

**RURAL INCOME, WELFARE AND
MIGRATION: A STUDY OF THREE
CISKEIAN VILLAGES**

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ABSTRACT

The on-going significance of the rural areas in policy formation in South Africa has its roots in the country's spatially skewed population distribution and the persistence of 'oscillating' or 'circular' migration. Thus, rural income (its level, sources and distribution) and rural welfare remain important policy considerations. This thesis, based on a microeconomic study of three Ciskeian villages, examines these issues, and attempts to use the understanding so gained, to consider the likelihood of continued circular migration.

Chapter 1 places the study in context, providing necessary background to the research area. Chapter 2 looks at the spatial structure and education levels of households in the three villages studied. Chapter 3 deals with the problem of defining and measuring 'rural household income', whilst Chapter 4 examines the adequacy and distribution of this income, paying attention to how changes in various components of income affect rural income distribution and welfare. This thesis is concluded in Chapter 5 with an analysis of the factors contributing to the persistence of circular migration.

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CHAPTER 1

INTRODUCTION

South Africa is currently faced with the sensitive problem of formulating a future regional policy that on the one hand, recognises (and does not repeat) the political and economic failures of past regional policy (of which the homelands can be considered part) and, on the other hand, takes cognisance of the demographic realities that are the legacy of such policy.

Over the last seven years, South Africa has experienced rapid urbanisation. The Standard Bank (1992), combining official figures with Development Bank of Southern Africa and Urban Foundation measures, suggest that the urban proportion of South Africa's Black population has risen from 46 per cent in 1985 to 51 per cent in 1992. However, Mabin (1990: 311) points out that a considerable proportion of this urban population growth has been generated from natural increase in the urban population rather than high rural-urban permanent migration.

Despite this trend, South Africa and other countries in the developing world, have exhibited slower rates of urbanisation than the countries that today constitute the developed world and those predicted by orthodox models of urban transition.

Not only do the orthodox models (such as the Todaro model: Todaro, 1969) predict an urban transition which seems reluctant to occur in most of the third world countries, but they do not deal with considerable migration within rural areas, nor with patterns such as large-scale (return) migration from urban to rural areas even when large differentials exist in favour of urban areas (Mabin, 1990: 311-312).

Mabin suggests that South Africa's observed departure from traditional wisdom stems from the fact that **circular (temporary) migration** appears to be an enduring phenomenon in the South African labour market. Such oscillating migration does not seem to have given way to permanent rural-urban migration to the extent predicted by orthodox models. In this regard, South Africa is not unlike other developing countries.

Indeed, in many parts of the world circular migration continues without any state policy to foster it and without noticeable large institutions (such as those of the gold mine labour system) to sustain it (Mabin, 1990: 313)¹.

As Mabin goes on to note, South African authors, particularly from the 'radical' school, have tended to over-emphasise the role of *Apartheid* and preceding state policy in explaining South Africa's retarded urbanisation. Hindson (1987) argues that South African labour market history is comprised of a succession of systematic attempts by government to control the spatial distribution of labour (for example, hut taxes, separate development, pass laws and influx control). Hindson's central point is that *Apartheid* laws (on top of earlier labour market legislation) left South Africa with a differentiated labour supply consisting of:

- (a) a small, Black permanent urban workforce with their permanent residency in the urban areas based on their birthplace, continued residency and continued employment in the urban areas, and
- (b) a large, Black urban workforce consisting of temporary migrants with close family, economic and residential ties with the rural base.

However, Mabin (1990: 313) argues that such 'institutional' analysis of temporary migration is simplistic, having led to the apparent misconception that South Africa's urbanisation experience is unique in world terms and that "conformity with the urban transition model" would be an inevitable concomitant of the removal of discriminatory legislation such as pass laws. As has been seen, despite the removal of influx control, temporary migration persists.

Thus, there exists a need for a new urban transition model that incorporates the reality of long term temporary migration and goes beyond the analysis of institutions impacting on the labour market. In line with recent trends in development economics, Mabin suggests that such a model must take into account the very household behaviour of which the decision to migrate on a temporary basis is a part². In other words, temporary rural-urban migration cannot be viewed in isolation. Attention has to be paid to the constraints under which the

¹Mabin recognises that the possibility of long term temporary migration in the absence of institutional intervention is not a new idea, having being noted twenty years ago by Bell (1972: 355).

²See the Household Decision Models of Becker (1965 and 1988), Low (1986) and Singh, Squire and Strauss (1986).

rural household operates, the distributional impact of temporary migration on rural areas and the availability of both urban and rural jobs.

This thesis attempts to look at these issues by analysing the household income levels and migration behaviour in three villages in the Ciskei. The focus of the analysis is on the causes and sources of inter-village differences in household income, and the understanding so gained is used to consider the factors contributing to the persistence of temporary migration.

An attempt is made to dispel the notion that rural families are peripheral agricultural units that respond, in a uniform way, to institutional intervention. Rural households are by no means homogeneous in their characteristics or aspirations. Within a single village significant disparities in income levels and sources of income are found. These disparities directly affect the economic focus of household activities and the way in which households respond to institutional intervention and price signals in both the rural and urban markets.

In the course of this analysis, the problem of **defining and measuring rural household income** is addressed. This constitutes an important theoretical issue given the diverse sources of rural income and the significance of in-kind income. Attention is also given to the adequacy of rural household incomes and the contribution of different components of household income to overall village income inequality. Given the fact that approximately half of South Africa's Black population remains in the rural areas (Standard Bank, 1992), sources of rural income inequality remain an important topic for policy-makers.

1.1. Details of the Study

The data on which this thesis is based are drawn from a 1990 household survey of three villages in the Keiskammahoek magisterial district of the Ciskei. The survey, conducted by the author, formed part of the 1990 Keiskammahoek Rural Survey which was run under the auspices of the Institute of Social and Economic Research at Rhodes University,

Grahamstown, as a follow up to the Keiskammahoek Rural Survey of 1949³. A copy of the household questionnaire used is provided in Appendix A⁴.

The three villages studied, Upper Rabula⁵, Burnshill⁶ and Chatha (see map in Appendix B), were selected for a number of reasons:

- (1) Mills and Wilson (1952) and Houghton and Walton (1952) covered all three of these villages (amongst others) in the 1949 Keiskammahoek Rural Survey and thus there exists valuable historical data against which comparisons can be drawn. Indeed, the year of the original survey, 1949, provides an important starting point for historical comparisons as it is the year following the start of National Party rule in South Africa, and thus enables an analysis of the impact of forty years of *Apartheid* rule on the area;
- (2) The villages have different geographic positions relative to the local urban centres, giving each a different degree of access to local urban economies; and
- (3) Within the three villages, a rich diversity of land tenure is found (De Wet, 1991), the three main types being:
 - (a) **'Trust tenure'**, which is the situation where land is owned communally and plots are allocated to specific households by the village 'headman' or, as at the

³The original survey is written up in Houghton and Walton, 1952; Mills and Wilson, 1952; Mountain, 1952; and Wilson, Kaplan, Maki and Walton, 1952.

⁴Copies of the completed questionnaires, along with the rest of the raw data from both the 1949 and 1990 surveys are housed in the Cory Library at Rhodes University, Grahamstown.

⁵For the purposes of simplicity, 'Upper Rabula' will hereinafter simply be referred to as 'Rabula'.

⁶The village of Burnshill has been defined as all households falling under the Burnshill Residents' Association in 1990. This differs from the definition of Burnshill used by Houghton and Walton (1952) and Manona (1981) in prior studies of the area. They included in their Burnshill sample households that today fall under the separate villages Ngxondoreni and Lenye that, having their own schools, residents' associations and clinics, were not considered part of Burnshill for the purposes of this study.

time of the survey, the village residents' committee. Such title is not 'strong' in the sense that it cannot be transferred by either sale or inheritance;

- (b) **'Freehold title'**, which is the ownership of land in the traditional 'modern sector' sense. Freehold land can be transferred to another owner by either sale or inheritance (either in terms of a will, South African common law or failing this, African customary law); and
- (c) **'Quitrent tenure'**, which is akin to an extremely long lease on a piece of land, the lease payments being an inordinately low fixed sum. Such title, like freehold title, can be transferred through sale or inheritance.

Rabula includes examples of both freehold and trust land tenure, as well as landless families and families that squat on either freehold land or the commonage. The Burnshill sample is split between families that have quitrent land and landless families that have either been allocated residential sites, or squat, on the commonage. Chatha exhibits communal land tenure, although there are landless families in Chatha that do not have allocated arable plots. A more detailed discussion of land tenure arrangements in the three villages is presented in Appendix C.

The empirical study was conducted between October 1990 and February 1991 and consisted of detailed interviews with ninety-eight households taken from the three villages. The sample is a 1 in 10 random sample of occupied homesteads in the three villages. Thirty-eight households were interviewed in Rabula, 22 in Burnshill and 38 in Chatha. The survey covered a total of 776 persons (349, 173, and 254 in Rabula, Burnshill and Chatha respectively).

1.2 Structure of the Thesis

Chapter 2 provides background data that places the subsequent analysis of rural household incomes in context. Various 'demographic' aspects of the rural households are considered,

including the spatial structure and education levels of households. Rural employment rates and dependency ratios are also noted.

The third chapter focuses on rural household income. The chapter looks at the problems of measuring rural income and, based on a tight theoretical definition of income, sets out the methodology used to circumvent these problems. The relative importance of different sources of income is discussed, with particular reference to household agricultural and migration behaviour.

Chapter 4 is focused on an assessment of living standards and income inequality in the three villages. An 'absolute' measure of poverty, based on individual poverty datum lines calculated for each household sampled, is given. Furthermore, this chapter presents a theoretical technique (outlined by Shorrocks, 1983 and Stark, Yitzhaki and Taylor, 1986) that is used to isolate the contribution of different components of household income to overall income inequality. This inequality decomposition analysis concentrates on the distributional and welfare effects of remittances from migrant labour and a number of policy implications are noted.

Based on the results derived in Chapters 3 and 4, Chapter 5 concludes this dissertation with a discussion of the factors that are apparently propagating the system of temporary migration that currently characterises the urban transition. It is shown how a number of rational household decisions and institutional factors all currently contribute to the persistence of circular migration. Finally, suggestions for future economic research in this area are outlined.

CHAPTER 2

HOUSEHOLD DEMOGRAPHIC PROFILE

2.1. Household Size

Adopting the view of Becker (1965 and 1988), households can be viewed as rational economic units maximising utility subject to a time and income constraint. Household structure is therefore an important 'economic variable' that responds to changing economic signals over time.

Changes in household size and structure over time provide important insights into the household's changing economic environment. However, at the outset, it is necessary to accurately define the term 'rural household', paying attention to exactly who is, and who is not, a member of the rural household.

For the purposes of this study, the household is taken to be a spatially diverse entity, encompassing a 'rural base' with urban links. A person away from the rural base is considered a member of the household **if that person has remitted to, or visited the household within the year prior to the survey.**

However, as in any empirical study, such rigid definitions cannot always be realistically applied. In a few specific cases, persons who did not fulfil the strict definition above were taken to be family members (for example, a mineworker who visits the rural base once every eighteen months). In practice the households have very clear views on who their household members are, and careful attention had to be given to their explanations even when they contradicted the guidelines set out above.

Details of household structure are given in Table 1:

	Average Household Size	Average Number Living at Home	Average Number Away from Home
Rabula: Freehold (17 households)	9.18	6.47 (70%)	2.71 (30%)
Rabula: Other ⁷ (21 households)	9.19	6.62 (72%)	2.57 (28%)
RABULA: Total (38 households)	9.18	6.55 (71%)	2.63 (29%)
Burnshill: Quitrent ⁸ (11 households)	8.82	7.00 (79%)	1.82 (21%)
Burnshill: Other (11 households)	6.91	5.09 (74%)	1.82 (26%)
BURNSHILL: Total (22 households)	7.86	6.05 (77%)	1.82 (23%)
CHATHA ⁹ : Total (38 households)	6.68	4.66 (70%)	2.03 (30%)
ACROSS ALL THREE VILLAGES	7.92	5.70 (72%)	2.21 (28%)

Table 1: Household Structure

It can be seen that in Rabula the average total household size is 9.18 persons, compared with 7.86 in Burnshill and 6.68 in Chatha. The exact explanation of the differences in household size between the areas is by no means clear. Education, degree of integration with local and urban economies and income levels appear to be important factors in this regard. These themes will be taken up in subsequent analysis dealing with income differences between the different villages.

Land tenure appears to be merely an 'historical' factor in determining household size in the sense that it influences, and has influenced, factors such as education levels and families' degree of integration with the regional economy. In many instances, especially in the case of freehold tenure in Rabula and quitrent tenure in Burnshill, a family's firm title to land is directly correlated with a family's degree of permanence and influence within a village. Thus, if one categorises families by land tenure type, one is inevitably classifying households

⁷This category includes landless families and families with access to trust land.

⁸This includes one freehold family in Burnshill.

⁹In Chatha all families either have access to trust land, or are landless. In this regard, they are similar to households falling under the 'other' category in Rabula.

on the basis of a host of extraneous socio-economic factors not directly related to the productivity of different types of land usage.

If household size is analyzed according to land tenure form (see Table 1), a number of observations can be made:

- (1) Families in the Rabula sample appear to be of similar size regardless of land tenure form. This finding is contrary to the evidence of De Wet, Manona and Palmer (1992: 35) and Mills and Wilson (1952: 122) that land-owning families are larger than their non-title-holding counterparts. However, since this particular survey focuses on aspects of *inter-village* income differences, it can only shed light, rather than conclusively prove (or disprove) *intra-village* differences based on land tenure.
- (2) Non-freehold Rabula households appear to be increasing in average size. The 1990 figure of 9.19 persons is notably higher than 6.87 in 1986 (De Wet *et al.*, 1992: 35), adding weight to the contention of De Wet *et al.* (1992: 36) that households in Rabula are getting larger. Indeed, if one of the direct determinants of household size is education (and the 'land tenure effect' on household size is indirect and 'historical'), average household size of freeholders and non-landowners within the same village would be expected to converge over time as education levels converge.
- (3) Different trends in household structure and size since 1949 can be identified for the different types of land tenure. In a 1949 survey across four Keiskammahoek villages¹⁰, Mills and Wilson (1952: 125) found that freehold families (predominantly taken from Rabula) had an average size of 9.14 persons in 1949, with 6.62 persons at home and 2.52 persons away. This structure is practically identical to that found in freehold families in Rabula in this survey.

The average size of quitrent families (almost exclusively taken from Burnshill in the 1949 survey) has grown from 7.70 persons in 1949 (5.57 at home and 2.13 away) to

¹⁰ Rabula (Upper and Lower), Burnshill, Chatha and Mthwaku.

8.82 (7.00 at home and 1.82 away) today. This growth in size would appear to be largely due to the fact that the number of quitrent sites in Burnshill has remained unchanged since 1949 and in the intervening years it has been difficult for the offspring of quitrenters to obtain new Burnshill residential sites due to local political sensitivity surrounding the allocation of such sites.

It can also be seen that a notably higher proportion of quitrent families lived away from the rural base in 1949 than do today (28 per cent in 1949 compared to 21 per cent in 1990) (Mills and Wilson, 1952: 125). This appears to be a result of Burnshill families' increasing ability to find jobs in the local economy.

Possibly the most notable change in household size since 1949 can be found amongst families with communal and trust tenure. According to Mills and Wilson (1952: 125) such families (based on data taken largely from Chatha) averaged 6.25 persons in 1949 (5.44 at home and 0.81 away), compared to the average of 6.68 persons (4.66 at home and 2.03 away) found in Chatha today. The vast increase in the number of people away from home (13 per cent in 1949 compared to 30 per cent in 1990) appears due to two factors:

- the general rise in education levels in Chatha since 1949 has necessarily been accompanied by people living away from home for the purpose of study as Chatha has not had a high school that can compete with some of the schools in surrounding villages (for example, in 1990 ,Chatha High School did not, as yet, offer matric); and
- the absentee rate in 1949 was particularly low because many Chatha residents were able to find jobs in the local forestry department on a forestry development programme that was being undertaken at the time of the survey. These jobs have long since ceased to exist.

- (4) In Burnshill, families with firm quitrent title to land tend to be larger than those on the commonage. This is explained by the length of time the households have been established in the area. The quitrent households have been firmly established since the late 1930's and consequently often extend back a generation further than the 'less

established' households on the commonage. Indeed, many of the families on the commonage are the families of the younger married children of quitrenters and thus, one would expect them to be smaller.

- (5) In both Chatha and Rabula approximately 30 per cent of the population is away from the rural base (Table 1). In Burnshill, a slightly lower proportion of the sample is away, especially amongst the quitrenters. As has already been mentioned, residents of Burnshill appear to have been the most successful at integrating with the local and regional economy and are less reliant on earnings from distant urban centres. This finding is an important link in understanding inter-village differences and will be discussed in detail in subsequent chapters.

2.2. Education

The three villages have marked differences in education levels. Table 2 shows the average education levels of persons 18 years and older that are not currently full time scholars or students:

	Average Years of Education	Standard Deviation
Rabula	7.57	1.97
Burnshill	9.36	2.04
Chatha	6.82	1.84

Table 2: Education Levels

The figure of 7.57 for Rabula is lower than that of 8.16 found in a 1986 survey of Rabula (De Wet *et al.*, 1992: 31). This difference is explained by the inclusion in the 1986 figure of all people over 18 years regardless of whether they have finished their education or not. In this survey, by considering only those eighteen and older that have finished studying, one excludes quite a few persons in their late teens and early twenties who have achieved

relatively high levels of education but have not yet completed their studies. This exclusion is made for the purposes of investigating linkages between income and education and the level of education of people studying at the time of the survey is more likely to be a determinant of future, as opposed to current, income.

As can be seen from Table 2, Burnshill is significantly better educated than Rabula and Chatha. Indeed, the data shows that, on average, people from Chatha do not as yet complete primary school (7 years of education). The differences in educational levels across the three villages appear to be related to the differing degrees of access to educational facilities. Burnshill residents, with superior educational facilities closer to the home than the residents of Rabula and Chatha, face significantly lower transaction costs in obtaining an education.

Burnshill continues to benefit from its mission school heritage, and is widely regarded as an 'educational centre' within the district. The Majisa High School in Burnshill, which is one of the few schools in the area to offer matric science and mathematics, attracts scholars from surrounding villages. These scholars pay to board with Burnshill families or rent accommodation within the village. As has been mentioned, the high school at Chatha does not, as yet, offer matric. Thus pupils have to travel considerable distances or stay in other villages or towns to complete high school. The high school in Rabula was only starting to offer matric at the time of the survey, thus one would expect education levels in Rabula to rise as the transaction costs of obtaining education fall accordingly.

In all three villages, education levels appear to be rising. This is seen within each village by comparing education levels of the different generations within the villages, or by comparing the results of this survey with prior research in the area. De Wet *et al.* (1992: 31) points out that in the 1981 study of Chatha, the average education level was 5.95 years¹¹. The 1990 figure of 6.82 years (Table 2) represents a 15 per cent increase in the previous 10 years¹².

¹¹This figure represents average education levels of all people over 18, regardless of whether they are still busy with their education or not.

¹²Realistically, the increase is greater than 15 per cent when one takes into account the definitional difference between De Wet's and this survey's average education figures.

Despite recent strides in education levels in Chatha, there was virtually no evidence of tertiary education in this village. The lack of a high school that offers matric in the village, coupled with low income levels (see Table 9), still prevents people achieving post-school qualifications. This fact is demonstrated by the lower variance about the mean education level in Chatha than in the other two villages. Evidence of this emerges in Table 3 which shows the percentage of households with significantly high or low average educational levels.

	Percentage of Households with an Average Household Education Level:		
	Greater than 12 Years	Between 10 and 12 Years	Less than 6 Years
Rabula	-	13%	18%
Burnshill	14%	32%	9%
Chatha	-	5%	26%

Table 3: Households with Significantly High or Low Educational Levels

Fourteen per cent of the households in the Burnshill sample have average education levels beyond matric (amongst persons over 18 years who have completed their studies). These superior education levels have opened up skilled and semi-skilled employment opportunities to the residents of Burnshill. This is a crucial factor in explaining the higher average income levels in Burnshill (see Chapter 3, Section 3.2).

In Burnshill and Rabula, it was found that quitrent and freehold families have slightly higher mean education levels than the other families (9.74 years compared with 8.98 years in Burnshill and 7.75 years compared with 7.44 years in Rabula). The same conclusion was reached by De Wet *et al.* (1992: 31). The fact that 'land-owning' families appear to be better educated than their landless and trust counterparts would seem to be due to their greater historical stability in the area. Evidence from Mills and Wilson (1952) suggests that at the time of the 1949 Keiskammahoek survey, land tenure form was a significant source of class division within villages. This class division was particularly evident in the achievement of education levels. Land-owners, who generally enjoyed higher education

levels, had greater access to jobs and consequently enjoyed higher income levels, than non-land-owners. This helped land-owners to achieve higher levels of education for their children (thereby perpetuating the division). However, over the years such class differences appear to have been eroded and access to educational opportunities within villages has become more equal.

2.3. Dependency and Employment

As can be seen from Table 4, all three villages are characterised by high dependency ratios (defined as the ratio of pensioners, pre-school children and full time scholars and students, to the potentially economically active population).

	Dependency Ratio (Amongst family members living at the rural base)
Rabula	4.00
Burnshill	3.76
Chatha	3.35

Table 4: Dependency Ratios

These ratios tend to compare favourably with the dependency ratio of 4.00 for the Ciskei as a whole calculated by the Development Bank of Southern Africa (1989). This is particularly so when one considers that the definition of a dependency ratio used in Table 4 is a far more stringent one than used by the Development Bank (who define the dependency ratio as the number of people outside the 15 years to 64 years age group as a ratio of all those between 15 and 64). Thus, the Development Bank, by counting full time scholars and students between the ages of 15 and 64 as economically active, tends to under-estimate 'true dependency' and thus it can be surmised that dependency in all three villages is notably lower than the Ciskei average.

Whilst these dependency ratios capture the high percentage of very young and very old in the rural areas, they do not necessarily constitute meaningful measures of economic

dependence in rural villages. Often families are more dependent on the old and the infirm, who qualify for old-age and disability pensions respectively, than on the potentially economically active segment of the population. As will be seen in Chapter 3, this is particularly the case in Chatha where government old-age and disability pensions account for one third of total household income (see Table 10).

As has been mentioned, residents of Burnshill have been more successful at integrating with the local and regional economy than the residents of Rabula and Chatha. Evidence of this is Burnshill's lower proportion of household members living away from the rural base for purposes of work (Table 5)¹³, and higher proportion of family members with paying jobs within the area living at the rural base (Table 6).

	Percentage of Total Household Living Away from the Rural Base:			
	Working	Busy with Education	Unemployed	Total
Rabula	22%	2%	4%	28%
Burnshill	16%	5%	2%	23%
Chatha	19%	7%	4%	30%

**Table 5: Persons Living Away From
the Rural Base**

¹³As will be shown in Chapter 3 (Table 14), a greater proportion of Burnshill residents that do live and work away from the rural base have jobs that enable them to visit their home at least once a month.

	Cash Income-earners Resident in the Rural Area as a Percentage of:	
	Total Economically Active Population (rural & urban)	Rurally-based Economically Active Population
Rabula	8%	22%
Burnshill	26%	52%
Chatha	5%	13%

Table 6: Cash Income-earners Living at the Rural Base

The success of Burnshill residents in obtaining paying occupations within daily commutable distance from the rural base seems to derive from the location of Burnshill and the 'prosperity' of Burnshill itself¹⁴.

Burnshill is favourably situated to benefit from the job opportunities provided by the Zanyokwe irrigation scheme, which has its headquarters at Burnshill. The scheme provides jobs in various forms (clerks, labourers, shop assistants etc.) for 38 per cent of the income-earners living at the rural base. Further manual employment opportunities are provided by the Fort Cox Agricultural College which is situated across the valley from Burnshill.

Burnshill's relative 'prosperity' within the Keiskammahoek district means that the community is able to support a greater level of informal sector employment activity than the poorer communities of Rabula and Chatha. Furthermore, the higher education levels within Burnshill place the residents in a better position than their counterparts in the other two villages studied to exploit informal sector opportunities close to home. Diverse examples of informal sector activity are found. These include:

- an ex-building labourer offering plastering services to the community¹⁵;
- a housewife of a small family offering laundry services to the community; and

¹⁴Burnshill's relative prosperity is demonstrated in Table 9 in Chapter 3.

¹⁵This individual was sub-contracted by the builders undertaking improvements to the local high school.

- an ex-government driver using his 'bakkie' (purchased with his retirement gratuity) as a taxi on the route between Middledrift and Keiskammahoek.

The higher levels of education within Burnshill have meant that it has a notably higher proportion of teachers than the other two villages. Some of these teachers have been able to fill local teaching posts in Burnshill and in nearby villages. Residents of Rabula and Chatha, with their relatively lower education levels and less advantageous economic position, have not had the same high level of access to such opportunities.

The unemployment rate varied greatly across the three villages (see Table 7), with significantly higher unemployment rates in Rabula and Chatha than Burnshill. A person has been classified as 'unemployed' if he or she:

- is between the ages of 16 and 60; and
- is not currently furthering their education on a full time basis; and
- is currently attempting to find a job; or
- has attempted to find a job within the last month.

Thus, housewives, pensioners and farmers are not regarded as officially 'unemployed'.

	Unemployment Rate.	
	Amongst Total Sample	Amongst Rural Residents
Rabula	24%	39%
Burnshill	15%	23%
Chatha	26%	42%

Table 7: Unemployment

The unemployment rate amongst the rural economically active population is high. The rural unemployment figures of 39 per cent and 42 per cent in Rabula and Chatha respectively exceed the average unemployment figure of the Development Bank of Southern Africa (1990)

for development sub-region D5¹⁶ of 32.1 per cent. Only Burnshill has a rate below the Development Bank's estimate of 25 per cent unemployment in Development Region D (Eastern Cape, Border, Ciskei and Transkei) as a whole.

The high unemployment (especially in the Rabula and Chatha) is underlined when one considers that Table 7 only shows active job-seekers as a percentage of the economically active population and does not reflect the severe **under-employment** in the region. Thus, the above figures should be regarded as the minimum conceivable levels of unemployment as they do not include any measure of under-employment which, without any doubt, is a significant feature of labour usage in the area.

At the time of the survey, many people who termed themselves farmers had not cultivated their land, or only cultivated a portion of their land, that season. Some families had up to three members who termed themselves housewives even though it was extremely unlikely that household chores kept all the recorded 'housewives' busy on a full time basis. This is especially true when one considers that pensioners and school-children generally play a significant role in the completion of such chores. If one looks at the percentage of the economically active population that is not earning cash income (Table 8), one can see that these percentages vastly exceed the recorded unemployment rates.

	Percentage of Economically Active Population Not Earning Cash Incomes:	
	Across the Total Sample	In the Rural Area
Rabula	38%	78%
Burnshill	27%	48%
Chatha	44%	87%

Table 8: Persons Not Earning Cash Incomes

¹⁶This sub-region covers the towns of Cathcart, Centane, East London, Gcuwa, Keiskammahoek, Middledrift, King William's Town, Mdantsane, Zwelitsha, Nqamakwe, Stutterheim and Tsomo.

The rates in Table 8 provide **theoretical maxima** for the unemployment rate. Whilst this ceiling measure is open to severe criticism for including as 'unemployed' persons who term themselves housewives and farmers, it does provide a means of identifying those people in the community that are potentially under-employed. By combining Tables 7 and 8, it is possible to obtain a **conceivable range for the actual unemployment figure**.

By looking at a village's average household size (and thus 'volume' of household chores) and degree of agricultural activity, one can surmise whether the unemployment figure will be closer to the upper or lower end of its range. For example:

- the larger household sizes and relatively greater access to agricultural land in Rabula imply a greater volume of household and agricultural tasks and suggest that Rabula's actual unemployment rate would be closer to the lower end of its unemployment range than would Chatha's, where families and fields are smaller; and
- the presence of taps amongst the houses in Burnshill decreases the amount of time needed for household chores which, coupled with the low levels of agricultural activity, increases the chance that actual unemployment figures in Burnshill approach the upper end of their potential range.

Thus, given Table 7 and 8, it is quite possible that a more realistic estimate of unemployment across the three villages is in the region of 50 per cent.

CHAPTER 3

HOUSEHOLD INCOME

This chapter looks at sources of rural income, and attempts to assess the standard of living in the three villages. In order to do this it is necessary to carefully define the concept of 'income' as it pertains to a rural household.

3.1. The Definition of 'Household Income'

The definition of income used in this study is that of Simons (1938: 50), who comprehensively defines income per period as:

the sum of (1) the market value of rights exercised in consumption and (2) the change in value of the store of property rights between the beginning and end of the period.

Attention is also paid to the admonition of the Minority Report of the Royal Commission on the Taxation of Profits and Income (1955: 355), which, in embracing Simons' income definition, warns of the dangers of using less complete definitions:

No concept of income can be really equitable that stops short of the comprehensive definition which embraces all receipts which increase an individual's command over the use of society's scarce resources - in other words, his "net accretion of economic power between two points in time".

Utilising the above definition in the calculation of rural household income, is practically very difficult due to the presence of a significant number of in-kind transactions in the rural areas, and leads to the use of proxies such as 'cash income' (for example, De Wet *et al.*, 1992). However, the Royal Commission is effectively warning against making welfare judgements on this basis. Analysis of rural households' allocation of time and remittance behaviour shows a number of reasons why cash income is not a suitable proxy for household income:

- (1) Many households devote significant amounts of time to agriculture and have no cash income to show for it. If in such cases one only considers cash income as a measure

of household welfare, one is effectively ascribing economic irrationality to households that devote resources to any activity not specifically aimed at earning cash income.

- (2) Analysis of cash income levels alone ignores agricultural differences between households. Thus it is necessary to consider income-in-kind from agriculture, both from stock farming and cultivation (of both homestead gardens and arable land).
- (3) Households in the three villages are heavily reliant on remittances from household members living away from the rural base. These remittances can be in one of three forms:
 - (a) Cash remittances;
 - (b) Remittances-in-kind (i.e. goods, normally groceries, brought by the family member to the rural household when he or she visits); and
 - (c) Account payments by migrant workers and commuters at their place of work for goods 'consumed' at the rural base. In many instances, households decide that instead of remitting cash, a household member working away from the rural base should purchase a specific good on account and have it delivered to the rural area. The member concerned then pays for it by stop order on his or her salary. By undertaking this a household is clearly reducing its transaction costs, thereby increasing the efficiency of remittances.

Hence, if one was to only measure cash income, one would exclude remittances of type (b) and type (c).

In light of Simons' definition of income and the aforementioned shortcomings of using cash income as a proxy, it is necessary to develop a comprehensive measure of income that includes income-in-kind in all its possible forms as well as changes in the value of household assets over the period in question. To do this, Simons' concept of income is applied to the following three traditional 'problem' areas in the measurement of rural income:

- i) Income from crop farming;
- ii) Income from stock farming; and
- iii) Remittance income.

i) Income from Crops

The crop income figures calculated for the purposes of this survey cover the twelve months ending 30 September 1990 (and thus include the 1989/1990 summer crop and 1990 winter crop). The total crop income figure is obtained by adding net cash receipts and income-in-kind. Net cash receipts include all cash received from sale of crops less the cash paid for crop cultivation inputs. In most instances, this amount was negative as the household bought a variety of inputs for cultivation and derived no cash receipts from crop farming.

In order to calculate income-in-kind from agriculture, two problems had to be surmounted:

- (1) **Yields had to be estimated for households that could not supply accurate yield figures:** This was done by calculating average yields for the various crops in the different villages on the basis of all recorded yields in the village, and applying these averages to the areas planted in order to estimate unrecorded yields. For crops where there were too few recorded yields to calculate an average yield for the village, an average yield across the three villages was used. Where possible, distinctions were made between yields in fields and in homestead gardens. Separate wet and dry land yields were calculated.
- (2) **Values had to be placed on crops consumed by the household:** 'Own consumption of crops' was valued on the basis of the average prices for the different crops in the area. The average price of a particular crop was based on all recorded transactions involving that crop within the community.

Where a family 'share-cropped', their income was recorded net of their payment-in-kind to the land-owner or land-holder. For a land-owner or land-holder who let out his or her land

in a share-cropping arrangement, the payment received was recorded as crop income-in-kind for the household.

Details of all yields and average prices used in the estimation of income-in-kind are given in Appendix D.

ii) Income from Stock

Accurately defining income from stock farming is extremely problematic. Recording cash sales of stock during a year does not give a realistic measure of income from stock farming, since, by selling stock, a household is merely converting from an illiquid, to a liquid asset.

In fact, using cash sales of stock as a measure of stock income could prove highly distortionary. In depressed economic times, poorer families with low incomes may be forced to sell off stock whilst wealthier families are able to hold on to stock. If cash proceeds from stock sales were used to measure income, income would be credited to poorer families in situations where they could well have incurred a loss by selling an asset for less than its market value. Also, it could lead to an unrealistic equality in recorded 'income' figures if, across the sample, poorer families rather than wealthier ones were selling off stock.

To get around this, it is necessary to use a more sophisticated method that records the change in household wealth, from the beginning of the year to end of the year, resulting from household stockholding activities. Thus income from stock was calculated by summing the following three amounts:

- (a) the increase (decrease) in value of stockholding from the start to the end of the twelve month period prior to the commencement of the survey;
- (b) the net increase (decrease) in cash holdings due to stock transactions during the twelve month period (including all expenditure on new stock, feed and veterinary services); and

(c) the value of stock consumed by the household during the same twelve month period.

It must be noted that in quite a few instances either amount (a), amount (b), or both, were negative resulting in a net loss from stock farming.

Thus, in order to arrive at stock farming incomes it was necessary to know the values of the various types of stock. The values used were obtained from records of transactions within the community and are detailed in Appendix E.

iii) Remittance Income

As has already been mentioned above, recording cash remittances alone under-estimates the true remittance income to the rural areas, and ascribes economic irrationality on the part of all who remit in-kind, or in the form of account payments. In order to measure the change in the wealth of a rural household due to remittances, one has to sum cash remittances, remittances-in-kind and remittances in the form of account payments.

3.2. Household Income Levels

Table 9 shows both average annual household 'income' (defined according to the principles discussed above) and average household annual 'cash receipts'¹⁷ for the three villages:

¹⁷The purpose of looking at cash receipts is not to provide any measure of household welfare, but to ensure continuity with prior work in the area and assess the liquidity position of the households.

	Average Rural Household 'Income' (in 1990 Rands) ¹⁸			Average Rural Household 'Cash Receipts' (in 1990 Rands)		
	1990	1949 ¹⁹	Annual Real Increase (1949-90)	1990	1949	Annual Real Increase (1949-90)
Rabula	R8572	R1082	5.2%	R6388	R940	4.8%
Burnshill	R11032	R1423	5.1%	R9082	R1315	4.8%
Chatha	R3998	R1515	2.4%	R3202	R1067	2.7%

Table 9: Household Income Levels²⁰

Table 9 demonstrates that households in Burnshill are clearly the most prosperous of the three villages, both in terms of cash receipts and income. In fact, the aggregated income of the Burnshill sample was 75 per cent that of the Rabula sample and 160 per cent that of the Chatha sample, despite the Burnshill sample being 58 per cent of the size of the Rabula and Chatha samples.

The figure of R6388 for 1990 average annual household cash receipts in Rabula is higher than the 1990 figure of R5644 found by De Wet *et al.* (1992: 29). This difference would appear to be due to the difference in samples. However, the 1990 average household cash receipts figure for Rabula of R6388 represents an **annual real increase** of 4 per cent from De Wet's 1987 nominal cash receipts R3831 (R5644 in 1990 terms).

From Table 9, it can also be seen that in 1949 Chatha in fact enjoyed the highest income levels. Chatha's 'affluence' in 1949 was largely due to the local employment opportunities in forestry at the time that have long since ceased to exist. Since 1949 average household

¹⁸Certain definitional differences exist between the 1949 and 1990 'income' figures. Income in 1949 does not include remittances-in-kind and remittances in the form of account payments. Also, the 1949 household income-in-kind from stock farming is simply taken to be the family's 'own-consumption-of-stock' regardless of whether the household's stockholding has risen or fallen in value over the year.

¹⁹The 1949 real income levels (in Rands) have been calculated using the South African consumer price index (Central Statistical Services, 1992: 8.20), on the basis that £1 equals R2.

²⁰Calculated from the figures of Houghton and Walton (1952: 106)

real income in Chatha has grown at approximately half the rate of Rabula and Burnshill. Rabula has enjoyed a practically identical growth rate to Burnshill since 1949 albeit off a significantly lower base. Burnshill's success at accessing the regional cash economy appears to be evidenced in the 1949 data by the fact that, even in 1949, Burnshill households had the highest average annual cash receipts.

3.3 The Components of Household Income

Table 10 gives the percentage breakdown of the components of incomes across the three villages. The different sources of household income will be dealt with individually below.

	Income from within the Area						Income from outside the Area		
	Cash Wages/Earnings	Govt. Pensions	Private /Work Pensions	Other Cash Earnings ²¹	Net Crop Income	Net Stock Income	Cash Remit.	Remit. in Kind	Remit. in the Form of A/c Payments
Rabula	22.05%	24.87%	1.79%	0.15%	3.15%	4.74%	24.78%	9.26%	9.20%
B'hill ²²	21.61%	19.15%	4.30%	0.90%	0.36%	2.21%	32.40%	10.81%	8.25%
Chatha	5.94%	34.38%	2.03%	0.56%	4.80%	2.57%	37.21%	6.82%	5.68%

Table 10: Breakdown of Household Income

i) Cash Earnings within the Area

Rabula and Burnshill rely on cash wages and earnings generated within the area for approximately one fifth of their total income²³, compared with 5 per cent in the case of Chatha. As was indicated in Chapter 2, Burnshill has the highest proportion of wage-earners

²¹'Other cash earnings' are mainly in the form of rental income and the once-off receipt of 'damages' in the case of an unplanned pregnancy in the family.

²²These figures from Burnshill are calculated excluding one household in the sample that constitutes a significant outlier in terms of the head of the household, as an ex-official in the Sebe regime, having just been paid out an unusually large pension relative to other household income flows in the village.

²³This result for Rabula is heavily dependent on two salary-earners living at the rural base, who earn particularly high salaries. The percentage of the rural population earning cash incomes, as well as the average local cash earnings per household, is notably lower for Rabula than Burnshill.

resident at the rural base, largely due to its geographic and educational advantages relative to local employment opportunities.

What is clear from Table 10 is that Chatha has been excluded from local employment opportunities. This is due both to its lower education levels and isolated geographic location. The importance of geographic location *vis-a-vis* job opportunities has been documented by De Wet and Leibbrandt (forthcoming) who point out that Rabula's 'prosperity' relative to Chatha has emerged since the 1949 survey. As has already been mentioned, at the time of the 1949 survey, Chatha had certain locational advantages over Rabula (in the form of local job opportunities in forestry). Since then Chatha's relative advantage in forestry employment opportunities has fallen away, and Rabula has been able to capitalise on the development of Dimbaza and its better geographical position relative to the Ciskei capital, Bisho (a source of bureaucratic jobs), and King Williams' Town.

As has already been seen, Burnshill has even greater locational opportunities than Rabula with its close proximity to Fort Cox and the Zanyokwe Irrigation Scheme.

ii) Pensions

The Chatha sample is reliant on the Ciskei government pension, granted in the case of old-age or disability, for over 30 per cent of its income, compared with a figure of 25 per cent and 19 per cent for Rabula and Burnshill respectively. At the time of the survey, the Ciskei government pension amounted to R300 every two months for all individuals over 60 years of age or those that qualify for a so-called 'sick pension' (disability grant). This high degree of reliance on government pensions is extremely worrying in light of the political uncertainty surrounding the issue of homelands in a future political dispensation. Already at the time of this survey, people were starting to voice concerns over the possible non-payment of pensions in the future.

Burnshill shows a greater proportion of its income coming from private pension schemes than the other two villages, indicative of the higher level of jobs that Burnshill residents have been able to obtain for a number of years.

iii) Crop Income

In all three villages, agricultural income (stock and crop) counted for less than 10 per cent of total income (7.9 per cent, 2.6 per cent and 7.4 per cent in Rabula, Burnshill and Chatha respectively). This represents a decrease in reliance on agriculture in all three villages since the 1949 survey when Rabula, Burnshill and Chatha relied on agriculture for 19.9 per cent, 9.0 per cent and 25.3 per cent of their income respectively (Houghton and Walton, 1952: 106).

However, despite such low reliance on agricultural income, agriculture remains a viable use of household time given the under-employment and unemployment in the area and the very low levels of many household incomes. Thus, the lesser importance of agricultural income in Burnshill, to a certain degree, reflects the lower levels of unemployment in Burnshill than in the other two villages.

The low degree of importance of agricultural income for Burnshill is evidence of both:

- a low level of agricultural involvement; and
- relatively high levels of non-agricultural incomes in the village.

Indeed, this minor emphasis on agriculture in Burnshill dates back to 1949, when already it was found by Houghton and Walton (1952: 106) that Burnshill was less than half as reliant on agriculture than either Rabula or Chatha.

The crop income was particularly low in Burnshill, despite Burnshill's fields falling under the Zanyokwe Irrigation Scheme. Indeed, the scheme provides an example of a top-down development scheme that is not achieving the desired results on the ground. The scheme originally intended to lease fields from land-owners for three years in order to install the irrigation. Over this period, it was intended that land-owners work for the scheme so they could receive some training to enable them to farm their land efficiently after the three-year development period. However, land-owners appear unenthusiastic about working for the scheme and are, by and large, quite content to receive rental for their land and devote their time to other activities. In many cases, the older generation of quitrent households are pensioners, too old to be interested in working for the scheme, and their offspring, having

Rabula, compared with R221 in Chatha), due to the far greater area of land cultivated by the Rabula sample. However, due to the low levels of Chatha's other sources of income, crop income is a relatively more important component of overall income in Chatha than in Rabula.

iv) Stock Income

Stock income was a more important component of income than crop income in both Rabula and Burnshill, whilst in Chatha the reverse situation was found. The lower absolute amount of average household stock income in Chatha is explained by Chatha's lower average household investment in stockholding (see Table 11).

The dry conditions prevailing at the time of the survey were cited as a problem by many of the households in all three villages and are probably partly to blame for the low average household annual stock income figures of R406, R233 and R178 for Rabula, Burnshill and Chatha respectively.

Table 11 shows the beginning of the year and end of year average value of household stockholding²⁵:

	Average Value of Household Stockholding		
	Start-of-year October 1989	End-of-year September 1990	Percentage Increase (decrease) over the Year.
Rabula	R5376	R5449	1.36%
Burnshill	R3388	R3303	(2.51%)
Chatha	R2217	R2005	(9.56%)

Table 11: Household Stockholding

As can be seen, there is a significant investment in stock in the area. If income from stock farming in each area is taken as a percentage of the value of beginning-of-year stock, a real

²⁵Details of the stock prices used to value herds are given in Appendix E.

private return on investment in stock of 7.6 per cent, 6.9 per cent and 8.0 per cent for Rabula, Burnshill and Chatha respectively is recorded. These returns compare favourably with other real returns open to families with limited access (due to educational factors) to 'modern sector' savings and investment opportunities, particularly when the fact that individual households do not face private costs of grazing is considered. Thus, investment in stock should not be merely seen as a culturally driven form of savings, but a rational investment in a 'profitable' asset.

In Rabula and Burnshill, land-owning families had significantly higher average values of stockholding than other non-land-owning households. In Rabula, the average year-end household stockholding of freehold families was valued at R8001, compared with R3384 for other families. In Burnshill, the quitrenters had a value of average year-end stockholding of R4900²⁶, compared with the R1706 for landless families and squatters. The higher average stockholding of land-owners would appear to be due to the fact that these families (in both Rabula and Burnshill) are the better established households in the community. They also have access to slightly better grazing in the form of unplanted freehold fields and can make use of the remains of their crops in their fields if they planted.

v) Remittances and Migrant Labour Patterns

As can be seen from Table 10, 43 per cent, 51 per cent and 50 per cent of total rural household income in Rabula, Burnshill and Chatha respectively, is derived from household members living away from the rural base, either in the form of cash remittances or remittances-in-kind (in the form of goods or account payments)²⁷. If rural cash receipts are analysed on their own, it can be seen that 33 per cent, 41 per cent and 47 per cent of total rural cash receipts are in the form of cash remittances. This is remarkably different from the situation in 1949 where Rabula, Burnshill and Chatha derived 47 per cent, 21 per cent

²⁶This figure includes the single freehold family in the Burnshill sample.

²⁷These measures greatly exceed the figures of Simkins (1984: 6) who, at macroeconomic level, estimated that on average (in the years 1960, 1970 and 1980) remittances constituted 25.6 per cent of total earnings in the homelands. The large difference appears to be explained by both the exclusion of remittances-in-kind from Simkins' estimates and obvious differences in the level of reliance on remittances across different homelands.

and 30 per cent of total income and 51 per cent, 22 percent and 28 per cent of their cash receipts respectively from remittances from outside the magisterial district. As can be seen, Rabula was much more heavily dependent on remittances in 1949 than it is today, while the opposite is true for Chatha. This appears to be due to the fact that although in 1949 Chatha had access to greater local wage employment than Rabula (in the form of forestry work), this situation has reversed over time, with Rabula, today, enjoying greater wage earning opportunities.

Table 10 shows that currently, Burnshill and Chatha enjoy the highest proportion of income from outside the rural area, albeit for different reasons. In Burnshill, this is explained by the high level of average household remittances (from relatively skilled workers), whilst in Chatha it is due to the low levels of income from within the area, rather than a high absolute level of remittances. This can be seen in Table 12 which shows that the Burnshill sample receives the highest level of household remittances (125 per cent and 232 per cent of the levels of Rabula and Chatha respectively).

	Average Household Remittances			Total
	Cash	In-kind in the form of:		
		Goods	Account Payments	
Rabula	R2124	R794	R788	R3706
Burnshill	R2908	R969	R740	R4617
Chatha	R1488	R272	R227	R1987

Table 12: Average Household Remittances

Thus far, no distinction has been made between different types of remittances. However, for the purposes of this survey, given the villages' differing abilities to access the regional economy, it is useful to distinguish between three different categories of people who remit to the rural base:

- (a) **short term commuters** - who live away from the rural base for the purpose of work and visit the home at least once a month;

- (b) **long term migrants** - who live away from the rural base for the purpose of work, and maintain their links with the rural base by remitting or visiting at least once a year; and
- (c) **members of separate households** - who remit to the sample household. These usually are married children who still remit to their parents despite having their own households. However, in most cases once children have their own household, remittances go to their household and no longer to that of their parents.

If one analyses the percentage breakdown of remittances on this basis (Table 13), one sees a remarkably different situation in each of the three villages.

	Average Annual Household Receipts of Remittances from: (percentage of total household income given in brackets)								
	Short Term Commuters in the Form of:			Long Term Migrants in the Form of:			Separate Households in the Form of:		
	Cash	Goods	Account Payments	Cash	Goods	Account Payments	Cash	Goods	Account Payments
Rabula	R980 (11.4%)	R563 (6.6%)	R510 (6.0%)	R1144 (13.3%)	R231 (2.7%)	R278 (3.3%)	0	0	0
B'hill	R2517 (22.8%)	R556 (5.0%)	R490 (4.4%)	R309 (2.8%)	R408 (3.7%)	R250 (2.3%)	R82 (0.7%)	R5 (0.1%)	0
Chatha	R318 (8.0%)	R96 (2.4%)	R59 (1.5%)	R1056 (26.4%)	R120 (3.0%)	R168 (4.2%)	R114 (2.8%)	R56 (1.4%)	0

Table 13: Breakdown of Remittances by Source

From Table 13 it can be seen that whilst Rabula receives a similar proportion of its total income from short term commuters (24%) and its long term migrants (19.3%), there are distinct differences in these proportions in both the Burnshill and Chatha sample:

- In the Burnshill sample 32.2 per cent of total income came from short term commuters whilst only 8.8 per cent of total income came from long term migrants;
- Long term migrants contribute 33.6 per cent of the total income of the Chatha sample, with short term commuters only contributing 11.9 per cent of total income.

This dichotomy in migrant labour behaviour between villages also emerges in the breakdown of migrants between short term commuters and long term migrants (Table 14).

	Percentage Breakdown of People Away from the Rural Base for Purposes of Work	
	Short Term Commuters	Long Term Migrants
Rabula	41%	59%
Burnshill	57%	43%
Chatha	18%	82%

Table 14: Breakdown of Migrants by Type

People away from Burnshill for purposes of work are mainly short term commuters, whilst those away from Chatha are predominantly long term migrants. The situation in Rabula falls somewhere between these two extremes.

This provides further evidence of the fact that Burnshill has been more successful than the other two villages in being incorporated into the mainstream of the Ciskei/Border regional economy. Migrants from Rabula and particularly Chatha have been forced to go further afield in search of work. Seventy-five per cent of all Burnshill migrants work in the immediate Ciskei/Border region, compared to 49 per cent and 22 per cent of migrants from Rabula and Chatha respectively. This demonstrates the different extent of reliance of the three villages on the Ciskei civil service and decentralisation policy. Thus, Burnshill and to a lesser, but still considerable extent, Rabula, will be the most seriously affected by any alterations in homeland and regional policy that cut regional bureaucratic jobs.

Burnshill's success in the Ciskei economy appears to be partly due to its history of political power in the district. Burnshill was the first village in the district where Betterment Planning was implemented. This early acceptance of Betterment Planning gained Burnshill valuable grazing land from the adjacent village of Debe Nek (which initially resisted 'betterment'). Burnshill was also the seat of the old Southern Tribal Authority, which furnished the village considerable political clout. Evidence of this influence is found in the fact that Burnshill was selected as the site of the headquarters of the Zanyokwe Irrigation Scheme and is one of the

only villages in the district with taps in the streets. Both these facts are of considerable economic advantage to the village today.

As has been discussed before, Burnshill's other major advantage is education. An analysis of the skill levels of the various categories of migrants (Table 15) shows a situation that contradicts conventional wisdom about migration: that it is the best qualified people that are most likely to migrate furthest (to the large urban centre) from the rural base.

	Percentage Breakdown of Migrants by Skill Level and Type of Migrant		
	Skilled	Semi-skilled	Unskilled
Rabula - Commuters	28%	34%	38%
- Migrants	6%	19%	75%
Burnshill - Commuters	63%	19%	19%
- Migrants	42%	25%	33%
Chatha - Commuters	11%	33%	56%
- Migrants	-	10%	90%

Table 15: Breakdown of Short Term Commuters and Long Term Migrants by Skill Level

Table 15 clearly shows a tendency for skilled workers to travel shorter distances than less skilled workers in their search for jobs (i.e. become 'short term commuters' rather than 'long term migrants'). Thus, it is the skilled people (teachers, nurses, agricultural extension workers, etc.) and, to a slightly lesser extent, the semi-skilled workers (police, mechanics, low level clerks, etc.) that are able to take advantage of the Ciskei regional economy, and the opportunities provided in the Ciskei civil service and decentralisation incentives.

Chatha with its low levels of average education is dependent on long term migrants, 90 per cent of whom are unskilled. Amongst these long term migrants there was significant evidence of the value of 'homeboy networks' ('migrant networks') in the securing of employment. For example, a significant proportion of unskilled Chatha workers were

employed in two specific dairies in Cape Town and Port Elizabeth. At the lower skill levels, in the absence of formal education certificates, these networks provide a valuable way of transmitting economic information about job-seekers, lowering information costs for both potential employer and employee alike. In some instances these networks go as far as reducing some of the training costs for employers. Much has been written on the importance of such networks, both in South Africa (Mayer, 1961) and elsewhere (particularly in the case of Mexican workers migrating to America (Mines and De Jenvry, 1982)).

The interaction of skill levels and the spread of long term and short term migrants within the two villages explains the different average remittances across the villages. Burnshill migrants, being more highly skilled, get better jobs closer to home, thereby retaining closer links with the rural base. This leads to greater remittances by workers from Burnshill. On the other hand, long term unskilled migrants from Chatha by and large achieve only low paying employment and, due to their more distant relationship with the home base, remit less.

In a study of migrants in Botswana, Lucas and Stark (1985) examine possible determinants of migrants' remittances, identifying four main motivations for remitting, each of which appears plausible, to a greater or lesser degree, in light of the findings of this study. They suggest that:

- (a) **Migrants' remittances are positively related to the degree of altruism on the part of the migrant.** They further noted that the migrant's altruism towards his or her family fades as the migrant has less contact with the home base. This confirms Tullock's (1982) view that altruism, in general, as a motive for redistribution, 'fades' as the distance (both geographically and socially) between the source and recipient of redistribution increases. This provides an explanation for why Burnshill, with its relatively high proportion of short term commuters working near to the rural base, has the highest level of remittances.

- (b) **Migrants' remittances are a positive function of migrants' wages.** This constitutes a further reason why migrants from Burnshill, who are generally the most skilled and consequently hold the best paid jobs, remit the most.

- (c) **To a certain extent, the remittances of migrants constitute a 'repayment' to the family for past investment by the family in the migrant's education.** Thus, Lucas and Stark predict that migrants who embody the highest level of human capital investment on the part of their family investment, will exhibit the highest level of remittances. This prediction provides a further reason as to why well-educated Burnshill migrants remit the most.

- (d) **Migrants' remittances can in some ways be viewed as a contribution towards a migrants' retirement to the rural base, and allow the migrant to maintain a 'stake' in the rural base if he or she stands to ultimately inherit the rural base.** Once again this provides a plausible reason as to why Burnshill exhibits the highest level of remittances. A detailed look at Burnshill remittances shows that the bulk of remittances is in fact located in the quitrent households, and quitrent title to land can be transferred via inheritance. Lucas and Stark suggest that this possibility of inheriting the quitrent title provides a valid motivation for remitting, particularly in the case of the oldest male offspring in the household as he is usually the first in line to inherit.

CHAPTER 4

LIVING STANDARDS AND VILLAGE INCOME INEQUALITY

In Chapter 3, whilst income levels and sources were compared across the three villages, no attempt was made to assess the adequacy of this income. Table 9 shows the average level of household income and cash receipts, but does not take into account the differences in household size across the three villages (see Table 1). A start is made in this regard in Table 16 which shows the levels of per capita income and cash receipts across the three villages.

	Average Per Capita Rural Household 'Income'	Average Per Capita Rural Household 'Cash Receipts'
Rabula	R1308	R975
Burnshill	R1825	R1502
Chatha	R875	R687

Table 16: Per Capita Income

However, whilst Table 16 confirms the already noted ranking of prosperity across the three villages (from Chatha, the poorest, to Burnshill, the wealthiest), it does not enable one to make an assessment of the standard of living in the three villages. This chapter looks at some of the problems in making such an assessment, and considers both the **adequacy** and **distribution** of village income.

4.1. An Assessment of Poverty Within the Three Villages

The question as to whether or not an household is impoverished is always, to a certain extent, emotive. Answering this question involves testing household income against some 'poverty base line', and the choice of a base line is necessarily subjective. Beckerman (1984: 6) identifies two types of poverty lines: 'absolute poverty lines' and 'relative poverty lines', noting that:

The former concept is supposed to correspond to some bare minimum subsistence line, whereas the latter is designed to reflect the fact that people can still be "poor" even well above the subsistence level, in the sense that they fall below what is required by the society in which they live as the minimum level of command over goods and services needed in order to be a fully integrated member of that society.

Given the above distinction, it is clear that all of the households surveyed are poor relative to what is considered the norm in modern urban centres. Burnshill is the only village with access to clean drinking water, having taps located at regular intervals within the village. Residents of Rabula and Chatha only have access to river water for drinking and washing, with the river being up to a two hour round trip from some homesteads. None of the villages has electricity, with paraffin and firewood constituting the chief sources of energy.

However, determining the extent of absolute poverty in the three villages is a more difficult task. To do this, one has to choose an absolute poverty line, and as Beckerman (1984) points out, it is difficult to assess the absolute minimum requirements of a family. He goes on to note that an analysis of poverty cannot be independent of time, as the question as to how long a person or household has been poor is an important one and the answer to it necessarily influences a person's or household's ability to escape from poverty. Thus, in the assessment of absolute poverty across the villages use is made of both a short term and long term poverty datum line, namely the **household subsistence level (HSL)** and **household effective level (HEL)**, as defined by Potgieter (1991a and 1991b).

The HSL is defined as:

an estimate of the **theoretical** income needed by an individual household if it is to maintain a defined minimum level of health and decency in the **short term**. It is calculated at the lowest retail cost of a budget of necessities of adequate quality (Potgieter, 1991b: 4) (emphasis added).

The words 'theoretical' and 'short term' have been stressed for in practice, in the long term, the HSL does not provide a realistic minimum level of income with which to judge a household's **sustainable** quality of life. In this regard, Potgieter's HEL is a more suitable measure. Potgieter (1991b: 7) states that the HEL of income is:

that (level of income) which, after one third of it has been allocated to other items²⁸, is equal to the cost of the HSL requirements for that household.

This implies that the HEL is equal to 150 per cent of the HSL.

Effectively the HSL is calculated to cover the most basic physiological needs (food, clothing, fuel, lighting, cleansing materials and transport), whilst the HEL includes items like medical services, education, pension and household equipment that all contribute to the household's longer term welfare and quality of life.

In order to heed both Cross and Preston-Whyte's (1984) warning that household poverty cannot be judged independently of household structure and Beckerman's (1984) counsel that account be taken of the fact that individual minimum needs vary, unique HSL and HEL measures were calculated for each household surveyed. Using poverty data from the nearby Ciskei town of Peddie (Potgieter, 1991a: 38 and 59)²⁹, an individual 'subsistence level' and an 'effective level' were calculated for each family member (according to their age and sex), and these were summed across each family to obtain that household's unique HSL and HEL. Ratios of household income to HSL and to HEL and household cash receipts to HSL and HEL were then calculated for each household. Table 17 shows the average of the household ratios of income to HSL and cash receipts to HSL in each of the three villages:

	Average Household Ratio of Income : HSL	Average Household Ratio of Cash Receipts : HSL
Rabula	1.31	0.98
Burnshill	1.60	1.35
Chatha	0.81	0.66

Table 17: Household Income and Cash Receipts as Ratios of the HSL

²⁸'Other items' include expenditure on health services, recreation, transport and pensions.

²⁹The March 1991 figures given in Potgieter (1991a) were deflated back to September 1990 (the end of the twelve month survey period) using the consumer price index (Central Statistical Services, 1992: 8.20).

This shows that on average the household cash receipts in Rabula and Chatha are insufficient to maintain the family above absolute poverty in the short run. However, if one includes non-cash income in the calculation, only Chatha households, on average, remain below the HSL³⁰.

It is perhaps more telling to look at the percentage of households in each village that have incomes and cash receipts below the HSL:

	Percentage of Households with:	
	Income Below their HSL	Cash Receipts Below their HSL
Rabula	32%	63%
Burnshill	36%	50%
Chatha	66%	82%

Table 18: Households with Incomes Below the HSL

From Table 18, the relative plight of Chatha is clear: 66 per cent of the households in the Chatha sample are living below the HSL in the short term, compared to 32 per cent in Rabula and 36 per cent in Burnshill. In light of Potgieter's definitions of the HSL (1991b: 4-10), these households are not meeting their basic physiological needs in the short run.

Table 18 also shows that in each village over 50 per cent of the households cannot cater for their basic needs out of cash incomes alone, and demonstrates the continued importance of the pursuit of non-cash income.

The high level of short term need outlined above, forewarns about the inability of many households to sustain a minimum quality of life in the long term. Table 19 shows the

³⁰In interpreting these results it must be remembered that non-cash income is still likely to be an underestimate in the sense that it does not include income from chickens, milk and green maize (see explanations in Appendix D and E). However, given the relatively small importance of agriculture in total income, this omission is unlikely to change the results significantly.

average household ratios of income to HEL and cash receipts to HEL in each of the three villages.

	Average Household Ratio of Income : HEL	Average Household Ratio of Cash Receipts : HEL
Rabula	0.87	0.65
Burnshill	1.07	0.90
Chatha	0.54	0.44

Table 19: Household Income and Cash Receipts as Ratios of the HEL

It can be seen that, with the exception of Burnshill, household income, on average, is below the HEL. In all cases, cash receipts are, on average, less than the HEL.

	Percentage of Households with:	
	Income Below their HEL	Cash Receipts Below their HEL
Rabula	71%	89%
Burnshill	50%	68%
Chatha	87%	97%

Table 20: Households with Incomes below the HEL

Table 20 shows that in each village (including Burnshill where on average household incomes are 107 per cent of the HEL), at least half of the households have incomes below their HEL's. This hints at serious inequality in income within villages. The inequality in income will be examined in detail later in this chapter.

If one takes the three villages studied as representative of the Keiskammahoek District as a whole (bearing in mind that they exhibit lower dependency ratios than the Ciskei average), Table 20 suggests that over 50 per cent of households in the district do not have sufficient

income to maintain a decent quality of life in the long term (i.e. they cannot provide themselves with adequate medical services and pensions). This inability to fulfil long term needs (and as has been seen in many instances, short term physiological needs) undoubtedly has an adverse effect on productivity levels which, in turn, impacts negatively on all household agricultural, job and educational achievement, thereby preventing households from achieving higher income levels. In essence, a 'vicious circle of poverty' exists, in the sense that the very effects of poverty prevent families from achieving the productivity levels necessary to break free from poverty. Thus, in the district, higher mortality rates and lower life expectancies than the South African national average can be expected.

Tables 9 and 16-20 provide strong evidence as to the importance of non-cash incomes in the area. Referring back to Table 9, it can be seen that in Rabula, Burnshill and Chatha cash receipts are only 75 per cent, 79 per cent and 80 per cent of total household income respectively. Table 20 shows that only 3 per cent of the Chatha sample (i.e. one out of 38 households) and 11 per cent of the Rabula sample have cash receipts that exceed the HEL. This highlights the inadequacy of the local cash economy to support the villages studied and clearly demonstrates the on-going importance of non-cash remittances and agricultural income-in-kind. Indeed, in light of local and urban job shortages, the rationality of rural households' continued involvement in local agriculture emerges, despite the extremely low productivity levels in agriculture.

4.2. Village Income Distribution

Whilst poverty exists within all three villages, an assessment of village welfare levels cannot be made without looking at the distribution of village income. Indeed, in South Africa, with its large rural population, inroads into the national income distribution problem cannot be made without a detailed knowledge of income distribution within the rural areas.

The question of rural income inequality is complicated by the fact that 'rural household income' is an aggregation of a number of different sources of income, each with its own distinct effect on the overall distribution of income within the village. The strength and direction of these effects are important parameters for policy formulation and the analysis of

the impact of changes in household behaviour. For example, as shown previously, labour 'out-migration' remains a significant socio-economic phenomenon in rural areas, and this begs the question as to whether such migration reduces or exaggerates rural income inequality, and what effect this inequality has on rural welfare levels.

This section attempts to answer such questions by measuring the distribution of income within the three villages and assessing the contribution of the different sources of household income to total village income inequality. Firstly, the theoretical framework for this analysis will be outlined. Subsequently, this framework will be applied to the three villages surveyed. This analysis follows a similar structure to that of Stark, Taylor and Yitshaki's (1986 and 1988) appraisal of different sources of income inequality in two Mexican villages.

i) Theoretical Framework for the analysis of the Distribution of Village Income and Village Welfare Levels

Assume that within a village there are n households deriving income from K different sources (i.e. K different income components). Following the notation in Shorrocks (1983: 311), let y_i denote the **total income of household i** , where $i=1,\dots,n$ and y_{ik} the **income of household i from source k** , where $k=1,\dots,K$. Thus:

$$y_i = \sum_{k=1}^K y_{ik}$$

Also, let the **distribution of total household income** be represented by $\mathbf{Y}=(y_1,\dots,y_n)$ and the **distribution of income component k** be represented by $\mathbf{Y}_k=(y_{1k},\dots,y_{nk})$.

Using this notation, the **Gini co-efficient (G)** for the distribution of total income within the village can be defined as:

$$G = \frac{2cov[\mathbf{Y},F(\mathbf{Y})]}{\mu} \quad (1)$$

where μ denotes village mean household income and $F(\mathbf{Y})$ the 'cumulative rank distribution'

of total household income in the village (i.e. $F(Y) = (f(y_1), \dots, f(y_n))$ where $f(y_i)$ is equal to the rank of y_i divided by the number of observations) (Stark *et al.*, 1986: 259).

Equation (1) can be rewritten and expanded into an expression for the Gini co-efficient that captures the 'contribution to inequality' of each of the K components of income:

$$\begin{aligned}
 G &= \frac{2}{\mu n} \sum_{i=1}^n (y_i - E(y_i))(f(y_i) - E(f(y_i))) \\
 \Rightarrow G &= \frac{2}{\mu n} \sum_{i=1}^n \sum_{k=1}^K (y_{ik} - E(y_{ik}))(f(y_i) - E(f(y_i))) \\
 &\rightarrow G = \frac{2}{\mu} \sum_{k=1}^K \text{cov}[Y_k, F(Y)] \\
 \Rightarrow G &= \sum_{k=1}^K \left(\frac{\text{cov}[Y_k, F(Y)]}{\text{cov}[Y_k, F(Y_k)]} \right) \left(\frac{2}{\mu_k} \text{cov}[Y_k, F(Y_k)] \right) \left(\frac{\mu_k}{\mu} \right)
 \end{aligned}$$

where μ_k is the village mean income from source k and $F(Y_k)$ is the cumulative rank distribution of income from source k (i.e. $F(Y_k) = (f(y_{1k}), \dots, f(y_{nk}))$ where $f(y_{ik})$ is equal to the rank of y_{ik} divided by the number of observations).

Thus, using the notation of Stark *et al.* (1986: 259), the Gini co-efficient can be written as:

$$G = \sum_{k=1}^K R_k G_k S_k \quad (2)$$

where S_k is the share of source k income in total village income (i.e. $S_k = \mu_k / \mu$), G_k the Gini co-efficient measuring the inequality in the distribution of income component k within the

village and R_k the 'Gini correlation' of income from source k with total income³¹, defined as:

$$R_k = \frac{\text{cov}[Y_k, F(Y)]}{\text{cov}[Y_k, F(Y_k)]} \quad (3)$$

Equation (2) states that the effect of source k income on total village inequality can be divided into three components:

- (a) the share of income component k in total village income (captured by the term S_k);
- (b) the inequality of income from source k within the villages (measured by G_k); and
- (c) the correlation between source k income and total income (as measured by R_k).

The larger the product of these three components, the greater the contribution of income from source k to total income inequality. However, it must be noted that whilst S_k and G_k are always positive and less than one, R_k can fall anywhere on the interval $[-1, 1]$. When R_k is less than one, income from source k is negatively correlated with total income and thus serves to lower the overall Gini measure for the village.

Using this decomposition of the Gini co-efficient for total village income, it is possible to analyse how a change in the magnitude of village income from any particular source affects total income inequality within the village.

Following Stark *et al.* (1986: 273-275), assume that there is an exogenous increase in income from source j by some factor σ_j . Thus, the distribution of income from source j becomes $Y'_j = ((1 + \sigma_j)y_{1j}, \dots, (1 + \sigma_j)y_{nj})$. Let G be the Gini co-efficient before the change in income and $G(\sigma_j)$ the Gini co-efficient after the change in income. Equation (2) gives the expression for G . However, in order to derive an expression for $G(\sigma_j)$ after a change in income from source j by factor $(1 + \sigma_j)$, it is necessary to look at how the change affects each of G_k , R_k and S_k for $k=1, \dots, K$:

³¹In essence, R_k is a form of rank correlation co-efficient as it measures the extent to which the relationship between Y_k and the cumulative rank distribution of total income coincides with the relationship between Y_k and its own cumulative rank distribution.

- (a) Since we are dealing with a $(1+\sigma_j)$ times increase in y_{ij} for $i=1,\dots,n$, G_j does not change. Obviously for all $k \neq j$, G_k also remains unchanged.
- (b) Assuming that the change in income from source j is small enough to leave the ranking of total income unchanged, R_k , as a function of ranks of income, will remain unchanged.
- (b) Since S_k measures income component j 's share in total income, S_k for $k=1,\dots,K$ will obviously change if income from source j changes. Let us call each income component's new share in total income after the change in income component j , $S_k(\sigma_j)$.

Thus, we can write the Gini co-efficient after the change in income component j as:

$$G(\sigma_j) = \sum_{k=1}^K S_k(\sigma_j) R_k G_k$$

By definition, for $k \neq j$:

$$S_k(\sigma_j) = \frac{\mu_k}{\sum_{k=1}^K \mu_k + \sigma_j \mu_j}$$

while for income component j :

$$S_j(\sigma_j) = \frac{(1+\sigma_j)\mu_j}{\sum_{k=1}^K \mu_k + \sigma_j \mu_j}$$

Thus, the change in the Gini co-efficient (ΔG) stemming from the exogenous change in income from source j can be written as:

$$\Delta G = G(\sigma_j) - G = \sum_{k=1}^K [S_k(\sigma_j) - S_k] R_k G_k \quad (4)$$

For $k \neq j$, $S_k(\sigma_j) - S_k$ can be rewritten as:

$$S_k(\sigma_j) - S_k = \frac{\mu_k}{\sum_{k=1}^K \mu_k + \sigma_j \mu_j} - \frac{\mu_k}{\sum_{k=1}^K \mu_k} = \left(\frac{-\sigma_j \mu_k \mu_j}{\left[\sum_{k=1}^K \mu_k \right]^2} \right) / \left(\frac{\sum_{k=1}^K \mu_k + \sigma_j \mu_j}{\sum_{k=1}^K \mu_k} \right)$$

which simplifies to:

$$S_k(\sigma_j) - S_k = \frac{-\sigma_j S_k S_j}{1 + \sigma_j S_j} \quad (5)$$

Similarly, for $k=j$ it can be shown that:

$$S_j(\sigma_j) - S_j = \frac{\sigma_j S_j - \sigma_j S_j^2}{1 + \sigma_j S_j} \quad (6)$$

Substituting equations (5) and (6) into (4), a more detailed expression for ΔG is obtained:

$$\begin{aligned} \Delta G &= \sum_{k \neq j} \frac{-\sigma_j S_k S_j}{1 + \sigma_j S_j} R_k G_k + \frac{\sigma_j S_j - \sigma_j S_j^2}{1 + \sigma_j S_j} R_j G_j \\ \Rightarrow \Delta G &= \sum_{k=1}^K \frac{-\sigma_j S_k S_j}{1 + \sigma_j S_j} R_k G_k + \frac{\sigma_j S_j}{1 + \sigma_j S_j} R_j G_j \end{aligned} \quad (7)$$

In order to find the derivative of the Gini co-efficient with respect to σ_j , take the limit of equation (7) divided by σ_j as σ_j tends to zero:

$$\lim_{\sigma_j \rightarrow 0} \frac{\Delta G}{\sigma_j} = -S_j \lim_{\sigma_j \rightarrow 0} \sum_{k=1}^K \frac{S_k}{1 + \sigma_j S_j} R_k G_k + \lim_{\sigma_j \rightarrow 0} \frac{S_j}{1 + \sigma_j S_j} R_j G_j$$

Hence, it can be shown that the derivative of the Gini co-efficient with respect to a change in income source j is:

$$\frac{\delta G}{\delta \sigma_j} = -S_j \sum_{k=1}^K S_k R_k G_k + S_j R_j G_j = S_j (R_j G_j - G) \quad (8)$$

If $\delta G / \delta \sigma_j$ is negative then a marginal increase in income component j will lessen income inequality. This will be the case when:

- income from component j has either a negative or zero correlation with total income ($-1 \leq R_j \leq 0$); or
- income from source j is positively correlated with total income ($R_j > 0$) and $R_j G_j < G$.

Alternatively, in order for a marginal increase in source j income to worsen income inequality, it is necessary that $G_j > G$. (i.e. income from source j must be more unevenly distributed than total income). However, this condition alone is not sufficient for a change in income component j to worsen overall income distribution, as the sign of $\delta G / \delta \sigma_j$ will still be influenced by the strength of the Gini correlation between source j income and total income (Stark *et al.*, 1986: 260).

If equation (8) is divided through by G, it can be seen that:

$$\frac{\delta G}{\delta \sigma_j} \left(\frac{1}{G} \right) = \frac{S_j R_j G_j}{G} - S_j \quad (9)$$

Equation (9) states that the marginal percentage change in inequality (as measured by the Gini co-efficient) resulting from a small percentage change in income component j is equal

to component j 's share in total inequality less component j 's share in total income (Stark *et al.*, 1986: 260).

However, if one wants to examine how village welfare responds to changes in income from component j , the sign of $\delta G/\delta\sigma_j$ only tells part of the story. As Stark *et al.* (1986: 269) point out, an increase in source j income affects overall village welfare via two routes. Firstly, it raises average village income which generally has a positive effect on welfare, and secondly, it alters income distribution within the village (as measured by G) which has a positive or negative effect on welfare depending on whether income inequality has decreased or increased. To capture these two aspects of village welfare, Stark *et al.* make use of a village social welfare function of the form³²:

$$W = \mu(1-G) \quad (10)$$

where μ and G , as defined previously, are the village mean household income and the Gini measure of total income inequality respectively³³.

Assuming, as before, that there is an exogenous increase in income from source j by factor σ_j , then the sign of the change in welfare (as measured by equation (10)) can be evaluated by taking the derivative of W with respect to σ_j . That is:

$$\frac{\delta W}{\delta \sigma_j} = \frac{\delta \mu}{\delta \sigma_j}(1-G) - \mu \frac{\delta G}{\delta \sigma_j} \quad (11)$$

From the definition of μ it can be shown that $\delta\mu/\delta\sigma_j = \mu_j$. Substituting this result and equation (8) into equation (11), it can be shown that:

³²Hereinafter, this social welfare function will be referred to as the 'Stark-Yitzhaki welfare index'.

³³Stark *et al.* (1986: 278) suggest that one can devise a more realistic social welfare function:

$$W = \mu(1-\alpha G)$$

where α is a 'behavioural parameter' representing the welfare weighting of equity in the distribution of village income versus mean income. However, for simplicity's sake, for the purpose of calculation in this study (as in that of Stark *et al.*), it has been assumed that α equals one. This simplifying assumption is legitimate as it is the sign of $\delta W/\delta\sigma_j$ rather than the magnitude of W that is the objective of this analysis.

$$\frac{\delta W}{\delta \sigma_j} = \mu_j(1-G) - \mu \frac{\mu_j}{\mu}(R_j G_j - G)$$

which simplifies to:

$$\frac{\delta W}{\delta \sigma_j} = \mu_j(1-R_j G_j) \quad (12)$$

A closer look at equation (12) reveals that $\delta W/\delta \sigma_j$ is composed of two welfare effects:

- (a) A positive **mean income effect**; and
- (b) A **distribution effect**, the sign of which depends on the sign of the Gini correlation of income from component j with total income (R_j).

If R_j is negative, the distribution effect from an exogenous increase in component j reinforces the positive mean income effect (i.e. both effects act to increase village welfare). If R_j is positive, the distribution effect acts in the opposite direction to the mean income effect. However, since both R_j and G_j can never exceed one, the distributional effect can never outweigh the mean income effect. Thus, even if R_j is positive, an increase in income from component j unambiguously increases total village welfare (Stark *et al.*, 1986: 270).

Dividing equation (12) through by W it can be shown that:

$$\left(\frac{\delta W}{\delta \sigma_j}\right)\left(\frac{1}{W}\right) = S_j \frac{1-R_j G_j}{1-G} \quad (13)$$

This expression gives a measure of the marginal percentage change in welfare (as measured by the Stark-Yitzhaki welfare index) resulting from an exogenous small percentage change in income component j . As in the case of $\delta G/\delta \sigma_j$, and for the same reasons, $\delta W/\delta \sigma_j$ is always positive.

ii) *Gini Measures of Village Income Inequality*

Gini co-efficients for the three villages, for both the distribution of income and cash receipts, calculated using equation (1), are shown in Table 21. In all three villages, the co-efficients are lower than the 0.55 for the distribution of income in South Africa as a whole.

	Gini Co-efficient for the Distribution of:	
	Income	Cash Receipts
Rabula	0.371	0.339
Burnshill	0.404	0.459
Chatha	0.324	0.251

Table 21: Distribution of Income and Cash Receipts Within the Villages

From Table 21 two important observations can be made:

- (a) Income inequality, as measured by the Gini co-efficient, varies across the three villages with Chatha having the most egalitarian distribution of income and Burnshill the most uneven. This 'ranking' of inequality across the three villages can be clearly seen in Figure 1 showing the Lorenz curves for the distribution of income in each village.

None of the Lorenz curves intersect, with Rabula's Lorenz curve lying unequivocally between that of Burnshill (to its right) and Chatha (to its left). The very factors (superior education levels and location) that have enabled Burnshill (and to a lesser extent Rabula) to obtain relatively high levels of average household income, act as a major source of intra-village income inequality. As shown in Table 3, education is not evenly distributed within the villages and it is education which is the key to the skilled and semi-skilled jobs in the Ciskei civil service of which Rabula and Burnshill are geographically well situated to take advantage. Careers in teaching, nursing and agricultural extension require formal qualifications, whilst a matric (with no further

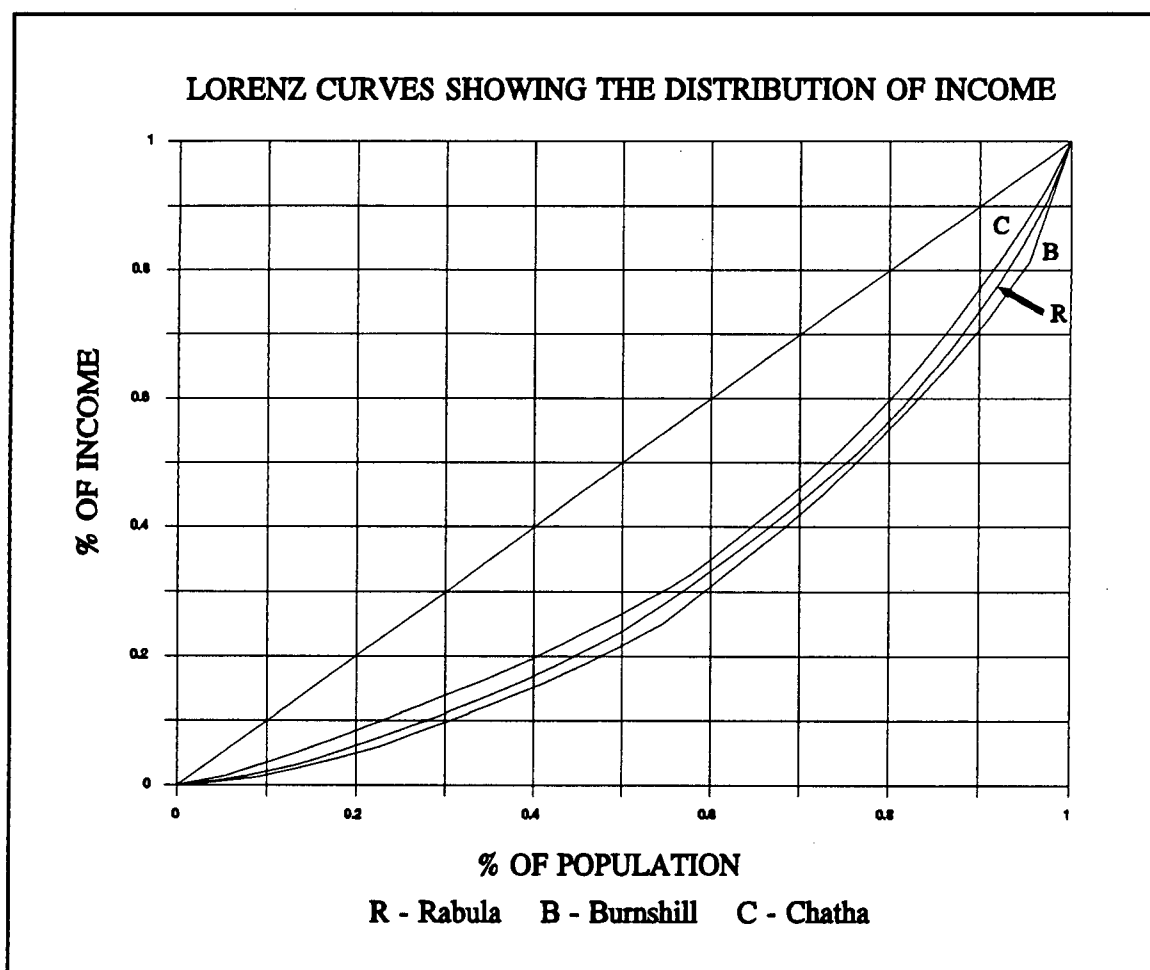


Figure 1

qualifications) opens up a number of clerical opportunities in the civil service. As seen previously, such jobs generally lead to higher remittances because, as well as being better paid than the more unskilled work of long term migrants, they enable the family member to maintain closer links with the rural base. Due to educational inequalities within the villages, not all households in Burnshill and Rabula have been able to access such jobs. Thus the creation of jobs via homeland government and decentralisation initiatives has led to a certain degree of class distinction within the area³⁴.

³⁴This is especially apparent in Burnshill where the older quitrent families, with their clear educational and property advantages, have achieved higher material living standards than families without title to land. These economic ('class') differences between the two groups add to the political ill-feeling that already exists between the quitrenters and landless families over access to residential sites on the commonage.

- (b) In Rabula and Chatha, cash receipts are more evenly distributed within the villages than income, whilst in Burnshill the reverse is true (see Table 21). This provides evidence of the existence of different sources of income inequality across the three villages, and necessitates the breakdown of the Gini measure by source of inequality.

iii) The Role of Migration in Village Income Inequality

In order to evaluate the effect of labour migration on village income inequality, total village income is divided into three components:

- (a) **remittances from short term commuters;**
- (b) **remittances from long term migrants; and**
- (c) **non-remittance income³⁵.**

Using equation (3), Table 22³⁶ shows the contribution of each of these sources of income to the Gini co-efficients of the three villages. The first column (S) shows that in each village non-remittance income constitutes between 50 and 60 per cent of total village income. However, the division of the remaining portion of village income between long term migrants' and short term commuters' remittances differs notably across the three villages, with Burnshill being heavily reliant on remittances from short term commuters and Chatha being largely dependent on the remittances of long term migrants.

The second column (G) in Table 22 shows the Gini index for the inequality of each of the sources of income within the three villages. It can be seen that Burnshill and Rabula have notably higher Gini measures for non-remittance income than Chatha. This confirms the view that not only have the villages of Rabula and Burnshill enjoyed significant locational advantages over Chatha in the generation of income at the rural base, but also that access to these advantages has not been evenly distributed amongst households within the villages.

³⁵This category includes all income not in the first two categories and thus, necessarily contains remittances from members of separate households that cannot be classified as remittances from 'commuters' or 'migrants'. However, such amounts constitute an extremely small and insignificant portion of total income (see Table 18). Thus, non-remittance income is almost exclusively income generated or received within the Keiskammahoek district (for example, agricultural income, pensions, locally earned wages and salaries, etc.).

³⁶The breakdown of the Gini measures is presented in a similar format to that used by Stark *et al.* (1986).

Village and Income Source	Share in Total Household Income (S)	Gini Co-efficient for Income Source (G)	Gini Correlation with Total Income Rankings (R)	Contribution to the Gini Co-efficient of Total Income (SGR)	Percentage Share in Gini of Total Income
RABULA					
Non-Remittance Income*	0.568	0.510	0.782	0.227	61.0%
Short Term Commuters' Remittances	0.240	0.709	0.692	0.118	31.7%
Long Term Migrants' Remittances	0.193	0.614	0.225	0.027	7.3%
Total Income	1.001	0.371	1.000	0.372	100.0%
BURNSHILL					
Non-Remittance Income*	0.589	0.583	0.638	0.219	54.2%
Short Term Commuters' Remittances	0.323	0.747	0.686	0.166	41.1%
Long Term Migrants' Remittances	0.088	0.809	0.270	0.019	4.7%
Total Income	1.000	0.404	1.000	0.404	100.0%
CHATHA					
Non-Remittance Income*	0.545	0.307	0.678	0.113	35.1%
Short Term Commuters' Remittances	0.118	0.892	0.659	0.069	21.4%
Long Term Migrants' Remittances	0.336	0.591	0.707	0.140	43.5%
Total Income	0.999	0.324	1.000	0.322	100.0%

Table 22: Decomposition of Gini Co-efficients

[* 'Non-Remittance Income' includes all income that is not from short term commuters' and long term migrants' remittances.]

Indeed, the ranking of the villages in terms of inequality of non-remittance income mirrors their ranking in terms of total income inequality (Burnshill being the most uneven and Chatha the most even).

Chatha's more egalitarian distribution of non-remittance income is largely due to the relative importance of Ciskei government pensions in total village income. Unlike other sources of income, these pensions are not linked to social stratifying factors such as education and wealth, and thus are generally more evenly distributed within the village than other components of income³⁷. In Burnshill and Rabula, the relative equality of access to pensions across the village is largely 'cancelled out' by more unevenly distributed income components that are larger in size relative to pensions than in the case of Chatha.

Looking at the third column in Table 22 (R), it can be seen that in Rabula and Burnshill, non-remittance income and remittances from short term commuters have relatively high Gini correlations with total income (over 0.6 in each case) whilst remittances from long term migrants have less than half the degree of correlation (below 0.3). This suggests that the families in Rabula and Burnshill with the highest income levels are generally not dependent on long term migrants for significant portions of income. On the other hand, in Chatha, all three sources of income enjoy a relatively high measure of Gini correlation with total income (above 0.6).

The last column in Table 22 shows that in Rabula and Burnshill, non-remittance income 'contributes' over half, and short term migrants' remittances over 30 per cent, of the Gini co-efficient for the distribution of total income. In both villages long term migrants' remittances, due to their low shares in total income (low S values) contribute less than 10 per cent to the overall measure (despite this income component having a high Gini measure itself). In Chatha, contributions to the total Gini co-efficient are more evenly spread across

³⁷In as much as life expectancy is skewed by wealth and education levels within villages, it could be argued that there is not equal access to old-age pensions within a village. However, such a bias within any village is likely to be extremely small and old-age pensions, in general, appear to be the most egalitarian component of income.

the three components of income, ranging from 21.4 per cent in the case of short term commuters' remittances to 43.5 per cent in the case of remittances from long term migrants.

The large share of non-remittance income and short term commuters' remittances in total income inequality in Rabula and Burnshill means that it is the factors causing the inequality in these two components that are responsible for the more skewed overall income distribution in Rabula and Burnshill than in Chatha. As has been mentioned before, the skewed education levels within Burnshill and Rabula (and the resultant skewed access to spatially-related opportunities) appears to explain the skewed distribution of these two income components, and hence overall income, in these two villages. Chatha, on the other hand, without the educational and geographic advantages of the other two villages, 'by default' has a more even income distribution. Thus, it appears that at a microeconomic level, a type of *Kuznets' 'inverted U' relationship* exists, with the three villages studied currently falling on the upward sloping section of the '*inverted U*' (i.e. as average household income levels rise as we move from Chatha, the least developed village, to Burnshill, the most developed, income distribution becomes more skewed).

iv) The Link between Migration and Rural Income Distribution

Assessing the exact effect of migration on village income inequality is a complex task. Stark *et al.* (1986) believe that the impact of migration on village income distribution changes over time. They suggest that initially it is only the best educated that migrate from the rural base and thus, at the outset of migration, village income distribution is skewed by migration. However, over time, as education levels within the village rise and migration networks are established, migration becomes open to increasing numbers of village residents. Thus, they argue, at some point in a village's migration history, migration starts to play an equalising role in village income distribution.

The evidence from these three villages supports this view. Income distribution in Rabula and Burnshill, with higher levels of education, economic development and migration³⁸ than Chatha, is equalised by migration. Evidence of this is found in the second column (G) of Table 22, which shows that the Gini indices of 0.510 and 0.583 for the distribution of non-remittance income in Rabula and Burnshill respectively, are lowered to overall levels of 0.271 and 0.404 respectively after the inclusion of migration (both long term and short term) in the calculation. In Chatha, the reverse situation is found with the Gini measure of 0.307 for the distribution of non-remittance income being raised to 0.324 by the incorporation of both types of migration in the calculation. Thus, in terms of Stark *et al.*'s analysis, as education levels improve in Chatha one would expect migration to have a more equilibrating effect on village income distribution.

v) The Effect of Changes in the Magnitude of Components of Village Income on Distribution and Village Welfare Levels

The fact that migration in general, currently plays an equalising role in income inequality in Rabula and Burnshill and an opposite role in Chatha, in no way explains how village income inequality will respond to changes in the magnitude of different components of income. To see this it is necessary to look at Table 23, showing the response of the Gini co-efficients in the three villages to exogenous proportionate changes in the different income components.

Table 23 shows that in each village an exogenous proportionate increase in short term commuters' remittances will worsen village income distribution (in each case, $\delta G/\delta\sigma_2 > 0$). This would appear to be due to the already mentioned fact that most short term commuters' jobs require education which is generally fairly unevenly distributed within the villages and it is only the best educated that are able to become short term commuters. In other words, if the income, and consequently the remittances, of these commuters were to rise, with all else remaining equal, one would expect overall income distribution to become more skewed.

³⁸Houghton and Walton (1952) point out that in 1949, due to local employment opportunities (and presumably its isolated location), Chatha had relatively low levels of migration compared to Rabula and Burnshill. This suggests that in fact, Rabula and Burnshill, have enjoyed a 'head-start' in migration over Chatha.

Village and Income Source	The Effects of an Exogenous σ_j Change in Income Component j on Overall Village Income Inequality.	
	The Derivative of the Village Gini Co-efficient*. $\delta G/\delta \sigma_j$ [Equation (8)]	The Marginal Percentage Change in the Village Gini Co-efficient. $(\delta G/\delta \sigma_j)(1/G)$ [Equation (9)]
RABULA		
Non-Remittance Income (σ_1)	0.016	0.043
Short Term Commuters' Remittances (σ_2)	0.029	0.077
Long Term Migrants' Remittances (σ_3)	-0.045	-0.121
BURNSHILL		
Non-Remittance Income (σ_1)	-0.019	-0.047
Short Term Commuters' Remittances (σ_2)	0.035	0.087
Long Term Migrants' Remittances (σ_3)	-0.016	-0.040
CHATHA		
Non-Remittance Income (σ_1)	-0.063	-0.195
Short Term Commuters' Remittances (σ_2)	0.031	0.096
Long Term Migrants' Remittances (σ_3)	0.032	0.097

Table 23: Sensitivity of the Village Gini Co-efficient

[* The derivatives are calculated for a *ceteris paribus* change in income component j. They do not show the effect of a re-allocation of labour amongst income components.]

This finding has important ramifications for the restructuring of the homelands. If these villages are indeed representative of the Ciskei, any policy changes that decrease civil service size or wages (such as changes to the homeland system) and consequently decreased short term commuters' remittances, would decrease rural inequality. Thus, these results suggest that the homeland system, along with decentralisation, by increasing the income-earning

opportunities for skilled and semi-skilled people within short term commuting distance of the rural base, has worsened rural income distribution.

In both Rabula and Burnshill, income distribution would be improved by increases in remittances from long term migrants ($\delta G/\delta\sigma_3 < 0$). This is due to the low Gini correlation of this component of income with total income. However, in Chatha, where the Gini correlation of long term migrants' remittances with total income is much higher and these remittances contribute a greater share of the total Gini measure than in the other two villages, an increase in remittances from long term migrants will worsen overall income distribution ($\delta G/\delta\sigma_3 > 0$). The ambiguity in the sign of $\delta G/\delta\sigma_3$ across the three villages has an important implication for policy analysis. Any policy or wage bargaining that increases the wages of unskilled workers in urban areas, within whose ranks there are considerable numbers of long term migrants from rural areas, could worsen (as in the case of Chatha) or improve rural income distribution (as in the case of Burnshill and Rabula), depending on the Gini correlation of remittances from these workers with overall rural income distribution.

However, in order to make a fuller assessment of possible policy implications it is insufficient to merely consider the distributional effects of changes in components of income. Consideration also has to be given to welfare effects of potential policy. From a national perspective this is a difficult matter because, as Harris and Todaro (1970), Stiglitz (1974), Corden and Findlay (1975) and Cole and Sanders (1985) point out, all policy, rural and urban, has implications for both the urban and rural welfare. Indeed, policy often has contradictory welfare effects for urban and rural areas, which have to be netted off against each other to arrive at the overall welfare effect of a policy for the economy as a whole. This is particularly the case regarding policy aimed at influencing migration, with its obvious effects on both rural and urban areas.

No consensus in the literature appears to have been reached as to the overall national welfare effects of migration. Whilst it is fairly unanimously held that migration improves rural welfare, authors differ as to the national welfare effects. Without considering the distributional effect on rural income of migration, Harris and Todaro (1970), in a two-sector

Village and Income Source	The Marginal Percentage Change in the Village Welfare Index Resulting from an Exogenous σ_j Change in Income Component j. $(\delta W/\delta\sigma_j)(1/W)$ [Equation (13)]
RABULA	
Non-Remittance Income (σ_1)	0.543
Short Term Commuters' Remittances (σ_2)	0.194
Long Term Migrants' Remittances (σ_3)	0.264
BURNSHILL	
Non-Remittance Income (σ_1)	0.621
Short Term Commuters' Remittances (σ_2)	0.264
Long Term Migrants' Remittances (σ_3)	0.115
CHATHA	
Non-Remittance Income (σ_1)	0.638
Short Term Commuters' Remittances (σ_2)	0.072
Long Term Migrants' Remittances (σ_3)	0.289

Table 24: Sensitivity of Village Welfare Levels

analysis of migration, argue that whilst possibly reducing national welfare, migration unambiguously enhances rural welfare. Cole and Sanders (1985), in a similar analysis, taking into account different skill levels of migrants, contend that as migrants tend to be more productive in their jobs away from the rural base than they would be at the rural base, migration indeed improves overall national welfare.

This study, just like that of Stark *et al.* (1986), whilst not directly focused on the national welfare implications of migration, provides evidence in support of the theoretical result of both Harris and Todaro (1970) and Cole and Sanders (1985) that migration categorically increases **rural** welfare. Indeed, it has already been shown in the theoretical discussion of

the Stark-Yitzhaki welfare index, that an exogenous increase in any of the components of rural income has a positive effect on rural welfare.

Table 24 shows the percentage changes in rural village welfare³⁹ caused by a one per cent change in each income component. From this table, it can be seen that whilst an increase in any income component would have a positive effect on welfare⁴⁰, a one per cent increase in non-remittance income would produce a larger increase in welfare than a one per cent increase in either one of the other two income components. Whilst this result is largely due to the fact that non-remittance income is a large component of total village income in each village, it stresses the importance of providing income-earning opportunities in the rural areas in order to increase rural welfare. However, as in any policy formulation, policy-makers must bear in mind the costs of policy aimed at increasing different components of rural income⁴¹.

Table 24 also serves as a warning for the restructuring of the homelands and current decentralisation incentives, no matter how economically inefficient they are. Harris and Todaro (1970), in their two sector analysis of migration, showed that whilst increasing national welfare, restricting migration will unambiguously decrease rural welfare. Thus, any re-incorporation of the homelands into South Africa that placed limits on migration (for example, by decreasing the opportunities for short term commuting) would harm village welfare.

This study supports this view. It was argued above that a decrease in skilled and semi-skilled job opportunities in the homelands and surrounding centres, caused, for example, by the restructuring of decentralisation policy and the homelands, by reducing the remittances from short term commuters, would improve rural village income distribution. However, such a decrease would reduce overall rural village welfare as the attendant negative 'mean income'

³⁹As measured by the Stark-Yitzhaki welfare index described by equation (10) (Stark *et al.*, 1986: 269).

⁴⁰As demonstrated in the theoretical discussion above.

⁴¹In practice this welfare analysis is far too simplistic. In reality, policy changes relative prices facing rural households and in so doing alters overall family behaviour, thereby rendering partial derivative analysis of G and W, with respect to changes in σ_j , impossible.

welfare effect would outweigh the positive 'distribution' welfare effect. Thus, if the homelands are to be re-incorporated into greater South Africa, careful attention has to be paid to the existing homeland bureaucracies.

Currently, the homelands and decentralisation policy, however inefficient, constitutes an important redistributive mechanism within South Africa. Streamlining these bureaucracies and cutting inefficient decentralisation incentives, without adequate compensating regional policy, would undoubtedly have negative welfare implications for rural Ciskei villages. This danger of reducing already low rural welfare levels, seen against the backdrop of current political dissatisfaction within the homelands and the high population levels in these areas, serves to underline the importance of regional policy in a future South Africa.

CHAPTER 5

ON-GOING TEMPORARY (OSCILLATING) MIGRATION

Contrary to the predictions of radical writers that temporary migration⁴² would be replaced by permanent out-migration upon the ending of influx control, this thesis presents evidence of the importance of on-going temporary migration. Whilst migrants' destinations, jobs, and the frequency of their visits home have, in many instances, changed since the earlier Keiskammahoek study (Houghton and Walton, 1952), the system of temporary migration has remained largely intact.

In saying this, one is not denying the existence (and importance) of permanent emigration from the area, but rather noting that the extent of on-going temporary migration appears to be in conflict with the experience of urban transition in the developed world.

Mabin (1990) points out that this is indeed a phenomenon found throughout the developing world.

Based on the history of developed economies, one would expect South Africa, given its current stage of development, to have a higher degree of urbanisation than it has. South Africa has exhibited slower rates of permanent urbanisation than conventional urban transition models predict for a country with South Africa's level of economic development. South Africa is still relatively under-urbanised compared to countries with similar economic structures and levels of per-capita income. It has been estimated that in 1985 approximately 53 per cent⁴³ of South Africa's Black population was effectively urbanised (Urban Foundation, 1990), compared to the average 1980 urbanisation level of 63 per cent for the so-called 'upper middle-income economies' that South Africa is classified with by the World Bank (Development Bank of Southern Africa, 1987: 7).

⁴²The broad label 'temporary migrants' is used here to cover both 'long term migrants' and 'short term commuters', who ultimately return or intend to return to the rural base (even if only at the end of their working lives).

⁴³This urbanisation measure includes all residents of dense settlements that are 'functionally urban', wherever they are located within South Africa.

Thus, given the existence of forces (such as agglomeration economies in urban areas and structural under-employment in rural areas) driving South Africa to ultimately higher levels of urbanisation, it is necessary to examine the **factors currently retarding permanent emigration from rural areas**. These factors clearly extend far beyond historical institutional barriers to urbanisation due to *Apartheid*. Mabin (1990) suggests that it is necessary to revise traditional models of urban transition in order to explain persistent temporary migration. This task has to be tackled at the household level, and based on the results of this survey presented in this chapter a number of factors contributing to the persistence of temporary migration can be isolated.

5.1. Risk and the Rural Family

The economic environment in which rural families exist is subject to a high degree of uncertainty, a considerable component stemming from rural households' involvement in agricultural activity. As Deaton (1991: 1) points out:

Agricultural income is inherently uncertain. Weather, pests, disease and fire make yields uncertain, and the variability of agricultural prices can generate fluctuations in farmers' incomes even when output is stable.

This uncertainty adds to the problem of low household agricultural incomes stemming from poor agricultural production in the homelands, which, as Simkins (1981: 262) points out, has been declining since the early 1950's.

However, instability of agricultural incomes is by no means the only source of income variability in the rural areas. As has been shown earlier, unemployment in rural areas tends to be high (especially at the lowest skill levels), leading to significant risk being associated with wage employment in the rural areas. This adds to the potential variability of rural incomes.

This variability in income poses a serious problem for rural households. Becker (1965 and 1988) suggests that rural households do not necessarily act purely so as to maximise expected income, but rather to maximise potential utility. Thus, households are as concerned with the **timing and source** of future income streams, as with their discounted present value.

However, rural households, constrained by poor education levels and low income levels, generally have limited access to commercial schemes devised to deal with uncertainty (for example, insurance policies) and are consequently forced to make use of alternative risk-management strategies.

As Guillet (1982) and Deaton (1991) point out, rural households, like any other economic units, respond to uncertainty by attempting to **diversify** and shed risk. Deaton (1991), focusing on agricultural uncertainty, discusses a variety of ways in which households can 'provide insurance' for their own consumption by consuming on the basis of their permanent, rather than their actual, incomes and:

sharing among individuals who are sufficiently well known to each other, so that moral hazard is weak enough to permit substantial pooling of risk. (Deaton, 1991: 1-2).

Guillet (1982: 9-12) cites a number of rural household risk-reducing strategies, that can be divided into two broad categories. Firstly, Guillet points out that households respond to risk by adopting '**mixed**' **agricultural strategies**. Amongst other risk-avoidance tactics, households diversify their crops, make use of 'inter-cropping' and adopt a mixed agro-pastoral strategy. Secondly, Guillet suggests that in response to risk, rural families attempt to achieve a diversified combination of productive activities within the household, a strategy which he describes by the term "polyvalency" (Guillet, 1982: 12). Temporary migration is an important component of this strategy.

In this light, the **spatially diverse household**, linked by a system of oscillating migration, can be viewed as a rational, welfare-maximizing household strategy to deal with financial risk⁴⁴. The placing of family members in spatially and sectorally diverse urban jobs achieves a diversified household income portfolio. The agricultural activity at the rural base is just a 'cheap' component of this diversified portfolio (cheap in the sense that it has low associated opportunity costs). A family's stockholding at the rural base provides a form of

⁴⁴In terming a household 'rational', it is simply assumed that the household acts in what it perceives as its own interest, given its educational and cultural background.

saving that can be drawn upon in bad times. Indeed, Table 11 provides evidence of Chatha households making such 'stock withdrawals' over the survey period.

Thus, the maintenance of a rural base (and consequently temporary migration) is likely to continue to be an important component of rural households' risk-management strategy until families start utilising commercial risk-spreading and savings mechanisms. Access to such mechanisms is dependent on both education and income levels. As has been seen in Tables 10, 12 and 13, the level of rural household incomes is notably dependent on remittances, and consequently, on urban incomes. Thus it appears that a rise in urban wages large enough to allow households access to risk-management strategies adequate for the entire family is a necessary condition for any shift to permanent emigration from rural areas.

5.2. The Rural Base as Security for Retirement

Insurance against fluctuations in the urban labour market is not the only form of security that the rural base provides. Being able to return to the rural base upon retirement, constitutes an important source of security for a migrant in his or her old-age. The migrant knows that he or she will be relatively well cared for by the next generation of the family. As has been mentioned previously, Lucas and Stark (1985) suggest that migrants' remittances can in some ways be likened to contributions towards their 'retirement fund'.

Few migrants have jobs with pensions large enough to enable them to maintain the same standard of living after retirement in the urban area as they can achieve by retiring to the rural base. Evidence of the low levels of private, 'work' pensions can be seen in Table 10. In each village this component of income constitutes only a small share of total village income.

For there to be any significant move towards permanent migration from rural areas, migrant workers would require wages or salaries high enough to allow them to contribute to **pension schemes** that would enable them to retire to the same perceived standard of living in the urban area as they can currently retire to in the rural area. The issue of pension schemes is

an area that requires future research and is likely to be a key determinant of demographic trends in a future South Africa.

5.3 Land Tenure

Current land tenure arrangements play an important role in explaining the slower than expected rate of permanent emigration from the rural areas. Three main categories of land tenure (trust, quitrent and freehold tenure) are represented in the sample studied, each with its attendant barrier to economically efficient permanent out-migration from rural areas.

A family that has access to a trust field possesses an asset that it **cannot convert into cash**. Trust title cannot be traded. If the family was to move to town on a permanent basis, it would have to relinquish its land. Even if a field is under-utilized, it provides a family with a **potential** means of income during hard times. This security cannot be costlessly replicated in an urban area.

Access to a field also provides considerable social and psychological benefit to household members. A temporary migrant finding him- or herself unemployed can return to the rural base and work on the family field (even if the worker is under-employed doing so). Thus, he or she avoids some of the loss of self-worth associated with 'sitting idle' when not employed. Being unemployed in the rural area is thus not only less costly than being unemployed in the urban area, but also psychologically preferable. Not only is there some work to do, but also the close cultural links between families in a rural village provide a form of security to an unemployed person unattainable in an urban environment.

Until a trust family can convert the full value of their field into cash, they will perceive this value as a cost of permanent migration. Thus, if one considers the Todaro (1969) approach to migration, the 'critical' level of expected urban income that will induce a family to migrate would be increased by this value. Hence, trust tenure provides a significant barrier to the mobility of households.

If tradeable title to land is all that is required to prompt permanent migration, the question arises as to why temporary migration is still so prevalent amongst freehold and quitrent families. This question can only be answered in light of the serious imperfections in the market for such land.

Despite the fact that freehold and quitrent title can be transferred by sale, various social and cultural factors restrict the freedom with which land is sold. The village authorities, whether they are the headmen or the residents' committees, are generally perceived as having some say over who moves into an area. Whilst these authorities cannot actually prevent sales, their sanction of newcomers is culturally important. It is generally perceived that the village authorities should look after their community to a certain degree, and thus newcomers should be approved by the authority⁴⁵. Any sanction over the sale of land, be it **real or perceived**, pushes down the price of land and limits the volume of land traded. Consequently, freehold and quitrent landholders cannot currently convert their land into an equivalent urban asset. The barrier to permanent migration constituted by an absence of free-functioning rural land market was pointed out by Elkan (1959: 195) who, in a study of migration in Kenya, pointed out that:

if the future income of a farm, however small, cannot be capitalised, the farm must exercise a strong pull. So long as a man cannot obtain compensation for vacating his land ... he has no inducement to vacate it.

Thus, freehold title and an active market in land (free of social restrictions) appear to be necessary conditions for any move towards permanent migration.

Despite such market imperfections, De Wet *et al.* (1992) has found evidence of limited sale of freehold land in Rabula which would tend to suggest the potential for a more active rural land market in the event of the elimination of the aforementioned market inefficiencies.

This call for freehold title is independent of any of the purported direct agricultural benefits of freehold title. Development theorists often suggest that freehold land tenure places the landholder in a favourable position for securing loans and thus modernizing the farming

⁴⁵Sales between parties from within the same village are not subject to such social censure.

operation. However, the small size of the majority of freehold plots, and their being scattered between commonage and trust land, prevent them from constituting practical security for loans. In this study, no significant difference has been found between the agricultural performance of freeholders and trust farmers, and thus the suggestion of freehold title above is put forward purely for the purpose of increasing population mobility⁴⁶.

Economic theory suggests that in the event of converting title to freehold, the first families to sell and permanently migrate would be the least efficient farmers and those least interested in small scale agriculture. These families' plots are most likely to be bought by the more efficient farmers who could then start to reap economies of scale. Despite agricultural performance being poor across all the different categories of landholders, there were a few notable exceptions in each category that produced promising results, and constitute the most likely early buyers in a 'fledgling' land market. However, for this to happen there would have to be a concurrent weakening in the cultural preference to hold agricultural land, even when one does not intend to use it.

5.4. Urban and Rural Housing

Rural households are further discouraged from permanent emigration from rural areas by:

- a shortage of urban housing and sites (coupled with 'harsh' urban building regulations relative to the unregulated rural areas) pushing up the price of urban housing relative to rural housing; and
- relatively imperfect markets for rural housing compared with urban housing further widening this price differential.

Thus, the amount a rural household is likely to receive by selling its home is likely to fall well short of the price of an equivalent urban home. This means that a rural family permanently migrating to an urban area will either require a bond or have to rent accommodation. Both options constitute significant barriers to permanent migration. Taking

⁴⁶It must be noted that De Wet and Leibbrandt (forthcoming) found that, in general, trust farmers outperform freeholders in terms of maize yield. However, due to the small scale of the farming operations by both categories of landholder, this difference in yield results in very little absolute divergence in their agricultural production (see Appendix D).

out a bond requires a family to have access to sufficient income over a long period of time. This is only likely in the case of families with well-educated members with relatively skilled jobs who are currently the least likely to migrate permanently due to their success in accessing economic opportunities close to the rural base.

Thus, more efficient rural housing markets and a greater supply of affordable urban housing are obvious facilitating factors for a switch from systems of temporary migration to permanent emigration.

It must be noted that none of the changes in pensions, land tenure and housing markets outlined above are, on their own, sufficient to facilitate a shift towards permanent migration. They simply constitute necessary conditions for such a shift.

5.5. Concluding Comments and the Direction of Future Research

This thesis has attempted to provide an insight into the measurement, adequacy, sources and distribution of rural incomes in the three Keiskammahoek villages studied. In so doing, it has been shown that whilst enhancing rural welfare, different forms of migration can have different distributional effects in rural areas depending on the education and migration history of the village concerned. This, it has been argued, has an important message for policy-makers in the way it highlights the importance of the current homeland and decentralisation system (however much the political disapproval) in rural welfare.

Furthermore, the likelihood of continued temporary migration has been demonstrated, thereby providing empirical support for Bell's (1972) theoretical conclusion and Mabin's (1990) suggestion that even in the absence of *Apartheid* laws, it is possible that temporary migration will persist in South Africa in the long run.

The analysis in this dissertation has concentrated on the rural end of the spatially extended rural household. However, migrants' behaviour is influenced by 'both the urban and rural sides of the migration equation'. Thus, there is a limit to the conclusions that can be drawn

from such a study without more detailed information on the urban living conditions and arrangements of migrants.

Consequently, there is a need for future research that captures both the rural and urban ends of the same sample to essentially 'close the migration model'. However, such data cannot be obtained from a rural survey alone and the logistical requirements of chasing up the urban end of a rural sample (or *vice versa*) are immense. Rural household members, whilst by and large being able to accurately supply information on migrants' remittances to the rural base, are generally not in a position to supply sufficient information on migrants' work to arrive at sufficiently accurate proxies for migrants' urban wages. Indeed, migrants often actively shield this level of information from rural household members to prevent them from being in a position to make value judgements as to the adequacy of migrants' remittances relative to their total salary. This lack of data prevents valuable modelling of remittance behaviour in the manner of Lucas and Stark (1990).

What has become clear from the survey is the extent to which the villages differed in sources of income and access to employment. Burnshill provides an example of a village that, in support of the view of Graaff (1987), can be regarded as functionally urbanised, in terms of both household activities and aspirations. The error of regarding Burnshill families as peripheral agricultural units has been amply demonstrated by the aforementioned difficulties experienced by the irrigation schemes. Chatha, on the other hand, continues to conform more closely to the 'stereotype' of a poor rural village dependent on long term migrants, with Rabula falling somewhere between these two polar extremes, showing characteristics of both. Thus, policy-makers must be sensitive to the problem of broadly assuming that rural households are generally homogeneous and consequently respond to similar signals. The apparent success of the best educated households in all the villages confirms the value of non-specific human capital in the rural context, and provides a signpost for the way forward in achieving economic development in these areas.

CHAPTER 6

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APPENDIX A

HOUSEHOLD QUESTIONNAIRE

**KEISKAMMAHOEK RURAL
SURVEY 1990**

Detailed Household Questionnaire

CONFIDENTIAL

Date of interview _____

Type of land access _____

SECTION A - HOUSEHOLD DEMOGRAPHIC INFORMATION

- (1) Household surname _____
- (2) Household head's name - Xhosa _____
English _____
- (3) Respondent's first name - Xhosa _____
English _____
- (4) Number of people in the household at present _____
- (5) Number of people currently living at home _____
- (6) Number of people away from the rural base _____
(whether working, studying or unemployed)

SECTION B - HOUSEHOLD LABOUR INFORMATION

(1) Household demographic and education data.

Individual	Age	Sex	Relationship with Household Head	Mother's Name	Spouse's Name (if married)	Place of Birth	Is the Person Currently Busy with their Education? (yes/no)	Highest Standard Reached	Post-School Training	How was Tertiary Education Financed?

(2) Details of all persons not currently busy with their education (and those still busy with their education living away from the rural base).

Individual	Occupation	Place of Employment	Place of Residence	Employer's Name	Employer's Main Activity	Salary / Income	When last at Home	Length of the Visit	Average No. of Visits Per Year

(3) Cash remittances over the preceding 12 months.

Individual	Oct 89	Nov 89	Dec 89	Jan 90	Feb 90	Mar 90	Apr 90	May 90	Jun 90	Jul 90	Aug 90	Sep 90

(4) Remittances in the form of goods (particularly groceries) over the last 12 months.

Individual	Oct 89	Nov 89	Dec 89	Jan 90	Feb 90	Mar 90	Apr 90	May 90	Jun 90	Jul 90	Aug 90	Sep 90

(5) Remittances in the form of account / hire purchase payments over the last 12 months.

Individual	Type of Goods Purchased	Total Amount of Payments over the Year	Period Over which Payments were Made & How Often within the Period	Paid to ...

(6) Household Members that have permanently migrated from the rural base within the last 10 years.

Individual	Education Level	Year of Migration	Married at Time of Migrating?	Married Now?	When Were they Married?	Occupation	Place of Employment
Individual	Place of Residence	Salary / Income	Employer's Name	Employer's Main Activity	When Were They Last at Home?	Length of the Visit?	Average No. of Visits Per Year

SECTION C - HOUSEHOLD LAND-HOLDING

(1) Household's access to land.

Type of Land	Piece Number	Type of Access (Title)	If Land is Rented ...		Approximate Size
			From Whom?	Amount of the Rental?	
Homestead Plot	1				
	2				
	3				
Garden (Within the Homestead)	1				
	2				
	3				
Arable Land	1				
	2				
	3				
Grazing Land	1				
	2				
	3				
	4				

- (2) Did you rent out or lend out any of your land this season, during the 1989/90 season or during the 1988/89 season? _____

Season	Plot Size	To Whom? (Relationship to head)	Rent or Lend?	Rental?

- (3.1) Did you plant or plough your garden or arable land in either of the seasons:

	1988/89	1989/90
(3.1.1) Garden?		
(3.1.2) Arable Land?		

- (3.2) If answer to either (3.1.1) or (3.1.2) was "no", why not?

- (3.3) If answer to either (3.1.1) or (3.1.2) was "yes", then what area was planted?

	1988/89	1989/90
(3.1.1) Garden?		
(3.1.2) Arable Land?		

- (3.4) If the whole area of either the garden or arable land was not planted, why not?

- (4) Is there a fence around your garden? _____

- (5) Is the arable land fenced off from the grazing land? _____

- (6) Is your land irrigated? _____

If so, give details of type of irrigation: _____

SECTION D - ASSET HOLDING AND USAGE

(1.1) Does the household own any vehicles (car, bakkie, truck, mini-bus, tractor, etc.)?

Vehicle type: _____ Owner: _____
 _____ Owner: _____

(1.2) Are any of the vehicles used for commercial purposes? _____

If "yes", give the following details:

Vehicle	Rented to whom?	How Often do You Rent it Out?	Rental

(2) Inventory of the household's larger furniture items.

Item	Quantity	Paid for by?	Item	Quantity	Paid for by?
Generator			Kitchen Unit		
Television			Coal Stove		
Lounge Suite			Other (specify):		
Dining Room Suite					
Bedroom Suite					

(3.1) Inventory of household's equipment.

Item	Quantity	Paid for by?	Item	Quantity	Paid for by?
Plough			Shovel		
Hoeing Plough			Spade		
Disc Planter			Fork		
Spike Harrow			Rake		
Cart / Wagon			Hand-hoe		
Sledge			Pick		
Water Tank			Axe		
Grain Tank			Other (specify):		
Wheelbarrow					

(3.2) Do you use any of your equipment for commercial purposes? _____

If "yes", give the following details:

Equipment	Rented to whom?	How Often do You Rent it Out?	Rental

(4) Do you rent equipment or machinery (or any other large items) from anybody? (include borrowed equipment here) _____

If "yes", give the following details:

Equipment	Quantity	Rented From Whom?	Frequency of Use?	Annual Rental Cost
Tractor				
Oxen				
Other (specify):				

SECTION E - HEALTH AND LIVING STANDARDS

- (1.1) What is your source of:
 - (1.1.1) Drinking Water? _____
 - (1.1.2) Water for Other Purposes? _____
- (1.2) If you use a water tank(s), for how many months of the year can you rely on it (them)? _____
- (1.3) Apart from your tank(s), what is your nearest source of water? _____
- (1.4) Approximate distance? _____
- (1.5) How do you fetch the water? _____
- (1.6) Approximate time taken to fetch water (there & back)? _____

- (2) What energy source do you use for:
 - Cooking? _____
 - Lighting? _____

- (3) Give details of household toilet facilities. _____

SECTION F - CROP DETAILS

Crop	1988/89 Season					1989/90 Season				
	Planted (Yes/No)	Yield (off the cob)	Month Planted	Month Harvested	Area of Land Planted	Planted (Yes/No)	Yield (off the cob)	Month Planted	Month Harvested	Area of Land Planted
Maize										
Sorghum										
Melon										
Pumpkin										
Green Beans										
Cabbage										
Potatoes										
Spinach										
Other (list):										

(Remember that more than one type of crop can be grown in a field.)

SECTION G - CROP SALES

(1.1) Did you sell any of your crop production from:

(1.1.1) 1988/89? _____

(1.1.2) 1989/90? _____

(1.2) If "no" to either of the above, why not? _____

(1.3) If "yes", then give details:

	Type of Crop Sold	Sales Volume and Value		Where Sold?	To Whom?	When Sold?
		Quantity Sold	At Price?			
1988/89						
1989/90						

(3) What do you do with crops that you do not sell (eat them yourself, feed to the animals, give away, etc.)? _____

(4) Give details of the following expenses related to agriculture:

	1988/89	1989/90
(4.1) Labour Employed		
(4.2) Irrigation		
(4.3) Seed		
(4.4) Manure / Fertiliser		
(4.5) Fencing		
(4.6) Dipping		
(4.7) Sheep-shearing		
(4.8) Transport of Produce / Stock		
(4.9) Veterinary Services		
(4.10) Other (please specify):		

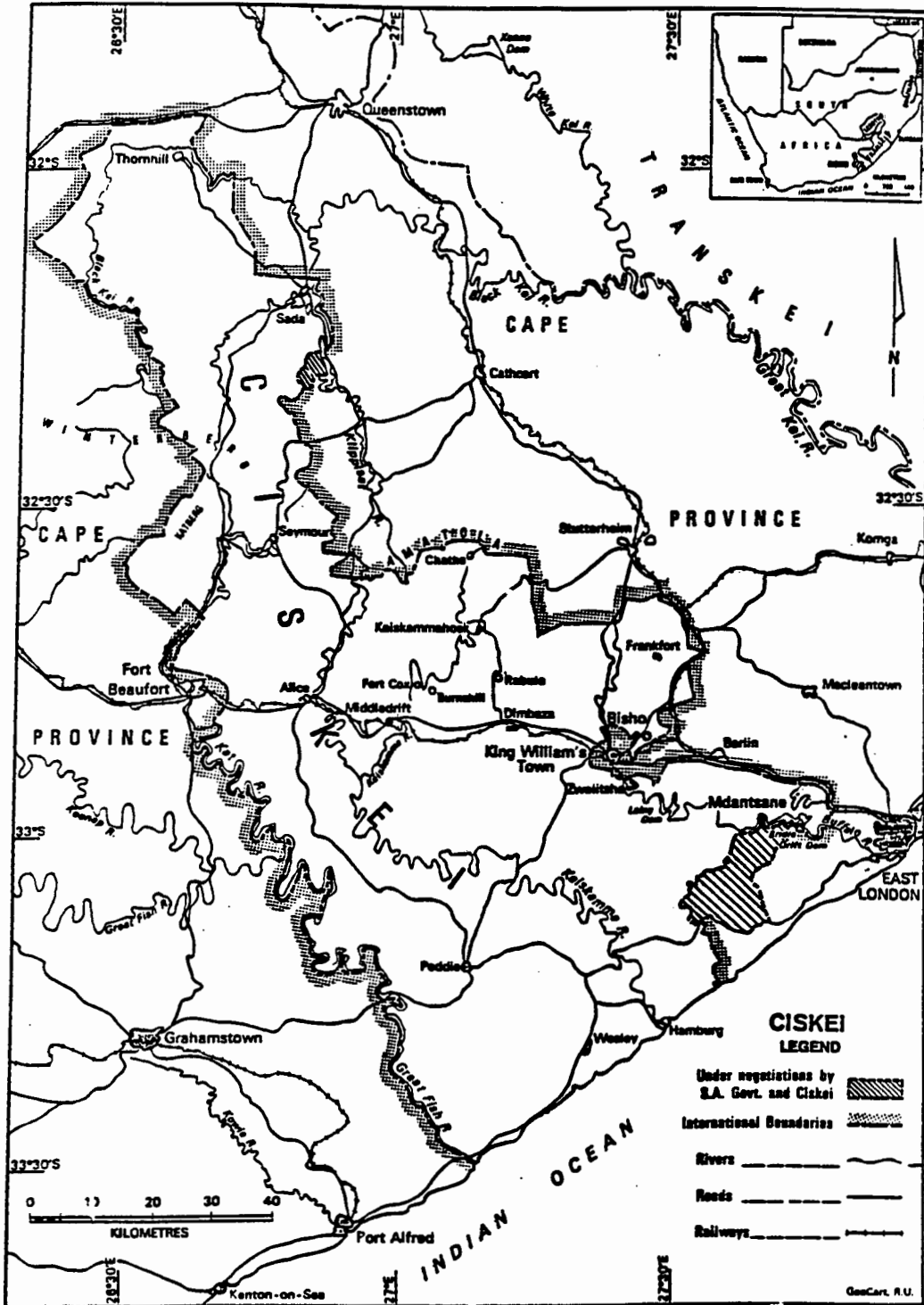
(Note: Give details to enable the quantification of any agricultural expenditure on any of the above items that was paid in-kind.)

SECTION H - STOCK HOLDING, ACQUISITIONS AND SALES

	Cattle				Horses	Sheep	Goats	Pigs	Chickens	Other (specify)
	Oxen	Bulls	Heifers	Tollies						
Number of stock now										
Stock at the same time last year										
Reasons for the change in stock (births, deaths, slaughter, buying or selling)										
Uses of your stock (milk, eggs, hides, draught, transport)										
Livestock / value of produce exchanged for stock in the last 12 months										
Where sold & to whom?										
Why sold?										
Quantity sold or exchanged										
Income / value of goods received										

APPENDIX B

MAP OF THE KEISKAMMAHOEK DISTRICT IN RELATION TO THE CISKEI



APPENDIX C

A BRIEF LAND TENURE HISTORY OF THE RESEARCH AREA⁴⁷

The Ciskei today is occupied by Xhosa and Mfengu people, both groups having descendants in all three of the villages surveyed (the Mfengu people being the predominant group, particularly in Upper Rabula and Burnshill). Manona (1981) points out that Xhosa people have lived in both the Ciskei and the Transkei since, at the latest, the middle of the 1500's. The Mfengu arrived in the area that today is the Ciskei around the 1830's, fleeing from the chaos of Chaka's wars in Natal.

For political purposes, the Mfengu aligned themselves with the British colonial government, assisting the British defeat the Xhosas in the various frontier wars fought during the nineteenth century. For their support, the colonial government granted the Mfengu large tracts of freehold land that previously belonged to the Xhosa (the Xhosa having been expelled during the course of the frontier wars).

Manona (1981) notes that the Mfengu had a close, early association with Christianity, leading to a strong mission school tradition being built up in the area. Thus, early exposure to education enabled the Mfengu to acquire 'Western' skills sooner than other Black nations, placing them in a favourable position to take advantage of job markets (both rural and urban) as they opened up. Indeed, many educated Mfengu were able to take up white collar employment in the emerging South African economy. These workers were consequently able to accumulate wealth and use this wealth to accumulate freehold land.

Another group, like the Mfengu, that received tracts of freehold land during the nineteenth century in the Ciskei, and more specifically in the Keiskammahoek district, was a group of German descendants who had also assisted the British against the Xhosa in the frontier wars.

By the time of the formation of the Union of South Africa (1910), there existed in the Ciskei both Black and White freehold agriculturalists who competed on a fairly equal footing in the regional agricultural produce markets. However, at this time, these freeholders were not the only inhabitants of the Ciskei. Various landless people had moved into the area,

initially attaching themselves to land-owners as labour tenants performing certain services for their landlords, in return for the right to cultivate a portion of land. Many of these tenants later moved on to the commonage, in order to free themselves of their obligations to their landlords and hired land from, or share-cropped with the land-owners (De Wet, 1991: 2).

Thus, the Ciskei was a region exhibiting a variety of land tenure forms. This diversity in land tenure forms still exists today, with each of the villages studied having its own unique land tenure history.

⁴⁷For a more detailed history see Manona (1981).

i) Upper Rabula

Rabula, lying on the tarred road between Keiskammahoek town and Dimbaza (approximately a twelve minute drive from both), is one of the relatively few areas in the Ciskei where freehold land tenure is found. As well as freeholders, Rabula is home to landless people (squatting on the commonage and freehold land) and people that have access to trust land. A brief look at the history of Rabula shows that freehold land tenure goes back a long way.

In Rabula, surveyed plots of freehold land had been sold to Blacks and a small collection of Whites (generally belonging to the group of German descendants mentioned above) since 1866. At the same time, certain land (the 'commonage') was set aside as communal grazing land for all land-owners in the area (Mills and Wilson, 1952: 45).

From this time to the turn of the century, many land-owners in Rabula bought additional land for their sons, often adjacent to their original freehold plots. This land was acquired under the quitrent land tenure system (Mills and Wilson, 1952: 47). Since the quitrent fee was abolished in 1934, this land can for all practical purposes be considered freehold land⁴⁸.

As De Wet (1991: 2) points out, since the initial acquisition of land in Rabula, landless people had moved into the area as labour tenants on freehold land. In many cases, these labour tenants subsequently moved on to the commonage. Over the years they were joined by descendants of land-owners for whom there was no freehold land available.

This situation of Black and White freeholders, labour tenants and landless squatters on the commonage, has been modified over the years through a variety of institutional interventions. In 1936, the South African Native Trust⁴⁹ (S.A.N.T.) began buying up the White-owned farms in Rabula. This trust land was used to grant landless families small portions of arable land, the landless families being settled on this land. Trust land was basically allocated through the village headman. The land remained the property of the S.A.N.T., thus title to trust land could not be transferred by sale. In many cases, however, this land could be passed from one generation to the next via inheritance (subject to the headman's approval). Portions of the trust land was allocated for grazing camps (De Wet, 1991: 2; and Mills and Wilson, 1952: 46).

Rabula was declared a 'Betterment Area' in 1939 (Mills and Wilson, 1952: 146), however, betterment planning was only implemented in Rabula in the late 1960's and early 1970's (De Wet, 1991: 3). Betterment only affected the trust areas and the landless people on the commonage. They were moved to specifically differentiated residential areas, the idea being to separate and fence off grazing land, arable land and residential land. Some families that had trust land lost it during the process of moving.

⁴⁸After extensive fieldwork in the area, De Wet (1991: 4) concludes that "for everyday purposes, people in Rabula do not distinguish between freeholders and quitrenters", indeed referring to both by the same term.

⁴⁹The S.A.N.T. was established in terms of the Native Trust and Land Act (1936), in order to buy up European-owned land in certain 'released' areas.

Today, in both Lower and Upper Rabula, one finds highly concentrated residential clusters housing both landless people and households with access to trust land. Amongst these clusters are pockets of freehold land with the land-owners having their residential sites on their own land. Some families are currently living as 'squatters' on freehold land, whilst some families have even started to move back on to the commonage⁵⁰.

ii) Burnshill

The village of Burnshill is situated in the south-west corner of the Keiskammahoek district on the dirt road running between Middledrift and Keiskammahoek town. It is approximately ten minutes drive from Middledrift and fifteen minutes drive from Keiskammahoek. Housing the headquarters of the Zanyokwe Irrigation Scheme, it lies about a kilometre from Fort Cox Agricultural College. Today, Burnshill, with a very strong mission school tradition, is somewhat of a 'schooling centre' within the district.

Manona (1981: 11) states that after the expulsion of the Xhosa from their territory in the 1850/53 frontier war, a group of Mfengu who had supported the colonial government in this war were granted 'reward land' in the area that today is Burnshill. They immediately came into contact with the United Free Church of Scotland and the Rev. James Laing who operated a mission at the site that today is Burnshill from 1830-1872. The Rev. Laing introduced the people of the area to Western education and improved cultivation methods. Indeed, missionaries served the area until 1931 (Manona, 1981: 11), being instrumental in initiating a strong educational ethic amongst the residents of Burnshill.

In the first years of occupation of Burnshill, wealthier Mfengu families purchased additional freehold land in the area. However, in 1865 Burnshill was surveyed and between 1868 and 1869, the land was formally granted to the residents of Burnshill as quitrent land⁵¹ (Mills and Wilson, 1952: 147). These quitrent sites formed a compact settlement in the area known as 'Old Burnshill', however, some people moved their homesteads onto the commonage to be near their fields (Manona, 1981: 12), where, over the years, they were joined by a certain amount of landless 'squatters'.

Burnshill was proclaimed a 'Betterment Area' in 1939, becoming the first village in the district where the provisions of betterment planning were introduced (Mills and Wilson, 1952: 149). The quitrent landholders were moved back to the sites in Old Burnshill, and the squatters were given permission to erect homesteads on the commonage immediately adjacent to the original block of quitrent sites. Today, more landless people have moved into the area and built houses on the commonage next to the quitrent sites. Indeed, children of the

⁵⁰All households, freehold and others, graze their stock on the commonage. Some trust areas have access to specifically allocated trust grazing camps.

⁵¹There exists a small pocket of freehold land behind Burnshill that did not fall under this registration. This isolated group of freeholders today falls under the administration of the Burnshill Residents' Association.

quitrent families have built their homesteads on the commonage, as title-holders are unable to subdivide quitrent land to pass it on to their heirs⁵².

iii) Chatha

The village of Chatha is situated in the northern most extremity of the Keiskammahoek district, against the mountains to the south of Cathcart. It is approximately a twenty minute drive from Keiskammahoek town along a dirt road that ends in Chatha, thus making the village notably more isolated than Rabula or Burnshill. Today, the only form of land tenure in Chatha is trust land tenure, and there exists a large number of households in the village that do not have arable land.

In 1853 the Keiskammahoek district was established as a 'Royal Reserve'. This means that all land not individually held by quitrent or freehold land was regarded as 'Crown Land' (Mills and Wilson, 1952: 137). Chatha fell into this category, and as a 'Crown Native Location' had a communal land tenure.

According to Government Notice No. 1029 of 1887, large areas of forested mountain slopes that had originally been part of Chatha's land were declared 'Crown Forests' (Mills and Wilson, 1952: 138), later becoming South African State forest, and ultimately, a Ciskei State Forest.

Under the Native Trust and Land Act of 1936, Chatha's land was vested in the S.A.N.T., however, this resulted in no practical change in the land tenure form at the time.

Chatha was proclaimed a 'Betterment Area' in 1939 (Mills and Wilson, 1952: 138), but it was not until 1964 that the betterment scheme was implemented. As in Rabula, people were moved to specifically demarcated residential clusters, separated and fenced off from the arable land and the grazing pastures (previously families had generally resided close to their arable land). In practice, the allocation of arable land was left in the hands of the headman who 'acted for' the local magistrate where the land allocation was registered⁵³.

Today, Chatha has a lot of families that are landless. Given on-going population growth, there has for some time been insufficient arable land to allocate to 'young' households. Currently a situation is emerging where there is severe pressure on the demarcated residential land⁵⁴ and newly married couples are being forced to live with their parents as new residential sites are scarce.

⁵²Quitrent land traditionally devolves upon one male person in the household, determined by Tables of Succession (Mills and Wilson, 1952: 147).

⁵³The fact that arable land is registered at the magistrate's office does not in practice give households any stronger title to the land. It still was not transferrable via sale or inheritance as it remained technically state-owned land.

⁵⁴A significant portion of the residential land in Chatha has been damaged by severe erosion due to the fact that the betterment residential area lies below land that was previously used for grazing and cultivation.

APPENDIX D

THE BASIS OF THE CALCULATION OF INCOME-IN-KIND FROM CROP FARMING

i) Maize

All maize yields are given 'off the cob'. It must be noted that recorded maize yields underestimate true yields due to the fact that a certain proportion of maize tends to be eaten green. This proportion varies, depending on:

- (a) climatic conditions (which affect the crop);
- (b) general economic conditions (which affect the availability of substitutes for green maize); and
- (c) the proximity of the fields to the homestead (which influences the resource costs of eating green maize).

In Rabula, it was possible to calculate three yields:

- freehold fields: 411 kg/ha;
- 'other' fields⁵⁵: 228 kg/ha; and
- homestead gardens⁵⁶: 237 kg/ha.

This resulted in a weighted average yield⁵⁷ for Rabula of 336 kg/ha which was used to estimate unrecorded maize crop yields.

In Burnshill, an average yield figure of 480 kg/ha was observed on the irrigated plots. This was used to estimate the unrecorded yields in Burnshill.

In Chatha the following average yields were observed:

- fields: 703 kg/ha; and
- homestead gardens: 833 kg/ha.

These figures were used to estimate yields in the cases of unrecorded yields.

An average maize price of 80c/kg was used to calculate the value of income-in-kind from maize cultivation.

ii) Potatoes

Average yield on dry land fields across the three villages was found to be 3215 kg/ha. This figure was used to approximate all unrecorded dry land crops.

On irrigated plots in Burnshill, a considerably higher average yield of 13500 kg/ha was observed. There were no unrecorded yields on irrigated crops.

⁵⁵This category includes all fields other than freehold fields.

⁵⁶All these homestead gardens were in households that were either 'landless' or had access to trust fields. No cases of freeholders planting maize in their homestead gardens were found.

⁵⁷The weighting is according to area of land planted.

The average price for potatoes across the three villages, based on a volume of 2120 kg of potatoes traded, was 80c/kg. This was used in order to arrive at income-in-kind from the cultivation of potatoes.

iii) Pumpkins

An average yield of 497 heads/ha was observed for pumpkins planted between maize on dry land. This was used to estimate unrecorded yields. For pumpkins planted on their own, the average yield was 2486 heads/ha. There were no unrecorded yields for pumpkins grown under mono-culture.

The average price for pumpkins traded, used to determine income-in-kind, was 93c/head.

iv) Melons

The average recorded yield of melons was 869 heads/ha on irrigated fields under mono-culture and 286 heads/ha for dry land inter-cropping. These figures were used to estimate unrecorded yields. Income-in-kind from melon cultivation was calculated on the basis of an average price of R1,25/head.

v) Beans

Average bean yields were calculated to be 152 kg/ha for beans grown on dry land on their own, and 83 kg/ha for crops planted in dry land amongst the maize.

The average bean price, based on intra-community trading and local shop prices, was R1,50/kg.

vi) Spinach

The only cases of spinach cultivation were in household gardens, where an average yield of 4615 bunches/ha was recorded. The average price for spinach within the community was R1/bunch.

vii) Onions

Onions were only observed to be grown in homestead gardens, where an average yield of 37500 heads/ha was recorded. The average price for onions within the community was 30c/head.

APPENDIX E

THE BASIS FOR THE CALCULATION OF INCOME-IN-KIND FROM STOCK FARMING

The average values detailed below were used in the calculation of stock farming income.

i) Cattle

The average value of a mature head of cattle was R990⁵⁸. This was based on all recorded purchases and sales of cattle across the three villages during the survey year. The highest recorded price was R1500 and lowest was R700. Head of cattle that were not yet mature were valued at an average price of R495⁵⁹.

It proved impossible to realistically estimate income-in-kind from the production of milk. Such an estimation would require detailed knowledge of too many variables that could not be covered by the survey (diet of the stock, age of cow, availability of water, standard of veterinary care, length of time since last pregnancy, etc.). This means that, in theory, the figure for income-in-kind from holding stock under-estimates the true value. However, in practice, due to the dry conditions in the survey year and the consequent poor condition of the cattle, this under-estimation would not seem to be serious.

ii) Sheep

Sheep were valued at an average price of R106 each based on records of sales within the community. Wool sales (all to the Ciskei co-operative) were recorded at the actual value of cash received (although in many cases such payments were 'voorskot' payments).

iii) Goats

Based on all recorded transactions involving goats, their average price within the community was seen to be R110.

⁵⁸This concurs with the average homeland cattle price of R2,00 to R2,20 per kilogram calculated by Doctor C.J. Rose, retired senior researcher at A.R.D.R.I. (University of Fort Hare).

⁵⁹This calculation is based on the following value weighting supplied by Doctor Rose:

Animal	Value Factor
Mature head of cattle.	1
Heifer/Tollie (older than 9 months).	0.6 - 0.8
Calf (9 months or younger).	0.25 - 0.4

iv) Pigs

The average price for mature pigs, based on all recorded transactions involving pigs and pork, was seen to be R275. However, as is to be expected, there was considerable variation about this mean. The value of a pig varied directly with its size which in turn, is dependent on its diet. Most pigs were fed on 'germ meal'. However, those that were brought up on 'pig growth' feed grew considerably larger and often traded for significantly higher prices. Piglets were traded at R25 each.

The most common transactions concerning pigs was the selling of a portion of the meat obtained when a pig was slaughtered. In such cases, when meat was sold for R275 or more, no household consumption was recorded. When a pig was slaughtered and meat was sold for less than R275, the difference between the amount obtained and R275 was taken to be household consumption of stock.

v) Horses

Horses were valued at R150 each. However, there were very few cases of households keeping horses⁶⁰.

vi) Chickens

It proved impossible to accurately value household income-in-kind from chickens. However with the exception of one household in Chatha⁶¹, chickens were only kept on a small scale for private usage. Egg production and numbers of chickens kept varied considerably across families and during the year. Significant numbers of chickens are continually lost to wild cats, jackals and birds of prey, further clouding possible estimates of income-in-kind from chickens. Thus, the recorded income-in-kind from stock farming would tend to slightly under-estimate the true picture.

⁶⁰In most instances, horses appeared to be kept and ridden as a form of status symbol. There was no evidence in the sample of horses being used commercially.

⁶¹In one case in Chatha, the breeding of chickens was found to be a cash-generating activity and this income was recorded. However, in this case the household's keeping of chickens was on a vastly greater scale than any other household, in any of the three villages.

TO Vanessa Bradwell
650 4085

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UNIVERSITY OF CAPE TOWN
FACULTY OF COMMERCE
REPORT FORM

CLASSIFICATION OF MASTERS DISSERTATION

NAME OF CANDIDATE: FLINT SPERBER

DISSERTATION TITLE:
.....
.....

EXAMINER: NICOLI NATTRASS

Please indicate below your classification of this dissertation.
Mark one block only.

- a. Awarded with distinction (75%) Yes
No
- b. Awarded, but minor corrections to be made.
- c. Awarded degree after identified changes have been made to the satisfaction of the Dean.
- d. Not awarded, but the candidate is permitted to revise and re-submit for re-examination.
- e. The degree not be awarded.
- f. Mark: 75%% (only required where the degree includes coursework)

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(i) a brief report on the research
(ii) comment on the presentation of the dissertation

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SIGNATURE.... ~~Signature Removed~~

DATE.... 4 Nov '93

Report on Flint Sperber's "Rural Income, Welfare and Migration: A Study of Three Ciskeian Villages"

This is a very interesting thesis which has clearly involved a great deal of field work and interpretation of data. It contains a good analysis of inequality and labour migration. Sperber also includes several interpretive and speculative points (which could have been supplemented with more qualitative data - but are none the less useful). Sperber ties the sections on inequality and labour migration together in a very readable way. The implications for inequality and migration which he draws concerning future policies are fresh and original.

Specific comments and queries are provided below:

1 Problems with structure

1.1 The main problem with the thesis is that the analytical focus has been spread a little too widely. This is part of the reason for the weakness in the structure.

1.2 In the introduction, Sperber gives the impression that the thesis is about testing models of migration - yet migration is only really discussed in the final chapter. The emphasis in the introduction is skewed and the comments about measuring inequality seem to be rather tacked on. Furthermore, why are the comments about land tenure placed in the introduction?

1.3 Some re-organisation would have been useful - for example, the information contained in Appendix C should perhaps have been included in chapter one. Knowing a bit more about the villages would have made it easier to follow the points made in the chapter. As it stands, the reader has to piece the story together him or herself.

2 References to the literature

2.1 The thesis is a little short on references to the literature. Sperber should have drawn more on existing rural studies or provided more detail about the previous work on Ciskei in order to

contextualise the study and situate his work in appropriate academic traditions.

2.2 Sperber makes unsubstantiated claims in certain places - and should have provided references. For example, he talks about the 'prediction so radical writers' (p.64) without providing any supporting references. On the same page, he talks about what conventional urban transition models predict for South Africa - without providing adequate references here either.

2.3 When discussing unemployment (p.17) Sperber should have included more about the problems of measuring work, labour force participation etc. A reference at least to the work of Moll (1984) would have been useful.

3 Statistical Issues

3.1 There are some statistical problems with the work. Sperber breaks his sample down into rather small sizes (eg Rabula Freehold = 17, Other = 21) This raises the problem of statistical significance of his results - something which he never comments on (eg p.9). This is rather worrying.

3.2 On p.10, Sperber claims that a notable change in household size had occurred - yet the average had moved from 6.25 to 6.68 over the period in question. This is not a significant change. If Sperber meant to say that there had been a notable change in composition of the household - then he should have made this clear. Also, his ratios in table 4 are not notably different from the Ciskeian average (as he implies).

3.3 His use of two decimal places is unnecessary and inappropriate.

3.4 His analysis of educational differences is interesting - except for table 3 where the percentages do not add up. (If they are not supposed to, then I cannot understand the table). His analysis of the relationship between education and migration, in chapter 3, is, however, very good.

3.5 On page 25 Sperber points out the differences in measuring income between his and the 1949 study (see footnote 18). Yet he goes on to draw comparisons. It seems to me that the differences in measurement

are so great that he should rather have attempted to make certain adjustments to the data to ensure compatibility before presenting the data as he does in table 9.

3.6 When reading chapters 2 and 3 it occurred to me that Sperber should have commented on the role of age. Were the age profiles of the villages different? If there were more old people in Chatha it might explain the relative dependence on pensions for example.

3.7 Page 40: What does Sperber mean when he says that different HELs were calculated for each family member? On what basis? He should explain his methodology more thoroughly. The reader should not be required to simply accept his data at face value.

4 Household Income

4.1 The section on measuring household income is very good. Sperber could, however, have made more use of his data. The section on income from stock is interesting and good (although comparisons with other studies on rates of return from cattle would have been useful) - as are his sections on pensions and on crop income. (By the way, is the observation on p.29 about unreliable ploughing services a surmise - or gleaned from interviews?)

4.2 On p.21 Sperber talks about migrants paying the accounts by stop order for certain household goods consumed in rural areas. He claims that this 'clearly reduces transaction costs, thereby increasing the efficiency of remittances'. This is a good point. But does the efficiency angle perhaps also depend on what the household members would have chosen to do with the cash - and on the rate of interest charged?

4.3 Also, did Sperber explore the difference between certain household's reported accounts payments and what is actually paid? Was he not asking the wrong party about the value of account payments?

5 Distribution of Income and Village Welfare Levels

5.1 The analysis of the distribution of income and village welfare levels is good. The analysis appears sound - although I must admit, that kind of statistical analysis is not a speciality of mine!

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5.2 The notion that the data supports the inverted U shaped hypothesis (p.57) seems rather far-fetched.

6 Migration

6.1 The notion that being unemployed in a rural area is better than being unemployed in an urban area seems to avoid the question of the costs of job search (and hence the kinds of arguments put forward by Todaro as to why rural-urban migration takes place in the face of high levels of urban unemployment).

6.2 On p.67 The use of the ideas about risk spreading from Guillet's Peru study is evocative - yet Sperber should have explored it more - perhaps using qualitative material or references to other studies.

6.3 On p.72, Sperber says that the household can say what is remitted but cannot say much about the salary of the migrant. Yet, judging from the questionnaire, he attempted to ask about salaries. What was the result?

6.4 This leads me to a few comments about methodology. It would have been useful to have had more about his research experience. An explanation as to why he did not analyse all the questions he asked would have been useful.

Mark

As noted above, the thesis has several flaws. However, considering that this is an original piece of field work, and considering that it has been submitted as one part of a requirement for a Master's thesis, I recommend a mark of 75%.

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Nicoli Natrass

UNIVERSITY OF CAPE TOWN
FACULTY OF COMMERCE
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CLASSIFICATION OF MASTERS DISSERTATION

NAME OF CANDIDATE: FLINT SPERBER

DISSERTATION TITLE: Rural income, welfare and
..... Migration

EXAMINER: Prof. E. BONDZEE

Please indicate below your classification of this dissertation.
Mark one block only.

a. Awarded with distinction (75%) Yes
No

b. Awarded, but minor corrections to be made.

c. Awarded degree after identified changes have been made
to the satisfaction of the Dean.

d. Not awarded, but the candidate is permitted to revise
and re-submit for re-examination.

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 - (ii) comment on the presentation of the dissertation

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External Examiner's Report on

"Rural income, welfare and migration : a study of 3 Ciskeian villages"
by Flint S.Sperber.

The candidate has used data collected in the "1990 Keiskammahoek Rural Survey" (Rhodes University) to study rural income, welfare and migration in 3 villages, in an attempt to assess the likelihood of continued circular migration and to suggest guidelines for regional policy in a new national political dispensation. An interesting conclusion of the study is that it supports the views of Bell (1972) and Mabin (1990) that circular (temporary) migration is likely to persist in the South African labour market; this contradicts the common expectation of unavoidable urbanisation (with its questionable welfare effects).

The candidate starts off with a clear description of the demographic profile and a brief history of land tenure in the research area. In chapter 3, he carefully defines the various components of household income; a rearrangement of the paragraphs might have improved the readability of this section. Chapter 4 is devoted to an assessment of poverty and to an analysis of income distribution following Stark et al. (1986). Using a decomposition of the Gini index and a simple welfare function, the candidate shows that an increase in "source j income" will have a positive mean income effect and a positive or negative distribution effect, the net effect on welfare being positive. It seems therefore inappropriate to qualify a change in income distribution as "worse" or "improved", as this refers to welfare effects : the distribution itself can only become more or less equal. Also, non-remittance income is said to be "an extremely small and insignificant portion of total income" (p.54, note 35), while on p.62 it is given as "a large component of total village income". Chapter 5 deals with on-going temporary (oscillating) migration and contains various, cautiously worded, policy suggestions as regards regional upliftment. When considering how the rural family tries to cope with risk, the candidate omitted any reference to the stockvel arrangements which appear to be effective in various areas. The concluding bibliographic section is pertinent and exhaustive.

This is a superb thesis : its subject is well researched, the concepts used are clearly defined with the necessary caveats, and the attention to analytical detail is sustained throughout. Above all, the candidate has managed to arrange his data in such a way that they were appropriate for the application of mathematical techniques. I am convinced that (part of) the thesis is suitable for publication in a journal of Development Economics and gladly propose a mark of 90%. As supervisor, Ms Hartzenberg surely must be congratulated for having "aided immeasurably in the generation of this thesis".

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