair, poor or non-existent.

When calculating the value of agricultural production in 1982 we had presumed a yield of 4,5 bags maize per hectare on the basis that the average yield of dry maize in KwaZulu was three bags per hectare and that at the time of harvest one third of the crop had already been consumed green. Information obtained in 1985 showed that approximately half the maize crop was consumed green and we therefore presumed the yield to be 6 bags per hectare. The value of a bag was put at R36 in 1985 - the average price at local stores. The figure of R20 used in 1982 was obtained in the same way. When recalculated in 1980 prices according to the Consumer Price Index the 1985 price (R21) was higher than the 1982 (R15) price. The final value of the presumed yield in 1980 prices for 1985 was R112 per hectare whereas that for 1982 was R68.

In the resurvey, as a result of the more thorough collection of relevant data, it was possible to deduct many of the costs incurred in agricultural production from the value of the production. Thus any expenditure on seed, fertilizer, ploughing or labour was deducted. However, there was still no deduction for the labour input of household members. As in 1982 where people hired oxen to plough the actual cost was deducted from the value of the produce but whereas in 1982 no deduction was made where people used their own animals to plough, in 1985 the average cost (R75 per hectare) was deducted in such cases. (The costs incurred in this way were neutralized when considering total household income as an equivalent amount was added into the current disposable income achieved as a result of owning

cattle (see B.3)). No deduction was made where people used their own seed for planting although they would have consumed or sold this seed had it not been planted.

Despite the fact that the final value of the presumed yield was higher in 1980 prices in the 1985 survey than in the 1982 survey the final value attributed to total agricultural production for all households surveyed in 1985 (R2 341.69) was less than that of 1982 (5 827.60) even without taking inflation into account. To establish whether agricultural production had declined or whether the value attributed was lower because expenses had been deducted in 1985 which were not deducted in 1982 the value of agricultural production in 1985 was recalculated according to the 1982 formula. The figure for total agricultural production in 1985 thus calculated (R4 074.46) was equivalent to 70 percent of the 1982 figure which confirmed that agricultural production had in fact declined. The value of the mean household production in 1985 was 64 percent of that in 1982 when calculated this way.

Where households had vegetable gardens or contained a member of a community garden and they had made use of these gardens and harvested something R40 or R60 respectively (or a percentage thereof in the case of partial use or harvest) was added to that household's income.

The value of crop production (which included monies received from the sale of produce) together with the value of garden production constituted 12,2 percent of subsistence income.

B.3 Subsistence Income from Stockholding

The majority of subsistence income was derived from stockholding. The value placed upon stockholding consisted of the following:

the income from cattle sales
the income from ploughing for others
the value of ploughing own land
the value of meat from slaughtered animals
the value of meat consumed from dead animals
the value of hides of slaughtered and dead animals
the value of milk/maas where consumed.

In a number of respects the values relating to stockholding in 1985 were estimated differently from those used in 1982. In 1982 no value was placed upon ploughing for oneself[1]. Nor was any value attributed to hides. In 1982 consumption of milk was assumed wherever there was a calf. However, as a result of a number of consecutive drought years many households had ceased taking any milk in 1985 considering that the entire production was needed by calves, and therefore in 1985 we only placed a value upon milk consumption where the household actually consumed milk. Significantly higher values were placed upon meat from slaughtered and dead animals in 1985. The effect of this increase was multiplied by the very much larger number of deaths which occurred in 1985 (67 as opposed to 26 in 1982).

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1. In terms of total subsistence income however this value becomes irrelevant as it is cancelled out by the charge levied against agricultural production for ploughing for oneself.

B.4 Income versus Dissaving

Where beef production is practised as an economic enterprise consumption or sales are the intended sources of income for the stockholder. However, where consumption or sale occur, not because that was the ultimate intention of the stockholder, but because he has been forced to do so by circumstances beyond his control, the proceeds of such sales or the value of meat consumed etc may not in fact be income but monies or values received in exchange for or on the loss of an asset and accordingly represent a form of dissaving. It could, therefore, be argued that such monies have no place in an income study. However, in a community where incomes are as low as they were in the surveyed community if these monies were not included in income it would be impossible to explain how certain households survived. In the interests of reflecting the survival mechanisms operating in households which would otherwise appear to have expenditure far in excess of income these amounts have therefore been considered income.

Although explaining survival mechanisms this inclusion can create false impressions as was well illustrated when the fifteen households whose incomes had risen or fallen most in the three years between surveys were closely investigated (see 6.3).

The economic position in a number of the households where incomes appeared to have improved, far from improving had in fact deteriorated to the point where a number of cattle had to be sold to meet outstanding debts and purchase necessaries. Although the proceeds of

the sales resulted in an immediate inflow of cash into the household this in no way implied that this new level of income was likely to be maintained. The reverse would have probably been the correct implication.

B.5 Subsistence Contribution to Household Income

The percentage of total household income obtained from subsistence was similar in 1982 (18,3 percent) to that in 1985 (18,0 percent). This is surprising in view of the fact that the value ascribed to agricultural production had fallen in both actual and real terms. When translated into 1980 prices according to the Consumer Price Index its 1985 value was less than a third of its 1982 value.

The maintenance in the level of the contribution of subsistence to total income is explained by the fact that the current disposable income attributed to stockholding grew by over thirty percent over the three years and that, whereas in 1982 no value was placed upon the home consumption of chickens, goats, sheep and pigs, in 1985 it was assumed that households consumed 40 percent of their chickens during a year, and 10 percent of their goats, sheep and pigs. Chickens were valued at R4 each and goats, sheep and pigs at R60. The sum thus calculated constituted 10 percent of the total value of subsistence income. When the value of the sales of small stock was added in, the percentage of subsistence income derived from small stock holding rose to 14,3 percent.

Table 38: Breakdown of 1985 Current Disposable Income from Stock-holding and its Relation to Subsistence Income:

Item	Value to all Households (Rands)	Percentage of Current Disposable Income from Cattle	Percentage of Subsistence Income	Percentage of Households Re-Survey Income from this Source
Milk	1840,00	8,9	6,5	12,2
Meat from slaughtered animals	6600,00	31,9	23,4	24,3
Meat from dead animals	6900,00	33,3	24,5	31,3
Hides	924,00	4,5	3,3	50,0
Animal sales	2500,00	12,1	8,9	8,1
Income from ploughing	318,00	1,5	1,1	10,8
Value of ploughing done for self	1612,69	7,8	5,7	29,7
Current disposable income[1]	20694,69	100,0	73,4	67,6
Consumption of small stock	2898,00		10,3	91,9
Small stock sales	1145,00		4,1	7,6
Agricultural and garden production	3442,78		12,2	100,0
Subsistence income [1]	28179,78	-	100,0	100,0

N = 74

1. See B.6 for definition

B.6 Details of Individual Evaluations

Details are given below of the individual evaluations which were made in order to attribute values to agricultural production, current disposable income from stockholding, small stock consumption and finally the subsistence income of each household.

1. Value of agricultural production:

   Amount of land available to household (hectares) x percentage ploughed x nature of yield (good, fair, poor, or nil represented as 1, 0,8, 0,4, and 0) respectively x 6 bags at R36 each less actual cost of hiring oxen or labour, less price of fertilizer ~~i~~or seed, less R75 per hectare for use of own oxen, plus actual proceeds of sale of agricultural produce.

2. Value of use of own oxen to plough:

   Amount of land in hectares available to household x percentage ploughed x how ploughed (by oxen = 1, partially by oxen = ,5, by hand, tractor etc = 0) x own oxen (all own oxen = 1, half own, half another's oxen = ,5, no oxen = 0) x R75 (R75 was the average price paid per hectare by those who paid others to plough).

3. Value of vegetable garden production:

   Access to vegetable garden, x did (1) or did not (0) harvest

anything, x R40. (R40 was assumed to be the value of the average production of vegetable gardens).

4. Value of community garden membership:

Membership of community garden (yes (1), no (0)), x did (1) or did not (0) harvest anything, x R60. (R60 was assumed to be the value of the average production of members of community gardens).

5. Value of milk consumed:

Number of calf births x do (1) or do not (0) consume milk x R80 (R80 was assumed to be the annual value of milk taken from a cow which had calved and was calculated by multiplying the amount consumed (presumed to average 750 ml per day during a 220 day lactation period) by 48c per litre).

6. Value of meat from slaughtered animals:

Number of animals slaughtered x R300. (See Appendix C for the value of a slaughtered animal).

7. Value of meat from dead animals:

No. of deaths x do (1) or do not (0) consume meat from dead animals x R150. (The value of meat taken from animals which died was assumed to be half that of animals which were slaughtered as the animals which died would probably have been thin and all their meat may not have been edible).

8. Value of hides:

(Number of deaths plus number slaughtered) x R12. (R12 was the average current price realized for hides in Eshowe - the nearest market).

9. Value of current disposable income realized from stockholding.

Value of milk where consumed plus value of meat from slaughtered animals plus value of meat from dead animals where consumed plus value of hides from dead and slaughtered animals plus value of ploughing own land plus actual income from ploughing for others plus actual proceeds of stock sales.

10. Value of chickens consumed:

40 percent of chicken holding x R4 each.

11. Value of sheep, goats and pigs consumed:

10 percent of stock holding x R60 each.

12. Subsistence Income

Subsistence income in 1985 was calculated by adding together the value of agricultural, vegetable garden and community garden production, the value of chicken meat, goat meat, sheep meat and pigmeat consumed, the value of all stock sales and the current

disposable income attributable to stockholding. In 1982 no value had been placed upon chicken, pig or goat meat consumed and as has been explained the values placed upon the other components were calculated on a different basis. Table 39 below gives details of the 1982 and 1985 evaluations in both current and 1980 terms.

Table 39: Summary of Estimates and Prices used in 1982 and 1985 to Estimate Subsistence Income

	Actual Figures (Rands)		In 1980 Terms (Rands)	
	1985	1982	1985	1982
Bag of mielies	36	20	19	15
Cost of ploughing	75	53	39	40
Vegetable garden	40	20	15	7,5
Community garden	60	30	31	23
Value of Agricultural:				
Yield per hectare	216	90	112	68
Chickens	4	-	2	-
Sheep, goats, pigs	60	-	31	-
Milk value	48	35	25	26,5
Meat from slaughtered animal	300	100	156	76
Meat from dead animals	150	25	78	19
Hides	12	-	6	-

APPENDIX C: METHODS OF CALCULATING THE VALUE OF STOCKHOLDING AND THE RETURNS THEREON

In order to assess the economic value of cattle to the surveyed community it was necessary to determine whether herd value was increasing or decreasing over time and what levels of return on assets cattleholders received.[1]

We had available for the purposes of making this assessment the cattleholding of the surveyed households in 1982, 1984 and 1985, as well as information concerning purchases, sales, deaths, births, lobola transactions etc. However, in order to put a financial value on stockholding it was necessary to attribute a certain value to each animal. Where sales or purchases occurred the value of the animal could be fixed at the price at which it was transferred. Where an animal died, was slaughtered, or was transferred as part of a lobola transaction or remained in the herd the animal's value had to be estimated and the question therefore arose as to how this value was to be calculated. Should farm gate prices or replacement costs be used and how should these be determined? As explained in Appendix B replacement costs seem more appropriate than farm gate prices in a subsistence situation and the following values were accordingly assigned to the different types of animal.

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1. See Appendix B for the method used to calculate current disposable income acquired as a consequence of stockholding and an evaluation thereof.

Calves	R100
Young bulls	R250
Heifers	R280
Cows	R350
Oxen	R480
Bulls	R425

Apart from placing values on the various animals it was necessary to determine the cost of a sale, purchase, death or lobola transaction. These were calculated according to the average value of the actual animals involved in the various transactions. Thus as 1 bull, 3 cows, 2 heifers and a calf were sold the value of the average sale was calculated as (R425 + (3 x R350) + (2 x R280) + R100) divided by 7. Purchases were valued at R332,50, sales at R320,56, deaths at R268,36, lobola cattle coming in at R323,50 and lobola cattle being transferred out at R337,06.

In the case of purchase where the actual costs were available the real cost and the attributed value were very close - i.e. the attributed value was R332,50 whereas the average actual cost was R332,73. Average sale proceeds were R277,78 and a sale was valued at R320,56. Although it was possible to estimate the total value of the surveyed herd at the beginning and end of the resurvey year reasonably accurately, in certain individual cases the value of transactions may have been over or under estimated. e.g. where someone sold a heifer valued at R280 but was debited with the average value of a sale - R320,56. As the number of sales or purchases was minimal such discrepancies are not important. Greater and more frequent errors may have occurred with regard to deaths. As only calf-deaths were separately recorded a general value had to be estimated for the deaths

of animals other than calves. Stockholders were thus debited R268,36 for a death regardless of whether the dead animal was a young bull valued at R250 or an ox valued at R480.

Most of the cattle which were held throughout the twelve months preceding the resurvey would have increased in value during that period. An arbitrary value needed to be placed upon this appreciation. During the year calves grew into heifers or young bulls, heifers became cows etc. On the basis of the values placed upon calves, heifers, cows etc at the beginning and end of the year it was necessary that the value of the herd grew through appreciation by R11305 during this period. 303 head were held throughout the period and R37,31 (R11305 divided by 303) has therefore been added to the value of each of the animals held. Unavoidably for some this is an over-evaluation and for others an undervaluation.

The same values were attributed to the different types of animal at the beginning and end of the survey year although replacement costs would not have been identical. Prices in the survey area were reported to change in response to price changes elsewhere in the country but increases would seem to be less marked and to lag behind those elsewhere. There were no public sales held in the survey area (and indeed none in the entire magisterial district of Nkandla) from which average prices realized might be obtained. The average price realized in 1985 for cattle sales from surveyed households was in fact 10 percent below that for 1982. However, too few sales occurred for the prices to be considered to reflect a trend. The appreciation

attributed to all animals held throughout the year would, in the case of mature animals whose weight did not increase during the year, have to some extent compensated for the fact that the price at which they were valued was the same at the beginning and end of the survey year.

An annual return on investment was calculated by adding herd appreciation (R11305) to the value of calves born (R7100) and the current disposable income received from cattle[1] (R22 638,69) received during the year preceding the resurvey and relating the total (R41044) to the value of the herd in 1984 (119550,37). Over the herd as a whole the return was 34,3 percent. However as not all the calves lived and much of the current disposable income - viz. meat from dead and slaughtered animals, hides, milk etc - was achieved at the cost of loss of a productive asset, a more realistic assessment of the value of cattle holding would be the net annual return calculated by subtracting the 1984 herd value from the 1985 herd value and then adding the current disposable income realized during the year preceding the resurvey and subtracting the cost of purchases made during that year.

The percentage return was calculated by relating the total net return (R9300) to last years herd value. Overall a return of 7,9 percent was achieved.

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1. See Appendix B Table 38.

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