Preface

It is with fresh enthusiasm that UNDP releases the second National Human Development Report for Mozambique. Once again, the report is the result of a dynamic and open partnership with several national institutions and personalities.

Loyal to a concept of human development that has in the short space of a decade gained universal acceptance, the team that spent several months preparing the report has produced an excellent document which will certainly be a valuable contribution to the debate around the broadening of choices for Mozambicans.

The emphasis given in this Report to breaking down statistical information, and the Human Development Index (HDI), by province is in itself a recognition of the dynamic nature of development and, above all, of poverty which, although it is known to be widespread throughout the country, expresses itself in varied forms at different times and regions in Mozambique.

Hence, the disaggregated data recently released by the National Statistical Institute (INE), which is analysed in the report will help to enhance the knowledge base and deepen the understanding of the specific nature of the different development variables which, notwithstanding the remarkable progress of recent years, still limit human development at provincial level, and consequently at national level as well.

This report will be an important reference instrument for drawing up and debating policies geared towards combating poverty and promoting development based on local needs and realities.

It is pleasing to note that the results of the research presented in this report reveal once again that there has been a significant increase in Mozambique's HDI. Hence, on the basis of up-to-date official data, it is estimated that the HDI reached 0.343 in 1998, which represents a 3.6% growth over the previous year's level. The latest estimates suggest that in 1999 the index reached 0.356, and in the absence of exogenous shocks the trend will be sustained over the coming years.

The analysis of the three components of the index shows that, over the last five years, per capita income has become the component contributing most to the growth of the HDI. However, it is gratifying to note that the social indicators in the index are also beginning to play a more important role in the annual change in the HDI.

Nevertheless, we cannot fail to take this opportunity to express our concern regarding the impact of the HIV/AIDS pandemic on the future of Mozambique. Unless there is a timely intervention which may reduce the casualties and slow the spread of this deadly virus, the progress in human development of the last few years could be put in serious jeopardy and the positive trend could be reversed.

The commitment of the government and civil society in general to the fight against the pandemic is remarkable. This is encouraging particularly given the fact that the latest projections paint a frightening picture. In the absence of an effective policy to combat HIV/AIDS, life expectancy in 2010 could be 14 years lower than anticipated – which means that life expectancy would be below 30 years in some parts of the county.

If the impact of the AIDS pandemic on

the demographic structure of the population is in itself frightening, the extent of the impact on the social and economic fabric of the country will be even more devastating: whole families economically and emotionally ripped apart; a health system that will be unable to cope with the huge financial burden that will imposed on it; the depletion of national human capital accompanied by divestment by national and foreign companies.

The preparation of the national plan to combat HIV/AIDS is eloquent evidence that the Government of Mozambique not only takes the epidemic seriously, but also that it considers effective intervention to slow its spread and minimise its impact, as a national priority.

The need for an effective strategy to combat HIV/AIDS becomes all the more pertinent when it is known that, notwithstanding the remarkable advances over the last few years, Mozambique's human development indicators are still fragile.

Human development is a slow process. The index is, due to its very composition, not susceptible to significant annual changes. As an example, I would like to note that no matter how great and efficient an investment policy in education might be in a given country, the literacy rate (which is one of the components in the HDI) could only be changed significantly in the medium term.

Nevertheless, more important than absolute changes in the index is the trend over time, and, in this regard, the indicators for Mozambique are encouraging indeed. It is gratifying to note that this report shows that Mozambique has managed to create the necessary conditions for sustained and continued improvements in its HDI over the coming years.

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Abbreviations

AIDS	- Acquired Immunodeficiency Syndrome
CPI	- Consumer Price Index
DHS97	- Demographic and Health Survey 1997
DPDS	- Department of Population and Social Development
GDI	- Gender Related Development Index
GDP	- Gross Domestic Product
GEM	- Gender Empowerment Measure
GNP	- Gross National Product
GOM	- Government of Mozambique
GHDRs	- Global Human Development Reports
HD	- Human Development
HDI	- Human Development Index
HIPC	- Highly Indebted Poor Countries Initiative
HIV	- Human Immunodeficiency Virus
HPI	- Human Poverty Index
IAF	- National Household Survey on Living Standards
IDS97	- Demographic and Health Survey 97
IFPRI	- International Food Policy Research Institute

ILO	- International Labour Organisation
IMF	- International Monetary Fund
INE	- National Statistical Institute
MINED	- Minsitry of Education
MISAU	- Ministry of Health
MOA	- Ministry of Agriculture
MPF	- Ministry of Planning and Finance
NDHR	- National Human Development Report
NGO	- Non-Governmental Organisation
ODA	- Overseas Development Assistance
OGE	- State Budget
OTM	- Organisation of Mozambican Workers
PNCS	- National Programme fof the Combat of AIDS
PPP	- Purchasing Power Parity
PPR	- Rural Poverty Profile
PRE	- Economic Rehabilitation Programme
SADC	- Southern African Development Community
SME	- Small and Medium Scale Enterprise
SNA	- System of National Accounts
STD	- Sexually Transmitted Disease
UAP	- Poverty Alleviation Unit
UEM	- Eduardo Mondlane University
UN	- United Nations
UNDP	- United Nations Development Programme
UNESCO	- United Nations Organisation for Education, Science and Culture
UNFPA	- United Nations Population Fund
UNICEF	- United Nations Children's Fund
UPM	- Understanding Poverty in Mozambique
VA	- Value Added

Introduction

Brief assessment of the 1998 report

The usefulness of a document intended for wide distribution, as is the case with the National Human Development Report, can be measured in many ways:

- by the interest it awakens in society;
- by the demand it generates among the potential users;
- by the debates that it stimulates;
- by its usefulness as reference material, in public debates and individual analyses.

The idea which guided the drafting of NHDR98 was explained in the report itself, which stated that the proof of the value of the report would be all the greater " if it makes a major contribution to a deep and constructive debate on strategies and programmes appropriate to the needs of the Mozambican population" (NHDR, 1998: 2).

A total of 4,000 copies of the NHDR98 were initially printed, incorporating English and Portuguese versions into a single volume, and they were distributed through a system whose main axis was centralised at the UNDP office in Maputo.

The main focus of the distribution system was institutional dissemination. That is, priority in distribution was given to a large extent to organisations and institutions. The distribution list shows a tendency to prioritise government bodies, non-governmental organisations and the United Nations system which between them received 2,330 copies, or 58% of the copies ordered.

If to this group are added the copies sent to the provinces, namely to the offices of the provincial governors, to the provincial directorates and to the municipalities, the number of copies going to institutions rose to about 3,700, or more than 90% of the print run. Clearly with this system few copies were left over for individual users.

This option was justified by the logic that it would ensure that institutions, be they non-governmental organisations, ministries, public and administrative departments at central, provincial and district level, embassies and institutions of higher education, among others, could have access to the report to use as a reference document, thus making it possible to maximise the number of users per copy.

However, this method of distribution incurred two risks.

First, the risk that the circulation of the report would be limited to a small group. And second, it gave access to the report to a group of users who perhaps had least need of it.

This was compounded by the fact that there is no mechanism for the effective monitoring of how the report is used, except for its use as a source for journalistic work.

In any case, demand for the report was so great that many people had to live with the frustration that they could not obtain a copy, simply because there were not sufficient copies available at the start. Several potential users insistently asked both the UNDP and SARDC for a copy of the report. This high demand suggests two things:

- that the distribution method adopted was to some extent restrictive, denying access to a considerable number of people for whom the report could have been an important instrument for their work;
- even with this targeted distribution system, copies of the report ran out very quickly, which could be taken as indicating that the number of copies printed was less than the demand.

When copies ran out, it was decided to print an additional 2,000. The decision to print more copies arose from noting that the number initially printed was insufficient to satisfy the demand. A further reason was that, regardless of the production of new editions in the future, potential users will continue to seek the first edition of the report, all the more so because the in-depth themes will vary from edition to edition.

Apart from these additional copies, the report was also produced in Compact Disc, in partnership with a Mozambican company. The

CD was aimed essentially at users abroad. Also, 3,000 copies of a summarised and simplified version were ordered to facilitate dissemination of the document.

On the debates

The debates stimulated by NHDR98 had four main foci, namely:

- the results and the concept of human development;
- the progress in Mozambique's HDI reflected in the report;
- the questions raised by the report;
- the value of the report as an instrument for work.

One of the proudest moments for the report was undoubtedly when it was quoted by the Head of State, a few hours after it had been launched, during the traditional end of year reception offered by the Mozambican President to the diplomatic corps accredited in Mozambique.

The report was also the subject of a special programme on Mozambican Television, and of various comments in the print media, particularly on the aspects mentioned above.

Participating in the televised debate were an independent economist, the report's consultant editor, a political commentator, and a representative of the UNDP, as the body that sponsored the report. In this debate, opinions about the report diverged into two main lines of thinking. Some argued that the report lost a good opportunity to distance itself from the paradigms established by the global human development reports, and in particular to show in a more specific way possible paths for development in Mozambique. Apart from this, it was argued that, while the report took a firm and unequivocal position on the question of cashew, on the other themes it was timid and hesitant.

However, others counter-argued that it is not the job of a human development report to deal in a prescriptive manner with the themes and questions it raises. The report should give information about the situation, and above all encourage debate about questions of development in Mozambique.

Other observations referred, for example, to the comments and recommendations kindly prepared by McClimans et al (1999). The comments dealt in particular with the need to broach the question of gender.

By way of example, the critique by McClimans et al starts with the very cover of the report, stating that this gives a traditional and stereotyped image: while "two boys are actively concentrating at their computer, two women are looking on and smiling passively". McClimans et al comment that this image strengthens dominant gender functions, while a human development report ought to promote an image of a society in transformation, characterised by gender equality.

McClimans et al identify important areas where it is possible and necessary to break down statistics by sex, as well as to incorporate the gender issue into the analysis. These observations were useful in drawing up the NHDR99.

The 1999 report

The main purpose of this report is to deepen the analysis and estimate of the main indicators on human development within the country, particular in Mozambique's provinces and macro-regions. To this end, it has been necessary to overcome some methodological and analytical limitations never previously solved. In particular, a methodology has been established to disaggregate the national gross domestic product (GDP) by provinces and regions. Without this, it would not be possible to estimate, for example, the provincial and regional human development index (HDI), or to clarify certain dynamics of economic growth and development in each province and region of the country.

The possibility of estimating the GDP and the HDI represents an advance in analytical and methodological capacity which goes beyond the scope of this report. First, as from now it is becoming possible to overcome a rather paradoxical limitation of specialists who study economic and development dynamics within the country. While an official or researcher, sitting in his or her Washington or New York office, could calculate Mozambique's national GDP or

HDI, a specialist living in Maputo city was not able to estimate the contribution made by each province or region to those economic and development indicators. Obviously, the question underlying this parallel does not refer so much to distance, but to capacity and to the availability of the means (data and methods) to undertake increasingly specific and local analyses.

Second, questions such as the following can now be raised, and in part find replies in this very report: what is the contribution made by each province to the production of wealth in Mozambique? If the Mozambican economy has undergone rapid growth, what has been the specific contribution of each province?Which are the most dynamic activities and sectors in a particular province?

Third, the reply to these and various other questions will certainly serve a wide range of users. Indeed, this utility has already been recognised, even before this report was published.

We are pleased to know that certain public bodies have already declared their interest in using and developing the methodologies presented in this report. They are useful for calculating macro-economic indicators that are relevant for Mozambique's regional and provincial planning. This is the case, to cite just one example, of the National Statistics Institute (INE). This body has already expressed its intention of including estimated provincial and regional GDPs in its future regular publications, particularly in connection with the annual yearbooks. In this particular case, we are doubly satisfied: first, because of the explicit recognition of the usefulness of the intellectual exercise and of the results presented here; and secondly, we hope that in this way we can make some retribution for the great importance that the data from institutions such as the INE represent for the quality of this report.

But while disaggregating the national GDP by regions and provinces may be regarded as an objective in itself, in the particular case of this report, it mainly represented a means without which we could not achieve our major goal: to estimate the main human development indices by province and by the three major regions (north, centre and south) of Mozambique.

The 1998 National Human Development Report (NHDR98) identified the two most important aspects for Mozambique in the second half of the 1990s as the return to peace and the revival of positive growth in the economy. As NHDR98 noted, Mozambique, in the last five years of the 20th century, experienced a transition from a relatively prolonged period of national insecurity towards progress in real human security. The main components of this transition were sketched, in a schematic form, in the analytical table shown on Graph 3.1 of NHDR98. This analytical framework continues to underlie the

Analytical framework: From national insecurity to human security

structure of this 1999 report. Thus the same analytical table is reproduced here again, albeit slightly modified, in order to stress the important features in the links between social peace and sustainable economic growth: political stability and institutional efficiency (Graph 1.1).

The main text of this report is structured into six chapters. The first two chapters are dedicated to describing the state of human development in Mozambique at the end of the 20th century. Chapter 1 identifies the most recent advances in the study of human development, at conceptual, methodological and technical levels. Chapter 2 briefly locates Mozambique's human development in the context of the development of the sub-continent and of the world in general. But the core of Chapter 2 is, on the one hand, the characterisation of human development by province and region, and on the other, the analysis of the multiple dimensions of human poverty. The HDI and HPI (Human Poverty Index), disaggregated by province and region, are discussed in this Chapter.

The second part deals with important aspects of human security and development, particularly the potential and the challenges for the first decade of the 21st century.

It should be mentioned that NHDR98 laid a special stress on economic growth as one of the important conditions for peace and human security. Through this, it was intended, above all, to recognise the importance of the revival of the national economy noted in the second half of the 1990s.

Even if one admits that it would have been difficult for the rapid economic growth to have had a substantial impact on human development, there was a crucial aspect that deserved recognition: without positive, rapid and persistent economic growth there is no human development that can last long. Or to put it simply, in the words used recently in an interview by President Chissano:

"You cannot redistribute equitably what you do not possess".

But for its part, the sustainability of peace presupposes a robust and lasting material, economic and financial base. That is, the national wealth and economic growth. In particular, Chapter 3 describes the contribution of each province to the national wealth and to living standards in Mozambique. This chapter replies to the question: who produces what, and how much?

A further relevant aspect for the generation of the nation's wealth is wage labour, as a source of income and a survival strategy in Mozambique. Chapter 4 shows that the weight and importance of wage labour in Mozambique are greater than has been acknowledged.

As regards the challenges that Mozambique will certainly face in the first decade of the 21st century, in addition to the human poverty dealt with in Chapter 2, Chapter 5 stresses the AIDS pandemic. For some people, the available data are excessively alarmist, while others prefer to consider them as worrying.

Finally, Chapter 6 summarises the main results presented in the rest of the report, and points to some future prospects: new lines of research, and of wide-ranging, constructive and intelligent debate.

What kind of development has Mozambique experienced, both in the past and in the present? Is it irrelevant if economic growth is prioritised at the expense of human development? How are economic resources converted into human development? And, vice-versa, how does human development help improve economic growth?

Without adequate data and analytical instruments, the kind of question posed above can only be answered in a merely speculative manner. In this respect, we hope that the present report will make a contribution so that future work in this area will provide duly grounded answers to the fundamental questions of human development in Mozambique.

Reasons for the triumph of the concept of human development

Box

Public acclaim is not always a sound way of judging the success of an intellectual exercise. John Stuart Mill's book on the Subjection of Women was his only work on which his publisher lost money; Bertrand Russell's book on mathematical logic initially had very few readers; Wittgenstein's Philosophical Investigations achieved its prominence only very slowly. Mozart's appreciation in the world of music came much more hesitantly than he had hoped. Speedy applause does not always greet creative contributions.

In contrast, Mahbub ul Haq could not really have had any complaint that the world took a long time to appreciate the remarkable merits of his brainchild, the Human Development Report as a vehicle of communication, nor to accept the preeminence of the idea of "human development" as an illuminating concept that serves to integrate a variety of concerns about the lives of people and their well-being and freedoms. Mahbub's creation has received remarkable notice and acclaim in less than a decade. The UNDP has had better luck in this respect, than John Stuart Mill's sponsor and publisher did.

The question with which I want to begin is this: why has the Human Development Report received so much reflective attention with such speed in a world where new ideas often take decades - sometimes centuries - to receive the recognition they deserve? Why is the idea of human development such a success in the contemporary world? This is not a question about the profundity of Mahbub ul Haq's creative ideas, which is, of course, absolutely clear and not in any way in dispute...

This raises a more elementary question. What does the human development accounting, in fact, do? What is its special feature, its identifying characteristic? This is, at one level, an easy question to answer. Rather than concentrating only on some solitary and traditional measure of economic progress (such as the per capita gross national product), "human development" accounting involves a systematic examination of a wealth of information about how human beings in each society live (including their state of education and health care, among other variables). It brings to the exercise of development evaluation an inescapably pluralist conception of progress.

Human lives are battered and diminished in all kinds of different ways, and the first task, seen in this perspective, is to acknowledge that deprivations of very different kinds have to be accommodated within a general, overarching framework. The framework must be cogent and coherent, but must not try to overlook the pluralities that are crucially involved in the diverse nature of deprivations in a misguided search for some one measure of success and failure, some single clue to all the other disparate concerns....

It is this faith in monoconcentration that had begun to receive much sceptical attention by the time the Human Development Reports were launched. Mahbub took on the leadership of large armies of discontent that were gunning, somewhat sporadically, at the single-minded concentration on the GNP.

There were activists arguing for the recognition of "basic needs". There were international interventionists lamenting "the state of the world's children". There were relief organisations concerned with hunger and epidemics. There were writers focusing on "disparities" between the actual lives of the rich and the poor. There were humanists voicing the need for social justice in the quality of life. There were advocates of measures of physical quality of life. And there were even some philosophically oriented critics wondering about the bigger insights into social ethics provided in the far-reaching works of Aristotle, of Adam Smith, of Karl Marx, and even of John Stuart Mill.

It is to the credit of Mahbub's integrating vision that he saw the possibility of harnessing these different discontents into the development of a capacious alternative outlook that would be at once practical and broad, and could accommodate - however roughly - these different concerns. If the idea of human development had a rapid acceptance, this was made possible by the skill - ultimately Mahbub ul Haq's skill - in coordinating discontents and in weaving them together into a rival and flexible format.

Not surprisingly, the same charges were brought against him that had been used earlier to keep utilitarianism victorious in a specially devised playing field, and there was no end of grumbles that the diverse concerns on which Mahbub concentrated did not automatically yield one "operational metric". Of course it didn't; it could not - and should not - have.

The domain of social valuation cannot be taken over by some kind of an allegedly value-neutral engineering solution. It is important that people explicitly and critically evaluate what we want, and engage in arguing for - or against - any set of proposed weights. What weights may emerge is ultimately a matter for social choice, not to be taken over by some kind of a mechanical reading of an apparent "truth". Central to this exercise is enlightened public discussion. Supporting the intellectual basis of well informed public discussion is one of the main glories of the human development enterprise.

The idea of human development won because the world was ready for it. Mahbub gave it what it had been demanding in diverse ways for some preceding decades...

Amartya Sen,
1998 Economics Nobel Prize Winner,
Extract from his keynote speech,
Decade of Human Development", 29/07/ 1999

Chapter 1

Conceptual, methodological and statistical framework

A pluralist concept of progress

Since the launching of the first global Human Development Report in 1990, human development has been defined as a process of expanding people's choices. Immediately after it was publicised, this new concept featured in promoting and leading debates about development in general, both internationally and in many specific countries. To some extent this recognition is rather surprising, as Sen writes (1999), "in a world where new ideas often take decades - sometimes centuries - to receive the recognition they deserve" (see Box 1.1).

The concept of human development catches the variety of people's concerns about their lives, well-being and freedom. Compared with other traditional definitions of development, mainly those which over-value economic measures to the detriment of other human dimensions, the concept of human development places people themselves - their potential, their capacity, their opportunities for realisation - at the centre of the debates, and of political strategies and development programmes.

The concept of human development has brought to the assessment of development "a pluralist conception of progress" (Sen, 1999). Certainly, this mobilises a wide range of interests, both among academics and researchers, and among politicians, technicians and other citizens.

But it would have been difficult for the concept of human development to achieve such a large degree of intellectual and political hegemony so rapidly, if it had remained a simple concept, without any methodological, technical and operational framework. Indeed, the concept of human development forms part simultaneously of a limited and of a broad analytical framework.

In the limited analytical framework, the concept of human development is made operational in several human dimensions, above all those which are immediately indispensable for the existence of the individual: "to enjoy a long and healthy life, to acquire knowledge, and to have access to the resources needed for a decent standard of living" (UNDP, 1997: 14). Each of these three human dimensions is represented by specific variables, brought together in a composite index known as the Human Development Index (HDI): life expectancy, educational level and per capita income.

Since 1990, the HDI has been calculated annually for the majority of countries in the world, and published in the Global Human Development Reports (GHDRs). But during the 1990s other, more specific, indices were also drawn up (see Table 1.1).

In 1995, two new indices appeared in order to measure inequalities in human development between the sexes. The Gender-related Development Index (GDI) measures the human development achievements or abilities of men and of women. The greater the disparity in basic human development, the lower will be the GDI when compared with the HDI of the respective country (HDR, 1997: 124).

The Gender Empowerment Measure (GEM) measures inequality between the sexes as regards participation in key economic and political areas. The GEM uses variables constructed explicitly to measure the relative acquisition of power by men and women in the spheres of political and economic activity, taking into consideration the percentage of women in parliament, among administrators and directors, and professional and technical staff, as well as women's income compared with men's. Thus, while the GDI concentrates on comparing capacities of men and women in development, the GEM concentrates on their opportunities in the economic, professional and political areas.

In 1997 and 1998, the GHDRs introduced the Human Poverty Index (HPI) to measure relative privations in the three essential dimensions of human life considered in the HDI - longevity, knowledge, and living standards. The first privation concerns survival - vulnerability to death at a relatively early age. The second privation concerns knowledge - to be excluded from the world of reading and

communication. The third privation concerns an adequate living standard in terms of total economic provisioning.[1]

The HDI, and the other complementary indices have generated a great deal of attention, criticism and suggestions for their improvement. While some believe that these indices underestimate human well-being, others state that they overestimate it. For the former, well-being is something much broader, richer and more complex than the HDI and the other indicators suggest; above all because they do not capture autonomy and self-sufficiency, independence and a sense of community, as well as freedom and human rights. For their part, the latter group believe that the value of the HDI should be lower than indicated, because it does not include damage to the environment, violence and fear, and, in some countries, the disintegration of their social fabric (Streeten, 1999: 2-5).[2] In part, this divergence can be minimised, through multidimensional analytical frameworks.

Table 1.1 HDI, GDI, HPI-1, HPI-2 - Same components, different measurements

	Longevity	Knowledge	Decent standard of living	Participation or exclusion
HDI	Life expectancy at birth	1. Adult literacy rate 2. Combined enrolment ratio	Adjusted per capita income in PPP$	–
GDI	Female and male life expectancy at birth	1 Illiteracy rate 2. Female and male combined enrolment ratio	Female and male earned income share	–
HPI-1	Percentage of people not expected to survive to age 40	Illiteracy rate	Deprivation in economic provisioning, measured by 1. Percentage of people without access to water and health services 2. Percentage of under weight children under five	–
HPI-2	Percentage of people not expected to survive to age 60	Functional Illiteracy rate (a)	Percentage of people living below the income poverty line (50% of median disposable income)	Long term unemployment rate (12 months or more)

[a] based on level 1 prose literacy according to the results of the OECD International Adult Literacy Survey

Source: UNDP (1998), Human Development Report 1998; P. 15

The limited analytical framework, drawn up around the indices mentioned above, neither exhausts nor captures the totality of human capacities and opportunities in the process of enlarging people's choices that the concept of human development stresses. There are many other human dimensions, perhaps more contingent, but by no means to be disregarded, and no less valued by individuals, such as: political freedom and freedom of expression, the guarantee of other human rights, such as dignity, self-respect and respect by others. Indeed, in the particular case of Mozambique, the violation of these additional human dimensions reached levels of extreme and tragic gravity at various moments in its history. It is enough to recall that the last 25 years of the 20th century were marked by violent armed conflicts with devastating repercussions for the majority of the Mozambican population.

Thus the limited analytical framework has been inserted into a broader analytical framework of human development. In this context, theoretical models, a variety of empirical tests, and the collection of a vast amount of quantitative and qualitative information has been undertaken. The global and national reports have been particularly useful instruments for the debate and dissemination of the priority questions of human development.

These reports, frequently preceded by specific articles and research, systematise the debate and the main data to characterise the human development profile of a specific country or region.

New analytical instruments and their empirical relevance

The composition of the human development fabric and the interdependence of its main economic, social, political and cultural components is very complex. In particular, the relationship between economic growth and human development is today widely recognised as a two way process, in which two series or chains of events influence each other mutually; one without the other does not progress in a sustainable fashion in the long term.

However, the specific elements and links flowing between these two series have only recently been investigated in a systematic fashion. This research is itself a sub-product resulting from the theoretical perspective that

[1] For a detailed explanation of the methodology used for the HDI, the GDI, the GEM and the HPI, see the technical; notes in the GHDRs of 1994, 1995, 1997 and 1998.

[2] Recently Streeten (1999) has systematised the main criticisms of a methodological nature motivated by the HDI.

underlies the operational concept of human development, according to which in development human activity is regarded as the main aim and economic growth as one of the fundamental means to attain it.

The identification of these elements and flows is crucial,both in order to understand the nature and direction of changes in development, as well as to be able to identify the forms of development to be followed, and the specific political strategies to be adopted.

But in order to advance to deeper research into the two-way relationship between human development and economic growth, in this case in Mozambique, it is necessary to possess the indispensable statistical data and indicators for this. The current report is already an important step towards a deeper statistical analysis in future work.[3]

Chapter 2 presents the main results of the research into human development in Mozambique. The main innovation is that this is no longer confined to national level, as was the 1998 Report, but advances to disaggregate the analysis by the three main regions of the country - the North, Centre and South - and the 11 administrative provinces.

After the methodological and statistical considerations that follow, the chapter provides a brief framework for Mozambique's human development in the context of the subcontinent, namely the countries of the Southern African Development Community (SADC), and internationally.

The chapter then discusses the uncertain destiny of demographic growth in Mozambique in the coming decades. Attention is drawn to the fact that the evolution of the Mozambican population in the immediate future and in the medium term will depend on the impact of the HIV/AIDS pandemic on Mozambican society.

The following section presents a brief socio-cultural characterisation of the zoning of Mozambique into three great regions: the North, Centre and South.

The final section of the chapter describes what the HDI reveals about human development in Mozambique between 1994 and 1998, according to the three main regions, and the administrative provinces of the country. It also provides a preliminary estimate of the 1999 HDI.

Multidimensional analysis of human development

At the start of this chapter, it was stressed that the true merit of the human development approach lies in the pluralist vision it brings to assessing a country's development process, in this case Mozambique's.

In this context, development indices serve as a working instrument to digest the countless statistics related to human development. Clearly, as Sen (1999) warns, it would be a major error to reduce the analysis of development to its summary indices.[4] These indicators are useful instruments for digesting the available statistics; but they become more useful when they express the multidimensional nature of human development.

If human development is a multidimensional process, then its analysis also requires multidimensional approaches. The current Report attempts to broaden the scale of analysis, providing instruments that make it possible to shift from an international and national dimension to more local scales and levels.

There are two important levels at which the data can be broken down, both for research and analysis and for purposes of drawing up specific socio-economic policies and programmes.

First, the sub-regional level, namely the zoning of the country into three major areas: the north, the centre and the south. Secondly, the provincial level, according to the administrative division of the country: 10 provinces plus Maputo city which, because of its status, is equivalent to a province.

Eventually, it will certainly be possible to advance to still more detailed levels of analysis, by districts and localities, in future reports. The administrative division of Mozambique envisages these levels of classification. But first it will be necessary to draw together and organise adequate statistical data indispensable for such analyses.

[3] For example, Bruno et al. (1995, cited by Ranis and Stewart, 1999), in a study of 20 countries, show that 10% of the increase in average per capita income between 1984 and 1993 was positively co-related with a reduction of 20% in the number of people living on less than a dollar a day.

New data and new methods

Updating the statistical data

This year's report benefits from the most up-to-date statistics currently available in Mozambique. The publication, in October 1999, of the definitive data from the 1997 census (INE, 1999) helped greatly in this regard.

In preparing the human development indices for Mozambique, the team also had access to GDP data calculated according to the new methodology and published in the 1998 statistical year book (Anuario Estatistico de 1998, INE, 1999).

Table 1.2 includes the indicators that comprise the Human Development Index (HDI), calculated with the most up-to-date statistical data currently available. This new data leads to some differences when compared with the NHDR98.

First, based on the definitive data from the 1997 Census, it is estimated that life expectancy at birth in 1997 was 42.3 years, and not 46.5 years as estimated previously based on the data from the 1980 census and from the 1991 National Demographic Survey.

Second, the adult literacy rate of 63%, taken from the 1997 Demographic and Health Survey (IDS97) has turned out to be a substantial overestimate when checked against the 1997 census.

Third, the data for the gross domestic product (GDP), measured in dollars adjusted for purchasing power parity (PPP), were also updated by the World Bank, following the more complete survey of 1997-98 undertaken by the International Comparisons Programme. The real per capita GDP index, presented in Table 1.2, refers to PPP (purchasing power parity) dollars, also updating the calculation presented in NHDR98.

There is another reason why the HDI figures in the NHDR98 should be different from those presented in this report. We refer to the methodological improvements introduced in 1999 in calculating the HDI in the Global Report.

Methodological improvement in the human development indices

Apart from an aggregate and general measure of the human development in any given country, the HDI makes it possible to put each country into a global perspective. In the GHDRs the countries of the entire world are classified into three groups:

- Countries with low human development (HDI of between zero and 0.500);
- Countries with medium human development (HDI of between 0.500 and 0.799);
- Countries with high human development (HDI equal to, or higher than, 0.800).

The HDI does not merely seek to classify the countries of the world according to the typology established by the GHDRs: high, medium and low human development. Above all, the HDI is an instrument undergoing continual transformation, which can be used to reveal the progress and the gaps in countries' development strategies. The HDI is important because it uses the living conditions of human beings as a barometer to measure their prosperity. It should therefore be placed at the centre of debate and of programming development actions.

The HDI is a wide-ranging methodology for measuring progress, which attempts to go beyond the routine of the traditional macro-economic indicators used in the past. It combines two measures concerning physical and educational capacities, with an indicator on purchasing power, represented by an indicator of real average income per capita. For purposes of measurement, the HDI integrates these three human dimensions into an index composed of the following variables:

- Life expectancy at birth
- Adult literacy
- Gross school enrolment rate
- Real per capita Gross Domestic Product (GDP)

The method of constructing the HDI is explained in detail in Technical Note 1. But it will be convenient here to draw readers' attention to the methodological changes in the treatment and calculation of the income index

in the HDI, inspired by the work of Anand and Sen (1999) (see Technical Note 1).

The methodological modifications implied a reclassification of countries (UNDP, 1999). For example, Mozambique appears in the GHDR99 classified in 169th place out of 174 countries, which is three places lower than the classification attributed in the GHDR98.

But it should be mentioned that a change of this type should not be interpreted as a real alteration in the state of human development in the country. This change in international ordering results from methodological differences, differences which imply that the data of the two sources are not directly comparable.[4]

To sum up, in the present report the HDI data are not immediately comparable with those that were presented in the NHDR98 for two reasons: the basic data are different, and so are the methods of calculation. Any direct and linear comparison between the two would be incorrect and misleading.

In fact, the HDI figures in this report are not only different from the figures given in NHDR98. Graph 1.1 and Table 1.2 show the evolution of the HDI and of the reduction of deprivations between 1994 and 1999 based on the new methodology. Contrary to the figure of 0.341 for the 1997 HDI contained in the GHDR99, the more correct figure would be slightly lower: 0.331. Since the methodology used to calculate this set of indicators is the same, this difference is to do solely with the data. The GHDR99 used 1997 figures to calculate the indices. The current report has benefitted from the most up-to-date statistics produced by the INE, notably the data from the 1997 census (INE, 1999). [5]

What does the national HDI between 1994 and 1999 show?

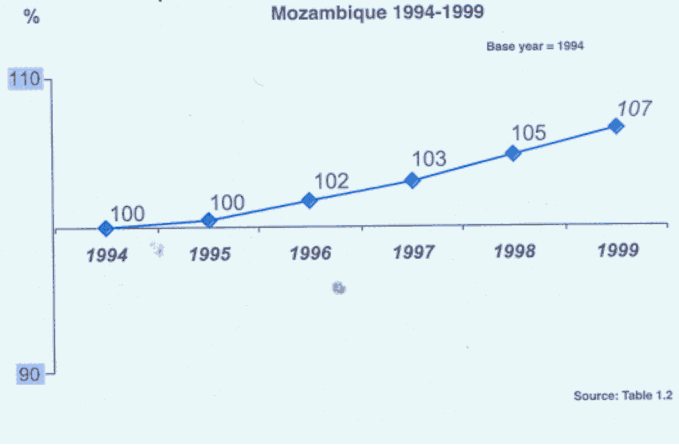
Table 1.2 presents the calculation and the results of the HDI between 1994 and 1999. The figure for 1999 is a provisional estimate. In this case, the HDI is calculated by using the real per capita GDP measured in $PPP, in order to allow international comparisons with more up-to-date figures than those used in the GHDR99 (UNDP, 1999: 137).

More important than each individual figure, the figures presented in Table 1.2 as a whole show a positive trend in the HDI, which increased by about 11% between 1994 and 1998.

However, in terms of real progress in reducing the shortfalls in human development, the progress is relatively less. The estimate of the reduction in shortfalls in human development can be made by noting the distance of the HDI figure for the country from the maximum possible value, which is 1. In other words, the difference between the figure reached by the country and the maximum possible figure shows the country's shortfall, that is, the distance that it still has to cover.

Graph 1.1 indicates that the reduction in the shortfalls, or in the country's deficit in relation to the maximum value for the HDI (that is, 1) between 1994 and 1998 was only 5%. If the forecast for the 1999 HDI is confirmed, it can be said that, in the last five years of the 20th century, Mozambique will have reduced its human development shortfalls by about 7%. This improvement could at first appear to be small. But as stated in the preface, human development is a slow and long process and the index itself, due to its composition, is not susceptible to significant annual changes.

Graph 1.1. Reduction of human development shortfalls, Mozambique 1994-1999



Source: Table 1.2

[4] This figure is rather higher than the figure of 49.5% presented by UNDP (1999: 148). The figure given here results from the use of more up-to-date statistics in calculating Mozambique's HPI-1.

[5] Although UNDP (1999: 137) uses the rate of life expectancy of 45,2 years, the most recent data given by INE (1999) indicates a life expectancy of 42,3 years in 1997. Also, the adult literacy rate is a bit less in Table 2.2 (39,5% against 40,5%), while the total school enrolment is more (32% against 25%).

Table 1.2. An updating of Mozambique's HDI, 1994-1998, based on the new methodology

	1994	1995	1996	1997	1998	1999 forecast
Basic data						
Life expectancy at birth (years) [a]	41,7	41,7	42,1	42,3	42,9	43,5
Adult literacy rate (%) [b]	39,5	39,5	39,5	39,5	39,5	40,0
Combined gross enrolment rate (%) [c]	25,0	25,0	29,2	32,0	33,2	35,0
Real per capita GDP (PPP dollars) [d]	620	640	680	740	850	952
Calculating the 1998 HDI						
Life expectancy at birth index	0,278	0,282	0,285	0,288	0,298	0,308
$\frac{42,9-25}{85,0-25} = 0,298$						
Educational index	0,347	0,347	0,361	0,370	0,374	0,383
(a) Adult literacy index						
$\frac{39,5-0}{100-0} = 0,395$						
(b) Joint enrolment rate index for primary, secondary and higher education						
$\frac{33,2-0}{100-0} = 0,332$						
(c) Educational index						
$\frac{(2x0,395)+0,332}{3} = \frac{1,122}{3} = 0,374$						
Real adjusted per capita GDP index (PPP dollars)	0,305	0,310	0,320	0,334	0,357	0,376
$\frac{\log(850)-\log(100)}{\log(40000)-\log(100)} = 0,357$						
Human development index (HDI)	**0,310**	**0,313**	**0,322**	**0,331**	**0,343**	**0,356**
$\frac{(0,298+0,374+0,357)}{3} = \frac{1,029}{3} = 0,343$						

(a) INE, 1999. See Table 23 in the Statistical Appendix.
(b) INE, 1999. See Tables 26 and 29 in the Statistical Appendix.
(c) Calculation based on the data and forecasts of MINED/MPF.
(d) World Bank 1999: updated data CD-ROM.

Sources: INE, 1999; UNDP, 1999; World Bank, 1999.

Why the UN gets its figures wrong

Box 1.2

In October 1999, Mozambique's National Statistics Board (INE) unveiled the definitive results of the 1997 census, which shows that, on the census date of 1 August 1997, there were 16.1 million people living in the country (or 16,099,246, to give the precise figure mentioned in the census).

The projections based on the census findings show that the Mozambican population, as of mid-October 1999, was 16,985,200.

These figures raise one obvious question: how is it that United Nations agencies, in their annual reports, repeatedly exaggerate the size of the Mozambican population? Thus the United Nations Children's Fund (UNICEF) report, entitled "The Progress of Nations 1999" gives the Mozambican population, as of 1997, as 18.4 million. The United Nations Development Programme (UNDP), in its 1999 Global Human Development Report, gives the same figure - a population of 18.4 million in 1997. The United Nations Population Fund (UNFPA) in its "State of the World Population 1999" puts the Mozambican population, this time in 1999, at 19.3 million.

What's going on here? How can United Nations agencies find more people in Mozambique than Mozambique's own statisticians can?

And the differences are by no means small. The three UN agencies are giving figures that are over 14 per cent higher than the INE's data.

Two obvious excuses spring to mind: the first would be that the UN has had no access to the INE data, and the second would be that the INE can't be trusted. But neither hypothesis survives the slightest critical scrutiny.

Although the final data from the census only became available in October 1999, the preliminary data were published in November 1997. These showed that the census brigades physically counted 15.28 million people.

Since no census can ever reach 100 per cent of the population, a coverage survey followed which showed there had been an "omission rate" of 5.1 per cent. In other words, the census had managed to reach almost 95 per cent of the total population. Under the UN's own system for classifying censuses, an omission rate this low is "good" (lower than four per cent would have been "very good", and higher than ten per cent "bad").

The figures from the coverage survey were available in June 1998. There is thus no excuse for UN reports published a year later to continue using data that ignore the 1997 census.

As for the reliability of the INE, this has never been questioned by any UN staff on the ground. Indeed, among the bodies who provided technical and financial support for the census were the UNDP and the UNFPA, which makes it rather ironic that their head offices should ignore its conclusions.

Since the local UN offices have no problems in cooperating with the INE, what we are facing looks like a classic bureaucratic problem. The UN agencies' headquarters are paying scant attention to what their (usually much better informed) staff on the ground are telling them.

It is not difficult to see how UN agencies have arrived at a figure of 18.4 million for the 1997 population. They simply extrapolated from the previous census, held in 1980, which gave a total population for that year of 12.1 million, and assumed an annual population growth rate of 2.6 per cent.

This completely ignored the huge mortality caused by the war of destabilisation in the 1980s and early 1990s, and by the natural disasters of those years (mainly cyclical droughts, whose victims the government had great difficulty in aiding because of the security situation).

The INE calculates the real average growth rate between 1990 and 1997 at just 1.7 per cent per annum. Now, in times of peace, the growth rate has picked up. Between 1996 and 1997, according to the census, it was 2.3 per cent.

Without the war and famines of the 1980s and early 1990s, the Mozambican population would indeed have been around 18.4 million by 1997. But it is wilful blindness to ignore factors such as war which have a major demographic impact – especially as the UN itself wrote many reports on Mozambique during the years of emergency.

Overestimating the population means getting many other figures wrong. In particular, it becomes impossible to calculate per capita GDP correctly. Clearly per capita GDP is much lower if the population is 18.4 million, than if it is 16.1 million.

Matters are made much worse if the GDP is miscalculated in the first place. Thus the UNDP report puts Mozambique's 1997 GDP at 2.4 billion dollars. But the government and the IMF together have calculated the figure for that year at 3.4 billion dollars.

When one works out per capita GDP, the difference between these two sets of figures is enormous: the UNDP figures give a 1997 per capita GDP of about 130 dollars, while the Mozambican ones push it up to 211 dollars – 62 per cent more.

If the GDP is underestimated and the population is overestimated, then it is hardly surprising that Mozambique remains near the bottom of the UNDP's list of countries as measured by its human development index.

GDP per capita accounts for a third of the human development index: were it calculated properly, using accurate figures, Mozambique's position on the UNDP list would doubtless change. None of the above is meant to imply that Mozambique is not a desperately poor country. It certainly is, and for illiterate peasant women who may have to walk several kilometres every day just to fetch water for their families, it is supremely irrelevant what position Mozambique occupies on the UNDP human development list.

But international agencies should have some respect for the institutions in the countries they are supposed to be helping. Census data are a serious matter. They are the building blocks for meaningful planning, and it is the height of arrogance for UN officials in New York to disregard them.

(Extracts from an article by Paul Fauvet, distributed by the Mozambique News Agency on 16 October 1999).

Chapter 2

Human development inside the country: Similarities and differences

Mozambique in the African and international context

In 1999, the population of Mozambique reached 16.99 million. This estimate is based on the recent projections made by the INE, following the publication in October 1999 of the definitive data from the 1997 census.

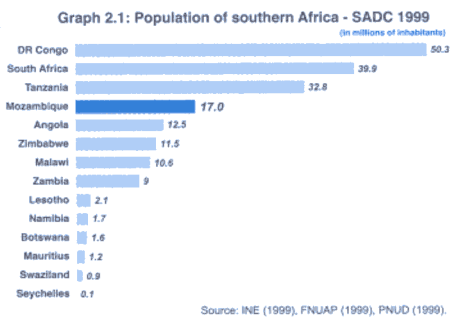
Mozambique in sub-Saharan Africa

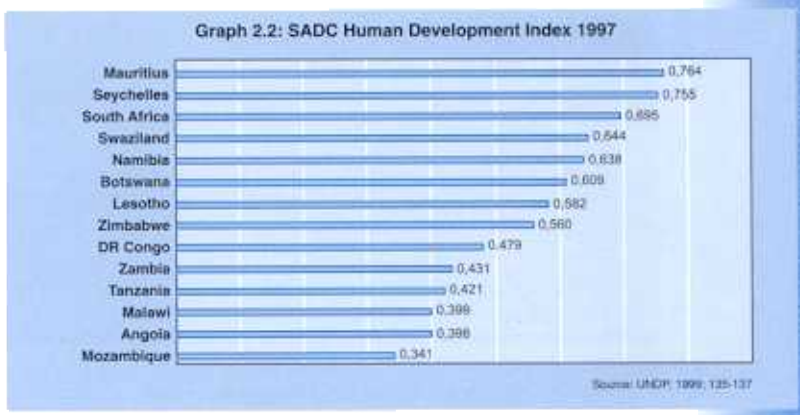
Mozambique is currently the fourth most populous of the 14 countries which are members of the Southern African Development Community (SADC). Graph 2.1 shows that the most populous SADC member is the Democratic Republic of Congo, with about 50 million people, followed by South Africa with about 40 million. Tanzania is in third position with about 33 million inhabitants. Taken together, these four countries account for over 70% of the 191 million or so people living in the 14 SADC member states.

As for the main human development indicators, Mozambique's situation within Africa has both negative and positive aspects. On the negative side, Graph 2.2 shows that Mozambique is in bottom position among the 14 SADC members.

Eight of these countries are in the category of medium human development (0.500 - 0.799). Amongst these, Mauritius, and then the Seychelles, stand out, with the best indices, both in SADC and in the entire sub-Saharan Africa region. The remaining six countries are classified in the category of low human development (less than 0.500).

Map 2.1
Southern Africa





The low level of human development in Mozambique is due to the low social and human indicators. Life expectancy in Mozambique is little more than 42 years, as against 48.9 in sub- Saharan Africa in general. Table 2.1 presents some selected indicators for the SADC countries: life expectancy and health expenditure, number of people per doctor, access to clean drinking water, and the rate of adult literacy.

Further important evidence on the weak human development of Mozambique, compared with other SADC countries, is shown by the poverty indicators. The human poverty index (HPI-1) in Mozambique is 59%,[1] the highest in the SADC region (Graph 2.3).

But on the positive side, when one compares women's participation in fundamental areas of economic and political power, Mozambican women seem to be in a better position than women of several other countries. This improvement is still not evident in the

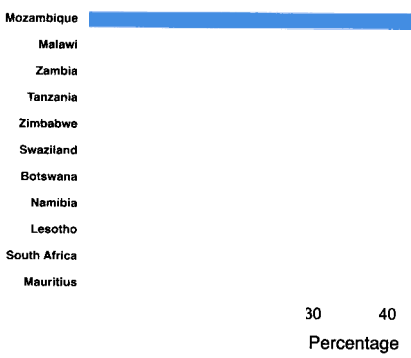
[1] This figure is rather higher than the figure of 49.5% presented by UNDP (1999: 148). The figure given here results from the use of more up-to-date statistics in calculating Mozambique's HPI-1.

Table 2.1. Social indicators in the SADC countries

	Life expectancy - years 1997	Public expenditure on health - as % of GDP 1995	Doctors (per 100,000 people) 1993	Access to clean drinking water (% 1990-1997)	Public expenditure on education as % of GNP 1995	Adult illiteracy 1997	
South Africa	54.7	7.9	59	87	6.8	84	
Angola	46.5	4	-	31	-	45	
Botswana	47.4	10.4	-	90	-	74.4	
Lesotho	56.0	7.0	5	62	5.9	82.3	
Malawi	39.3	5.5	2	47	5.7	57.7	
Mauritius	62.2	6.1	85	98	4.3	83	
Mozambique	**42.3**	**4.6**	**10**	**91.5**	**2.3**	**39.5**	
Namibia	52.4	3.7	23	83	9.4	79.8	
DR Congo	50.8	0.2	-	42	-	77.0	
Seychelles	71.0	7.6	104	n/a		84	
Swaziland	61.4	7.3	-	50		7.5	
Tanzania	47.9	3	4	66		71.6	
Zambia	40.1	2.4	-	38	1.8	75.1	
Zimbabwe	49	2	14	79	8.5	90.9	

Sourcee: INE, 1997; PNUD, 1999; World Bank, 1999

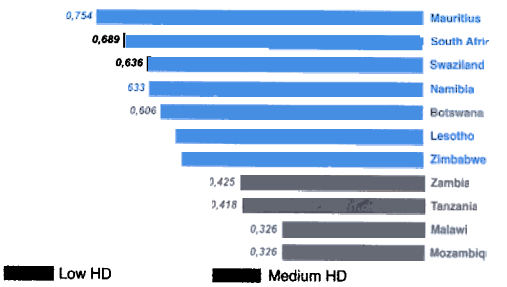
Graph 2.3. Human Poverty Index (HPI-1), 1997



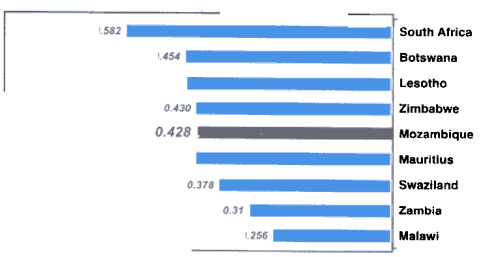
Gender-related Development Index (GDI); as Graph 2.4 shows, the GDI also puts Mozambique in the bottom position within SADC. But in any case, contrary to Mauritius, for example, the GDI in Mozambique is higher than the HDI, which suggests a more equitable distribution between women and men in terms of human development.

But the indicator which best shows the better position of Mozambican women in the

Graph 2.4 Gender-related Development Index (GDI), 1997



Graph 2.5. Gender Empowerment Measure, 1997



Source: UNDP, 1999: 143-144

SADC context is the Gender Empowerment Measure (GEM) in fundamental economic and political areas. Graph 2.5 shows the GEM for several SADC countries. In contrast with the human development indicators mentioned above, as regards the GEM Mozambique's performance is better than that of countries such as Mauritius, Swaziland, Zambia and Malawi.

That is, despite the low level of general and gender-related human development, the available data suggests that Mozambique has made a greater effort than several other SADC countries in improving women's participation in fundamental areas of economic and political power.

Clearly, this positive assessment of participation by Mozambican women is of relative validity. When looked at from the viewpoint of standards of real equity, it is very far from exemplary. What it shows is that the status of women in the neighbouring countries mentioned above is worse than in Mozambique, even though they are at a higher economic and human development level.

Development disparities: myth and reality

Box 2.1

Throughout my active intellectual life, as a citizen and as an academic, I have had great difficulties in positioning myself in the debate about South-North disparities in our country.

There is a kind of Russian box (those ornamental boxes, where a larger box contains a smaller one in an almost unending succession) which summons us inexorably either to delay going into the question in depth, or to become diverted onto the most superficial levels of the problem, sometimes with mistaken approaches.

For me, the problem of disparities begins with the depiction of geographical location. We are a country whose borders are awkward as well as artificial (as are those of the other countries of the African continent).

The peculiarity of our borders lies in their lack of logic in geographical terms. Which in itself just lays the basis for a "natural" impediment in administrative, political, economic and social management.

At the end of the 19th century, António Enes, then the royal envoy of the kingdom, emphatically asserted this natural obstruction in his famous report to the King of Portugal. For him, Mozambique was not governable because of the simple fact that its territory was not symmetrical, and physical planning would be difficult. It should be noted that this was at the very start of the effective implantation of colonial administration, arising from the decisions of the Berlin conference. The Portuguese and the British were in dispute over the territories between the Atlantic and Indian Oceans.

However, selling Mozambique to the British was a proposal much in vogue at the time, since with the money acquired it could more profitably develop Angola, and avoid useless torments.

The King did not sell, but history tells us that he yielded sovereignty, by renting out some land – an act which, though it seems to have been just a mere temporary deal for effective sovereignty in the administration of the territory, could have begun a whole process of intellectual fantasies, the results of which we are still feeling today. On many occasions, fantasies may be turned into reality, projecting images in accordance with their own subjectivity.

Mozambique is a poor country. Thus to deal with the reality of disparities implies focusing on the type of disparity we are talking about. Otherwise, we would be generalising what cannot be generalised. In the first place, without this necessarily being an exercise to try and evade the question, I must admit that the disparities are visible. They can be so even from the point of view of human resources.

Second, the location of Maputo in the far south, polarises national life in the same way and manner as this phenomenon occurs in our relations with the countries of the north.

Thus, a large number of young students, whether on state scholarships or not, who come to Maputo to study in the universities, settle here after the end of their courses, inflating the increasingly visible number of graduates waiting to be absorbed by the limited labour market.

Third, the unitary administration, enshrined in the constitution, faces not only geographical problems of the complex ordering of the territory, but also suffers the consequences of those disparities that originate in neighbouring countries.

Fourth, all efforts to build a Mozambican awareness based only on cultural values can have no viability, given our multi-ethnic, multicultural and multi-linguistic nature. Thus, a territorial approach, of the "From the Rovuma to the Maputo" type, though it came late in our contemporary history, will have been the best means of bringing this image into people's heads.

Our "Mozambicanness" is worth what the awareness of the territorial nature of the country is worth. Our territory has had, geographically and historically, various factors that tend to break it up, and in the discussion of the problem these are not being taken into due consideration. That is why, starting from a real and obvious situation of disparity, an assortment of myths has been created, some sonorously proclaimed, and others whispered in almost clandestine and conspiratorial conditions of complicity.

From my point of view, the myths about disparities further nourish the political battle, by bolstering centrifugal factors, and mortgaging the effort to preserve national unity. Thus in the South, the myth is now taken for granted that the North, even if it wanted to, would have difficulties in finding solutions to mitigate the existing disparities. The level of underdevelopment is such that it is becoming inevitable to accept a country going at two or three different speeds.

Furthermore, the exodus of human resources makes that region an oasis of mediocrity without capacity or creativity in the arts of management and governance. On the other hand, in the north the myth is taken for granted that the south has illegitimately usurped the instruments that would allow the correction of the disparities inherited from colonial rule, removing from the list of priorities the agenda that would make it possible in practice to implement what would, at heart, be the ingredient around which a nationalist awareness could form - that is the awareness of the scale of the territory as a basis of nationality, citizenship, and "Mozambicanness", summarised in the slogan "From the Rovuma to the Maputo".

If today I leave Maputo to go to Zambezia, Nampula, Niassa or Cabo Delgado, I must go through a neighbouring country, this shows that our territory still suffers from symptoms of break-up, just as the young graduate from Pemba shows the same thing when, after taking a degree in Maputo, refuses to return to the home city, for "lack of conditions" there.

For how long will Reality continue to feed the Myth of disparities?

There is a lack of creativity among us to face this question courageously. There must be real political will to reverse the Reality in order to destroy the Myth. And these are the myths that feed the mental image we have of somebody else. For me it is, to say the least, monstrous to imagine that this question can be solved just by handing out a quota of government positions, which is what the discussion has become polarised around. It is not a question of more or fewer ministers or governors. It is a problem of patriotism. Do we all know or feel what it is to be a patriot in the same way?

Lourenço do Rosário in Savana no. 317
4 February , 2000

What does the HDI by region and by province show?

Zoning the country: North, Centre and South

From north to south, Mozambique extends for a distance, as the crow flies, of 2,515 kilometres from the mouth of the Rovuma river to Ponta do Ouro (MINED, 1986: 44). About halfway between these two points is the basin of the Zambezi river (see Map 2.2). Roughly speaking, three major zones or socio-economic regions can be identified in the country.

Table 2.2. Surface, population and population density by region, province and gender, 1999

Region/Province	Surface (km2)	(%)	Population Total	(%)	Men	Women	Density (hab./Km)
Total	**799,380**	**100**	**16,840,654**	**100**	**8,083,085**	**8,757,569**	**21**
North	**293,287**	**36.7**	**5,481,857**	**32.6**	**2,701,433**	**2,780,424**	
Niassa	129,056	16.1	848,889	5.0	416,138	432,751	7
Cabo Delgado	82,625	10.3	1,436,496	8.5	695,687	740,809	17
Nampula	81,606	10.2	3,196,472	19.0	1,589,608	1,606,864	39
Centre	**335,411**	**42.0**	**7,056,328**	**41.9**	**3,412,353**	**3,643,975**	
Zambezia	105,008	13.1	3,240,576	19.2	1,570,491	1,670,085	31
Tete	100,724	12.6	1,287,517	7.6	619,158	668,359	13
Manica	61,661	7.7	1,103,857	6.6	528,980	574,877	18
Sofala	68,018	8.5	1,424,378	8.5	693,724	730,654	21
South	**170,682**	**21.4**	**4,302,469**	**25.5**	**1,969,299**	**2,333,170**	
Inhambane	68,615	8.6	1,222,219	7.3	539,060	683,159	18
Gaza	75,709	9.5	1,173,337	7.0	509,425	663,912	15
Maputo Province	26,058	3.3	899,329	5.3	427,814	471,515	35
Maputo City	300	0.04	1,007,584	6.0	493,000	514,584	3359

The northern zone includes three provinces: Niassa, Cabo Delgado and Nampula. Together these three provinces cover 37% of the country's area, and account for about 33% of its total population. The central zone includes four provinces: Zambezia, Tete, Manica and Sofala. Coincidentally, this area represents 42% both of the surface area and of the country's population. Finally, the southern zone includes the remaining provinces - Inhambane, Gaza, Maputo Province and Maputo City. It represents 21% of the surface area, in which 25% of the Mozambican population lives.

But apart from the geographical configuration and the population distribution, this zoning of the country also possesses strong historical and socio-economic roots. Several historians and other social scientists have investigated and described the dominant characteristics of each zone.

Although the great majority of the Mozambican population is of Bantu origin, over the centuries several socio-cultural idioms and identities, with a variety of geographical expressions, have developed in a diversified and multiple mosaic (Map 2.3).

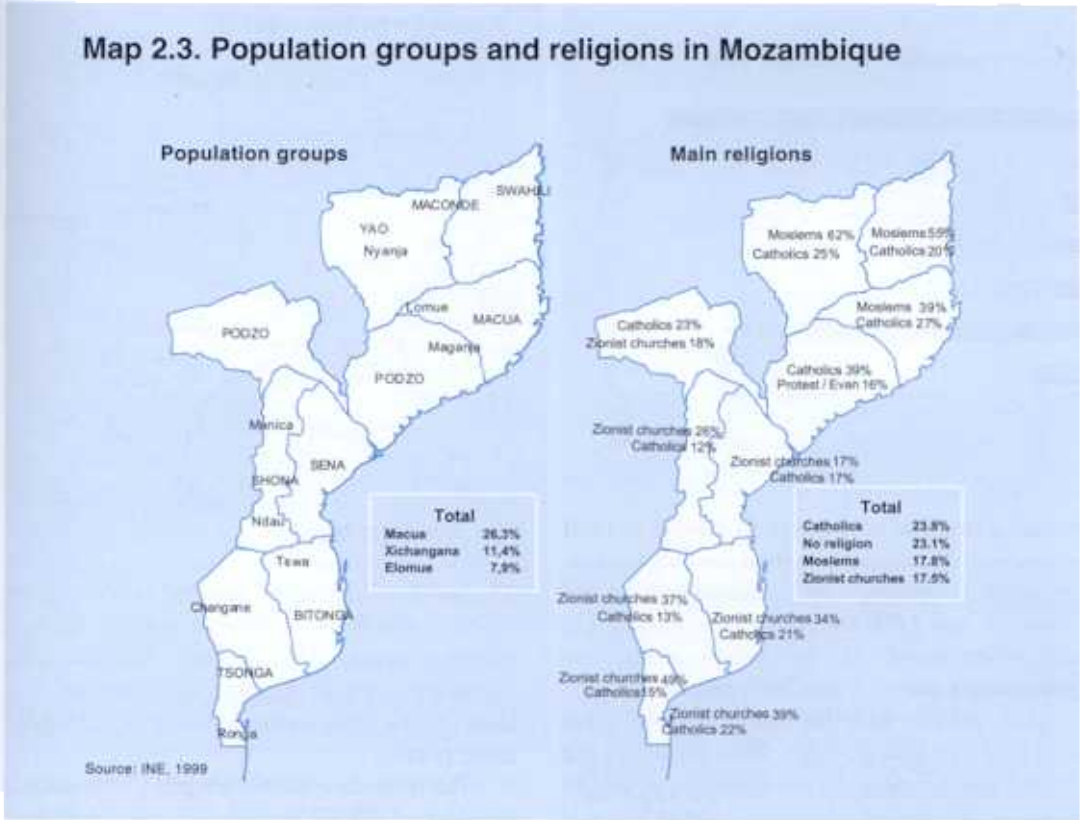
Although Portuguese is the official language of Mozambique, it is spoken by only 40% of the population. The percentage of people for whom Portuguese is their mother tongue, or is the most frequently spoken language at home in the country, is very small: 6.5% and 8.8% respectively.[2] (INE, 1999)

It can thus be said that the national languages dominate everyday communication among Mozambicans. The most common mother tongue in Mozambique is Emakhuwa (26.3%), followed by Xichangana (11.4%), with Elomwe (7.9%) in third place.

But Mozambique's rich and diversified linguistic and cultural mosaic is not rigidly confined to the geographical limits of the provinces that form part of each zone. The same is true between Mozambique and the

[2] This is mostly an urban phenomenon. In urban areas, the number of people who have Portuguese as their mother tongue, or the language most spoken at home, rises to 17% and 26% respectively (INE, 1999: 39-40).

Map 2.3. Population groups and religions in Mozambique



neighbouring countries, or even between provinces of the country, whose territorial boundaries have a merely administrative interpretation.

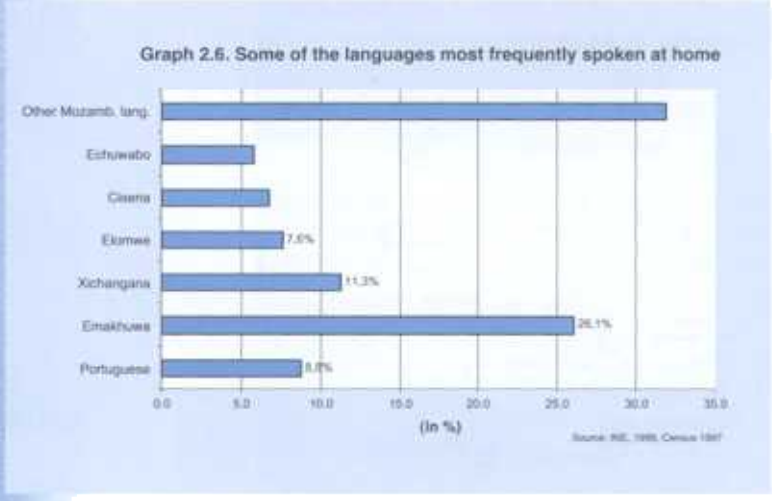
The strategies and programmes implemented in the colonial period and after independence have also helped strengthen both the similarities and the differences between these great regions of the country.

In the colonial period policies were implemented to promote the network of overland transport and labour migration to the hinterland - the neighbouring countries and territories without direct access to the sea. After independence, attempts were also made to exploit the advantages of Mozambique's geographical position in the region. This was the context for the stress on the rail and road "corridors" that link the main Mozambican ports - Nacala, Beira and Maputo - to landlocked neighbouring countries. The logic is that these poles of development promote exports and imports from and to the hinterland, and attract industrial investment.

Finally, the development of other forms of interaction also contributed to the network of relationships of interdependence and differences at sub-regional and provincial level. These are, for example, those of a cultural, religious or kinship order, as well as the media and the entire administrative, political and governance machinery of the country. In this section we stress the first two aspects, since the 1997 Census has recently provided updated information on linguistic diversity and on the distribution of the main religions.

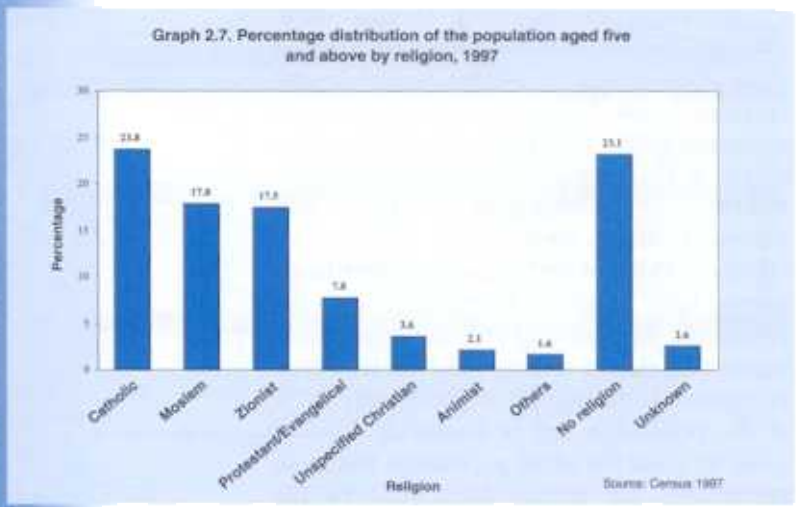
According to the 1997 Census data, although Portuguese is the official language, it is far from the main mother tongue or the language most frequently spoken in daily communication. The most common mother tongue in Mozambique is Emakhuwa (26.4%), followed by Xichangana (11.4%), with Elomwe (7.9%) in third place.

About 39.6% of the Mozambican population knows how to speak Portuguese. But the percentage of men (50.4%) is substantially higher than that of women (29.7%). However, Portuguese is the mother tongue of only 6.5% of the population and is frequently used at home by about 9% of the population. But these percentages are mainly determined by the



urban areas. The percentage of people in rural areas with Portuguese as their mother tongue, or as the language most frequently spoken at home, is just 2.0% and 1.4% respectively. On the other hand, in the urban areas, the percentages are 17% and 26%, respectively for mother tongue and for the language most frequently spoken at home. Thus the use of the Portuguese language as a mother tongue and as the main method of communication at home is essentially an urban phenomenon.

As for the major religions, catholicism is the one with the most aherents (23.8%). It is followed by those who say they have no religion (23.1%), with moslems in third place (17.8%), and followers of zionist churches in fourth place (17.5%). Catholicism is thus the majority religion according to the census, mainly in urban areas, but also with some implantation in the countryside.



The Northern region

The north is served by several ports: namely Nacala, which is the deepest port on the east African coast, and Pemba. Neighbouring countries, such as Malawi and Zambia, find their closest links to the Indian Ocean through these ports.

The dominant mother tongue in the north is Emakhuwa (68%). Emakhuwa is the dominant tongue in Mozambique as a whole (26.3%), and, in the case of Nampula province, the mother tongue of about 90% of the population.

Conquest and loss of the highlands by the Portuguese

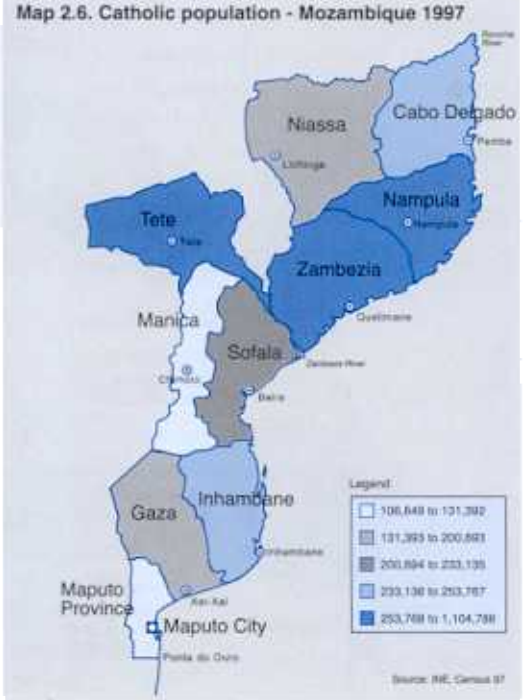
Box 2.2

In the 17th century, there was a possibility that Central Africa might be firmly dragged into the growing core of world capitalism, which could have made a strong colonial Portuguese state or a centralised Karanga monarchy emerge. However... this economic revolution never occurred: the traditional technologies, and the local, small scale production and exchange systems were maintained. With them the decentralised and segmented political structures survived. The 17th century was certainly crucial for placing the African continent on the path of underdevelopment but, contrary to what is frequently stated, this was not because international capitalism turned it into a peripheral area and controlled its economic relations. Underdevelopment arose because the technologies and institutions necessary for the creation of a modern state were not implanted, either among the indigenous Tonga and Karanga communities, or among the Portuguese and Afro- Portuguese communities.

Extract from História de Moçambique, 1997: 82-83

Other important languages in the north are Ciyao (37%) and Cinyanja (8%) in Niassa; Shimakonde (22%) and Kimuwani (6%) in Cabo Delgado. Only about 27% of the population knows how to speak Portuguese.

Map 2.6. Catholic population - Mozambique 1997



Map 2.7. The Central zone

The geography of the interior, south of the Zambezi

Box 2.3

Modern Mozambique is the result of a series of international treaties signed between Portugal and Britain in 1891. These treaties were inevitably a reflection of the political tensions and realities of the time. But the frontiers they delineated were not simple lines drawn arbitrarily on a map. The geography and the historical evolution of the peoples of the region played a considerable role in deciding the form of the modern state. South of the Zambezi, the line of the frontier separates the highlands of the savanna from the lowlands; sometimes the border itself runs along the hilltop, and in other places it crosses irregular escarpments where granite plateaux plunge towards the sea. The escarpment and the plain form a rough area, finely covered with small trees and shrubs from which rise imposing baobabs. It is a hot area, and, when uncontrolled, the bush is easily infested by tsetse flies... The Zambezi is by far the largest of the rivers, and the Zambezi Valley is in many ways like an extension of the coast, a tongue that penetrates the interior of the plain for 300 miles. The river crosses a volcanic fault. Its banks consist of a narrow flood plain and still narrower escarpments giving access to the highlands. However, the climate of the valley is hotter and drier than that of the coast. the heavy perennial rains that fall on Quelimane, on the coast, take on a seasonal character in the Tete region, turning the valley into an area affected by extremes of drought and catastrophic floods... Some of the mountainous zones of Manica extend into the Mozambican interior, but on the other hand, all the high plateau is beyond its borders. Even so, this is an important region in the history of Mozambique, since the highlands were the heart of Shona culture, and this diverse but distinctive African civilisation penetrated and dominated many of the lowlands of Mozambique.

Extract from História de Moçambique, 1997: 46-47

Map 2.5 shows that the Moslem religion (52%) is dominant in the north, followed by catholicism (24%). In Niassa (62%) and in Cabo Delgado (55%) more than half the population consists of moslems. In Nampula, 39% of the population is Moslem, followed by 27% who are catholic, and 11% who follow other Christian churches.

The Central region

This region is distinguished by the basic hydrography of the Zambezi Valley, the Cahora Bassa dam, the port of Beira, the pipeline between Beira and Zimbabwe, and the two major railways linking Beira to Zimbabwe and to Tete. The central zone, on the boundary between matrilinear and patrilinear societies, possesses a great linguistic diversity: In Zambezia - Lomwe (41.8%), Echwabo (31%) and Cisena (8%). In Tete - Cinyanja (48.4%), Cinyungwe (27.9%) and Cisena (11.7%). In Manica - Cindau (8.6%), Chitwe (21.6%) and Chimanika (15.4%). In Sofala - Cisena (47%), Cindau (33.5%) and Echwabo (3%). About 36% of the population knows how to speak Portuguese. As for religion, about 23% of the population of the central region is catholic. About 18% are moslems followed by 8% who are members of protestant/evangelical churches.

The Southern region

The southern region consists of Inhambane, Gaza and Maputo provinces, and Maputo city. The main pole of economic and administrative

Map 2.8. The Southern zone

The southern zone of Mozambique

Box 2.4

The region between the Save and the Limpopo rivers which, at a later stage, became part of Mozambique can be described as a vast plain covered with bush, without any sizeable geographic features to break the monotony. The area is dry, and the soil is sandy and poor. Droughts are frequent, and it seems that tse-tse fly has been known here for a long time. Everything indicates that there has never been any population surplus in this zone, hence it is rich in game... South of the Limpopo, the scenery changes considerably. The Lebombo mountains, at the far north of the great coastal mountain chains of South Africa, rise to 2,500 feet above sea level. They function as a natural barrier just 50 miles from the coast. The rains that fall on them spill into a series of important rivers that flow into Delagoa Bay. Both the scattered population in the dry lands north of the Limpopo and the inhabitants of the Natal and Transkei regions of southern Africa discovered the motor of their history in the area of the Bay, whose geographic location and natural wealth exercised a powerful influence on all of them. To these advantages the Portuguese added the important factor of foreign trade. Delagoa Bay became the gateway through which the peoples of the South African region first experienced direct contact with the world beyond the ocean.

Extract from História de Moçambique, 1997: 141-142

Map 2.9. Zionist church population - Mozambique 1997

dynamics is Maputo City itself, where one may note the country's main industrial park, the Port of Maputo, with a capacity to handle 14 million tonnes of cargo a year, and the three railways linking the city to Zimbabwe, South Africa and Swaziland.

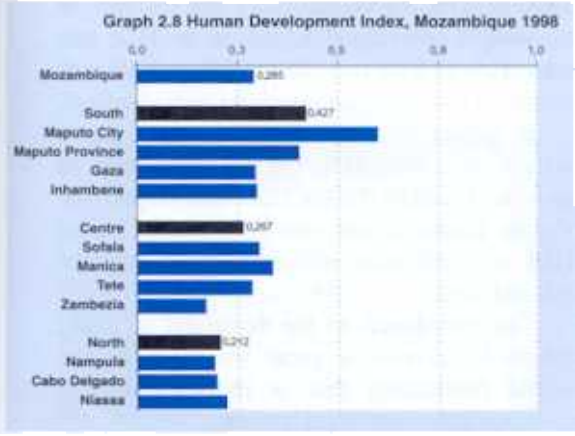
In the southern zone the following languages are dominant: Xichangana in Gaza (88.4%). Maputo province (44.3%) and Maputo city (34.1%). Xirhonga in Maputo Province (25.6%) and Maputo city (20.7%). Xitshwa in Inhambane (57%) and Maputo Province (5%); Cichope in Inhambane (16.6%), Gaza (6%) and Maputo Province (5%). In the south about 62% of the population knows how to speak Portuguese.

Map 2.8 shows that about 40% of the population of the southern zone follow Zionist churches, while 18% are catholics. One notes that throughout the country where the catholic religion is not first in terms of followers, it is second. Thus it is this religion that has most believers in the country (23.8%), and not Islam as is frequently stated. As Graph 2.7 shows, Islam has almost the same number of followers (17.8%) as the Zionist churches (17.5%).

Progress and privations in human development

Graph 2.8 summarises the development situation in 1998, inside Mozambique, including HDI figures for the country, for the three major regions, and for the eleven provinces.

In 1998, the national HDI of Mozambique was 0.285. Note that this figure differs from what appears in Table 1.1, simply because the economic component (the real per capita GDP index) is calculated in this case in meticais rather than in PPP dollars.



Given that the main focus of this report, and particularly of this chapter, is an analysis of the human development situation within Mozambique, by region and by province, it was decided to use an HDI calculated in meticais: this is the monetary measurement which best reflects the local economic situation of Mozambique.

When the HDI is broken down by provinces, the disparity between Maputo City and the rest of the country leaps immediately to view. It is not surprising to hear some people remark, in everyday conversation, that "Maputo is increasingly distant from its own country". With a 1998 HDI estimated at 0.605, Maputo City is the only area in Mozambique with an HDI level above 0.500; that is, with an HDI which puts it into the category of medium human development.

Although the indices calculated here may not be directly comparable with the international ones, in a rough approximation one can say that the human development level of Maputo is comparable to that of countries such as Botswana, Egypt, Algeria and Swaziland.[3] On the other hand, the province with the lowest human development index in 1998 is Zambezia, with an HDI of 0.176. It is followed by Nampula (0.200), Cabo Delgado (0.204), Niassa (0.227) and Tete (0.287). All these provinces have HDI figures of less than 0.300. Viewed in an international perspective, if the HDIs were calculated in PPP dollars, these provinces would be classified with the least developed countries in the world, alongside Sierra Leone, Niger and Ethiopia.[4]

The disparities in human development are significant. In regional terms, as Graph 2.8 shows, the more distant a region is from Maputo city, the smaller is its HDI. The HDI of Maputo City is 1.8 times greater than that of the rest of the south, 2.3 times greater than that of the central region, and 2.9 times greater than that of the north.

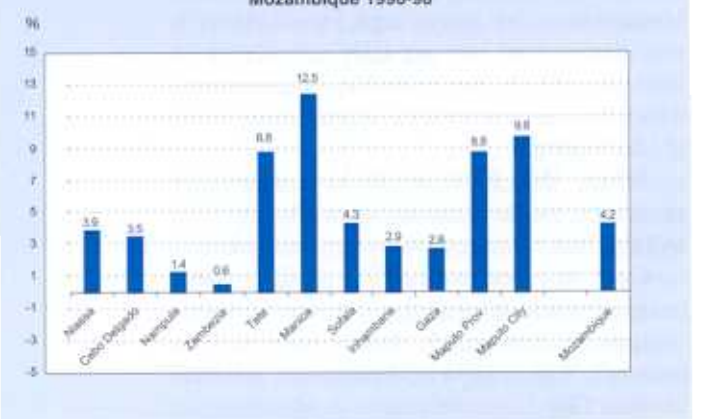
But the greatest regional discrepancy is between Maputo City and Zambezia: the HDI of the former is more than three times greater than that of the latter. The implication of this is

[3] If the Maputo City GDP Index had been calculated in PPP dollars, its HDI would reach 0.669.

[4] The three countries mentioned in the category of medium human development, have HDI values of between 0.609 and 0.665 (UNDP, 1999: 136).

that, while Maputo city will have to compensate for a human development shortfall of about 40%, Zambezia needs to compensate for a human development shortfall of around 83%.

Graph 2.9 Variation in the deficit of human development shortfalls, Mozambique 1996-98



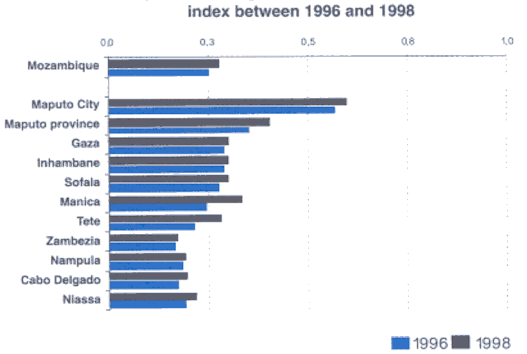
HDI trends between 1996 and 1998

Graphs 2.9 and 2.10 show the changes in the HDI between 1996 and 1998, both in terms of growth trends, and in terms of variations concerning the reduction of shortfalls with regard to the maximum possible value of the HDI. Graph 2.10 shows that all provinces, except Gaza, showed positive HDI trends between 1996 and 1998.

Graph 2.10 Changes in the human development index between 1996 and 1998 Mozambique Maputo city Maputo province Gaza Inhambane Sofala Manica Tete Zambezia Nampula Cabo Delgado Niassa. It was mentioned earlier that the reduction in the human development deprivation between 1994 and 1998 was 5%.

Graph 2.10 quantifies the recovery as regards human development deprivation between 1996 and 1998 both for the country as a whole, and for the provinces. In these two years the country reduced its deprivation by 4.2%, while four provinces - Manica, Tete, Maputo Province and Maputo City - showed recovery in excess of 5%. Particularly noteworthy was Manica, with a 12.5% recovery.

Graph 2.10 Changes in the human development index between 1996 and 1998



On the other hand the remaining provinces scarcely managed to achieve any reduction in their shortfalls. Zambezia and Nampula had positive results, but less than 1.5%, while Sofala, Niassa, Cabo Delgado and Inhambane had increases of less than 5%.

The HDI components in Mozambique

The variations in human development in Mozambique can be better understood when the situation and the behaviour of the HDI components are analysed. In this respect, there are important discrepancies hidden behind the national aggregate indices.

In a situation of balanced human development, where the three HDI components reach the maximum possible value (0.999), each of the three components would represent about 33%. But in Mozambique the imbalance between the components of human development is still very sharp.

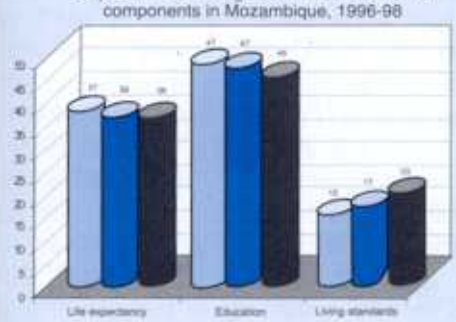
Graph 2.11 shows the weight of each of the three components in the national HDI, while Graph 2.12 does the same for the specific case of Maputo City.

But in the last five years the income index has increased its weight nationally, and in some regions of the country. Graph 2.11 shows an increase in the weight of living standards (represented by GDP) in the HDI from 15% in 1996 to 20%. In Maputo City, the increase in the weight of living standards in the HDI was slower: from 24% in 1996 to 25% in 1998 (see graph 2.12).

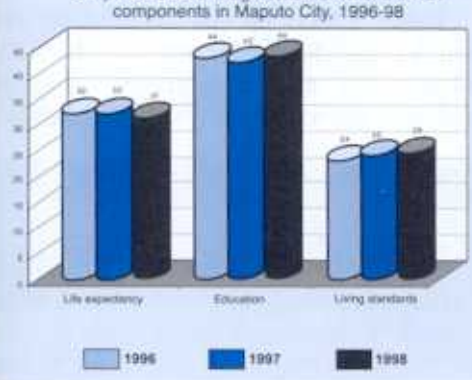
In Sofala Province, GDP also now has a weight of around 24%. On the other hand, in provinces such as Niassa, Gaza and Maputo the weight of the living standards index in the HDI in 1998 was still oscillating between 8% and 10%.

This imbalance, to the detriment of living standards, reveals a great weakness in the whole foundation that is indispensable to sustainable human development.

Graph 2.11 Percentage contribution of the HDI components in Mozambique, 1996-98



Graph 2.12 Percentage contribution of the HDI components in Maputo City, 1996-98

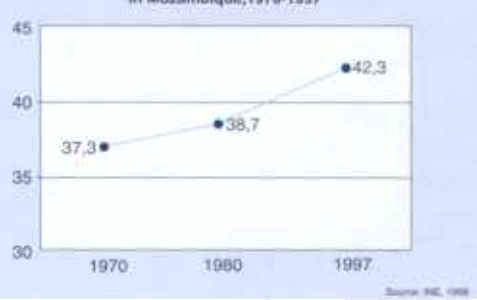


Life expectancy and health

In 1997, the life expectancy at birth of the Mozambican population was estimated at 42.3 years - 44 years for women, and 40.6 years for men. This life expectancy level is about three years lower than the available estimates prior to the 1997 census, and about seven years lower than the average for sub- Saharan Africa.

Graph 2.13 suggests a gradual, albeit slow, increase in longevity among Mozambicans between 1970 and 1997, despite the war, natural disasters and the economic crisis. But this might not continue, as Chapter 5 shows, if the impact of AIDS is on the scale that available data currently suggest.

Graph 2.13 Evolution of life expectancy at birth in Mozambique,1970-1997

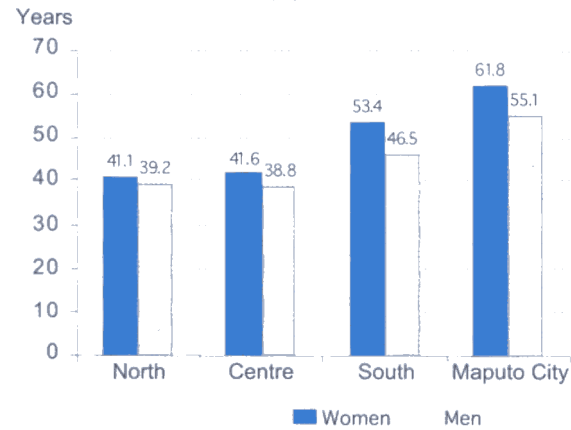


While dealing with life expectancy, it is also worth noting the particular case of Zambezia, the province with the lowest life expectancy in Mozambique: 38 years for women, and 36.1 years for men. This is an average of 21 years less than in Maputo City.

This means that a girl born today in Maputo can expect to live for 23 years longer than a girl born in Zambezia province. But the same child born in Maputo has a life expectancy that is 20 years shorter than that of children born in industrialised countries.

Graph 2.14 shows life expectancy at birth broken down into four regions: North, Centre, South and Maputo city. While the gap in life expectancy at birth between men and women in Zambezia is about two years, in Maputo it reaches almost seven years. The obvious question is: in places such as Maputo city, where there is a more rapid improvement in women's life expectancy, is this due to the fact that they benefit more from health care than do men?

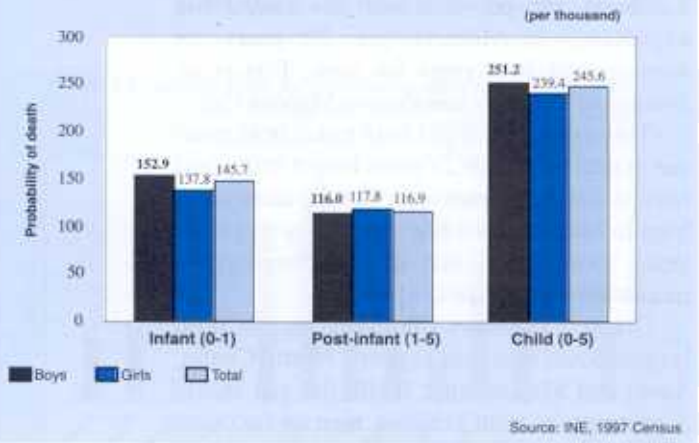
Graph 2.14 Life expectancy at birth, by region and by gender, 1997



One should remember that, in general, in the conditions of an underdeveloped country such as Mozambique, the main variations in life expectancy occur in the age group that is less than five years old.

Graph 2.15 shows the three main mortality rates for under-fives. This grouping by separate ages-under one-year-old, between one and five, and the combination of these two rates-is justified by the fact that each of these age groups has significantly different impacts in determining levels of life expectancy at birth.

Graph 2.15 Infant, post-infant and child mortality by gender, 1997



Source: INE, 1997 Census

The rate of infant mortality in Mozambique, for both sexes taken together, is 145.7 per 1,000 live births (INE, 1999), while child mortality (the combination of infant and post-infant mortality) reaches 246 deaths per 1,000 live births. But, as Graph 2.15 shows, both in the case of infant mortality, and in that of child mortality, boys have a higher mortality rate than girls.[5] This is also valid for Maputo city (see appended statistical table), where these rates are two or three times lower than in the rest of the country.

Chapter 5 takes up this theme of survival again, to consider the impact that the AIDS epidemic may have on mortality among the population, and consequently on life expectancy.

Equity in the provision of health services

The provision of health care is an important component for improving the well-being of the public, providing a long and healthy life. Health is an indispensable component in the struggle against poverty, and is thus a central question of human development, along with education, access to water, communication routes, and agricultural marketing.

In restoring the health care network destroyed during the war, the government based its intervention on the goal of ensuring not only quantitative and qualitative growth, but also of providing access to the less privileged regions and strata, using criteria of vertical and horizontal equity. The concept of horizontal equity establishes that people under identical conditions should have identical benefits, while vertical equity stipulates that people with additional needs should receive greater benefits. As an example of vertical equity, the health sector undertakes programmes aimed at protecting vulnerable groups such as women, children, adolescents, young people, the disabled, the elderly and others. Those programmes aimed at women of child-bearing age and at children are the ones with the largest coverage rates since, apart from passive care in fixed primary level health units, there is also active care, through mobile brigades which reach most villages in the country.

This influences health indicators such as infant and child mortality, and maternal mortality, which are still very high in Mozambique. The provinces have very similar coverage rates, but these health indicators are much higher in the northern provinces, precisely because in this region, for cultural and religious reasons, the education level of women is lower than in the rest of the country.

Before independence, there were enormous inequalities in the distribution of the health network, not only between provinces, but also between districts of the same province. After independence, programmes were introduced intended to correct the imbalances in the health network. Unfortunately, the war which followed in the interior of the country, led to a great setback in this process, particularly after 1980. With the end of the war in 1992, the health sector outlined a new strategy which consisted of transforming the health posts (about 1,000 of them) into Health Centres with maternity facilities. The Health Posts undertook only curative activities, but the Health Centres included most of the health programmes, particular those concerned with the health of children and of women of child- bearing age. The health network also expanded, with the building of new health centres containing maternity wards.

Since 1992, the planning of the health network, of the activities it undertakes, and of the distribution of resources have complied with criteria of equity, based on indicators developed to serve as supports for the planning exercise. One of the most important indicators are the so-called Care Units. This indicator is calculated by multiplying each of the activities undertaken by a factor related to the time spent on each of them and their approximate relative cost.

Calculation of Care Units

- days/bed occupied - factor 9
- births - factor 12
- vaccinations - factor 0.5
- mother-and-child health contacts - factor 1

[5] Infant mortality in Africa, and in southern Africa, is 87 and 62 per 1,000 live births respectively (UNFPA, 1999: 67).

Knowledge and education

Education plays a key role both in the dynamics of components of demographic change, and in the productivity of labour, and the opportunity to enjoy the benefits of the extraordinary worldwide progress in science and technology. Educational level thus represents a further important dimension of human development, and is measured by the combination of two indicators: adult literacy, and the combined enrolment rate in the primary, secondary and tertiary levels of education.

The 1997 census data show that, in general, access to education in Mozambique is still very low. The rate of adult literacy is 39.6%. That is, only about 6.4 million of the 16.1 million Mozambicans know how to read and write.[6]

But, as Graph 2.16 shows, regional and gender differences are blatant. In the North, only about 14% of women and 44% of men are literate, as against 77% and 93% respectively for the women and the men living in Maputo City.

Likewise, only 28% of the Mozambicans living in the countryside are literate, as against 65% in the urban areas. In both cases, the discrepancies between the sexes, and between persons of the same sex are large. About 80% of men and 54% of women in the urban areas are literate, compared with 44% of men and 15% of women in the rural areas.

Box 2.5

- out-patient consultations - factor 1
- dentistry consultations - factor 2

Thus to obtain the number of Care Units of a particular health unit, of a district, of a province, or even of the entire country, one adds up the various activities undertaken after multiplying each of them by the respective factor.

Once we possess data on the population and on the health technical staff employed by the state, two other indicators can be calculated: care units per inhabitant, and care units per health worker. The first of these measures the access of the public to health care, and the second measures the productivity of health workers.

Of these two indicators, the first is more relevant in assessing equity, and its value in each district, for instance, shows us the difference between districts, in any given province.

Measuring equity in the provision of health care, for example in a province, can be undertaken using another indicator - the inequality index, in other words, by measuring the lack of equity. This is calculated by taking the arithmetical average of care units of some of the most favoured districts, and the arithmetic average of this same indicator for the least favoured districts.

The population of each of these groups of districts should be higher than 25% of the total population. The inequality index results from the quotient between the calculated average of the most favoured, and that of the least favoured. The lower the inequality index, the better the equity in the provision of health care. By comparing inequality indices obtained over the years, we can assess the improvements attained in terms of equity in providing health care.

In operational planning for the distribution of human resources and of capital, it is important to use the other two indicators mentioned above: care units per inhabitant and care units per health worker.

In the distribution of funds for recurrent costs (materials), two indicators can be used: funds per capita and funds per health unit. The latter is more relevant since it relates the costs of activities and the funds allocated for carrying them out.

This method has allowed the health sector, annually or throughout the year, to undertake an appropriate distribution or redistribution of resources, using criteria of equity, and pushing down the inequality indices between districts in the same province, or even between provinces. The differences between the cities and the rural areas in terms of providing health care has narrowed substantially in recent years.

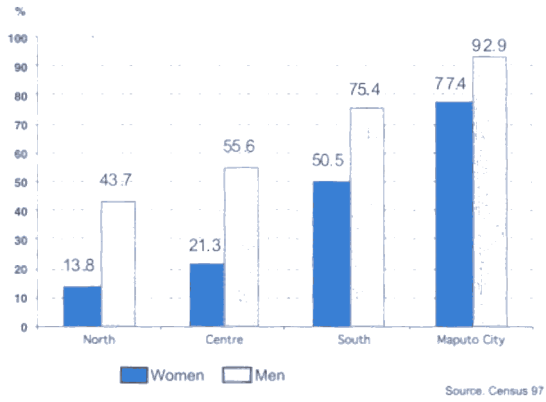
Gradual increases in funds from the state budget, resulting in part from economic growth, and in part from the HIPC initiative, make the international community's support for the sector more sustainable, and lead donors to medium to long term financing agreements with it.

Trends in the health sector show a gradual increase in public access to health care, and an improvement in the quality of care: there is a reduction in the distance people have to walk to reach health centres where they can obtain access to health care. Given the activity of mobile brigades, health services also reach more remote areas which do not have normal access to these services, particularly preventive care.

Igrejas Campos

[6] This figure, obtained from the recently published definitive data from the 1997 census, corrects the figure used in the 1998 NHDR, which was taken from the 1997 Demographic and Health Survey (INE, 1998).

Graph 2.16 Rate of adult literacy by region and by gender, 1997

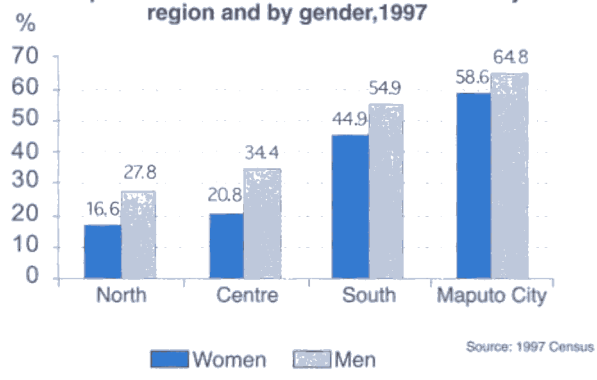


The data shows that neither of the sexes can be regarded as a homogeneous group in terms of educational level, since among men, and particularly among women, there are enormous inequalities. There are twice as many literate men in urban areas as in rural ones. As for women, there are 3.6 times more literate women in the cities and towns than in the countryside.

Put in absolute terms, only 2.2 million of the 8.4 million Mozambican women alive in 1997 knew how to read and write. Considering the high dependence of the Mozambican population on agricultural production and the crucial role played in this by women, it is hard to imagine any progress and improvement in economic productivity, while rural women remain so cut off from knowledge.

Although the budgetary sums destined for education increased in 1997 to 17% of total government expenditure, the number of schools, and of teachers and other qualified educational staff remains very small. This is shown by the poor coverage of the educational system, expressed by the gross school attendance rates in the 1997 census: 66.8% in primary education, 39.9% in secondary education, and 0.3% in higher education. Graph 2.17 breaks down the gross school attendance rates by gender and by the four regions of the country.

Graph 2.17 Gross school attendance rate by region and by gender,1997



This low educational level is compounded still further when one considers what levels of education Mozambicans actually finish. About 78% of all Mozambicans - 69.5% of the men and 86% of the women - have not finished any educational level. Among people who are over 60 years old, these percentages rise to 90% for men and 98% for women.

In 1997, only 1% of women and 3.1% of men had concluded secondary education. These figures suggest that the majority of young people who finish primary education do not continue their studies to higher levels. In the case of the rural areas, the rate of attendance at secondary education is just 1.3%.

Multiple dimensions of human deprivation - the HPI in Mozambique

The incidence of absolute poverty and the human poverty index

The DPDS-UEM-IFPRI work (1998), Poverty and Well-being in Mozambique – A First National Assessment 1996-97 (Pobreza e Bem-estar em Mocambique – Primeira Avaliacao Nacional 1996-97) is currently the main reference for the phenomenon of poverty in Mozambique.

Since poverty is a complex phenomenon, with multiple dimensions and characteristics, it is inevitable that there should be a diversity of approaches and indicators for measuring poverty.[7]

The DPDS-UEM-IFPRI report (1998) chose one of the most important approaches, the welfarist approach to poverty, resting on a measurement of well-being based on per capita consumption of goods and services by a household or by persons individually.

It is not the purpose of this report to

[7] One could mention the welfarist approach to poverty, the capacity approach, the human development approach, the nutritional/biological approach, the participatory approach (MPF, 1999)

reproduce the results of the MPF-IFPRI work, much less question the value and validity of its results. On the contrary, what is intended here is to complement and expand the approach of economic welfare measured by consumption, with the human development perspective, through the concept of human privation and the human poverty index.

The human poverty approach to some extent incorporates, but tries to go further than the consumption and income approach, considering human poverty in a broader sense. As the DPDS-UEM-IFPRI work mentioned above states:

"Although it is believed that consumption (or income) is a useful aggregate monetary measure, it is recognised that both measures fail by not including some important aspects of individual well-being, such as the consumption of public property (for example, schools, health services, public sanitation infrastructures), and the quality of life (for instance, leisure, longevity and health)". (DPDS-UEM-IFPRI, 1998: 5)

At root, the HPI-1 offers another way of measuring absolute poverty, with the difference that it is part of a broader approach — the human development concept — incorporating dimensions of absolute poverty that measurements of consumption and income do not capture.

Human poverty is understood as the negation of the most elementary opportunities and choices needed so that people can live a longer and healthier life, acquire more knowledge, and have access to the resources necessary for a decent standard of living.[8]

The results of the DPDS-UEM-IFPRI work (1998) support the need to take into account a broader human development approach, because they provide convincing evidence of the strong association, for example, between poverty levels and levels of literacy and school attendance, the situation of rural infrastructure, fertility, and the household dependency ratio (DPDS-UEM-IFPRI, 1998: 177-191).

Box 2.6 presents the absolute poverty line defined by the DPDS-UEM-IFPRI study (1998). Absolute poverty refers to a quantum of "necessary minimum conditions" to guarantee the subsistence of an individual, and may be expressed through an absolute poverty line.

For its part, the human poverty approach, upon which this report is based, can contribute towards deeper knowledge of the multiple dimensions of poverty that the consumption or income perspective does not catch.

The human poverty approach, resting on the HPI, offers a more long term measurement of poverty, while the rate of incidence of absolute poverty expresses more short term relationships. The human poverty index (HPI-1), mentioned in Chapter 1, measures privation relative to the same factors used in the human development index - longevity, knowledge and living standards.

This suggests that the HPI should be more stable than the rate of incidence of absolute poverty. Because it includes variables associated to life expectancy and to the illiteracy rate, variables which change slowly over time, the HPI should be relatively stable from year to year. But the rate of incidence of absolute

National and provincial poverty lines in Mozambique

Box 2.6

The national poverty line in Mozambique is estimated at 5,433 meticais per person per day: that is, about half a US dollar a day at the 1997 exchange rate (of 11,395 meticais to the dollar). This poverty line is defined as the sum of the lines of food and non-food poverty, and has been adjusted to the regional differences in the cost of living and consumer prices prevailing in April 1997, the last month of the 1996/97 National Household Survey (DPDS-UEM-IFPRI, 1998). The graph below shows cost of living variations in the country. For example, a person who lives in Maputo needs to spend 2.5 times more on daily consumption than someone living in rural Nampula. That is, someone living in Maputo will have to spend 8,541 meticais on total daily consumption to enjoy a standard of living comparable to that of someone from rural Nampula who spends 3,359.16 meticais on total daily consumption.

Graph 2.18. Lines of total poverty in Mozambique, April 1997

[8] As the MPF Glossary (1999: 11) mentions: "Other choices, greatly valued by many people, arise from economic and social freedom, the opportunity to be creative and productive, and to benefit from respect, and guaranteed human rights. Although important, INCOME is clearly just a choice that people would like to have" (see also UNDP, 1997: 15-16).

Poverty in Mozambique has two faces and is of all ages

Contrary to the internationally widespread idea that households headed by women, particularly by widows and divorced women, are disproportionately poorer than other households, in Mozambique empirical evidence suggests the opposite. This evidence is supplied by two of the most representative and up-to- date sources of data in the country: the National Household Survey (on Living Conditions in Mozambique) of 1996-97 (MPF- IFPRI, 1998), and the General Population Census of 1997, particularly the INE monograph entitled Women-Headed Households in Maputo (Agregados Familiares Chefiados por Mulheres em Maputo).

According to the DPDS-UEM-IFPRI (1998: 69), nationally about 20% of the non-poor live in households headed by women. However, only 17% of the poor live in such households. Although this difference may seem small, it is statistically significant, and is determined by data from the rural areas, where 19.5% of the non- poor, as against 16% of the poor live in households headed by women. The urban zones give the opposite picture with 20.6% of the poor, against 17% of the non-poor living in women-headed households in 1997.

"However, women-headed households do not form a homogeneous group, and it would be incorrect to treat them as such," writes the DPDS-UEM-IFPRI (1998: 69). In this respect, the data show that in most cases a breakdown by marital status does not change the results mentioned above. In the rural areas, and in the country as a whole, the proportion of poor people living in women-headed households is smaller than the proportion of non-poor people living in such households, regardless of the marital status of the head of the household. In the urban areas, the pattern of disproportionately poor households headed by women is the case in all subgroups, except the case where the head of the household is married: very probably these are women who receive transfers from husbands who have emigrated. But all the differences are small, and the majority of them are statistically insignificant. One significant result (at the level of 10%) is the disproportional poverty of urban widows. While 7% of the urban poor live in households headed by widows, only 4.7% of the urban non-poor live in such households.

Apart from the two-variable poverty profile, the DPDS-UEM-IFPRI also undertook a multi-variable assessment of living standards and poverty through which variables are controlled which, in a two-variable profile, can distort the conclusions (for example, the difference in household size).

Tables 2.3 and 2.4 present the estimate of the distribution of the poor according to gender, which takes into consideration population structure and household composition.

Both in the case of the country as a whole, and in that of Maputo City, one would have a difficult job finding support for the famous claim that 60-70% of the poor are women. If 60% of the poor were women, there should be 6.7 million poor women, rather than 5.8 million, and only 4.5 million poor men. That would mean a masculinity index in poor households of 67 men per 100 women. There is no evidence that infant mortality or adult male migration is so disproportionate.

Thus the most realistic estimate of the number of poor women in Mozambique is 5.8 million, which is 52% of the total number of poor.

Likewise, considering the masculinity index of the population of Maputo City, in 1997 it was expected that there were 602,000 poor people in the city, of whom 307,000 (51%) should have been women.

Thus, the DPDS-UEM-IFPRI study (1998: 169) poses and replies to the following question: "What does this contrast between the profile of poverty and the results of regression imply for establishing policies directed towards women-headed households in Mozambique ?"

Table 2.3. Population of Mozambique by household

(10^6 people)

	Men	Women	Total
Total	13.3	2.8	16.1
Non-poor	4.0	0.9	4.9
Poor	9.3	1.9	11.2
Men	4.5	0.9	5.4

Table 2.4. Population of Maputo City by household

(10^3 people)

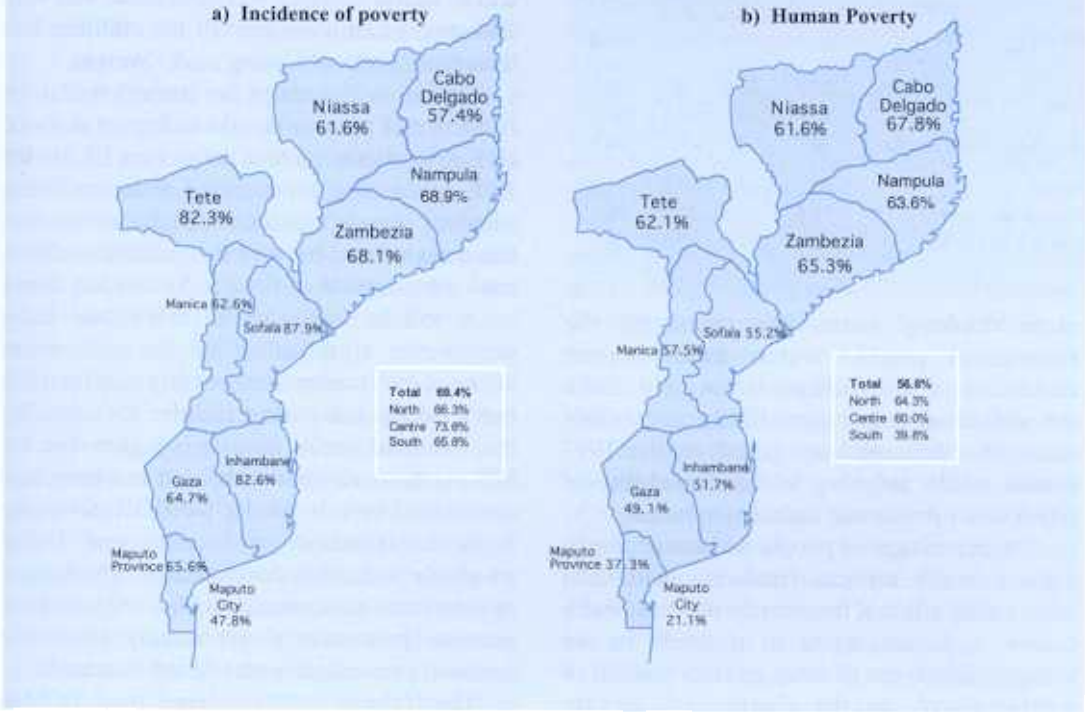
	Men	Women	Total
Total	714	251	965
Non-poor	279	84	363
Poor	435	167	602
Men	213	82	295

The reply depends on the type of policy measure in question. If one is thinking of using households headed by women as the sole indicator for the establishment of a programme of pecuniary assistance aimed at the poor, then the correct response is given by the profile of "unconditional" poverty, which suggests that a woman-headed household is not a good indicator of poverty.

But if, on the other hand, the purpose of the intervention is to correct a factor responsible for lower living standards, the factors identified by a multi-variable analysis supply the correct answer, though in this case the woman-headed household is not particularly eligible for a policy measure (DPDS-UEM-IFPRI, 1998: 169).

To sum up, unlike the alleged "feminisation of poverty", in Mozambique poverty has two faces – male and female – and affects all ages.

Map 2.10. Two comparative dimensions of poverty in Mozambique, 1997



poverty in a particular region may present substantial variations, including from one year to the next. It is enough that there shoulkd be a disasters, such as a flood, or the destruction of infrastructures and personal property during an armed conflict, and people's levels of consumption and income could be suddenly affected. These kinds of short term incidents could only affect life expectancy or educational level, if they are prolonged for lengthy periods.

Map 2.10 puts side by side the indices of the two approaches mentioned above, the economic well-being approach, measured through current food and non-food consumption, used in the DPDS-UEM-IFPRI study (1998), and the human development approach on which this report rests.

Important and new questions arise from this comparison of the incidence of absolute poverty and the human poverty index (HPI), presented in Map 2.10.[9]

First, the incidence of poverty, both nationally and in the provinces, is generally higher than the HPI.[10] But in general both indices converge on one and the same message: more than 60% of the Mozambican population is living in conditions of absolute poverty.

From the material point of view, the DPDS-UEM-IFPRI study estimates an average monthly per capita consumption of 160,780 meticais. This is equivalent to US$ 14 per month, or about US$ 170 per capita annually. Since the incidence of absolute poverty is 69.4%, this means that two out of every three Mozambicans (or about 11.2 million people) are living below the absolute poverty line.

Perhaps the element most comparable to incidence of poverty is the HPI component concerning privation of a decent living standard (P3). Table 2.5 summarises the HPI components at national and regional level.

While P3 does not refer to food and non-food consumption as such, it catches important aspects of human poverty, namely:

- the percentage of people without access to

[9] Apart from incidence, the DPDS-UEM-IFPRI study also estimates two other important indices: a poverty intensity or depth index, and a poverty severity index. These indicators are known in the literature on this matter as belonging to the Foster-Greer-Thirbecke (FGT) class of poverty measurements.

[10] The HPI estimate made in the last GHDR is much lower than that presented here: 39.8%. This is because the UNDP did not use the most up-to-date data available.

Table 2.5. Human Poverty (HPI), Mozambique 1997

	Regions			Country
	North	Centre	South	
Human Poverty Index (HPI) (%)	64,3	60,0	39,8	56,8
P_1 - Survival privation (years)	41,7	39,7	27	39,1
P_2 - Knowledge privation (%)	71,9	62,8	39,1	60,5
P_3 - Composite decent living standard privation (%)	70,7	69,5	47,4	64,6
$P_{3.1}$ People without access to water	95,7	94,1	76,5	91,5
$P_{3.2}$ People without access to health services	77,6	81,0	53,6	76,2
$P_{3.3}$ Underweight children (under the age of 3)	39,0	33,4	12,1	26,1

clean drinking water. But measuring the sources of potable water, under current conditions in Mozambique is not easy. Since the definition refers specifically to potable water, the data used are based on the 1997 census results referring to the availability of piped water inside and outside the house;

- the percentage of people without access to various health services (including ante-natal care; childbirth in a materbnity ward or health centre; a doctor, nurse or midwife in the village; and the use of some modern method of contraception), as the absence of sanitary services (a toilet or latrine);
- the percentage of children under three years old who are moderately or severely under weight.

A further two aspects of human poverty refer to survival and to level of knowledge. A little more than 39% of Mozambicans (or about 6.3 million people) are not expected to survive beyond 40 years of age; around 10 million Mozambicans are illiterate, and are therefore completely deprived of access to the best and most modern forms of knowledge; about 64.6% of Mozambicans (or 10.4 million people) are deprived of a decent living standard as regards access to drinking water, and to health services and sanitation, and with 26% (over half a million) of the children less than three years old being under weight.

Second, it is perhaps not irrelevant that the incidence of poverty should be higher than the HPI. After all, the value of component P3.3 in the HPI, concerning privation of a decent living standard, closely approaches the incidence rate: this makes sense, because the incidence reflects total consumption of food and non-food items.

It will be necessary to investigate more deeply the significance of the differences between the incidence of poverty and the HPI, but it seems reasonable to infer that the fact that the incidence of poverty is higher than the HPI seems consistent with what has been said earlier, and even in the 1998 NHDR, about the weak contribution of income and living standards to human development. The human development components in Mozambique have become prisoners of profoundly miserable levels of consumption and living standards.

Third, the poverty incidence map (in Map 2.10a) shows three provinces - Sofala, Tete and Inhambane – with levels of absolute poverty above 80%. For its part, the HPI Map 2.10b shows that all the northern and central provinces, with the exception of Manica and Sofala, have human poverty indices higher than 60%. At this level, Cabo Delgado presents the highest HPI in the country, largely because of a percentage of underweight children that is substantially above the national average, and above that of any other province.

Table 2.6. The effort needed to eradicate absolute poverty in 20 years

Description (Base year: 1996)	1997	1999	2000	2005	2010	2015	2020
1. Total population							
1.1. Total population (10^6 inhabitants)	16,1	16,9	17,2	19,4	21,9	24,8	28,0
1.2. Projected demographic growth (%)	2,297	2,348	2,365	2,421	2,476	2,476	2,476
3. Prospects for evolution of the poor population							
3.2 Hypotheses for the evolution of absolute poverty							
H1: It remains stationary	**69,4**	**69,4**	**69,4**	**69,4**	**69,4**	**69,4**	**69,4**
H2: It declines by 30% by 2010 and by 70% between 2010 and 2020	69,4	69,4	69,4	59,0	50,1	32,6	21,2
H3: It declines by 50% by 2010 and by 100% between 2010 and 2020	69,4	69,4	69,4	52,0	39,0	19,5	9,8
H4: To eradicate absolute poverty in 20 years: 85% in each fiveyear period	69,4	69,4	69,4	10,4	1,6	0,2	0,0
3.3. The poor in absolute figures							
H1 (10^6 inhabitants)	11,2	11,7	12,0	14,8	16,8	18,9	21,4
H2 (10^6 inhabitants)	11,2	11,7	12,0	11,5	11,0	8,1	5,9
H3 (10^6 inhabitants)	11,2	11,7	12,0	10,1	8,6	4,8	2,7
H4 (10^6 inhabitants)	11,2	11,7	12,0	2,0	0,3	0,1	0,0

The scale of the social challenge: how to reduce the incidence so that absolute poverty is eradicated by the year 2020?

In April 1999, the Council of Ministers approved the Lines of Action for the Eradication of Absolute Poverty (Linhas de Acção para a Eradicação da Pobreza Absoluta). This fixed as the main objective for the next decade a reduction in the incidence of poverty of 30%, and a reduction in the depth of poverty of 50%.

This 30% target set by the government could be regarded as realistic, if we take into consideration the country's feeble economic and institutional capacity, but it is excessively modest and slow from the point of view of the population's needs, and particularly from the viewpoint of the much talked about eradicatopn of absolute poverty. The series of four graphs that follows present different scenarios, which illustrate the scale of the social challenge of a hypothetical eradication of absolute poverty by the end of the second decade of the 21st century.

The Mozambican population should increase by about two-thirds within the next two decades: from 16.8 million in 1999 to about 22 million in 2010 and about 28 million in 2020.

Graph 2.19 shows that, if the incidence of absolute poverty remains at the same level as in 1997, the number of poor Mozambicans will increase to about 19.5 million people, and the numbe rof the non-poor will increase to about 8.6 million.

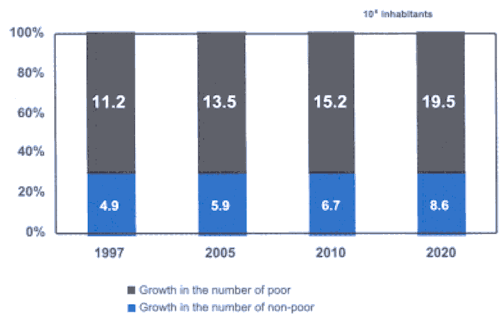
If a 30% reduction in the incidence of poverty is achieved, Mozambique will have around 11 million poor people in the year 2010, and 10.5 million in the year 2020.

This apparent stagnation in the absolute number of the poor is illusory. As Graph 2.20 shows, a reduction in the incidence of absolute poverty would result in a significant increase in the numbe rof non-poor: from 4.9 million in 1997 to 17.6 million in 2020, which is around the size of the total Mozambican population of today.

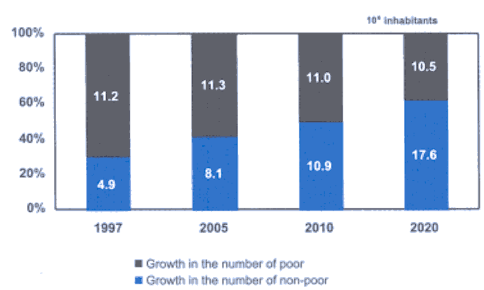
The two final graphs show two scenarios leading to one and the same goal: the hypothesis of eradicating absolute poverty by 2020. The eradication of absolute poverty in Graph 2.21 results from a reduction inincidence of 4% a year up to 2010, and of 200% a year in the second decade of of the 21st century.

Finally in Graph 2.22, the eradication of poverty is simulated at the annual rate of a 35% reduction in incidence until 2020.

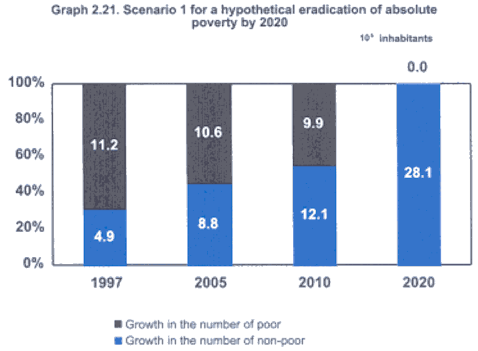
Graph 2.19. Stationary incidence of absolute poverty, 2000-2020



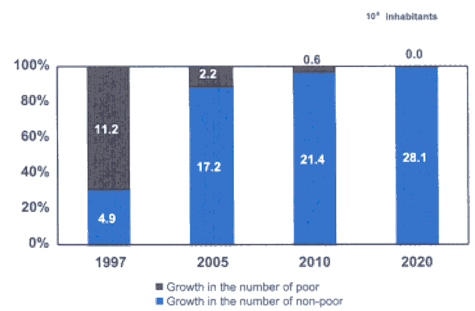
Graph 2.20. Reduction in incidence of 30% a decade, 2000-2020



Graph 2.21. Scenario 1 for a hypothetical eradication of absolute poverty by 2020



Graph 2.22. Scenario 2 for a hypothetical eradication of absolute poverty by 2020



From disparities to the (im)possible unification

Box 3.1

Since I was a boy, I have known this country from end to end. If there is one province (formerly district) whose face I have not touched with my hand, but which I have gained access to from conversations and catalogues, it is Tete. I have never had the opportunity to come close to the shade (if there is any shade) of the famous baobabs of Tete. I know the fruit, and I tasted it with unrepeatable pleasure when I was a boy in Dombe (1967), which is now part of Manica province. I'm speaking of a country called Mozambique, and I'm speaking as a writer, and not a researcher, this methodical character, this surveyor, who thinks he makes no mistakes in the ancient and methodical exercise of measuring everything with the (in)fallible tools of measuring everything.

After more than 20 years of independence, disparities (of various kinds) in development between the South, Centre and North of Mozambique are discussed. And in the midst of sound and unsound arguments, everyone forgets our great tragedy - our inability to be Mozambicans and hence Africans. Who are we? We are just a patchwork quilt whose purpose is to serve the interior, known in other languages as the hinterland, and everybody else who comes through our Indian Ocean gateways. Our duty as page boys through the ages, has been to roll out our blanket and ask what colour they would like - some choose white, some yellow, a few black, and many, without an exact definition of colours, choose the east with its diffuse shades.

From south to north of this country, what do we feel? Maputo, and indeed everywhere south of the Save, part of our patchwork quilt, has, since the end of the 19th century, been handed over to South African capital. The dependence is unending. In real terms, the south has little or nothing in the way of natural resources, when compared to the centre and north of the country. When the royal companies were created (the Mozambique Company, the Niassa company, and other companies in Zambezia), the south, given the scarcity of resources there, and the pressing need for labour for the gold and diamond mines of South Africa, became a preferential area for the recruitment of labour, and a transport corridor, under contractual terms between the Portuguese colonial government and the British government. The experience came from the sugar plantations of the Natal area. From then until now, the South was and continues to be a free zone of South Africa. Maputo port and the idyllic beaches are still the great attractions. The Maputo-Witbank motorway is an exponential example of dependence. This road will not only allow the rapid circulation of goods but also, in the medium term, it will allow cultural dependence to become effective and strong. I mean: the rules of the game dictated in the South African capital will rapidly be accepted in Mozambique. In my view this is an updating to our era of the so-called constellation of states, by other means. On the surface, the southern zone will be at an advantage in relation to the centre and north when it comes to finance. But, on the other hand, under the surface, our way of seeing, being and thinking will be totally subordinate to the economic and cultural dictates emanating from the South African centres of power. Note that the transfer of technology from South Africa to Mozambique south of the Save has a great deal to do with a cheaper labour force. We have the illusion of being richer than our brothers of the centre and north.

Go a little further north, and we reach the centre of the country. In the remote past this region (Sofala, Manica and Tete) was umbilically linked to the Monomotapa empire, then to Rhodesia and today to Zimbabwe. The Beira Corridor is the finished example of this. During the civil war, for its own survival Zimbabwe bet heavily on the stability of the region. But with the war over, Zimbabwe, for various reasons, passed the baton to South African and western capital. Between Zimbabwean and South African influence, there was a certain stagnation, so that here per capita income is amongst the lowest in the country.

Zambezia is something else. On the one hand, we have the Chuabos, a culturally and financially stable ethnic minority. On the other, we have the Lomues, a majority, with a relatively lower level of formal education, but the master of major natural resources. How to maintain the balance? This is the great question which can serve as an example for the entire country. In my view, education is the essential factor for the development of this country. A private university has opened in Quelimane. This university charges about 200 dollars per month per student. Who benefits from this? Not many people, if we consider that in Zambezia province on average 1,500 pupils a year graduate with 12th grade of secondary education. And of these, only about 5% have access to university. The rest, without specific technical training, vegetate in the markets, as underemployed youths, in an agricultural area lacking in industry. What is the solution? In my view, the government must reverse its whole educational policy. What we need are not universities, but technical schools and polytechnics scattered throughout the country.

With this, and without wanting to mention the cultural specificities of Nampula, Cabo Delgado and Niassa provinces (where effective colonial occupation occurred in the first quarter of the 20th century), I mean the following: the disparities will continue for ever, but the real unification of this huge territory must necessarily involve investment in human capital. We are a country fated to serve the hinterland, we are a country fated to eternal economic dependence on South Africa. And to be ourselves, so that we can manage the little that remains to us in terms of national wealth, polytechnic education should be our weapon, obviously without obliterating classical higher education. Otherwise we shall continue to be a raft of stone at the mercy of foreign interests. We have to be part of Africa with our heads held high.

ngulani Ba Ka Khosa (Writer)

Chapter 3

The wealth of the Mozambican nation

Who produces what and how much?

Freedom from want is one of the main aims of the concept of human development and security, stressed in the analytical framework in the introduction to this report. The process of freedom from want involves increasing human security at various levels - economic, food security, health and the environment, among others - through the generation of wealth for the nation.

The wealth of a country results from the economic activities undertaken by individuals, households and companies in agriculture, industry and services. These economic areas are also frequently classified as the "primary", "secondary" and "tertiary" sectors. There is also the sale of goods to other countries (exports), and purchases from abroad (imports). In this case, the transactions imply that resources enter and leave the country, this contributing to increasing or diminishing the national wealth.

But how can we express the economic wealth of a country, in this case Mozambique, in a summary indicator representative of all, or at least the majority, of the economic activities undertaken in the country over a certain period, for example a year?

The best known and most widely used indicators are gross domestic product (GDP) and gross national product (GNP) at current and constant prices.[1] The GDP expresses total domestic economic activity over a particular period, regardless of who owns the means of production. The GNP expresses the balance of income only of national residents, regardless of the location of the assets. The choice between these two indicators depends on the national accounting systems. The differences between them are generally small: about 1% to 2% of GDP.[2]

As is common knowledge, all these indicators have their margins of error and their limitations, due above all to under-registration of economic activity. But among them, GDP has become the most broadly used in measuring the living standards of a country's population, particularly when expressed by inhabitant or per capita.[3]

As mentioned in Chapter 1, on the theoretical and methodological framework for the analysis of human development, the GDP is seen as the main element in the material flow of human development. In this context, the GDP and GNP are fundamental indicators in the efforts of governments and national and international development agencies to assess the general situation of countries' economies. They also serve as a basis for economic comparisons between countries, and for the formulation of short, medium and long term economic policy programmes.

However, when considered in relation to the situation and economic dynamics within a country, the figure for the national GDP is of little use if it does not reflect the contributions made by each region.

In the past, Mozambique's GDP was solely calculated at national level, from national accounts classified according to economic activities, but without any classification in regional or provincial terms.

The current report proposes to overcome that limitation in the estimate of the most important indicator for measuring the wealth of Mozambique. To this end, a methodology has been drawn up for an approximate breakdown of the GDP by regions – the three major zones, the North, Centre and South – and by the country's 11 administrative provinces.

The motivation for the breakdown of GDP by province lay in the need to calculate the human development index (HDI) in a

[1] The term "gross" means that one does not discount or amortize wear and tear or depreciation of fixed capital. The terms "market prices" and "factor costs" correspond to the inclusion or not of indirect taxes excluding possible subsidies to production (Moura and Amaral, 1977: 2).

[2] There are exceptions and, in fact, when GNP is substantially greater than GDP, it is worthwhile considering both indicators, because it means that net income from abroad is positive. For example, in 1989 Kuwait's GNP was 35% larger than its GDP, due to the major earnings of the country from assets held abroad (*The Economist*, 1996: 43). The reverse could soon happen in Mozambique, due to the growing weight of the mega-projects in GDP.

[3] There is a third, broader indicator of economic activity, the so-called Net National Product (NNP): but as the British weekly *The Economist* writes (1996: 42), the NNP is of little practical value because of problems of accounting for amortisation. Therefore, the "gross" indicators become more useful for day-to-day analysis, and these will be the indicators used in this work to measure the economic wealth of Mozambique.

disaggregated manner by region and by province. For calculating the provincial and regional HDI, data was only available on life expectancy and educational levels. But without the economic component, which is represented by GDP, it would not be possible to calculate a disaggregated HDI.

At the same time, this effort to develop methodologies with a regional and provincial dimension will help contribute to better interaction between the central and the provincial governments in assessing the economic situation, and formulating specific policies that are more effective, dynamic and useful for the public.

An attempt has been made to ensure maximum harmonisation and compatibility between the methodology for breaking down the national GDP, used in this work, and the new base for the national accounts implemented by the INE as from 1999.

It should be noted that the new methodological base, used by the INE to calculate the national GDP, is more inclusive and up-to-date, and led to changing the figure for the GDP, for instance in the recently published Annual Statistics (Anuario Estatistico 1998, INE, 1999).[4] What makes the INE's new base more representative than the one used up until the Anuario Estatistico 1997 is that it is based on more up-to-date figures from the 1996/97 Household Survey and from the 1997 Population Census, both with a more representative urban and rural coverage. Furthermore, the year used as the basic reference point is 1996, a year which can be regarded as a "normal economic year", for the simple reason that the country was already at peace, and the market mechanisms were now functioning with a certain normality.[5]

The effort to make the GDP data presented here compatible, according to a methodological basis with regional and provincial representation, has two objectives. On the one hand, to ensure the greatest possible consistency between the statistical data produced by this report, and the official statistics published by the INE. And on the other, to contribute to and to support the effort the INE has been making to produce figures that are, as far as possible, up-to-date and representative of productive activity in Mozambique.

The following section presents the results of calculating the national, regional and provincial GDP.

Method and sources of calculating the disaggregated GDP

As mentioned above, GDP is a summary and aggregate statistical approximation of the level of production achieved in a country, for example, during a year. The value of the GDP is obtaining from the sum of the added value at current prices of all economic sectors, including: agriculture, livestock, fisheries and extractive production, the food industry, construction and electricity, commercial services, transport, public administration, education, health and the provision of domestic services.

To be more specific, the GDP can be calculated in three different ways: the production method, the expenditure method and the income method. The first method takes the viewpoint of production: putting together the so-called "added value", that is, the value of production minus the cost of the materials and services used but valued in previous sectors. Given that the production of a product (say, flour) can be applied in producing another product (say, bread or cakes), it is necessary to avoid double counting. When weighting coefficients are possessed, drawn up on the basis of a sample of products representative of economic activity, these coefficients can be applied to the final value of production.

The second method uses the logic of the expenditure made when production is sold for consumption, investment, exports and imports. Also used in this method are data from Household Surveys, such as the 1996-97 Household Survey carried out by the INE.

The third method uses the income from the various factors of production or of the producers: wages (income from labour), profits (income from capital), interest (income from

[4] For example, the Statistical Yearbook 1997 estimated the 1996 and 1997 GDP at 19.8 and 24.2 million contos respectively. (One conto = 1,000 meticais). Working with the new methodology, the 1996 and 1997 GDP become 32.7 and 40.6 million contos (INE, 1997: 134; 1998: 135).

[5] It should be noted that the International Monetary Fund, recognising the advantages of the new methodological base, started to use it as from February 1999 in formulating its new programme with Mozambique. Likewise, the National Planning and Budget Directorate (DNPO) has already used the new base in its projections for the next three years.

financial capital), rents (income from land and other rented factors), and finally, in economies such as that of Mozambique, an income associated with the consumption of one's own production. For calculating this macro-economic indicator, the United Nations has developed a methodology which is commonly used for all countries. The most recent is the System of National Accounts (SNA93), which was adopted in 1993.

In an ideally perfect world, the GDP figures obtained from the viewpoints of production, expenditure and income would be identical. In practice, there are discrepancies caused by inadequacies in the collection of data, by differences in the declared period of the transactions, and by the parallel, underground or illegal economy.

At least in the short term, the figure calculated from the viewpoint of production is generally the most reliable indicator for the evolution of the economy.[6] But this perspective begins to become less realistic if the weighting coefficients used to aggregate the production indicators are not regularly updated.

In any case, the basis that is currently available seems satisfactory, in terms of being up-to-date and of representing economic activity. Therefore, calculating GDP by province is based on the production, or Value Added (VA), method.

Determining GDP by province has involved, first, the choice of products, and the amounts produced in a particular year are determined, at current and at constant prices. The product of the quantities by prices makes it possible to calculate the gross value of production.

Secondly, the intermediate consumption was determined - that is, the products purchased from third parties to achieve a certain level of production value. The difference between the gross production value and the intermediate consumption gives the value added in the production of any given product. By extension, the value added is calculated by area of activity and for the country.

In summary form, these are the general principles on which the methodology for the disaggregation of the GDP is based. There are other more technical aspects concerning the transformation of the provincial values in the national aggregate to the provincial ones. For further details, see technical note 2 in the appendix.

National GDP as the aggregate of the provincial GDPs

Table 3.1 presents the summary and synthesis of the national GDP, in this case as an expression of the activities of the sectors in each of the 11 provinces of the country. Throughout this chapter the results broken down by the country's major regions, and by the provinces are presented, But before this it is worth making some further considerations on the macro-economic figures drawn up according to the methodological approach created for this report.

Table 3.1. Gross Domestic Product (GDP) of Mozambique: 1996-1998

	1996	1997	1998
GDP from the production viewpoint, in 10^9 MT	**32675**	**40641**	**46203**
Growth rate in volume (%)		15.2	12.6
GDP at current prices per capita, 10^3 meticais	2.933	3.567	3.898
Population, 10^6	15.7	16.1	16.5
GDP at market prices, per capita, 10^3 meticais	2.076	2.528	2.808
GDP at market prices per capita, US$	186	222	237
Real GDP per capita, US$	165	205	235
Sectors of productive activity			
Primary sector	**9169.6**	**11498.3**	**12741.1**
Agriculture	7983.2	9702.6	10507.4
Livestock	743.5	924.4	1072.6
Forestry	442.9	871.3	1161.2
Secondary sector	**6782.1**	**7949.9**	**11151.6**
Fisheries	1271.0	1107.4	1505.1
Mining Industry	68.2	90.2	139.9
Manufacturing Industry	3166.3	3830.6	4610.7
Electricity and Water	194.0	358.4	1127.6
Construction	2082.6	2563.4	3768.3
Tertiary sector	**16723.1**	**21193.1**	**22310.7**
Transport and Communications	3783.1	5538.2	4686.6
Commerce	8063.5	8483.7	10256.8
Restaurants and Hotels	302.0	499.3	474.1
Public Administration and Defence Services	834.5	1248.4	1442.5
Financial Services and Insurance	1181.5	477.1	473.8
Real estate, renting and business activity	1032.3	1712.3	1691.9
Education Services	477.7	688.0	756.8
Health Services	171.7	253.4	222.1
Other Services	876.8	2292.7	2306.1
Exchange rate MT/US$	11140	11395	11853.4
National GDP deflator (Base = 1996, in %)	13.09	8.0	0.99

Source: INE, 1999

[6] According to *The Economist* (1996: 53), for longer periods the expenditure viewpoint is probably better, because of the problems mentioned above of the weighting coefficients going out of date. The figure calculated according to income is the last to become available, and is the least trustworthy of all.

Inevitably, and despite the great consistency and similarity obtained between the national figures for GDP presented here, and the figures published by the INE in the Anuário Estatistico de 1998, some differences may be identified.

First, as regards the value of the national GDP proper, the figure given by the INE is higher than the one presented here by 3% in 1996 and by 1% in 1997 and 1998.

Second, like the GDP figure, the annual growth rate given here is slightly higher than that of the INE. As the figures in Table 3.1 show, in the last five years of the 20th century, Mozambique's GDP grew sharply, reaching a real annual average growth rate of 11% between 1996 and 1998.

Third, the differences between the data presented here and those of the INE are greater as regards percentage variations over time and between sectors. This is due, on the one hand, to differences in criteria and assumptions in the annual variation of the production of the provinces. One should note that there is greater complexity here, because the national GDP, viewed as an aggregate of provincial GDPs, is based on 11 provincial accounts, rather than on one national account, as is the case with the INE methodology.

All the activities have, in one or other year, contributed to Mozambique's economic growth. However, as the two last columns of Table 3.2 show, the real contribution of each activity between 1996 and 1998 varies. While certain activities present real positive or negative growth in one year, in the following year the reverse occurs, usually with a different intensity. For example, from 1996 to 1997 forestry activity and real estate services experienced real growth rates higher than 40%, while "other services" grew by more than 140%. From 1997 to 1998 the growth in forestry activity remained above 30%, while other sectors such as fisheries, manufacturing industry and mining, electricity and water, and construction experienced growth rates of more than 25%.

As for the contribution made by the three major sectors to GDP, Table 3.3 summarises the evolution between 1996 and 1998, at current prices and at 1996 constant prices.

Table 3.2. Percentage variation of GDP in Mozambique, 1996-98

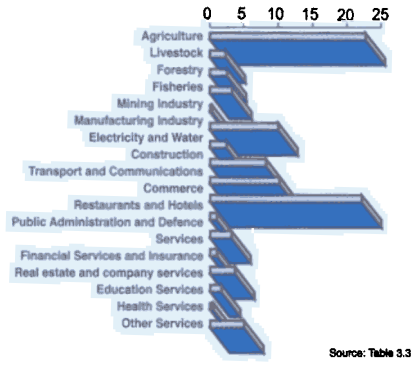
Percentage variation of production	97/96 Nominal variation in volume	98/97 Nominal variation in volume	97/96 Variation in prices	98/97 Variation in prices	97/96 Real variation in volume	98/97 Real variation in volume
GDP	12,6	12,0	10,43	1,48	11,3	10,9
Primary sector	**13,9**	**14,7**	**10,10**	**-3,4**	**12,1**	**13,3**
Agriculture	10,4	12,1	10,10	-3,36	9,3	11,0
Livestock	12,9	20,1	10,10	-3,36	10,8	18,2
Forestry	78,7	37,9	10,10	-3,36	57,1	34,4
Secondary sector	**-5,9**	**10,9**	**24,6**	**26,5**	**-5,3**	**8,7**
Fisheries	-25,3	28,9	16,63	5,48	-19,6	24,7
Mining Industry	-0,1	62,8	32,36	-4,66	-0,1	47,4
Manufacturing Industry	21,5	12,3	-0,42	7,18	19,1	12,4
Electricity and Water	10,9	41,9	66,56	121,7	7,7	25,2
Construction	14,3	43,0	7,69	2,82	10,0	39,9
Tertiary sector	**8,8**	**1,3**	**16,5**	**3,9**	**8,7**	**1,1**
Transport and Communications	36,1	-15,2	7,52	-0,16	42,7	-14,2
Commerce	-20,2	34,8	31,83	-10,29	-15,0	26,4
Restaurants and Hotels	27,0	-12,8	30,17	8,85	31,0	-9,8
Public Administration and Defence Services	25,7	-6,3	19,00	23,26	27,4	-5,3
Financial Services and Insurance	-51,7	14,4	-16,35	-13,20	-45,2	17,2
Real estate, renting and business activities	45,8	-2,2	13,79	1,00	46,8	-1,9
Education Services	16,9	-4,8	23,19	15,58	17,8	-3,9
Health Services	13,6	-17,8	29,91	6,65	16,6	-13,7
Other Services	139,6	-3,1	9,12	3,79	144,1	-2,8

Table 3.3. Percentage contribution to the GDP of Mozambique, 1996-98

(Base year 1996)

	Corrent prices			Constant prices	
	1996	1997	1998	1997	1998
Gross Domestic Product (Mts 10^9)	32,675	40,641	46,203	37,631	45,751
	Percentage structure				
Gross Domestic product (%)	100	100	100	86	94
Primary sector	**28.1**	**28.3**	**27.6**	**25.7**	**28.5**
Agriculture	87.1	105.8	91.4	96.1	94.6
Secondary sector	**20.8**	**19.6**	**24.1**	15.7	19.1
Manufacturing industry	46.7	48.2	41.3	48.4	38.6
Construction	30.7	32.2	33.8	29.9	32.9
Tertiary sector	**51.2**	**52.1**	**48.3**	44.8	46.5
Transport/communications	22.6	26.1	21.0	24.3	21.0
Commerce	48.2	40.0	46.0	30.4	51.2

Graph 3.1. Percentage structure of GDP by economic activity at current prices, Mozambique 1998



Source: Table 3.3

The primary sector continues to hold a very significant real weight in the GDP of between 25 and 30%. Agriculture represents about 95% of this sector.

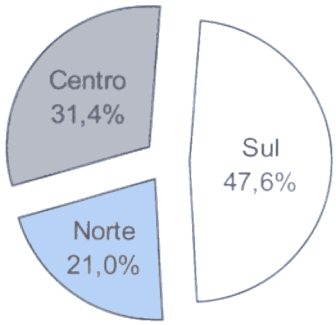
In the secondary sector, manufacturing industry represents about 45% and construction rather more than 30%. Finally, in the tertiary sector, commerce stands out with a weight of about 45%, and transport and communications with a little more than 20%.

The regional and provincial GDP

What is the contribution made by each of the major regions and by each province to Mozambique's GDP?

Graph 3.2 shows the contribution made in 1998 by the three macro regions of the country. The northern region contributed 21% of the national GDP, the Centre contributed 31.4%, and the South 47.6%. The value added of these regional aggregates is broken down by provinces in Graph 3.3 for 1998 and at current prices.

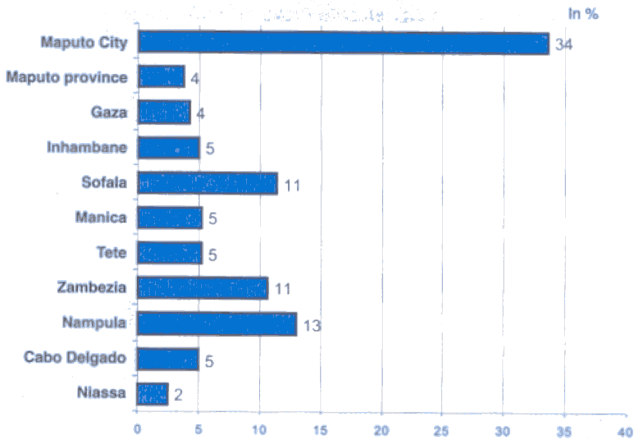
Graph 3.2. Gross Domestic Product by regions, Mozambique 1998



The contribution made by Maputo City stands out from the other parts of the country, because it produces about 34% of the entire Mozambican GDP. There follow the provinces of Nampula with 13%, and Sofala and Zambezia with 11% each. The remaining seven provinces contribute with between 2% (Niassa) and 5% (Cabo Delgado, Inhambane, Manica and Tete).

Considering the regional and provincial distribution of production in relation to the distribution of the population, one notes that

Graph 3.3. Provincial contribution to the real GDP, 1998

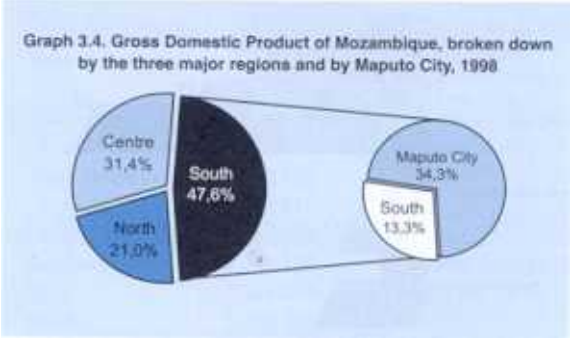


the 48% or so that the South contributes to the national GDP is heavily influenced by the contribution of Maputo City which produces over 34%.

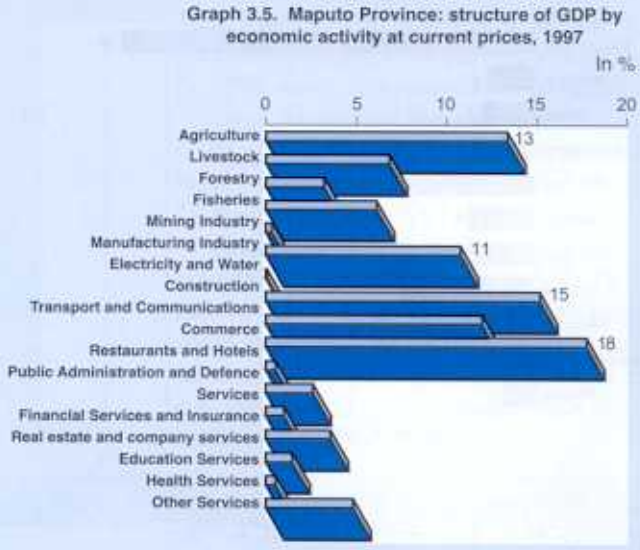
The weight of the southern region excluding Maputo City (that is Inhambane, Gaza and Maputo provinces) is equal to the weight of Nampula province.

On the other hand the 6% or so of the total Mozambican population that lives in the city of Maputo (about a million people) produce as much statistically quantifiable economic wealth as the population of the rest of the southern region and of the northern region put together: that is, as much as about 52% of Mozambicans, or around 8.6 million people.

Graph 3.4. Gross Domestic Product of Mozambique, broken down by the three major regions and by Maputo City, 1998

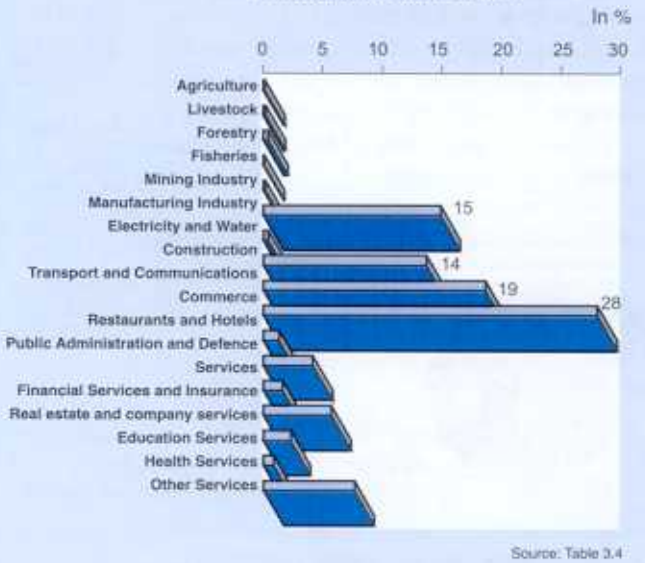


Graph 3.5 shows the percentual distribution of the economic activities which contribute to GDP of Maputo Province while Graph 3.6 does the same for Maputo City. One immediately visible difference between Maputo Province and Maputo City concerns the weight of agricultural, livestock and forestry activities. While these activities accounted for about 23%



Graph 3.5. Maputo Province: structure of GDP by economic activity at current prices, 1997

Source: Table 3.4



Graph 3.6. Maputo City: structure of GDP by economic activity at current prices, 1997

Source: Table 3.4

of the GDP of Maputo Province in 1997, in Maputo City their weight was less than 1%.

Second, in 1997-98, industrial activity in Maputo province accounted for 35% of the provincial GDP, while in Maputo city, the figure was around 30%.[7]

Third, service activities account for about 40% of the GDP of Maputo province, as against about 70% in Maputo City.

It is worth noting that, when discussing the distribution of production between Maputo province and Maputo City, there is a technical difficulty caused by changes in the administrative division of the country.

As from 1986, three urban districts of Maputo City became part of the separate city of Matola: Matola, Machava and Infulene. But a significant number of industrial and service units there remain registered as part of Maputo City. For this article, data on production identified as coming from Maputo Province have been taken from the Anuários Estatísticos (Statistical Yearbooks) of that province.[8]

Nominal and real GDP: the influence of current and constant prices

Nationally, the GDP figures are generally presented at current prices and at constant prices. The former are converted into the latter as a way of adjusting production data to the effects of inflation, that is, to the general variation in prices. It is important to take into account the difference between the nominal and the real values in order to avoid erroneous conclusions about the behaviour of, and the real changes in, the economy.[9]

When the behaviour of the provincial economies is considered, significant differences are observed, some of which are due to differences in the price variation indices. Graph 3.7 shows the differences in the percentage variation of production between 1997 and 1996. But in this case a factor that significantly influences the differences is the

[7] 1997 is used here as the main reference year among the three years concerned. In general, the difference between 1997 and 1998 is minimal, although a tendency is noted for the contribution made by Maputo province to growth. Certainly this trend will become sharper in the near future, particularly when the mega-projects, such as the MOZAL aluminium smelter, begin to produce.

[8] Information from the provincial statistical yearbooks.

[9] For example, a 12% growth in GDP at current prices, when inflation is running at 10%, means that real GDP growth was only 2%. But if inflation is rather higher, at, say, 11%, this slightly higher figure means that the real growth rate was merely 1%.

kind of deflator used to control the changes in price from one year to the next.[10]

Graph 3.7 shows the results of using two types of deflator: a national GDP deflator applied to all the provinces, and a regional deflator, based on the consumer price indices (CPIs) for Maputo, Beira and Nampula cities.

Using the GDP national deflator, it is assumed that inflation was 10.4% and 1.5% in 1997 and 1998 respectively. Based on this deflator, the percentage variations in provincial GDPs are shown on Graph 3.7 by the darker bars. Niassa and Nampula have the smallest growth rates, 9% and 10%, while Manica and Tete have the largest ones - 18% and 19% respectively.

But the price variations in the capitals of the three great zones of the country suggest differentiated and different behaviour. The CPIs drawn up by collecting price data in Nampula, Beira and Maputo point to differentiated inflation rates. Nampula experienced a price variation of 3% in 1997 and 1% in 1998. In Beira inflation was 15% in 1997 and -5% in 1998. And in Maputo City prices rose by 6% in 1997 and 1% in 1998. Thus the average national price variation, based on the regional CPIs, would have been 8% in 1997 and 1% in 1998.

In accordance with the perspective of breaking down the GDP by regions and provinces, the use of deflators which reflect regional variations seems more consistent. The results of the approach are expressed by the lighter bars in Graph 3.7. When this method is adopted, the provinces with the lowest real growth rates are Zambezia and Sofala, with 9% and 10% respectively. The other two central provinces, Manica and Tete, also show growth rates lower than those obtained when using the national deflator. This is consistent with the fact mentioned above that the Beira CPI indicates an inflation rate of about 15% in 1997.

As was done for 1997, so Graph 3.8 shows the 1998 percentage variation of GDP, also estimated both with the national deflator (dark bars), and with the regional CPIs.

In 1998, the CPIs suggest that price variations between the regions were less than in 1997. This trend is shown in Graph 3.8. One can note, on the one hand, a similarity in most

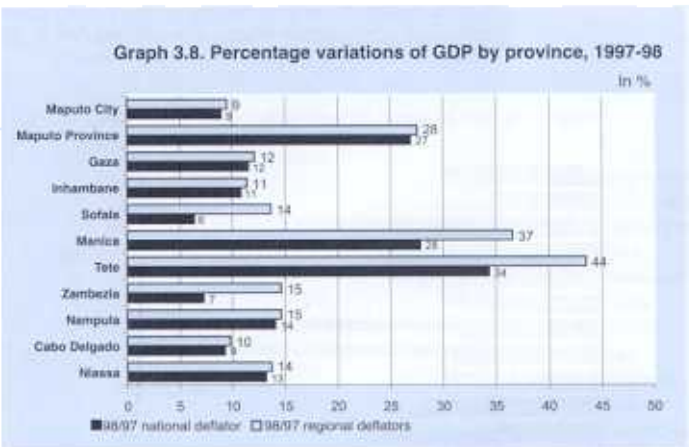
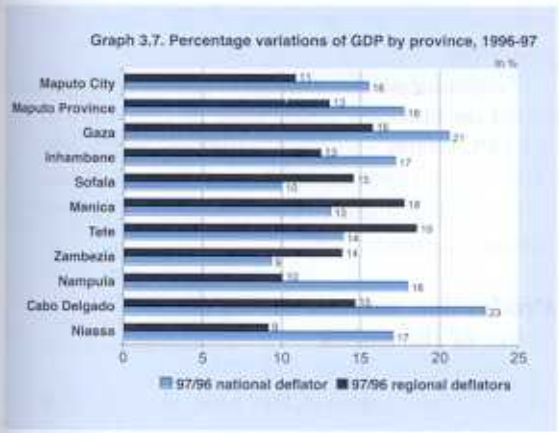


Table 3.4. Real GDP growth between 1996 and 1998

Base year: 1996, Unit: 10⁶ Meticais				Real GDP growth per capita	
Region/Province	1996	1997	1998	97/96(%)	
North	**6,294,693**	**8,235,227**	**9,609,027**	**16.6**	**10.9**
Niassa	774,017	995,369	1,165,620	14.4	
Cabo Delgado	1,548,828	2,091,634	2,365,375	20.5	
Nampula	3,971,848	5,148,225	6,078,031	15.6	
Centre	**9,187,304**	**10,928,573**	**14,500,442**	**8.2**	**12.7**
Zambezia	3,216,238	3,778,459	4,734,169	6.9	
Tete	1,229,333	1,503,986	2,359,452	11.2	
Manica	1,288,980	1,566,111	2,338,017	9.8	
Sofala	3,452,753	4,080,018	5,068,805	7.9	
South	**13,026,323**	**18,482,250**	**21,787,253**	**13.5**	**8.5**
Inhambane	1,402,126	2,005,248	2,367,510	14.1	
Gaza	1,126,989	1,658,521	1,970,536	17.8	
Maputo Pro.	909,729	1,307,009	1,767,005	13.0	
Maputo City	9,586,411	13,511,472	15,682,201	14.5	

[10] The global GDP deflator is the best indicator of the overall inflation of the GDP. Also known as the implicit deflator, this deflator allows us to identify trends and possible variations in prices. As a measure of inflation trends, sometimes small variations or errors in measuring values and current prices can lead to very different results in the series of constant prices.



kind of deflator used to control the changes in price from one year to the next.[10]

Graph 3.7 shows the results of using two types of deflator: a national GDP deflator applied to all the provinces, and a regional deflator, based on the consumer price indices (CPIs) for Maputo, Beira and Nampula cities.

Using the GDP national deflator, it is assumed that inflation was 10.4% and 1.5% in 1997 and 1998 respectively. Based on this deflator, the percentage variations in provincial GDPs are shown on Graph 3.7 by the darker bars. Niassa and Nampula have the smallest growth rates, 9% and 10%, while Manica and Tete have the largest ones - 18% and 19% respectively.

But the price variations in the capitals of the three great zones of the country suggest differentiated and different behaviour. The CPIs drawn up by collecting price data in Nampula, Beira and Maputo point to differentiated inflation rates. Nampula experienced a price variation of 3% in 1997 and 1% in 1998. In Beira inflation was 15% in 1997 and -5% in 1998. And in Maputo City prices rose by 6% in 1997 and 1% in 1998. Thus the average national price variation, based on the regional CPIs, would have been 8% in 1997 and 1% in 1998.

In accordance with the perspective of breaking down the GDP by regions and provinces, the use of deflators which reflect regional variations seems more consistent. The results of the approach are expressed by the lighter bars in Graph 3.7. When this method is adopted, the provinces with the lowest real growth rates are Zambezia and Sofala, with 9% and 10% respectively. The other two central provinces, Manica and Tete, also show growth rates lower than those obtained when using the national deflator. This is consistent with the fact mentioned above that the Beira CPI indicates an inflation rate of about 15% in 1997.

As was done for 1997, so Graph 3.8 shows the 1998 percentage variation of GDP, also estimated both with the national deflator (dark bars), and with the regional CPIs.

In 1998, the CPIs suggest that price variations between the regions were less than in 1997. This trend is shown in Graph 3.8. One can note, on the one hand, a similarity in most

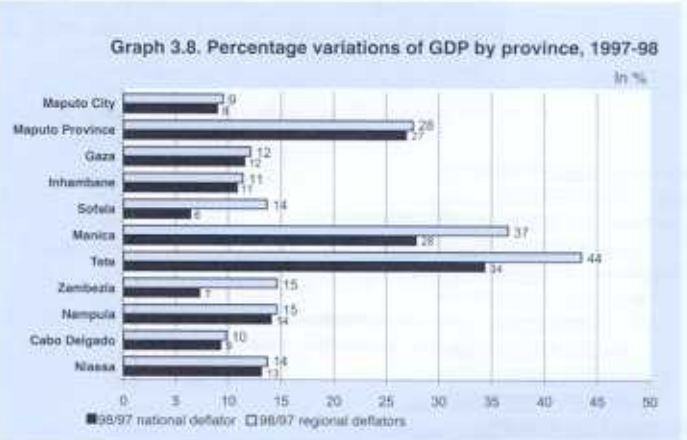


Table 3.4. Real GDP growth between 1996 and 1998

Base year: 1996. Unit: 10^6 Meticais				Real GDP growth per capita	
Region/Province	1996	1997	1998	97/96(%)	98/97(%)
North	**6,294,693**	**8,235,227**	**9,609,027**	**16.6**	**10.9**
Niassa	774,017	995,369	1,165,620	14.4	**11.0**
Cabo Delgado	1,548,828	2,091,634	2,365,375	20.5	**7.6**
Nampula	3,971,848	5,148,225	6,078,031	15.6	**12.2**
Centre	**9,187,304**	**10,928,573**	**14,500,442**	**8.2**	**12.7**
Zambezia	3,216,238	3,778,459	4,734,169	6.9	**6.5**
Tete	1,229,333	1,503,986	2,359,452	11.2	**33.1**
Manica	1,288,980	1,566,111	2,338,017	9.8	**26.0**
Sofala	3,452,753	4,080,018	5,068,805	7.9	**5.9**
South	**13,026,323**	**18,482,250**	**21,787,253**	**13.5**	**8.5**
Inhambane	1,402,126	2,005,248	2,367,510	14.1	**8.4**
Gaza	1,126,989	1,658,521	1,970,536	17.8	**9.4**
Maputo Pro.	909,729	1,307,009	1,767,005	13.0	**22.5**
Maputo City	9,586,411	13,511,472	15,682,201	14.5	**8.5**

[10] The global GDP deflator is the best indicator of the overall inflation of the GDP. Also known as the implicit deflator, this deflator allows us to identify trends and possible variations in prices. As a measure of inflation trends, sometimes small variations or errors in measuring values and current prices can lead to very different results in the series of constant prices.

of the price variations, and on the other hand, even where the figures are different, the direction of the variations is the same.

Clearly, whichever of the two deflators, the national or the regional, is chosen, it is still not the most appropriate, because it does not capture the situation and the difference in specific prices for each province. But, in the logic of disaggregation, it seems more consistent to take the regional deflators into consideration, since they better reflect the differences in prices.

This difference may be overcome in the future, when the regional and national deflators come to be the synthesis of the price variations in the various provinces. But right now the choice of a deflator based on the consumer price indices, seems more consistent with the methodology of breaking GDP down by provinces.

Graph 3.9 and Table 3.4 summarise the results based on breaking down both production and the CPI. Graph 3.9 shows variations in the real GDP from 1996 to 1997, and from 1997 to 1998. Table 3.4 shows the variations in the real per capita growth rate.

Graph 3.9. Real percentage variation of GDP, 1996-1998

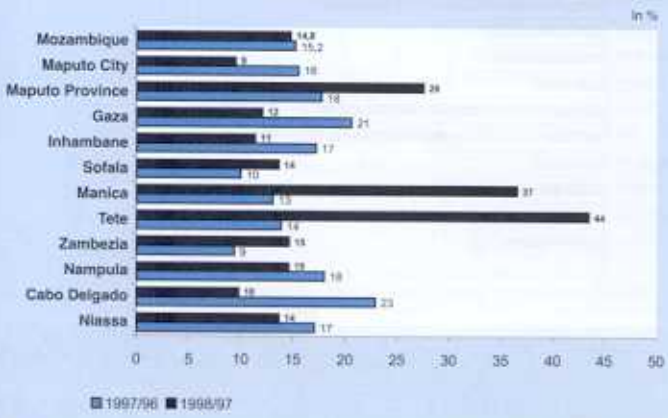


Table 3.5 Per capita GDP by regions and provinces, 1996-98

Regions/ Provinces	in 10³ Meticais					in US$			Average
	1996 nominal	1997 nominal	1997 real	1998 nominal	1998 real	1996	1997	1998	1996-98
North	**1344,5**	**1615,0**	**1567,9**	**1808,9**	**1791,0**	**121**	**145**	**162**	**143**
Niassa	1076,4	1268,0	1231,0	1421,5	1407,5	97	114	128	113
Cabo Delgado	1257,6	1560,9	1515,5	1696,6	1679,8	113	140	152	135
Nampula	1454,4	1730,9	1680,5	1961,9	1942,5	131	155	176	154
Centre	**1501,0**	**1867,3**	**1623,7**	**2103,4**	**2214,1**	**135**	**168**	**189**	**164**
Zambezia	1141,2	1403,3	1220,3	1494,0	1572,7	102	126	134	121
Tete	1103,7	1410,7	1226,7	1877,3	1976,1	99	127	169	131
Manica	1372,7	1732,7	1506,7	2181,6	2296,4	123	156	196	158
Sofala	2763,5	3428,2	2981,0	3629,3	3820,3	248	308	326	294
South	**3979,6**	**4786,6**	**4515,6**	**5244,3**	**5192,4**	**357**	**430**	**471**	**419**
Inhambane	1519,2	1836,8	1732,9	2010,7	1990,8	136	165	180	161
Gaza	1261,0	1574,0	1484,9	1739,0	1721,6	113	141	156	137
Maputo Pro.	1391,5	1667,4	1573,0	2063,2	2042,8	125	150	185	153
Maputo City	11944,8	14497,0	13676,4	15882,4	15725,2	1072	1301	1426	1266
Mozambique	**2079,8**	**2528,1**	**2341,8**	**2808,4**	**2835,7**	**187**	**227**	**252**	**222**

Production and the economic well-being of the public

The real per capita GDP (that is, the GDP divided by the number of inhabitants) enters the human development index as an indicator of a decent standard of living. That is, it is a substitute for all the dimensions of human development not reflected in a long and healthy life and in knowledge.

So that the GDP may be used as an indicator of living standards, it is necessary to link the real variations in production and those in population. Only when the GDP increases more rapidly than the population can one consider that there is a relative improvement in economic well-being.

At current prices, Mozambique's per capita GDP reached 2.1 million meticais in 1996 and about 2.8 million meticais in 1998. That corresponds of US$ 165 in 1996 and US$ 237 in 1998 (Table 3.5).

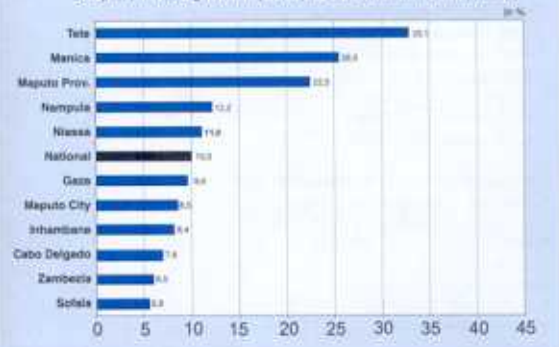
The per capita GDP produced in Maputo city is about six times greater than the average national GDP, and 11 to 12 times greater than the per capita GDP of, for example, Zambezia, Tete, Manica and Niassa.

Between 1996 and 1997, Mozambique's national GDP grew in real terms by 9%. But this growth resulted from real provincial growth rates that are highly differentiated. As Graph 3.10 shows, GDP growth varied between 2.5% in Niassa and about 12% in Zambezia. Between 1997 and 1998 (Graph 3.11), the variation oscillated between 7.6% in Cabo Delgado and 40.1% in Tete (the latter was the result of Cahora Bassa electricity).

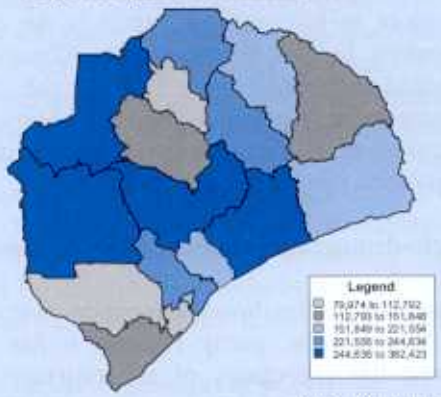
The description of the human development and the economic situation presented in this and in previous chapters could be undertaken in much greater detail for each region or province. That is not possible in this report, for

Graph 3.10. Real growth in per capita GDP between 1996 and 1997

Graph 3.11. Real growth in per capita GDP between 1997 and 1998



Map 3.1. Population of Zambezia, 1997



Source: INE, Census 97

Table 3.6. Profile 1996-98 Human development indicators, Zambezia

HDI, 1998		0,173
Life expectancy index, 1998		0,208
Educational index, 1998		0,238
GDP index, 1998		0,070
GDP contribution to HDI, 1998		14%
Gross death rate 1997 (per 1,000)		26,45
Life expectancy at birth, 1997		37 years
Women		38 years
Men		36 years
Infant mortality rate (per 1,000 live births)		182,9
Girls (per 1,000 live births)		174,4
Boys (per 1,000 live births)		191,1
Chronic malnutrition (IDS97), <3 years		37%
Acute malnutrition (IDS97), <3 years	9%	9%
Gross birth rate, 1997 (per 1,000)		49,98
Overall fecundity rate		6,6
Rural		6,7
Urban		6,1
% of adolescent mothers (15-19 years)		22%
Contraceptive prevalence		5%
Socio-cultural conditions		
Illiteracy		70,3%
Women		85,2%
Men		53,2%
Economically active population		73,2%
Women		71,4%
Men		75,1%
No. of children (7-14 years) working		34,7%
Girls		36,1%
Boys		33,5%
Access of public to health services		13,7%
Access to piped water		1,5%
Main mother tongues		
Elomwe		41,8%
Echuwabo		30,6%
Cisena		7,7%
Portuguese		5,2%
Main religions		
Catholic		38,6%
No religion		19,2%
Protestant/Evangelical		15,8%
Zionist churches		12%
Moslem		10%

Source: INE (1999), Census 97; IDS (1998); Tables in Appendix

lack of time and space. A possible alternative is to present a sketch of possible regional and provincial human development profiles which could be drawn up, either in future reports of the sort, or by other research bodies.

The following section presents a brief profile of human development in Zambezia province. This province was chosen because it has the lowest HDI in Mozambique.

Provincial human development: the case of Zambezia

Table 3.6 brings together some of the main relevant indicators for the characterisation of human development in Zambezia, the province identified by this report as that which has the lowest Human Development Index (HDI) in Mozambique. These indicators, some of them demographic, others of a socio-economic nature, are relevant for understanding the current level of human development in Zambezia. The specifically economic indicators will be presented below.

Zambezia, covering 13% of the country's total surface area, is the second largest province in Mozambique, but it is the most populous. In 1999, the population of Zambezia reached 3.2 million, or 19% of the total Mozambican population. Map 3.1 shows the distribution of the population, in terms of population density per district.

Socio-demographic indicators in Zambezia

Zambezia has the lowest human development in Mozambique, partly because it has the lowest life expectancy of any province: 38 years for women and 36 years for men. Graph 3.12 shows three of the main mortality rates which cause Zambezia's low life expectancy at birth, broken down by gender. In 1997, infant mortality (0-1 year old) for both gender was 183.2 deaths per 1,000 live births; post-infant mortality (1-5 years old) was 150.2 deaths per 1,000 live births; and child mortality, the combination of the two previous rates (0-5 years old), was 306.2 deaths per 1,000 live births. In all categories, these rates are the highest in the entire country.

The second HDI component, educational level, shows that Zambezia is the province with the third lowest literacy rate in the country.[11] In particular, the discrepancy in educational level between men and women is enormous: 46.8% of men are literate, as against 15% of women.

But, as was observed for the country as a whole in Chapter 2, just as there is a huge gap between the educational level of women and that of men (the latter have a level three times higher than that of women), there are also great disparities within each sex, when the figures are broken down by residential areas. Urban men in Zambezia have a literacy level 1.7 times higher than rural men. Urban women are 3.5 times more likely to be literate than rural women.

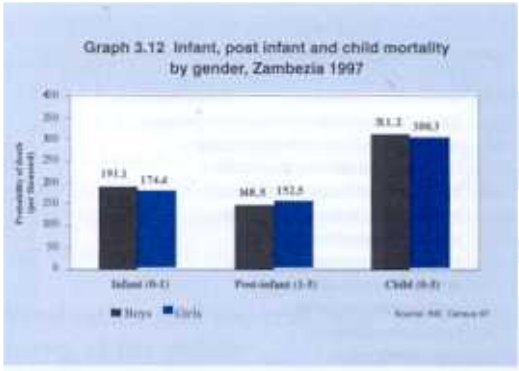
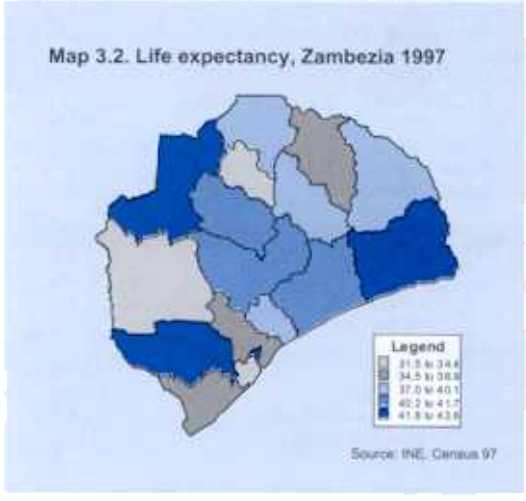


Table 3.7. Provincial macro-economic indicators, Zambezia, 1996-1998

	1996	1997	1998
The GDP of Zambezia province			
GDP at constant 1996 prices, in 10^9 MT	3,455	4,345	4,732
Real per capita GDP, in 10^3 MT	1,141	1,403	1,494
Real per capita GDP in US$	95	107	126
Contribution to national GDP	10.6%	10%	10.7%
Real growth rate of GDP	-	6.9%	6.5%
Contribution of GDP to HDI	5%	94%	15.5%
Percentage structure of provincial GDP	100.0	100.0	100.0
Agriculture	40.01	66.3	62.13
Livestock	6.55	1.1	1.23
Forestry	1.98	4.1	4.98
Fisheries	11.82	4.0	5.01
Mining Industry	0.12	0.1	0.09
Manufacturing Industry	6.53	7.1	8.92
Electricity and Water	0.29	0.1	0.30
Construction	0.43	0.5	0.64
Transport and Communications	7.97	2.0	1.54
Commerce	15.16	7.8	8.67
Restaurants and Hotels	0.55	0.8	0.67
Public Administration and Defence Services	1.57	1.1	1.22
Financial Services and Insurance	2.22	0.4	0.40
Real estate, renting and business activities	1.94	1.6	1.43
Education Services	0.90	0.6	0.64
Health Services	0.32	0.2	0.19
Other Services	1.65	2.1	1.95
Other indicators			
General state budget (overall) in US$	-	-	5
Percentage of state budget (total)	-	-	11%
Percentage of state budget (only provincial)	-	-	3.1%
PDA per capita in US$	6.3	5.7	-
Percentage of total PDA received	-	-	2%
Inflation, based on Beira CPI	-	1.05	0.95
Exchange rate (national), MT/US$	11,140	11.395	11,853

Sources: INE, 1999, Anuário Estatístico 1998; UNDP 1999, Relatório de Desenvolvimento Humano 1999; MPF 1999 Orçamento do Estado 1998



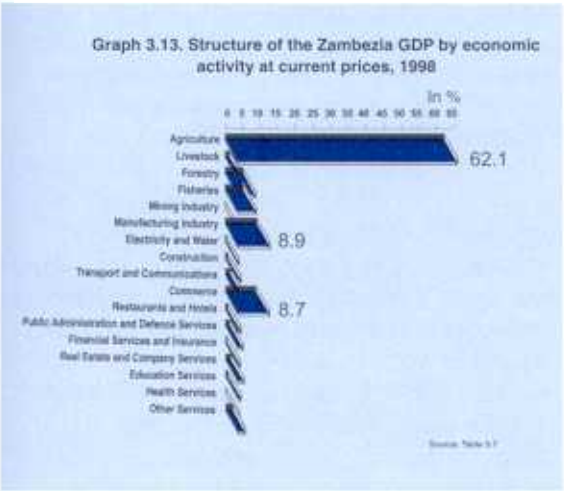
[11] The weakest province is Cabo Delgado with only 25% of the population literate, and in second place is Nampula, with 28.3%.

Zambezia's macro-economic indicators

Table 3.7 presents some of Zambezia's macro-economic indicators which are relevant for characterising the third human development component which influences the population's living standards: real per capita GDP.

The economy of Zambezia province represents about 10% of the gross domestic product (GDP) of Mozambique. The real per capita GDP of this province grew from US$ 102 in 1996 to US$ 134 in 1998, which is an annual average real growth rate of 9.5% between 1996 and 1998.

Table 3.7 and Graph 3.13 show the percentage contribution to the Zambezia provincial GDP of the main economic activities.



Agriculture accounts for over 60% of the province's total production, while the other economic activities each account for less than 10%. The most significant are manufacturing industry and commerce, each with about 9%.

Two other important economic indicators in Table 3.7 are the percentage directly allocated to Zambezia both of the General State Budget (OGE) and of Overseas Development Aid, or foreign aid (ODA).

In the first case, the amount of the total budget (the recurrent budget and the capital budget) attributed in 1998 to Zambezia was 3.1%, which corresponds to US$ 5 per capita. This percentage refers to the overall OGE, of which 71% is allocated for national and regional expenditure: only the remaining 29% is directly attributed to the provinces. When the distribution of this 29% for the provinces is considered, Zambezia receives about 11% of the total (Government of Mozambique, 1998).

As for ODA, Zambezia benefitted from approximately 2% of the total value received by Mozambique in the 1995-97 period, which corresponds to an annual average of US$ 7 per capita over the three years. About 67% of this foreign aid was distributed nationally and regionally, while the remaining 33% went directly to the provinces. Of this 33%, Zambezia received about 6.5% (UNDP, 1999).

The varied dimensions of poverty in Zambezia

Rate of incidence of absolute poverty and the human poverty index

The MPF-UEM-IFPRI study (1998) analysed the scale of poverty from the consumption and income perspective in an exhaustive fashion. With an average monthly consumption per person of 143,585 meticais in nominal terms, Zambezia's provincial poverty profile indicates an incidence of absolute poverty of 68.1%. That is, in 1997 about 2.1 million people were living below the absolute poverty line.

Like the incidence figure, the human poverty index (HPI) also indicates that there were around 2.1 million people in 1997 living under conditions of extreme human deprivation.

The difference, however, is that the 65.1% in the case of the HPI refers not only to current food and non-food consumption, but to a composite of deprivations in development variables: survival deprivation (P1), knowledge deprivation (P2), and deprivation of a decent living standard (P3).

What does the HPI show about human poverty in Zambezia?

Table 3.8 breaks down the Zambezia HPI, alongside the HPI for the central region, and for the country as a whole for purposes of comparison.

What does the HDI reveal about human poverty in Zambezia? First, as regards the population's chances of survival, it is estimated that about 46.8 per cent of people (or 1.5

Table 3.8. Human poverty index, Zambezia 1997

	Province	Central Region	Country
Human poverty index (HPI) %	**65.3**	**60**	**56.8**
P1 - Survival deprivation (years)	46.8	39.7	39.1
P2 - Knowledge deprivation (%)	70.3	62.8	60.5
P3 - Composite index of deprivation of an adequate living standard	72.7	69.5	64.6
P3.1 - Population without access to water12	98.5	94.1	91.5
P3.2 - Population without access to health services	86.3	81.1	76.2
P3.3 - underweight children (<3 years)	33.2	33.4	26.1

Source: RDHM99

million) will not live beyond 40 years of age. Second, 70% of the inhabitants of Zambezia are illiterate. Third, 73% do not have a decent living standard.

The figure for the variable concerning deprivation of a decent living standard suggests that human poverty is even worse than the absolute poverty incidence rate of the DPDS-UEM-IFPRI study showed. While the incidence of absolute poverty (68.1%) measures current consumption, variable P3 estimates privation of a series of living conditions that are no less important: the percentage of the population without access to a piped source of water (98,5%) and without access to health services (86,3%) , as well as the percentage of children under three years old who are under weight (33,2 %).

Apart from Table 3.6's reference to these indicators on living conditions, it also includes the percentage of children who are working. According to the 1997 census, children's rate of participation in the labour force increases with age, and is higher among girls, reaching a general average of 34.7% among those aged between 7 and 14.

The economy and strategies for reducing absolute poverty

The reduction of poverty in Zambezia will depend to a great extent on the capacity and the possibility, both of households and of the government, to improve material and social well-being.

In Chapter 2, the yawning gap between Zambezia and Maputo city was mentioned, and the major effort which Zambezia must undertake to reduce its human development shortfalls or deficit: about 83% in comparison with the maximum possible HDI value.

Although there has been real growth in the economy over the past few years, this is recent economic growth. It is indispensable that this growth be maintained, over the medium and long term, so that the high level of human development shortfalls can indeed be substantially reduced.

In 1997, there were about 2.1 million people living below the absolute poverty line in Zambezia. By the year 2005, the population of Zambezia should have increased by 19% (about 600,000 people) and by the end of 2010, there should be an additional 1.1 million people in Zambezia representing, a 35% increase. Thus, the reduction in the number of people living in absolute poverty requires a double effort: a reduction in the poverty inherited from the past, and in the poverty which, through the inertia of demographic growth, will be added to the existing poverty.

If the simulations and results obtained by the DPDS-UEM-IFPRI study (1998) are correct, the heavy dependence of the population on agriculture will constitute one of the main obstacles for the reduction of absolute poverty in Zambezia. With current levels of productivity, that study suspects that both the expansion of the area cultivated by each household, and the increase in the production of cash crops such as cashews, fruit trees, copra, cotton and tea, as well as in livestock production, will make a minimal contribution to the average levels of consumption of the population, and consequently to the reduction of absolute poverty.

On the other hand, the DPDS-UEM-IFPRI study suggests that the transfer of adults from the agricultural sector, both to the industrial and construction sectors, and to the service sector, could have a significant impact in increasing incomes and in the population's consumption.

The success of strategies to fight against poverty requires political will and commitment, as well as capacities and the availability of material, human and financial resources. At the same time, the inferences mentioned above seem crucial for defining strategies and programmes of action for the reduction of absolute poverty and of human poverty in general.

Rural financial markets and agro-industries

Box 3.2

Mozambique has a high incidence of rural poverty. Official estimates indicate that 71.2% of the rural population can be classified as poor, with a real consumption of about US$ 12 per month. It should be mentioned that, out of a population estimated at 16 million in 1997, 79.7% live in the countryside. Official data show that 81.8% of the population classified as poor is to be found in the rural areas, which puts at risk the sustainability of development. This situation, which is the consequence of an absence of agricultural development, is worsened by the poor development of transport and communication infrastructures and the limited access to social services.

Apart from this, the population has no access to credit with which to finance agricultural activities. A short term solution, with a serious possibility of success, would be the use of agro-industries as financial mediators between the banks and the family sector. How can the development of rural financial markets be promoted in order to reduce poverty in Mozambique? How to overcome the obstacles to the development of rural financial markets, including the high costs of selecting and supervising clients, and making them comply with the repayment terms?

Successful financial systems have capitalised on the features of the local economy and have used social institutions and economic ties that already exist. Experience in Africa shows that there is a high demand for savings services and instruments, for payment and money transfer services, as well as for credit in areas where there are marketing mechanisms. Transaction costs associated with rural credit are high because of transport and communications difficulties, and problems in obtaining the relevant information that would make it possible to draw up risk profiles. But experience from other areas shows that the problem of transaction costs can and has been overcome in various ways:

1. The opening of regional savings programmes. Although in principle this strategy only reaches large scale producers, it may later penetrate deeply into the rural areas, as long as the banks receive savings deposits from family sector cooperatives.

2. The commercial banks avoid direct contact with the producers, and grant loans in bulk to companies that supply inputs, cooperatives, traders, or other entities who directly finance the family sector. The intermediaries, who have a better knowledge of their clients, can make loans in kind at lower cost, and obtain much higher repayment levels than a bank could ensure.

3. The use of networks of associations and groups of producers. Group loans provide a detailed knowledge and supply mechanisms of social pressure for repayment. The high costs of assessment, monitoring and obtaining loan repayments are entrusted to another agent, thus reducing the costs to the bank and increasing the viability of making loans in rural areas.

4. Bank funding for low cost investments in irrigation and other forms of water resource management in order to reduce the risks caused by the lack of adequate and timely rains.

5. Financing the production of cash crops for export, since these are elastic, and a good harvest in Mozambique would not affect prices.

6. Negotiate with the producer to receive a previously determined percentage of the real sales price of the export crop, to be guaranteed against falls in world market prices during the purchasing period.

7. Ensure that the time spans for repaying loans are complied with through the link between the trader and the family sector, which is marked by ties of interdependence and the physical presence of the creditors.

Agro-industries in Mozambique offer a short term packaged solution to the problem of rural credit. Agro-industry accumulates many of the features of the methodologies described above, even though it is based on a relationship of dependence between the producer and clients, and offers another way of overcoming the obstacles to a rural financial system. Agro-industry in Mozambique has a close and longstanding relationship with the family sector. It knows the sector well, and uses this information to channel its loans and support capacity building activities. Thanks to the agreement which guarantees the purchase of the family sector's harvest, agro-industry has means to enforce compliance with repayment terms. Sophisticated agro-industries can sell their products on international markets, protecting themselves against falls in international prices, through futures contracts. For the reasons mentioned above, agro-industry will serve very nicely as a first step in opening up Mozambique's rural areas to national and international markets.

Agro-industry can bring with it other solutions to various aspects of Mozambique's development problematic. It could, for example, enter into partnership with the government in the management of infrastructure services, in maintaining roads, in producing energy, and in telecommunications.

What is the situation of agro-industries in Mozambique? In general, they represent a significant proportion of the value of Mozambican manufacturing. INE figures indicate that food processing accounts for 60% of the value of the manufacturing industry, with the textile industry, and the production of clothing and wooden artifacts accounting for a further 11%. A recent inquiry into 146 companies in Mozambique shows that the sales of the food processing sector (an indicator for agro-industries) grew by 28% a year between 1992 and 1997. This growth was based on the use of capacity that was already installed. The food processing sector used 47% of its productive capacity in 1998.

The reduction of poverty in Mozambique involves increasing income and improving well-being in the rural areas. The growth of agricultural production and of labour productivity contribute substantially towards these goals. The high level of interaction between the agro-industries and the family sector makes them important partners in the promotion of rural development. There are many ways in which agro-industries could participate in producing public goods and services, such as roads, training groups of producers, and promoting new technologies, where the social return is much greater than the private one. This situation justifies a smart subsidy from the government (or other agencies) in producing these services.

There are many risks for a public-private partnership in support of rural development. One of these is the use of monopoly power by a private company in a situation where the market is not well developed. Another is that the government institutions involved in supervising this partnership prefer to follow their own interests (and not those of the public sector). There is also the risk of poor allocation of public resources to projects which the private sector would have undertaken regardless of whether or not these are projects of political importance, and to secondary programmes without any economic or social return. Precautions should be taken against such risks. But the possible economic and social returns are high, which justifies the utility of this exercise.

James Coates, Resident Representative of the World Bank: excerpts from a statement presented at a seminar in Chimoio, 21 July 1999.

Chapter 4

The role of wage labour in survival strategies

Sources of household income

What are the main sources of household income in Mozambique? What is the importance of waged labour for the survival of poor Mozambicans, both in rural and in urban areas?

The difficulty of obtaining a coherent picture of income sources in Mozambique, at both "macro" and "micro" levels, lies in the fact that only a few socio-economic surveys have been undertaken since the beginning of the 1990s. Surveys that include data on income as such are rare. None of them, moreover, with the notable exception of the National Household Survey on Living Standards (IAF), can claim that it is nationally representative.

This section examines critically the existing employment statistics by arguing that rural and urban waged employment is more significant than acknowledged in today's Mozambique. In particular, it is argued that the decline in formal waged employment during the 1980s and 1990s has been accompanied by the casualisation of labour throughout the country, in both urban and rural areas and not only in the traditionally wage dependent south.

The war brought about economic disruption and reduced dependence on agriculture, as the rural population's main source of income. Today, while land continues to be a crucial source of income for many rural and urban households, the market for agricultural wage labour is expanding as a result of uneven growth, and uneven access to resources. In urban areas, furthermore, wage labour continues to be one of the most important income sources, also within the informal sector, often perceived as the self-employment sector par excellence. From a gender perspective, Mozambican women are increasingly engaged in remunerated activities, and are becoming less confined to their "traditional" and stereotypical roles.

In the past, strategies to tackle rural poverty have mainly focused on what is known as the "smallholder" or "family" sector, and on attempts to increase security of access to land and increase agricultural productivity. While this is extremely significant, there has been little explicit policy intervention designed to maximise the scope for employment generation to contribute directly to poverty reduction, nor has there been an explicit policy focus on the significance to the poorest of access to wage labour.

This raises the question of whether the importance of wage income in the well being of the Mozambicans, be it easonal or permanent, has not been underestimated.

The following section portrays the aggregate picture of household income sources in both rural and urban Mozambique. The next section presents aggregate employment data paying particular attention to the concept of economically active population, the size of the waged labour force and employment trends. The third section looks at more disaggregated data in order to shed some light on the development and characteristics of the rural and urban labour market in Mozambique and to challenge current perceptions of the nature of rural employment. The fourth section briefly surveys disaggregated analyses of livelihood strategies in selected parts of the country in order to gain a further insight into the survival strategies of the Mozambican population. The final section presents the conclusions and policy implications of the study.

The profile of rural poverty

The 1996 Rural Poverty Profile (RPP), produced by the then Poverty Alleviation Unit (UAP), represents one of the few "official" sources of socio-economic information prior to the completion of the National Household Survey on Living Standards 1996-97 (IAF). Drawing on a number of surveys conducted between 1991 and 1995, the RPP conveys some useful information on the main features of Mozambican poverty up to the first half of the past decade, and includes a small section on

rural and urban households' income sources. As can be seen in Table 4.1, according to the RPP, the percentage of households which do not sell home grown/produced goods is markedly higher in the southern provinces of Maputo and Gaza, in the central provinces of Sofala, Tete and Manica, and in the northern province of Niassa. Five of these six provinces (except Niassa) also display the highest percentages of households with non-agricultural income. In contrast, the provinces of Inhambane, Zambezia, Nampula and Cabo Delgado possess higher percentages of households which depend more on the sale of their output, and less on off-farm income.[1]

Table 4.1. Rural households' sources of income (%)

Province	% of households that do not sell own production	% of households without sources of income	% of households with non-agricultural income
Niassa	70.8	83.5	9.6
Cabo Delgado	63.3	87.1	12.1
Nampula	59.3	76.8	9.3
Zambézia	60.7	87.4	20.3
Tete	79.8	73.1	42.5
Manica	66.3	87.9	29.7
Sofala	79.1	80.2	35.2
Inhambane	57.4	65.9	19.3
Gaza	78.2	76.9	32.5
Maputo	77.8	53.3	59.8
Total	**68.3**	**77.2**	**24.1**

Source: RPP 1996:23

This data seems to confirm the widespread generalisation that households in the South, and particularly in the Centre, depend more on off-(own) farm income, while in the North the picture is reversed.

The RPP also includes some data on the sources of income of urban households by poverty level (i.e. ultra-poor, poor and non-poor) and residence status (i.e. large city – Maputo, Nampula, Beira and Matola - and small city – all other provincial capitals).[2]

As can be seen from Table 4.2, own production, wage labour and commerce, in declining order of importance, are the most

Table 4.2. Structure of household income sources in Maputo city and other provincial capitals

Type of source	Ultra-poor		Poor		Non-poor	
	Large city	Small city	Large city	Small city	Large city	Small city
Wage labour	30.7	45.2	34.2	37.6	37.4	22.7
Own production	53.6	28.3	49.7	27.6	39.5	18.1
Commerce	4.5	12.9	17.0	19.1	20.4	39.9
Property rent	0.9	1.2	0.3	1.0	1.1	0.5
Transfers	1.9	8.5	2.2	8.8	3.5	17.7
Other receipts	0.1	0.7	0.0	1.7	0.2	0.5
Savings and borrowing (net)	8.4	3.1	-3.4	4.2	-2.2	0.6
Total	100	100	100	100	100	100

Source: RPP 1996, Annex 5

prominent sources of income in big cities across the three categories.[3]

While wage labour and commerce are positively correlated with poverty status, a negative relationship exists between own production and poverty status. In small cities, by contrast, there exists a negative relation between wage labour and own production and poverty status, and a strong positive one with respect to commerce. Among non-poor households, in fact, commerce accounts for almost 40% of income. As for other income sources, it is worth mentioning transfers, notably in small cities and across the three consumption categories, and savings among the ultra-poor in large cities.

These data are clearly insufficient to draw any conclusion about the income sources of Mozambican households, especially when it is considered that they are not nationally representative. At best, they can provide some useful information from which it is possible to formulate generalisations that will be scrutinised in detail in the following sections.

National Household Survey 1996-97

Amidst the general lack of statistical data on income sources, one notable exception is the National Household Survey on Living Standards (IAF) 1996-97, the most recent and comprehensive source of socio-economic

[1] Unfortunately, the RPP does not provide a rigorous definition of "own production", "non-agricultural income" etc. Note also that Nampula and Zambezia are the most populous provinces in the country, each with about 3.1 million people in 1997. Together these two provinces contain about 40% of the Mozambican population (see Statistical Appendix).

[2] The distinction between poor and non-poor households is based on a poverty line fixed at 2,200Kcal/person/day. the ultra-poverty line is determined on the basis of 1,760Kcal/person/day (RPP 1996, Annex 3).

[3] It is important to note, however, that the RPP Annex does not provide any definition of the income categories. Tentatively, "own production" should also include "self-employment".

data.[4] From this study's point of view, however, the IAF96-97 data are somewhat disappointing, in that the survey design was aimed mainly at collecting information on consumption expenditure, rather than income as such.[5] Nonetheless IAF96-97 includes some data on income and on the structure of the economically active population, which may be used to obtain an aggregate picture of the Mozambican population's sources of income. Based on the elaboration of the IAF data, the INE presented some results on sources of income by macro-region (i.e. South, Centre and North), by household and at the individual level (INE, 1998). The income data collected by the IAF96-97 include:

Monetary income

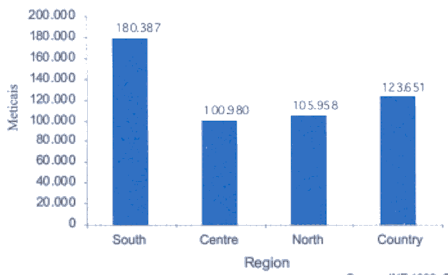
- Income deriving from employment, including the salary of the primary occupation, secondary occupation and gratification/rewards;
- Income deriving from self-employment, including net income from the sale of home-produced (or grown) products and previously acquired products;
- Income deriving from property, including rents and dividends;
- Net transfers (including debts-loans, national and international in and out-remittances);

Income in kind

- Income in kind, in the form of free transport, free foodstuffs, and free rent provided by the firm to the workers were also included in the estimate;
- Estimated own-rent, in the case of owner-occupiers;
- Auto-consumption of products produced by the household.

According to data elaboration produced by the INE, between February 1996 and March 1997, monthly average household income in Mozambique was in the order of 598,530 meticais, or 123,647 meticais per person (INE, 1998: 51). If these estimates are compared with those regarding consumption expenditure (i.e. those on which the calculation of the poverty lines are based), it can be noted that the latter, on average, are higher by 29,000 meticais.[6] Despite this discrepancy, the following generalisations can be made:

Graph 4.1. Average per capita income by region, Mozambique 1997



Source: INE 1998; Graph 11.1

First, average household income in the south of the country is nearly twice as high as in the Centre and North (see Graph 4.1). This difference, according to the INE, is probably to be ascribed to the structure of the labour force: a greater proportion of workers work in the secondary and tertiary sectors, where salaries are higher, than in the primary sector (INE 1998). As can be seen from Graph 4.1, the average per capita monthly income in the south is 180,137 meticais, compared with lower estimates for the centre (100,980 meticais), and for the north (105,985 meticais). (INE, 1998: Graph 3.11)

Second, there is also a marked difference between the population's income in urban and rural areas. While the average household monthly income in urban areas is around 993,780 meticais (or 177,413 meticais per capita), the same estimate for rural areas is 523,444 meticais (or 111,454 meticais per capita).[7]

[4] The IAF96-97 was designed and implemented by the INE and was conducted between February 1996 and April 1997. The sample consisted of 8,274 households, and was nationally representative, although it did not have complete national coverage, in that it lacks data from at least 10 of the country's 128 districts.

[5] The section on expenditure in the IAF96-97 questionnaire is developed in far greater detail than the section on income.

[6] Total consumption is usually the preferred indicator, despite the practical problems concerned with estimating it. The seasonality of earnings, notably in rural areas, makes income a "noisy" indicator. Moreover, respondents face objective difficulties in disentangling their sources of income in a meaningful way and are prone to understating wealth levels (hence in the INE report consumption is higher than income). The only way of obtaining an accurate estimate of income, according to Deacon, is "by imposing an accounting framework on the data, and painstakingly constructing estimates from myriad responses to questions about the specific components that contribute to the total" (Deaton, 1997: 29). However, obtaining detailed estimates of all transactions for usually large and complex households is an enormous task. The limitations and cost of this procedure are so severe that they lead one to question the value of trying it at all (Ibid, 1997).

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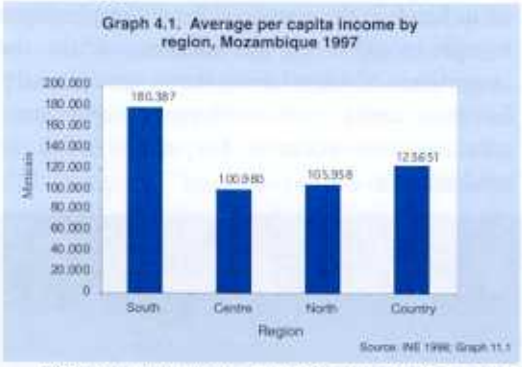

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Third, according to the INE, the principal sources of income in Mozambique are: self-employment (54%), including the sale of products grown or processed by the household, wage labour (19%), and property income (6%). Table 4.3 presents the main sources of income in urban and rural areas: the major source of income in urban areas is wage labour. On average, in all urban areas households received around 458,228 meticais per month from this source, or 81,841 meticais per capita. On the other hand, in the countryside self-employment brings in 60% of the income, while the importance of wage labour drops precipitously. In rural areas, self-employment and auto-consumption account for about 80% of total income.

Table 4.3. Monthly income structure by place of residence and source (%)

Income source	Urban	Rural	Total
Total income	100.0	100.0	100.0
Wage labour	46.1	9.1	18.9
Self-employment	36.2	60.0	53.8
Auto-consumption	2.2	19.8	15.1
Property income	7.7	5.4	6.0
Other and transfers	7.2	5.8	6.2

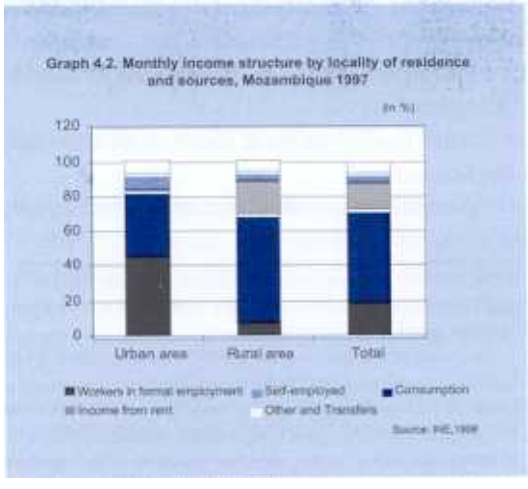
Source: INE, 1998: Frame 11.1

When considering the three macro-regions within Mozambique, self-employment seems to account for the majority of household income in all areas of the country. Comparing monthly income per capita by region, the contribution of this source to total income is not very different. The major noticeable difference by region according to single income sources is the varying contribution of wage labour. The contribution of wage labour to total income in the South is in the order of 29.2%, while the figures for the Centre and North are 14.6% and only 9.8% respectively (INE, 1998).

The non-representative nature of the RPP, and its limited information on household income, makes it difficult to compare income data between this study and the IAF96-97 results. Based on the results of these studies, however, the following generalisations seem to hold:

- Household income is markedly higher in the South of the country than in the Centre and North;
- Urban household income is nearly twice as large as rural household income;
- At national level, self-employment accounts for the majority of income. This result holds even when the data are disaggregated by region. The contribution of wage labour to total income oscillates sharply by region, and is more prominent in the South than in the Centre and North;
- While in rural areas self-employment accounts for 60% of total income, in urban areas wage labour is the most prominent source of income. But if the results of the RPP are accepted, this only holds true for small cities. In large cities, own production/ self-employment, and, among the non-poor, commerce, surpass wage income in importance.

But these generalisations must be compared with the picture that one obtains from examining more disaggregated data. Additional sources of information on the income structure of the Mozambican population can be obtained by examining the aggregate employment data, and more specific information on the rural and urban labour market. This is precisely the aim of the following two sections.



Employment in Mozambique

Economically active labour force

According to the most recent estimates drawn up by the INE, 62% of the Mozambican population of seven years of age and above is economically active[8] (INE, 1998: 38). The percentage of the population that is economically active is markedly higher in rural than urban areas (66.6% versus 40%). In the view of the INE, this result is to be ascribed to the fact that in rural areas almost all females work on the machambas (fields), while in urban areas there are more women who carry out "domestic work" and who are students. In urban areas, in fact, only 32% of women are considered economically active, against 69% in rural areas (INE, 1998).

The waged labour force and employment trends

On the basis of the IAF data, it is possible to calculate tentatively the size of the country's waged labour force. The 1997 census counted 15.7 million people although, due to census omissions, the total 1997 population is estimated at over 16 million (INE, 1999). The economically active population was estimated at 7.4 million. On the basis of estimates presented in Understanding Poverty in Mozambique: the First National Assessment[9] (UPM), around 10% of these 7.4 million people can be defined as working for a wage or some form of payment during the week preceding the interview (DPDS-UEM-IFPRI 1998). According to the IAF96-97 data, therefore, the waged labour force consists of about 740,000 people.

But a major doubt lies in the fact that evaluations of the absolute number of wage workers in Mozambique vary dramatically according to the (few) sources available. A 1997 study prepared by UNESCO, in collaboration with the ILO, based on official statistics and "rough estimates", maintained that around 1.4 million individuals were employed for some sort of wage in Mozambique. Although the study assumed a total population of 18 million, the reported figure exceeded the estimate derived from the IAF96-97 data (740,000) by nearly a factor of two (UNESCO/ILO 1997, see also de Vletter 1995). It is also interesting to note that this estimate is biased towards formal sector employment.

The UNESCO/ILO study calculated the number of wage workers in the following sectors: private sector formal employment (agricultural and non-agricultural), public service, domestic service and migrant workers. The only explicit reference to informal sector employment regards non-agricultural informal sector activities, while it is not clear what the category "non-household agricultural enterprises" refers to, and whether it covers the formal or informal sectors, or both (See Table 4.4) (UNESCO/ILO 1998).

Table 4.4. Estimated wage labour by categories

Private sector formal employment	500,000
Non agricultural	460,000
Agricultural	40,000
Public service	100,000
Domestic service	150,000
Non-household agricultural enterprises	250,000
Non-agricultural informal	250,000
Migrant workers	150,000
Total	**1,400,000**

Source: ILO/UNESCO 1997: Table 3

A further controversy regards the number of migrant workers. While the ILO/UNESCO study estimate is 150,000, a recent figure produced by de Vletter points to the existence of around 500,000 migrant workers. He suggests that "the figure for external migrant workers may well be much higher" (de Vletter 1996: 8). There is evidence that documents the existence of many illegal Mozambican workers in South Africa, not only working in the mine sector, but also on farms (Sender and Johnston 1996, Standing, Sender and Weeks 1998).

[8] See the INE's definition of the term "economically active population", used to determine the labour force, as well as other terms found in this document.

[9] The IAF data were also analysed by the former Department of Population and Social Development that worked in collaboration with the International Food Policy Research Institute (IFPRI). The UPM document includes a poverty profile that, inter alia, presents the most recent data on employment and the composition of the labour force.

The available data on employment trends seem to suggest that formal sector employment in both rural and urban areas declined between the early 1980s and the 1990s. This decline was caused by the combination of war, economic stagnation and enterprise restructuring and privatisation (de Vletter, 1995).

According to the official statistics, in 1980 wage employed and salaried workers accounted for 16.5% of the labour force (total population at that time: 12,130,000). Almost one third of the men (31.1%) and only 3.6% of the women were waged employed. The 1991 Demographic Survey estimated wage employment at 16% of the labour force, and pointed to a decrease in the percentage of men in waged employment (28.5%), while women increased their participation to 5.2% (total population: 14.4 million) (Ibid, 1995). As noted above, most recent data suggest that roughly 10% of the active labour force is composed of wage labourers.

Male wage employment accounts for around 16% and women for nearly 4% (total population: 16 million) (INE, 1998: Table 4.11; UNDP 1998; DPDS-UEM-IFPRI, 1998). Taking into account population growth, the biggest decline in the waged labour force seems to have taken place between 1991 and 1997. This latter result comes partially as a surprise, given that economic growth and agricultural production have been relatively rapid in the last four years.

In short, there is a controversy about the absolute number of people who depend on wage labour in Mozambique. While it would be plausible to assume that the IAF96-97 questionnaire, at least in theory, should have been able to record formal and informal employment, the estimate of the waged labour force based on its data is markedly inferior — at least 50 per cent lower – than the figure produced by the UNESCO/ILO study. As will be argued below, it is probable that the most recent figures that can be elaborated from the IAF96-97 data, considerably underestimate the size of the Mozambican waged labour force. Not only is the estimate incomprehensable, given the importance of wages in urban areas, but it can also be challenged on the basis of the small scale evidence that will be examined below.[10]

Sources of data on the rural and urban labour markets

In order to understand the potential importance that waged labour could have for poverty alleviation in Mozambique, it is necessary to look more closely at the available data on the labour market in the countryside and in urban areas. It will be argued below that while urban well-being is frequently linked to the availability of wage labour, in rural areas the potentially beneficial results of the expansion of wage labour opportunity are frequently ignored, while the number of people who already depend on this source of income for their survival is grossly under-estimated.

The rural labour market

Information on the rural labour market in Mozambique is limited, and can be found in several large and small scale studies, carried out at both the official/governmental and academic levels. Some contributions have been selected for a brief analysis, although major attention will be paid to the Understanding Poverty in Mozambique (UPM) section on employment.

The Rural Poverty Profile

According to the Rural Poverty Profile of 1996, around 19% of rural households hire in wage labour, notably for harvest operations.[11] Although the use of wage labour is more frequent among households with larger landholdings, the RPP maintains that only 28% of households that possess more than three hectares of land hire in waged workers. The use of paid farm-workers is higher in the North and lower in the South, but the extent of labour hiring is too low to justify the existence of a rural labour market.

[10] It is worth remembering, at this stage. that the INE estimates presented earlier in this article are also based on the IAF96-97 data.

[11] The RPP elaborates here the information contained in the Agricultural Survey conducted in 1993/94 by the Ministry of Agriculture.

Even though the wages derived from this kind of employment constitute a source of income additional to the production of these workers' own fields, these opportunities are still very limited. Only 11% of adult males who belong to rural households had employment outside their own machambas. Adult females have less chance of working off their own farms, although women in the south are more likely to be engaged in off- own- farm employment than women in the North. The RPP concludes that the rural labour market is quite small. However, it maintains that "This picture reflects the reality at the time when the survey was carried out. It is plausible to assume that wage employment opportunities have improved with the return of formerly displaced people and the significant increase in agricultural production". (RPP 1996: 14). Indeed, this development has now taken place.

Understanding Poverty in Mozambique: the First National Assessment

The UPM results on employment and the composition of the labour force, based on the answers to the questionnaires, can be summarised as follows (for more details on the questions discussed throughout this section, see the section on the labour force in the Statistical Appendix).

- In reply to the question: "What was your employment status in the last week ?", only 44% of respondents worked for some form of payment during this reference period. Students amounted to 20%, while 16.9% worked for the family without payment and 7.8% did domestic work without pay. These four categories make up nearly 90% of the replies. Of the remaining 10%, 8.3% of respondents, notably young people and the elderly, indicated "other" while only 0.8% considered themselves as unemployed and 0.9% were employed the previous week, but did not work because of holiday leave or sickness (MPF/IFPRI 1998: 70).

On the basis of the distinction between non-poor, poor and ultra-poor,[12] the UPM draws the following conclusions:

- At national level, the non-poor are more likely to be working for a salary/pay than the poor and the ultra-poor. "Helping family without pay", and to a lesser extent "domestic work", make up for the difference among the poor.
- In rural areas, the non-poor are more likely to be in the workforce than the poor and ultra-poor. It is estimated that 55% of the non-poor are employed, as against 42.2% of the poor and 39.8% of the ultra-poor. About 22.5% of the ultra-poor fall into the category "helping family without pay", as against 21.4% and 17.6% of the poor and non-poor respectively.
- Although the proportion of the work force under the age of 16 is greater among the poor (15.4%) and ultra-poor (16.7%) than the non-poor (13.2%), the age distribution of the labour force suggests that in rural areas the picture tends to be blurred. In order to avoid the confusing effects of different age distributions between poor and non-poor households, it is possible to examine the percentage of each age group that are participating in the work force. In rural areas, the percentage of 7-to-11 years old in the work force is roughly the same for poor and non-poor. An ultra-poor and poor individual in the age group 12-to-15 is more likely to be in the workforce that a non-poor age-mate, while a non-poor person aged 16-to-20 is more likely to be working than his or her counterparts in poor households.
- The data on employment are also disaggregated by sector: i.e. agriculture and fisheries, commerce and services, public services, industry and mining, construction, transport and communication. In rural areas, 95% of the labour force is employed in agriculture, with the ultra-poor and poor more likely to be employed in this sector than the non-poor. The non-poor, by contrast, are more likely to be employed in the sectors commerce and services or public services sectors. The data are also examined by poverty indices, i.e. the headcount index, poverty gap index and squared poverty gap index and by sector of employment. In rural areas poverty is highest among those working in the agriculture and fisheries sector, and differences in poverty

[12] The UPM is concerned with absolute poverty. An absolute poverty line is determined on the basis of a food poverty line augmented by a non-food poverty line. It is expressed in monetary terms (5,285.92 meticais/person/day; at the exchange rate of the time, US$ 1 = 12,500 MT). Individuals who fail to reach the line are deemed poor, while those above the line are non-poor. The ultra-poverty line is set at 60% of the reference poverty line (UPM, 1998: chapter 2).

measured across sectors of employment are not marked.

- There are two dominant categories of type of employment in Mozambique, according to the UPM data: the self-employed and unpaid family workers. At national level and in rural areas, the self-employed are disproportionately non-poor. As for unpaid family workers, the reverse is true; i.e. at national level, as well as in rural areas, unpaid family workers tend to figure more prominently among the poor and ultra-poor.

The UPM also presents data on the proportion of households who hire in agricultural labour. It is estimated that nationally 13.2% of Mozambican households hire in labour.

This is a more conservative estimate than that found in the RPP (19%). In rural areas, 11.6% of all households hire in labour. According to the UPM data, hiring in of labour is significantly more pronounced among non-poor households. Non-poor households are about twice as likely to use hired labour on their machambas than the poor are. In rural areas, 17.3% of non-poor households hire in labour compared to 9.3% of poor households and 7.1% of ultra-poor households. Hiring of labour, therefore, appears to be a strong indicator of whether a household is poor or non-poor (MPF/IFPRI 1998).

Additional evidence from small scale surveys

Additional information on rural employment is scattered through a number of small sale surveys. The evidence presented in these studies points to the existence of a fairly dynamic rural context in Mozambique. It suggests that many rural households no longer depend exclusively on the land for their survival, but on increasingly diversified sources of income, including income derived from seasonal and casual wage employment. It is important to bear in mind, however, that the evidence is fragmentary and cannot be generalised. At best it can be used to challenge existing generalisations.

A study carried out in Nampula and Cabo Delgado confirms the existence of land-poor households in a "land-abundant" setting, and detected substantial inequalities in the distribution of land. It also points out how landless and near-landless households are increasing turning to labour markets for their survival (Francisco de Marrule, 1998).[13] A study undertaken in both urban and rural areas in Nampula, Zambezia, Manica, Sofala, and Mutarara district in Tete province points to the existence of some 840,000 micro and small enterprises (MSE) employing approximately 1.4 million people. This figure includes self-employed, unpaid workers and apprentices. As can be seen from Table 4.5, waged employment represents 15% of the total figure, amounting to 210,000 people, two thirds of them living in rural areas. (MSU/MOA 1997: Table 3.1).

Benfica (1998) uses the same data and, disaggregating by province, confirms the magnitude of MSE paid workers in rural areas in his analysis of the contribution of MSE to rural household income (Benfica 1998: 91).

There is also some fragmented evidence on the existence of a rural wage labour market, notably in and around areas of cash crop production. A substantial number of female and male wage labourers are found on Lomaco's cotton fields around Chokwe (Cramer and Pontara 1998). According to these authors, in 1997 the number of casual/seasonal workers on the Lomaco cotton farms oscillated from 157 in October to 1,228 in January (Ibid 1998: 118). This is also the case in the Lomaco area of influence in and around the district of Montepuez, Cabo Delgado, where thousands of workers, including children, find seasonal employment on so called small producers' (or family sector) cotton plots.

According to local sources, the market for seasonal and casual wage labourers is developing on the fields of the more affluent "smallholders", whose cotton production has substantially increased in the past 5 years . Large cotton companies like Lomaco and Joao Ferreira dos Santos (JFS) are gradually

[13] Francisco de Marrule, however, stresses access to land as a crucial factor for the survival of the poorest, rather than exploring the potential poverty alleviation implications of developing wage employment opportunities.

Table 4.5. Overall employment in MSEs

Structure of the work force	No. of people (% of workers in each category) Rural	Urban	Total
Total people active in MSEs	1,146,112	267,166	1,413,278
Working owners	707,715 (62%)	156,018 (58%)	863,734 (61%)
Unpaid workers	214,745 (19%)	54,807 (21%)	269,554 (19%)
Paid workers	167,286 (15%)	42,280 (16%)	209,566 (15%)
Apprentices	56,364 (5%)	14,586 (5%)	70,950 (5%)
No. of women workers (out of all workers)	234,125 (20%)	89,411 (33%)	323,536 (23%)
No. of workers aged under 15 (out of all workers)	44,096 (4%)	24,825 (9%)	68,922 (5%)

Source: MOA/MSU 1997: 10

scaling down direct cultivation and switching to the more profitable smallholder development schemes.[14] These schemes contribute to enhancing social differentiation in rural areas in that conditions of entry, location, landholding size and access to productive inputs are far from uniform (Pontara 1998: fieldwork notes).

Other micro evidence on the dynamism of rural labour markets is provided by Pitcher's analysis of agrarian relations in selected districts of Nampula. Thus: "In Monapo, the disparities between rich and poor households are dramatic. Out of 33 households surveyed, the upper decile control one-third of the total land area. Moreover, the large landowners all hired labour and transported their cotton harvest to market by tractor and truck. Their material possessions were also greater in number than those of the average household. All had radios, bicycles, chairs, beds, cooking utensils and plastic buckets" (Pitcher 1998: 138).[15]

Pitcher's work in Nampula illustrates the level of household economic stratification. Very small cultivators and near-landless chronically deficit-households exist alongside small cultivators who can produce for subsistence and for the market, and medium to big cultivators who are likely to produce a sizeable surplus and can respond to market stimuli. The exchange processes and the land, labour and credit involvement of these participants are neither uniform nor equal. The

Table 4.6. Level and structure of employment in rural MSEs by province

Structure of the work force	Province: Nampula	Zambezia	Mutarara	Manica	Sofala	Overall study area
	Number of people employed (% employed in each category)					
Total people active in MSEs	352.713	400.860	46.410	89.648	155.013	1.044.644
Working owners	228.951 (64,9%)	242.174 (60,4%)	27.454 (59,2%)	53.444 (59,6%)	109.339 (70,5%)	661.362 (63,3%)
Paid workers	61.618 (17,5%)	46.905 (11,7%)	2.651 (5,6%)	10.176 (11,4%)	14.602 (9,4%)	135.915 (13,0%)
Unpaid workers	43.550 (12,3%)	92.592 (23,1%)	15.034 (32,4%)	16.780 (18,7%)	27.050 (17,5%)	195.006 (18,7%)
Apprentices	18.595 (5,3%)	19.189 (4,8%)	1.307 (2,8%)	9.248 (10,3%)	4.002 (2,6%)	52.361 (5,0%)
No. of women workers (out of all workers)	44.888 (12,7%)	78.809 (19,7%)	17.649 (38,0%)	36.243 (40,4%)	43.877 (28,3%)	221.466 (21,2%)
No. of workers aged under 15 (out of all workers)	10.824 (3,1%)	14.185 (3,5%)	3.268 (7,0%)	5.601 (6,2%)	9.407 (6,1%)	43.286 (4,1%)

Source: Benfica 1998: 91)

[14] Lomaco has various different arran nents with cotton produc Generally, the company offers credit for the purchase of ts at the start of the season, anc en discounts these costs at har rest when smallhold sell their produce to the pany (author's fieldwork, 1998).

[15] It is interestir g to note that the tw op landowners surveyed Pitcher in her fieldwork in Nampula province had 16.5 a

livelihood strategies that they pursue in order to survive are also likely to be different.

Further evidence on social differentiation and the historical importance of wage labour in Mozambique can be found in a number of sources (Wuyts 1989, Hermele 1992 and O'Laughlin 1996).

The urban labour market

Urban labour markets have been the subject of study to a greater extent than their rural counterparts. In part, the greater focus on urban rather than rural labour was dictated by the long war that ended only in 1992, since during the armed conflict many rural areas were virtually inaccessible.

Sources of information

The UPM results on employment and the composition of the labour force, based on answers to the survey questions, can be summarised as follows:[16]

- In reply to the question: "What was your employment status in the last week ?", only 44% of respondents worked for some form of payment during this reference period. Students amounted to 20%, while 16.9% worked for the family without payment and 7.8% did domestic work without pay. These four categories make up nearly 90% of the replies. Of the remaining 10%, 8.3% of respondents, notably young people and the elderly, indicated "other" while only 0.8% considered themselves as unemployed and 0.9% were employed the previous week, but did not work because of holiday leave or sickness (MPF/IDPRI 1998: 70).

On the basis of the distinction between non-poor, poor and ultra-poor,[17] the UPM draws the following conclusions:

- At national level, the non-poor are more likely to be working for a salary/pay than the poor and the ultra-poor. "Helping family without pay", and to a lesser extent "domestic work", make up for the difference among the poor.
- Among the unpaid employment category, "domestic work" figures prominently in urban areas. In urban areas, the poor and non-poor participation in the labour force is similar and having a job, per se, does not seem to differentiate the poor from the non-poor.
- The age distribution of the labour force suggests that in urban areas the work force tends to be younger among the ultra-poor and the poor than among the non-poor. In particular, the proportion of people between 7 and 15 years old who work is substantially higher in the ultra-poor and poor categories (and, to a lesser extent, the same is true of the 16 to 20 age group), while among the non-poor a large proportion of the work force consists of people between 20 and 59 years of age. In order to avoid the confusing effects of different age distributions between poor and non-poor households, it is possible to examine the percentage of each age group that is participating in the work force. In urban areas, the percentage of members in the work force in the four age groups from 7 to 29 years old is markedly higher for the poor, confirming the trend mentioned in the previous point.
- The data on employment are also disaggregated by sector: i.e. agriculture and fisheries, commerce and services, public services, industry and mining, construction, transport and communication. In urban areas, there is a clear positive correlation between poverty and employment in the agricultural sector, and in almost all the other sectors the picture is reversed, with the non-poor much more likely to be employed in commerce and services, public services, industry and mining and transport and communication.

The construction sector does not seem to present any clearly defined pattern. The data are also examined by poverty indices, i.e. the headcount index, poverty gap index and squared poverty gap index (see technical note 3) and by sector of employment. In urban areas, unpaid family workers tend to figure more prominently among the poor and the ultra

[16] The UPM does not include a gender-disaggregated analysis of the employment data. Given that the INE does provide some disaggregation on the basis of gender and expenditure quintiles, the following analysis will be integrated by the INE estimates wherever possible.

[17] The UPM is concerned with absolute poverty. An absolute poverty line is determined on the basis of a food poverty line augmented by a non-food poverty line. It is expressed in monetary terms (5,285.92 meticais/person/day: at the exchange rate of the time, US$ 1 = 12,500 MT). Individuals who fail to reach the line are deemed poor, while those above the line are non-poor. The ultra-poverty line is set at 60% of the reference poverty line (UPM, 1998: chapter 2).

poor. Differences in poverty levels between employment sectors are sharper than in the rural areas.

- There are two dominant categories of employment in Mozambique, according to the UPM data: the self-employed and the unpaid family workers. At national level and in rural areas, the self-employed are disproportionately non-poor. As for unpaid family workers, the reverse is true; i.e. at national level, as well as in urban areas, unpaid family workers tend to figure more prominently among the poor and ultra-poor.

The UPM also presents data on the proportion of households who hire in agricultural labour. It is estimated that nationally 13.2% of Mozambican households hire in labour. This is a more conservative estimate than that found in the RPP (19%). Labour hiring seems to be more common in urban than in rural areas. According to the UPM data, hiring in of labour is significantly more pronounced among non-poor households. In urban areas, 43.5 per cent of non-poor households hire in labour, as compared to 17.6% and 16.9% for poor and ultra-poor households respectively. Hiring of labour, therefore, appears to be a strong indicator of whether a household is poor or non-poor (MPF/IFPRI 1998).

Additional evidence

In his study on urban poverty in Mozambique, Desai produces considerable evidence on occupational patterns in Maputo and other provincial capitals. In his view, the striking feature of employment patterns in the provincial capitals does not lie in occupational difference, but in the fact that a very high percentage of household heads are employed in agricultural activities. He goes on to say that, "The occupational diversification that is associated with industrialisation is at a very early stage in Mozambique, and the general impression one gets is that, except for a few cities such as Maputo and Beira, urban areas in Mozambique are largely concentrated agricultural settlements" (Desai, 1997: 27). It is difficult to compare Desai's results with those produced by the UPM for urban areas, given that the latter are not disaggregated into Maputo and provincial capitals.

Desai provides a number of results on employment patterns in Maputo and the other provincial capitals. According to his study, in Maputo and the provincial capitals there are hardly any differences in the male participation rate, while the participation rate of women in the labour force is lower in both areas, and also displays greater variation with age. This result seems to confirm the INE estimate on the low percentage of economically active women in Mozambique. One element that emerges quite clearly is that, both in Maputo and in the other provincial capitals, a large percentage of women and men in the prime working age group of 20-24 years did not work in the week before the interview (57% of men and 62% of women in Maputo, and 49% of men and 58% of women in the provincial capitals) (Desai, 1997: 30).

Desai produces some interesting evidence on the correlation between per capita expenditure and occupational status, The data show that in Maputo men from poorer households are more likely to be employed in the private sector, while self-employment is more common among the richest 20%. The percentage of men employed in the public sector is roughly constant across expenditure quintiles. Women, in contrast, display different characteristics: in Maputo, the richest women are more likely to be employed in government and the public sector, and less likely to be employed in the private/ cooperative sector, or self-employed. If the data are examined by sector of primary work, poorer men tend to be engaged in construction, transport and communication, while those from better-off households are more likely to work in public administration and social services. The agricultural nature of the occupational structure of the provincial capitals emerges more clearly when women are examined. Almost two thirds of women, notably the poorer, work in the agricultural sector (Desai, 1997: 33).

Finally, it can be seen that in Maputo a far higher percentage of the adult workforce is employed in waged work (in the private or the public sector). In the provincial capitals,

the private sector is smaller and includes adults from better-off households. The self-employment sector, often identified with the informal sector, is larger in the provincial capitals than in Maputo. The sectoral composition of the labour force shows that agricultural employment accounts for a very small share in Maputo, but is significant in the provincial capitals, even among the richest quintile, where roughly 30% of working adults have agriculture as their primary occupation. Furthermore, the occupational diversity is much greater in Maputo. While in the provincial capitals agriculture and commerce together include a large percentage of the work force, in Maputo the industrial sector, transport and communication, and public administration employ a substantial proportion of the working adult population.

De Vletter provides some evidence on the urban informal sector, notably in Maputo. In his view, the urban informal sector in Mozambique mainly consists of petty trading in the markets or on street corners, producing minimal value added, and contributing little to the GDP. In his disenchanted view: "the informal sector, much romanticised and the target of many economic strategists for employment creation and poverty alleviation, should be seen for what it really represents for thousands of Mozambicans – the sector of last resort when there are no other alternatives for survival" (de Vletter, 1995: 10).

Despite his rather sceptical remark, de Vletter provides a dynamic picture of the urban informal sector where people can get some decent monthly earnings. He makes it clear that informal activities are not a synonym for illegal activities: virtually all vendors pay some sort of official fee and most micro-enterprises (i.e. Group C companies) are required to pay an annual tax that ranges between 80,000 and 120,000 meticais. In today's Maputo there are 45 official markets, plus an additional 22 temporary ones (also known as *dumba nengues*) that provide income to some 40,000 vendors. In a survey of 63 vendors, incomes oscillated from a minimum of 50,000 meticais to a maximum of over two million meticais a month: 27% earned less than 100,000 meticais a month, and 62% less than 200,000 meticais a month. Only a small number (16%) were found to earn more than 400,000 meticais a month (de Vletter, 1995).

Within the informal sector, widely regarded as the self-employment sector par excellence, there exists a group of ultra-exploited hired helpers. According to de Vletter, a study found that 42% of women operating their own activities employ labour, although the form of payment is in kind rather than in wages (the latter form of payment is found in 7% of cases) (Ibid 1995). Other than vending, a number of productive activities such as carpentry, welding, panel beating, mechanical workshops etc. are carried out daily in the informal sector. According to de Vletter, a small survey of 12 unlicensed enterprises showed that they employed on average 2.6 workers with wages ranging from 80,000 to 180,000 meticais a month (de Vletter, 1995: 13).

In short, the informal sector is not only populated by the self-employed, as is often assumed, but also by a substratum of wage labourers. Again and again, this category crops up in the analysis, reinforcing the argument put forward by this study.

Are casual and seasonal labourers invisible?

What are we to make of the data on rural and urban labour markets? They are often the product of studies that focus on different parts of the country, define employment categories in different ways, and disaggregate the data in different ways.

The results of the UPM suggest that, at national level and in rural areas, the non-poor are more likely to be in the work force than the poor, In urban areas, in contrast, being poor or non-poor does not seem to determine labour force participation. On the basis of the presented small scale evidence, however, it can be argued that this may well be the case when considering well-remunerated formal sector employment, but is unlikely to be the case outside of formal employment. As was shown above, in fact seasonal and casual labour in both rural and urban areas seems to be a

prerogative of the poorest segment of the population. The general results of the UPM are not only contradicted by some (fragmentary) evidence in Mozambique, but also more substantial evidence elsewhere in southern Africa (see, for example, Sender and Smith 1990, Sender and Johnston 1996, Standing, Sender and Weeks 1996, Guyer 1997), which support the assertion that many of the poorest people/households continue to lack access to means of production and depend on the irregular and pitifully low wages that they will earn in casual and seasonal unregulated rural labour markets. Indeed, the UPM analysis points out that non-poor households are more likely to be hiring in labour, in both rural and urban areas. There is no analysis, however, that refers to the characteristics of these wage labourers and their existence is not mentioned in the entire report.

The data presented by Desai, further-more, are difficult to compare with the UPM, in that he offers a further urban disaggregation into Maputo and provincial capitals. Nor, for that matter, can they be directly compared with the RPP results on urban income sources in large and small cities. The relationship between poverty and employment in the agricultural sector for instance, is not as straightforward in the analysis of Desai as it is the UPM. It does not hold for men in Maputo (the proportion of men engaged in this sector in Maputo increases with expenditure), for instance, but does so for women. It holds, instead, for provincial capitals, albeit not strongly. According to Desai, wage work (i.e. private or public sector) is greater in Maputo than in the provincial capitals, although the RPP data show that, at least among poor and ultra-poor, wage labour is the main source of income in small cities. And so on.

As can be seen, the picture on income sources looks quite confused and contradictory, when different studies are compared. One notable aspect, however, is the invisibility of poor wage labourers in big surveys, such as the IAF96-97. This omission is particularly worrying, given that it is on the basis of the IAF96-97 that a number of very influential studies have been conducted. These studies, such as the UPM or INE 98, are also the most influential ones in the eyes of policymakers.

Livelihood strategies: some selected evidence

Household survival strategies often involve pursuing multiple activities in various markets, and this is especially true for the poorest segment of society. Evidence on the multiple sources of income pursued by urban and rural households is scattered through a number of small-scale and narrowly focused surveys. This study analyses some evidence on the urban informal sector in Maputo, livelihood strategies in Ndixe village, and income generating strategies in Massoane, Djananhabe, Banga and Netia.

Livelihood strategies in Ndixe village

Waterhouse presents an interesting account of the post-war economy of Ndixe village, Maputo province (Waterhouse, 1999)[18] According to her, the post-war economy of Ndixe can best be understood in historical context. Pre-war Ndixe was clearly integrated into the male migrant labour economy, and out-migration led to the permanent loss of many Ndixe- born men.

For those migrants who maintained households within Ndixe, a common pattern was migrant labour combined with farming on the rural homestead, often involving livestock (goats and/or cattle). This was possible through the typical gender division of labour, whereby men migrated for waged work, while women held the rural fort. During the migrant's time away from home, this system of labour meant a clear division of tasks within the household, along gender and generational lines. The resulting division of work and responsibilities was often an inter-dependent one.

Within the inter-dependent urban-rural economy established by the migrant labour system, land was a crucial fall-back resource: the key thing that migrants could keep a secure hold on - the place they could go back to at the

[18] Ndixe village is located some 12 kilometres north-west of Marracuene town, in the coastal district of Marracuene, 30 kilometres north of Maputo city. To the north, the district borders Manhica, and to the west Moamba district, which borders South Africa. Flowing down from the highlands of South Africa, the Incomati river runs the length of the district, joined in the north by its tributary, the Bobole river. The river valleys provide a fertile relief from the poor, sandy soils typical of most of the district, which falls within the low lying coastal plain around Maputo Bay.

end of their contract. It was also women's principal domain in terms of production and daily management, though not in terms of ownership or control. All except one person interviewed in Ndixe described their mothers as peasant farmers. Referring to their mothers, and to women's pre-war lives, people often also noted women's lack of mobility.

Despite a certain continuity with the past, three key features mark a change in local economic conditions. These changes in turn have influenced the gender division of labour and roles, including in relation to land. These key features are the war time loss of resources, which most people have so far been unable to replace; long term and structural unemployment in the formal sector, for men; and women's increased mobility and engagement in marketing.

The key problems for agriculture in Ndixe include the war time loss of resources, except for the land itself, and post-war incapacity to replace them. Thus, before the war, some half of the local families had cattle, sometimes up to 50 head. In 1997, however, only four men owned any cattle (and none more than four animals), only two had ploughs, one of these had a cart, and that farmer was the only one in Ndixe who claimed to market a cultivated crop: in this case, tomatoes, onion and chilli pepper. Farm income alone was thus unable to secure agricultural growth or investment. Lack of roads, transport and commercial facilities in Ndixe and lack of cash or credit to buy inputs present further difficulties. Clearly, male unemployment in the formal sector has only added to the problems.

Male migration or absenteeism continues to be a key feature of the local economy. However, since Mozambique began its IMF-supported programme of economic liberalisation in 1987, a gradual breakdown of the migrant labour system taking men to South Africa has been paralleled by heavy losses in the urban job market. Thus by 1997, in many cases absent men were employed in casual, informal or even illegal activities (particularly in the case of illegal emigration to South Africa). Compared to the pre-war period, there has also been a rise in the number of men principally engaged in cultivation; but often supplemented by casual or irregular labour outside Ndixe and/or by selling firewood and charcoal. Without an urban wage, it was proving hard to replace livestock and other agricultural capital lost during the war. Thus the loss of rural wealth encouraged a continuous search for outside employment and loss of youth (men and, increasingly, women) to the village.

Meanwhile there has been a significant increase in the number of people, both men and women, depending on off-farm income derived from the woodland (firewood and charcoal), not only for residents but for immigrants to the village. Virtually all villagers interviewed saw firewood as the surest and quickest way to earn cash, for buying such goods as salt, oil, soap and flour. This activity, though, is unsustainable in Ndixe at its current rate.

The central importance of farming for women in Ndixe still puts the seal on the significance of their relationship with the land. Land availability is a key feature in the lives of women who spend so much of their time working on and producing from it. Nonetheless, farming is no longer the sole productive activity of women - although women continue to guarantee virtually all reproductive labour. Displacement to urban and peri-urban areas during war time isolated many women from production on the land. As an alternative, they often turned to petty trade. Post-war, many women have maintained their links with urban resources, urban services and urban markets, through kinship networks and informal marketing. In the absence of a marketable crop surplus, the other main source of income for women is remittances from wage earners in the city, almost always husbands, lovers or sons. Beyond this, the main alternative sources of cash for women are: gathering and marketing wild fruits and vegetable leaves, xitoco (manual labour on another person's field, which may be paid for in cash or kind), wood cutting (rarely, also, charcoal burning), and beer brewing. Women's marketing is thus dependent on access to rural land, and especially to communally held lands. Although several

women hired out their labour, this was often seen as a last resort.

Income generation in Massoane, Djavanhane, Banga and Netia

A study conducted by the Eduardo Mondlane University's Faculty of Agronomy and Agricultural Engineering offers an interesting insight into the income sources of selected communities in Massoane, Djavanhane, Banga and Netia.[19] The study shows that households in the south depend much more on migratory work than those in the north. The number of households receiving remittances is, indeed, much higher in Massoane and Djavanhane. These villages depend more on agriculture for their own consumption than for selling.

In the north, in contrast, about a third of the households in Banga and Netia depend on the sale of their agricultural output. It is interesting to note that in these two villages there are many households that sell drinks, suggesting that the majority of ingredients used in brewing come from agricultural products themselves. Remittances are very low here.

In terms of waged work, working for other people for money (*ganho ganho)* is an important source of survival for 33 households Banga stands out, with about a fifth of the households depending on this source of income, followed by Massoane and Netia (6) and Djavanhane (5). In contrast, households dependent on *salário* (wages) are only present in Massoane and Netia (9 and 11 households, respectively).[20] Sale of animals does not seem to follow a geographical pattern, with a greater number of households dedicated to this activity in Netia and Djavanhane (9 and 11 households, respectively). In the south, the villages of Massoane and Djavanhane display a higher number of households which obtain income from the sale of forest produce, such as wood and charcoal, mfuma (a traditional food based on wild fruits), as well as building materials. Households resort to these strategies notably in the "hungry period" (UEM, 1999: 29).

As can be seen on Table 4.7, the sale of agricultural output and of drink is more pronounced among the "average" households in quartiles 2 and 3. The top and bottom expenditure quartiles (notably the bottom) do not seem to depend crucially on output or drink sales. The bottom quartile shows 19 households that depend on remittances. Waged work is more pronounced in the bottom two quartiles, reinforcing the idea that poor people in rural areas are increasingly dependent on this income source. The sale of building materials and wood are also of particular importance for the poorest. Livestock selling and small businesses, in contrast, figure prominently among the top expenditure quartile (12 and 7 households, respectively).

Finally, it is also instructive to look at the change in income generation strategies over time, before and after the war. Table 4.8 shows that remittances (+27) and wage labour (+15) are the two sources of income that registered the most notable increases after the war, while livestock and formal sector employment display the biggest decline (-18 and -28, respectively). These results come as no surprise: the war dramatically slashed the number of livestock and threatened the very institutions that offered waged work in rural areas (UEM, 1999).

In sum, the evidence presented in these two case studies of selected rural areas reinforces once more the argument presented in this

Table 4.7. Number of households that pursue different income generation strategies

Income Source	Number of households per village				
	Massoane	Djavanhane	Banga	Netia	Total
Sale of own plot's output	0	5	35	37	77
Remittances	24	19	2	8	53
Drink sale	1	10	19	21	51
Ganho ganho	6	5	16	6	33
Livestock sale	4	11	3	9	27
Craftsmanship	3	3	8	1	15
Small businesses	0	4	5	5	14
Salario	9	0	0	2	11
House building	2	3	4	1	10
Wood and charcoal sale	1	7	0	0	8
Mfuma sale	7	0	0	0	7
Building materials	6	1	0	0	7
Fishing	5	2	0	0	7
Total	**68**	**70**	**92**	**90**	**320**

Source: UEM 1999: 18

[19] Massoane is in Salamanga locality, Matutuine district, Maputo province. Djavanhane is part of Guija district, in Gaza province. Netia is in Monapo district, Nampula province, while Banga is in Tsangano district, Tete province.

[20] It is plausible to assume that while *ganho ganho* refers to waged work carried out for other people (i.e. probably casual and seasonal agricultural wage labour, and other casual labour), salario refers to "formal" employment.

article. Alongside the decline in formal waged employment, there seems to be an increase in casual and seasonal work and in a number of activities geared towards raising money income, such as petty trade and the sale of forest products in Ndixe, Massoane and Djavanhane. Moreover, it is clear from the Ndixe examples that women are no longer confined exclusively to the machamba. Besides documenting the changes in land ownership in Ndixe, Waterhouse clearly conveys the image of the increased engagement of women in a number of productive activities including, inter alia, casual agricultural waged work.

The importance of income for the survival of the poor: implications for policy and strategy

The aim of this study was to draw attention to the increasing importance of waged work for many rural and urban Mozambicans. A number of large scale surveys have been scrutinised in order to obtain an aggregate picture of household income sources in Mozambique. Subsequently, this article examined the results of several small scale and more narrowly focused studies. As argued throughout the article, the widespread generalisations that are often put across when discussing the income structure of Mozambican households may be somewhat misleading in that there exists a much more dynamic and varied picture.

This study has tried to produce as accurate a picture as possible on the sources of income of urban and rural households. in particular, it has attempted to show:

- That the estimates of the size of the wage labour force that can be derived from the IAF96-97 data are misleading. The estimate of 740,000 waged workers is a gross underestimate of the real size of the waged labour force and, at best refers to urban formal waged employment. This point emerges clearly from the disaggregated data on rural and urban labour markets.
- That alongside the decline in formal waged employment, small -scale evidence seems to suggest an increase in the casualisation of labour in both urban and rural areas. In rural areas, while land continues to be tremendously important, increasing numbers of poor Mozambicans are diversifying livelihood strategies. Furthermore, in urban areas wage labour is not only the most important source of income in the formal sector (whether in large or small cities being an object of controversy), but is also present in the informal sector of the economy.
- That Mozambican women are no longer exclusively confined to their traditional roles in the machambas. Women resort to a number of productive activities in order to survive. In the south, for instance, they hire themselves out as paid labourers when the need arises (as in Chokwe and, to a lesser extent, in Ndixe).
- That waged employment is no longer an exclusive characteristic of southern Mozambique. As pointed out in the RPP, labour hiring is higher in the North.
- That substantial numbers of the poorest rural Mozambicans depend for their survival on access to waged employment (specifically casual and/or seasonal labour opportunities) in agricultural activities. The cotton producing areas are experiencing a slow but steady growth of (segmented) rural labour markets, as a result of highly uneven growth and uneven access to economic resources, and this reality must be taken into account, given that wage labourers in agriculture often belong to the poorest segments of the population, not only in Mozambique, but also elsewhere in sub-Saharan Africa.

Furthermore, it can be argued that employment in the formal sector may well be on the rise in the future: the recent surge in foreign investment, attracted by macro-economic stability and rapid economic growth since 1994, has resulted in a number of "mega-projects" (e.g. the MOZAL aluminium smelter, and the planned MIPS steel slabs factory) that are expected to generate employment in the heavy industry sector. Some industrial sectors such as beverages, construction materials, food processing and consumer goods have been growing steadily since 1994 (EIU 1998). The exploration of the mining sector is in progress, and given the country's mineral-rich sands, foreign direct investment in the mining

sector has continued to rise (EIU, 1999). Furthermore, infrastructure rehabilitation, notably the rehabilitation of the road network on a national scale, is absorbing a local workforce in the areas of intervention. Finally, and most importantly, significant developments are taking place in the agricultural sector, where the great majority of the population is concentrated. First of all, agricultural production has steadily increased in recent years after the long spell of instability brought about by the war and exacerbated by the severe drought that took place in 1991/92 (GOM 1998). Secondly, significant land concessions have been given to large commercial agricultural enterprises (e.g Lomaco and Joao Ferreira dos Santos for cotton and other cash crops). Foreign investors have undertaken substantial investment in the sugar cane sector (e.g. Mauritians in the Zambezi Valley, South Africans in Maputo province) And foreign farmers, notably South Africans, are increasingly settling in Mozambique, either privately under land leasing arrangements or through government schemes. These dynamic developments suggest that wage labour could be significantly stimulated in the future.

It should also be stressed that ignoring the existence of poor rural and urban wage labourers may have serious negative implications for their well-being. Not only will anti-poverty policies fail to identify the characteristics of many poor Mozambicans, but also no attention will be paid to the extremely low wages these labourers earn, nor to the often appalling working conditions under which they operate. In areas with high yield potential, there is scope for policy interventions to influence cropping patterns to increase wage labour demand and to ensure that the profitability of agriculture is such that wages and working conditions for labourers are sufficient to provide a genuine contribution to poverty reduction. In urban areas, moreover, wage income is already an important source for the survival of thousands of Mozambicans. Its expansion, notably within the informal sector, should be looked at more seriously.

Table 4.7. Number of households that pursue different generation strategies

Income Source	Number of households per		
	Massoane	Djavanhane	Banga
Sale of own plot's output	0	5	35
Remittances	24	19	2
Drink sale	1	10	19
Ganho ganho	6	5	16
Livestock sale	4	11	3
Craftsmanship	3	3	8
Small businesses	0	4	5
Salario	9	0	0
House building	2	3	4
Wood and charcoal sale	1	7	0
Mfuma sale	7	0	0
Building materials	6	1	0
Fishing	5	2	0
Total	**68**	**70**	**92**

Source: UEM 1999: 18

As this chapter has tried to show, there is a strong case for conducting, not just more research into the characteristics and determinants of rural and urban poverty in Mozambique, but also research applying new analytical and research techniques. In particular, estimates of the extent of wage labour in rural and urban Mozambique that can be derived from the most recent socio-economic data are likely to require more detailed investigation, and are likely to be biased towards enumerated sector employment, and uninformative regarding the involvement of the poorest rural and urban households in labour markets.

The minimum wage: still a precarious income

Box 4.1

Fixing the national minimum wage is one of the most sensitive decisions for those involved in the tripartite negotiating forum between the Mozambican government, the trade unions, and the employers' associations.

Setting the minimum wage obliges participants in that forum to think about variables such as the economic viability of companies, incentives for private initiative, workers' living conditions, economic growth and macro-economic stability.

The annual negotiations over the minimum wage between employers, unions and government often run into impasses which are sometimes only overcome with the greatest of efforts. The involvement of the government in these negotiations is conditioned by its international undertakings and by the fact that it is the largest single employer in Mozambique.

The workers generally start the negotiations with demands that the employers regard as unbearable. For their part, the employers push forward proposals for an increase which the unions regard as unacceptable. Positions are pushed closer together in an attempt to balance the demand for improvements in workers' living conditions with the business class's insistence on economic viability.

A new element in the tripartite negotiations emerged in 1999, when the unions introduced the demand that in fixing the increase in the minimum wage, the rate of growth in the economy should also be taken into account.

The workers' new demand arose as a counterpart to the use by the government and by the employers of exchange rate stability and control over inflation as mechanisms to moderate the workers'claims.

Based on the performance of the economy and their estimates of the cost of living, the unions entered the 1999 negotiations with the demand for a monthly minimum wage of 900,000 meticais (worth US$ 75 at the time).

The unions' argument was that this level of minimum income,based on Ministry of Health calculations, would make it possible for workers to acquire the basket of basic foodstuffs to guarantee the minimum level of calories, established by the United Nations for the survival of a household of five members.

Table 4.2. Evolution of the real national minimum wage

Year	Inflation (%)	Wage (MTs)	Increase (nominal) (%)	Variation (real) (%)	US$ equivalent
1987	175,8	7.500	50,0	-125,8	37,50
1988	55,0	17.000	103,4	48,4	29,30
1989	40,0	22.500	32,4	-8,0	32,05
1990	47,1	32.175	39,3	-7,8	27,34
1991	35,2	40.000	24,3	-10,9	24,64
1992	54,5	58.800	47,0	-7,5	19,50
1993	43,6	70.600	20,0	-23,6	17,77
1994	79,1	117.500	66,4	-12,7	19,60
1995	54,9	218.650	72,5	12,6	19,92
1996	16,6	271.126	30,0	13,4	23,54
1997	1,2	311.795	15,0	13,8	26,89
1998	-1,7	354.000	13,5	15,2	29,82
1999		450.000	27,0		36,00

Sources: Planning and Finance Ministry (1999); Friedrich Ebert Foundation (1997)

But the employers insisted on an increase of only 13.5%,which would have lifted the minimum wage to 401,540 meticais. Eventually, the unions dropped their demand to 550,000 meticais. But when the employers proved intransigent, the unions walked out of the negotiations.

The impasse was only broken when the government unilaterally decreed a minimum wage of 450,000 meticais, which all employers had to comply with. This increase was double that proposed by the employers, but well below the unions' demands.

The evolution of the minimum national industrial wage since the launch of the Economic Recovery Programme (PRE) in 1987 shows that in the first eight years there was an erosion in real wages.

The erosion in the purchasing power of the minimum wage in this period resulted from the fact that inflation levels exceeded by far the rates of increase decreed annually by the government between 1987 and 1994, with the exception of the year when the government was trying to sell the programme to the public, 1988.

The table below shows the evolution of the non-agricultural minimum wage over the last 12 years. The situation only began to change as from 1994. Control over inflation and stability in the exchange rate allowed a substantial real increase in the minimum wage, resulting, at worst, in stabilisation, and at best, in a relative broadening of purchasing power, particularly when compared with the sharp erosion of the minimum wage in 1993, a year in which the monthly minimum wage had fallen to the equivalent of about 18 dollars.

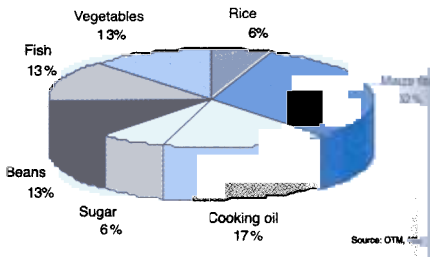
One of the inferences from the evolution of the minimum wage is that, although from 1995 to 1999, the minimum income underwent substantial real growth, it has still not, in theory, regained the value it had when the PRE was launched some 12 years ago.

This is due fundamentally to the corrosion of the minimum wage resulting from the inflationary explosion caused by liberalisation in 1987.

The workers also insist that, despite the improvements of the last five years, the minimum wage still only covers a limited percentage of their basic requirements.

The main trade union federation, the Mozambican Workers' Organisation (OTM), estimated that the minimum wage decreed for 1998, for example, covered just 39.43% of the basic needs of family of five - which is the average size of Mozambican households, according to the 1997 Population Census.

Graph 4.3. Distribution of the "ideal" minimum wage



The OTM argues that the minimum wage should be set at 900,000 meticais, a figure which, although it is twice the current minimum wage, covers only the monthly food requirements of a household of five people, excluding other essential items such as clothing, housing, transport, and education of the children, as the graph shows.

The workers' accommodation to low wages suggests that they have become partially resigned to the fact that, given the difficulties faced by the productive sector, it could be difficult to guarantee, in the short term, a minimum wage level that permits a decent standard of living.

The workers' negotiating strategy seems centred on two aspects, namely protecting the purchasing power of the minimum wage, and a substantial improvement in the minimum wage over the years, in the hope that this will also contribute to raising the income of those workers who earn above the minimum.

Improving the minimum wage has been a tough battle. Although inflation remains under control, the 450,000 meticais that were worth US$ 36 in the first quarter of 1999, had already slipped somewhat to US$ 33 by mid-November, thanks to the fall in the exchange rate. It is thus not surprising that, despite the notable improvements of the past five years, the minimum wage remains, from the viewpoint of the workers, an extremely precarious income.

Chapter 5

Between hope and uncertainty: new challenges faced with the threat of Aids

AIDS and human development

The process of expanding people's choices and improving their well-being is at the core of the notion of human development. Such choices are not finite or static, but neither are they indefinable or abstract. As the previous chapters have pointed out, among the various important human dimensions in life, there are at least three which are universally indispensable to human existence: longevity, knowledge, and a decent standard of living.

In the end, aspiring for a growing enlargement of people's choices implies aspiring for a longer and healthy life, for a broader and more profound mastery of knowledge, and for access to the resources that are indispensable for a decent living standard.

But this notion of human development can easily become an empty box if it is not examined in the historical context of the institutional, social, cultural and economic changes of the population in a specific country.

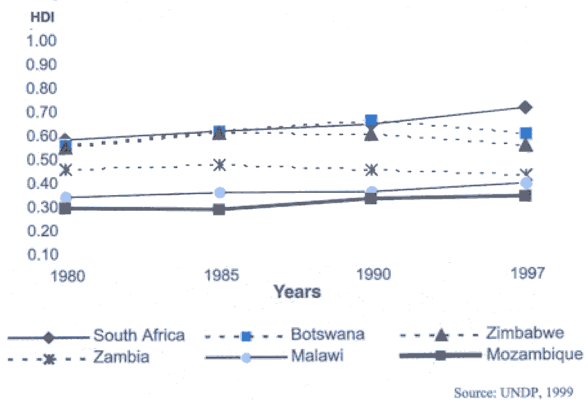
In the particular case of Mozambique, when the country has scarcely recovered from the scourge of the war that it lived through until 1992, it now appears that its population faces a new, and probably no less devastating, danger: the HIV/AIDS pandemic.

Warnings about the imminence of this pandemic came from within and outside the country. From outside the country, although AIDS struck the southern African region relatively late, when compared with other African countries, several countries in the region are now showing the devastating effects of the pandemic. Graph 5.1 illustrates the impact of AIDS on the decline in the human development index in three southern African countries: Zambia, Zimbabwe and Botswana.

Between 1996 and 1999, life expectancy for Zimbabwe fell from 53.4 to 44 years. Life expectancy in Zambia has fallen from 48.6 to 40 years, and in Botswana from 65.2 to 47.4 years over the same period. In these three cases, the significant decline in life expectancy is due to the devastating effects of AIDS (UNDP, 1999: 130).

While Mozambique was suffering from the effects of war over the past decades, neighbouring countries such as Botswana were enjoying a level of economic growth and social stability enviable in Africa. The question now posed is the following: if even more stable countries, with higher levels of human development, such as Botswana, are being affected, in such a visible fashion, what will happen in Mozambique? In other words, if even in a climate of peace, political stability and strong economic growth, human development can be demolished so visibly, will there be any chance of Mozambique avoiding this further catastrophe?

Graph 5.1. HDI trends, southern African countries, 1980-97



Source: UNDP, 1999

The previous chapters stressed matters that are indispensable for improving human development. On the one hand, the enlargement of the political choices of individuals and of communities in general; and on the other, the economic potential and resources, coexisting with various weaknesses that must be overcome so that the rapid economic growth of recent years may be preserved and may be sustainable over the long term.

But during the past decade, the AIDS epidemic has been silently emerging within society. "Is alarm justified?", some will ask, adding "Isn't this a storm in a teacup, about a future epidemic, when at this very moment people are dying of many other diseases - malaria, tuberculosis and measles, among them?"

Unfortunately AIDS is no longer a future

In order to combat AIDS effectively, it must first be publicly recognised

Box 5.1

According to the estimates published by UNAIDS and by WHO, by the end of November 1999 about 2.6 million people had died throughout the world that year because of AIDS, while 5.6 million (including 570,000 children) were believed to have become infected that year with HIV, the virus that causes AIDS. In total, there are an estimated 33.6 million infected people in the world, of whom about 70% are in sub-Saharan Africa, a region with only 10% of the world's population.

The Mozambican population accounts for about 0.3% of the world's population, and 3% of the population of sub-Saharan Africa. However, Mozambique currently has about 5-6% of the people infected with the virus in the entire world. In 1999, an average of 600-700 people a day became infected with HIV in Mozambique, of whom over 70% are adults over 20 years old, and 20% are children between 0 and 4 years of age, infected by transmission from mother to infant. The total number of people infected in Mozambique is expected to increase from 1.1 million in 1998 to about 2 million in 2000. It is forecast that about 75,000 of these will die of AIDS in 2000.

The first case of AIDS recorded in Mozambique was in 1986. But only in late 1999 was it publicly announced, in the deaths notices page of the daily paper Noticias, that a specific person had died because of AIDS. The case did not escape the attention of readers and media professionals for two reasons. First, the person in question was a brother of Samora Machel, the first president of Mozambique. Second, as Matusse wrote, following this death notice: "this is the first time that a family has publicly acknowledged AIDS as the cause of the death of one of its loved ones" (Matusse, Domingo, no. 932, of 5/12/1999). Matusse wrote this article to praise the courage of the Machel family for the fact that they had agreed to make use of their own pain to alert society to the danger of HIV-AIDS. "In the past, those who suffered from diseases such as, for example, tuberculosis and leprosy, were kept out of the normal life of society. It took a long time to overcome this inhuman practice," Matusse went on to write in the same article.

In Mozambique, as in many other parts of the world, ignorance, complacency, and the stigma associated with AIDS are the main killers (The Economist 27/11/1999).

In the Mozambican case, heterosexual relations are the major method of HIV transmission. It is estimated that in 1997 some 2.3 million adults had sexual relations with irregular partners and, in most cases, without any protection. How many Mozambicans will change in time, and take proper care of their sexual behaviour and relationships? And how many will be motivated to do so now, instead of saying that having sex wearing a condom is like eating a banana without removing the skin?

"The pleasure is greater, all right," Bras wrote in this regard in Domingo on 11/7/1999. But is there any pleasure greater than life?

Table 5.1. Infection with HIV

	% of adults* infected	people infections (millions)	infections in 1999** (millions)	% of infected who are women
Sub-Saharan Africa	8	23.3	3.8	55
Caribbean	1.96	0.36	0.057	35
South and Southeast Asia	0.69	6	1.3	30
Latin America	0.57	1.3	0.15	20
Western Europe and North America	0.39	1.44	0.074	20
Eastern Europe and Central Asia	0.14	0.36	0.095	20
North Africa and Middle East	0.13	0.22	0.019	20
East Asia and Pacific	0.07	0.53	0.12	15
Total	**1.1**	**33.6**	**5.6**	**46**

Source: The Economist (1999), November 27, p. 52 *15-49 years **Adults and children

epidemic. What could happen is that the worst is still to come. And who can guarantee that it will not become the main cause of death in Mozambique? Is there anything concrete that can reassure people that AIDS will not surpass the other causes of death? Or is it that, because AIDS does not kill in the same noisy fashion that firearms killed thousands of people during the war, it merits a complacent attitude from Mozambican society? (see Box 5.1).

The worst thing that could happen to Mozambique over the next decade is that those people in a position to warn society of the dangers of the pandemic, decline to do so, either because they are afraid to disturb their own sense of decorum, or because they have tired of hearing about AIDS – even before its more devastating effects really begin to be felt.

Unfortunately, this will inevitably happen if, instead of rigorous research into and publication of what is really happening in the country as regards the AIDS situation, a choice is made merely to reproduce alarmist speeches, based on data from other parts of the world, or on moralising rhetoric, as if the reason for talking so much about AIDS were merely that it's the fashionable thing to do or... simply to impress the "international community".

As was done in the NHDR98, this present report is identifying a topic in order to analyse in a specific manner the nature, characteristics and complexity of the links between growth and development in Mozambique. In this case, the topic chosen rests on the assumption that nothing can be done now to stop the pandemic. What has to be done is minimise its impact, and find ways of overcoming it.

This chapter brings together the largest amount of up-to-date statistical data that currently exists. Part of the text was drafted when the most recent projections and estimates were not yet available (MISAU-INE, 2000).[1]

A new threat to progress and human development?

For the time being, Mozambique does not yet present a general index of HIV prevalence as serious as in the countries mentioned previously. But it is not clear whether this is because the pandemic is less serious in Mozambique, or simply because the data available are less inclusive and less up-to-date than in the other countries.

In 1998, the epidemiological vigilance and data gathering system, on a more or less systematic basis, had only one post in the south, three in the centre, and none in the north of the country. So it is not surprising that the central region shows a substantially higher index of infection than the rest of the country.

Scale and origin of the pandemic in Mozambique

According to data released by the Mozambican government in August 1999, it is estimated that during that year an average of 600 to 700 people a day became infected with the HIV virus. The adult population, those aged over 20, is the most affected, with about 70% of the daily infections, followed by children aged 0 to 4, with about 20% of the daily infections, resulting from mother-child transmission.

Since the first case of AIDS was recorded in 1986, the number of cases has been consistently increasing, and geometrically. While by 1992 there had been a cumulative total of only 662 recorded cases of AIDS, by the end of 1998 the official diagnosed number had reached 10,863. But these figures do not reflect the real scale of the pandemic. The National AIDS Control Programme estimates, on the basis of the HIV-prevalence among pregnant women under observation, that by that date there were 140,000 people either living with AIDS, or who had already died of the disease.

By the end of 1998, the estimates showed that there were 1,140,000 people in Mozambique infected by the HIV virus, and that the HIV-prevalence among the adult population was 14.5%.

Graphs 5.2 and 5.3 show the projections for the evolution of national HIV prevalence among the adult population and for new cases of AIDS. Between 1998 and 2002, it is estimated that the number of people infected will rise from 1.1 to 1.9 million people. It is forecast that the national HIV prevalence among adults (15-49 years old) will increase from 15% in 2000 to about 20% in 2010.

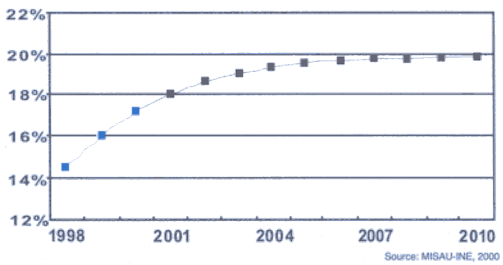
As for the number of people with AIDS, it

[1] Even these figures, as their authors themselves warn, are not statistically representative of the entire country. The collection of updated figures is continuing. It should become systematic and more inclusive, as the epidemiological vigilance system expands.

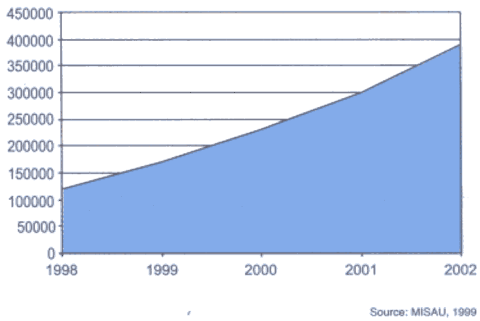
is estimated that the numbers will continue to increasing at least until the end of the first decade of the 21st century (Graph 5.3).[2]

The number of deaths among adults is expected to rise from 118,000 in 1998 to approximately 400,000 in 2002, while the number of infant deaths will rise from about 50,000 to 170,000 (Graph 5.4). As for the number of children orphaned because of AIDS, the forecast is that it will reach 400,000 in 2002. Graph 5.5 shows the prediction for growth in the number of orphans.

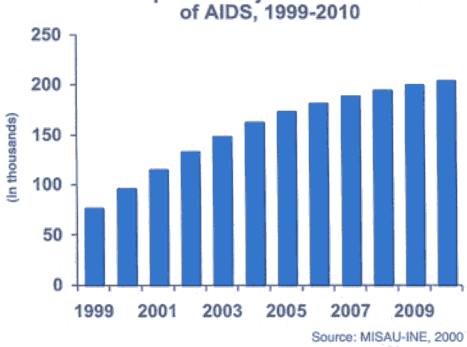
Graph 5.2. Projection of national HIV prevalence among adults (15-49 years), Mozambique



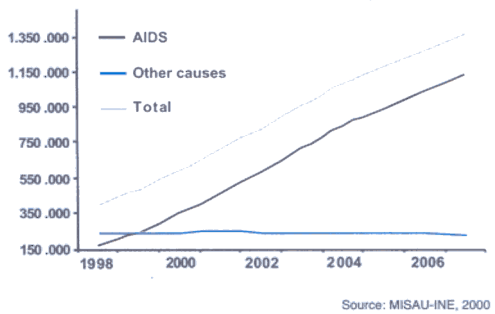
Graph 5.4. Number of AIDS or AIDS-related deaths, 1998-2002



Graph 5.3. Projected new cases of AIDS, 1999-2010



Graph 5.5. Orphans (Projected number of children who have lost/ will lose their mother), Mozambique 1998-2007



These figures are merely indicative, and as coverage becomes more systematic and inclusive, the numbers will certainly undergo changes. But the most important thing about these statistics is that they already contain sufficient information for us to understand that silently a new disaster has been taking hold of the Mozambican population.

Where did the HIV virus come from?

As for its origin, the AIDS pandemic seems to have spread through the migratory movements, caused above all by the war which, in the 1980s and early 1990s, provoked the exodus of hundreds of thousands of people into the neighbouring countries.

During and after the war, Mozambique has been recording a rapid and generalised spread of the HIV virus. Most of the infections occur in regions where there was a conflict. The international transport corridors linking the country to its landlocked neighbors are also singled out as routes that accounts for the rapid spread of HIV in central Mozambique.

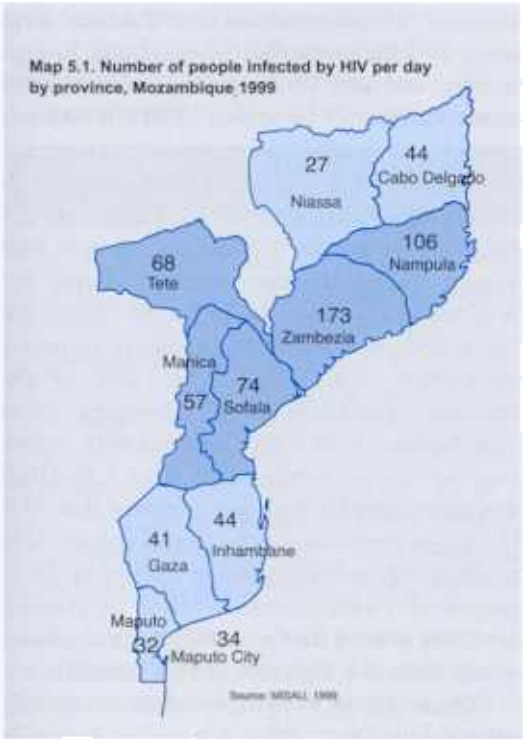
As can be seen in maps 5.1 and 5.2, the central region, covering the provinces of Sofala, Manica, Tete and Zambezia, is the most affected, with 370 new infections per day, of which 101 are among children under 15 years of age.

In this region, there is also a high prevalence of other Sexually Transmitted Diseases (STDs). The prevalence rate of STDs among individuals aged between 15 and 49 was 12.6% in 1996/97. In 1998, there were 223,637 recorded cases of STDs, of which 111,324 (49.8%) were women, and 112,303 were men (50.2%). However, it is estimated that there were about 534,000 cases in the entire country.

Apart from facing other challenges to its development, Mozambique is a country that is

[2] In the United States, about 17,000 people died of AIDS in 1998 (Janssen, 2000).

Map 5.1. Number of people infected by HIV per day by province, Mozambique 1999



Map 5.2. Number of children (0-15 years) infected by HIV per day by province, 1999

extremely vulnerable to the impact of HIV/AIDS, because of its limited capacity to manage the effects of the pandemic.

The high level of poverty, the limited budgets, inadequate communication and transport, and a limited amount of skilled labour makes it still more difficult to implement effective prevention initiatives to deal with present and future HIV infections.

However, it is believed that the pandemic is still in its initial stage. There is therefore some possibility of preventing many additional infections and reducing the impact of existing ones. The national response to combat the expansion of HIV began in 1988, with the creation by the Ministry of Health of the National AIDS Combat Programme. Currently, there are 58 programmes and projects (29 managed by NGOs, and 9 by international organisations), and their activities are mostly concerned with information, education and condom promotion. The advantage of this response lies in the attention paid to vulnerable groups and to catalysts, namely: young people, groups of HIV-positive people, teachers, health workers, sex workers, community leaders, the unemployed, and itinerant traders/vendors.

The Mozambican government has drawn up and approved a National Strategic Plan for the Fight against STD/HIV/AIDS 2000-2002. The Plan seeks to strengthen directives for a renewed and strengthened strategy which steps up and expands efforts to prevent HIV infections, to care for those already infected or affected, and to mitigate the impact of AIDS. The plan has a multi-sector focus, mobilising efforts from the sectors of health, education, social welfare, agriculture and rural development, transport, industry and defence.

Characteristics of the HIV/AIDS pandemic in Mozambique

HIV/AIDS prevalence and trends

Although data on the HIV/AIDS pandemic in Mozambique is still limited, surveys of pregnant women in ante-natal consultations suggest several important characteristics of the pandemic (see Table 5.2 and Graph 5.6).

The levels of HIV infection among pregnant women has already reached over 20% in some parts of the central region (see Table 5.3 on the provincial distribution for some of the main vectors for HIV transmission).[3] The pandemic seems to have begun to spread earlier

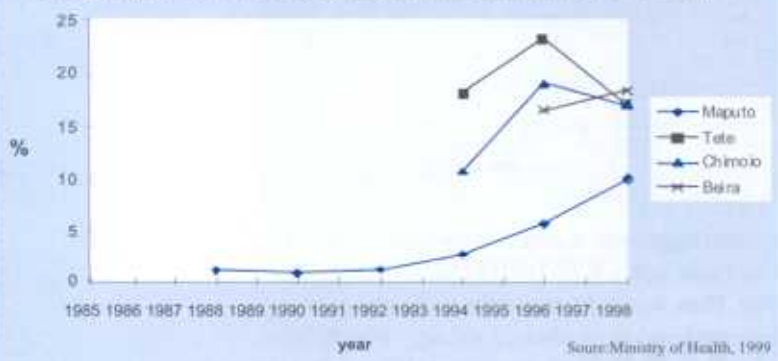
3 A decline in prevalence recorded in Tete and Chimoio is due to survey factors, and may not represent a real decline. Indeed, in both areas the level of infections among adolescents increased in 1998.

Table 5.2. HIV prevalence in ante-natal consultations

	1988	1990	1992	1994	1996	1998
Maputo	1.0%	0.8%	1.2%	2.7%	5.6%	9.9%
Tete				18.1%	23.2%	17.0%
Chimoio				10.7%	19.2%	17.0%
Beira					16.5%	18.3%

Source: MISAU-INE, 2000

Graph 5.6. Prevalence of HIV in pre-natal consultations, 1987-1998.



Source: Ministry of Health, 1999

in the central region, where levels of infection are twice as high as in the south. The indices for the north are 25% higher than in the south.

HIV prevalence in Maputo is lower than in the central region, but has shown an accelerated and constant growth rate, with a doubling of prevalence every two years.

The rural areas are just as affected as the urban ones. Rapid assessments in 1998 showed a prevalence of 9% in Maputo city, compared with 12.5% in the Maputo rural area. In Manica, the prevalence was 17% in Chimoio city, and 17.5% in the rural area, while in Nampula city, the urban and rural figures were 5% and 6% respectively.[4]

Two major factors seem to influence the level and timing of the pandemic in different parts of Mozambique. On the one hand, the transport corridors in the central region have been vectors for the spread of HIV/AIDS. During the war, the long-established Beira corridor with Zimbabwe and Zambia, kept open by a large number of local and foreign troops, and the Tete corridor with Malawi created a route for the spread of HIV from those countries to communities in the central region.

There are also population movements, both within the country and abroad. Levels of HIV infection among the 1.7 million refugees who sought shelter in other countries during the war, are likely to be similar to the figures for the countries of asylum. The main countries of asylum included Malawi (75% of the returnees), Zimbabwe (14.5%), Tanzania (3.4%) and Zambia (1.3%), all countries with severe and advanced pandemics. The UN High Commissioner for Refugees reported that 83% of refugees returned to the central region, 12% to the north and only 5% to the south. Even people who were displaced within the country are likely to have found themselves in situations where there is a high risk of HIV infection.

Since one in every five adults is already affected in the central region, and one in 10 in the south, Mozambique is facing a severe pandemic.

Table 5.3. Provincial distribution of the vectors that favour HIV transmission

Province	Vector		
	Trade corridor	Population movement	Migrant labour
Niassa		1992-95	
Cabo Delgado			
Nampula			
Zambezia		1992-95	
Tete	post-1975	1992-95	
Manica	post-1975	1992-95	
Sofala	post-1975	1992-95	
Inhambane			post-1993
Gaza			post-1993
Maputo (province)	post-1992		
Maputo (city)	post-1992		

AIDS cases and deaths - the hidden pandemic

Although there is not much reliable data, and little research about the behaviour of this pandemic, there cannot be much doubt that the number of people affected is on the increase, particularly in the central region. Currently, Maputo accounts for two-thirds of reported AIDS cases, despite having a lower level of HIV

4 These data differ from the experience of Malawi, Zambia and Zimbabwe, where the rural areas tend to have lower infection levels. But they are similar to the rates for the rural and urban areas of Kwa-Zulu Natal and Swaziland.

infection.[5] It should be mentioned that by far the largest numbers of AIDS cases notified to the National AIDS Control Programme (PNCS) fall into either the 20-29 or 30-39 year age groups.

Table 5.4. Breakdown of HIV prevalence by age

	Year	Age	
		15-19	20-24
		(%)	
Maputo	1996	5.9	6.0
	1998	8.9	11.3
Tete	1996	19.9	29.3
	1998	19.8	16.6
Chimoio	1996	17.3	22.0
	1998	20.3	16.4
Beira	1996	15.0	20.2
	1998	18.9	22.7

As in many other southern African countries, the HIV/AIDS pandemic in Mozambique is likely to remain hidden for a long time, both in statistics and in the public eye, until a rapid rise in the number of AIDS deaths makes it impossible to ignore.

Most of the pandemic remains hidden for five reasons. First, the pandemic in Mozambique is still at an initial stage. Second, AIDS tends to develop between 8 and 10 years after infection with HIV. Thus the increase in the number of AIDS cases occurs much later than the rise in HIV infection levels.

Third, many people are never diagnosed as carrying the virus, since the tests are not always available, and many people die before the diagnosis is made. Fourth, many people with AIDS do not reveal their diagnosis, since openness may expose them to negative financial and social consequences. And fifth, AIDS cases and deaths are usually under-reported by any routine reporting system.

The danger of rapid spread of the pandemic

By international standards, Mozambique is already experiencing a severe HIV/AIDS pandemic, but it could become even more severe for reasons such as the following:

- Disrupted family and community life because of war, population displacement and migrant labour;
- High levels of poverty and income inequality;
- Evidence of high levels of other sexually transmitted diseases (STDs). In 1996, 12.6% of Mozambican men interviewed reported STD symptoms in the previous 12 months. Since around half of STDs are likely not to have any symptoms, actual rates are likely to be much higher.
- The 1997 Demographic and Health Survey reported that only 7% of women and 32% of all men who were sexually active and unmarried had ever used a condom. In 1996, a KAPB survey found that only 28% of sexually active adults used condoms in high risk sexual encounters.
- The low status of women in many communities and relationships makes it difficult for them to protect themselves against infection. This is made worse by the high level of female illiteracy, particularly in rural areas, as was stressed in Chapter 2. In urban areas, women-headed households tend to be poorer than their male counterparts. Biological factors also put women at greater risk of infection. Data from other countries indicate that overall the rate of infection in men may be slightly lower than in women, particularly in the early stage of pandemics.
- The significant number of sexually active adults who have sex with non-regular partners (see Box 5.2).
- The development of the Nacala and Maputo corridors as well as other major economic projects could stimulate the growth of the pandemic. Emigration of workers, particularly to South Africa, where there is a high HIV prevalence, could easily spread the pandemic in the southern region. In 1996, it was estimated that of the 284,050 people employed in the mining sector in South Africa, 55,741 were Mozambican migrants. Of the 176,351 illegal immigrants deported from South Africa in 1997, 146,285, or 83%, were Mozambicans.

Regional trends in the HIV/AIDS pandemic

Estimates of the number of individuals carrying HIV, of those suffering from the disease, of the deaths and children orphaned because of AIDS have already been mentioned at the start of this chapter. But it is worth mentioning that, judging from the experience of neighbouring countries, it is very likely that HIV prevalence and risk

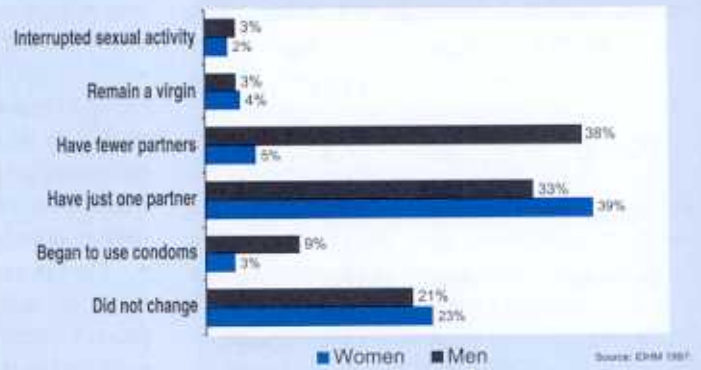
[5] This probably reflects such factors as greater access to health services, and diagnostic facilities.

Are Mozambicans changing their sexual behaviour because of AIDS?

Box 5.2

In the 1997 Demographic and Health Survey, an attempt was made to find out from women (9,590 interviewed) and from men (2,889 interviewed), aged between 15 and 64, whether their knowledge of AIDS was influencing or changing their sexual behaviour. The following graph shows that about 23% of women and 21% of men said they had not changed their sexual behaviour. Only 3% of women and 9% of men said they had begun using condoms to protect themselves from HIV/AIDS, while 39% of women and 33% of men said they had opted for just one sexual partner.

Graph 5.7. Changes in sexual behaviour because of AIDS



As a way of reducing the risk of contracting the AIDS virus, men (38%) were more likely to say they had reduced their number of partners than women (5%). This great difference between the sexes is consistent with the results of previous studies on sexual behaviour undertaken by the National Control Programme on STDs and AIDS, which suggests that men are more ready than women to speak more openly about their sexual activity.

Only 2% of women and 3% of men said they had stopped their sexual activity for fear of contracting HIV, while 4% of women and 3% of men of reproductive age were still virgins when they were questioned.

INE-MacroInternational, 1998: 173

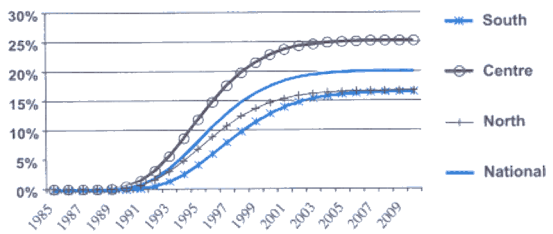
factors in Mozambique will gradually get worse.

Preliminary projections made for the NACP indicate that, without effective interventions, the regional pandemic will continue to grow until at least the year 2005 (Graph 5.8).

And if current trends continue, it is possible that around 50% of the 15-19 age group will die of AIDS.

Within five years, one in five Mozambican adults over 15 years old will be infected with HIV. In the central region, 25% of the population will be carrying HIV, while in the southern and northern regions, about 17%, or one in six adults, are expected to be infected with HIV, but these figures could rise if commercial corridors in these regions develop rapidly.

Graph 5.8. Regional and national expansion of HIV

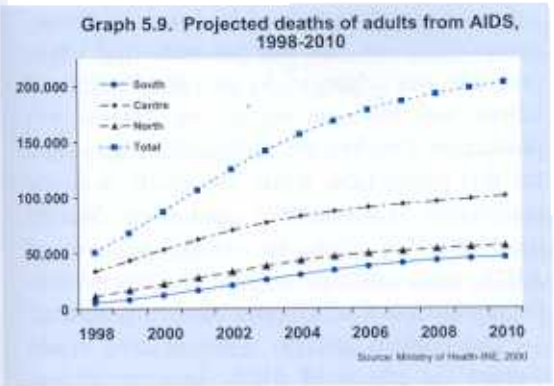


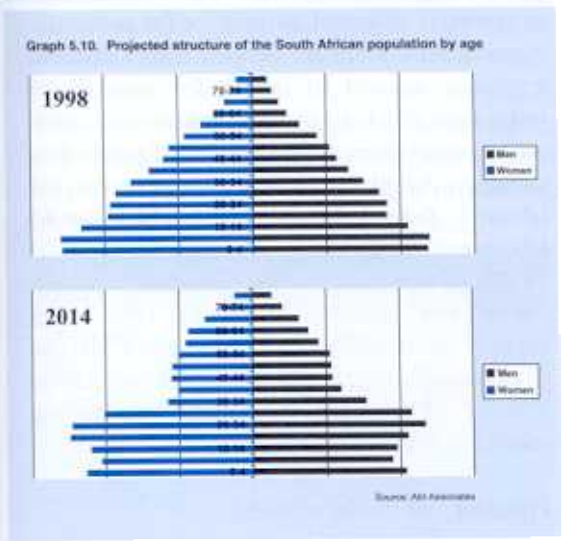
Projections suggest that 2.5% of adults are being newly infected every year and that, without effective interventions, the rate of new infections will remain above 1.9 per cent a year for at least the next decade.

Projections on AIDS cases and deaths and their implications for the Mozambican population structure are not yet available. However, estimates for several southern African countries suggest that the AIDS pandemic can have a significant effect on population growth, reducing it to negative levels in the coming decade.

The population structure will undergo changes, with a sharp reduction in the number of adult workers, identical to the changes forecast for South Africa, and shown in graph 5.10.

The pandemic will affect children in two ways: on the one hand, the disease will kill





their parents, leaving them orphans and, on the other hand, the children themselves are at risk of infection.

Impact on households and communities

The impact of AIDS is likely to be most severe at household level, because this is a fatal disease. Apart from that, AIDS affects more than one of the adults in the household, generally those of productive age who support the children and the elderly.

Illness and death from AIDS result in psychological and social tension for members of the household, particularly when the carriers of the disease are stigmatised. Tension for the sick or affected members of the household increases when they lack basic infrastructures, such as a dwelling place, sanitation and water. Lack of these makes it more difficult to care for the sick person, particular when suffering from chronic diarrhoea. Women and girls are generally double victims since they are responsible for caring for the sick members of the household, and could be without support should they fall ill themselves.

The economic impact on the household can be devastating. When adults become ill or die of AIDS, the household income drops because of the loss of their earnings. In addition, other members of the household often have to take time off work to look after the sick. Health care and funeral costs may place substantial burdens on household. The picture of household expenditure in Mozambique for 1996-97 shows little flexibility to accommodate these pressures, since a high proportion of total consumption covers just basic needs such as food and energy. Studies show that health care costs are met by selling the household's livestock, from production, or from debt. The pandemic thus feeds the poverty of households who are already poor, and who therefore have fewer reserves to deal with the impact of AIDS. This pandemic will lead to the impoverishment of many non-poorhouseholds.

The household structure will be severely affected by deaths from AIDS. The pandemic will produce a large number of orphans, thus worsening the dependency index, which is already high in Mozambique, particularly among poor households (Table 5.5). The dependency index could increase due to the deaths of adults suffering from AIDS, leaving children and elderly relatives without support.[6]

The nature of household responses to the deaths of adults will be diversified and limited. The households are likely to be headed by children or by the elderly after the death of the adults. Other households will be broken up, their members sent to relatives. neighbours, friends or institutions. While extended families often do care for orphans, family structures may become overloaded. A significant number of orphans will lose all their support structures. Recent studies indicate that informal support mechanisms that previously existed for the elderly and the disabled are already breaking down.

Traumatic and prolonged impacts will occur among children who have accompanied closely the death of their parents, or who have received inadequate parental support. Thus many children will be deprived of a healthy and

[6] The dependency index is measured by the number of household members aged less than 16 or more than 59, plus the physically disabled, divided by the total number of persons in the household (DPDS-UEM-IFPRI, 1998).

productive life. In other countries in the region, AIDS orphans show retarded growth and lower indices of school enrolment due to lack due to lack of family support.

Certain communities will be more vulnerable with an HIV/AIDS prevalence above the average, or with fewer resources for prevention against the pandemic and for the needs of caring for the sick.

The subsistence of rural communities

Most Mozambicans, and the poorest strata of the population, live in rural areas, where agriculture, forestry and fishing account for 88% of employment. The typical rural household in Mozambique resorts to a variety of subsistence strategies, including agricultural production and migrant labour. Most crops are destined for domestic consumption.[7]

Households involved in small scale production, subsistence agriculture or fishing are very susceptible to the loss of adults, or of children to care for the sick. The impacts on the subsistence of the other countries of southern Africa include reduced inputs for agricultural production, lower export and food crop production, wasting of assets, the abandonment of labour-intensive and non-food crops, lower school enrolment, particularly among girls, and increased malnutrition. The vulnerability of subsistence production to HIV/AIDS depends on the type of crops, food security, access to credit, the technology used, and the health staff and services. In Mozambique the impact could be particularly serious because subsistence activities are characterised by low investment, except in labour, and low productivity.[8] It is probable that changes in the distribution of labour will have an impact on cashew nut production. Children are traditionally responsible for this production, while the adults dedicate themselves to subsistence production. Should the number of adults be reduced because of AIDS, these children will be channelled into the production of subsistence foodstuffs instead.

The climate and the types of crop could worsen the effects of AIDS. In areas of low or intensive seasonal rainfall, or for particular communities, there are periods which demand a greater amount of labour for agricultural tasks. Lack of labour in these periods could have serious consequences for households' productive capacity. In places where the demand for labour is more balanced, one could resort to labour exchanges between households.

Subsistence strategies, such as migrant labour and money remittances, could also submit members of the household to the devastating effects of HIV infection. About 25% of Mozambican households depend on remittances to supplement their earnings.

Table 5.5. Dependency Index in Mozambique, 1996-97[a]

	Rural	Urban	Country
Absolutely poor	60.5	61.4	60.7
Poor	58.8	57.6	58.6
Non-poor	47.4	47.9	47.5
All	55.5	53.9	55.2

Source: IDS, 1997

Political and social stability

AIDS could affect political and social stability from community to national level. Many current and future leaders could die prematurely, thus affecting the availability of human and social resources, and opening the path to the eruption of political conflicts. Soldiers and police have proved to be high risk groups for AIDS in many countries, and this could compromise political stability. Countless children who have been inadequately socialised and supported will suffer the consequences of the pandemic throughout their lives. Apart from poverty, this could lead to criminal and anti-social behaviour.

Consequences for the social services

Infection among the labour force will have an impact on the ability of the social services to offer health care, social welfare, and other

services, such as agricultural extension. Also, HIV will alter the degree and nature of the needs from the various services.

Infection of workers

It may be thought that workers in the health and social welfare sector are better informed about AIDS, and therefore better able to avoid high-risk sexual relations. However, there is clear evidence that they have the same risk profile as other adult Mozambicans. Indeed, many studies show that people with higher incomes and from the better-off classes may have an above-average risk of contracting HIV, especially in the initial stages of the pandemic, since they are more likely to engage in high-risk sexual relations. The example of Malawi, shown in Table 5.6 is sufficiently clear.

Table 5.6. HIV prevalence among blood donors by occupation, Malawi

Occupation	HIV prevalence (%)
Soldier/policeman	62
Malawi young pioneer	28
Educated	28
Skilled	24
Unspecified	20
Unskilled	18
Small producer	16
Housewife	16
Student	13

Other studies clearly show that HIV infection rates among government employees, including health workers, are high. In 1991/92, midwives and nurses in Lusaka had HIV prevalence rates of 39% and 44% respectively, and in two hospitals in southern Zambia mortality among nurses increased 13 times between 1980 and 1991. In Kinshasa, in the Congo Democratic Republic, staff at the Zaire Hospital had HIV infection levels similar to those of their communities of origin. In Malawi, the death rate among health service staff was 3% in 1997, which was six times the death rate prior to the pandemic. A study by the Swaziland Education Ministry in 1999 shows losses of 3 to 4 teachers a week, who have fallen victim to AIDS. Estimates show that AIDS could kill 14,000 teachers in Tanzania by 2010.

An additional problem is that health workers infected with HIV are exposed to opportunist infections in their working environment. The most serious of these infections is tuberculosis, which is transmitted within hospitals. Cases of tuberculosis are increasing fivefold among health staff every five years in areas with high HIV prevalence rates.

Consequences for the services sector

The capacity of the services sector could be seriously compromised if the impact of AIDs on its staff is not prevented and properly handled. AIDS among the staff will impose direct and indirect costs. It will increase the direct costs of health care and other assistance to staff, such as social security benefits. But the indirect costs could be even greater, such as:

- Absenteeism due to sickness, attending funeral or caring for sick family members;
- Low productivity of sick workers;
- Shortages of skilled staff. The death of skilled workers may increase the difficulties and costs of replacing staff;
- Low morale among workers affected by the disease, and by the deaths of relatives, friends and colleagues;
- Increase in recruitment and training costs.

Many indirect costs are expressed more as a reduction in efficiency than as obvious financial costs. The experience of many countries suggests that the public sector is more vulnerable to these impacts, since it is less ready to adapt itself to the pressures instigated by the pandemic. Indeed, the majority of government staff remain in employment, even after they have become ill and unproductive. There is little flexibility to replace staff and ensure that work continues at a normal pace during periods of absenteeism and low productivity.

Impact on the demand for services

Apart from affecting the ability of services to do their job in all sectors, AIDS will also significantly increase the scale and nature of the demands placed on social welfare. The increase in demand will be the greatest challenge for the health service and other social sectors, whose capacity and coverage in Mozambique are already limited.

The Child Vulnerability Index - a comparative study between provinces

Box 5.3

The Child Vulnerability Index is a concept that is still being elaborated, although it has already been presented, as the "Child Risk Measure", in the 1999 UNICEF report on The Progress of Nations. Although it is recognised that the choice of indicators is debatable, the index was created to stimulate debate and efforts to develop a better approach to assess the level of children's well-being. The original "Child Risk Measure" sought to combine traditional indicators and those that are concentrated on new threats, with the aim of revealing the current situation of children.

The Child Vulnerability Index, which was developed for a comparative study between the Mozambican provinces, takes into consideration traditional indicators, such as mortality and malnutrition, but also includes other factors which affect the child's well-being in the long term. Although the data is still inadequate, estimates of HIV prevalence were included due to its likely influence on the various forms of child vulnerability. The higher the percentage of adults with HIV, the greater the probability that a child will be born infected or will live in an infected family. As soon as the child attains adolescence, and becomes sexually active, the risk of infection increases. AIDS will also have an impact on the communities where the children live.

Two indicators on education have been included. The first concerns the percentage of children of primary school age who are not attending school, and whose development potential is thus compromised. The second indicator is the percentage of girls (as from 6 years of age) and women who have never attended school. This gives prominence to two types of vulnerability: girls' lack of access to education, and the low levels of literacy among women, which has proved to be one of the most important factors in child survival and development.

The final indicator covers orphans, defined here as children whose mothers, or both of whose parents, have died. These children are particularly vulnerable, since they are probably the last to benefit from the sparse resources of their households. The data presented here are based on recent regional estimates of the percentage of children liable to become orphans (due to the death of their parents from AIDS, or from other illnesses) in 1999, taking into consideration the rates of HIV prevalence and the projections of the 1997 population census. It should be mentioned that, despite the almost exclusively regional focus of the estimates, use of the more precise, though older, IDS data does not produce different results as regards the ranking of the provinces.

Graph 5.11. Child vulnerability index by province, Mozambique 1999

Source: INE/MISAU, 1999; DPDS/UEM/IFPRI, 1998

It is thought that the variables in the index have differing degrees of importance. Mortality, HIV and orphanhood had a relatively greater weight in the equations. Mortality may be regarded as the final result, and thus clearly shows the effects of a high level of vulnerability. HIV and orphanhood cause complex problems for children throughout their development. Since the numbers of orphans and HIV-affected children are fewer than other children, the importance of the indicators has been categorised in such a way as to ensure that the HIV and orphanhood components are not lost within the equation. One should note that, even if the degree of importance of the indicators is altered, the order of the provinces is unchanged. Tete and Sofala are consistently the provinces with the highest indices, while the southern provinces have the lowest vulnerability rates.

- The health sector will face the most obvious impact of AIDS. The increase in the number of people suffering from AIDS will demand more from the health sector. This sector already faces difficulties in responding to the typical problems of the sector in developing countries, such as malaria, cholera, and diseases that can be vaccinated against, such as measles. This sector will have to respond to a massive increase in the needs for hospital care and first aid, tuberculosis treatment services and medicines. The HIV/AIDS pandemic will result in demand for new types of services such as counselling and terminal care in the family environment for people in the final stages of the disease. The health services also play an important role in prevention through improving the services that treat other STDs, and the promotion of health care that involves high costs and quality of treatment. Although the government has honoured its promise to increase expenditure on health, which amounted to 7.9% of government expenditure in 1997, the amount of new needs may surpass the available resources. In Mozambique, company spending on their workers' health care, which currently represents 9.2% of health expenditure, could have an important role to play in the response of this sector.
- The education sector has a vital role in managing the impact of the pandemic. Educational institutions have a unique opportunity to undertake preventive programmes against HIV among young people and to maximise investment on education. The increase in the number of students will lead to special needs, and will include HIV-infected pupils, orphans and others affected by AIDS in their families or in their circles of friends. Economic pressures and the need to care for family members will prevent many children from enrolling or remaining in school. There will be urgent demands for the training of more teachers and qualified staff to replace those staff members who fall victim to AIDS.
- The demand for social welfare will increase. The HIV/AIDS pandemic will increase the number of households facing economic crises and other difficulties. Some will mainly need assistance as a bridging measure while they adapt to the absence of important adult members, but other households will face permanent economic difficulties and other problems. In all countries with severe epidemics, the concern of social welfare is concentrated on caring for orphans. It is estimated that the number of orphans caused by AIDS in Mozambique will rise from 123,000 in 1998 to over 400,000 in 2002.
- Improvements in employment, housing, health services and other infrastructures, as well as in agricultural extension, will be very important to help people deal with the impact of the pandemic, and to improve social conditions, thus reducing the risk of new infections. Currently the lack of services and infrastructure is enormous. Although population growth in Mozambique may decline significantly because of AIDS, even reaching negative rates in some areas, broader development and the provision of services will remain the greatest challenges.

Impact on the national economy

The development of the business sector and real and rapid growth in the economy are necessary, albeit not sufficient, conditions to ensure human development. The consequences of the AIDS pandemic for all economic sectors could be enormous. And for the rapid economic growth witnessed in Mozambique in recent years, it could be devastating. UNICEF estimates that in sub-Saharan Africa, the extra mortality caused by AIDS leads to a loss of about 2.5% of GDP, plus an extra 1% caused by increased absenteeism. In countries with high rates of HIV prevalence, such as Mozambique, between a third and a half of all hospital beds may be occupied by patients with AIDS. The cost of treating AIDS cases increases public expenditure, and this could lead to a further 1% decline in the GDP. The Namibia Human Development Report envisages that AIDS related expenditure will amount to 9.6% of GDP in 1999, and that this figure will rise to 16.3% in 2001. These costs have been doubling every year since 1996.

Just as in the case of government sectors, the impact of AIDS among private sector employees will impose direct and indirect costs on businesses. The vulnerability of companies

Circumcision: to snip or not to snip?

Box 5.4

Circumcision usually depends on religion, ethnic group or culture. Now it seems likely that the loss of a small flap of skin can help to prevent the loss of life from AIDS. But this conclusion is far less simple than it might seem.

The relationship between circumcision and HIV has been hotly debated for over a decade. Many epidemiologists have argued that, if there is a relationship, it is not a matter of the removal of the foreskin, but of the sexual behaviour of the cultural, ethnic or religious groups that are either circumcised or not circumcised.

Research by a Kenyan microbiologist, Maina Kahindo, challenges this theory. This was part of a larger study designed to investigate whether levels of risky sexual behaviour really were the deciding factor. Places in Kenya and Zambia, where more than a quarter of the people being studied were infected with HIV, were compared with places in Benin and Cameroon, where HIV prevalence was below 6%. To the surprise of the researchers, the only important difference in sexual behaviour was that risky sex was most common in low-prevalence Cameroon. The real difference lay in male circumcision: over 98% of the men in the West African areas were circumcised, compared with about 30% in Kenya and 10% in Zambia.

The most compelling evidence came from the Kenyan study, where circumcised men could be compared with men of the same Luo group and Christian religion who were not circumcised, but who had similar numbers of sexual partners and rates of condom use. The results: 26% of uncircumcised Luo men were HIV-infected, compared with 6% of circumcised Luo men. The difference persisted even after controlling for other sexually transmitted diseases which increase HIV transmission.

The result is entirely plausible. Put simply, the tip of a circumcised penis is tougher than the exposed tip of an erect penis usually covered by a foreskin. This toughness protects against micro-lesions which give HIV an entry point to the body.

But it is not easy to know what to do with this information. Although the results have been presented at medical conferences, including an international conference on AIDS and other sexually transmitted diseases in Zambia in September, the controversial nature of the findings has researchers dancing in circles. In Africa, circumcision is a badge of ethnicity or religious affiliation. Along with death rites, it is probably the most deeply held of cultural traditions. In the fractious societies of east and southern Africa, a government dominated by one ethnic group would be ill-advised to override the cultural norms of another, even in the interests of reducing the spread of a disease that already causes four out of five young adult deaths.

Governments are unlikely to launch campaigns promoting universal circumcision. People will probably be left to decide for themselves what to make of the information. Public health officials are deeply worried that circumcised men will decide they need do nothing more to protect themselves. Already dangerous rumours are circulating that circumcision is a "natural condom". And anything that undermines the campaigns to promote safer sex would be calamitous, particularly in sub-Saharan Africa, which is home to around 70% of the 33.6 million human beings who were carrying the HIV virus in 1999.

Source: The Economist, 27 November 1999

will vary in accordance with the nature of the business and the production process, the risk profile of the employees, the skills of infected employees, and the advance planning of operations and business to respond to AIDS among the workforce. It is unlikely that the consequences of the HIV/AIDS pandemic will be substantial in the short term for the majority of business activities, but the same cannot be said for the long term impact. Certain companies may be vulnerable to the impact of AIDS if their consumer market is severely affected by the pandemic, and if households stop buying "luxury items". Businesses tend to be vulnerable to inadequate responses to the HIV/AIDS pandemic on the part of suppliers of important inputs such as electricity, telecommunications and basic public services.

Small and medium companies play a key role in Mozambique's human development, since they represent the most immediate chance of improving the lives of many people. Although all companies will be affected by the impact of HIV/AIDS, the small companies will be particularly vulnerable, because in the event of the loss of entrepreneurs or of skilled workers,

these may prove difficult to replace.

The impact of AIDS on macro-economic growth is difficult to predict. There are signs that AIDS will not be a dominant factor in growth of GDP or of investment in Mozambique in the immediate future, although the cumulative effect over time could be significant. Projections for other African countries indicate that generalised AIDS pandemic will reduce GDP growth rates by an average of about one percentage point per annum over time frames ranging from 15 to 25 years.[9] The main consequences will be more evident in the medium and long terms and could be the result of the loss of skilled personnel in the economy.

The country has about 5,000 university graduates, a number which cannot respond effectively to the current needs of the labour market. Since the Mozambican universe of manpower with technical, administrative and management skills is small, the pandemic could become a more serious constraint on economic growth than in other countries. Because of the probable decline in population growth caused by the pandemic, the impact on per capita GDP will be less than the impact on the GDP itself, which does not mean that impacts on other aspects of human development will be less serious.

Population growth: an uncertain fate, posed between two disasters

By around 1995-97, the size of the Mozambican population should have tripled, when compared with the mid-20th century. But this did not happen, and is now predicted for 2004-2005, or about ten years later than was forecast at the start of the 1980s.

Over the past two decades, there was an unexpected brake on population growth. This was contrary to normal demographic trends.

Graph 5.12 illustrates this phenomenon. Between 1950 and 1980, the average rate of demographic growth accelerated from 1.6% in the 1950s, to 2.1% by 1970 and to 2.5% by 1980 (DNE, 1983). But between the 1980

Graph 5.12. Growth of the Mozambican population, 1950-1997

census and the 1997 census, the rate of population growth shrank to an annual average of 1.7% (INE, 1999).[10]

Such a sharp change in the rhythm of population growth can only have resulted from obstacles to demographic growth, which must have occurred under abnormal conditions.

But it is practically impossible to estimate the relative weight of the main factors that caused the brake on population growth over the past two decades. What is known is that, in the period in question, the majority of the Mozambican population was affected by drought, hunger, war, forced displacement, and a deep political, social and economic crisis. These factors operated both simultaneously, and in alternative, cumulative and independent forms.

In any case, what is important to mention here is that taken together such factors had the effect of "positive obstacles", from the Malthusian perspective of reducing the size of the population through hunger, disease and war (Livi-Bacci, 1992: 75-76; Njoku, 1986).[11]

Unfortunately, the slowdown in population growth has not led to any improvement in well-being. In general, between 1975 and 1995, the rate of GDP growth remained lower than the rate of population growth (Francisco, awaiting publication; UNDP, 1997, 1998; World Bank, 1997, 1998).

But this negative trend was brought under control, and indeed reversed, in the second half of the 1990s. In the last five years the rate of economic growth has remained positive and

[9] For example, an annual growth rate estimated at 5% without an AIDS pandemic would, on average, be reduced to 4%.

[10] The "r" refers to the average rate of exponential growth.

[11] In the first edition of his book on the Principle of Population, (1795) Malthus argued that population growth could only be controlled through food shortages and consequent increases in mortality. Malthus later modified his analysis and recommendations for population control, favouring what he called "preventive obstacles" and "moral moderation", instead of "positive obstacles". Preventive obstacles are those that oppose new births through forms of moral containment - celibacy, or postponement of marriage; positive obstacles are those that destroy children who are already born and the population in general (misery, disease, war). (Livi-Bacci, 1989: 76; Malthus, 1977; Nazareth, 1988: 30-31).

much higher than the rate of population growth.

But what can be expected of Mozambican population dynamics in the coming decades? Immediately, the forecast for the growth of the Mozambican population is uncertain.

Even admitting that the positive obstacles that affected population growth up until 1995 will cease to be felt in the coming decades, the major question now concerns the impact of the HIV/AIDS pandemic on the population. This chapter has looked in detail at the pandemic's impact on society in several demographic aspects and on human development in general.

But recent studies now admit that the natural population growth rate, of around 2.7% a year, should no longer occur because of the likely increase in mortality caused by AIDS.

Graph 5.13 shows the likely projections for population growth over the next two decades, without considering the impact of AIDS, or of any other immediately unforeseeable factors. Without these factors, the Mozambican population would reach 22 million in 2010, and 28 million in 2020.

However, when one considers the possible impact of AIDS on life expectancy and on the size of the population, the prospects for the coming decade change (INE/MISAU, 2000). Graph 5.14 shows that, instead of life expectancy at birth increasing in the coming decade, AIDS could reduce it by about 8 years, from 43.5 years in 1997 to 35.4 in 2010.

Likewise, the brakes could be put on population growth again. Instead of the 22 million inhabitants forecast for 2010, over the coming decade AIDS could reduce the natural population growth by about three million people: that is, to 19 million inhabitants (Graph 5.15). This is a very clear Malthusian "positive effect", and one that is probably no less tragic than the civil war and other disasters that Mozambique suffered in the 1980s and 1990s.

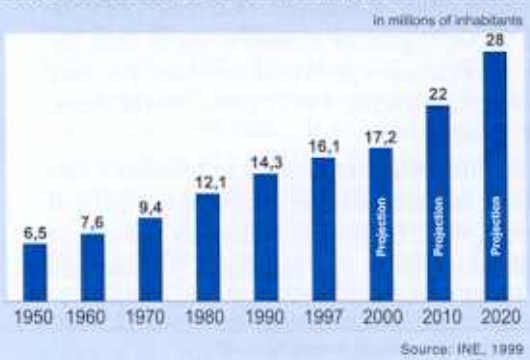
If this happens, it means that AIDS will have a negative effect on the longevity of the population such as no other factor - wars, famine and other disasters - has had throughout the 20th century in Mozambique.

Thus Mozambique is currently faced with a paradoxical dilemma, that is difficult to solve, from the demographic point of view. On the one hand, if the country does not manage to control the spread of the AIDS pandemic, it will be the pandemic that controls the population. On the other hand, if AIDS and other "positive obstacles" do not have the impact forecast here, the high growth rate and other demographic factors will continue to have negative repercussions on the living conditions and well-being of the population.

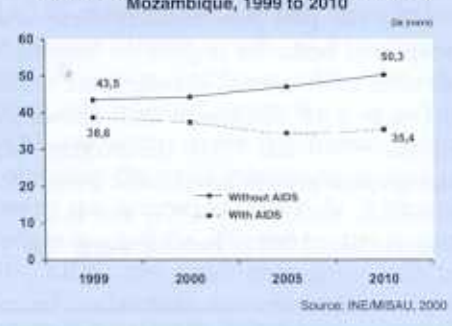
In chapter 2, it was noted that poor households are on average larger than non-poor ones: 5.6 and 3.6 persons (DPDS-UEM-IFPRI, 1998: 65). The greater dependency rates of poor households have repercussions, both on the levels of consumption per person and on the prevalence of child labour.

Still more important, Chapter 2 stressed the high rates of absolute poverty and human poverty throughout the country. If rapid economic growth does not lead directly and immediately to a gradual improvement in the living standards of the public at large, the proportion of people living in absolute poverty will increase. That is, it is sufficient for the

Graph 5.13. Evolution of the Mozambican population, 1950-2020



Graph 5.14. Projected life expectancy at birth, Mozambique, 1999 to 2010



incidence of absolute poverty observed in 1997 to remain constant over the coming decade for the number of people below the absolute poverty line to increase by 2010 to 16.8 million people, as much as the entire current population of Mozambique.

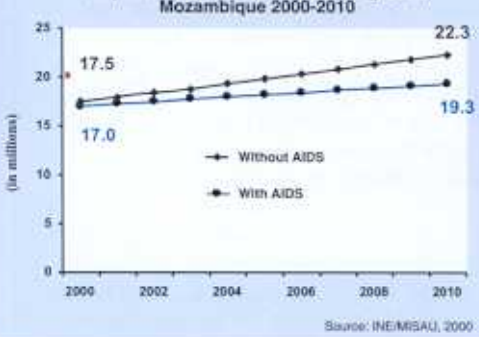
This evidence shows, clearly and explicitly, the weight of demographic factors in the search for solutions to important economic and social problems. The men and women who will be parents at the end of the first decade of the 21st century have already been born.

Two in every three of these future parents are currently living in absolute poverty, and if they do not alter their reproductive behaviour, very probably they will have the same number of children that the population has currently.

Fertility, or the number of children that women of reproductive age bear, is usually measured by an indicator called the Total Fertility Rate (TFR).[12] The TFR in Mozambique is currently 5.9 children per women - 5.2 children in urban areas, and 6.2 in rural areas. A significant number of these births happen when the women are very young. About 29% of young adolescents (15 to 19 years old) have at least one child, and 24% already have two children. Adolescents account for about 13.4% of the total annual number of births in the country. This contribution is slightly higher in the urban areas (14.6%), than in the rural areas (12.9%) (INE, 1999: 9-11).

It is thought that this high number of births among adolescents results from unwanted or unplanned pregnancies. This being the case, it becomes an area where much can be done to improve the management and planning of reproduction.

Graph 5.15. Projected population growth, Mozambique 2000-2010



Source: INE/MISAU, 2000

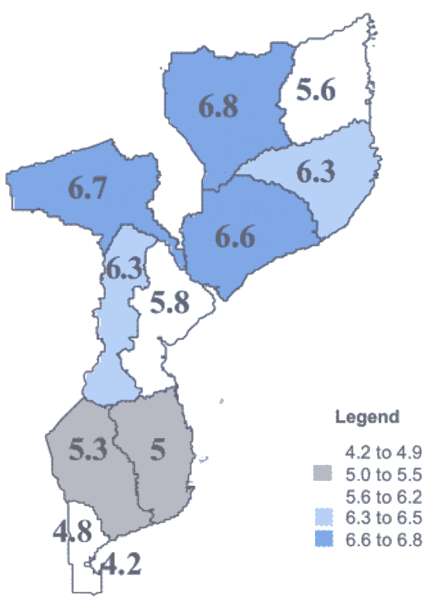
Obviously there are regional and provincial differences in fertility. On the one hand, Maputo, including both the city and the province, has the lowest fertility rate in the country: between 4.2 and 4.8 children per woman. On the other hand, Niassa, Tete and Zambezia provinces have fertility rates of between 6.8 and 6.6 children per woman.

These regional differences in fertility have not yet been adequately investigated and explained, which makes the effort to improve reproductive management more complex and difficult, particularly when it is known that the statistical indicators reflect socio-economic and cultural determinants in the behaviour of both sexes.

But what seems important to retain from this is the importance of these factors so that the vicious cycle between population growth and the "positive" or Malthusian obstacles may be broken.

Together with mortality, fertility determines the growth and structure of the population. In truth, it is fertility that most determines the structure of the population, while mortality ad migration modify it, with greater or lesser intensity. This observation may not be intuitively

Map 5.3. Total fertility rate, Mozambique 1997



Source: Census 97

[12] Formally, the TFR may be understood as the average number of children a woman may bear if the fertility conditions remain constant until she is 49 years of age.

obvious at first sight, but it is extremely important for understanding population dynamics.[13]

In this context, the most sensible and effective way to break the vicious cycle between demographic growth and the "positive" Malthusian obstacles is to replace the latter with preventive obstacles to rapid growth in the size of the population.

Is there any correlation between current fertility levels and human development by provinces and regions as presented in this work? Is it possible to prevent birth control in Mozambique from being restricted to the minority, well-to-do groups, as in the proverb that states "the rich have money, and the poor have children".

These, among many other questions, are worth studying deeply in debates and future research, alongside the specific relationships between human development and fertility in Mozambique.

But the concern is raised here, for debate and research in the future, since this and other demographic problems are part of the necessary conditions so that numerical over-development is not converted into the multiplication of poverty. Since Mozambican society, and the government in particular, wishes to reduce levels of mortality, it is in everyone's interest to reflect on the additional consequences, positive and negative, that achieving this goal may have on the dynamics of population growth and structure.

[13] Perhaps it will be more easily understood when considering age groups separately. For example, the number of people aged between 50 and 70 who are currently alive was determined (if migration is ignored) by the number of people who were born 50 to 70 years ago, minus the deaths that have occurred over the years (Newell. 1988: 32).

Maternal mortality: an avoidable tragedy

Box 5.5

"Ms. LB, 26 years old, married, a peasant woman, with no schooling. This was her first pregnancy, and she never attended any ante-natal consultations. At nine months she began feeling the labour pains. She stayed at home for five days, until a haemorrhage began. At that point, the family decided to take her on a traditional stretcher to the nearest health post. They had to stop overnight on the journey. At the health post, the nurse decided to transfer the patient to the rural hospital, because she was showing signs of uterine rupture. A lift from a trader took the woman to the rural hospital. Observation by the medical technician diagnosed that Ms LB did show signs of uterine rupture, plus shock caused by the haemorrhage, and that the baby was already dead. The surgical technician asked the relatives to give blood, and decided that the patient should be operated upon urgently. But the surgical material was not ready, and there was no water in the rural hospital. Ms LB died at 22.00 that same day without undergoing treatment". Source: Review of Maternal Deaths in Mozambique (Revisao de Mortes Maternas em Mocambique), 1998/99.

With about 1,067 maternal deaths for every 100,000 births, Mozambique has one of the highest rates of maternal mortality in the world. One maternal death, almost always avoidable, takes place every hour. There are many factors that underlie this situation – the status of women in society and in the family, which has a negative influence on seeking health care, even when the woman's life is in danger; the high rate of illiteracy, in particular among women, 43% of whom have no schooling, which affects their level of knowledge about health matters, and even a more active attitude in seeking out health care; the fragile socio-economic conditions of the population, with 69% living in absolute poverty, which has repercussions on the nutritional status of the most vulnerable groups, particularly women and children. In an assessment of deficiency in micronutrients in four Mozambican provinces, undertaken by the Ministry of Health's Nutrition Department, it was found that around half the women observed were anaemic (51% and 53% of non-pregnant and pregnant women respectively).

We must therefore stress that maternal mortality in Mozambique is intimately linked with the socio-economic development of the country, and is frequently the culmination of social injustices that the development process has to correct gradually through appropriate measures.

But it would be wrong in the extreme to imagine that nothing can be done in the short term. The health sector has been playing an active role to ensure interventions that will guarantee safe births, and thus reduce maternal mortality. Reducing maternal mortality has been internationally recognised as one of the most cost-effective public health strategies. In the chain of causes of maternal mortality, what are the priorities for the health sector?

In the first place, throughout her life the probability of a woman dying from a complication in pregnancy occurs each time she is pregnant. For a maternal death to occur, there must first be a pregnancy. In countries with high fertility rates, such as Mozambique, where the Total Fertility Rate is 5.9, we can therefore state that, on average, each woman runs the risk of maternal death 5.9 times during her life. Reducing fertility will bring as a natural consequence a reduction of maternal mortality. In particular, pregnancies in adolescence, pregnancies after 35 years of age, or short intervals between pregnancies pose higher risks of obstetric complications. Access to family planning information and services is thus an effective measure to reduce the problem.

Second, for a maternal death to occur the pregnant woman may have a complication during the pregnancy, the birth or immediately after the birth, which is not adequately treated. Access to health care, particularly at the critical moment of birth, or when there is a complication, has the potential to reduce drastically Mozambique's shockingly high level of maternal mortality. The seriousness of this situation arises from the fact that about 9 out of every 10 maternal deaths could be avoided with interventions that are not technically complicated, do not cost much, and have been known for decades. What is the current situation in Mozambique?

Access to information about, and use of, family planning

In Mozambique an important section of the adult population, 61% of women and 67% of men, know about at least one modern method of family planning. Among couples, more than half of the women (55%) approve of the use of family planning, but the percentage of approval among their husbands drops to 35%. The percentage of couples in which both partners approve of the use of family planning is still lower, at 29%. However, these percentages contrast with the low level of actual use of modern contraceptives. In fact, only

5.1% of women of child-bearing age are currently using a modern family planning method. Only women with secondary or higher education, or who live in urban areas, were making significant use of contraception (27% and 17% of such women respectively).

Access to health care during childbirth, or when complications occur in pregnancy, childbirth, or immediately afterwards

As for access to health care during childbirth, the assessment of requirements for safe maternity, and the review of maternal deaths undertaken by the Ministry of Health in 1999, showed that:

- The identification of complications within communities still takes a long time, because a significant percentage of traditional midwives, and even of pregnant women themselves, are unaware of the danger signs that mean urgent attention is required. Indeed, only about a third of the traditional midwives interviewed mentioned the danger signs of complications in pregnancy. Likewise, only about a third (37%) of pregnant women in ante-natal consultations were advised on what to do in the event of complications.
- There is a serious problem of physical access to health units that are able to deal with obstetric complications. Only the rural hospitals have the capacity to treat obstetric complications. Ideally, the time taken to refer a patient to a health unit able to deal with obstetric complications should be no longer than two hours. But only about a fifth of the health centres have a time of two hours or less to transfer patients to the nearest rural hospital. The average transfer time is 4.4 hours. Less than half (44%) of health centres and only 6% of health posts have a functioning telephone or radio, which would enable them to request emergency transport. In 41% of the cases of maternal deaths studied it took over six hours for the woman to reach the health unit where she received treatment. In 20% of cases it took a day or more.
- Finally, as regards the quality of the health services provided, the great majority of health centres and posts assessed have no capacity to deal with the most frequent obstetric complications. They transferred 97% of the complications that they saw. In the rural hospitals, only 7% of the complications were referred to a higher level. But in Mozambique the health centres should already have the capacity to treat the most frequent obstetric complications that do not require surgery (Basic and Essential Obstetric Care), such as the manual removal of the placenta, the use of suction in some prolonged births, and the treatment of an incomplete miscarriage. This situation significantly worsens the problem of access to the first health unit of reference, given the problems of transport and the poor state of the country's access roads.

What are the possible solutions?

The first critical step is the building of capacity in the communities themselves. It is immediately essential to increase the ability of traditional midwives and of the pregnant women themselves to recognise complications in pregnancy. The availability of ambulances and of means of communication in the health services will not be solved in the short term: the communities themselves should adopt collective solutions to organise emergency evacuation plans, relying on the resources available locally.

The second critical step will be in the health sector. The Ministry of Health has begun a broad movement of advocacy among civil society and with its partners, in order to develop and implement a programme to reduce maternal mortality in Mozambique. The district health teams should inform all pregnant women, traditional midwives and communities of the danger signs in pregnancy and childbirth, as well as making district governments and communities aware of the need to draw up evacuation plans based on local capacities. Furthermore, ensuring that health centres are able to carry out basic and essential obstetric care, and improving the quality of services provided by rural hospitals, will make it possible to increase the confidence of the communities, and finally to avoid many maternal deaths.

Clara Santos, WHO Mozambique

Source: Avaliação das Necessidades em Maternidade Segura, 1998/99. Revisão das Mortes Maternas em Moçambique, 1998/99. DHS, 1997. Avaliação da Prevalência da Deficiência de Micronutrientes em Moçambique, 1999. Understanding Poverty and Well-being in Mozambique: First National Assessment.

Chapter 6

Human development in Mozambique: conclusions and future prospects

Progress, obstacles and challenges

The present report characterises human development by the major regions and administrative provinces of Mozambique at the end of the 20th century. Each of the previous five chapters deals with different subjects but, in one way or another, they all stress three common features: progress, deprivation and challenges in the human development of Mozambicans.

Chapter 1 deals with the most recent progress in the study of human development, at the conceptual, methodological and technical levels. This progress refers to the recent improvement made in the methods of calculating the indices that measure human development, and in updating the statistical data. This updating has been undertaken by national bodies (such as INE), and international organisations (such as World Bank).

With better methods and more up-to-date figures, a more realistic and precise picture of the human development situation in Mozambique can be presented. Obviously the improvement of methods and updating of statistical data sometimes results in unpleasant surprises. Particularly when the results obtained show that human deprivation is on a larger scale than the previous data would suggest; or that progress is slower than one imagined. To cite just one example, this happened with the figure for life expectancy at birth. Instead of the 45.5 years estimated for 1997 (INE, 1996: 21), the definitive data from the 1997 Census, released in October 1999, show that the most appropriate figure is 42.3 years. In a country where life expectancy at birth is already so low, a drop of a further three years implies that the future social challenge will be greater than was previously thought.

But updating the statistical data is necessary and indispensable. And obviously when this clearly reveals a better correspondence with the reality the figures refer to, it can only be welcome. At root, scientific research is precisely this: successive advances from the appearance of phenomena towards a greater knowledge of the essence and internal dynamics of reality.

Thus at the end of Chapter 1, an updated estimate for the HDI for the past five years is presented, based on the new methods and statistical data. This updating (see Graph 1.1) is done in such a way as to allow immediate international comparisons. To this end, purchasing power parity (PPP) is used as the factor of international comparison of the Gross Domestic Product.

But it is Chapter 2 which shows, in the most convincing way, how the preparation of new analytical instruments can contribute to significant advances in understanding the internal dynamics of Mozambique's development. Chapter 2 describes human development within the country, but it was first necessary to draw up a specific methodology for disaggregating Mozambique's Gross Domestic Product (GDP). As Chapter 3 shows, this methodology is a worthwhile exercise, because it opens up new paths for the analysis of the country's regional and provincial economies. The macro-economic indicators that were previously available did not allow this.

But, while it is true that GDP disaggregated by regions and provinces is worthwhile in itself, this was not done merely for its own sake. The main motivation was to estimate human development indicators within the country, in the major regions and administrative provinces.

We must run fast, if we want to stay in the same place

Chapter 2 is the heart of the present report. In it are summarised the data on the regional and provincial human development of Mozambique, given in detail in the appended statistical tables. In a summary form what does Chapter 2 tell us about progress, deprivation and challenges in human development by regions and provinces?

1. Between 1996 and 1998, Zambezia was the province with the lowest HDI in Mozambique. Following it in 1998, in ascending order, were Nampula, Cabo Delgado, Niassa and Tete provinces, all with figures lower than 0.300.

Viewed from an international perspective, these provinces are at the level of countries with the lowest human development in the world, such as Sierra Leone, Niger and Ethiopia.

2. Maputo City is the only part of Mozambique with an HDI of between 0.500 and 0.799. In other words, with an HDI of 0.605 in 1998, Maputo City is positioned in the category of medium human development, close to the level of countries such as Botswana, Egypt, Algeria and Swaziland.

This does not mean that Maputo city itself does not possess substantial strata of population with identical living standards to those of the rest of the country. However, since HDI is an average value, which does not capture social distribution, such asymmetries will have to be determined through other indicators, such as the Gini index.

3. Was there any real progress in the human development of Mozambique over the last five years of the 20th century? Yes - the figures do indicate that there was progress, albeit slow, and still feeble, and in no way comparable to the rapid economic growth observed in the same period. In general, it is estimated that between 1996 and 1998 Mozambique managed to reduce its human development deprivations only 5%.

4. But did this progress reach all the provinces? No. The available data indicate that only four provinces contributed to the reduction in human development deprivations: Manica, Tete, Maputo Province and Maputo City. As for the others, Gaza even experienced a reverse, with a negative figure between 1996 and 1998, while the other provinces remained more or less stationary: Zambezia, Nampula, Sofala, Inhambane, Niassa and Cabo Delgado.

5. Are there major disparities between the provinces? How are they expressed? One of the most blatant disparities is between Maputo City and Zambezia Province: the HDI of the first is 3.5 times higher than that of the second. What are the implications of this? As mentioned in Chapter 2, while Maputo City will have to compensate for a human development shortfall of about 65%. Zambezia needs to compensate for a shortfall in the order of 83%.

6. Chapter 2 also discusses the three human dimensions essential to life: survival, knowledge and a decent standard of living. The first two components are dealt with briefly in Chapter 2 itself, while the third component is treated more thoroughly in Chapter 3. The relevant aspect about these components is that in all of them there is potential, but above all enormous need for progress. At cultural and institutional level, for example, there is a great need to set up a strategic programme for teaching the adult population to read and write. Even if it is no longer possible to arouse the same enthusiasm and dynamism that drove the adult literacy campaigns in the years immediately following independence, it will be necessary to find effective alternatives to the revolutionary voluntarism of those days. Some of these alternatives will certainly involve mobilising financial resources, but it is also known that one does not overcome underdevelopment simply with money.

7. The final section of Chapter 2 is dedicated to the flip side of progress in human development - the multiple dimensions of human deprivation. The Human Poverty Index (HPI) is calculated and analysed alongside the most widely publicised rate in Mozambique: the incidence of absolute poverty. These two indicators are complementary since each of them catches specific dimensions of human deprivation. From the HPI, in particular, some worrying features, which poverty indices based on consumption and income do not show, leap into sight. For example, the HPI calculated for 1997 shows that about 39% of Mozambicans (around 6.3 million people) are not expected to live beyond their 40th birthday. And that about 10 million Mozambicans are excluded from basic and essential knowledge, such as the ability to read and write. And also that 10.4 million people do have adequate living standards.

8. A surprising case concerns the high proportion of children in Cabo Delgado who are under weight. While the national average is 26%, in Cabo Delgado about half (49%) the children from 0-13 years of age are moderately or severely underweight. How can this be explained?

9. Chapter 2 ends with a simple but unequivocal exercise on the scale of the social challenge that Mozambique will face in the coming decades. In April 1999, the Council of Ministers set a target of reducing the incidence of absolute poverty by at least 30% between

2001 and 2010. If this target is not achieved, and if, for example, the incidence of absolute poverty remains stationary, then by around 2015 there will be about 17 million people living below the absolute poverty line - about as many people as currently live in Mozambique today. If the 30% reduction is achieved, and is repeated in the following decade, then by 2020 there could exist about 10.5 million absolutely poor Mozambicans, about the same as today's number. In this scenario, more significant that the reduction of 30% in the incidence of absolute poverty would be the increase in the non-poor population from about 5 million in 1997 to 17.6 million in 2020: that is, by then the number of non-poor Mozambicans would be equivalent to the total population of the country today. A final, and extremely ambitious, alternative can help show the scale of what it would mean to eliminate absolute poverty in the next two decades. To ensure that nobody is absolutely poor in the year 2020, it will be necessary to reduce the incidence of absolute poverty by an average of 35% a year.

10. Let there be no illusions: it will be necessary to find effective ways of surpassing the target of a 30% per cent reduction - otherwise the eradication of absolute poverty will not be achieved in the next 50 years, and perhaps not in the entire 21st century. In other words, as the subtitle to this section stresses, Mozambicans need to run fast, even if they are to remain at the same level of development they find themselves in now. An important question for debate, linked to this problem, is the following: is it possible to achieve a real average annual growth in human development of 10 per cent or more?

The wealth of the Mozambican nation: unlimited potential, and difficulties that can be overcome

Per capita GDP is the main indicator used in Chapter 3 to estimate economic progress and deprivation in the country's major regions and provinces. What does Chapter 3 show us about the contribution of each province to the national wealth, and what does it say, in more general terms about living standards in Mozambique?

1. In 1998 Mozambique's GDP was about 3.9 billion US dollars, to which the Northern region contributed 21%, the Central region 31% and the Southern region 48%.

2. Maputo city is set apart from the other regions of the country, because it contributes about 35% of Mozambique's entire GDP. This means that the 6% of the population who live in Maputo city produce as much as the entire population of the rest of the south, and of the north, put together: as much as about 52% of the total Mozambican population. The mains sector in the Maputo City GDP is services (67%), notably commerce (31%) and transport and communications (14%).

3. After Maputo city, the provinces with greatest weight in the GDP are: Nampula, with 13%, and Sofala and Zambezia with 11% each. The remaining seven provinces contribute between 3% (Niassa) and 5% (Cabo Delgado and Inhambane).

4. Mozambique's real per capita GDP increased from US$ 165in 1996 to US$ 237 in 1998. However, the real per capita GDP of Maputo City increased from US$ 879 in 1996 to US$ 1,340 in 1998. This means that the per capita GDP of Maputo city is six times greater than the national average and 11 to 12 times greater than that of Zambezia, Tete, Manica and Niassa.

Niassa province has the lowest per capita GDP, followed immediately by Zambezia, on US$ 120 and US$ 126 respectively in 1998.

5. Since it is not possible, for limitations of time and space, to draw up a profile of human and economic development for all the provinces, it was decided to sketch a brief profile of the province that currently posses the lowest HDI, Zambezia. Similar profiles for other provinces may be drawn up, either in other reports of this nature, or by other research bodies.

The role of wage labour in producing national wealth

1. Chapter 4 looks into the importance of wage labour as a source of income and livelihood strategy. At root, wage labour is one of the ways of producing the nation's wealth. Chapter 4 shows that waged employment has ceased to be something exclusive to Mozambicans in the south of the country. As the 1996 Rural Poverty Profile shows, the employment of labour is higher in the north.

?. To underestimate the already significant ght of urban and rural wage labour will serious negative implications for the well- g of the country. Political anti-poverty egies will not succeed in identifying the acteristics of many poor Mozambicans. as attention will not be drawn to the emely low wages that these workers ive, or to the terrible working conditions to h they are subjected. In regions with high luctive potential there is the opportunity for rvention policies influencing cultivation els which increase the demand for wage ur, and which ensure that agriculture is itable enough so that wages and working litions can make a genuine contribution overty reduction. In the cities, wages are ady an important source of survival for y Mozambicans. The expansion of wage ur, particularly in the informal sector, ld be taken more seriously.

y are we so worried about AIDS, if e Mozambicans die of malaria and rculosis?

aps the simplest and most direct reply to question is: you're still asking this!

f the problem of AIDS is not tackled ously now, it will not be long before this ase overtakes others which are currently main causes of death in Mozambique.

Human poverty and the AIDS epidemic are two great social disasters that will dominate ambican society in the coming decades.

By raising this alert, we do not intend to nplay the other causes of death. They are known, and are already taken account of he high levels of mortality confirmed, for nple, by the 1997 census. But the impact of DS, causing a possible reduction in life ectancy, has only very recently begun to stimated.

Judging from what Chapter 5 reveals, inevitability of a negative impact on life ectancy, on the economically active ulation, and on orphanhood, among other cts, seems beyond question.

But hopefully the estimates and projections he impact of AIDS presented in this report , at the end of the decade, prove to have

b totally wrong and alarmist. This desire is, ir self, paradoxical, from the point of view of re arch, and particularly that of the credibility o esearchers' forecasts. But we make this w for moral rather than scientific reasons. If th forecasts presented in Chapter 5 do indeed m erialise, it will be a genuine social and n onal disaster for human development ir Mozambique.

F ure prospects: new lines of research a of broad, constructive and in rmed debate

C portunity for new lines of research – n ing from description to explanation

C pter 1 makes a passing reference to the recent a earance of new instruments for analysing th fabric of human development so as to u erstand better the interdependence of its components, flows, interactions and actors. n particular, the relationship between nomic growth and human development oday widely recognised as a two-way tionship, in which two series or chains ir ence each other mutually: one without the o r does not progress in a sustainable manner ir he long term. In this respect, recently R irez et al (1998) and Ranis and Stewart (1 9), for instance, have unveiled important as cts ofthe two-way relationship between hu an development and economic growth, bo in conceptual and in empirical terms.

t is of great interest that this analytical fr nework, and particularly its research hy otheses should be tested in the particular ca of Mozambique. In the end, the aim of the ir lectual exercise motivated by the concept o uman development is not intended for a m e contemplative description of phenomena. D cription is an indispensable stage in the pr ess of knowledge, but it is not sufficient: it is ecessary to move on to analysis and, in pa icular, to the explanation of phenomena, de amics, and identified relationships.

Preliminary drafts of this report contained a ketch of the content of the analytical fr nework drawn up by Ramirez et al (1998), an a summary of the hypotheses and results ob ined from a sample of 76 African, Asian

and Latin American countries. However, as content of this report took shape, it bec clear that it would not be possible to do muc the way of verifying these research hypoth as applied specifically to the case of Mozambi It was necessary first to gather and systema the statistical data and draw up specific ind for analysis.

Many of the questions raised in the NHDI remain pertinent, and some of them can nov asked not only of the country in general, also of specific regions and provinces.

But it would be presumptuous on our pa try to be prescriptive at the current stage of research. Instead, we have opted to end report, on the one hand with some questions may serve for future research or debate perhaps the matters dealt with here may sp off; and on the other, we stress some statem extracted from relevant empirical evide for the continuity of analysis of developm in Mozambique.

Let this report encourage construc and informed debates.

What sort of development has Mozambi experienced, in the past and in the present? irrelevant to prioritise economic growth to detriment of human development, or vice ve How are economic resources converted into hu development? And how does human developn contribute to improved economic growth?

In Mozambique, as in other countries, more equitable distribution of income positi correlated with positive and rapid econo growth? What is the weight of public expendi on social services and of the educatior women in the robustness of the links betw economic growth and human development'

There is no fixed and rigid number of fac responsible for the success of countries wl have achieved sustainable human developm Indeed, there are several possible alternati and no county has managed exceptional res in all of them. This is very encouraging, bec political decision makers may more ea recognise that it is worthwhile to prom human development, by trying to take advan of the specificities and merits of th respective countries.

May this report be useful for ot specific work

We are pleased to know that even before report was published some important institut in Mozambique were already expressing interest in using some of the results prese here. That is the case, for instance, with INE. Its president has shown an interes institutionalising the practice of disaggrega GDP by regions and provinces. A fur example is the interest shown by some techr staff who would like to improve econo planning, and the planning of regional provincial development.

As we said in the 1998 National Hu Development Report, if the content of report inspires new initiatives, further rese work, and a constructive, useful and intelli debate, its main aim will have been achiev

The government's economic policies and greater or lesser decentralisation of governn services and resources seems to determine dire the way in which economic resources converted into human development. But cle the relations of interdependence betw economic growth and human development not automatic: the strength of such relati varies in accordance with a vast range factors, including the structure of the econo the distribution of assets, and political choi

If we're going to compete, let it be in a game of our choosing

Box 6.1

Once upon a time the goddesses decided to hold a competition, a kind of Olympics, among the nations of the world. This was not an ordinary race in which the distance was determined and the winner would be the runner who took the shortest time, but a contest to see which society, acting as a team, could move all its members forward.

When the gun went off, one nation assumed that the race would not last long. It urged all its citizens to start running as quickly as possible. It was every person for himself. Very soon the young children and the elderly were left behind, but none of the fast runners bothered to help them out because it would have slowed them down.

At first those who were in front were exhilarated by their success. But as the race continued, some became tired or hurt and fell by the wayside. Gradually all the runners grew exhausted and sick, and there was no-one to replace them. It became clear that this nation would not win the race.

Everyone's attention turned to a second nation, which adopted a slightly different strategy. It sent all its young men out ahead to compete, but required all the women to come along behind, carrying the children, the sick and the elderly, and caring for the runners who needed help. The nation's leaders explained to the women that this was a natural and efficient arrangement from which everyone could benefit. They provided great incentives for the men to run fast, and gave them authority over the women.

At first this seemed to work, but the women found that they could run just as fast as the men if they were not burdened with caring for the weak. They began to argue that the work they were doing – caring for the runners – was just as important as the running and deserved equal reward. The men refused to make any changes. The nation began to waste a great deal of energy in bargaining and negotiation. Gradually it became clear that this nation, too, was losing the race.

So attention turned to a third nation, which had started out moving quite slowly, though making steady progress. In this nation, everyone was required both to run and to take care of those who could not run. Both men and women were given incentives to compete, to run as fast as possible, but the rules required them all to share in carrying the burden of care.

Having agreed to rules that rewarded both kinds of contribution to the collective effort, people were free to choose their own speed, to find a balance between individual effort and collective responsibility. This freedom and equality contributed to their solidarity. Of course, it was this nation that won the race.

Perhaps this is a utopian fairy tale. But the global economic system tells us that we are all in a race. It tells us to hurry up. It tells us all to worry about our speed. But it does not tell us how long the race will last – or what the best long-term strategy is. And it does not tell us how victory will be defined. If we are going to compete, let it be in a game of our own choosing. That is, in a nutshell, the challenge of the new global order: how to define a world economy that preserves the advantages of market competition, but establishes strict limits and rules that prevent competition from taking a destructive turn.

Source: Folbre, in UNDP, 1999

Technical Notes

Technical Note 1:

Calculating the Human Development Index (HDI)

The HDI is based on three indicators: longevity, as measured by life expectancy at birth; educational attainment, as measured by a combination of adult literacy (two-thirds weight), and the combined gross primary, secondary and tertiary enrolment ratio (one third weight); and standard of living, as measured by real per capita GDP (PPP$).

Fixed minimum and maximum values

To construct the index, fixed minimum and maximum values have been established for each of these indicators:

- Life expectancy at birth: 25 years and 85 years.
- Adult literacy rate: 0% and 100%
- Combined gross enrolment ratio: 0% and 100%.
- Real GDP per capita (PPP$): $100 and $40,000.

For any component of the HDI, individual indices can be computed according to the general formula:

$$\text{Index} = \frac{\text{Actual } x_i \text{ value - minimum } x_i \text{ value}}{\text{Maximum } x_i \text{ value - minimum } x_i \text{ value}}$$

If, for example, the life expectancy at birth in a country is 65 years, the index of life expectancy for this country would be:

$$\text{Life expectancy index} = \frac{65 - 25}{85 - 25} = \frac{40}{60} = 0.667$$

Treatment of income

Constructing the income index is a little more complex. Over the years the Human Development Report has used a particular formula to do this, explained below. This year a thorough review of the treatment of income in the HDI was done, based on the work of Anand and Sen (1999).

Income enters into the HDI as a surrogate for all the dimensions of human development not reflected in a long and healthy life and in knowledge - in a nutshell it is a proxy for a decent standard of living. The basic approach in the treatment of income has been driven by the fact that achieving a respectable level of human development does not require unlimited income. To reflect this, income has always been discounted in calculating the HDI. The issue is, how should it be discounted, and at what level?

In previous years the practice was to discount income above the threshold level of the world average income, using the following formula:

$$W(y) = y^* \text{ for } 0 < y < y^*$$
$$= y^* + 2[(y - y^*)^{1/2}] \text{ for } y^* < y < 2y^*$$
$$= y^* + 2(y^{*1/2}) + 3[(y - 2y^*)^{1/3}] \text{ for } 2y^* < y < 3y^*$$

Where y is the actual per capita income in PPP$ and y^* is the threshold per capita income (PPP$) at the world average income in the year for which the HDI is constructed. The world average income was taken as the threshold income on the premise that each person should have the income that the world on average enjoys.

To calculate the discounted value of the maximum income of $40,000 (PPP$), the following formula was used:

$$W(y) = y^* + 2(y^{*1/2}) + 3(y^{*1/3}) + 4(y^{*1/4}) + 5(y^{1/5}) + 6(y^{*1/6}) + 7[(40{,}000 - 6y^*)^{1/7}]$$

This is because $40,000 (PPP$) is between $6y^*$ and $7y^*$. With the above formula, the discounted value of the maximum income of $40,000 (PPP$) is $6,311 (PPP$).

The main problem with this formula is that it discounts the income above the threshold level very heavily, penalising the countries in

which income exceeds the threshold level. It reduces the $34,000 (PPP$) between the threshold and maximum level of income to a mere $321 (PPP$). In many cases, income loses its relevance as a proxy for all dimensions of human development other than a long and healthy life and knowledge.

This year's refinement in the treatment of income attempts to rectify this problem by putting the methodology on a more solid analytical foundation. The rationale and the formula adopted in the refinement are discussed in detail in Anand and Sen (1999). To summarise, in the construction of this year's HDI, income is treated using the following formula:

$$W(y) = \frac{\log y - \log y_{min}}{\log y_{max} - \log y_{min}}$$

There are several advantages to this formula. First, it does not discount income as severely as the formula used earlier. Second, it discounts all income, not just the income above a certain level. Third, as figure TN1 shows, the asymptote starts quite late, so middle-income countries are not penalised unduly: moreover, as income rises further in these countries, they will continue to receive recognition for their increasing income as a potential means for further human development.

Illustration of the HDI methodology

The construction of the HDI is illustrated with three examples - an industrialised country, Germany, and two developing countries, China and Mozambique.

Country	Life expectancy (years)	Adult literacy (%)	Combined gross enrolment ratio (%)	Real GDP per capita (PPP$)
Germany	77.2	99.0	88.1	21,260
China	69.8	82.9	68.9	3,130
Mozambique	42.3	39.5	32.0	740

Life expectancy index

$$\text{Germany} = \frac{77.2 - 25}{85 - 25} = \frac{52.2}{60} = 0.870$$

$$\text{China} = \frac{69.8 - 25}{85 - 25} = \frac{44.8}{60} = 0.747$$

$$\text{Mozambique} = \frac{42.3 - 25}{85 - 25} = \frac{17.3}{60} = 0.288$$

Adult literacy index

$$\text{Germany} = \frac{99.0 - 0}{100 - 0} = \frac{99.0}{100} = 0.990$$

$$\text{China} = \frac{82.9 - 0}{100 - 0} = \frac{82.9}{100} = 0.829$$

$$\text{Mozambique} = \frac{39.5 - 0}{100 - 0} = \frac{39.5}{100} = 0.395$$

Combined gross enrolment index

$$\text{Germany} = \frac{88.1 - 0}{100 - 0} = \frac{88.1}{100} = 0.881$$

$$\text{China} = \frac{68.9 - 0}{100 - 0} = \frac{68.9}{100} = 0.689$$

$$\text{Mozambique} = \frac{32 - 0}{100 - 0} = \frac{32}{100} = 0.320$$

Educational attainment index

Germany = [2(0.990) + 1(0.881)]/3 = 0.954

China = [2(0.829) + 1(0.689)]/3 = 0.782

Mozambique = [2(0.395) + 1(0.320)]/3 = 0.370

Country	Life expectancy index	Educational attainment index	Adjusted real GDP (PPP$)	Sum of the 3 indices	HDI
Germany	0.870	0.954	0.895	2.719	0.906
China	0.747	0.782	0.575	2.104	0.701
Mozambique	0.288	0.370	0.334	0.992	0.331

Adjusted real GDP per capita (PPP$) index

$$\text{Germany} = \frac{\log(21{,}260) - \log(100)}{\log(40{,}000) - \log(100)} = 0.895$$

$$\text{China} = \frac{\log(3{,}130) - \log(100)}{\log(40{,}000) - \log(100)} = 0.575$$

$$\text{Mozambique} = \frac{\log(740) - \log(100)}{\log(40{,}000) - \log(100)} = 0.334$$

Human Development Index

The HDI is a simple average of the life expectancy index, educational attainment index and adjusted real GDP per capita (PPP$) index, and so is derived by dividing the sum of these three indices by 3.

Technical Note 2:

Method and sources for calculating the GDP disaggregated by provinces

In an ideally perfect world, the GDP figures obtained from the viewpoints of production, expenditure and income would be identical. In practice, there are discrepancies caused by inadequacies in the collection of data, by differences in the declared period of the transactions, and by the parallel, underground or illegal economy (The Economist, 1996: 52).

At least in the short term, the figure calculated from the viewpoint of production is generally the most reliable indicator for the evolution of the economy. But this perspective begins to become less realistic if the weighting coefficients used to aggregate the production indicators are not regularly updated.

In any case, the basis that is currently available seems satisfactory, in terms of being up-to-date and of representing economic activity. Therefore, calculating GDP by province is based on the production, or Value Added (VA), method.

More specifically, determining GDP by province has involved, first, the choice of products, and the amounts produced in a particular year are determined, at current and at constant prices. The product of the quantities by prices makes it possible to calculate the gross value of production.

Secondly, the intermediate consumption was determined - that is, the products purchased from third parties to achieve a certain level of production value. The difference between the gross production value and the intermediate consumption gives the value added in the production of any given product. By extension, the value added is calculated by area of activity and for the country.

This is the general principle, but for this work a quick method was sought for shifting from national level figures to provincial ones, by defining specific criteria. In summary form, the sources used were the following:

- the balance sheets;
- the Provincial Statistical Yearbooks;
- the data from the Early Warning System;
- data on expenditure from IAF96-97, and

some assumptions concerning the distribution of the national figures by province, and for estimating gross production and Value Added. This final procedure is related to the lack of detailed information at provincial level, since the Provincial Statistical Yearbooks are still of very poor quality, and contain incomplete information.

To draw up the estimates which are presented later, we started by using the balance sheets from the INE's Department of National Accounts. In particular, the column concerning domestic production is used. These figures serve as a reference point, in that the sum of the production of all the provinces should be approximately equal to the figure given on the balance sheet.

Then the Provincial Statistical Yearbooks were used to detect figures for agricultural,

livestock, fisheries and industrial production. At this level, one begins to have an idea of the way in which the production of the main products is distributed.

In the case of certain products regarded as important in agriculture, data from the Early Warning System was used, since the quality of these is regarded as good. For the remaining sectors, regional allocation was on the basis of certain specific criteria.

By way of example, for the livestock, meat and milk areas, the number of head served as the basis for allocation. For firewood, the percentage of population was the criterion used. For electricity, production per province was used, and for water supply the number of consumers of electricity was the criterion chosen.

In the transport sector, the criteria used were the statistics on the number of vehicles, and the cargo handled in the ports, while for communications the basis was the number of telephone exchanges. For the construction sector, an average of the percentages of construction values for the 1995-97 period was used. As for the restaurant and hotel area, the criterion used was the number of rooms. Finally, for the remaining services, the allocation takes into account a criterion based on an arithmetical average of the number of vehicles, the number of telephone exchanges, and the number of hotel beds.

Based on these criteria, the value of production per province was estimated for 1997. Once the production value was obtained, the value added coefficients by activity were applied, on the assumption that the same coefficients are equal for all the provinces. With the methodology developed for 1997, it was easy to estimate production and value added per province for 1996. The resulting indicators were calculated, the most important being per capita GDP per province for 1996 and 1997.

Methodology for allocating production to provinces

Given the fragility of the information available at provincial level, presented in the Provincial Statistical Yearbooks, a simple methodology was created which uses the balance sheets produced by the INE, and other information scattered among a variety of sources. The criteria used for allocating production by province were the following:

1. ***Agriculture*** - in this sector several criteria were used:

1.1 For maize, sorghum, unhusked rice, beans, groundnuts and cassava the basic source was the Early Warning System;

1.2 For onions, tomatoes, other vegetables, other root crops, cashew nuts, raw cotton, tobacco, oilseeds and fruits, the sources were the household data from IAF96-97, and the percentage of households who cultivate certain crops, according to the Family Sector Agricultural Survey of 1996 (Economics Directorate/MAP);

1.3 For forestry and firewood, the criterion used was the percentage of the population;

1.4 For the various types of livestock and associated produce, the basis for allocation was the number of head per province, and the source was the 1997 Statistical Yearbook;

1.5 For the remaining agricultural produce, the sources were the Provincial Statistical Yearbooks, and the perception of the authors of this methodology on the location of production.

2. ***Fisheries*** - The allocation of production to provinces in this sector was based on the number of people employed by economic activity in accordance with some of the results from IAF96-97.

3. ***Mining*** - the basic source was the Mining Sector Production Balance for 1995-1999, drawn up by the Ministry of Mineral Resources and Energy (Economics Directorate).

4. ***Manufacturing Industry*** - In this sector allocation was based on the Provincial Statistical Yearbooks, as well as the perception of the authors on the location of industrial production.

5. ***Electricity and Water*** - The main source was the 1997 Statistical Yearbook, as regards electricity production by region, and the number of electricity consumers by region. This latter figure was used for the distribution of the water sub-sector.

6. ***Construction*** - the basic source for distribution by province was the 1997

Construction Statistics, recently published by the INE.

7. ***Restaurants and Hotels*** - the source used was the 1997 Statistical Yearbook and the criterion was the number of hotel beds.

8. ***Transport and Communications***

8.1 In road transport, the criterion was the number of vehicles, according to the 1997 Statistical Yearbook;

8.2 In the communications sub-sector, the number of telephone exchanges was the criterion used, and the source was the 1997 Statistical Yearbook;

8.3 For the rail and port sub-sector, an index was created taking into consideration the amount of cargo handled and the number of passengers carried, according to the 1997 Statistical Yearbook.

9. ***Commerce and other services*** - For these activities, an index was created taking into account the number of vehicles, the number of hotel beds, and the number of telephone exchanges, and in this way the production was allocated to provinces.

Technical Note 3:

Human Poverty Indices

The four poverty measures, used in DPDS-UEM-IFPRI (1998), and in this report, are briefly described below:

The Head-count Index, P0, is the simplest among the poverty indicators. It shows the incidence of poverty, i.e. the proportion of the population below the poverty line. In any given society there will be a number of people q in a population n for whom consumption, or the chosen method of poverty measurement, falls below the poverty line so that P0 = q/n. More formally, P0 can be expressed as:

$$P_0 = 1/n \sum_{i=1}^{n} 1[xi \leq z]$$

Where the poverty line is expressed by z and the chosen welfare measure by x and where 1(.) is an indicator function that is 1 if the argument is true and 0 otherwise. The right hand side of the equation is simply the number of people in poverty. P0, therefore, expresses the fraction of people in poverty (Deaton, 1997).

The Poverty Gap Index (hereafter noted as P1) can be expressed as

$$P_1 = 1/n \sum_{i=1}^{n} [1-xi/z]...1[xi \leq z]$$

This index reflects the depth of poverty, whereby the contribution of individual (i) to aggregate poverty is larger the poorer is (i). P1, therefore, represents the aggregate shortfall of income of all the poor from the specified poverty line [Sen 1981: 33]. Alternatively, it represents the sum of all the shortfalls divided by the population, and expressed as a ratio of the poverty line.

The Squared Poverty Gap Index, or P2, is expressed as

$$P_2 = 1/n \sum_{i=1}^{n} [1-xi/z]^2...1[xi \leq z]$$

This index is the mean of the squared proportionate poverty gaps (where the gaps are weighted according to their magnitude, and not equally, as in the case of P1) and is sensitive to inequality amongst the poor. For example, a transfer of income from a poor person to a poorer person (who remains below the poverty line) may be seen as poverty reducing, but neither P0 nor P1 will detect this improvement. P2, on the other hand, will decrease, given that it is sensitive to the severity of poverty amongst the poor.

A general class of measures that is often used in practice can be derived from P0, P1, and P2 indices, and is known as the Foster-Greer-Thorbecke class of additively decomposable poverty measures. It can be expressed as:

$$P_\partial = N^{-1} \sum_{i=1}^{n} [1-xi/z]^\partial...1[xi \leq z]$$

As can be readily seen, P0, P1 and P2 are special cases corresponding to a being equal to 0. 1 and 2 respectively.

Finally the Human Poverty Index for developing countries, or HPI-1, used in the UNDP's global Human Development Reports

since 1998, concentrates on deprivations in three essential dimensions of human life already reflected in the HDI - longevity, knowledge and a decent standard of living. The first deprivation relates to survival - vulnerability to death at a relatively early age. The second relates to knowledge - being excluded from the world of reading and communication. The third relates to a decent living standard in terms of overall economic provisioning.

In constructing the HPI-1, the deprivation in longevity is represented by the percentage of people not expected to survive to age 40 (P1), and the deprivation in knowledge by the percentage of adults who are illiterate (P2). The deprivation in living standards is represented by a composite (P3) of three variables - the percentage of people without access to safe water (P3.1), the percentage of people without access to health services (P3.2), and the percentage of moderately and severely underweight children under five (P3.3).

The composite variable P3 is constructed by taking a simple average of the three variables P3.1, P3.2, and P3.3. Thus

$$P_3 = \frac{(P_{3.1} + P_{3.2} + P_{3.3})}{3}$$

Following technical note 1 in Human Development Report 1997 (UNDP, 1997), the formula for HPI-1 is given by;

$$\text{HPI-1} = [1/3(P_1^3 + P_2^3 + P_3^3)]^{1/3}$$

As examples, here are the calculations for the HPI-1 of Panama and Mozambique:

Step One

Calculating P3

$$\text{Panama - } P_3 = \frac{7 + 18 + 7}{3} = \frac{32}{3} = 10.7$$

$$\text{Mozambique - } P_3 = \frac{91.5 + 76.2 + 26.1}{3} = \frac{193.8}{3} = 64.6$$

Step Two

Constructing the HPI-1

Panama: HPI-1

$= (1/3(6.4^3 + 8.9^3 + 10.7^3)]^{1/3}$
$= [1/3(262.144 + 704.97 + 1,225.04)]^{1/3}$
$= [1/3(2,192.15)]^{1/3}$
$= 730.72^{1/3}$
$= 9.0$

Mozambique: HPI-1

$= (1/3(39,1^3 + 60.5^3 + 64,6^3)]^{1/3}$
$= [1/3(59776.5+221445+269586)]^{1/3}$
$= [1/3(559607.5)]^{1/3}$
$= 183602.5^{1/3}$
$= 56.8$

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