WORKING PAPERS FROM DEPARTMENT FOR STATISTICS ON INDIVIDUALS AND HOUSEHOLDS

POPULATION AND LIVING CONDITIONS

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Report from Multidisciplinary Research Conference on Poverty and Distribution Oslo, November 16–17, 1992

Part 7 Parallel Session 6 Less developed Countries: Who are the Poor, where are they located and why are they poor?

CENTRAL BUREAU OF STATISTICS OF NORWAY



FORORD

I denne serien samles notater innen feltet befolkning og levekår som har krav på en viss allmenn interesse, men som ikke presenterer avsluttede arbeider. Det som presenteres vil ofte være mellomprodukter på vei fram mot en endelig artikkel eller publikasjon, eller andre arbeider som forfatteren eller avdelingen er interessert i en viss spredning av og å få kommentert. Når de er ferdig bearbeidet, vil noen av arbeidene bli publisert i andre sammenhenger.

Synspunktene som presenteres er forfatternes egne, og er ikke nødvendigvis uttrykk for for SSBs oppfatning.

PREFACE

This series contains papers within the field of population and living conditions. The papers are expected to be of some general interest, and presents work in progress, or other notes worth a limited distribution.

The views expressed in this paper are those of the author(s) and do not necessarily reflect the policies of the Central Bureau of Statistics of Norway.



CENTRAL BUREAU OF STATISTICS OF NORWAY

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Report

from

Multidisciplinary Research Conference

on

Poverty and distribution

Oslo, November 16-17, 1992

Parallel session 5 The welfare state, distribution policy and poverty

November 16th and 17th 1992 the Central Bureau of Statistics, Norway arranged a multidisciplinary research conference on poverty and distribution in Oslo.

The <u>aim</u> of the conference was

- * to present and discuss various approaches and methods in the study of poverty and distribution,
- * to present and discuss results of Norwegian and foreign investigations of the scope of poverty, its distribution and development, its causes and remedies, and
- * to identify relevant areas for research on poverty in Norway and other countries.

Researchers from more than twenty countries participated. The conference partly consisted of plenary lectures and discussions, and partly of parallel sessions where individual participants had the opportunity to present and discuss their own papers.

The conference report includes the lectures of the main speakers and the papers presented at the the conference, and consists of seven issues of Working papers from Department for Statistics on Individuals and Households. The first one includes the lectures given in the plenary sessions, while the others includes the papers from each of the parallel sessions:

- 1 Plenary lectures
- 2 Paralell session 1. Approaches to the study of poverty. Subjective and objective indicators of poverty.
- 3 Parallel session 2. Income and consumption. Distribution and poverty.
- 4 Parallel session 3. Who are the poor? Comparisons between groups and countries.
- 5 Parallel session 4. Poverty development and duration.
- 6 Parallel session 5. The welfare state, distribution policy and poverty.
- 7 Parallel session 6. Less developed countries: Who are the poor, where are they located and why are they poor?

Programme

November 16th:

10.30 - 10.45	Opening
10.45 - 11.45	Prof. Jonathan Bradshaw, University of York, Britain: Why and how do we study poverty in industrialized western countries. Various approaches to the study of poverty. Lecture and plenary discussion.
11.45 - 12.45	Lunch
12.45 - 13.45	Prof. Bernard M.S. van Praag, Erasmus University, Netherlands: How poor are the poor? Relative and absolute poverty. Subjective and objective indicators of poverty.
13.45 - 14.00	Pause
14.00 - 15.00	Prof.Lee Rainwater, Harvard University USA: Who are the poor? The distribution of poverty. Comparisons between various groups and various countries.
15.00 - 15.15	Pause/coffee
15.15 - 17.15	Parallel sessions with presentations and discussions of contributed papers.
17.15 - 18.15	Prof.Greg Duncan, Ann Arbor, USA: Poverty's development and duration. Panel studies.
19.30	Get-together
20.00	Festive dinner

November 17th:

08.45 - 11.00	Parallel sessions with presentations and discussions of contributed papers.
11.00 - 11.15	Pause/coffee
11.15 - 12.15	Prof.Stein Ringen, University of Oxford, Britain: The welfare state, distribution policies, and poverty. Analyses of measures and policies to combat poverty.
12.15 - 13.15	Lunch
13.15 - 14.30	Presentation of International Research and statistical Programmes on Poverty.
14.30 - 14.45	Pause
14.45 - 15.45	Panel discussion: Challenges and possibilities facing poverty research focusing on data requrements.
15.45 - 16.00	Conclusion and closing led by a representative of the Central Bureau of Statistics. 22. september 1992

Parallel session 1 Approaches to the study of poverty. Subjective and objective indicators of poverty.

Session leader: Dr. philos Lars Gulbrandsen, INAS, Norway

- Mr. Karel Van den Bosch, UFSIA, Belgium: Poverty and Social Security in Seven Countries and Regions of the E.C.
- Mr. Arne S. Andersen and mr. Jan Lyngstad, Central Bureau of Statistics, Norway: Payment problems or poverty? Norwegian households 1987 - 1991.

Parallel session 2.

Income and consumption. Distribution and poverty.

- Session leader: Mr. Ib Thomsen, Central Bureau of Statistics, Norway.
- Mr. Thor Olav Thoresen, Central Bureau of Statistics, Norway: Child Care Subsidies and Effect on Distribution.
- Ms. Hilde Bojer, Department of Economics, University of Oslo, Norway: Gender, occupational status and income inequality in Norway.
- Prof. Leif Nordberg and Rec.ass. Markus Jäntti, Åbo Akademi University, Finland: Statistical inference and the measurement of poverty.
- Dr. Jolanda van Leeuwen, Erasmus University Rotterdam, The Netherlands: The Leyden Poverty Line when Prices are Income-Dependent. Abstract
- Dr. Jørgen Aasness and Ms. Jing Li, Central Bureu of Statistics, Norway: A microsimulation model of consumer behavior for tax analysis. Abstract
- Mr. Ib Thomsen and Mr. Dinh Quang Pham, Central Bureau of Statistics, Norway: An application of latent Markov models to estimate response errors from repeated surveys.

Parallel session 3.

Who are the poor? Comparisons between groups and countries.

- Session leader: Ms. Gunvor Iversen, Central Bureau of Statistics, Norway.
- Dr. A. Jan Kutylowski, Poland: Distribution of subjective income deprivation in Poland 1981 -1990.
- Ms. Iulie Aslaksen, Central Bureau of Statistics, Norway and ms. Charlotte Koren, INAS, Norway: A women's perspective on poverty: Time use, income distribution and social welfare.
- Dr. Björn Gustafsson, Göteborg University, Sweden and Dr. Ludmilla Nivorzhkina, Rostov University, Russia: Relative Poverty in two egalitarian societies. A comparison between Taganrog, Russia during the Soviet era and Sweden.
- Mr. Lars B. Kristoffersen, NIBR, Norway: Social Indicators of Child Poverty.
- Ms. Randi Kjeldstad, Central Bureau of Statistics, Norway: Pre valence and Change in Low Income among Male and Female Singles and Lone Parents in Norway through the Nineteen Eighties.
- Mr. Børge Strand, Central Bureau of Statistics, Norway: Regional location of Poverty in Norway.
- Dr. Hans de Kruijk, Erasmus University, The Netherlands: Location of poverty in Pakistan.

Parallel session 4.

Poverty - development and duration.

Session leader: Dr. Kari Skrede, INAS, Norway.

- Dr. R. Muffels, Tilburg University, The Netherlands: The Evolution of poverty according to objective and subjective standards.
- Mr. Kjell Jansson, Statistiska Centralbyrån, Ørebro, Sweden: Low income per year is not enough to measure poverty.
- Prof. Dr. Bea Cantillon, UFSIA, Belgium: The "zero-sum crisis": the stability in the distribution of income and welfare in a period of economic crisis.
- Mr. Jon Epland and Mr. Leif Korbøl, Central Bureau of Statistics, Norway: Duration of Poverty in Norway in the 1980s. Some longitudinal results from the Norwegian socio-economic panel (NSP)

Parallel session 5. The welfare state, distribution policy and poverty.

Session leader: Mr. Knut Halvorsen, NKSH, Norway.

- Dr. Ivar Lødemel, FAFO, Norway: European Poverty Regimes.
- Dr. Jørgen Elm Larsen, The Danish Equal Status Council, Denmark: Poverty debate and poverty research in Denmark.
- Mr. Tapio Salonen, Sosialhögskolan, Sweden: Social assistance in a longitudinal perspective.
- Mr. Sven-Åke Stenberg, Swedish Institute for Social Research, Sweden: Welfare Dependence in the Welfare State: A Cross-Generational Study in Post-War Sweden.
- Dr. Lutz Leisering and Dr. Wolfgang Voges, Bremen University, Germany: Poverty produced by the welfare state. An application of longitudinal analysis.
- Mr. Peter Whitesford, University of York, United Kingdom: Assessing the Impact of Anti-Poverty Policies: - the Australian Experience

Parallel session 6.

Less developed countries: Who are the poor, where are they located and why are they poor ?

Session leader: Mr. Bjørn K. Wold, SSB, Norway

- Mr. Mohamed Ould Abba, Ministry of Plan, Mr. Sidna Ould N'Dah, National Statistical Office, Mauretania: Le Profil de la Pauvrete en Mauretanie: Questions Conceptuelles, Instruments et Principaux Resultats.
- Mr. William Bender and Mr. Simon Hunt, Ministry of Plan, Luanda, UNICEF, Luanda, Food Studies Group, University of Oxford, Angola & Great Britain: Poverty and Food Insecurity in Luanda.
- Mr. Christian Grootaert, World Bank, USA: The evolution of welfare and poverty during structural change and economic recession the case of Cote d'Ivoire 1985-88.
- Mr. Wilson Mazimba and Mr. Emmanuel Silanda, Central Statistical Office, Zambia: Some indicators of poverty in Zambia.
- Mr. Sidna Ould N'Dah, National Statistical Office, Mauretania: Enquete Permanente sur les Conditions de Vie des Menages en Mauretanie.
- Mr. Jeannot Ngbanza and Mr. Perkyss Mbayndoudjim, ECAM, Bangui, Central African Republic: Mesure de la Pauvrete: Les Travaux en Cours en Republique Centrafricaine.

REPUBLIQUE ISLAMIQUE DE MAURITANIE Honneur-Fraternité-Justice

MINISTERE DU PLAN

PROJET DIMENSIONS SOCIALES DE L'AJUSTEMENT

LE PROFIL DE LA PAUVRETE EN MAURITANIE : QUESTIONS CONCEPTUELLES, INSTRUMENTS ET PRINCIPAUX RESULTATS

Participants : - Mohamed Ould Abba, Coordinateur du Programme DSA

- Sidna Ould N'Dah, Directeur Général Adjoint de l'ONS

LE PROFIL DE PAUVRETE EN MAURITANIE : QUESTIONS CONCEPTUELLES, INSTRUMENTS ET PRINCIPAUX RESULTATS

1.Introduction :

Dans le cadre du projet Dimensions Sociales de l'Ajustement au Ministère du Plan, une étude profil de la pauvreté en Mauritanie a été réalisée.

La première partie de cette étude a été consacrée à la image descriptive de la construction d'une pauvreté en Mauritanie: le nombre des pauvres, la profondeur de leur les caractéristiques des ménages pauvreté, pauvres (en comparaison avec ceux des ménages non-pauvres) etc. La deuxième phase (récemment entamée) comprend une analyse des causes de la pauvreté, et, en particulier, une composante traitant des questions politiques. Évidemment, les résultats de la première phase, seront utilisés pour préciser les contenus exacts de cette deuxième phase.

Le but de la présente communication est de faire une présentation succinte de cette première partie, ce qui m'amenera à aborder successivement les questions conceptuelles de mesure de la pauvreté, le schéma de la pauvreté en Mauritanie, les caractéristiques des ménages pauvres, et ce avant de tirer les conclusions les plus pertinentes.

La présente étude se fonde principalement sur les résultats des deux années d'enquêtes Enquête Permanente sur les Conditions de Vie des ménages (EPCV) qui ont été entreprises par l'Office National de la Statistique en 1987-88 et en 1989-90. Sur la base d'un échantillon de près de 1 600 ménages choisis d'une manière aléatoire en milieu sédentaire chacune des deux années, les questionnaires ont recueilli des informations sur les différents aspects des conditions de vie des ménages, y compris les caractéristiques démographiques, les revenus, les dépenses, les activités économiques, les niveaux d'éducation, l'utilisation de facilités de santé etc. A part ces informations recueillies au niveau des ménages, des informations ont été également collectées au niveau des communautés, par exemple sur les prix des aliments et sur les infrastructures physiques et sociales. Cette base de données permet la construction d'une image détaillée des conditions de vie des ménages en milieu sédentaire en Mauritanie.

2. Questions conceptuelles de la mesure de la pauvreté

Afin de faire une analyse de la pauvreté en Mauritanie sur la base des données de lEPCV, il faut aborder trois éléments d'ordre conceptuel : (i) le choix d'une mesure du bien-être des ménages et de leurs membres; (ii) la définition de la pauvreté, c'est à dire, le choix d'un seuil de pauvreté; et (iii) le choix des mesures sommaires (indices de pauvreté) qui résument les dimensions principales de la pauvreté.

Comme mesure de bien-être nous avons utilisé pour chaque ménage ses dépenses totales par tête, en prix constants. Pour calculer cette mesure, il faut avoir:

- une estimation des dépenses totales des ménages en prix courants, qui comprend des imputations de l'autoconsommation et d'autres formes de consommation en nature;

- un indice du coût de la vie qui résume les variations dans le temps et dans l'espace;

- une estimation de la taille des ménages.

Toutes ces informations sont disponibles dans la base des données EPCV, même si le nombre d'observations des données de prix est très réduit.

Pour le pays entier la valeur moyenne de cette mesure de dépenses totales par tête en prix constants est de 32 370 UM pendant la première année et 36 160 UM pendant la deuxième année. Au niveau des régions, de grandes différences sont observées, les valeurs moyennes de dépenses totales étant de loin plus élevées en milieu urbain qu'en milieu rural. Lors des deux années, les valeurs moyennes sont les plus élevées à Nouakchott et les plus basses dans la région "Rural Fleuve".

Étant donné que nous avons utilisé la consommation par tête comme mesure du bien-être, en principe le seuil de pauvreté devrait être le niveau minimum de consommation nécessaire pour permettre à un individu typique de subsister. Mais la définition de la subsistance est en partie subjective. Il est difficile de définir les besoins minima en aliments, et encore plus difficile de les définir pour les produits non-alimentaires. Pour cette étude nous n'avons pas essayé d'estimer un seuil de pauvreté spécifique à la Mauritanie, mais plutôt choisi d'utiliser les deux seuils généraux de pauvreté de la Banque Mondiale. En monnaie locale, le seuil le plus élevé est approximativement 32 800 UM par tête et par an, et le plus bas (pour identifier les pauvres extrêmes) approximativement 24 400 UM par tête et par an. Même si ces seuils sont relativement arbitraires, ils servent à faire un découpage entre les ménages avec les niveaux de consommation relativement bas ("les pauvres") et ceux avec des niveaux relativement élevés ("les non-pauvres") et d'établir des comparaisons entre ces deux groupes.

La mesure sommaire la plus simple de la pauvreté est son incidence, c'est à dire le pourcentage de l'échantillon classé "pauvre". Mais cette mesure simple ne tient compte ni de la profondeur de la pauvreté ni de sa répartition au niveau des ménages. Des mesures sommaires plus générales de la pauvreté qui peuvent tenir compte de sa profondeur et de sa répartition - la famille des indices de la famille P proposée par Foster, Greer et Thorbecke - ont été également utilisées dans cette étude.

3. Schéma de pauvreté en Mauritanie

Dans la première année, 64,1% de la population enquêtée est classée "pauvre" sur la base du seuil le plus élevé, et 49,8% sur la base du seuil le plus bas. L'intensité de la pauvreté est également frappante; l'écart moyen entre les dépenses moyennes des pauvres et le seuil de pauvreté est de 50,2% du seuil au niveau de l'hypothèse la plus élevé et 54,4% au niveau de l'hypothèse la plus basse. Ce qui signifie qu'en utilisant le seuil le plus élevé, en moyenne les ménages pauvres ne dépensent qu'une moitié du seuil. Dans la deuxième année le nombre des pauvres et l'intensité de leur pauvreté ne sont que légèrement plus bas.

Cependant, du point de vue de la politique, on ne s'intéresse pas principalement à la pauvreté au niveau du pays entier mais plutôt à sa répartition entre des différents groupes des ménages. Cela permet l'identification précise des groupes cibles et leur caractérisation socio-économique, afin de définir des mesures de politique à prendre en leur faveur. Pour la définition de ces groupes, plusieurs critères alternatifs doivent être utilisés pour identifier les types de ménages dans lesquels se trouve le plus de pauvreté.

(a) Pauvreté selon la région de résidence.

Étant donné que, dans chacune des deux années, la valeur moyenne de dépenses par tête est de loin plus élevée en milieu urbain qu'en milieu rural, il n'est pas surprenant que les indices de pauvreté indiquent que la pauvreté en Mauritanie se trouve d'une façon disproportionnée en milieu rural. Pour la première année, en utilisant le seuil de pauvreté le plus élevé, 41,9% des individus du milieu urbain sont classés "pauvres" contre 79,7% du milieu rural; 58,8% de l'échantillon habite en milieu rural, mais 72,9% des ménages du pays avec un niveau de vie inférieur au seuil le plus élevé s'y retrouvent. Si on utilise un indice de pauvreté qui tient compte de la; profondeur de la pauvreté, cette concentration en milieu rural devient encore plus marquée. Ces grandes différences entre le milieu urbain et le milieu rural existent également pour la deuxième année d'enquête, même si elles sont un peu moins marquées. A l'intérieur du milieu rural, dans les deux années d'enquête les dépenses moyennes par tête des pauvres sont plus basses dans la région "Rural Fleuve" que dans la région "Rural Autre", et la proportion de l'échantillon enquêtée classée "pauvre" plus élevée dans la première que dans la deuxième. Pourtant, parmi les ménages pauvres, la profondeur de la pauvreté est plus marquée dans la région "Rural Autre" que dans la région "Rural Fleuve". Ce fait peut être expliqué par l'existence d'une importante inégalité dans la région "Rural Autre"; cette explication a été confirmée par une analyse de l'inégalité par région en Mauritanie. Cette analyse indique que l'inégalité est la plus marquée dans la région "Rural Autre", qui contient des ménages très pauvres en plus des ménages relativement riches. Il faudra désagréger d'avantage cette dernière pour identifier plus précisément ces ménages très pauvres.

La pauvreté urbaine se trouve d'une façon disproportionnée (en termes numériques et en termes profondeur) dans les villes autre que Nouakchott. Mais même à Nouakchott, dans chacune des deux années d'enquête plus de 30% des ménages enquêtés sont classées pauvres en utilisant le seuil le plus élevé. A l'intérieur de Nouakchott, la pauvreté est plus profonde et plus intense dans les quartiers périphériques. Durant la deuxième année d'enquête, 49,6% des ménages des zones périphériques sont classés pauvres, en comparaison avec 20,8% dans les zones non-périphériques. L'intensité de la pauvreté est également plus marquée dans ces zones périphériques.

En dépit de ces observations en milieu urbain, la conclusion la plus frappante de l'analyse de pauvreté selon le lieu de résidence est que la pauvreté en Mauritanie est, d'une façon disproportionnée, un problème rural. En particulier, il existe des ménages très pauvres dans la région "Rural Autre".

(b) Pauvreté selon groupe socio-économique

Pour aborder les questions de politique, et pour mieux comprendre les causes de la pauvreté, il est également important de considérer la répartition de la pauvreté par groupe socioéconomique. Pour cela il faut d'abord définir ces groupes socio-Dans la présente étude six groupes socioéconomiques. économiques ont été identifiés sur la base des principales activités économiques des membres des ménages pendant la semaine précédant l'entretien. Les ménages dans lesquels personne n'avait travaillé pendant cette semaine ont été classés "en chômage" si un seul membre a cherché un emploi durant cette période et "non-actifs" si aucun membre n'a cherché un emploi. Les autres ménages dans lesquels un membre ou plus a travaillé pendant la semaine précédant l'entretien ont été classés selon le type principal d'activité pour le ménage, avec une distinction entre les employés du secteur public, les employés du secteur privé, les indépendants agricoles et les indépendants nonagricoles.

Les ménages indépendants agricoles ont toujours été les plus pauvres, pour les deux seuils de pauvreté, pour les deux années et pour tous les indices de pauvreté calculés. Avec le seuil de pauvreté le plus élevé 85,5% des ménages indépendants agricoles dans la première année et 74,2% dans la deuxième sont classés pauvres, des pourcentages de loin supérieurs à ceux des autres groupes socio-économiques. Au niveau de ces ménages la pauvreté est profonde. Dans les deux années et pour les deux seuils, les dépenses moyennes des pauvres dans ce groupe sont de 50% inférieures au seuil de pauvreté.

Dans les deux années, les groupes les moins touchés par la pauvreté sont les ménages qui travaillent comme employés dans le secteur public et les ménages indépendants non-agricoles. La pauvreté est plus marquée au niveau des ménages qui travaillent principalement dans le secteur privé qu'au niveau de ceux du secteur public (dans la première année d'enquête 37,5% des ménages dans le groupe "employés publics" sont pauvres en utilisant le seuil le plus bas, mais 58,4% dans le groupe "employés privés"; ces chiffres sont presque les mêmes pendant la deuxième année d'enquête). Les ménages qui sont des employés du secteur privé comprennent des ménages urbains et des ménages ruraux, et c'est probable que la plus grande part de la pauvreté dans ce groupe se trouve en milieu rural (par exemple, parmi les ménages qui travaillent comme ouvriers agricoles).

Les ménages en chômage et les ménages non-actifs sont un peu moins touchés par la pauvreté que la population moyenne. La proportion du premier groupe qui est pauvre est plus élevée que celle du second, mais la profondeur de la pauvreté est plus marquée au niveau des ménages non-actifs. Cela indique que l'inégalité est plus marquée au niveau des ménages non-actifs. La proportion de ceux-ci dont le niveau de vie est supérieur au seuil de pauvreté est plus élevée que celle des ménages en chômage, mais la proportion des pauvres extrêmes est aussi plus Cela reflète le fait que le groupe des ménages nonélevée. actifs regroupe différents types de ménages qui sont dans des conditions très différentes, et qui sont non-actifs pour des diverses raisons. Étant donné la profondeur de la pauvreté dans ce groupe, il convient d'effectuer plus d'analyse pour mieux comprendre les différences entre les ménages non-actifs pauvres et les ménages non-actifs non-pauvres.

(c) Pauvreté selon les caractéristiques du chef de ménage

Des groupes de la population parmi lesquels la proportion des ménages non-actifs est relativement élevée sont les ménages dont le chef est une femme et les ménages dont le chef est âgé. Par conséquent, ceux-ci sont des candidats pour le choix des groupes cibles. Pour examiner l'importance de ces groupes parmi les pauvres, des indices de pauvreté ont été calculés selon le sexe du chef du ménage et (séparément) selon qu'il est âgé (c'est à dire, plus de 65 ans) ou non. Dans les deux années, la proportion des pauvres au niveau des ménages dont le chef est âgé est plus élevée que celle des autres ménages. De plus, la profondeur de la pauvreté au niveau des ménages dont le chef est âgé est légèrement supérieure à celle des autres. Mais quand on regarde la pauvreté selon le sexe du chef de ménage, il n'y pas de schéma très évident. Il n'y a pas de différence significative entre les valeurs moyennes de dépenses par tête selon le sexe du chef. La proportion des ménages qui sont pauvres est moins élevée chez les ménages dont le chef est une femme, même si la profondeur de la pauvreté chez ces ménages pauvres est légèrement plus élevée. Il n'y a toutefois pas de différence évidente entre les conditions de vie des ménages selon le sexe du chef du ménage. Il reste cependant la possibilité que les indices calculés pour le pays entier masquent des différences importantes au niveau régional.

4. Les caractéristiques des ménages pauvres

Les mesures sommaires de la pauvreté déjà présentées fournissent une image initiale des dimensions de ces problèmes et de leur répartition entre les différents groupes. Cependant, pour examiner les causes de la pauvreté, et discuter le choix des mesures politiques appropriées à prendre pour lutter contre la pauvreté, il est nécessaire d'avoir une image beaucoup plus détaillée. On examine maintenant, d'une façon préliminaire, les socio-économiques des ménages pauvres caractéristiques en comparaison avec celles des ménages non-pauvres dans les domaines suivants : éducation, santé, logement, emploi, dépenses alimentaires, et accès à l'aide alimentaire.

L'analyse dans cette section a utilisé un découpage des ménages en quantiles de dépenses totales par tête (la mesure du bienêtre). Chaque quantile contient 20% des individus dans l'échantillon, le premier quantile étant le plus pauvre et le cinquième le plus riche.

(a) L'éducation

Trois aspects ont été examinés:

- Le taux d'alphabétisation: En moyenne 55-60% des hommes âgés de plus de 10 ans savent lire, et 35-40% des femmes dans la même tranche d'âge. A part cet écart entre les hommes et les femmes, il y a aussi un écart important entre le milieu urbain et le milieu rural (par exemple, environ 75% des hommes en milieu urbain savent lire, en comparaison avec 45% en milieu rural). milieux plus, à l'intérieur de deux De ces le degré d'alphabétisation augmente sensiblement avec le niveau de vie, et surtout pour les femmes. Par exemple, pour la première année d'enquête, chez les femmes du premier quantile, 33,3% savent lire en milieu urbain et 15,5% en milieu rural; dans le cinquième quantile 60,2% des femmes du milieu urbain et 45,5% en milieu rural savent lire. Ces pourcentages ne sont pas très différents de ceux de la deuxième année d'enquête.

- Le taux de scolarisation: En milieu urbain, plus de 60% ont fréquenté l'école, dont 45% ont fréquenté l'école moderne; en milieu rural environ 45% ont fréquenté l'école mais moins de 20% ont fréquenté l'école moderne. Dans les deux milieux les taux de scolarisation augmentent sensiblement avec le niveau de vie, mais d'une manière générale les taux de scolarisation (école moderne ou traditionnelle) sont supérieurs aux taux d'alphabétisation, une observation qui soulève la question de l'efficacité de l'école.

- Le taux actuel de fréquentation de l'école pour les enfants en âge scolaire: Le taux net de fréquentation à l'école primaire est moins de 35% pendant les deux années d'enquête. Il n'est que légèrement supérieur pour les garçons par rapport aux filles, mais il y a un écart marqué entre milieu urbain (avec un taux de plus de 40%) et milieu rural (avec un taux de 25% environ).

L'écart entre garçons et filles est de loin plus évident au niveau de l'enseignement secondaire. En général le taux de fréquentation augmente avec le niveau de vie, surtout en milieu rural et pour les filles en général. Cela pourrait être un reflet des coûts (coûts directs et coûts d'opportunité) pour les ménages pauvres d'envoyer leurs enfants à l'école (surtout les filles).

Il est évident qu'il y a une forte corrélation entre le niveau de vie et le niveau d'éducation des individus, en utilisant chacune de ces trois mesures. Cela suggère (mais ne prouve pas) que le niveau d'éducation est un facteur très important dans la détermination du niveau de vie d'un ménage, et que les enfants des ménages pauvres seront (en moyenne) désavantagés dans l'avenir par leur niveau réduit d'éducation.

(b) L'emploi

L'analyse de la pauvreté par groupe socio-économique a déjà indiqué la concentration de la pauvreté parmi les ménages qui font un travail indépendant agricole. Ce fait est confirmé par une analyse du type d'emploi selon le quantile. Pour la première année d'enquête 51,4% des individus appartenant à des ménages du premier quantile font un travail indépendant agricole; ce pourcentage diminue avec le quantile, il est de 7,1% pour le cinquième quantile. Par contre, le pourcentage des individus qui font un travail indépendant non-agricole ou qui travaillent comme employés du secteur public augmente avec le quantile. Mais le pourcentage des membres d'un quantile qui sont en chômage ne change pas beaucoup avec le niveau de vie; c'est à dire que les chômeurs ne semblent pas être plus pauvres que la population Cette observation peut s'expliquer par le fait que la moyenne. plupart des chômeurs se trouvent en milieu urbain où les conditions de vie sont généralement mieux qu'en milieu rural.

(c) La santé

Nous ne présentons pas ici des chiffres sur l'état de santé des individus dans l'échantillon à cause de l'absence d'une mesure objective dans le questionnaire. Nous allons aborder la question de l'utilisation par la population mauritanienne des facilités de santé et sa relation avec le niveau de vie.

Le pourcentage des enquêtés qui ont consulté un personnel de santé quand ils ont été malades a été plus élevé en milieu urbain qu'en milieu rural, mais à part cette différence il n'y a pas de forte corrélation entre les pourcentages des individus qui ont consulté un personnel de santé et le niveau de vie. Pour l'échantillon entièr, dans chaque quantile et dans les deux milieux (urbain et rural), environ 90% des consultations ont été faites avec un médecin ou un infirmier. Il n'y a pas de relation évidente entre le type de personnel de santé consulté et le niveau de vie, à part le fait que les médecins sont plus sollicités et les infirmiers moins fréquentés en milieu urbain qu'en milieu rural.

En ce qui concerne le type de facilités de santé utilisé, certaines différences sont évidentes entre les deux années d'enquête. On note en particulier plus d'accès aux dispensaires et moins d'accès aux hôpitaux. Dans la deuxième année, les pauvres utilisent les dispensaires d'une façon disproportionnée, et en milieu rural ils utilisent les hôpitaux moins que la population moyenne. Par contre, la proportion des ménages les plus riches qui utilise les hôpitaux a augmenté entre les deux années, et celle qui utilise les dispensaires a diminué. Ces changements entre les deux années dans le type de facilités de santé utilisées par les riches et les pauvres peuvent être expliqués par la nouvelle politique sanitaire qui a instauré la libéralisation de la pharmacie et de la profession médicale. Cette politique serait responsable de la hiérarchisation dans l'utilisation des centres de santé, et avec la restructuration du système hospitalier, l'accessibilité des hôpitaux, bien qu'elle n'est plus gratuite, serait rendue meilleure.

(d) Le logement

La qualité du logement a été examinée à travers trois critères: le type du logement, le mode d'approvisionnement en eau potable et la source d'éclairage. Cet examen indique de grandes différences entre le milieu urbain et le milieu rural. La construction des logements en milieu urbain est d'une qualité meilleure, et les ménages urbains ont plus d'accès à des sources d'eau potable de bonne qualité et à l'électricité (qui n'existe guère en milieu rural). A l'intérieur de chacun de ces milieux, la qualité des logements et les facilités augmentent avec le niveau de vie.

(e) Les dépenses alimentaires

Il existe un très grand écart entre les dépenses alimentaires des riches et celles des pauvres. L'écart n'est pas surprenant, mais c'est la magnitude de la différence qui est frappante. Pour les grains les 40% des ménages les plus pauvres en milieu urbain dépensent moins de 13% du total en milieu urbain, et les 40% les plus pauvres en milieu rural dépensent moins de 25% du total en milieu rural. Au niveau des produits pris séparément, certains sont relativement plus importants pour les pauvres (par exemple, le riz local paddy en milieu rural, la farine de blé en milieu urbain), mais même pour ces produits la contribution des pauvres aux dépenses totales reste faible.

Un schéma pareil est observé pour les aliments autres que les grains. Ces contributions très faibles des ménages pauvres aux dépenses totales sur les aliments indiquent l'inefficacité d'une politique de subventions non-ciblées comme outil d'amélioration des conditions de vie des pauvres.

(f) L'aide alimentaire

En principe, l'aide alimentaire devrait aider directement les ménages les plus pauvres (ou les plus mal-nourris), si les ménages cibles pouvaient être identifiés avec précision. Pour évaluer l'efficacité du programme d'aide alimentaire pendant les deux années d'enquête, nous avons examiné le pourcentage des ménages qui l'ont reçue par quantile et par région de résidence. Si la distribution de l'aide alimentaire avait été bien ciblée, le pourcentage des ménages l'ayant reçue aurait diminué avec le quantile.

L'efficacité de ciblage de l'aide alimentaire a été beaucoup plus précise en milieu urbain qu'en milieu rural. Pendant les deux années, le pourcentage des ménages en milieu urbain qui ont reçu l'aide alimentaire diminue avec le quantile. La même tendance n'est pas évidente en milieu rural; dans chacune des régions du milieu rural et dans chacune des années, le pourcentage des ménages du cinquième quantile qui a reçu l'aide alimentaire dans chaque région est respectivement plus élevé que le pourcentage moyen dans la même région. Même si le tableau n'a pas tenu compte de la quantité de l'aide alimentaire reçue par chaque ménage, c'est évident qu'en milieu rural elle n'était pas destinée aux ménages les plus pauvres. L'aide alimentaire octroyée aux plus riches renforce le doute sur l'efficacité de ciblage des groupes nécessiteux et de l'aide alimentaire, elle-même, comme outil d'allégement de la pauvreté.

<u>Conclusions Principales de la première partie de l'étude sur la pauvreté</u>

(a) Indices de pauvreté

L'échantillon entièr:

- environ 60% de l'échantillon classifiée pauvre selon le seuil le plus élevé de la Banque Mondiale
- environ 45% selon le seuil le plus bas
- il semble qu'il y avait une petite diminution de la pauvreté entre les deux années d'enquête

Répartition urbain-rurale:

- en milieu urbain environ 40% des ménages classifiés pauvre en utilisant le seuil le plus élevé; dépenses moyennes des pauvres en milieu urbain environ 65% du seuil
- en milieu rural environ 75% des ménages classifiés pauvre en utilisant le seuil le plus élevé; dépenses moyennes des pauvres en milieu rural moins de 50% du seuil
- la pauvreté est, d'une façon disproportionnée, un problème rural

Milieu rural:

- dans la région Rural Fleuve les dépenses moyennes sont plus basses et l'incidence de la pauvreté plus élevée que dans la région Rural Autre
- la pauvreté est plus intense dans la région Rural Autre des ménages très pauvres là-bas
- l'existence d'une inégalité marquée dans la région Rural Autre

Milieu urbain:

- la pauvreté se trouve d'une façon disproportionnée dans les villes autre que Nouakchott
- à Nouakchott, l'incidence et l'intensité de la pauvreté sont plus marquées dans les zones périphériques

Répartition socio-économique:

- les ménages indépendants agricoles le groupe le plus pauvre: environ 75% classifiés pauvre, leur pauvreté est très intense
- les ménages indépendants non-agricoles et les employés du secteur public les groupes les moins pauvres
- la proportion des ménages en chômage et des ménages non
- actifs classifiée pauvre moins que la population moyenne
- pour les ménages non-actifs qui sont pauvres, leur pauvreté est intense (leur dépenses moyennes environ 50% du seuil)

Pauvreté selon caractéristiques du chef:

- pas de grandes différences dans la pauvreté selon le sexe du chef du ménage (la proportion des ménages dont le chef est une femme classifiée pauvre est inférieur à celle dont le chef est un homme)
- il faut distinguer les différents types de ménages dont le chef est une femme
- l'incidence et l'intensité de la pauvreté sont plus élevées qu'en moyenne de la pauvreté chez les ménages dont le chef est âgé
- (b) Caractéristiques des pauvres

Éducation

- l'augmentation de degré d'alphabétisation avec le niveau de vie reflète en partie les grandes différences urbains
- rales, mais l'alphabétisation augmente avec le niveau de vie à l'intérieur de ces deux milieux, surtout pour les femmes
- dans les deux milieux les taux de scolarisation augmentent avec le niveau de vie
- le taux de fréquentation des enfants en âge scolaire augmente avec le niveau de vie en milieu rural et pour les filles en général

Emploi

- le travail indépendant agricole est de loin le travail le plus important pour les individus du premier quantile
- le travail indépendant non-agricole et l'emploi dans le secteur public sont les types de travail les plus important pour les individus du cinquième quantile

- le taux de chômage est élevé (40%), mais ne change pas beaucoup avec le niveau de vie

Dépenses alimentaires

- pour la plupart des produits alimentaires, la contribution des dépenses des ménages de chaque quantile aux dépenses totales augmente avec le niveau de vie
- la contribution des 40% des ménages les plus pauvres aux dépenses totales sur les grains est moins de 13% en milieu urbain et moins de 21% en milieu rural
- pour les aliments autre que les grains la contribution des plus pauvres aux dépenses totales est également faible
- il n'y a pas de produits alimentaires sur lesquels les 20% ou 40% contribuent d'une façon disproportionnée aux dépenses totales sur le produit
- ces constats indiquent l'inefficacité comme outil d'allégement de la pauvreté des interventions visant à baisser les prix des aliments d'une manière générale

Aide alimentaire

- en milieu urbain le pourcentage des ménages dans un quantile qui ont reçu l'aide alimentaire diminue légèrement avec le niveau de vie
- par contre, en milieu rural, la même tendance n'est pas évident - le pourcentage des ménages du cinquième quantile qui ont reçu l'aide alimentaire est plus élevé que pour la population en moyenne
- il est évident que l'aide alimentaire n'a pas été bien ciblée, surtout en milieu rural

Santé

- le pourcentage des individus malades qui ont consulté un personnel de santé est plus élevé en milieu urbain qu'en milieu rural; à part cela il n'y pas de relation forte avec le niveau de vie
- ni le type de personnel de santé consulté ni le type de facilités utilisée ne change beaucoup avec le niveau de vie à l'intérieur du milieu urbain ou du milieu rural, sauf qu'en milieu urbain les facilités privées sont utilisées principalement par les ménages du cinquième quantile

Logement

- la qualité des logements et de ces facilités (eau potable, électricité) est de loin supérieur en milieu urbain qu'en milieu rural
- dans les deux milieux la qualité de construction des logements augmente avec le niveau de vie
- en milieu urbain, l'accès à une source d'eau potable ou d'éclairage de bonne qualité augmente avec le niveau de vie
- en milieu rural, la qualité des sources d'eau potable ou d'éclairage n'est pas étroitement liée avec le niveau de vie; le problème ici est le manque de l'infrastructure nécessaire.

ANNEXE 2

L'estimation d'un indice régional et temporel du coût de la vie en Mauritanie

A2.1. Les mesures du bien-être des ménages utilisées dans la présente étude sont calculées sur la base des estimations des dépenses totales des ménages calculées en prix courants. Pour une comparaison entre les deux années d'enquête d'une part, et entre les différentes régions du pays d'autre part, ces dépenses doivent être déflatées avec un indice du coût de la vie. Cet indice doit tenir compte de la variation du prix dans le temps pour permettre de faire une comparaison entre les deux années, et dans l'espace (différences entre les régions) pour permettre de faire une comparaison entre les ménages des différentes régions dans chaque année. L'estimation de cet indice du coût de la vie n'est pas beaucoup moins importante que l'estimation des dépenses des ménages.

A2.2. L'indice le plus approprié est un indice du type Laspèyres ou Paasche. Les indices de ce type sont basés sur une comparaison des prix de chaque groupe avec les prix d'un groupe de référence. Si p_{i0} représente le prix du produit i pour le groupe de référence 0, et p_{ij} le prix du produit i pour le groupe j, les formules des deux indices (Laspèyres , PL_j , et Paasche, PP_j) sont les suivantes:

$$PL_j = \sum_{i=1}^n \left(w_{i0} \frac{P_{ij}}{P_{i0}} \right)$$

$$PP_{j} = \frac{1}{\sum_{i=1}^{n} \left(w_{ij} \frac{P_{i0}}{P_{ij}} \right)}$$

où v_{ij} est la proportion des dépenses totales du groupe j sur le produit i et v_{i0} est la même proportion pour le groupe de référence 0. En général, l'indice Laspèyres (PL_j) est plus facile à calculer, et il est aussi plus utilisé dans pratique. A2.3. Pour calculer ces indices on a besoin des deux types de données: (i) des données sur les prix de chaque produit dans chaque région (p_{i0}, p_{ij}) ; et (ii) des pondérations pour chaque produit pour lequel des estimations de prix sont disponibles (v_{ij}, v_{i0}) . Les pondérations sont la dépense moyenne dans une région sur un produit divisée par la dépense régionale moyenne sur tous les produits pour lesquels les estimations de prix sont disponibles. Ces pondérations peuvent être estimées en utilisant les résultats de l'enquête auprès des ménages. Les estimations de prix sont fournies par l'enquête sur les prix.

A2.4. L'indice peut être calculé sur la base de tous les produits pour lesquels des estimations de prix sont disponibles dans chaque région et pour les deux années. En pratique la disponibilité limitée des données sur les prix a beaucoup réduit la base de couverture de l'indice estimé. L'enquête sur les prix ne collecte que trois observations dans chaque grappe sur chacun des 47 produits. Ces produits comprennent les produits alimentaires et les produits non-alimentaires, mais principalement les premiers. Pour les produits non-alimentaires, étant donné le nombre réduit de produits et d'observations d'une part, et la cohérence limitée entre les produits non-alimentaires dans l'enquête de prix et ceux dans l'enquête auprès des ménages d'autre part, il a été décidé d'estimer un indice du coût de la vie sur la base des produits alimentaires seulement. Il y a 20 produits alimentaires dont les prix et les pondérations sont disponibles dans les 4 régions et dans les deux années d'enquête. Ces produits, et les pondérations utilisées sont présentés dans le tableau A2.1.

A2.5. En utilisant pour le groupe de référence les prix et paniers moyens pour les ménages du pays entier pendant la première année d'enquête, et sur la base de ces 20 produits, l'indice ainsi calculé est présenté dans le tableau A2.2. C'est un indice Laspèyres qui a été retenu pour faire ce calcul. Un tableau a également été construit sur la base de l'indice Paasche; les résultats ayant été presque les mêmes, il n'a pas été jugé nécessaire de présenter ce dernier tableau. A2.6. L'indice du coût de la vie implique un taux d'augmentation moyenne des prix des produits alimentaires de 27,2% entre 1988 et 1990. Ce taux varie d'une région à l'autre(de 16,9% dans la région "Rural Fleuve" à 30,9% à Nouakchott). A cause de ces différents taux d'augmentation , le coût relatif de la vie dans les quatre régions change d'une année à l'autre. En général les différences urbains-ruraux sont plus marquées pendant la deuxième année que pendant la première. Il est difficile de savoir dans quelle mesure cette différence entre les deux années reflète un changement réel ou des insuffisances des données disponibles. En tout cas, ce changement peut expliquer l'amélioration entre les deux années dans la contribution du milieu urbain à la pauvreté nationale .

Tableau A2.1 : Pondérations pour l'indice du coût de la vie

Riz local, paddy	3,04						
Riz importé, SONIMEX	14,76						
Sorgho local	5,48						
Mil blanc, rouge etc.	3,28						
Mais local	0,19						
Blé en grains, local	0,74						
Blé en grains, importé	1,72						
Farine de blé	7,15						
GRAINS TOTAL	36,36						
Viande de bouef	9,30						
Viande de mouton	6,78						
Viande de chameau	15,63						
Sel	1,10						
Sucre	18,10						
Dattes	0,38						
Arachides	1,32						
Oignons	1,84						
Oeufs	0,20						
Lait en poudre	6,83						
Huile de beurre importé	0,96						
Tomates	1,02						
Limonade	0,17						
AUTRES ALIMENTS TOTAL	63,64						
	¦ 100,00 !						
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<u>Tableau A2.2: Indice du coût des produits alimentaires, Mauritanie</u> <u>entière 1988, = 100,00</u>

	NOUAKCHO- TT	AUTRES VILLES	RURAL FLEUVE	RURAL AUTRE	ENSEMBLE		
Première année	99,66	104,89	102,63	95,47	100,00		
Deuxième année	130,55	127,34	119,50	123,83	127,18		

THE LUANDA HOUSEHOLD BUDGET AND NUTRITION SURVEY

WORKING PAPER NO. 1

POVERTY AND FOOD INSECURITY IN LUANDA

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ABSTRACT

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Summary

A range of approaches are used to identify the poor and food insecure in Luanda using data from the Luanda Household Budget and Nutrition Survey (February to June 1990). Tabular, rather than detailed statistical and econometric, techniques are used to explore the relationships between poverty and food security, and between poverty and its household level determinants and correlates.

A Poverty Line and an Extreme Poverty Line are calculated. 5.8% percent of individuals fall below the Extreme Poverty Line and are classified as Extremely Poor, whilst 29.8% of individuals have incomes below the Poverty Line but above the Extreme Poverty Line. The latter are classified as Moderately Poor. 35.6% of the population of Luanda fall below the Poverty Line (Section 3.2).

Household food security, as measured by the proportion available to the household in relation to recommended household requirements, is strongly correlated with poverty. Of the Extreme Poor, none has more calories available than those that are internationally recommended. Of the Moderate Poor, 99.5% have less calories available than those that are recommended. 98% of the Extreme Poor and 86.5% have less than 66% of the recommended calories available at the household level (Section 4.1).

The poor have low levels of employment and work that yields low levels of income. 14.3% of households have none of its members employed, whilst 63.3% have only one or two household members in employment. Households with low levels of employment rely on two sectors of the economy for their employment, the public sector which employs 45.7% of single employee households, and the informal sector which employs 32.4% of the same households (Section 5.1.2).

Poor households have different patterns of food and non-food expenditure from those of higher income households. Nearly 40% of the food budgets of the poorest households are spent on starchy staples, whilst the highest income households spend only 26.2% of their food budgets on starchy staples. However fresh fish is the most important item in the expenditure of poor households, and this because it is cheaper than any other calories. The other commodities on which the greatest proportion of the expenditure of the poor is made, are bread, fuba de bombo (cassava flour), water, transport costs, rice, tomatoes, dried fish and onions (Section 5.2.2).

Additional characteristics of the poor include:

- a) heavy burden of work on women in poor households (Section 3.7),
- b) poor quality and congested housing (Section 3.5.1), and
- b) larger than average family size (Section 3.4.1).

In addition the poorest bairros of the city in order of poverty are: Viana, Rangel, Terra Nova, Cazenga, and Golfe (Section 3.3).

Very high levels of child ill-health and child malnutrition are pervasive across all bairros and across all income groups, with levels of child stunting exceeding 45% in four bairros, and reported fortnightly illness rates amongst children under 5 years exceeding 50% in nine bairros (Section 3.6).

The sources of vulnerability for the poor allows the classification of poor households into three types (Section 5.1.2):

Type 1 Households: have one or two members of the household employed in the public sector. Such households are at risk from two sources, firstly the complete loss of income through public sector redundancies, and secondly from the possible erosion of the purchasing power of their money income through retail price increase,

- Type 2 Households: have the informal sector as their principsource of employment. Type II nouseholds are vulnerable to a slow decline of their income rather than a complete collapse. This decline is likely to be provoked by the decline of aggregate demand as fiscal expenditure contracts, and by the increase of supply onto the labour market as public sector redundancies swell the numbers looking for employment - in other words less demand will be divided amongst a larger number of people,
- Type 3 Households: are the chronically poor. They do not effectively participate in the labour market, having no members of their households enployed, and have a considerable reliance on the subsicies that they illegally acquire from the Lojas de Povo.

Other working papers in this series apply both poverty and vulnerability classifications in the exploration of a range of structural adjustment policy options.

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POVERTY AND FOOD INSECURITY IN LUANDA

1 INTRODUCTION

The elimination of deficits and sustainable economic growth are the explicit objectives of the Ministry of Planning's <u>Plano 1991</u>. Whilst not an explicit plan objective, poverty elimination does rank amongst a wider set of policy objectives contained under the umbrella of the <u>Programa de Acção</u>.

The experience of Structural Adjustment Programmes (SAP's) in Sub-Saharan Africa during the 1980s has shown how difficult it has proven to move an economy onto a path of sustained growth that reduces, rather than increases, the level of poverty¹. The 1980s have also shown, however, that economies can grow and poverty can be reduced when <u>both</u> macro-economic and meso-economic policies (See Box 1) converge to support the poor. On their own, favourable macro-economic or favourable meso-economic policies will not improve the position of the poor, but will tend only to stabilise it. When both macro and meso-economic policy take account of the distributional effects on the poor, the evidence indicates that economic growth and poverty reduction can occur simultaneously.

More specifically, the SAP evidence of the 198(s is showing that a combination of:

- a) deflationary macro-economic policies, and
- b) inequitable meso-economic policies,

have failed against criteria of both economic growth and equity (i.e., allocation of resources according to need). Firstly, they have failed to successfully eliminate the balance of payments and fiscal deficits for which they were designed; secondly, they have failed to promote national economic growth; thirdly, they have failed to increase rates of investment in the economy, and therefore risk compromising future long term growth.

During the 1980s, the consequences of:

- a) poor macro-economic performance, and
- b) meso-economic policies which distributed benefits and burdens unevenly,

has been serious for the standards of living and improved welfare of the poor. Although the micro-economic evidence is still patchy, there appears to be increasing evidence that both the outcomes and the determinants of low and worsening standards of living have been the direct product of this poor macro and meso-economic performance. In particular, the evidence includes falling real incomes, rising food prices, low rates of school enrolment, falling rates of clinic attendance, and slower rates of improvement in child mortality and malnutrition. The latter has occured despite the widespread progress in the delivery of low cost health interventions.

This paper therefore attempts to construct a poverty profile for Luanda based upon the results of the Luanda Household Budget and Nutrition Survey (LHHBNS) that could be useful for the design of policy, programmes and projects. From a poverty perspective, Luanda is a particularly important economy to understand. The state makes a large contribution to both the incomes and the consumption levels of most households in Luanda. Any attempt to adjust the

See Frances Stewart '<u>Are Adjustment Policies in Africa Consistent</u> with Long <u>Run Development Needs</u>?', Paper Prepared for a Panel of the American Economic Association meetings, December 30 1990, and Frances Stewart '<u>The Many Faces of Adjustment</u>', Paper Prepared for the International Conference on Policy Based Lending, University of Manchester, 10-11 September, 1990.
Box 1: The Meso-Economy

The meso-sconomy refers to the "middle" economy, i.e. that between the macro sconomy and the micro sconomy. Meso sconomic policy analysis examines, amongst others, the distributional affects of macro-sconomic policy change. In practice, meso-sconomic policy analysis studies the effects of macro-sconomic change on the behaviour of factor and product markets, on the availability and accessibility of scolal and physical infrastructure (i.e. health services, education, sanitation, housing, energy, transport, and communications), and thereafter on the consequences for individuals who participate in different ways and to different degrees in these markets.

Examplas of meso-economic analysis are included in the table below.

Macro Policy & Instrument	Heso-Bconomy: Analytical fool			
Monetary Policyf Formal Credit Mkt.	informal & Formal Market Differentials	Differentials in: Access Interest Rates Collateral		
Fiscal Policy: Expenditure Reduction	Reduction in Consumer Subsidies	Beneficiaries: High/Low income Level of Subsidy		
Exchange Rate Policys Nkt. Liberalisation	Foreign Exchange Auctions	Participation Req.s. Collatersl Registration Information Skills/Rducation		
Trade Polidy: Imports of Capital	Capital Imports	Element of Subsidy Small or Large Enterprises Benefit Impact on non- beneficiaries in same market		
Institutions Policy: Privatisation of Public Materprise	Liberalisation of Food Marketing	Barriers to Entry: Legalisation of Informal Sector Access to Production /Importation		
Incomes Policy: Public Sector Nage Decermination	Reduction of Employment Subsidy Subsistence Wage for Fublic Employee	Response of Demand for Labour: Private Sector Informal Sector		
Resource Folicy: Fublic Sector Investment in Agriculture	Targeting of Improved Ag. Inputs	Distribution of Benefics: Region Farm Size / Type		

levels and structure of state participation in the economy will have serious consequences for levels of welfare and standards of living, unless alternative real incomes are available. The Troca da Moeda of September 1990 is a good example of the size of the impact that changes in macro-economic policy can make on the local economy.

In particular, the paper attempts to provide:

- i) an indication of both the scope and intensity of poverty in Luanda,
- ii) a profile of the characteristics of the poor, the extremely poor and of those vulnerable to poverty in order to improve the efficiency of macro-economic and meso-economic policy reform, and
- iii) a profile of poverty and vulnerability that would assist the design of effective targeting mechanisms that attempt to maintain a safety net of incomes and levels of consumption during the Programa de Acção.

Other working papers in this series will address related policy issues. In particular, attention will be paid to the meso-economic alternatives when poverty elimination is one of the objectives of Structural Adjustment.

2 A FRAMEWORK FOR ANALYSING POVERTY AND HOUSEHOLD FOOD INSECURITY

There are a number of different methods for the analysis of poverty. The method utilized in this paper² is based upon full expenditure of individual households. The use of household expenditure, adjusted for household size⁴, as a primary welfare proxy has a sound basis in economic theory. We use a variety of approaches to the analysis of poverty and food security to corroborate our evidence.

There are at least three parts to a poverty focused analysis:

4

- i) the classification of the population into poor and non-poor households,
- ii) the identification of factors correlated or associated with poverty, and
- iii) the identification of economic mechanisms that affect the poor and the levels of poverty.

We develop these components of a poverty and food security analysis by developing three analytical approaches based upon household expenditure, as outlined in Table 1.

We adjust for household size by using adult equivalence scales (see Technical Appendix I).

² Other papers planned for this series use alternative approaches (e.g. gender and health status).

³ When referring to household expenditure, we mean total household expenditure adjusted for household size, unless we specifically state to the contrary.

Approaches to Poverty and Food Security Analysis Based Upon Household Expenditure

- 1. FULL EXPENDITURE APPROACH
 - a) Poverty and Extreme Poverty Lines
 - b) Poverty Indices
- 2. FOOD SECURITY APPROACH
 - a) Food Gap
 - b) Expenditure Shares
 - i) Food Expenditure as Percent of Total Expenditure
 - ii) Starchy Staples Expenditure as Percent of Food Expenditure
 - c) Cost of Calories
- 3. VULNERABILITY ANALYSIS
 - a) Access to Incomes and Employment
 - b) Vulnerability to Price Changes

2.1 The Full Expenditure Approach

The first approach is based upon the classification of poor and non-poor households in relation to their level of total expenditure (i.e., food and non-food). This is done in two ways. First, we set two poverty lines relative to the average standard of living in Luanda: i) a poverty line, and ii) an extreme poverty line. Thus, we classify households and individuals into one of three mutually exclusive groups separated by these two poverty lines, either i) extremely poor, ii) moderately poor, or iii) non-poor. Second, we calculate poverty indices for a large variety of socio-economic groups within Luanda. Utilizing these two techniques is our primary method for accomplishing parts i) and ii) of our poverty focused analysis, as outlined above. In other words, for part i) we classify households and individuals as poor and non-poor. For part ii), we examine the socio-economic characteristics of those who are poor and non-poor, and search for characteristics which are closely associated with their poverty status. This analysis is presented in Section 3 of this report.

2.2 The Food Security Approach

The second approach (Section 4) recognizes the particular importance of food markets in determining levels of welfare, and uses a household food security approach for the identification of the poor and non-poor. This analysis largely validates the conclusions reached using the full expenditure approach.

Access to adequate amounts of food by all members of a household at all times, with minimal risk to that access, ensures <u>Household Food Security</u>. The two principal components of household food security are:

i) the level of food available to the household in relation to nutritional requirements, and

ii) the likelihood or risk that households can or cannot sustainably achieve that level.

A combination of several methods are used to determine the "adequate" amount of food for a household.

2.2.1 The Food Gap

The "food gap approach"⁵, uses internationally recognised norms for daily calorie requirements to approximate a household's daily or monthly food needs. The "food gap" is therefore the gap between household food availability and household needs. For example a household of a particular age and gender structure might require Kcal.s 12,000 per day to satisfy its caloric needs - approximately the Kcal.s contained in Kg.s 4 of maize flour. Households that are unable to acquire adequate calories to cover needs are classified as "chronically food insecure", whilst those at risk of failing to acquire adequate calories are classified as "vulnerable to food insecurity".

2.2.2 Expenditure Shares

The "expenditure share" approach, uses either or both:

- i) the proportion of food expenditure to total household food and non-food expenditure, or
- ii) the proportion of the expenditure on starchy staples to total food expenditure.

The cut-off points that are used to determine food insecurity are usually 60% and 60% respectively. Again, there can be methodological problems associated with this approach. This is particularly true in the context of highly distorted markets where starchy staples are not the cheapest source of calories, and where the scarcity of non-food items tends to inflate food expenditure shares⁶.

2.2.3 Cost of Calories

Given this latter problem, a further technique, the "cost of calories" approach, has been used. It is based on the ranking of households according to the average costs of calories consumed; high income households are presumed to purchase more expensive calories than low income consumers. This approach only allows for the ranking of households and lends itself less easily to the determination of food insecurity. Nevertheless the approach has merits in that it gives an approximation of the degree of substitution households could make within the food basket before opportunities for substitution are exhausted, and a reduction of calorie consumption becomes the principal opportunity for expenditure reduction.

All three methods have their theoretical and practical strengths and weaknesses. The theoretical weaknesses are dealt with extensively in the literature and this paper will only allude to them as the explanation unfolds.

See Appendix V.

⁵ See also Appendix II.

2.2.4 Advantages of a Household Food Security Analysis

Despite the difficulties of a food security analysis, understanding poverty through the availability and entitlement to food has a number of advantages:

- a) household food availability is often a good indicator of household welfare. Food insecure households have low and/or variable incomes, consume low costs foods, rely heavily upon food subsidies, and often will have children that are frequently sick and malnourished. Their housing is extremely poor, and their consumption of publicly provided goods and services, such as water, health care, education, sanitation, electricity, housing and transport, is low relative to other socioeconomic groups;
- b) household food insecurity, and the poverty to which it relates, if persistent, will severely compromise the ability of the Programa de Acção to achieve its goals of long term sustainable economic growth and poverty elimination;
- c) an understanding of household food security has important analytical strengths. Households participate, either as producers or consumers, in food markets more than any other markets. Over 70% of household budgets across all income classes are spent on food in Luanda. Any change, therefore, in the structure or performance of food markets can have important benefits or serious consequences for the ability of households to gain access to adequate food;
- d) food security is likely to have important consequences for political stability. Urban populations, in receipt of heavily subsidised food at the expense of both the rural producer and the exchequer, have been prepared to riot in the face of rising food prices and declining real incomes. Zambia, Zaire, Sudan, and Turisia are all countries in the region that have had to deal with the political consequences of food price reform.

2.3 Vulnerability and the Risk of Household Food Insecurity

The "risk" of households being able to achieve an adequate level of food availability is more difficult to quantify. The approach used in this paper (Section 5) attempts, in a structured yet informal way, to predict the likelihood that those factors which determine access or entitlement to food will worsen or improve. This requires an analysis of household income sources and expenditure patterns, and the estimation of the trend and variation in a range of different income sources and consumer prices. For example, consumer subsidies form a major part of income in some households. We can expect that for higher income households, the value of these subsidies will tend to fall as targeting improves. Some price and income effects, however, are more difficult to forecast. This can introduce some error in the estimate of risk in a food security analysis.

2.4 A Simple Framework for a Poverty and Food Security Analysis

Figure 1 shows diagrammatically the links between standards of living, food security, and their determinants. The concept of a "living standard" has had many different uses. For the purposes of this paper it will be taken as a household's level of full expenditure on all goods and services, food and nonfood. If the value of household expenditure falls below the poverty line then the household is said to be "moderately poor". Similarly, if it falls below the extreme Poverty Line, then the household is "extremely poor" (See Box 4). The four principal determinants of both poverty and household food insecurity are:

- i) the levels and variability of household income (See Fig.1 and Box 2). This includes income from wage employment, income from own production, income from rent and interest on land, physical and financial capital, and income from transfers or gifts that are received by the household either from other families or from institutions and government,
- ii) the levels and variability of retail prices. These include the prices of food and non-food goods and services available in the market,
- iii) the availability of services and goods provided by the state, often referred to as social infrastructure provision. These services include health care, education, hygiene and waste disposal, and arguably water and housing, although the latter are sometimes referred to as items of physical infrastructure provision,
- iv) the availability of services such as electricity supply, transport and communications, which are often supplied by the state in the context of physical infrastructure provision.

Figure 1

A SIMPLE FRAMEWORK FOR A POVERTY & FOOD SECURITY ANALYSIS



Box 2: The Economics of the Household & Real, Incomes

The economic theory of the household assumes that households attempt to maximize their happiness (utility) through the consumption of goods, services and leisure. Goods and services bought in the market are not necessarily goods and services that can be consumed immediately; they may be the bacessery ingredients or inputs which require transformation into a final consumption good. The production in the household of final consumption goods includes food preparation, house building, and social entertaining, as well as the production of good health (requiring inputs/ingredients of food, rest, madicines, hygienic environments, housing sto.) and education.

Time and available income therefore limit the ability of the household to improve its level of welfare. The scarcity of time limits the ability of households to generate incomes through employment or own production, and to produce commodities for final consumption. The scarcity of income limits the ability of the household to purchase goods and services in the market.

The ability of the household to purchase goods and services from the market depends upon:

- i) their money or nominal income,
- 11) the levels and value of their own production,
- 111) their income from rent or interest for capital or financial assets,iv) the value of gifts and transfers received from other households or
 - institutions, i.e. food gifts or food aid, and
- v) market prices:

Households in Luanda, in common with many urban areas, rely principally upon money or nominal incomes, the real values of which changes as market prices change. Thus, the low prices of the late 1980's increased the real incomes or purchasing power of households, whilst the expected price increases of the adjustment period, are likely to decrease real incomes.

Rural households that sell a proportion of their produce onto the market will find that their nominal incomes will increase. If the rise in nominal incomes of agricultural producers is greater than the rise in prices of the commodities that they consume, then their real incomes will increase.

The use of time by the household either for income generating activities, home production activities, or leisure and rest will depend upon the opportunity cost of that time. For example, if the wage rate increases, then the opportunity cost of time spent in child care or food preparation in the household will also increase. Activities in the household that are relatively time intensive will become relatively more expensive, and cheaper ways of achieving the same levels of consumption will be found. In the case of food preparation, households will switch to foods that are more easily processed, stored and cooked. In the case of child care, parents with a high opportunity cost to their time will try to substitute their time with that of young or old relatives who have a lower opportunity cost to their time.

Wage levels do not always determine the opportunity cost of time to the household. In households where a male income earner is made redundant, women not previously in employment may, in the absence of an income, place an increased cost on household production, activities and therefore increase the amount of time spent in searching for employment.

3 A FULL EXPENDITURE APPROACH TO POVERTY ANALYSIS

The previous section has outlined the use of expenditure based measures of welfare. The following sections use the flow diagram in Figure 1 to demonstrate how this approach can be applied to the classification and analysis of the poor in Luanda.

3.1 Interpreting the Poverty Tables

Many of the following sections contain three types of table. The first table in each grouping shows the distribution of poverty for a particular variable (i.e by bairro, by employment category, by household size). The second table in each category shows the contribution of each category of a variable (i.e. Bairro x, Employment y, Household Size z) to total extreme poverty, moderate poverty, or above poverty. For example, 12.9% (Table 4) of the population in Viana are extremely poor, and they constitute 6.8% (Table 5) of the extremely poor in Luanda.

The third and final table in each category calculates the poverty indices for each category of a variable. Three indices are used, as follows (see Box 3 for a technical description):

- P. indicates the proportion of the population of each category below the poverty line the higher the index, the greater the proportion below the poverty line. Thus, a P. of 0.053 indicates that 5.3% of the population in that category are below the poverty line; a P. of 0.29 indicates 29% of the population is below the poverty line,
- P1 indicates the intensity of poverty, i.e., the average gap between the expenditure of a poor individual in the category and the poverty line again the higher the index number the greater the poverty gap. Thus, a P1 index number of 0.129 indicates that the average gap between an individual's monthly expenditure and the poverty line is 12.9% of the poverty line, and a P1 index number of 0.064 indicates that the average "poverty gap" is 6.4% of the poverty line,
- P, is most sensitive to extreme poverty, but is difficult to understand intuitively. It is safe to assume that not all individuals below the poverty line have an expenditure exactly equal to the average "poverty gap"; some individuals are below the average gap and some are above. If we are more concerned about those individuals that are considerably below the average gap than those just below or just above, then we need to give greater weight to their poverty in the index. This additional "weight" is achieved in this index by squaring the "poverty gaps", i.e. squaring the proportion by which each individual's expenditure falls below the poverty line. Thus an individual who falls 10% below the poverty line has a P, index value of $0.1^2 = 0.01$, whilst an individual falling 20% below the poverty line has a P² index value of $0.2^2 = 0.04$. 0.04 is evidently greater than 0.01 - therefore greater degrees of poverty are weighted more than lesser degrees of poverty.

POVERTY AND FOOD INSECURITY IN LUANDA

Box 31 Poverty Indices: Technical Description

Three indices of poverty are used throughout this report. They describe the extent and intensity of poverty as discussed in the text. This box describes the mathematical formulation of the indices.

The poverty measures used in this report were developed by Foster, Greer and Thorbecke [1984]. The three measures used herein are all based upon a single formula, but each index puts a different weight on the degree to which a household/individual falls below the poverty line.

The formula for these measures is as follows:

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Γ	P -	1	Z-Y	<u>.</u>)*
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where z = the poverty line, q = the number of individuals below the poverty line, n = the total number of individuals in the group of interest, and $y_i =$ the household expenditure of the household in which individual i lives. The quantity in parentheses is the proportionate shortfall of income below the poverty line. This quantity is raised to a power x. By increasing the value of x, we increase the "aversion" to poverty as measured by the index. The parameter x takes on the values 0, 1, and 2 in the measures used, which we call P_0 , P_1 , and P_2 , respectively. The interpretation of these measures is as follows:

 $P_{0} = H = q/n$ is the proportion of the population that falls below the poverty line. This is sometimes known as the head count ratio. For example, if there are 10 poor people out of 100, the ratio H = 10/100 or 0.1.

 $P_1 = BI = q/n * (z-y)/z$ multiplies the proportion of the population below the poverty line, or H, times the income gap between the average poor person and the poverty line. Continuing the example, if each of the 10 poor people had an income of 50% of the poverty line, the poverty measure would be 10/100 * .5, which equals .05.

P, is the only of these three measures which weights the poverty of the poorest individuals more heavily than those only slightly below the poverty line. This is done by squaring the gap between their incomes and the poverty line in order to increase its weight in the overall poverty measure.

This class of poverty measures has a the advantage of being decomposable by any analytical sub-group, i.e., employment source, demographic structure, and recency of migration. This feature of these indices is the basis of the tables presented throughout the report (See Appendix IV). 3.2 Classifying the Poor and the Non-Poor: Determining the Poverty Lines

The data of Table 2 show two important points:

- i) the mean expenditure (per adult equivalent per month') from which it is possible to calculate the Poverty Line and the Extreme Poverty Line, and
- ii) the distribution of expenditure across population deciles, from which it is possible to gauge the degree of expenditure inequality within the population.

The calculation of poverty lines is the principal step in the classification of households and individuals into poor and non-poor categories. The Poverty and Extreme Poverty Lines (see Box 4) calculated from this table were Kz 33,056 and Kz 16,528 per adult equivalent per month, which are two-thirds and one-third of mean expenditure, respectively. 64.4% of the population fell above the poverty line, while 5.8% fell below the Extreme Poverty Line, and the remaining 29.8% of the population fell below the Poverty Line but above the Extreme Poverty Line.

It can be seen in that the poorest 10% of individuals have an **average** expenditure per adult equivalent per month of Kz 15,322, and for the highest expenditure decile, the figure is approximately 8.6 time greater at Kz 132,176. By international standards, this indicates a comparatively equitable distribution of expenditures.

Although approximately 35% of individuals are below the poverty line, Table 2 shows that a proportion of individuals are close enough to the poverty line such that moderate declines in their real incomes will make them poor.

Table 2

7

Mean Household Expenditure per Adult Equivalent per Month By Expenditure Decile

Expenditure Group	Mean Expenditure Per Adult Equivalent
Towest	(NWAIIZAS)
	15,522
Secona	22,819
Third	29,360
Fourth	35,550
Fifth	42.379
Sixth	49,904
Seventh	58,360
Eighth	68,871
Ninth	85,782
Highest	132,176
Overall Mean	49,584
Poverty Line	33,056
Extreme Poverty Line	16,528

See Technical Appendix I for a discussion of "adult equivalency".

Box 410/2 The Calculation of a Poverty Line

Methods for determining a poverty line fall into two categories;

- 1) methods based on absolute measures of poverty, and
- ii) methods based on relative poverty.saaaas
- ent mounter range en regenere portant/regener

Absolute measures of poverty assume that poverty exists when individuals or households are not able to acquire a specific level of consumption. Levels of consumption often used are those covering both food consumption and the consumption of basic needs, such as a given level of housing, sanitation, and water supply. The food basket approach, calculates the cost of acquiring a basic baskat of foodstuffs which will provide adequate calories for the individual or household. Some of the problems related to this approach, such as household/individual variability in calorie requirements, have already been discussed above. Three further difficulties with the food basket approach are:

- a) operational difficulties in adjusting the poverty line and value of the food basket when prices change. The retail price index does not usually adequately represent the commodities within the food basket, and so cannot be used as the deflator,
- b) individuals and households will make changes in their commodity bundle not only as prices increase or decrease, but also as relative prices changes. Thus rice, bread and dried fish might be amongst the principal commodities in a food basket for Luanda in 1991, but changes in relative prices, particularly those of the starchy staples, may mean that by 1993 the food basket should contain fuba, maize grains, and beans.
- c) the food basket approach, and the absolute approaches more generally, do not take account of self-esteem or self-perception in the persistence of poverty. It can be argued that poverty is as much about relative poverty to others in society as it is about failure to reach a minimum standard of living. Households and individuals may achieve a material standard of living and still remain poor as a result of exclusion from participation in wider society.

Relative measures of poverty attempt to overcome some of the methodological weaknesses of absolute approaches by selecting a poverty line relative to the standard of living of the whole population. There are two advantages to this approach. First, poverty is a relative concept, and the poor judge themselves according to the standard of living of others within their own society. This has direct bearing on the political acceptability of alternative policies that may directly or indirectly affect the standards of living of the poor.

Second, relative measures of poverty correspond to the resources available within a society to address poverty. Although certain standards of housing, education, and medical cars may be deemed to be minimum acceptable levels, if the resources required to reach these levels are wall beyond the available means to achieve them, the measures of absolute poverty have little policy significance. Relative measures of poverty always correspond to the living standards of the society as a whole, and therefore correspond to the resources available to address the poverty problem. Figure 2

Pobreza: Indice P2



Table 4 compares the rates of Moderate Poverty and Extreme Poverty against the contribution of each bairro to the total estimated population of the bairros. If Moderate Poverty and Extreme Poverty were evenly distributed across bairros we would expect that the three left hand columns would approximate the proportions in the right hand column. Cazenga and Viana, for example have unexpectedly high levels of extreme poverty. Cazenga contributes 22.5% of total Extreme Poverty, whilst it only contributes to 14.4% of the total population of the 16 bairros. In Viana the contribution to Extreme Poverty is 6.8%, whilst their contribution to the population is less than half of that, i.e. 3.1%.

Table 6 uses the Poverty Indices to denote the different levels of poverty in each bairro. It is important to note how the poverty ranking of bairros changes as the index changes. If poverty elimination has a high priority in policy design (Index P2), then Viana has the highest priority for resource allocation. If the proportion that are poor (Index P0) is considered to be more important than the intensity of poverty, then Terra Nova is the bairro that has the highest priority for resource allocation. Table 3 ranks the poorest and the least poor bairros using index P2. Map 1 gives a geographic representation of the same ranking.

Table 3

Location of Poverty by Bairro: Index P2

Rank Order	Poorest Bairros	Least Poor Bairros
1.	Viana	Cuca
2.	Rangel	N'gola Kiluanje
3.	Terra Nova	Ilha do Cabo
4.	Cazenga	Bairro Popular
5.	Golfe	Marcal

Table 4

Bairro by Poverty Group

		POVERTY GROUP	POVERTY GROUP		
	Above	Extreme	Moderate		
	Poverty Line	Poverty	Poverty		
	Percent	Percent	Percent	Percent	
Bairro					
Kassequel	70.28	4.3%	25.5%	100.0%	
Prenda	61.48	5.3%	33.3%	100.0%	
Ilha do Cabo	78.48	5.6%	16.0%	100.0%	
Kinanga	60.1%	5.6%	34.38	100.0%	
Marçal	68.1%	3.7%	28.2%	100.0%	
Terra Nova	50.1%	3.7%	46.28	100.08	
Rangel	54.0%	7.9%	38.1%	100.0%	
N'gola Kiluanji	72.5%	1.1%	26.5%	100.0%	
Sambizanga	66.48	6.4%	27.28	100.0%	
Bairro Operario	61.2%	7.78	31.18	100.0%	
Bairro Popular	69.18	1.6%	29.48	100.0%	
Golf	57.8%	7.28	35.1%	100.0%	
Tala Hadi	67.0%	9.0%	24.0%	100.0%	
Cazenga	62.08	9.18	28.98	100.0%	
Cuca	79.38	2.5%	18.2%	100.0%	
Viana	57.78	12.98	29.48	100.0%	

Distribution of Poverty by Bairro

		POVERTY GROU	P	Total
	Above	Extreme	Moderate	
	Poverty Line	Poverty	Poverty	
	Percent	Percent	Percent	Percent
Bairro				
Kassequel	6.9%	4.78	5.4%	6.3%
Prenda	10.3%	9.9%	12.1%	10.8%
Ilha do Cabo	1.9%	1.5%	.8%	1.6%
Kinanga	1.0%	1.0%	1.2%	1.0%
Marcal	2.7%	1.6%	2.4%	2.5%
Terra Nova	4.8%	3.9%	9.6%	6.2%
Rangel	5.1%	8.2%	7.8%	6.1%
N'gola Kiluanji	5.8%	1.0%	4.6%	5.2%
Sambizanga	9.1%	9.7%	8.1%	8.8%
Bairro Operario	4.68	6.5%	5.1%	4.9%
Bairro Popular	7.3%	1.9%	6.7%	6.8%
Golf	7.3%	10.1%	9.7%	8.2%
Tala Hadi	4.38	6.48	3.4%	4.28
Cazenga	13.9%	22.5%	14.08	14.48
Cuca	12.28	4.28	6.1%	9.9%
Viana	2.88	6.8%	3.0%	3.1%
Total	100.0%	100.0%	100.0%	100.0%

Table 6

Poverty Indices by Bairro

	Valid Cases	Percent of Total	Poverty Index P.	Poverty Index P.	Poverty Index P.	Percent of All P, Poverty
Bairro		•	•	•		• •
Kassequel	531	6.3	0.298	0.100	0.039	5.2
Prenda	909	10.8	0.386	0.117	0.050	11.4
Ilha do Cabo	133	1.6	0.216	0.060	0.031	1.0
Kinanga		1.0	0.399(5)	0.107	0.045	1.0
Marcal	212	2.5	0.319	0.089	0.032	1.7
Terra Nova	521	6.2	0.499(1)	0.156(3)	0.062(3	5 8.0
Rangel	511	6.1	0.460(2)	0.164(2)	0.073(2	9.3
N'gola Kiluanji	435	5.2	0.275	0.065	0.023	2.5
Sambizanga	739	8.8	0.336	0.099	0.041	7.5
Bairro Operario	408	4.9	0.388	0.127(5)	0.058	5.9
Bairro Popular	570	6.8	0.309	0.086	0.032	4.5
Golf	688	8.2	0.422(4)	0.135(4)	0.059(5	10.0
Tala Hadi	351	4.2	0.330	0.114	0.053	4.6
Cazenga	1211	14.4	0.380	0.126	0.060/4	1 18.1
Cuca	829	9.9	0.207	0.053	0.020	4.2
Viana	259	3.1	0.423(3)	0.168(1)	0.081(1) 5.2
Total	8396	100.0	0.356	0.111	0.048	100.0

Numbers in brackets indicate poverty rankings, i.e., (1) - poorest, (2) - second poorest.

3.4 Household Characteristics of the Poor

The age and sex of the household head, household size, household dependency ratio, education, migrancy, and ethnicity can all be associated with poverty. These household characteristics are interrelated and the causality is complex. For example, the incidence of female headed households, family size, and in some cases poverty itself can result from low levels of education, recent migration, or discrimination against particular ethnic groups. This section reviews some of the poverty related human asset characteristics of Luandan households.

3.4.1 Household Characteristics of the Poor: Household Size and Structure

Tables 7 to 9 show that the calorie based dependency ratio (i.e. the ratio of householders not of income earning age to those who are of income earning age) does not appear to be closely related to poverty. However households with a dependency ratio of between 1 and 2 have (e.g. two adults and four young children) have both a high incidence and intensity of poverty. However 50% of those in Extreme Poverty have a dependency ratio of less than 1, and 82% have a dependency ratio of less than 2.

Table 7

Distribution of Poverty Indices by Dependency Ratios

	Percent of Total	Poverty Index P0	Poverty Index Pl	Poverty Index P2
Dependency Ratio				
<= 1.00	45.235	.34786	.10437	.04577
1.00 - 2.00	39.585	.38394	.12273	.05113
2.00 - 3.00	10.081	.29792	.10170	.04652
3.00 - 4.00	2.506	.34625	.13102	.06393
4.00 - 5.00	.877	.23399	.06352	.02425
5.00 - 6.00	1.717	.37529	.10421	.04270
Total	100.000	.35654	.11168	.04818

Table 8

Dependency Ratio by Poverty Group

	Above Poverty Line	POVERTY Extreme Poverty	Moderate Poverty	Total
Dependency Ratio				
<= 1.00	65.2%	6.4%	28.3%	100.0%
1.00 - 2.00	61.6%	4.78	33.7%	100.0%
2.00 - 3.00	70.2%	5.4%	24.4%	100.0%
3.00 - 4.00	65.48	11.2%	23.4%	100.0%
4.00 - 5.00	76.68		23.4%	100.0%
5.00 - 6.00	62.5%	12.8%	24.8%	100.0%
Total	64.3%	5.8%	29.8%	100.0%

Table 9 Di	stribution of Poverty	y by Depende	ency Ratio	
	Above Poverty Line	POVERTY Extreme Poverty	Moderate Poverty	Total
Dependency Ratio				
<= 1.00 $1.00 - 2.00$ $2.00 - 3.00$ $3.00 - 4.00$ $4.00 - 5.00$ $5.00 - 6.00$	45.8% 37.9% 11.0% 2.5% 1.0% 1.7%	50.1% 31.9% 9.4% 4.8% 3.8%	43.08 44.78 8.28 2.08 .78 1.48	45.2% 39.6% 10.1% 2.5% .9% 1.7%
Total	100.0%	100.0%	100.0%	100.0%

Tables 10 to 12 show that large households are more likely to be living in Moderate Poverty or Extreme Poverty than smaller households. Table 10 shows that not only is the proportion below the Poverty Line higher as household size gets larger, but so is the intensity and depth of poverty. For example 50% of households of between 10 and 12 members are below the poverty line.

Table 10

Distribution of Poverty Indices by Household Size

	Percent of Total	Poverty Index P0	Poverty Index Pl	Poverty Index P2
Household Size				
<= 2.00	1.706	.13891	.07002	.03884
4.00 - 6.00	8.457	.27229	.05418	.02356
6.00 - 8.00 8.00 - 10.00	23.309 20.417	.32848 .33682	.10220 .09232	.04362 .03586
10.00 - 12.00 12.00 - 14.00	12.506	.49782	.14168	.05948
14.00 - 16.00	3.721	.53528	.21017	.09653
>= 19.00	1.950	.40081	.14908	.05956
Total	100.000	.35569	.11138	.04806

TADIG II	Household Ŝize b	y Poverty Gr	oup	
	Above Poverty Line	POVERTY Extreme Poverty	Moderate Poverty	Total
Household Size				
<= 2.00	86.1%	5.3%	8.6%	100.0%
2.00 - 4.00	82.2%	4.28	13.6%	100.0%
4.00 - 6.00	72.8%	3.98	23.3%	100.0%
6.00 - 8.00	67.2%	4.8%	28.0%	100.0%
8.00 - 10.00	66.3%	5.0%	28.7%	100.0%
10.00 - 12.00	50.2%	5.4%	44.48	100.0%
12.00 - 14.00	47.0%	12.5%	40.5%	100.0%
14.00 - 16.00	46.5%	13.8%	39.7%	100.0%
16.00 - 19.00	52.1%	12.3%	35.6%	100.0%
>= 19.00	59.9%		40.18	100.0%
Total	64.4%	5.8%	29.8%	100.0%

Table 11

Distribution of Poverty by Household Size

		POVERTY		Total
	Above	Extreme	Moderate	
	Poverty	Poverty	Poverty	
	Line			
Household Size				
<= 2.00	2.3%	1.6%	.5%	1.7%
2.00 - 4.00	10.8%	6.1%	3.9%	8.5%
4.00 - 6.00	19.0%	11.2%	13.2%	16.8%
6.00 - 8.00	24.38	19.3%	22.0%	23.3%
8.00 - 10.00	21.0%	17.6%	19.78	20.4%
10.00 - 12.00	9.78	11.5%	18.7%	12.5%
12.00 - 14.00	5.6%	16.5%	10.4%	7.7%
14.00 - 16.00	2.78	8.8%	5.0%	3.7%
16.00 - 19.00	2.8%	7.4%	4.28	3.5%
>= 19.00	1.8%		2.68	2.0%
Total	100.0%	100.0%	100.0%	100.0%

3.4.2 Household Characteristics of the Poor: Gender of Head of Household

Surprisingly, there appear to be only slight differences in poverty levels between households with male heads or female heads. Female headed households have a 40% chance of falling below the poverty line, while male headed households have a 35% chance. The intensity and depth of poverty amongst poor female headed households are also greater than poor male headed households.

Gender of Household Head by Poverty Group

		Total		
	Above Poverty Line	Extreme Poverty	Moderate Poverty	
Cender of household head	Percent	Percent	Percent	Percent
Female	59.98	6.7%	33.38	100.0%
Male	65.1%	5.8%	29.28	100.0%

Table 14

Distribution of Poverty by Gender of Household Head

		Total		
	Above Poverty Line	Extreme Poverty	Moderate Poverty	
Gender of household head	Percent	Percent	Percent	Percent
Female	14.3%	17.9%	17.2%	15.4%
Male	83.4%	82.1%	81.0%	82.6%
Total	97.8%	100.0%	98.2%	98.0%

Table 15		Peverty India	es by Gender	of Nead of Ne	uscheld	
	Valid Cases	Percent of Total	Poverty Index P,	Poverty Index P ₁	Poverty Index P,	Percent of All P, Poverty
Gender of household head						
Female	1293	15.7	0.401	0.124	0.053	17.2
Male	6939	84.3	0.349	0.109	0.047	82.8
Total	8231	100.0	0.357	0.111	0.048	100.0

3.4.3 Household Characteristics of the Poor: Age of Household Head

The age of the head of household can be associated with a number of features of a household's stock or portfolio of human assets. These features might include an indication of the age structure of the household, with young heads of households having smaller families with a young average age, whilst older heads of households might be expected to have larger families with a higher average age. Similarly, the age of the head of household may be associated with some aspects of the productivity and the self-perception of the household. For example, older heads of household may have wider opportunities for information gathering through long established contacts that enable income generating opportunities to be developed. On the other hand, their education levels may be low and their work experience and skills may be inappropriate to the demands of a changing economy, thereby reducing their opportunities for income generation.

Tables 16 to 18 show two contrasting trends. Firstly, households with older heads of households are more likely to be below the Poverty Line, with 40.2 percent of individuals in households with a head of 60 years or older falling below the Poverty Line, as compared with to 31.7 percent of individuals in households with a head between 20 and 24. On the other hand, Extreme Poverty is worst amongst households with young household heads. These trends combine such that the overall P2 poverty index is the same for the younger (20 to 34 years) and older (60 years and over) headed households, but less for those households with heads between 35 and 59 years inclusive.

Table 16

Age of Household Head by Poverty Group

	Above Poverty Line	POVERTY GROU Extreme Poverty	P Moderate Poverty	Total
	Percent	Percent	Percent	Percent
Groupo de Idades				
Idade 7 - 14	100.0%			100.0%
Idade 15 - 19	100.0%			100.0%
Idade 20 - 34	68.3%	7.48	24.38	100.0%
Idade 35 - 44	63.78	5.1%	31.2%	100.0%
Idade 45 - 59	61.3%	5.9%	32.8%	100.0%
Idade >59	59.8%	4.9%	35.3%	100.0%

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Table 17
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Distribution of Poverty by Age of Household Head

	POVERTY GROUP			Total
	Above	Extreme	Moderate	
	Poverty Line	Poverty	Poverty	
	Percent	Percent	Percent	Percent
Groupo de Idades				
Idade 7 - 14	.18			.0%
Idade 15 - 19	.2%			.18
Idade 20 – 34	31.6%	36.7%	24.1%	29.7%
Idade 35 - 44	31.2%	26.7%	32.8%	31.4%
Idade 45 - 59	29.6%	30.3%	33.8%	30.9%
Idade >59	7.38	6.3%	9.2%	7.8%
Total	100.0%	100.0%	100.0%	100.0%

Table 18		Poverty Ind	ices by Age (f Need of Nov	sehold	
	Valid Cases	Percent of Total	Poverty Index P.	Poverty Index P.	Poverty Index P.	Percent of All P. Poverty
Groupo de Idades						
Idade 7 - 14	3	0.0				
Idade 15 - 19	12	0.1				
Idade 20 - 34	2407	29.7	0.317	0.112	0.053	32.3
Idade 35 - 44	2548	31.4	0.363	0.106	0.044	28.5
Idade 45 - 59.	2504	30.9	0.387	0.116	0.048	30.7
Idade >59	633	7.8	0.402	0.123	0.053	8.6
Total	8106	100.0	0.359	0.112	0.048	100.0

3.4.4 Household Characteristics of the Poor: Recency of Migration

Although a complete analysis of the patterns of migration to Luanda has not been undertaken, it appears that these patterns are not comparable to many of those elsewhere in Southern Africa. Whole households appear to have migrated POVERTY AND FOOD INSECURITY IN LUANDA

to Luanda rather than particular individuals. Furthermore, there appear to be very limited flows of remittances from Luanda to the other regions of the country.

Nevertheless, recency of migration raises issues similar to those as the age of the head of the household. Given the conditions of insecurity, it would appear likely that recent migrants to Luanda arrive with few assets and little basis for income generation, either through employment opportunities or through own production opportunities in the informal sector. Over time, as knowledge about income generating opportunities increases household incomes will also tend to increase. However the evidence of Tables 19 to 21 appears to controvert this with recent migrants being less poor than more long term residents. At least two possible interpretations or scenarios appear reasonable:

- Scenario 1: households arrive in Luanda with some assets or are given transfers such as resettlement grants, both of which enable them to support a standard of living which on average is higher than the poverty line. After some years, as the value of their assets and the availability of transfers declines, these sources of income are not fully replaced with alternative sources, and real standards of living begin to fall,
- Scenario 2: households migrating to Luanda in recent years have been able to exploit employment and income generating opportunities more successfully than longer term residents and are therefore able to maintain a higher standard of living.

Table 19

Recency of Migration by Poverty Group

	Above Poverty Line	POVERTY GROUP Extreme Poverty	Moderate Poverty	Total
Tempo mudou para Luanda	Percent	Percent	Percent	Percent
< 1 year 1 – 5 years >= 5 years Always in Luanda	1.5% 4.5% 29.8% 61.8%	2.5% 29.9% 62.6%	3.3% 25.8% 68.3%	1.0% 4.0% 28.4% 63.8%
Total	97.6%	95.0%	97.4%	97.4%

Table 20

Distribution of Poverty by Recency of Migration

	POVERTY GROUP		
Abov Pover Line	reExtremectyPoverty	Moderate Poverty	
Perce Tempo mudou para Luanda	ent Percent	Percent	Percent
< 1 year 100	.0%		100.0%
1 - 5 years 72	.3% 3.7%	24.1%	100.0%
>= 5 years 67	.18 6.18	26.8%	100.0%
Always in Luanda 62	.48 5.78	31.9%	100.0%

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Poverty Indices by Recency of Higration

	Valid Cases	Percent of Total	Poverty Index P,	Poverty Index P,	Poverty Index P,	Percent of All P, Poverty
Tempo mudou para Luanda						
< 1 year	62	.97				
1 - 5 years	338	4.03	. 277	.091	.037	
>= 5 years	2406	28.66	. 329	.104	.046	
Always in Luanda	5354	63.76	. 376	.117	. 050	
Total	8180	97.423	. 354	.111	.048	

3.4.5 Household Characteristics of the Poor: Levels of Functional Literacy

Functional literacy⁸, not unexpectedly, appears to be higher than the national average at 73.3% as opposed to 41%⁹. However those who reported themselves as being functionally illiterate appear to be only slightly more poor than individuals with functional literacy (see Tables 22 and 24). This may well be indicative of a number of factors related to both the supply and the demand for education. On the demand side, it may well be that the benefits of education are not adequately rewarded in the labour market by increased incomes.

Table 22

Literacy of Household Head by Poverty Group

		Total		
	Above Poverty Line	Extreme Poverty	Moderate Poverty	
Sabe ler o jornal	Percent	Percent	Percent	Percent
Näo Sim	58.8% 65.5%	7.3% 5.7%	34.0% 28.8%	100.0% 100.0%

Table 23

Distribution of Poverty by Literacy of Household Head

	POVERTY GROUP			Total
	Above Poverty Line	Extreme Poverty	Moderate Poverty	
Sabe ler o jornal	Percent	Percent	Percent	Percent
Não	20.9%	28.6%	26.18	22.9%
Sim	74.5%	71.48	70.98	73.3%
Total	95.4%	100.0%	97.0%	96.1%

⁸ Data was collected on self-reported functional literacy and not objectively tested functional literacy.

Data for 1985 in World Bank <u>World Development Report 1990</u>, Oxford University Press, 1990.

Table 24		Poverty Indices and Functional Literacy				
Vali	Valid Cases	Percent of Total	Poverty Index P.	Poverty Index P.	Poverty Index P ₁	Percent of All P, Poverty
Sabe ler o jornal Não Sim	1920 6151	23.0 76.2	0.412 0.345	0.132 0.106	0.057 0.046	27.9 72.1
Total	8072	100.0	0.361	0.113	0.049	100.0

3.4.6 Household Characteristics of the Poor: Linguistic and Ethnic Background

Linguistic and ethnic background can be associated with poverty in a number of different ways. At the community level, particular ethnic groups may be discriminated against positively or negatively in income generating opportunities. At the household level, ethnic differences in child care and health care practices can be the cause of significant inter-ethnic differences in levels of health.

No direct questions on ethnicity were posed in the survey. However, two questions, the language most frequently used in the household and the birthplace of the head of household, give some indication of the likely ethnic origin of the household.

Tables 25 to 27 show that there are distinct patterns of poverty related to the language spoken in the household. There are four main languages spoken in Luanda, Kimbundo (53.5 percent of all individuals), Portuguese (27.6 percent), Kikongo (11.3 percent) and Umbundo (5.2 percent). Of these four, the highest rates of poverty are found amongst the Umbundo and Kimbundo speakers, whilst considerably lower rates of poverty are found amongst the Kikongo and Portuguese speakers. Amongst Umbundo speakers, Extreme Poverty is very high at 12.5%.

Further evidence of ethnic differences in poverty are seen in Tables 28 to 30, with significantly high poverty levels amongst individuals whose household head was born in either Huambo, Kwanza Norte or Kwanza Sul. This would appear to support the linguistic evidence of Tables 25 to 27. Poverty levels from three other Provinces appear to be particularly high, but because of the very small sample size for these populations, the poverty related results should not be taken as reflecting a true position for that group.

Table 25

Language Spoken by Poverty Group

I	Above Poverty Line	POVERTY GROUP Extreme Poverty	Moderate Poverty	Total
	Percent	Percent	Percent	Percent
Linqua fala em familia				
Kikongo	68.6%	4.7%	26.7%	100.0%
Kimbundo	58.9%	6.8%	34.3%	100.0%
Umbundo	53.8%	12.5%	33.7%	100.0%
Cokwé	43.0%	6.4%	50.7%	100.0%
Lingala	100.0%	•		100.0%
Portugues	75.28	3.3%	21.4%	100.0%
Outros	68.4%		31.6%	100.0%

Tab	le	26
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	Distribution	Total		
	Above Poverty Line	Extreme Poverty	Moderate Poverty	
	Percent	Percent	Percent	Percent
Lingua fala em familia				
Kikongo	11.8%	9.0%	10.0%	11.1%
Kimbundo	48.1%	61.6%	60.6%	52.6%
Umbundo	4.3%	11.0%	5.8%	5.1%
Cokwé	.68	.9%	1.4%	.8%
Lingala	1.6%			1.0%
Portugues	31.78	15.6%	19.5%	27.18
Outros	.5%		.5%	.58
Total	98.6%	98.2%	97.9%	98.3%

Table 27		Poverty	Indices by :	Language Spoke	n	
	Valid Cases	Percent of Total	Poverty Index P.	Poverty Index P ₁	Poverty Index P,	Percent of All P, Poverty
Lingua fala em familia						
Kikongo	934	11.3	0.314	0.091	0.037	8.6
Kimbundo	4414	53.5	0.411	0.128	0.056	61.5
Umbundo	431	5.2	0.462	0.184	0.089	9.6
Cokvé	70	0.8	0.570	0.163	0.061	1.1
Lingala	16	1.0				0.0
Portugues	2279	27.6	0.248	0.077	0.033	18.8
Outros	43	0.5	0.316	0.106	0.041	0.4
Total	8257	100.0	0.354	0.112	0.048	100.0

Birthplace of Household Head by Poverty Group

	POVERTY GROUP		
Above	Extreme	Moderate	
Poverty Line	Poverty	Poverty	
Percent	Percent	Percent	Percent
Provincia de nascimento			
do chefe do agregado			
Cabinda 100.0%			100.0%
Zaire 78.3%		21.78	100.0%
Uige 72.9%	4.98	22.28	100.0%
Kwanza Norte 57.4%	5.5%	37.18	100.0%
Kwanza Sul 56.6%	12.8%	30.5%	100.0%
Malanje 67.3%	6.78	26.18	100.08
Lunda Norte 41.8%	6.3%	51.98	100.0%
Benguela		100.0%	100.0%
Huambo 52.4%	5.6%	42.08	100.0%
Bie 49.5%	31.48	19.18	100.0%
Moxico 31.3%		68.7%	100.0%
Kuando Kubango		100.0%	100.08
Namibe 100.0%			100.0%
Huila 100.0%			100.0%
Cunene	100.0%		100.08
Lunda Sul 100.0%			100.0%
Bengo 65.8%	3.5%	30.8%	100.0%
Luanda 66.2%	5.2%	28.6%	100.0%
Estrangeiro 68.1%	4.48	27.6%	100.0%

Distribution of Poverty by Birthplace of Household Head

	POVERTY GROUP			Total
	Above	Extreme	Moderate	
	Poverty Line	Poverty	Poverty	
	Percent	Percent	Percent	Percent
Provincia de nascimento do chefe do agregado				
Cabinda	.28			.18
Zaire	4.3%		2.6%	3.5%
Uige	11.0%	8.2%	7.3%	9.7%
Kwanza Norte	11.5%	12.3%	16.0%	12.9%
Kwanza Sul	5.7%	14.4%	6.7%	6.5%
Malanje	20.4%	22.5%	17.1%	19.6%
Lunda Norte		1.3%	2.1%	1.2%
Benguela			.48	.18
Huambo	3.1%	3.78	5.4%	3.8%
Bie	1.0%	6.8%	.8%	1.3%
Moxico	.18		.5%	.2%
Kuando Kubango			.18	.08
Namibe	.18			.18
Huila	.48			.2%
Cunene		.98		.18
Lunda Sul	.3%			.2%
Bengo	21.5%	12.6%	21.8%	21.1%
Luanda	16.8%	14.5%	15.7%	16.3%
Estrangeiro	1.4%	1.0%	1.2%	1.3%
Total	98.6%	98.2%	97.98	98.3%

Table 30	Pe	overty Indices	by Birthpla	ce of Head of	Household	
	Valid Cases	Percent of Total	Foverty Index P.	Poverty Index P.	Poverty Index P.	Percent of All
Provincia de nascimento do chefe do agregado					,	-,,
Cabinda	12	0.1				
Zaire	295	3.6	0.217	0.044	0.012	0.9
Uige	817	9.9	0.271	0.083	0.036	7.3
Kwanza Norte	1080	13.1	0.426	0.136	0.057	15.4
Kwanza Sul	546	6.6	0.434	0.155	0.075	10.3
Malanje	1643	19.9	0.327	0.096	0.042	17.5
Lunda Norte	103	1.2	0.582	0.153	0.056	1.4
Benguela	11	0.1	1.000	0.126	0.020	0.1
Huambo	323	3.9	0.476	0.157	0.070	5.7
Bie	106	1.3	0.505	0.260	0.140	3.7
Noxico	19	0.2	0.687	0.219	0.071	0.3
Kuando Kubango		0.0	1.000	0.008	0.000	0.0
Namibe	i i	0.1				0.0
Buila	19	0.2				0.0
Cunene		0.1	1.000	0.592	0.350	0.4
Lunda Sul	18	0.2				0.0
Bengo	1771	21.5	0.142	0 100	0.040	17.9
Tuanda	1177	16 6	0 119	0 110	0.043	19 4
Estrangeiro	109	1.3	0.319	0.084	0.030	0.8
Total	8257	100.0	0.354	0.112	0.048	100.0

3.5 Poverty and the Distribution of Social Infrastructure

Social Infrastructure is often used to refer to the community or state provision of services such as health care, education, housing, sanitation and waste disposal. In this section, we refer to the availability and quality of items of social infrastructure at the household level, and their relation to poverty. This reflects the degree of coverage of goods and services that have

been publicly provided or subsidised, and reflects the resources available to some types of household.

Poor quality of housing and unavailability of running water and sanitation services are both correlates and contributors to poverty. Poor households do not usually have the resources to afford good quality and uncongested housing with access to regular sanitation services and running water. Likewise, by increasing the risks of disease and ill-health, poor social infrastructure risks a perpetuation of poverty through loss of time for income generating activities.

3.5.1 Housing

Table 31 shows that 94% of the Extreme Poor and 95% of the Moderate Poor live in either Vivendas (modern, European style housing with good finishing), Casas Traditionais: Definitivas (walls made of brick or cement blocks, roofs of corrugated iron or "lusalite"), or Casas Traditionais: Não Definitivas (mud walls and roofing in a variety of non-rigid materials i.e. woven mats, thatch). However, Table 32 shows that type of housing is not necessarily a good indicator of poverty status, as approximately 60% of the population living in the same categories of housing are above the poverty line. Households living in Quartos (single rooms in a larger house) are more likely to be poor, with 52% below the Poverty Line (Table 32) and 23% below the Extreme Poverty Line. However, less than 1% of Luanda population lives in Quartos.

Table 31

Distribution of Poverty by Housing Type

POVERTY GROUP			
Extreme	Moderate		
y Poverty	Poverty		
t Percent	Percent	Percent	
8 6.18	18.1%	13.8%	
8 45.48	42.5%	47.1%	
8 42.28	34.28	32.6%	
8	1.4%	2.98	
8.68	1.0%	1.1%	
8 3.68	.98	.98	
8 2.18	1.2%	1.3%	
100.08	99.3%	99.6%	
	POVERTY GRO Extreme y Poverty 1 Percent 8 6.18 8 45.48 9 42.28 9 42.28 9 3.68 9 3.68 9 2.18 9 100.08	POVERTY GROUP Extreme Moderate Poverty Poverty At Percent Percent % 6.1% 18.1% % 6.1% 18.1% % 45.4% 42.5% % 42.2% 34.2% % 6% 1.0% % 6% 1.0% % 2.1% 1.2% % 100.0% 99.3%	

Table :	3	2
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Housing Type by Poverty Group

	Above Poverty Line	POVERTY GROU Extreme Poverty	P Moderate Poverty	Total
	Percent	Percent	Percent	Percent
Tipo de habitação				
Vivenda	58.2%	2.6%	39.2%	100.0%
Casa trad.:definitiva Casa	67.6%	5.6%	26.8%	100.0%
trad.:näo-definitiva	61.2%	7.5%	31.3%	100.0%
Apartamento	85.5%		14.5%	100.0%
Anexo	69.9%	3.0%	27.18	100.0%
Quarto	47.5%	23.48	29.2%	100.0%
Outros	64.6%	9.2%	26.28	100.0%

Table 33

Poverty Indices by Type of Housing

Valid Cases	Percent of Total	Poverty Index P.	Poverty Index P ₁	Poverty Index P ₁	Percent of All P, Powerty
1156	13.8	0.418	0.107	0.041	11.9
3957	47.3	0.324	0.102	0.044	43.4
2733	32.7	0.388	0.132	0.058	39.9
241	2.9	0.145	0.017	0.003	0.2
91	1.1	0.301	0.048	0.020	0.4
75	0.9	0.525	0.215	0.137	2.6
111	1.3	0.354	0.141	0.060	1.7
8365	100.0	0.355	0.111	0.048	100.0
	Valid Cases 1156 3957 2733 241 91 75 111 0365	Valid Cases Percent of Total 1156 13.8 3957 47.3 2733 32.7 241 2.9 91 1.1 75 0.9 111 1.3 8365 100.0	Valid Cases Percent of Total Poverty Index P, 1156 13.0 0.410 3957 47.3 0.324 2733 32.7 0.300 241 2.9 0.145 91 1.1 0.301 75 0.9 0.523 111 1.3 0.354	Valid Cases Percent of Total Poverty Index P, Total Poverty Index P, Index P, 1156 13.8 0.418 0.107 3957 47.3 0.324 0.102 2733 32.7 0.388 0.112 241 2.9 0.145 0.007 91 1.1 0.301 0.048 75 0.9 0.525 0.215 111 1.3 0.354 0.141 8365 100.0 0.355 0.111	Valid Cases Percent of Total Powerty Index P, Powerty Index P, Powerty Index P, 1156 13.8 0.418 0.107 0.041 3957 47.3 0.324 0.102 0.046 2733 32.7 0.386 0.132 0.058 241 2.9 0.145 0.017 0.003 91 1.1 0.301 0.048 0.020 75 0.9 0.525 0.1215 0.137 111 1.3 0.354 0.141 0.060 8365 100.0 0.3355 0.111 0.048

Table 34 shows that poverty increases as the number of householders per bedroom increases. Households with one person per bedroom have only 11% of their population below the poverty line, whilst households where over 6 are sharing a single bedroom have a poverty rate of over 56%. Indices P1 and P2 follow the same, approximately linear, trend. 90% of the Extreme Poor and 80% of the Moderate Poor have more than two householders per bedroom.

Table 34 Distribution of Poverty Indices by Number of Individuals per Bedroom

	Percent of Total	Poverty Index P0	Poverty Index Pl	Poverty Index P2
NO. OF INDIVID.S PER BEDROOM				
<= 1.00	2.901	.11385	.03853	.01575
1.00 - 2.00	25.543	.24506	.06907	.02762
2.00 - 3.00	29.315	.33771	.10694	.04824
3.00 - 4.00	18.789	.39544	.11378	.04693
4.00 - 5.00	10.150	.47564	.17311	.08155
5.00 - 6.00	5.580	.42980	.15292	.06430
> 6.00	7.721	.56024	.17480	.07345
Total	100.000	.35472	.11109	.04801

Table 35 Poverty	y and Number of	Individuals	per Bedroom	
	Above Poverty Line	POVERTY Extreme Poverty	Moderate Poverty	Total
NO. OF INDIVID.S PER	ι			
BEDROOM	00 69	40	11 09	100 08
<= 1.00	88.08	.48	11.08	100.08
1.00 - 2.00	75.5%	2.28	22.3%	100.0%
2.00 - 3.00	66.2%	7.5%	26.3%	100.0%
3.00 - 4.00	60.5%	5.3%	34.28	100.0%
4.00 - 5.00	52.4%	14.18	33.4%	100.0%
5.00 - 6.00	57.08	5.78	37.38	100.0%
> 6.00	44.08	3.7%	52.3%	100.0%
Total	64.5%	5.8%	29.78	100.0%

Table 36 Distribution of Poverty by Number of Individuals per Bedroom

	Above Poverty Line	POVERTY Extreme Poverty	Moderate Poverty	Total
NO. OF INDIVID.S PER				
BEDROOM				
<= 1.00	4.0%	.28	1.18	2.98
1.00 - 2.00	29.98	9.7%	19.2%	25.5%
2.00 - 3.00	30.1%	37.8%	26.0%	29.3%
3.00 - 4.00	17.6%	17.2%	21.7%	18.8%
4.00 - 5.00	8.2%	24.68	11.4%	10.2%
5.00 - 6.00	4.98	5.4%	7.0%	5.6%
> 6.00	5.3%	4.9%	13.6%	7.7%
Total	100.0%	100.0%	100.0%	100.0%

3.5.2 Access to Water and Basic Sanitation

Although the data from Tables 37 to 42 indicate the unexpectedly high coverage of access to basic water and latrines and the small differences in this access between poverty groups, it appears likely that there is considerable unreported differentials in the availability of water in the taps and differentials in the usage of latrines (as opposed to their availability).

Table 37	Availability of	Running Water	by Poverty	Group
	Above Poverty Line	POVERTY GROU Extreme Poverty	P Moderate Poverty	Total
Aqua corrente da r Não Sim	Percent ede 63.2% 68.8%	Percent 6.9% 3.2%	Percent 30.0% 28.0%	Percent 100.0%

Distribution of Poverty by Availability of Water

	POVERTY GROUP			Total
	Above Poverty Line	Extreme Poverty	Moderate Poverty	
Aqua corrente da rede	Percent	Percent	Percent	Percent
Não	70.7%	85.0%	72.6%	72.1%
Sim	28.2%	14.6%	24.9%	26.4%
Total	98.9%	99.6%	97.5%	98.5%

Table 39Poverty Indices and Access to Piped WaterValid CasesPercent of
TotalPoverty
Index P,Poverty
Index P,Poverty
PovertyPercent of All
P, PovertyAqua corrente da rede
Não
Sim6051
222073.2
26.80.368
0.3120.118
0.0920.052
0.03878.5
21.5Total8271100.00.3530.1110.048100.0

Table 40

Poverty Indices and Access to Latrines

	Percent of Total	Poverty Index P0	Poverty Index Pl	Poverty Index P2
Latrina dentro ou fora da casa				
Näo	15.307	.37240	.12	.06
Sim	84.693	.34874	.11	.05
Total	100.000	.35236	.11	.05

Table 41 Ava.	ilability of Latri	nes by Pover	ty Group	
	Above Poverty Line	POVERTY Extreme Poverty	Moderate Poverty	Total
Latrina dentro ou d da casa	fora			
Näo Sim	62.8% 65.1%	7.5% 5.6%	29.7% 29.3%	100.0% 100.0%
Total	63.7%	5.8%	28.9%	98.4%

Table 42

Distribution of Poverty by Availability of Latrines

	Above Poverty Line	POVERTY Extreme Poverty	Moderate Poverty	Total
Latrina dentro ou fora da casa				
Näo Sim	14.7% 84.3%	19.5% 80.1%	15.0% 82.0%	15.1% 83.4%
Total	98.9%	99.6%	97.1%	98.4%

3.6 The Impact of Poverty on Child Health and Nutrition Status

Tables 43 to 45 show the distribution of poverty for a range of child health and nutrition outcomes. The latter includes child stunting (Height for Age), Child Wasting (Weight for Height) and Child Undernutrition (Weight for Age), while the former includes whether children in the household were reported as being sick during the previous fortnight. Households are categorised according to the numbers of children who were reported as having the relevant symptom.

As the Tables show, at the level of a simple tabular analysis, there would seem to be little correlation between poverty levels, child malnutrition and child health outcomes, even when disaggregated to the bairro level. The possible reasons for this are dealt with in the Health Options Paper and other papers in this series. However it is worth outlining some of them here:

- a) multiple regression analysis on the LHHBNS data shows that education has a strong relationship to the level of reported child nutrition. As has been seen in Section 3.6.5 education, as represented by functional literacy, appears to bear little relation to poverty,
- b) there may be no real difference between the levels of child health between the poor and non-poor as they have been classified in this study. Disease and infection, as well as poor nutrition and low levels of household food availability, bear a close relationship to child malnutrition. The very high levels of reported illness in Luanda are as much to do with the overall level of poverty and poor access to basic services as they are to do with the particular poverty

characteristics of sub-groups. Households above the poverty line still cannot afford to isolate their children from health risks that originate both at the household level and the community level,

- c) there may be a real difference between the levels of child health in poor and non-poor households. However if the children of the poor are at greater risk of dying as infants (under 12 months) or as juveniles (12 months to 59 months), it may be that only the healthier children of the poor were still alive to be sampled in the survey,
- d) there is also the problem of aggregation household level data on poverty is being tabulated against individual level data on health and nutrition. It is possible that there exist intra-household differences in resource allocation that disproportionately benefit the children of the poor more than the children of the non-poor,
- e) the morbidity responses in the survey were self-reported and not objectively measured. Non-poor households may have reported childhood illness in different ways to poor households.

Table	43					
		Poverty	Indices	by	Child	Stunting

	Percent of Total	Poverty Index P0	Poverty Index Pl	Poverty Index P2
Number of Children in Household with Height for Age Less than -2 S.D.s				
0	67.135	.30014	.10	.04
1	26.324	.31989	.09	.03
2	5.818	.31111	.11	.06
3	.615	.38003	.14	.07
5	.108	1.00000	.65	.42
Total	100.000	.30723	.10	.04

Table 44

Poverty Indices by Child Morbidity

	Percent of Total	Poverty Index P0	Poverty Index Pl	Poverty Index P2
Number of Children in Household Report Sick during previous 14 Days				
0	49.174	.30888	.10	.05
1	34.249	.32991	.10	.04
2	12.641	.35373	.09	.04
3	3.260	.29067	.07	.02
4	.677	.17154	.11	.08
Total	100.000	.32023	.10	.04

-	Poverty		Poverty	Rate of	Height	for Age	Weight for	Height	Weight fo	or Age
Balrro	Ranking		Index P2	Iliness	<-2 SD.	<-3 8D.	<-2 5D.	<-3 6D.	<-2 50.	<-38D
Cuca	1	Least Poor	0.020	45.90	25.90	13.80	5.50	3.60	18.00	1.60
N'gola Kiluange	2		0.023	51.90	37.30	16.90	8.50	1.70	23.00	8.20
Ilha do Cabo	3		0.031	62.50	29.40	11.80	5.90	0.00	18.90	2.70
B.Popular	4		0.032	43.10	31.70	7.30	15.00	5.00	18.20	2.30
Marcal	5		0.032	52.90	34.10	9.10	9.10	1.30	25.00	4.50
Kassequel	6		0.039	58.50	31.10	17.80	9.10	0.00	14.60	2.10
Sambizanga	7		0.041	64.70	46.30	14.80	11.30	0.00	17.90	5.40
Kinanga	8		0.045	41.20	33.30	13.30	0.00	0.00	13.30	0.00
Prenda	9		0.050	43.30	25.40	9.00	11.40	1.50	17.10	1.30
Tala Hadi	10		0.053	50.00	46.20	23.10	15.40	2.60	20.90	7.00
B. Operario	11		0.058	63.60	30.80	7.70	0.00	0.00	20.00	4.00
Golfe	12		0.059	50.70	42.30	11.50	4.00	0.00	24.10	3.70
Cazenga	13		0.060	51.20	36.10	14.80	13.20	0.90	21.10	5.30
Terra Nova	14		0.062	53.10	50.00	21.40	3.60	0.00	19.40	0.00
Rangel	15		0.073	57.80	47.20	16.70	11.10	0.00	23.10	7.70
Viana	16	Poorest	0.081	53.30	38.20	17.60	12.10	3.00	27.30	6.10

Table 45 Distribution of Poverty & Health Related Variables by Bairro

3.7 The Time Use and Incomes of the Poor

To repeat the contents of Box 2 - the theory of household economics views the household as a single entity having the single goal of increasing its welfare through the production and consumption of goods and services. The household produces these goods and services by combining goods and services purchased in the market with the time inputs and skills of its members. These household goods and services therefore include abstract "commodities" such as good food and meals, good health, good education, and leisure as well as less abstract commodities such as housing, water, and child care.

It is therefore <u>real incomes and time</u> that limit the household's ability to produce goods and services for final consumption, and which therefore limit its ability to increase its levels of consumption and welfare. Real incomes constrain the household's ability to buy goods and services in the market; available time limits the household's ability to generate income, when employment is available, and produce household commodities through home/household production.

Whilst the timeuse data derived for the LHHBNS requires further development and analysis, some important points can already be noted. Tables 46, 47, and 48 divide total time use (Table 46) into its two principal components: time spent on household production activities (Table 47), and time spent on income generating activities and travel to the workplace.

The first point to note is the comparatively low number of hours that individuals spend in production activities per week. This is partly explained by the considerable influence of age group differences on average hours worked. Children and the elderly work approximately 15 hours per week and adults between the ages of 19 and 59 work approximately 40 hours per week (See Appendix V). Nevertheless, time spent in production activities is lower than

¹⁰ Z-scores less than -2 standard deviations below the mean and less than -3 standard deviations below the mean, when compared to a healthy reference population. In a healthy population, only 2.28 percent of the population fall below -2 standard deviations, and only 0.13 percent of the population fall below -3 standard deviations. Higher numbers than these indicate unhealthy portions of the population.

other internationally comparable urban examples. This may well be explained firstly by the lack of income generating opportunities in the Luandan economy and secondly by a need for individuals to conserve energy when faced with very low levels of food availability.

The second point to note is the considerable differences in time use between the two genders when classified by poverty group. Not only do women spend more time in production activities than men, but as poverty increases the burden of time use on women also increases. Women above the poverty line spend 20% more time per week in production activities than men whilst those in the Moderate Poverty category spend 25% more time, and those in the Extreme Poverty category spend 50% more time.

The gender division of time use can be seen more explicitly in Tables 47 and 48, where women are shown to perform the principal share of household production activities and men the principal share of income generating activities. Again the burden of household production activities falls increasingly on Extremely Poor women with women above the poverty line spending 187% more time than men in household production activities whilst in the Extremely Poor category the figure is 233%.

Some further points need to be summarised regarding the time use data available in the LHHBNS, but which cannot be examined in detail here:

- identification of priority infrastructural projects using timeuse data: a) some essential tasks such as water and fuelwood collection are highly differentiated across poverty groups and across bairros. Closer analysis of this data may provide an indication of projects which would significantly release the time of the poor for income generating and other household production activities. However, a caution needs to be made about designing infrastructural projects in the expectation of future increases in household incomes. Low levels of wages and employment have an important role in determining the opportunity costs of household and individual time. A household able to reduce time spent in water collection by many hours will not necessarily be able to find substitute employment for that time. Indeed in bairros such as Ilha, where the Extreme Poor spend very much more time in collecting water and fuelwood than the Moderate Poor or the Non-Poor, this may be an indication that Extremely Poor Households and Individuals have not the cash to buy water or cooking gas because they have only very low cash income. Any reduction in their time use through the provision of standpipes near their housing may not have any immediate income benefits, although there may well be benefits associated with improved health,
- b) timeuse data, age and gender inequalities: the further analysis of the LHHBNS time use data is likely to raise important issues vis à vis the impact of Structural Adjustment on human capital formation, and upon gender inequalities in access to resources and income generating opportunities. A synthetic example of this can be seen in the balance of time use amongst school age children. Tables 67 and 68 in Appendix V, show that the burden of domestic work is not shared equitably between boys and girls. This may suggest that within households priority access to schooling is given to boys rather than girls. If the Structural Adjustment process increases the time burden on older women in the household either in income generating activities or in time spent searching for work, it would appear likely that school age girls, rather than boys, will substitute the mothers household production work. In the longer term, girls of the present generation are likely to have poorer levels of education than boys in the same age cohort,

timeuse data and young child health: there exists an important dilemma concerning mother's time use and its effect on young child health. On C) the one hand, it is well understood that time spent in breastfeeding, hygienic food preparation and water storage, and cleaning in the house has important implications for the growth and overall health of young children. On the other hand, income generation can have similarly important benefits for child health including increased food availability, improved housing, improved access to water and sanitation. Some evidence suggests, for example, that a mother's time spent in household production activities has considerable benefits for infant health but reduced benefits of juvenile health (12 months to 59 months), the latter being improved by greater access by the mother to cash incomes. If ensuring young child health is an important objective in the design of Structural Adjustment policies, then further analysis of the time use, expenditure, morbidity and anthropometric data in the LHHBNS would be valuable.

Table 46

Total Weekly Time Use (Excluding Leisure) by Poverty Group & Gender

	Weighted Avge.	SEX		
POVERTY		Homem	Mulher	
Above Poverty Line	27	24	29	
Extreme Poverty	23	18	27	
Moderate Poverty	23	20	25	

Table 47 Total Weekly Time Used in Household Production Activities by Poverty Group

	Weighted Avge.	SEX		
DOUEDEV	-	Homem	Mulher	
Above Poverty Line	16	8	23	
Extreme Poverty	13	6	20	
Moderate Poverty	13	7	19	

Table 48 Total Weekly Time Used in Income Generating Activities & Travel by Poverty Group

	Weighted Avge.	SEX		
DOURDTY		Homem	Mulher	
Above Poverty Line	11	16	7	
Extreme Poverty	9	12	6	
Moderate Poverty	9	13	6	

Table 49 Total Weekly Time Used in Procura de Tratamento Medico

	Weighted Avge.	SEX		
		Homem	Mulher	
Above Poverty Line	1	1	2	
Extreme Poverty	1	0	1	
Moderate Poverty	1	1	1	

Table 50

Total Weekly Time Used in Procura de Agua

	Weighted Avge.	SEX		
DOVEDMY		Homem	Mulher	
Above Poverty Line	3	2	5	
Extreme Poverty	3	2	5	
Moderate Poverty	3	2	5	

Table 51

Total Weekly Time Used in Procura de Lenha

	Weighted Avge.	SEX		
		Homem	Mulher	
Above Poverty Line	0	0	0	
Extreme Poverty	0	0	1	
Moderate Poverty	0	0	1	

Table 52

Total Weekly Time Used in Fazer Compras

	Weighted Avge.	SEX		
		Homem	Mulher	
POVERTY Above Poverty Line	3	1	4	
Extreme Poverty Moderate Poverty	2 2	1	2 3	
4 A FOOD SECURITY APPROACH TO POVERTY ANALYSIS

4.1 A Food Gap Classification of Food Insecurity

Using the combined results of the Household Survey and the Prices Survey, it was possible to calculate the ratio of calories available to the household in relation to the recommended calorie needs of the household. This absolute of food insecurity was described in Section 2 as the food gap¹¹. Table 55 shows that this absolute measure of poverty has a strong association with our principal, but relative measures of poverty, namely the Poverty Line classifications and the Poverty Indexation. Of those households with less than 33% of their food requirements, 93.2% are below the Poverty Lipe. Similarly, those with between 33% and 66% of their calorie needs, 66% are also below the Poverty Line. Of those with more than 133% of their calorie needs available, less than 1% have been classified as being below the poverty line.

There is also a strong association between the size of the foodgap and our poverty indices. Those with the largest foodgap (< 33% of needs) have levels of expenditure that are on average 45% below the poverty line (Index P1). Those households whose foodgap is 33% - 66% of their food needs have levels of expenditure that are on average 18% below the poverty line. A similar positive relationship between the size of the household foodgap (..measured absolutely) and poverty (..measured relatively) is maintained for Index P2, with high levels of inequality amongst those households with large food gaps, and lower levels amongst those households with smaller food gaps.

Table 56 shows, furthermore, that 98% of the extreme poor have food gaps representing 66% of their needs or less. Similarly, for those in Moderate Poverty, 86.5% have foodgaps representing 66% of their needs or less. If we are to assume that foodgap analysis is a necessary, if not sufficient determinant of Household Food Security, this would imply:

- i) that in terms of at least one absolute measure of poverty i.e. Food Security, the Poverty Line has been appropriately determined,
- ii) that the Poverty Tables in this paper are equally applicable as Food Security Tables.

See also Technical Appendix II.

Table 54 Distribution of Poverty Indices by Size of Household Foodgap

	Percent of Total	Poverty Index P0	Poverty Index Pl	Poverty Index P2
PROPORTION OF CALORIES				
AVAILABLE AS % OF NEEDS				
<= 33%	9.032	.93234	.45467	.25134
338 - 668	34.821	.66052	.18027	.06656
66% - 100%	25.645	.15646	.02861	.00835
100% - 133%	14.419	.00940	.00141	.00032
133% - 166%	7.209			
166% - 200%	3.917			
>= 200%	4.958			
Total	100.000	.35569	.11138	.04806

Table 55

Size of Household Foodgap and Poverty

	Above Poverty	POVERTY Extreme Poverty	Moderate Poverty	Total
PROPORTION OF CALORIES AVAILABLE AS & OF NEEDS	Line			
<= 33% 33% - 66% 66% - 100% 100% - 133% 133% - 166% 166% - 200% >= 200%	6.8% 33.9% 84.4% 99.1% 100.0% 100.0% 100.0%	44.28 4.98 .48	49.0% 61.2% 15.2% .9%	100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0
Total	64.4%	5.8%	29.8%	100.0%

Distribution of Poverty by Size of Household Food Gap

PROPORTION OF CALORIES AVAILABLE AS & OF NEEDS	Above Poverty Line	POVERTY Extreme Poverty	Moderate Poverty	Total
<= 33%	.98	68.8%	14.98	9.0%
338 - 668	18.3%	29.48	71.6%	34.8%
668 - 1008	33.6%	1.98	13.1%	25.6%
100% - 133%	22.28		.5%	14.48
1338 - 1668	11.2%			7.2%
1668 - 2008	6.1%			3.98
>= 200%	7.7%			5.0%
Total	100.0%	100.0%	100.0%	100.0%

4.2 A Food Expenditure Share Classification of Food Insecurity

The second method for identifying food insecurity (identified in Section 2) uses two frequently observed but powerful relationships to identify the poor, that is:

- i) the share of total expenditure on food tends to decline as expenditure levels increase the food expenditure share, and
- ii) the share of expenditure on starchy staples to total food expenditure the starchy staples share - also tends to decrease as total expenditure increases.

As Table 57 shows, using the proportion of total expenditure on food to total expenditure on all items - the food expenditure share - will not provide a useful additional method of classifying the food insecure from the food secure. Neither is there an inverse relationship between expenditure and food shares, with food shares remaining approximately constant across the expenditure range, nor is a 60% cut-off point useful in discriminating between food secure and insecure households as households across all the expenditure deciles spend more than 74% of their budget on food.

The reasons for these very high levels of food expenditure shares has already been alluded to, but include:

- i) the undereporting, across all expenditure deciles but especially amongst the higher deciles, of the resale of food commodities, acquired through Lojas de Povo, Lojas Francas and Lojas Complementares, for nonfood items or cash,
- ii) the scarcity of non-food goods and services available in the market, and
- iii) the unreported levels of financial savings i.e. households save money rather than spend on non-food items.

However a classification using a starchy staples share behaves more regularly. Table 57 shows that there is a steady decline in the starchy staple share as expenditure levels increase. Thus in the poorest ten percent of households, 38.5% of total food expenditures is spent on starchy staples, whilst in the highest expenditure groups, only 26.2 percent of food expenditure is on starchy staples.

Section 2 suggested that when using starchy staples shares, a commonly used cut-off point for classifying the food insecure is 60%. As with food expenditure shares, the starchy staple method would not appear to be immediately applicable to the Luanda case. Again the severe distortions that exist in retail markets across all sectors may be the cause. For example, we would only expect starchy staple shares to be highest amongst the poor if the cheapest calories available are those that derive from starchy staples. The table in Technical Appendix I shows, however, that sardines were the lowest cost calories available in Luanda during the survey period.

Nevertheless, Table 57 shows an important behavioural feature in starchy staple expenditure patterns. Whilst starchy staple shares remains approximately constant for the lowest three or four expenditure deciles, thereafter starchy staple shares decline as expenditure increases. Again, this would appear to reinforce the choice of a Poverty Line for Luanda which classifies 35% of the population of Luanda as Poor.

Table 57			Percent	of Total	Budget Spen	t on Co	mmodity C	ategories			
	Mais Baixo	2	3	4	Expenditure 5	Decile 6	7	8	,	Hais Alto	Total
All Food Items	76.7	74.2	74.6	75.4	75.9	76.5	74.0	77.2	76.1	75.4	75.6
Starchy staples (As percent of food exp.)	38.5	36.1	38.0	36.6	34.9	33.9	35.5	34.7	. 30.5	26.2	34.5
Oils and fats (As percent of food exp.)	5.0	4.0	2.8	3.2	2.9	2.5	2.6	2.1	2.3	2.0	2.9
Cereais e Farinhas Raises e Tuberculos	18.1	14.8	17.2	14.7	14.7	13.5	13.9	14.8	12.2	11.4	14.5
Leguminosas e Nozes	2.6	1.8	1.4	1.8	1.7	1.4	1.3	2.2	1.4	1.5	1.7
Frutas	1.1	1.2	1.3	1.3	1.6	1.7	1.5	1.4	1.6	2.1	1.5
Legumes	7.6	8.2	9.2	8.9	0.5	8.6	7.1	9.1	8.5	8.6	8.4
Comida Preparada	.1	. 2	. i	. 2	.4	. 6	.7	. 9	.7	.7	0.5
Carne, Aves, Peixo	15.5	17.9	17.4	18.0	16.3	18.7	17.4	18.5	16.9	17.0	17.4
Produtos Lacteos	3.5	3.0	3.0	2.6	2.9	3.0	2.8	3.3	3.4	3.7	3.1
Oleos Alimentares	3.6	2.6	2.0	2.3	2.2	1.9	1.9	1.6	1.7	1.4	2.1
Doces e Acucar	4.3	3.0	2.9	3.3	3.6	2.5	2.6	2.5	2.4	2.7	3.0
Bebidas	5.0	6.2	5.6	6.7	9.0	9.5	9.6	8.7	13.3	15.7	8.9
Conservas e Produtos de Conservação	3.4	2.8	2.8	2.6	2.9	2.8	2.6	2.4	2.5	2.3	2.7
Combustivel, Agua,											
Iluminacao	13.4	13.3	12.2	11.0	7.5	9.7	10.8	9.7	0.4	<u></u>	10.6
Saude e Higiene Pessoal	1.1	1.3	1.2	1.3	1.4	1.3	1.2	1.3	1.0	1.1	1.3
custos de Transporte	3.8	4.3	5.0	3.7	4.0	4.7	4.5	4.2	4.3	4.8	4.3
vestuario, Calcado e		• •	• •		• •	• •					
ATTIGOS PESSORIS	1.1	2.3	2.4	2.7	J.J	2.0	2.8	2.0	3.4	3.5	4.7
Gastos ressoais	<u>.</u>	2.0	2.7	3.0	3.2	2.0	2.0	2.9	2.9	3.3	2.0
Artigos Familiares	1./	1.9	2.0	3.0	4.0	4.0	4.1	2.0	3.1	3.9	2.1

4.3 A Cost of Calories Classification of Food Insecurity

The underlying basis for food expenditure share analysis is that poor households consume cheaper calories than wealthier households in order to maintain food intake as incomes decline. Figure 3 shows that this is indeed the case in Luanda. Households in the lowest expenditure decile spend about one-half as much per calorie consumed as households in the highest expenditure decile. This provides corrobating evidence for the other approaches to poverty and food insecurity.



Figure 3

5 AN ANALYSIS OF VULNERABILITY

- 5.1 Unemployment, Employment, Incomes, and Vulnerability
- 5.1.1 Incomes

The analytical framework outlined in the second section of this paper decomposes household income into four major sources, namely income from employment, income from own-production, income from interest or rent on assets, and income from gifts or transfers received from private individuals or the government. Understanding which sources of income are the most important to poor households, and which sources of income are most vulnerable to a decline in their real values, is important for understanding how the poor and the vulnerable will benefit or suffer during the period of structural adjustment.

The first step in any analysis of incomes is an examination of the contribution of the four different classes of incomes to the total incomes of the poor and the non-poor¹². Table 58 shows gives an **approximation** of the importance of different sources of income to total income as revealed in total expenditure. The table is constituted as follows:

- i) **Transfers:** are listed as two categories. Loja de Povo subsidies and other gifts and transfers,
- ii) Interest and Rent: this data was unreliably collected in the survey and was therefore excluded. Very few households reported having made loans or received loans, and the business data was too thin to derive estimates of rent income,
- iii) Employment: this data includes reported salaries and wages, and includes reported Kwanza payments, plus reported Kwanza Convertivel payments, (valued in Kwanzas at a shadow exchange rate), plus a subjective valuation of auto-consumo,
- iv) Income from Own Production: these data have been reported in the survey, or can be derived as a residual item. By definition, total expenditure must equal total income¹³. If we subtract all other sources of income from total expenditure, then the balance will indicate the contribution from own production. We do not have confidence in own-production data derived from either method.

While it is necessary to be cautious about the detail of the data in Table 58, its strength lies as an indicator of the proportionate balance between the different sources of income for different expenditure deciles. In particular the importance of Loja de Povo subsidies would appear critical to the real incomes of the poor. Similarly reselling activities, such as beer for other goods and services, would appear to be most important for households in the upper five expenditure deciles. However particular caution needs to be taken

¹³ Ignoring saving and dissaving.

¹² We use reported expenditure as the best indicator of household income, and not reported income. **Reported Incomes** are often liable to inaccuracies. Firstly, some types of incomes, especially those in the informal sector, are composed of a large number of small sums that are difficult for the respondent to report accurately. Secondly, people are often unwilling to report incomes because they fear their reports may be used for tax purposes, or because they may have been gained illegally.

vis à vis these reselling activities as it appears likely that reselling has been considerably undereported by some households because of its illegality¹⁴

Table 58 shows, with the provisos made above, that low expenditure households are relatively more dependent upon Loja de Povo Subsidies than their higher income counterparts. The absolute value of the subsidies received by higher expenditure households though, is considerably greater than their lower expenditure counterparts; the current system of food subsidisation is therefore inequitable.

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Table 58
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Sources of Income

Income Contributions as a Percentage of Total Expenditure by Expenditure Decile

	1	2	3	4	5	6	7	8	9	10
Reselling Non-Loia	1.5	4.4	2.2	2.2	3.3	6.0	4.1	2.7	6.2	6.4
Transfers	.6	. 5	5.0	.6	.4	8.7	.8	1.0	1.1	4.1
Loja Transfers	16.5	11.3	10.0	8.7	8.5	5.5	6.0	4.7	4.1	4.7
Salary/Wages	18.4	15.8	14.4	11.9	15.4	9.9	7.1	6.6	5.9	7.0

5.1.2 The Employed and the Unemployed

Changes in the levels of incomes and vulnerability to a decline in those incomes pose, with changes in the prices of food, the greatest threats to the levels of poverty in Luanda. Tables 59 to 62 indicate both the levels of income (reflected in poverty levels) and the level of vulnerability (reflected in the degree of reliance on employment in high risk sectors).

Tables 59, 60 and 61 show the poverty structure associated with employment and unemployment in Luanda. Table 59 shows, not unexpectedly, that households which have unemployed household heads make the largest contribution to the **numbers** below both the Poverty Lines and the Extreme Poverty Lines. Public sector employees however make similarly large contributions. However Tables 60 and 61 show that whilst the likelihood of being in Moderate or Extreme Poverty is high amongst the unemployed, 41.6%, the intensity and inequality of poverty is highest amongst employees of the Aparelho de Estado (Index P2) who, on average, have levels of expenditure that are 14.6% below the Poverty Line (Index P1).

¹⁴ The expenditure shares analysis shows that higher expenditure decile households appear to a have both an unexpectedly high share of expenditure on food items, and a similarly high share of expenditure on alcohol. It is likely that food expenditure shares for these households are particularly high because food commodities, especially alcohol, are being bought and stored for later resale. If true, the <u>real</u> food expenditure of the upper deciles would be lower than those reported in the tables.

		Total		
	Above Poverty Line	Extreme Poverty	Moderate Poverty	Iotai
	Percent	Percent	Percent	Percent
Entitade natronal	rercent	rercenc	rercenc	rercent
Aparelho de Estado	62.38	11.4%	26.3%	100.0%
Empresa Estatal	64.38	5.0%	30.7%	100.0%
Empresa Privada	72.78	2.78	24.6%	100.0%
Empresa Mista	65.7%	10.9%	23.5%	100.0%
Empresa Estrangeira	69.6%		30.4%	100.0%
Conta Propria	65.6%	4.78	29.6%	100.0%
Outro	68.9%	9.6%	21.5%	100.0%
Combinacao	86.7%		13.3%	100.0%
Unemployed	58.4%	7.0%	34.6%	100.0%
TOTAL	64.4%	5.8%	29.8%	100.0%

Entitade Patronal by Poverty Group

Table 60

Distribution of Poverty by Entitade Patronal

		Total		
	Above	Extreme	Moderate	
	Poverty	Poverty	Poverty	
	Line	-	-	
	Percent	Percent	Percent	Percent
Entitade patronal				
Aparelho de estado	5.8%	11.7%	5.3%	6.0%
Empresa estatal	28.8%	24.8%	29.8%	28.9%
Empresa privada	9.5%	3.9%	7.0%	8.5%
Empresa mista	3.5%	6.4%	2.78	3.4%
Empresa estrangeira	.8%		.78	.78
Conta Propria	21.6%	17.3%	21.1%	21.28
Outro	3.2%	4.9%	2.1%	3.0%
Combinacao	3.3%		1.1%	2.5%
Unemployed	23.5%	31.0%	30.2%	25.98
Total	100.0%	100.0%	100.0%	100.0%

Table 61

Poverty Indices by Socio-Economic Groups

	Valid Cases	Percent of Total	Poverty Index P.	Poverty Index P.	Poverty Index P,	Percent of All P, Poverty
Entitade patronal				•	•	• •
Aparelho de estado	501	6.0	0.377(2)	0,146(1)	0.071(1) 8.8
Empresa estatal	2423	28.9	0.357(4)	0.108	0.044	26.6
Empresa privada	710	8.5	0.273	0.083	0.033	5.8
Empresa mista	286	3.4	0.343	0.128(4)	0.060(3) 4.2
Empresa estrangeira	59	0.7	0.304	0.059	0.012	0.2
Conta Propria	1639	21.2	0.344(5)	0.101	0.044	
Outro	249	3.0	0.311	0.134(2)	0.069	2) 4.2
Combinacao	208	2.5	0.133	0.012(5)	0.002	0.1
Unemployed	2177	25.9	0.416(1)	0.131(3)	0.057	(4) 30.5
Total	8396	100.0	0.356	0.111	0.048	100.0

Individuals employed by Empresas Estatais, although having an average number below the Poverty Line, do not show the intensity of poverty of other major employee groups. Finally, those employed on their own account (conta propria) fall into a similar category, with an average number of individuals below the Poverty Line, but with below average levels of intensity and depth of poverty.

At the other end of the spectrum, those who reported being employed in a combination of sectors or in employment with an Empresa Privada displayed the lowest levels of poverty across all P indexes.

Tables 62 and 63 indicate the level of vulnerability to a collapse in income that some households face. Households with few household members employed are vulnerable to a collapse or a decline in incomes. Firstly, the loss of one job could mean the total loss of all employment. Secondly, households with low levels of employment are those most likely to be employed in the public sector, thereby facing the threat of public sector redundancies.

Over 14% of households have no member of the household in employment, whilst a further 36% of household have only one household member in employment. As Table 63 shows, households with low numbers of household members employed are those that make the greatest contribution to the levels of Moderate and Extreme Poverty. Furthermore 78% of households with one member employed and 80% of households with two members employed are reliant on either public sector incomes or upon the informal sector for employment. Job losses, or declining incomes from these activities will result both in increased numbers below the poverty line and an increased intensity of poverty.

From Tables 59 to 63 we can identify three types of poor and vulnerable households:

Type 1 Households: Public Sector Dependent & Low Levels of Employment

These households have low levels of employment and are employed in the public sector. Such households are already likely to be poor and therefore public sector redundancies that affected them would likely lead to an almost complete collapse of incomes,

Type 2 Households: Informal Sector Dependent & Low Levels of Employment

These households have low levels of employment and are active in the informal sector. Their incomes will be vulnerable to decline rather than complete collapse during the early stages of the existing Programa de Acção. Fiscal retrenchment, including public sector redundancies, reductions in aggregate demand, and decreased wages due to increased relative prices for tradeable commodities implies that the numbers looking for informal sector incomes will increase. At the same time there will be declining demand and falling prices for the goods and services produced in the informal sector.

Type 3 Households: No Employment & Already Chronically Poor

These households represent over 14% of the population of Luanda but make the greatest contribution to the levels of Moderate and Extreme Poverty. They have by definition no employment or very low levels of employment. They survive nevertheless through recourse to transfers from the state (Loja de Povo) subsidies and transfers from other individuals.

Table 62 Employer by Humber Employed in Household

Entitade Patronal			Nu	unber of E	mployed F	ersons in	Household	d			Total	Percent
		1	2	3	4	t - 5	6	7	8	9	Employed	of Employed
Aparelho de Estado		8.2%	10.18	7.41	9.98	10.71	7.11	0.08	9.41	-0.01	17	6 8.91
Empresa Estatal		37.51	26.8%	25.71	24.1%	25.78	27.41	19.0%	6.31	0.01	55	6 28.01
Empresa Privada		8.21	9.58	10.7%	16.0%	7.91	9.51	9.51	3.1%	0.01	19	8 10.0%
Empresa Hista		4.1%	1.48	2.6%	2.81	3.61	0.01	9.51	3.18	0.01	5	2 2.6%
Empresa Estrangeira		1.5%	0.5%	1.31	2.41	0.01	0.01	0.0%	0.01	0.01	2	0 1.01
Conta Propria		32.4%	43.18	40.3%	30.7%	3711	36.91	33.34	31.31	88.91	76	38.31
Outro		4,11	5.01	5.91	8.01	10.7%	7.18	0.01	9.41	11.18	11	7 5.91
Combinacao		3.6%	3.41	5.01	4.21	.2.1%	7.11	0.01	12.5%	0.01	8	1. 4.11
Total Households	164	413	311	153	53	28	14	3	° '4 ,	1	1145	
Pct. of Households	14.3%	36 . 14	27.21	13.4%	4.61	2.41	1.21	0.3%	0.31	0.1%	100.01	
Total Employed		413	622	45.9	212	140	84	21	32	9	198	5.
Pct. of Employed		20.8	31.3%	23,11	10.7%	7.11	4.21	1.11	1.61	0.51	100.	01 100.01

Table 6	3
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Number of Jobs per Household by Poverty Group

Number of John	Above Poverty Line	Extreme Poverty	Moderate Poverty	Count Percent
per Household	Count	Count	Count	
F	Percent	Percent	Percent	
1	47.8%	49.38	45.9%	47.48
2	28.3%	19.3%	28.8%	27.7%
3	14.6%	20.6%	19.8%	16.6%
4	5.0%	10.0%	4.0%	5.1%
5	2.4%	.8%	1.3%	2.0%
6	1.3%			.8%
7	.5%			.3%

5.2 Prices and Vulnerability

As described in Box 2, the real purchasing power of nominal incomes depends upon prices. In the case of the poor, a large proportion of their spending is on food, and as a result the critical prices to examine are food prices. The poor buy very different commodities and services than their higher income counterparts.

5.2.1 Vulnerability to Changes in Prices and Availability of Goods in the Formal Market

The majority of households in Luanda buy food in two different types of market, the parallel market and the subsidised formal market. The Lojas de Povo represent for most households the major source of contact with the formal retail market and its heavily subsidised prices. Figure 5 shows that extent to which low income households will be vulnerable if the level of subsidy they receive from the Loja de Povo is reduced. For households in the poorest expenditure decile the value of the Loja subsidy which they receive represents approximately 22% of the value of their total food budget. For the highest expenditure households, the value of subsidised goods bought in the Lojas represent less than 8% of their food budget. However, the absolute worth of the subsidy to higher income households is several times greater than its absolute value to low income households. A reduction of fiscal budgets for the susbsidisation of consumption should therefore review options for reducing the distribution of existing benefits to higher income households. Although it is true that much of the Lojas de Povo subsidies can be viewed as a form of wage, it is also clear from the data that the Lojas de Povo in fact do provide subsidies to large portions of the population. addressed further in other papers in this series. This issue is

Figure 4





An examination of commodity specific expenditure patterns by income categories indicates the sources of vulnerability for poor and food insecure households. The most important commodities to the lower income groups include, in order of importance, fresh fish, bread, fuba de bombo, water, transport costs, rice, tomatoes, dry fish, and onions, which together account for more than 50 percent of household expenditure (See Table 64). The impact of structural adjustment upon the prices and availability of these commodities must be monitored closely in order to assist in protecting the welfare of the poor. As Structural Adjustment proceeds and the relative prices of these goods and services changes, however, other commodities will replace those commodities that are currently of most importance to the poor. Table 64 Key Commodities for the Poor during the Fist Stages of Structural Adjustment

> Fresh Fish Bread Fuba de Bombo Water Transport Costs Rice Tomatoes Fish Onions

The graphs in Figures 6,7 and 8, and the data in Tables 65 and 66 show how changes in incomes affect the structure of household expenditure. As households decrease their proportionate expenditure on starchy staples (Figure 6), they most rapidly reduce the share of expenditure devoted to rice and massa alimentar (pasta). Bread appears to be the preferred starchy staple, as its expenditure share remains roughly constant as incomes increase. Since bread, rice, and massa are all heavily dependent upon imports, their prices are all likely to increase relative to that of fuba de bombo as structural adjustment proceeds. As a result, fuba is likely to increase in its importance to the diets of the poorest Luandan households.

Table 65

Change in Expenditure Pattern as Incomes Increase

Declining Share	Constant Share	Increasing Share
of Budget	of Budget	of Budget
Cereals Roots and Tubers Legumes and Nuts Oils Sweets and Sugars Preserved Food	Vegetables Meat and Fish Dairy Products	Fruit Prepared Food Beverages

Notes: Derived from Table 57.

Figure 6 illustrates the shifts in the consumption of meat and fish. Although expenditure on this category as a whole remains relatively constant, the graphs show that households gradually shift their expenditure from fresh fish to beef and chicken as their incomes increase.

Figure 7 demonstrates the dramatic increase of the consumptions of soft drinks and alcohol as incomes increase. Since soft or alcholic drinks are clearly luxury goods consumed or traded by the wealthier households, any direct or indirect subsidies of these items, whether imported or nationally produced, can be reduced with little direct impact upon the poor.













Percent of Total Budget Spent on Specific Commodities

	Expenditure Decile						Total				
	Hais Baixo	2	3	4	5	6	7	8	9	Mais Alto	
Cereals											
Bread	7.7	9.2	10.0	9.8	9.1	9.1	8.8	8.6	7.8	6.7	8.7
Rice	4.2	3.2	2.2	2.3	2.3	1.5	2.0	1.7	1.8	1.3	2.3
Hassa	2.2	1.9	1.3	1.5	1.2	1.1	1.2	1.6	1.2	1.0	1.4
Roots and Tubers											
Fuba	9.3	7.8	8.6	9.4	7.9	0.1	7.8	7.3	6.4	4.3	7.7
Crueire	.6	1.1	. 6		1.5	1.3	2.0	1.1	1.5	.7	1.1
Meats and Fish						••••					
Fresh Fish	9.9	12.1	12.0	12.7	10.3	10.8	10.0	9.9	9.2	8.4	10.5
Dry Fish	2.4	2.4	2.1	2.6	2.1	1.1	2.1	2.6	2.4	2.1	2.5
Beef	1.7	1.7	1.1	1.1	1.4	2.1	1.9	2.5	2.2	2.3	1.7
Chicken	1.4	1.1	1.7	1.6	2.1	1.4	2.4	2.4	2.1	2.7	2.0
Dairy Breducta		1.0			•••	1.,	•••	•••	•••	•••	
with	, ,		1 2						1.4		
RIIK SCO		4.0	1.5	* • •	1 .,	1.5	1.3	1.0	1.0	1.5	1.,
Beverages		-		-					• •		
Beer - Imported	• 5		. 0	• •	1.5	4.0	1.1	1.3	3.2	3.9	1.0
Beer - National	. 4	.4	. 5	.4	1.3	1.3	1.3	1.4	1.2	1.6	1.0
Soda - Imported	1.3	1.1	1.2	1.4	1.7	1.7	1.9	1.6	2.8	3.4	1.8
Wine	1.4	1.5	. 9	1.2	1.4	. 9	1.0	1.1	1.6	2.2	1.3
Non-food											
Water	2.9	3.3	2.8	2.5	2.2	2.4	2.4	2.3	2.1	2.0	2.5

Technical Appendix I

Using Adult Equivalence Scales

Total household income and expenditure is highly dependent upon the size of a household. Clearly two households with the same total expenditure can have very different standards of living if one household is twice as large as the other. Thus, in order to compare expenditure patterns across households, we must in some way account for the size of the household. The simplest way is to divide total household expenditure by the size of the household. However, this is misleading. A household of six adults requires a higher expenditure for a given standard of living than another household of the same size, but with two adults and four infants. Thus, the age and sex composition of the household must be accounted for in addition to household size.

Household composition can be accounted for by using adult equivalence scales. There is considerable controversy in establishing such scales, and ideally such scales should be individually designed for every country of interest (see Deaton and Muellbauer [1980]). To our knowledge, no such scales exist in Angola. Since seventy percent of Luanda's households spend at least seventy percent of total expenditure on food, food requirements of household members are clearly the primary determinant of overall household expenditure requirements to maintain a given standard of living. Thus, we have used estimated caloric food needs requirements by age and sex in order to calculate equivalence scales.

All methods of adjusting for household size have disadvantages. The most significant disadvantage of the method used here is that food requirements for female adults are substantially lower than those for male adults. This is an accurate reflection of expenditure levels for the seventy percent of the budget spent upon food, but overstates the welfare level of households with i) high proportions of female adults, and ii) large non-food expenditures. This caveat must be borne in mind when performing gender analysis with the data presented herein.

Technical Appendix II

Food Gap Analysis

The use of "food gap" analysis becomes complicated very quickly. The "food gap" approach examines the ratio between household food availability (the numerator in the ratio) and food needs (the denominator in the ratio). Problems occur in the quantification of both the numerator and the denominator. Firstly, in the case of the numerator, it is not always possible to get an accurate estimate of the calories available or consumed by a household at any one time. Our consumption estimates are based upon reported expenditure during a two or four week recall period (depending upon the commodity). These data are converted into food quantities using data from the Prices Survey. There are those many possible sources of error, so the food gap data presented here is indicative rather than an absolute standard of adequate food consumption. Reporting errors, household stocking and destocking, food wastage, and price variations are the major sources of error. Secondly, if food is distributed in the household inequitably, i.e. not in proportion to need, then it is possible that some members of the household will be food secure whilst others are food insecure.

In the case of the denominator, caloric needs are often difficult to determine. Firstly, caloric needs are based upon individuals of an average weight and height for their age. Through genetic inheritance some peoples or ethnic groups may be significantly larger or smaller than the average, implying that their calorie needs will be smaller or greater than average. Secondly, the implication of a fixed denominator is that food needs are fixed and cannot be reduced without risking malnutrition, or increased without risking obesity. In practice though, individuals and households, when faced with declining food availability, will reduce their energy expenditure in order to reduce the food needs, i.e., the size of the denominator falls.

We can see from Figure 1, the Food Gap by Expenditure, that there is a high correlation between household expenditure and the gap between estimated food consumption and estimated food needs, a proxy for food security during the period of survey enumeration. Figure 8





Technical Appendix III

Decomposing Poverty Indices

We can divide the overall population into mutually exclusive and exhaustive groups, and label these groups by the index j, which varies from 1 up to the number of groups (j = 1, 2, ..., n). Each group j accounts for the proportion k of the total population, such that $(k_1 + k_2 + ... + k_n = 1)$. The overall index P_x is simply a weighted sum of the poverty measures for each of the n groups, with the weights the proportion of the total population contained in each group:

$$P_x - \sum_{j=1}^n k_j * P_{j,x}$$

The contribution of a given group to total poverty is:

$$c_j = \frac{k_j * P_{j,x}}{P_x}$$

Technical Appendix IV

Individual Time Use

Table 67

Total Weekly Time Use (Excluding Leisure) by Poverty Group, Age & Gender

	Weighted Avge.	SI	EX
	•	Homem	Mulher
0 - <7 anos			
Above Poverty Line	6	4	8
Extreme Poverty	2	2	2
Moderate Poverty	7	4	10
7 - <14 anos			
Above Poverty Line	13	10	16
Extreme Poverty	10	5	15
Moderate Poverty	10	9	12
14 - <19 anos			
Above Poverty Line	21	14	27
Extreme Poverty	20	10	28
Moderate Poverty	22	18	25
19 - <34 anos			
Above Poverty Line	37	31	42
Extreme Poverty	33	27	38
Moderate Poverty	32	25	39
34 - <44 anos			
Above Poverty Line	45	47	42
Extreme Poverty	47	46	48
Moderate Poverty	38	39	38
44 - <59			
Above Poverty Line	45	49	41
Extreme Poverty	39	42	36
Moderate Poverty	39	45	32
>= 60 anos			
Above Poverty Line	24	30	20
Extreme Poverty	12	16	8
Moderate Poverty	19	23	15

Table 68

Total Weekly Time Used in Household Production Activities by Poverty Group, Age and Gender

	Weighted Avge.	SI	EX
	2	Homem	Mulher
0 - <7 anos			
Above Poverty Line	6	4	8
Extreme Poverty	5	5	5
Moderate Poverty	7	4	9
7 - <14 anos			
Above Poverty Line	13	9	16
Extreme Poverty	10	7	12
Moderate Poverty	10	8	12

14 - <19 anos			
Above Poverty Line	16	8	25
Extreme Poverty	12	6	18
Moderate Poverty	16	9	23
19 - <34 anos			
Above Poverty Line	20	7	30
Extreme Poverty	19	7	28
Moderate Poverty	17	6	26
34 - <44 anos			
Above Poverty Line	17	9	26
Extreme Poverty	14	5	23
Moderate Poverty	16	6	25
44 - <59			
Above Poverty Line	17	9	26
Extreme Poverty	20	3	33
Moderate Poverty	14	9	21
>= 60 anos			
Above Poverty Line	12	9	14
Extreme Poverty	4	1	7
Moderate Poverty	7	4	9

Total Weekly Time Used in Income Generating Activities & Travel by Poverty Group by Age and Sex

	Weighted Avge.	5	SEX
		Homem	Mulher
0 - <7 anos			
Above Poverty Line Extreme Poverty			
7 - <14 anos			
Above Poverty Line	0	1	0
Extreme Poverty	0		0
Moderate Poverty	0	1	
14 - <19 anos			
Above Poverty Line	5	7	3
Extreme Poverty	5	4	6
Moderate Poverty	6	9	2
19 - <34 anos			
Above Poverty Line	18	24	12
Extreme Poverty	12	18	8
Moderate Poverty	15	19	12
34 - <44 anos			
Above Poverty Line	28	38	16
Extreme Poverty	27	34	19
Moderate Poverty	22	33	13
44 = <59	20	20	15
Above Poverty Line	28	39	15
Excleme Poverty Mederate Deverty	22	46	10
	24	20	10
>= 60 anos	12	10	0
Extreme Poverty	12	13	0
Moderate Poverty	12	19	6
nouerate roverty	12	10	0

Table 70 Total Weekly Time Use (Excluding Leisure) by Poverty Group, Bairro & Gender

	Weighted Avge.	S	EXO
		Homem	Mulher
Kassequel			
Above Poverty Line	25	20	30
Extreme Poverty	31	38	25
Moderate Poverty	23	22	24
Prenda			
Above Poverty Line	24	22	26
Extreme Poverty	28	31	26
Moderate Poverty	22	21	22
Ilha do Cabo			
Above Poverty Line	31	28	34
Extreme Poverty	46	32	58
Moderate Poverty	20	20	20
Kinanga			
Above Poverty Line	29	29	29
Extreme Poverty	34	23	57
Moderate Poverty	21	21	20
Marcal			
Above Poverty Line	23	22	24
Extreme Poverty	9	11	8
Moderate Poverty	22	15	30
Terra Nova			
Above Poverty Line	29	24	34
Extreme Poverty	41	10	53
Moderate Poverty	22	18	26
Rangel			
Above Poverty Line	37	35	38
Extreme Poverty	7	.3	12
Moderate Poverty	22	20	23
Ngola Kiluanji			
Above Poverty Line	28	25	31
Extreme Poverty	11	15	5
Moderate Poverty	22	22	21
Sambizanga			
Above Poverty Line	26	23	27
Extreme Poverty	33	22	39
Moderate Poverty	22	15	31
B.Operario			
Above Poverty Line	31	26	35
Extreme Poverty	22	27	18
Moderate Poverty	32	30	36
B.Popular			
Above Poverty Line	26	24	28
Extreme Poverty	27	7	40
Moderate Poverty	28	25	31
Golfe			
Above Poverty Line	25	26	24
Extreme Poverty	12	14	10
Moderate Poverty	20	17	22
Tala Hadi			
Above Poverty Line	27	25	30
Extreme Poverty	19	22	16
Moderate Poverty	20	14	25
Cazenga	L V	* 1	~ ~
Above Poverty Line	26	23	28
	- v		.

21	19	23
24	22	27
26	27	25
25	24	27
29	22	34
23	15	34
27	22	32
	21 24 26 25 29 23 27	21 18 24 22 26 27 25 24 29 22 23 15 27 22

Total Weekly Time Used in Household Production Activities by Poverty Group, Bairro & Gender

	Weighted Avge.	SI	X	
	,	Homem	Mulher	
Kassequel				
Above Poverty Line	14	7	21	
Extreme Poverty	14	5	20	
Moderate Poverty	11	6	17	
Prenda				
Above Poverty Line	13	6	19	
Extreme Poverty	8.	2	13	
Moderate Poverty	11	6	16	
Ilha do Cabo				
Above Poverty Line	19	12	26	
Extreme Poverty	36	17	51	
Moderate Poverty	8	3	14	
Kinanga 🦳				
Above Poverty Line	12	5	21	
Extreme Poverty	19	0	57	
Moderate Poverty	10	5	16	
Marcal				
Above Poverty Line	13	7	18	
Extreme Poverty	2	2	3	
Moderate Poverty	12	6	19	
Terra Nova				
Above Poverty Line	17	9	25	
Extreme Poverty	20	8	30	
Moderate Poverty	12	4	18	
Rangel				
Above Poverty Line	22	12	30	
Extreme Poverty	8	3	16	
Moderate Poverty	13	8	18	
Ngola Kiluanji				
Above Poverty Line	19	11	28	
Extreme Poverty	15	5	31	
Moderate Poverty	14	9	1	
Sambizanga		-	-	
Above Poverty Line	15	7	21	
Extreme Poverty	23	11	30	
Moderate Poverty	13	6	23	
B.Operario			20	
Above Poverty Line	17	9	25	
Extreme Poverty	13	9	18	
Moderate Poverty	24	21	29	

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B.Popular			
Above Poverty Line	16	7	23
Extreme Poverty	25	13	42
Moderate Poverty	18	11	27
Golfe			
Above Poverty Line	14	8	19
Extreme Poverty	5	2	7
Moderate Poverty	11	5	17
Tala Hadi			
Above Poverty Line	18	10	26
Extreme Poverty	6	2	9
Moderate Poverty	11	5	16
Cazenga			
Above Poverty Line	16	8	23
Extreme Poverty	12	6	18
Moderate Poverty	12	6	19
Cuca			
Above Poverty Line	14	9	21
Extreme Poverty	11	10	12
Moderate Poverty	17	9	25
Viana			
Above Poverty Line	18	7	26
Extreme Poverty	16	6	27
Moderate Poverty	17	8	26

Total Weekly Time Used in Non-Household Production Activities & Travel by <u>Poverty Group by Age and Sex</u>

	Weighted Avge.	SEX	
		Homem	Mulher
Kassequel			
Above Poverty Line	11	13	9
Extreme Poverty	11	20	4
Moderate Poverty	12	16	6
Prenda			
Above Poverty Line	12	16	7
Extreme Poverty	13	21	7
Moderate Poverty	11	15	6
Ilha do Cabo			
Above Poverty Line	11	16	6
Extreme Poverty	11	15	7
Moderate Poverty	14	17	10
Kinanga			
Above Poverty Line	17	25	8
Extreme Poverty	15	22	
Moderate Poverty	11	15	4
Marcal '			
Above Poverty Line	11	15	7
Extreme Poverty	7	9	5
Moderate Poverty	10	9	11
Terra Nova			
Above Poverty Line	13	17	10
Extreme Poverty	6	5	7
Moderate Poverty	10	14	8
Rangel			

Above Poverty Line	14	22	9
Extreme Poverty	5	3	8
Moderate Poverty	9	12	6
Ngola Kiluanji			
Above Poverty Line	9	14	4
Extreme Poverty	8	9	8
Moderate Poverty	9	15	5
Sambizanga			
Above Poverty Line	11	16	7
Extreme Poverty	13	13	12
Moderate Poverty	8	10	6
B.Operario			
Above Poverty Line	14	17	11
Extreme Poverty	9	19	
Moderate Poverty	8	8	8
B.Popular			
Above Poverty Line	10	17	5
Extreme Poverty	7	10	3
Moderate Poverty	9	14	4
Golfe			
Above Poverty Line	11	17	6
Extreme Poverty	5	10	2
Moderate Poverty	8	12	5
Tala Hadi			
Above Poverty Line	ġ	15	4
Extreme Poverty	9	14	4
Moderate Poverty	9	9	8
Cazenga			
Above Poverty Line	10	15	5
Extreme Poverty	9	10	7
Moderate Poverty	9	13	5
Cuca			
Above Poverty Line	10	14	6
Extreme Poverty	11	20	6
Moderate Poverty	8	15	2
Viana			
Above Poverty Line	12	16	10
Extreme Poverty	9	13	4
Moderate Poverty	11	14	7

Technical Appendix V

Caloric Values and Calorie Costs

Table 73			
Food Commodity	Kz.	KCals/	Kcals/
	/Kg./Lt	100 g/mls	Kz.
PIMENTA	150.00	308	20.53
SARDINHAS	233.33	334	14.31
LEITE CHOCOLATADO	400.00	529	13.22
OLEO DE SOJA/DE MANA	688.89	900	13.06
OUTROS OLEOS: OLEO D	703.00	900	12.80
OUTROS FARINHAS DE G	275.00	350	12.72
DENDEM	500.00	587	11.74
MASSAMBALA	300.00	350	11.66
CAFE	100.00	100	10.00
ARROZ	472.22	370	7.83
OUTROS LEGUMINOSAS	500.00	340	6.80
OLEO DE PALMA	1366.67	892	6.52
MARGARINA	1150.00	747	6.49
ABACATE	357.14	223	6.24
BANHA: GORDURA ANIMA	1500.00	891	5.94
GELADO	191.67	107	5.58
FEIJAO	614.04	340	5.53
CANA DE ACUCAR	100.00	54	5.40
OUTROS OLEOS FEITOS	2000.00	900	4.50
MOAMBA	2000.00	891	4.45
MANDIOCA: RAIZ	350.43	150	4.28
MANDIOCA: FARINHA DE	833.33	340	4.08
MANTEIGA	1883.33	740	3.92
ACUCAR	1010.07	3/5	3.08
MILHU-FAKINHA CRUEIDA	1212.12	360	2.9/
CRUEIRA MAGGA	900.00	200	2.95
MASSA FURA DE ROMRO	1300.00	370	2.04
NILHO CPAO	1250.00	350	2.00
TPICO-OUTPOS	1375 00	340	2.71
LEITE ERESCO/EM PO/C	1982 38	490	2.47
OVOS	580.00	140	2.41
000	1416.67	290	2.04
TRIGO-FARINHA	1666.67	330	1.98
OUTROS RAIZES, TUBER	600.00	110	1.83
SUMO FRUTO FRESCO E	666.67	112	1.67
OUTRAS CONSERVAS: FI	1375.00	217	1.57
PAO	1761.90	270	1.53
OUTROS GRAOS- BICO	2500.00	350	1.40
KISSANGUA	180.00	25	1.38
MILHO-FRESCO	766.67	100	1.30
PEIXE SECO	2000.00	255	1.27
BERINJELA	116.67	14	1.19
REFEICOES FEITAS FOR	1000.00	119	1.19
BATATA DOCE	1018.52	120	1.17
OUTRAS FRUTAS-CAJU	300.00	35	1.16
CONDIMENTOS-FOLHA LO	2000.00	233	1.16
GINGUBA	5000.00	570	1.14
OUTROS SEMENTES OU N	5000.00	560	1.12
DOCES, MICATOS, BOLA	3166.60	337	1.06
SALSICHA	3466.68	367	1.05
COLA	1417.00	148	1.04
BANANA: FRUTA OU COZ	470.59	47	0.99

Food Commodity	Kz. /Kg./Lt	Kcals/ 100 g/mls	Kcals/ Kz.
MIUDEZAS	3333.33	310	0.93
YOGURTES	1083.33	95	0.87
QUEIJO	3833.33	311	0.81
ABOBORA BRANCA	200.00	15	0.75
MEL	4000.00	288	0.72
ATUM	4333.33	289	0.66
KAPORROTO	400.00	25	0.62
CHOURICO	8000.00	491	0.61
PORCO	7100.34	408	0.57
legumes e frutas em	1466.67	80	0.54
BATATA RENO	1562.50	80	0.51
GAZOSA-NACIONAL	1033.33	45	0.43
PEIXE FRESCO	2666.67	115	0.43
CARNE DE VACA	5750.00	234	0.40
COUVE, ALFACE, REPOL	550.00	22	0.40
KISACA	2200.00	80	0.36
MASSA TOMATE PACOTE/	1906.00	67	0.35
OUTROS LEGUMES-PEPIN	650.00	20	0.30
FRANGO	4848.48	138	0.28
GOIABA	1666.67	46	0.27
VINHO-NACIONAL	2583.33	68	0.26
ABACAXI, ANANAS	1/50.00	40	0.20
ABUBURA	1000.00	25	0.25
GEDUEIN INDODUNDA	2333.33	20	0.24
ULNUO INDODUNDO	1200.00	29	0.24
VINHO-IMPORTADO	2033.33	12	0.24
BODINUS LEGUMES COM P	500.00	12	0.24
CEDUEIN NACIONAL	9333.33	222	0.23
CERVEJA NACIONAL	1200.00	29	0.23
CADNE DE CADNEIDO/CA	203/+14	39	0.20
CARNE DE CARNEIRO/CA	9203.71	1/1	0.10
MARTECOS CAMARAO /CAR	6000.00	30	0.17
OUTDOG NUTS DATO	0000.00	120	0.15
CAROSA INDODIADA	3636 36	130	0.14
GALUSA-IMPORIADA	10277 70	45	0.12
LADANIA MANCEDINA	10211.10	110	0.11
HARANJA, TANGERINA,	2300.07	20	0.10
CENCUDA	1420.57	14	0.09
CENOURA DINENTO CINDUNCO	2100.07	20	0.09
TURNIC, GINDUNGO		10	0.03
IUMAIE VINACEE	1625 00	14	0.02
V INAGRE	1023.00	3 2 ñ	0.02
	10666 67	20	0.02
CEBUL 9 COTADO	10000.0/	20	0.01
CEDULA Cat.	1005 EC	23	0.00
CFI O	1005.50	0	0.00
GETO	1000.00	v	0.00

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THE EVOLUTION OF WELFARE AND POVERTY DURING STRUCTURAL CHANGE AND ECONOMIC RECESSION --THE CASE OF COTE D'IVOIRE, 1985-88

Christiaan Grootaert

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1. Introduction

Since the start of structural adjustment programs in the 1980s, a growing debate has emerged as to the efficiency of these programs to bring about sustainable economic growth and as to their short and long-term impact on poverty and basic needs fulfillment. By now, a fair amount of evidence has been accumulated to show that "adjusting" countries have experienced more improvement (or less decline) in their macro-economic performance than "non-adjusting" countries (see Corbo et al., 1992 for a recent review). However, it is now recognized that progress has been much slower than anticipated originally and that structural adjustment and associated policy change is a long-term endeavor in most countries.

It is much less clear what the impact of the adjustment process has been on the poor and on the social sectors in general. Initial claims of a strong negative impact (Cornia et al., 1987) were based on insufficient empirical evidence and a too limited conceptual approach, which failed to distinguish between the effects of economic recession and those of adjustment which itself was a policy response to the recession and its concomitant internal and external imbalances. Recent work (World Bank, 1990; Demery, Ferroni and Grootaert, forthcoming) has provided a more refined framework to describe the transmission mechanism between macro-economic events and the micro-economy of households and individuals. This work has emphasized the role of labor and commodity markets and of economic and social infrastructure, and described in some detail the relevant factors in the transmission process in the case of the social sectors (education, health) and in the case of important target groups (women, rural smallholders, the poor).

This target group and sector-specific approach has focused on identifying key variables that need to be considered in an empirical analysis of the macro-micro transmission and on setting out suitable analytical approaches which can provide guidance to policy. One reason for this angle of inquiry was the emerging conclusion from the work that in most situations the poverty and social impacts of adjustment cannot be predicted on purely theoretical and a priori grounds — not even qualitatively. The reasons are (at least) twofold. First, a typical adjustment package consists of many different macro-economic and sectoral measures. These measures do not necessarily have converging impacts. Second, the impact of a given single policy action is usually difficult to predict, even when considered in isolation. For example, how a nominal exchange rate devaluation will impact the poor depends upon the consumption and income patterns of the poor, the composition of imports and exports, associated tariffs and subsidies, etc. Moreover, the impact of a given measure can depend upon which other components are in the package. In the same example, the impact of devaluation will depend on what simultaneous actions are taken to liberalize trade and abolish government marketing monopolies. 1/

What all this means is that the determination of what happens to household welfare, poverty, and the fulfillment of basic needs under conditions of structural change is largely an empirical matter. And this presents a serious problem, because in many developing countries, especially in Africa, the needed social and economic data base is non-existent or out-of-date. It is therefore potentially very instructive to undertake detailed case studies in those rare countries where the needed data do exist. One such case is Côte d'Ivoire over the period 1985-88. To our knowledge, this case is unique in Africa, because the available data meet three essential conditions. First, any analysis of the impact of macro-economic change requires comparable data for at least two points in time. Second, the available data must be situated at appropriate time points relative to the adjustment phase, so that they can reflect its impact. Third, the concern with household welfare and poverty requires micro-level data which cover the different dimensions of household welfare.

^{1/} There are of course exceptions. The impact of laying off government workers on the welfare of their households is rather straightforward — at least in the short run. Similarly, cutting food subsidies will directly and immediately hurt consumers of the subsidized item. The challenge remains though to identify medium-term responses.

In Côte d'Ivoire, such data were collected for four consecutive years, 1985-88, in the Côte d'Ivoire Living Standards Survey (CILSS). This survey asked detailed information on income, expenditure, employment, health, education, housing and other relevant socioeconomic characteristics of households and individuals. Moreover, the period 1985-88 represents a particularly critical phase in Côte d'Ivoire's process of structural change. Adjustment efforts in Côte d'Ivoire started in 1981, and were sustained for six years. After showing signs of improvement in 1985-86, the economy nosedived in 1987-88 and the government abandoned the structural adjustment program (it was resumed in late 1989). The initial years of CILSS data (1985-86) are thus able to pick up the effects of sustained adjustment, while the latter years (1987-88) will reflect the abandon of the effort and rapid economic decline — in effect, a period of destabilization. This feature is particularly important, because it provides a "natural" way to disentangle adjustment from recession effects 2/.

Our objective in this paper is to chart the evolution of household welfare, poverty, and the fulfillment of basic needs in Côte d'Ivoire between 1985-88 and to try to understand this evolution in the context of the macro-economic change which occurred over the period. We are concerned to find out how the overall incidence and depth of poverty has evolved, and what changes may have occurred in the regional and socio-economic patterns of poverty. It stands to reason that the macro-economic swings will have benefitted some groups and hurt others, and it is clearly of interest for policy to know who they are. It is to be expected that the economic decline in 1987-88 will have had a negative impact on household welfare, but the question is by how much and where the impact was concentrated.

In trying to address these questions, we elected to use a flexible methodology which allowed the story of what happened to welfare and poverty to come out of the data themselves as much as possible, without imposing a formal model structure. Given how

^{2/} Obviously, this is a simplification. Even after the abandon of the adjustment program, some effects will continue to be felt. Likewise, the subsequent economic decline will also take time before it shows up in poverty and basic needs measures.
large and rich the CILSS data sets are, this is actually in itself somewhat of a challenge, and would seem to be a useful approach to a policy-oriented empirical analysis of poverty. Our methodology is centered around the construction of a policy relevant poverty profile which includes the income/expenditure dimension as well as the basic needs aspects of welfare. Decomposition of poverty indexes along regional and socio-economic lines will be used to try to relate specific policy measures to the welfare of sub-groups of the population. An analysis of income and expenditure patterns will form the basis of an assessment of the impact of commodity-specific measures.

As we hope the paper will demonstrate, this approach can provide policy-makers with much relevant information for the assessment of past policies and for the design of new ones, in the area of poverty and basic needs. It will be clear though, and must be explicitly stated from the outset, that our approach will not permit to prove causality in a formal way, neither between macro-economic policies and macro-economic performance, nor between the latter and changes at the micro-level. Strictly speaking, only a general equilibrium model of the economy, suitably disaggregated, would be capable of doing so. And while such model could be one of several useful areas of follow-up research, we did not think it was the most fruitful starting point. (In fact, the design itself of such a model requires a good prior understanding of the factual patterns of changes in the economy, both at macro- and micro-levels).

The CILSS data have been the subject of earlier analysis related to welfare and poverty, but most studies used only the 1985-86 data. A recent selection includes Deaton (1987, 1989), Glewwe (1987, 1989), Grootaert (1987, 1990), Vandergaag and Vijverberg (1989), Kakwani (1990) and Kanbur (1990). To our knowledge, this paper presents the first set of poverty and welfare indicators covering the entire four year period. As the results will show, the use of the fourth year of data (1988) proves to be particularly important to interpret properly the impact of macro-economic change on households.

Moreover, this study improves on previous work in two ways. First, we developed a new regional cost-of-living index with a much more comprehensive coverage than earlier indices. The use of this index to deflate the welfare measure makes a significant difference in the estimation of poverty. Second, as part of the research underlying this paper, we have examined in detail the sampling procedures and properties of the Côte d'Ivoire Living Standards Survey. We discovered the existence of several errors in the data due to sampling bias, and developed appropriate corrective weights to be applied to the data. Again, this correction makes a significant difference for the estimation of the level and trend of poverty.

While the main purpose of the paper is to present empirical evidence of changes in welfare and poverty in Côte d'Ivoire, we do aim to go beyond the specifics of the case study and to derive some lessons with general relevance and applicability to other countries as well. We shall also try to assess the general usefulness of our methodology as a tool to analyze poverty. Lastly, the experience gained during the analysis of the data will permit to draw specific conclusions regarding the optimal type of data collection for policy-oriented analysis of poverty, in terms of frequency of surveys, sample size and design, and survey content.

The outline of the paper is as follows. In the next section, we briefly review the data sets underlying the case study. Section 3 presents our methodology of poverty analysis, centered around the construction of a policy-relevant poverty profile and the use of a decomposable poverty index. In section 4 we sketch the macro-economic evolution in Côte d'Ivoire in the 1980s and the main lines of the adjustment program. The presentation of case study results begins in section 5 with findings on household expenditure and the incidence and depth of poverty. Section 6 addresses the basic needs dimensions: education, health and housing. The final section summarizes the empirical findings, draws policy implications for Côte d'Ivoire, and extracts lessons which are relevant for other countries as well.

2. The Côte d'Ivoire Living Standards Survey (CILSS)

The main data set for this case study is the Côte d'Ivoire Living Standards Survey (CILSS). The CILSS was conducted from 1985 to 1988 by the Direction de la Statistique, with financial and technical support from the World Bank during the first two years. The sample size each year was 1,600 households and the sample design was a rotating panel, i.e. 50 percent of the households were re-visited the following year and the other half was replaced by new households. The survey thus yielded a sequence of four cross-sectional data sets, each of which is representative of the country as a whole, as well as three overlapping panels of approximately 800 households each (1985-86, 1986-87, 1987-88). The survey collected detailed information on employment, income, expenditures, assets, basic needs and other socio-economic characteristics of the households. Over the four years, coverage and methodology of the data collection were held constant so that results are comparable over time (see Grootaert, 1986, for a further discussions of the content and methodology of the CILSS).

As part of the research underlying this paper we undertook a detailed review of the sampling procedures and properties of the CILSS. We found that even though the survey sample had been designed to be self-weighting, in practice various errors occurred in the constitution of the sample, which require the application of ex-post weights to the data. These errors were brought to light by the observation of several anomalies in the survey results.

First, it was noted early on that household expenditures appeared to be overestimated in Abidjan in 1985 and 1986. This could be traced to an incorrect selection of primary sampling units (PSUs) leading to an over-representation of rich areas. To the extent possible, this was corrected through the construction of ex-post weights for Abidjan. The majority of the studies which used data from the early CILSS years have applied those weights (see citations in section 1).

Second, average household size as calculated from the survey declined from about eight to six persons between 1985 and 1988. Demery and Grootaert (1992) have investigated this phenomenon in detail and concluded that it did not correspond to a demographic reality. The culprit was found to be a flawed field procedure in listing the households from which the 1985 and 1986 samples were drawn. There was a bias towards listing larger dwellings, and thus larger households. This bias in the listing was of course reflected in the final sample of the survey. The listing procedures were revised in 1987, and a comparison with 1988 Population Census results indicated that the household size derived from the 1987-88 CILSS closely matches census figures. Consequently, the distribution of household size for the 1985 and 1986 samples (and the 1987 panel component derived from the early sample list) was re-weighted to eliminate this sampling bias. As Demery and Grootaert have shown, the sampling bias in the 1985-86 data corresponds to an overestimation of poverty in the order of 10-15 percent at the national level, and as much as 20-30 percent for some regions and socio-economic groups. The proper correction is thus not a matter of trivial importance, but has serious implications for policy. Unlike the first set of weights (for Abidjan), this correction for household size has not been applied by other researchers. Given the magnitude of the correction, several of the results reported in earlier work may well prove not to be robust to this correction for sampling bias.

Third, the share of rural households in the CILSS dropped suddenly between 1986 and 1987, from 57 to 50 percent. Results from the 1988 Population Census indicated that this drop did not correspond to reality. It stemmed from an update of the sampling frame which occurred in 1987, and which was based on results from an electoral census (Daho, 1992). The latter proved to have incorrect coverage of households, so that an excessive number of urban PSUs were selected for the sample. With the benefit of hindsight, i.e. the 1988 Population Census results, it became clear that the updated set of PSUs was actually further from reality than the 1985-86 set. Consequently we re-weighted the 1987 and 1988

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regional distribution of households so that it would match census figures.3/ This reweighting is particularly important for over-time comparisons of welfare and poverty, in view of the wide urban-rural welfare differential in Côte d'Ivoire. If one were not to apply these weights, the sudden drop in the percentage of rural households in the sample in 1987 would produce a false drop in the estimated incidence of poverty (given that poverty is much higher in rural than in urban areas).

The three corrective factors discussed above were combined in one series of household weights to be applied to the data in order to eliminate the three identified sources of sampling bias. The series was normalized to keep degrees of freedom in the data constant. $\frac{4}{}$ All tables in this paper are based on survey results to which the series of corrective sampling weights have been applied.

3. The Measurement of Welfare and Poverty <u>5</u>/

3.1 The Welfare Index

Household welfare or level of living $\underline{6}$ / is fundamentally a multi-dimensional concept, comprehending every aspect of direct consumption of goods and services as well

^{3/} This re-weighing affected only the distribution of the sample <u>across</u> strata, i.e. regions. In contrast, the revision of the listing procedures in 1987 - which were a great improvement over the early procedures - affected only the second stage of the sampling, i.e. the listing and selection of households <u>within</u> PSUs and strata. This explains why the estimates of household size within each region were correct in 1987-88.

^{4/} Oh and Venkataraman (1992) contains a more detailed discussion of the mechanics of the construction of these weights, as well as further general information on the CILSS data files underlying this research.

^{5/} The discussion in this section partly follows that of Grootaert and Kanbur (1990).

^{6/} We use the terms "welfare" and "level of living" interchangeably. The name of the CILSS notwithstanding, we prefer not to use the term "standard of living" because it is sometimes used in a normative sense.

as non-consumption activities and services (see Grootaert, 1983, and Sen, 1987). The former is the result of direct market purchases as well as consumption of goods and services produced by the household itself. The latter includes the use of services often provided by the State such as health, education and access to clean water, which contribute directly and indirectly to the level of living of the household. Because the value of these services is not easy to quantify, we keep separate in the analysis below the direct consumption components of household welfare from the so-called basic needs aspects. $\frac{7}{7}$

The basic problem is then to quantify the complete pattern of direct consumption into a single indicator of welfare. The standard economic solution is of course to convert the quantities consumed into a total figure by valuing them with prices — market prices in the case of actual purchases, imputed prices in the case of consumption out of home production or income received in kind. In the case of the CILSS, the task of imputing prices has been made easy because for all non-purchased items, households were asked to estimate the equivalent market value. $\underline{8}/$

The measure of household welfare used in the analysis below is thus household expenditure. <u>9</u>/ This is a preferred measure over household income for conceptual and pragmatic reasons. Conceptually, household expenditure can be seen as a proxy for

^{7/} The satisfaction of many basic needs enters both the direct and indirect consumption of the household. For example, even if the State provides health services, the household will usually still have outlays on health services, either because they are not entirely provided for free by the State, or because they are purchased from a private provider. Only in rare cases will the total direct outlays correspond to the total consumption of the household of health services - hence the need to review the satisfaction of basic needs over and above the fraction that is captured by the measure of direct consumption.

^{8/} It is recognized that this may introduce an element of subjectivity. On the other hand, households may well be better able to assess what something is worth in the market which is part of their daily environment, than an outside analyst who tries to impute prices "objectively" from an estimated model of that market.

^{2/} Johnson et al. (1990) describe how total household expenditure was constructed from the CILSS data.

permanent income or consumption, which is the ideal measure because it incorporates overtime decisions by the household (i.e., substitution between current and future consumption through savings). Unfortunately, the estimation of this requires longitudinal data on household consumption over several years. The two-year panels of the CILSS go a small way towards estimating this, but the attempt to use this feature of the data has been relegated to a separate paper (Grootaert and Kanbur, 1992b). In a developing country setting, current expenditure is likely to represent permanent income better than current income, because it tends to be less subject to short-term fluctuations. Also, experience with data collection has provided a strong indication that expenditure tends to be recorded more accurately than income. This is especially the case in settings where non-market income is important.

The proper use of household expenditure as a measure of welfare requires in principle that the size and composition of the household be taken into account, because consumption needs will depend on the number of household members and may vary with age and sex. Household size can be taken into account by expressing expenditure on a per capita basis. The consideration of household composition requires the use of an adult equivalent scale. The construction of such a scale in an endogenous fashion, i.e. derived from the data itself, is a complex exercise fraught with conceptual and practical difficulties and there is no agreement in the literature on the best procedures (see e.g. Deaton and Muellbauer, 1980). The calculation of such a scale has not been attempted for this paper. Some analysts use an exogenously derived scale, frequently from another country. E.g. Glewwe (1987) uses an equivalent scale based on Sri Lanka and Indonesia data in his analysis of the CILSS data. We deem the assumption that equivalent scales are valid across countries as non-proven and intrinsically very questionable, and that hence the use of such scales does not constitute an obvious improvement over simple per capita measures.

3.2 **Prices**

Different households in a country may face different prices because they operate in different markets. To the extent that it is practically possible, such differences should be

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taken into account when using household expenditure as a welfare measure, by deflating it with a cost-of-living index. Previous research on the CILSS data has been largely unsuccessful in doing so. The most complete index was developed by Glewwe (1987) and has been used by other researchers as well (Kanbur, 1990). Glewwe's index however includes only one non-food item — a can of tomato paste. It is difficult to argue that this item, which constitutes about 1 percent of an average Ivorian household's non-food budget, can adequately represent the entire non-food basket.

We have therefore drawn on a richer data base, namely the prices collected in Côte d'Ivoire in 1985 under the auspices of the International Comparisons Project (ICP). Such prices have been used to calculate exchange rates between different countries based on purchasing power parity (see Kravis et al, 1982; Eurostat, 1989). However, our use of the data for the purpose of welfare comparisons within the country constitutes a novel use of ICP data. We calculated a Paasche regional cost-of-living index (basis = Abidjan) by matching prices of 260 product categories in ICP data with expenditure shares for 27 food categories and 25 non-food categories derived from the CILSS (the details of this work are described in Grootaert and Kanbur, 1992a). The resulting index (Table 1) shows that Abidjan is the highest-cost region in Côte d'Ivoire. Cost of living in other urban areas is about 8 percent lower, and in rural areas 13 to 25 percent lower. A comparison of this with Glewwe's index reveals that the latter underestimates cost-of-living differences in rural areas but overestimates price differences between Abidjan and other cities.

Since ICP price data are only available for 1985, we had to assume that regional price differences remained steady for the other years. We did, however, update the expenditure shares for each year and recalculated the cost-of-living index accordingly. The resulting index is quite stable except in West Forest and Savannah. For West Forest the cost-of-living differential increases from about 22 to 28 percent, while in Savannah it decreases from 24 to 18 percent. The two regions trade place in terms of the greatest cost-of-living difference relative to Abidjan. This is consistent with the fact that West Forest

	1985	1986	1987	1988
Abidian	100.00	100.00	100.00	100.00
Other Cities	92.84	93.62	91.49	92.57
East Forest	87.01	87.01	88.12	86.58
West Forest	78.25	74.66	75.64	72.42
Savannah	75.97	80.12	81.86	81.88

Table 1: Regional Cost-of-Living Index, 1985-88

is the region that saw the most severe erosion of welfare: between 1985 and 1988 real household expenditure per capita fell by 41 percent. This is likely to have depressed prices. In Savannah real household expenditure also declined, but less than the national average (see Section 5).

Since our analysis involves welfare comparisons over time, it is also necessary to incorporate general price increases over time. This was done on the basis of the Consumer Price Index (Table 2), which was uniformly applied to the regional cost-of-living index. In other words, we assumed (again) that regional cost-of-living differences remained constant over the four year period.

Table 2: CPI 1985-88

	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
CPI	100.00	107.30	107.75	115.31

Source: IMF, International Financial Statistics

3.3 **Poverty Line and Poverty Index**

After having constructed the welfare index and a suitable cost-of-living deflator, it is necessary to distinguish the poor from the non-poor, i.e. to set a poverty line. This paper is not the place to review the large literature on this topic (see e.g. Sen, 1987; Kanbur, 1987; Ravallion, 1992), but it suffices to say that it constitutes a controversial area in poverty analysis. The two main alternative approaches involve the calculation of a relative or absolute poverty line. The latter is frequently based on minimum nutritional intake requirements which are "translated" into minimally needed food expenses, and to which is then added a non-food basket deemed to constitute an essential minimum. Apart from the queries raised in the literature about the feasibility of both establishing nutritional minima and converting them into food expenses (see e.g. Srinivasan, 1981; Sen, 1987), there is a fundamental arbitrariness in setting the non-food minimum. This would clearly be influenced by and be relative to social, cultural, political and other norms. We make this point not so much as a criticism of the approach, but to emphasize that an absolute poverty line does have an arbitrary and relative element in it.

The relative poverty line is determined entirely within the expenditure data to which it is to be applied. The approach consists of setting a poverty line which cuts off an arbitrarily — preselected percent of the population on the expenditure distribution. An alternative procedure is to set the poverty line at an — equally arbitrarily — preselected fraction of mean expenditure (Boateng et al., n.d., use this method in a poverty study on Ghana).

Regardless of the approach chosen, it is important to recognize that the poverty line is a largely arbitrary divider between poor and non-poor. It will thus be important to undertake sensitivity analysis to ensure that poverty incidence and patterns are not unduly changed as a result of small shifts of the line. Also, in practice, it will be important to have support from policy makers for the chosen line if the poverty analysis is to be policy relevant. For this study we have opted to define two poverty lines, using a relative approach. The first poverty line — 128,600 CFAF per year — was chosen so as to cut off 30 percent of individuals ranked by household expenditure per capita in 1985. The second line — 75,000 CFAF per year — was chosen to identify people in extreme poverty, as it cuts off the bottom 10 percent of the distribution. 10/ These lines correspond to about one half and one third of mean per capita household expenditure, respectively. Our analysis will include a sensitivity analysis around those lines (section 5.4) as well as dominance tests (section 5.5). For the analysis of the evolution of poverty over time, the two poverty lines were held constant <u>in real terms</u>. So, even though the lines were initially selected in a relative way, the analysis over time follows an absolute approach (under a purely relative approach the incidence of poverty does not diminish over time, by definition).

Our last choice remains that of a poverty index, which must summarize information on the incidence and depth of poverty. In line with much other recent work (Boateng et al., n.d.; Kakwani, 1990; Kanbur, 1990; Ravallion, 1992) and the approach suggested in Grootaert and Kanbur (1990), we have selected the so-called P-alpha class of poverty measures developed by Foster, Greer and Thorbecke (1984).11/ The general formula is

$$P_{e} = \frac{1}{n} \sum_{i=1}^{q} \left(\frac{z - y_{i}}{z} \right)^{e}$$

- where n = number of people
 - q = number of poor people
 - z = poverty line
 - y_i = expenditure per capita of individual i
 - α = poverty aversion parameter

^{10/} Sometimes the minimum wage is suggested as the poverty line. This is not suitable in Côte d'Ivoire, because the guaranteed hourly industrial wage (SMIG) was set at 191.40 CFAF over the period 1985-88, which adds up to an individual income of 306,240 CFAF per year (on the basis of 1,600 work hours). This is almost 50 percent <u>above</u> mean expenditures per capita in 1985.

^{11/} For a review of poverty measures, see Foster (1984) and Atkinson (1987).

The poverty aversion parameter can take any positive value or zero. The higher the value the more the index "weighs" the situation of the very poor, i.e., the people farthest below the poverty line. Of specific interest are the cases where $\alpha = 0$ and $\alpha = 1$.

If $\alpha = 0$, the index becomes

$$P_{o} = \frac{q}{n}$$

which is the simple head count ratio of poverty, i.e. the number of poor people as a percentage of the total population. While this is a useful first indicator, it fails to pay attention to the severity or the depth of poverty. To do so, one also needs to look at the extent to which the expenditures of poor people fall below the poverty line. This is customarily expressed as the "income gap ratio" which expresses the average shortfall as a fraction of the poverty line itself, i.e.,

$$\frac{z-\overline{y}_i}{z}$$

where y_i is the average income or expenditure of the poor.

A useful index is obtained when the head count ratio of poverty is multiplied with the income gap ratio. This corresponds to

$$P_1 = \frac{q}{n} \left(\frac{z - \overline{y}_i}{z} \right)$$

which reflects both the incidence and depth of poverty. This measure has a particularly useful interpretation because it indicates what fraction of the poverty line would have to be

contributed by every individual to eradicate poverty through transfers, under the assumption of perfect targeting. Since this assumption is not likely to apply in practice, this can be considered as the minimum amount of resources needed to eradicate poverty. In the tables below in section 5, we shall show P_0 , P_1 and P_2 . Since the latter measure is more sensitive to the situation of the poorest, the comparison with P_1 can show whether the distribution among the poor has worsened or improved.

The P-alpha poverty measure has the further advantage of being decomposable. For example, the measure at the national level can be expressed as the sum of regional measures weighted by the population share of each region:

$$P_{\alpha} = \sum_{j=1}^{m} k_j P_{\alpha_j}$$

where j = 1, ..., m regions

 $k_j = population share of region j$

This makes it possible to calculate the "contribution" c_j of each region to national poverty:

$$c_j = \frac{k_j P_{e_j}}{P_e}$$

This feature is very helpful to make poverty analysis directly relevant for policy. Decompositions along policy relevant dimensions such as region and socio-economic group can indicate how macro-economic events have changed poverty in the country through their effects on specific regions or groups. Knowledge about the share of each region or group in total poverty is essential for targeting interventions. Therefore, parallel to the presentation

of the P_{α} measure for $\alpha = 0,1$ and 2, the tables below will also show the decomposition of the measure.

4. Côte d'Ivoire's Macro-Economic Evolution in the 1980s

Côte d'Ivoire's extraordinary growth record during its first 2 decades of independence is well documented (Den Tuinder, 1978). The "Ivorian miracle" came to an abrupt halt in 1980 as a result of the collapse of world prices for coffee and cocoa — the country's two main exports. In 1982-84 a severe drought further ransacked the economy, so that real GDP per capita fell by almost one fifth over the period 1980-84. Excellent harvests and a rise in world prices for coffee and cocoa provided an upturn in 1985 and 1986, but it proved to be short-lived and in 1986 it was already insufficient to outpace population growth (Table 3).

In 1987, the recession resumed in full force. This was triggered by a sudden and sharp appreciation of the real effective exchange rate, which in 1986 and 1987 rose by 33%. This was the result of the significant depreciation of the dollar against the French Franc (against which the CFAF is convertible at a fixed parity of 1 FF = 50 CFAF), in combination with domestic wage rigidity. Moreover, the terms of trade turned severely against Côte d'Ivoire in 1987. Coffee and cocoa production and exports fell significantly, resulting in a sharp decline in Côte d'Ivoire's traditional trade balance surplus. The situation also affected the industrial sector of the Ivorian economy. The sudden and large increase in the real effective exchange rate and the commensurate loss in competitiveness was beyond the adjustment and restructuring capacity of the Ivorian economy. The outcome of all this was to turn the 1985 current account surplus into a deficit, which in 1988 equalled 10 percent of GDP. The recession also reduced government receipts and, since government expenditures were not cut, the government budget deficit rose to 15 percent of GDP in 1988. All agents in the economy suffered from the recession, but households were particularly hard hit. According to the national accounts, aggregate consumption on a per capita basis fell by about 10 percent in 1987 and by another 20 percent in 1988. It stands to reason that a major downward trend occurred in levels of living in Côte d'Ivoire over the period 1985-88.

	1985	1986	1987	1988	1989	1990	
GDP (bln CFAF)	3137	3244	3118	3067	2948	2705	
Population (mln)	9.4	9.7	10.1	10.5	10.8	11.2	
GDP per capita							
('000 CFAF)	334	334	309	292	273	242	
Real Growth Rates							
GDP	4.9%	3.4%	-1.6%	-2.0%	-1.5%	-2.9%	
Private Consumption	4.1%	13.1%	-7.1%	-16.6%	-0.1%	-10.1%	
<u>Trade</u>							
Terms of trade (index)	100.0	100.7	82.4	73.9	63.8	59.3	
Average Exchange Rate							
(CFAF per \$)	449.3	346.3	300.5	297.8	319.0	272.3	
Real Effective Exchange							
Rate (index)	100	120	133	136	130	134	
Agriculture							
Cocoa production							
('000 tons)	528	627	544	715	782	780	
Coffee production							
('000 tons)	277	260	254	184	239	284	
Official cocoa price							
(CFAF/kg)	375	·400	400	400	200	200	
Official coffee price							
(CFAF/kg)	190	200	200	200	200	100	
Food crops production $1/$							
('000 tons)	5832	5592	5791	6012	5792	6289	
Public Finance							
Gov't receipts (bln CFAF)	1110	978	794	789	680	639	
Gov't expenditure (bln CFAF)	1026	1058	1051	1236	1197	980	
Surplus/deficit (bln CFAF)	84	-80	-257	-447	-517	-341	
(as % of GDP)	(2.7)	(2.5)	(8.2)	- (14.6)	(17.5)	(12.6)	
Balance of Payments							
Trade Balance (bln CFAF)	597.6	523.0	372.6	298.6	284.1	374.8	
Current Account (bln CFAF)	21.1	-120.1	-238.4	-301.6	-307.4	-283.9	
(as % of GDP)	(0.7)	(3.7)	(7.6)	(9.8)	(10.4)	(10.5)	
Capital Account (bln CFAF)	-108.4	21.8	-31.7	-151.9	-111.5	-123.0	
Overall Balance (bln CFAF)	-87.3	-98.3	-270.1	-453.5	-418.9	-406.9	
Debt Service Ratio	41.5%	39.4%	40.9%	56.7%	59.2%	54.7%	

Table 3: Côte d'Ivoire Macro-Economic Indicators 1985-90

Sources:

IMF and World Bank Statistics, Côte d'Ivoire, Ministère de l'Economie et des Finances The Economist (1990)

^{1/} Food crops include yams, plantains, cassava, rice (paddy), maize, millet and sorghum.

The Structural Adjustment Program

The Ivorian Government has reacted varyingly to the economic deterioration in the 1980s. In 1981, Côte d'Ivoire became one of the first African countries to launch a structural adjustment program. This marked the beginning of a first phase (1981-87) which attempted to restore fundamental macro-economic balances, and to correct major distortions in the incentive system. This phase was supported by three World Bank structural adjustment loans (SAL) in 1981, 1983 and 1986 - for a total of US\$650 million (see Grootaert and Kanbur, 1990 for a detailed discussion of Côte d'Ivoire's adjustment program). Over the same period, the IMF concluded one extended and four stand-by arrangements with Côte d'Ivoire, for the equivalent of 827 million SDR (Table 4). In spite of these programs, economic conditions in Côte d'Ivoire continued to deteriorate and this led eventually to an interruption of the adjustment effort — and of the support by the World Bank and the IMF — between 1987 and 1989. Towards the end of 1989, the Government put in place a new economic reform program supported by the Bank and the Fund. In this new phase, the strategy had shifted toward a sectoral approach in providing the proper incentives for sustainable growth. Since 1989, six sectoral adjustment operations have been launched, covering agriculture, energy, water supply, the financial sector, competitiveness and human resources (Table 4). In June 1991, Côte d'Ivoire became eligible again for IDA terms as a result of the continuous decline in GDP per capita, and some of the sectoral operations were partly funded through IDA. In July 1991, the Bank temporarily suspended disbursements in view of overdue payments, but the situation has since been normalized.

SAL II and III

For the purposes of this paper, we need to take a closer look at SAL II and III, covering the 1983-87 period. A first ingredient of SAL II was the (continued) reform of the parastatal and public sectors. The reforms consisted of the rationalization of investment policy, the improvement of the structure of current expenditures and the rehabilitation of the parastatal sector. However, the most immediate impact on household welfare came from the

government's decision in 1984 to align parastatal wages with those in the regular civil service. This meant a significant wage-cut for parastatal employees. Civil service wages were also frozen, and remained so until January 1986. They rose only slightly in the subsequent years.

Agriculture price and subsidy policy under the structural adjustment program had a potentially significant impact on farmers and on poverty incidence among them. First, coffee and cocoa producer prices were raised for the 1983-84 season and kept constant until 1989 (when they were cut by 50%). Second, a series of subsidies on domestic sales of export crops were removed. Third, the prices of cotton fertilizer and cotton were increased simultaneously, and the expansion program for cotton production started under SAL I was continued. Fourth, programs to promote food crop production, also started under SAL I, were maintained.

The government also revised its industrial policy in an attempt to reform the incentives regime. Non-tariff barriers were removed and replaced with a tariff system aimed at establishing a 40 percent effective protection rate. An export subsidy mechanism was introduced geared to providing the same effective assistance to exports as to import substitutes. In essence, these measures attempted to mimic a real devaluation, since a nominal devaluation was not possible in view of the fixed parity between the CFAF and the French franc.

A major, and new, component of SAL II was housing policy. The government decided to get out of the provision of public housing and to abolish the two agencies responsible for it (SOGEFIHA and SICOGI). Rents on public housing units were increased in 1985 and eventually the units were sold to tenants at below market values. Housing subsidies to civil servants were also reduced.

In SAL III, several agricultural measures were proposed with potentially important impact on farmers' income: (i) progressive increases in real producer prices for coffee and

cocoa; (ii) a series of tariffs and export subsidies to achieve a minimum effective protection level of 30 percent for most other export crops; (iii) progressive re-alignment of traded food crops such as rice and wheat flour with international prices, but in a way to ensure that there would be no "excessive repercussions" on consumers; (iv) various programs to promote selected export as well as food crops and to improve their quality. In the event, many of these measures were not implemented in view of the abandon in 1987 of the adjustment program. Most noteworthy is that producer prices for coffee and cocoa were never increased, but instead cut by 50 percent in 1989 — because of fiscal necessity. Also, the consumer price of rice was not "re-aligned" but kept above the border price in order to protect domestic producers.

In summary, looking at the three SALs as a sequence, it is clear that the main concern of the SALs was financial stabilization through rationalization (and reduction) of government spending. There was little explicit discussion of poverty. Nevertheless, the SALs did attempt to protect the incomes of the poor — especially farmers — by redressing the rural-urban terms of trade in favor of rural areas. In contrast, public sector wages were frozen or reduced (Serageldin, 1988). Only one major action in the social sectors was addressed in the SALs, namely the government's withdrawal from the provision of housing.

Table 4: World Bank and IMF Support to Côte d'Ivoire'sStructural Adjustment Program

World Bank Loans

Min of Dollars

1981	Structural Adjustment Loan I	150
1983	Structural Adjustment Loan II	250
1986	Structural Adjustment Loan III	250
1989	Agriculture Sector Adjustment Loan	150
1989	Energy Sector Adjustment Loan	100
1990	Water Supply Sector Adjustment Loan	80
1991	Financial Sector Adjustment Loan	200
1991	Competitiveness Adjustment Loan	100
1991	Human Resources Adjustment Loan	150

IMF Support

Min SDR

Feb.	1981	Extended Arrangement (3 yr)	484.50
May	1984	Stand-by Arrangement (1 yr)	82.75
June	1985	Stand-by Arrangement (1 yr)	66.20
June	1986	Stand-by Arrangement (2 yr)	100.00
Dec.	1987	Stand-by Arrangement (16 mos)	94.00
Nov.	1989	Stand-by Arrangement (17 mos)	175.80
Sept.	1991	Stand-by Arrangement (1 yr)	82.75

5. Household Expenditure and the Incidence of Poverty

In this section, we begin the presentation of the empirical results for Côte d'Ivoire, 1985-88. In view of the country's macro-economic evolution, as discussed in the previous section, our presentation of the results will focus around three themes. First, since our main objective is to interpret observed patterns of welfare and poverty in a macro-economic context, it is essential to contrast findings for the 1985-86 years with those of 1987-88. Indeed, the two sub-periods were characterized by totally different macro-economic scenarios. In the first sub-period, GDP increased and the government was actively managing the economy's adjustment process. In 1987-88, this effort was abandoned and the dominating macro-economic event was a sharp fall in GDP and aggregate consumption.

Second, since the main redistributive feature of the adjustment process was the shift in the rural-urban terms of trade towards rural areas, we will attempt to pick up the effects of this by disaggregating results along the urban/rural and regional dimensions. However, for policy purposes, it is important to identify further where poverty and welfare effects were concentrated, i.e. who the losers and gainers were. For that purpose, we disaggregate results by socio-economic groups.

Third, we shall attempt to highlight links with specific policy measures, in particular those related to consumer or producer prices of specific commodities (coffee, cocoa, cotton, rice) or groups of commodities (export crops, food crops). This will be achieved by a detailed look at income and expenditure patterns.

5.1 The Evolution of Household Expenditure

Table 5 shows nominal and real household expenditure per capita for Côte d'Ivoire and for each of the five regions. Nominal figures were first deflated with the regional price index, in order to make expenditure figures comparable <u>within</u> each year. Subsequently, all expenditures were expressed in constant 1985 CFAF by applying the CPI (see section 3.2).

Table 5 (A) shows average household expenditure per capita calculated from the distribution over households, while table 5 (B) shows the average calculated from the distribution over individuals. In the former case, expenditure per capita is viewed as the welfare level attributable to the household as a unit and averages are taken with the This reflects that many decisions pertaining to household as the unit of analysis. income/expenditure are made by the household as a unit or are largely influenced by the behavior and the decisions of the head of household. On the other hand, it must be recognized conceptually that welfare and poverty are individual attributes and are ultimately experienced by individuals. From that point of view, the individual becomes the unit of analysis and the assumption is then made that household welfare — expressed by expenditure per capita — is distributed evenly over all household members. There is no consensus in the literature about the empirical validity of this assumption, but work by Haddad and Kanbur (1989) suggests that even if information on intra-household distribution of consumption is considered, it does not necessarily invalidate patterns of poverty derived from household expenditure per capita measures. As Table 5 shows, switching from the household to the individual as the unit of analysis has the effect of lowering average calculated welfare levels. This is because poor households have above average household sizes and the individual distribution is skewed more to the left than the household distribution.

	1985	1986	1987	1988					
(A) Household Distrib	ution								
		- C	ôte d'Ivoire -						
Nominal	263,610	260,792	259,043	208,369					
Regionally Deflated	292,236	289,659	284,806	233,293					
Real	292,236	269,953	264,321	202,300					
		- Al	bidjan -						
Nominal	457,812	394,489	477,894	390,778					
Regionally Deflated	457,812	394,489	477,894	390,778					
Real	457,812	367,650	443,521	338,864					
	- Other Cities -								
Nominal	318,352	340,139	309,319	224,485					
Regionally Deflated	342,919	363,334	338,080	242,508					
Real	342,919	338,615	313,763	210,292					
		- Ea	ast Forest -						
Nominal	166,884	190,907	184,469	173.352					
Regionally Deflated	191,803	219,423	209,338	200,217					
Real	191,803	204,495	194,281	173,618					
	- West Forest -								
Nominal	213,423	186,985	160,868	134,149					
Regionally Deflated	272,748	250,463	212,662	185,225					
Real	272,748	233,423	197,366	160,618					
		- Sa	wannah -						
Nominal	142,457	163,342	146.291	135.077					
Regionally Deflated	187,517	203.879	178.699	164.966					
Real	187,517	190,009	165,846	143,050					

Table 5: Nominal and Real Household Expenditure Per Capita (CFAF/yr)

(B) Individual Distribution

		- Cô	te d'Ivoire -	
Nominal	213,634	216,173	212,191	178,051
Regionally Deflated	237,853	240,250	233,780	199,587
Real	237,853	223,905	216,965	173,072
		- Ab	oidjan -	
Nominal	376,108	335,698	401,220	332,938
Regionally Deflated	376,108	335,698	401,220	332,938
Real	376,108	312,859	372,361	288,708
		- Ot	her Cities -	
Nominal	252,387	271,758	246,469	190,190
Regionally Deflated	271,864	290,290	269,385	205,460
Real	271,864	270,540	250,010	178,165
		- Ea	st Forest -	
Nominal	143,104	160,890	159,491	152,267
Regionally Deflated	164,472	184,922	180,993	175,864
Real	164,472	172,341	167,974	152,501
		- We	est Forest -	
Nominal	187,120	163,782	138,380	120,225
Regionally Deflated	239,134	219,383	182,934	165,999
Real	239,134	204,457	169,776	143,947
		- Sa	vannah -	
Nominal	115,910	132,968	120,017	113,957
Regionally Deflated	152,573	165,967	146,605	139,172
Real	152,573	154,676	136,061	120,684

Note: The basis for regional deflation is Abidjan. Real expenditures are expressed in 1985 CFAF (see text).

For the purposes of this paper, the overriding consideration is the conceptual one, namely that poverty and welfare are individual attributes, and all remaining tables in the paper have been calculated using the individual as the unit of analysis (except where noted differently).

Table 6 expresses regional differences in real household expenditure per capita as an index number which uses the 1985 country average as 100. For the country as a whole, real household expenditure per capita declined by about 30 percent over the 1985-88 period. About two-thirds of the decline occurred in 1988. This is consistent with the real negative growth in GDP in both 1987 and 1988, and with national account figures on aggregate consumption (see section 4). Regional disparity stayed roughly the same over the period: the Abidjan average remained about 2.4 times higher than that of the poorest region — the Savannah. The relative position of the other regions however changed: among urban areas, the decline in welfare in Abidjan was less than the country's average while that in other cities exceeded it. In the rural areas, the biggest drop in welfare was recorded in West Forest, which became a poorer region than East Forest. The Savannah remained Côte d'Ivoire's poorest region over the period 1985-88, but its average expenditure level declined less than the national average.

5.2 The Evolution of Poverty

The thirty percent decline in household expenditure per capita over the period 1985-88 has resulted in significant increases in poverty and extreme poverty in Côte d'Ivoire (Tables 7 and 8). The fraction of the population which was poor rose from 30 percent to 45.9 percent and the fraction which was very poor went from 10 percent to 14.1 percent. This means that Côte d'Ivoire counted about 2.8 million poor people in 1986 and 4.8 million poor people in 1988 — an increase of 71 percent. In 1985, there were about 940,000 people living in extreme poverty and in 1988 this figure had risen to 1.5 million — an increase of 57 percent.

Table 6: Pattern of Real Household Expenditure per Capita

	1				
	1985	1986	1987	1988	1988/85
Abidjan	156.7	125.8	151.8	116.0	.74
Other Cities	117.3	115.9	107.4	72.0	.61
East Forest	65.6	70.0	66.5	59.4	.91
West Forest	93.3	79.9	67.5	55.0	.59
Savannah	64.2	65.0	56.8	49.0	.76
Côte d'Ivoire	100.0	92.4	90.4	69.2	.69

(A) Household Distribution

(B) Individual Distribution

	1985	1986	1987	1988	1988/85
Abidjan	158.1	131.5	156.6	121.4	.77
Other Cities	114.3	113.7	105.1	74.9	.66
East Forest	69.1	72.5	70.6	64.1	.93
West Forest	100.5	86.0	71.4	60.5	.60
Savannah	64.1	65.0	57.2	50.7	.79
Côte d'Ivoire	100.0	94.1	91.2	72.8	.73

The pattern of change in poverty and extreme poverty is very different for 1985-86 than for 1987-88. As we discussed in section 4, 1985-86 were the final two years in a sustained adjustment effort which started in 1981, and were also marked by a brief economic In contrast, when the upturn ended in 1987, the Government abandoned the upturn. adjustment program and 1988 was a year of severe economic decline. <u>12</u>/ Between 1985 and 1986, the incidence of poverty did not change, while the incidence of extreme poverty was reduced by over one third. In 1987, the incidence of both poverty and extreme poverty rose and the rising trend accelerated sharply in 1988. In 1988 alone, the incidence of poverty rose by 32% and the incidence of extreme poverty by 55%. Obviously, the juxtaposition of these results does not prove causality between the adjustment effort and the stability or reduction in poverty, but it does indicate two things. First, the incidence in poverty in a country can change very dramatically from one year to the other. This suggests that there can be a great deal of mobility into poverty and possibly out of it as well, and that it is necessary to monitor poverty on a regular basis — at least annually. As we explained in section 2, the CILSS data contain a panel component which is more suitable than the cross-section approach in this paper to investigate the question of mobility in and out of poverty. Work by Grootaert and Kanbur (1992b) on this panel component has confirmed that while there exists a "hard-core" type of poor, a large proportion of the poor change from year to year. Second, the severe increase in poverty in 1988 indicates that in conditions of economic recession and destabilization, a rapid "trickle-down" can occur with the potential of severely affecting the welfare of households and individuals.

A digression is in order here. When survey results suggest changes in welfare and poverty of the magnitude of those reported in tables 7 and 8, the question is inevitably raised about the quality and reliability of the survey data. While quality of survey data can never be proved in an absolute way, two investigations are possible to provide an assessment of

^{12/} It is <u>not</u> implied that the economic upturn was <u>caused</u> by the adjustment program, nor that the decline was caused by the abandon of the adjustment effort.

				(A)	P-Alpha	Measures							
		1985		1986				1987			1988		
	P	P ₁	P ₂	Po	P ₁	P ₂	Po	P ₁	P ₂	Po	P ₁	P ₂	
Abidjan	0.034	0.009	0.004	0.166	0.035	0.012	0.074	0.019	0.009	0.139	0.023	0.006	
Other Cities	0.236	0.075	0.037	0.223	0.062	0.024	0.224	0.053	0.019	0.410	0.106	0.040	
East Forest	0.479	0.155	0.069	0.395	0.115	0.045	0.435	0.111	0.041	0.494	0.145	0.062	
West Forest	0.178	0.036	0.013	0.200	0.042	0.013	0.376	0.102	0.043	0.553	0.154	0.064	
Savannah	0.502	0.183	0.088	0.481	0.142	0.058	0.578	0.197	0.093	0.652	0.258	0.131	
Côte d'Ivoire	0.300	0.098	0.045	0.299	0.082	0.032	0.348	0.101	0.043	0.459	0.142	0.063	
	· · · · · · · · · · · · · · · · · · ·			(B)	Decompo	osition (%)							
		1985			1986			1987			1988		
	Po	P ₁	P ₂	Po	P ₁	P ₂	Po	P ₁	P ₂	Po	P ₁	P ₂	
Abidjan	2.3	1.8	1.6	11.0	8.4	7.8	3.9	3.6	3.8	5.2	2.8	1.5	
Other Cities	16.8	16.3	17.6	17.1	17.4	17.3	14.6	12.0	10.0	19.3	16.1	13.7	
East Forest	37.1	36.8	35.3	31.8	33.7	34.5	29.3	25.8	22.4	25.5	24.1	23.3	
West Forest	8.3	5.1	4.1	9.2	7.1	5.5	11.8	11.1	11.0	18.6	16.8	15.6	
Savannah	35.6	39.9	41.4	30.9	33.3	34.9	40.3	47.5	52.9	31.4	40.2	45.9	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

<u>Table 7: Poverty Incidence in Côte d'Ivoire by Region, 1985-88</u> (poverty line = 128,600 CFAF/yr)

.

Table 8: Incidence of Extreme Poverty in Côte d'Ivoire by Region, 1985-88 (poverty line = 75,000 CFAF/yr)

				(A)	r-Alpha	Measures						
		1985			1986			1987			1988	
	Po	P ₁	P ₂									
Abidjan	0.007	0.002	0.001	0.014	0.005	0.002	0.017	0.006	0.003	-	-	-
Other Cities	0.080	0.025	0.014	0.055	0.009	0.002	0.047	0.007	0.001	0.073	0.016	0.005
East Forest	0.132	0.038	0.016	0.095	0.019	0.007	0.086	0.015	0.004	0.139	0.033	0.011
West Forest	0.016	0.005	0.003	0.019	0.002	0.000	0.093	0.024	0.009	0.161	0.031	0.010
Savannah	0.226	0.053	0.019	0.121	0.025	0.008	0.194	0.057	0.022	0.305	0.088	0.034
Côte d'Ivoire	0.100	0.027	0.011	0.064	0.013	0.004	0.091	0.023	0.008	0.141	0.035	0.013
				(B)	Decompo	osition (%)						
		1985			1986			1987			1988	
	Po	P ₁	P ₂	Po	Pı	P ₂	Po	P ₁	P ₂	Po	P ₁	P ₂
Abidjan	1.4	1.4	1.1	4.3	8.0	10.5	3.4	4.7	5.8	-	-	-
Other Cities	17.1	20.4	26.8	19.6	15.9	12.6	11.8	6.7	4.1	11.1	9.6	8.6
East Forest	31.0	32.9	32.3	35.7	36.5	37.8	22.1	15.9	11.8	23.3	22.2	20.5
West Forest	2.2	2.8	3.9	4.2	2.0	1.3	11.1	11.5	11.6	17.6	13.5	11.8
Savannah	48.3	42.5	35.9	36.2	37.7	37.8	51.7	61.3	66.7	47.9	54.7	59.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(A) D. Alpha Magazina

data quality. First, one can review sampling and field procedures which affect sampling and measurement error in the data. As discussed in section 2, we have reviewed these in detail and made the necessary corrections to compensate for certain sampling deficiencies. Quality control during CILSS data collection and data entry were extraordinary in comparison with usual survey practice (see Ainsworth and Munoz, 1986; Grootaert, 1986; Daho, 1992). The many analyses undertaken with the data (see earlier references) have shown a high degree of internal consistency in the data. This brings us to the second course of investigation: consistency with other data sources - census, other surveys, national accounts. Such comparisons have to be treated with caution, because it is not always clear that the "reference data" are of better quality than the survey results. We reported in section 2 that household size in the 1988 CILSS closely matched that reported in the 1988 Population Census. Selected demographic variables from the survey have been compared with the Côte d'Ivoire Fertility Survey and were found to be consistent (Ainsworth, 1989). Farming information in the CILSS was evaluated against other sources and found to be quite good (Deaton and Benjamin, 1988). Most importantly for this analysis is that the pattern of household expenditure observed for Côte d'Ivoire as a whole is entirely consistent with the pattern of macro-evolution recorded in the national accounts and in other macro-data. Both the upturn in 1986 and the decline in 1987-88 are picked up by the CILSS data. In summary, we feel confident that the CILSS data are a valid data source to explore the evolution of welfare and poverty, and that its main shortcomings - sampling deficiencies - have adequately been corrected in this research as explained in section 2.

Let us return now to the discussion of the empirical results. The pattern of increase in the incidence of poverty which we noted for Côte d'Ivoire as a whole did not occur in each region. In Abidjan and other cities poverty rose at an even faster rate than the national average. However, the basis from which this increase occurred was quite small, since the incidence of poverty in cities, especially Abidjan, was quite low in 1985. The decomposition of P₀ reported in Table 7 (B) shows that the share of urban poverty in the total rose from 19.1 percent in 1985 to 24.5 percent in 1988. Poverty thus has become a relatively more urban phenomenon in Côte d'Ivoire, even though the vast majority of the poor are still located in the rural areas. Within the latter, a major shift took place, however: in West Forest, the incidence of poverty more than tripled, making it the second poorest region in 1988 (as opposed to the region with the second lowest poverty incidence in 1985). The reasons for this sharp decline have to do with the socio-economic make-up of this region (four-fifths of households are farmers, and farm income fell very sharply over the period — see section 5.3). Although in the Savannah the increase in poverty was well below the national average, it remained Côte d'Ivoire's poorest region in 1988: with a poverty incidence of 65.2 percent, it accounted for almost one third of all poor.

Although the country-wide evolution of extreme poverty between 1985 and 1988 paralleled that of poverty, the regional pattern was not the same. In particular, the incidence of extreme poverty did not increase in urban areas. The main increase took place in West Forest where the incidence of extreme poverty increased tenfold from 1.6 to 16.1 percent. Equally important was the increase in the Savannah from 22.6 to 30.5 percent, which meant that in 1988 Savannah accounted for almost half of the very poor in Côte d'Ivoire. In fact, one of every two poor persons in the Savannah was in extreme poverty. Obviously, this region remains a prime target for poverty-oriented policy interventions.

The differences in the patterns of poverty and extreme poverty indicate that important shifts can occur within the poor and underline the importance of using two poverty lines in the analysis.

Next to looking at the incidence of poverty, the depth of poverty must be investigated and this is done on the basis of P_1 and P_2 in Tables 7 and 8. These two measures display the same pattern over time as P_0 , but less pronounced. For example, P_2 for overall poverty rises from .045 to .063 between 1985 and 1988 — a 40 percent increase as opposed to a 53 percent rise in P_0 . This means that conditions for the people at the very bottom of the distribution deteriorated relatively less than for the poor as a group. In one region, East Forest, P_2 actually was lower in 1988 than in 1985. In order to separate more directly the evolution of incidence and depth of poverty, Table 9 shows the mean expenditure level of each poverty group and the expenditure gap ratio — the mean proportionate shortfall of expenditure from the poverty line (see section 3). Mean expenditure per capita for the poor as well as for the very poor increased between 1985 and 1986 and fell thereafter (but the 1988 mean was still 2% above the 1985 mean). In contrast, mean expenditure of the non-poor fell by 19 percent over the period. <u>13</u>/

	1985	1986	1987	1988	Change 1985-88
					、
	- H	ousehold Expe	enditure Per Ca	ipita (CFAF/yr) -
Very poor	55,008	60,087	56,447	56,222	+2.2%
Poor	86,781	93,280	91,395	88,752	+2.3%
Non-poor	302,767	279,731	284,095	244,547	-19.2%
Côte d'Ivoire	237,853	223,905	216,965	173,072	-27.2%
		- Expenditure	Gap Ratio -		
Very poor	.272	.203	.253	.248	-8.8%
Poor	.326	.274	.290	.309	-5.2%

<u>Table 9: Mean Household Expenditure Per Capita and</u> <u>Expenditure Gap Ratio, by Poverty Status</u>

Likewise, the expenditure gap ratio for the poor and very poor declined between 1985 and 1986, i.e. the distance of the average poor person's expenditure from the poverty line

^{13/} Note that the country-wide change in Table 9 is not an average of the change in each category, because the number of people in each category is not the same over the four years. In particular, the number of poor and very poor increased considerably.

diminished. In 1987 and 1988, the ratio increased, indicating that the poor became poorer over that period (in addition to the rise in the number of poor).

The difference in the evolution of mean expenditure per capita between the poor and the non-poor, and the difference in the trends between 1985-86 and 1987-88 provides a first indication that one intent of the adjustment program, namely to shift the burden of adjustment to the better-off, may in fact have been realized. It also shows that the rich have not been shielded from the recession in 1987-88.

The figures in Tables 7-9 provide some useful guidance for designing and targeting policy interventions aimed at alleviating poverty. First and foremost, the results show that poverty alleviation efforts have become much more needed in view of the sharp rise in poverty. Second, the main target zones are West Forest, where poverty has risen fastest, and Savannah, where extreme poverty affects one third of the rural population. Together, the two zones account for half of all poor in Côte d'Ivoire. Third, urban poverty is a rising phenomenon in Côte d'Ivoire and will require increasing attention. Fourth, the rapid evolution of poverty and the shifting pattern indicate the need for regular monitoring at the sub-national level.

The figures (especially P_1) are also useful to estimate the size of resources needed to alleviate poverty. E.g. in 1988, $P_1 = .106$ for Other Cities. This means that poverty in Other Cities could be eliminated if every resident of Other Cities transferred 10.6 percent of the poverty line, i.e. 13,632 CFAF to the people below the poverty line (with perfect targeting). Estimating the Other Cities population at about 2.5 million, this implies a total transfer of 34,080 million CFAF. Alternatively, this is the amount of new income that needs to be generated among the poor in order to eliminate the poverty gap. If one were to make the optimistic assumption that new income generated under economic growth is distributed in equal proportions to everyone, regardless of current income, then a total of 340,800 million CFAF of new income would have to be generated in the economy to eliminate poverty in Other Cities, given that the Other Cities' poor are about 10 percent of the country's population. This amount represents 11 percent of Côte d'Ivoire's GDP in 1988. With more realistic assumptions about the distribution of new income, the total growth requirement would increase. While such total resource requirements are only indicative and a function of the distribution assumptions made, performing such calculations for each region may help set priorities for channeling resources to different regions and help to clarify the link between economic growth and poverty reduction.

5.3 The Socio-Economic Pattern of Poverty

In order to get a better grasp on how the changes in welfare and poverty relate to macro-economic events, we next use the decomposition property of the P_{α} measures to estimate what happened to poverty within socio-economic groups in Côte d'Ivoire and what contribution this made to total poverty. For this purpose, we define socio-economic groups according to the household's main source of income and/or the main economic activity of the head of household. Since many of the adjustment measures were geared towards certain types of income earners (e.g., government and parastatal employees, export crop farmers), this classification of households provides a direct link with the macro-economy.

We defined eight mutually exclusive socio-economic groups as follows. First, a distinction was made between farming and non-farming households. A farming household had cultivated fields during the survey's reference year and obtained more than 50 percent of its earned income from agricultural activities. Second, in view of the importance of SAL measures related to export crops, we divided farmers into export crop and food crop farmers. Export crop farmers derived more than 50 percent of farm revenues from the sale of export crops. Third, non-farming households were further subdivided according to the main sector of employment and the work status of the head of household. We distinguished inactive, unemployed, self-employed and employee (wage-earner) heads of household, using standard ILO definitions of these concepts. Employees were further split according to sector. The public sector consisted of the government and parastatal enterprises. The private sector was divided into formal or informal depending upon whether employees

received any form of legal or social protection associated with the formal sector. The CILSS recorded several attributes useful for this purpose such as whether the employee had a written contract, whether there was a union at the work place, whether minimum wages were applied, and whether the employee received social security benefits (pension, paid leave, paid sick leave, etc.). In view of the relative rarity of these attributes, an employee was considered to be in the formal sector if he/she was the beneficiary of at least one of these attributes (see Grootaert, 1987, 1992, for a further discussion and analysis of the formal/informal distinction).

Tables 10 and 11 show that the incidence and depth of poverty varied a great deal across different socio-economic groups as did the over-time patterns. On a relative basis, poverty increased most for households of public sector employees. However, poverty incidence doubled in the private sector — to the same extent in the formal and informal sectors. Increases in P_1 and P_2 were much more pronounced for public sector employees and in the informal sector, suggesting a substantial deterioration for those employees at the bottom of the earnings scale. This is confirmed by Table 11 which shows marked increases of extreme poverty in those two groups. The depth of poverty also increased for both groups, especially for public sector employees where the expenditure gap ratio (P_1/P_0) almost doubled from .14 to .23.

These findings are consistent with the earlier noted rise in urban poverty and with the wage policy of SAL II which was to freeze government worker wages and to reduce those of parastatal workers. The impact of these measures does not appear to have affected all government workers equally, but particularly those with the lowest earnings. This implies that special protective programs for those workers would have been in order. The results also indicate that the private formal sector has succeeded better than the public sector in shielding itself from the contraction in economic activity. Perhaps the sector benefitted from the industrial reform measures in SAL II aimed at promoting exports. On the other hand, the informal sector has clearly not been able to take advantage of any opportunities the adjustment program may have offered.

				(A) P	-Alpha M	easures						
	1985			1986			1987			1988		
	Po	Pı	P ₂	P ₀	Pı	P ₂	Po	Pı	P ₂	Po	P ₁	P ₂
Export Crop Farmer	0.366	0.094	0.038	0.354	0.099	0.037	0.477	0.150	0.063	0.548	0.179	0.087
Food Crop Farmer	0.434	0.144	0.065	0.411	0.121	0.048	0.473	0.132	0.055	0.590	0.196	0.087
Public Sector Employee	0.049	0.007	0.001	0.056	0.006	0.001	0.072	0.016	0.006	0.213	0.050	0.018
Private Formal Sector Employee	0.071	0.014	0.005	0.096	0.009	0.001	0.061	0.012	0.004	0.151	0.025	0.00
Informal Sector Employee	0.262	0.075	0.028	0.401	0.097	0.028	0.364	0.090	0.040	0.542	0.183	0.093
Self-Employed	0.262	0.104	0.058	0.287	0.077	0.030	0.333	0.084	0.033	0.462	0.127	0.052
Inactive	0.183	0.075	0.043	0.211	0.047	0.015	0.327	0.141	0.080	0.319	0.080	0.03
Unemployed	0.041	0.005	0.001	0.346	0.119	0.067	0.312	0.049	0.009	0.383	0.15k	0.076
Côte d'Ivoire	0.300	0.098	0.045	0.299	0.082	0.032	0.349	0.101	0.043	0.459	0.142	0.063
•				(B) De	ecomposit	ion (%)						
		1985		· · ·	1986			1987			1988	
	Po	Pı	P ₂	P ₀	Pı	P ₂	Po	Pi	P ₂	Po	Pı	P ₂
Export Crop Farmer	14.5	11.5	10.0	21.8	22.2	21.6	25.9	28.0	27.9	17.7	18.7	20.6
Food Crop Farmer	63.6	65.2	63.8	51.2	54.9	56.4	48.8	47.2	46.4	52.4	56.2	56.9
Public Sector Employee	1.7	0.8	0.3	2.4	1.0	0.4	3.0	2.4	1.9	6.2	4.8	3.8
Private Formal Sector Employee	2.4	1.4	1.1	2.3	0.7	0.3	1.5	1.0	0.8	3.0	1.6	1.0
Informal Sector Employee	1.5	1.3	1.0	1.8	1.6	1.2	1.8	1.5	1.6	1.6	1.7	2.0
Self-Employed	12.8	15.6	18.7	14.1	13.8	14.0	12.9	11.3	10.3	14.8	13.2	12.2
Inactive	3.3	4.2	5.1	4.9	4.0	3.4	5.6	8.3	11.1	3.5	2.8	2.4
Unemployed	0.2	0.1	0.0	1.5	1.8	2.7	0.6	0.3	0.1	0.9	1.1	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<u>Table 10: Poverty Incidence in Côte d'Ivoire by Socio-Economic Group, 1985-88</u> (poverty line = 128,600 CFAF/yr)

Table 11:	Incidence o	of Extreme	Poverty in	<u>ı Côte</u>	<u>d'Ivoire</u>	by	Socio-Economic	Group,	<u>1985-88</u>			
(poverty line = $75,000 \text{ CFAF/yr}$)												

				(A) P	-Агрпа м	easures						
		1985			1986			1987			1988	
	P	P ₁	P ₂	Po	Pi	P ₂	Po	Pı	P ₂	P_	Pi	P ₂
Export Crop Farmer	0.086	0.020	0.006	0.081	0.013	0.004	0.148	0.031	0.009	0.210	0.058	0.022
Food Crop Farmer	0.150	0.036	0.013	0.101	0.020	0.006	0.111	0.029	0.010	0.197	0.047	0.016
Public Sector Employee	0.003	0.000	0.000	0.000	0.000	0.000	0.009	0.002	0.001	0.039	0.005	0.001
Private Formal Sector Employee	0.008	0.002	0.001	0.000	0.000	0.000	0.013	0.001	0.000	0.007	0.002	0.001
Informal Sector Employee	0.099	0.004	0.001	0.000	0.000	0.000	0.067	0.028	0.016	0.220	0.071	0.026
Self-Employed	0.115	0.043	0.025	0.052	0.012	0.005	0.070	0.015	0.004	0.107	0.027	0.009
Inactive	0.063	0.032	0.021	0.028	0.005	0.001	0.176	0.065	0.032	0.072	0.013	0.006
Unemployed	0.000	0.000	0.000	0.137	0.061	0.027	0.000	0.000	0.000	0.088	0.049	0.028
Côte d'Ivoire	0.100	0.027	0.011	0.064	0.013	0.004	0.092	0.023	0.008	0.140	0.035	0.012
		•		(B) D	ecomposi	tion (%)						
		1985			1986			1987	*********************		1988	
	Po	P ₁	P ₂	Po	P ₁	P ₂	Po	Pı	P ₂	Po	Pı	P ₂
Export Crop Farmer	10.4	8.8	5.7	23.2	19.2	17.0	30.7	25.7	20.8	22.2	24.7	26.3
Food Crop Farmer	66.5	60.2	51.5	59.1	58.1	55.1	43.8	45.1	43.6	57.3	55.2	53.7
Public Sector Employee	0.3	0.0	0.0	0.0	0.0	0.0	1.4	1.3	1.4	3.7	2.0	1.4
Private Formal Sector Employee	0.8	0.8	0.5	0.0	0.0	0.0	1.2	0.2	0.0	0.4	0.6	0.5
Informal Sector Employee	1.7	0.3	0.1	0.0	0.0	0.0	1.3	2.1	3.5	2.1	2.7	2.8
Self-Employed	16.9	23.5	32.2	11.9	14.1	17.7	10.2	8.6	7.1	11.1	11.4	10.8
Inactive	3.4	6.5	10.0	3.1	2.5	2.2	11.4	16.9	23.6	2.5	1.9	2.3
Unemployed	0.0	0.0	0.0	2.7	6.1	8.0	0.0	0.0	0.0	0.7	1.5	2.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(A) 10 A1
Among farmers, the incidence of poverty was highest for food crop farmers, but poverty rose faster among export crop farmers. In fact, the representation of food crop farmers among all poor fell significantly, from 63.6 to 52.4 percent over the four years. The depth of poverty and the incidence of extreme poverty has also become a more severe problem among export crop farmers.

A fuller understanding of these trends would be helped by the simultaneous consideration of regional and socio-economic patterns, since socio-economic groups are not distributed equally across regions. Unfortunately, the CILSS sample size is too small to permit this: a cross-tabulation of region by socio-economic group yields a table with 40 cells of which almost half have less than 30 observations. However, a meaningful cross-tabulation can be done over farmers and rural regions (Table 12). This shows that the distribution of types of farmers over the regions is fairly stable over time. The main change is an increase of export crop farmers in Savannah (due to growing production of cotton in that region).

More importantly, it shows that welfare levels within each farmer category differed a great deal across regions and also changed differently over time. Average expenditure of export crop farmers in West Forest was more than twice that of their colleagues in Savannah in 1985, but it declined much more rapidly. Expenditure of food-crop farmers in West Forest also fell sharply: a 47% drop between 1985 and 1988. The increased incidence of extreme poverty among export crop farmers is concentrated in West Forest and Savannah in the latter region average expenditure of these farmers is barely above the extreme poverty line. The relative improvement among food-crop farmers was in large measure due to East Forest where there was even an absolute increase in welfare level. Table 12 shows that reasons for the change in welfare must be sought in the evolution of farm income. Farm income of export crop farmers in West Forest was reduced by almost half over the four-year period, which makes it not surprising that there was such a large rise in poverty.

The findings on socio-economic patterns of poverty lead to two policy considerations. First, in general, poverty has become more widespread across the socio-economic spectrum in Côte d'Ivoire. This will make it more necessary but also more difficult to effectively target the poor. Second, many measures in SAL II and III were aimed at promoting export crops and should thus have benefitted export crop farmers. It was deemed especially crucial to maintain official prices for coffee and cocoa. In spite of this, export crop farmers have been hurt.

	E	xport Crop Fa	rmers	Foo	Food Crop Farmers		
	1985	1988	Change	1985	1988	Change	
		distrib	ution of ind	lividuals			
East Forest	51.4%	45.8%	-10.9%	32.3%	29.9%	- 7.4%	
West Forest	30.7%	31.4%	+ 2.3%	19.0%	21.8%	+14.7%	
Savannah	9.4%	16.9%	+79.8%	41.0%	41.1%	+ 0.2%	
Total <u>1</u> /	91.5%	94.1%	+ 2.8%	92.3%	92.8%	+ 0.5%	
	avera	age household	l expenditur	re per capit	a (CFAF/y	ear)	
East Forest	181,031	146,344	-19.2%	147,667	157,312	+6.5%	
West Forest	239,000	158,550	-33.7%	250,298	132,519	-47.1%	
Savannah	116,605	87,406	-25.0%	152,800	118,332	-22.6%	
		farn	n income (C	CFAF/year)	655555		
East Forest	1,268,456	1,123,182	-11.4%	587,029	611.293	+4.1%	
West Forest	1,115,022	798,630	-28.4%	971,953	507,687	-47.8%	
Savannah	847,434	529,456	-37.5%	642,770	564,564	-12.2%	

Table 12: Distribution of Farmers Across Rural Regions

1/ The total is not 100% because some farmers are located in areas designated as urban in the CILSS.

The CILSS results show that farmers indeed received the official unit price for their crops, but that their revenues from the sale of coffee and cocoa fell sharply due to a reduction in the quantity sold (Table 13). This in turn reflected a diminished cropping area devoted to these two crops, but this reduction was much less than the fall in output sold, suggesting falling yields. This pattern occurred for both cocoa and coffee, but much more so for the latter. It was also much more pronounced in West Forest than in East Forest. One lesson from this is that price support measures for export crops are not sufficient to ensure sustained production and income for farmers, but must be accompanied by a comprehensive support system including extension service, provision of farm inputs, etc. In the event, the absence of this led to sharply falling incomes for farmers, especially in West Forest, which in turn led to rapidly rising poverty. The incidence of poverty among export crop farmers is likely to have augmented further after 1988, since in 1989 official producer prices of coffee and cocoa were cut in half.

		East Fore	est	۲	West Forest	1005 00
	1985	1988	Change	1985	1988	Change
Area under produc	tion (ha)					
- cocoa	4.37	4.25	-2.7%	3.08	3.36	+9.1%
- coffee	3.69	3.12	-15.4%	3.98	3.00	-24.6%
Quantity sold (kg)						
- cocoa	2067	1870	-10.5%	2121	1043	-50.8%
- coffee	1858	1252	-32.6%	2773	978	-64.7%

 Table 13: Average Production and Sales of Cocoa and Coffee per Farmer

 in East and West Forest, 1985 and 1988

Do not quote

5.4 Sensitivity Analysis

As was explained in section 3, the two poverty lines on which the analysis so far has been based were selected to cut off, in the initial year, 30 percent and 10 percent of individuals ranked by household expenditure per capita. The selection of these cut-off points was of course arbitrary — we argued that the key issue was to keep the chosen poverty lines constant over time in real terms so that the evolution of poverty could be assessed. However, it is essential to undertake sensitivity analysis to see whether observed crosssectional and over-time patterns are robust to changes in the poverty line. We therefore recalculated the regional and national P_{α} measures for alternative poverty lines set at 10 percent below and above the original ones. The results are that levels of poverty decreased or increased accordingly, but by more than 10 percent (Tables 14 and 15). This is a normal result which will obtain as long as the poverty line is below the median, given that the expenditure distribution is skewed to the left.

More important is that tables 14 and 15 show that the same cross-sectional patterns and over-time trends are observed as with the original lines. This confirms that the analysis and findings presented so far are not sensitive to the exact position of the poverty line.

5.5 **Dominance Test**

Sensitivity analysis is primarily useful to check whether the observed general pattern of poverty is robust to relatively small changes in the location of the poverty line. It is possible to expand the inquiry to cover a wider range of poverty lines and to include changes in poverty measures as well. This involves dominance analysis and requires plotting the entire distribution curves for the regions, socio-economic groups, or years to be compared. In principle, the complete distributions must be plotted, but in practice this can be restricted to the highest possible location of the poverty line.

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Table 14: Poverty Incidence in Côte d'Ivoire: Sensitivity Analysis

		1985			1986			1987			1988	
	Po	Pi	P ₂	P	P ₁	P ₂	Po	Pı	P ₂	Po	Pı	P ₂
A 1. 1 1	0.054	0.010	0.005	0.102	0.049	0.017	0 122	0.020		0.104	0.005	
Abidjan	0.054	0.012	0.005	0.193	0.048	0.017	0.132	0.028	0.011	0.186	0.035	0.010
Other Cities	0.274	0.091	0.045	0.278	0.079	0.032	0.276	0.071	0.026	0.476	0.137	0.054
East Forest	0.536	0.187	0.087	0.493	0.145	0.060	0.483	0.142	0.056	0.547	0.180	0.080
West Forest	0.237	0.052	0.018	0.283	0.061	0.019	0.501	0.134	0.056	0.588	0.192	0.083
Savannah	0.579	0.214	0.107	0.550	0.176	0.075	0.633	0.234	0.114	0.725	0.298	0.157
Côte d'Ivoire	0.350	0.118	0.056	0.366	0.105	0.042	0.409	0.126	0.055	0.515	0.174	0.080
			(B) Pove	rty Line decre	eased by 1	0% (i.e. 11:	5,740 CFAF	/yr)				
		1985			1986			1987			1988	
	P	P ₁	P ₂	P	Pı	P ₂	Po	P ₁	P ₂	Po	Pı	P ₂
Abidjan	0.029	0.00	6 0.003	0.109	0.023	0.009	0.04	8 0.015	0.007	0.091	0.013	0.003
Other Cities	0.185	0.06	0 0.030	0.185	0.047	0.017	0.17	2 0.038	0.013	0.316	0.077	0.028
East Forest	0.418	0.12	2 0.052	0.339	0.087	0.032	0.33	7 0.080	0.028	0.400	0.113	0.046
West Forest	0.113	0.02	4 0.009	0.152	0.027	0.008	0.27	2 0.076	0.032	0.437	0.117	0.047
Savannah	0.421	0.15	1 0.069	0.410	0.109	0.041	0.50	6 0.159	0.073	0.582	0.219	0.106
All	0.248	0.07	8 0.035	0.246	0.061	0.022	0.28	0 0.077	0.032	0.375	0.112	0.048

(A) Poverty Line increased by 10% (i.e. 141,460 CFAF/Yr)

Do not quote

Table 15: Incidence of Extreme Poverty in Côte d'Ivoire: Sensitivity Analysis

		1985			1986				1987			1988	
	Po	P ₁	P2	P_0	Pı	P ₂	•	Po	P ₁	P ₂	 Po	P ₁	P ₂
Abidjan	0.010	0.002	0.001	0.039	0.006	0.003		0.022	0.007	0.003	0.009	0.000	0.000
Other Cities	0.087	0.031	0.017	0.076	0.014	0.004		0.054	0.011	0.003	0.119	0.023	0.008
East Forest	0.192	0.049	0.021	0.125	0.027	0.010		0.115	0.023	0.007	0.182	0.044	0.016
West Forest	0.034	0.007	0.004	0.037	0.004	0.001		0.119	0.031	0.012	0.193	0.044	0.015
Savannah	0.270	0.071	0.027	0.178	0.036	0.012		0.267	0.073	0.029	0.375	0.110	0.045
Côte d'Ivoire	0.127	0.034	0.015	0.095	0.019	0.006		0.121	0.030	0.011	0.183	0.047	0.018

(A) Extreme Poverty Line increased by 10% (i.e. 82,500 CFAF/yr)

	(B) Extreme Poverty Line decreased by 10% (i.e. 67,500 CFAF/yr)											
	1985			1986	1		1987			1988	1988	
	Po	Pı	P ₂	Po	Pı	P ₂	Po	Pı	P ₂	Po	P ₁	P ₂
Abidjan	0.007	0.001	0.000	0.011	0.004	0.002	0.017	0.004	0.002	-	-	-
Other Cities	0.049	0.021	0.012	0.031	0.005	0.001	0.026	0.003	0.001	0.050	0.010	0.003
East Forest	0.112	0.028	0.012	0.060	0.013	0.005	0.054	0.009	0.002	0.113	0.023	0.007
West Forest	0.011	0.004	0.003	0.004	0.001	0.000	0.080	0.017	0.006	0.118	0.020	0.006
Savannah	0.169	0.039	0.013	0.075	0.017	0.006	0.170	0.043	0.015	0.238	0.066	0.024
Total	0.075	0.020	0.009	0.039	0.009	0.003	0.072	0.016	0.005	0.108	0.025	0.009

For the most stringent test — first-order dominance — we need to plot the cumulative expenditure distribution, showing the cumulative percent of people at successive levels of expenditure per capita. It can be shown that if this curve for, say, year 1 lies entirely to the right and below that for year 2, then poverty has unambiguously increased between years 1 and 2, regardless of where one draws the poverty line and regardless of the poverty measure used (at least so long as the measure has certain basic desirable properties). If the two distribution curves intersect, the conclusions about changes in poverty will depend upon where one sets the poverty line and may also vary for different poverty measures. In that case, it is possible to restrict the comparison to a narrower class of poverty measures, such as those which reflect the depth of poverty (e.g., P_1 and P_2). If one then plots a "poverty deficit curve" (defined by the area under the cumulative distribution), one can test for second-order dominance. Higher-order dominance tests also exist. <u>14</u>/

For the purposes of this paper we wanted to test the robustness of two of the main findings, viz. the overall increase in the incidence of poverty between 1985 and 1988, and the increase in the urban component. Figure 1 compares the cumulative distribution of per capita expenditure, first on a year-by-year basis and then for the entire period (the distribution is only shown up to about the seventieth percentile — surely a reasonably upper limit for the poverty line). Between 1985 and 1986, the curves intersect repeatedly between the twentieth and thirty-fifth percentile showing that the conclusions regarding poverty incidence are sensitive to where in that range the poverty line is set. Only a poverty line below the twentieth percentile will yield an unambiguous reduction in poverty. In contrast, Figure 1(B) shows that the 1987 distribution is entirely to the left and above the 1986 one, indicating an unambiguous increase in poverty. Figures 1(C) and 1(D) show that this is also the case between 1987 and 1988, and for the entire 1985-88 period.

^{14/} See Atkinson (1987), Foster and Shorrocks (1988) and Ravallion (1992) for a further discussion of dominance.

Figure 2 breaks down the 1985-88 comparison by region. In Abidjan, first-order dominance is very clear, except at the very bottom (about one percent of individuals). Obviously, this is not of a nature to affect the conclusion that poverty increased in Abidjan over the period. For other cities the case is a bit less clear. There are several intersections below the 10 percent mark, indicating that conclusions about extreme poverty are not likely to be robust. However, the rest of the 1988 distribution is very clearly dominated by the 1985 one, indicating an unambiguous increase in poverty. Lastly, for rural areas first-order dominance is met completely.

In summary, some caution is needed in assessing the change in the incidence of country-wide poverty between 1985 and 1986, and in assessing the change in incidence of extreme poverty in cities other than Abidjan, as the conclusions may be affected by the location of the poverty line and possibly the type of poverty measure used as well. However, all other findings are clearly robust, in particular the two main findings that overall poverty increased in Côte d'Ivoire between 1985 and 1988, and that it did so in each region. This conclusion holds regardless of where the poverty line is put and what poverty measure is used.



Figure 1: Cumulative Distribution of Household Expenditure per Capita, Côte d'Ivoire, 1985-88

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Cumulative percent of population



5.6 Decomposition of Changes in Poverty

The changes in poverty which occurred in Côte d'Ivoire between 1985 and 1988 are the net result of two effects: a fall in the mean level of household expenditure per capita and a change in the distribution. It may be useful to separate out the two effects, in order to properly assess the policies of the period and in order to see where future policy needs to be focused.

Following Ravallion and Datt (1991), the change in P_{α} can be written as the sum of a growth component, a redistribution component and a residual. Let

$$P_{\alpha,t} = P_{\alpha} (z/M_t, D_t)$$

where z is the poverty line, M_t is mean expenditure per capita and D_t is the distribution of expenditure per capita in year t. The change in P_{α} between 1985 and 1988 can then be written as

 $P_{\alpha,88} - P_{\alpha,85} = G (85, 88; r) + D(85, 88; r) + R (85, 88; r)$

Growth	Redistribution	Residual
component	component	

where r refers to the reference point. If we select the initial year as the (logical) reference point, the components are defined as follows:

G (85, 88; 85) = $P_{\alpha} (z/M_{88}, D_{85}) - P_{\alpha} (z/M_{85}, D_{85})$ D (85, 88; 85) = $P_{\alpha} (z/M_{85}, D_{88}) - P_{\alpha} (z/M_{85}, D_{85})$

The growth component thus captures the effect of the changing level of mean expenditure between 1985 and 1988, while maintaining the 1985 distribution. The

	Growth Component	Redistribution Component	Residual	Total Change	
-		P ₀ _			
1985-86	.029	035	.005	001	
1986-87 1987-88	.017 .151	.024 061	.008 .021	.049 .111	
1985-88	.169	060	.050	.159	
		P ₁			
		I			
1985-86 1986-87	.012	028	.000	016	
1987-88	.065	017	007	.041	
1985-88	.079	032	003	.044	
		Pa			
		* 2	 		
1985-86 1986-87	.007	019	001	013	
1987-88	.033	009	004	.020	
1985-88	.044	019	007	.018	

<u>Table 16: Decomposition of Annual Change in Poverty</u> <u>into Growth and Redistribution Components</u>

	Growth Component	Redistribution Component	Residual	Total Change	
		P ₀			
1985-86 1986-87 1987-88 1985-88	.020 .006 .077 .102	053 .025 .013 043	003 004 014 018	036 .027 .050 .041	
		P ₁			
1985-86 1986-87 1987-88 1985-88	.004 .001 .021 .033	017 .007 007 015	001 .002 002 011	014 .010 .012 .007	
		P ₂ _			
1985-86 1986-87 1987-88 1985-88	.002 .001 .009 .016	008 .003 003 007	001 .000 001 007	007 .004 .005 .002	

Table 17: Decomposition of Annual Change in Extreme Povertyinto Growth and Redistribution Components

redistribution component shows the effect of the changes in distribution between 1985 and 1988, while maintaining mean expenditure at its 1985 value. The residual reflects the interaction between changes in the mean and the distribution. $\frac{15}{7}$

Table 16 shows the breakdown of P_0 , P_1 and P_2 between 1985 and 1988, on an annual basis and for the period as a whole. 16/ The most important finding is that the redistribution component is negative. This means that the changes in distribution which occurred in Côte d'Ivoire between 1985 and 1988 contributed to reducing poverty. This also means that the observed increase in poverty over the period is entirely due to the negative growth in expenditure. Had mean household expenditure in Côte d'Ivoire remained the same between 1985 and 1988, poverty incidence would have been reduced by 6 percentage points, i.e., 20 percent (not considering the interaction effect). Moreover, the absolute value of the redistribution component becomes larger relative to the total change as one moves from P_0 to P₂, which means that the poverty reduction effect stemming from the changes in distribution benefitted the poorest most. The same conclusion is derived from Table 17, pertaining to extreme poverty, except that the relative importance of the redistribution effect is twice as large: had there been no changes in mean expenditures, the change in redistribution would have reduced extreme poverty by over 40 percent. This finding strongly underlines the role of the absence of economic growth in the generation of poverty. What was needed to fight poverty in Côte d'Ivoire in 1988 was not in the first place redistributive policies, but policies which could halt and then reverse the decline in household expenditure.

 $\begin{array}{l} R \ (85,\ 88;\ 85) \ = \ G \ (85,\ 88;\ 88) \ - \ G \ (85,\ 88;\ 85) \\ = \ D \ (85,\ 88;\ 88) \ - \ D \ (85,\ 88;\ 85) \end{array}$

This also shows that switching between the initial and terminal year as point of reference will reverse the sign but not change the value of the residual.

16/ The year-by-year components do not add up to the all-period components because of the moving reference year.

^{15/} The residual exists because the decomposition is sensitive to the choice of reference year. Assuming that initial or terminal year are the two possible choices for reference, the residual will vanish if either mean or distribution do not change between the two years (since in that - unlikely - case the reference does not matter). This can be seen from:

The year-by-year decomposition shows that the poverty reducing effect of the redistribution component occurred throughout the period, except in 1986-87. We speculate that this may be related to the onset of the recession, following the end of the 1985-86 upturn. This would suggest that the poor and possibly the "middle class" with expenditure levels just above the poverty line were the first to be hit by the recession, so that the expenditure distribution became more unequal.

It is instructive to perform the decomposition also by region and socio-economic group. Tables 18 and 19 show the results for P_0 over the entire period 1985-88. For overall poverty, the redistribution component is negative for all regions except Savannah and for all socio-economic groups except households with an unemployed head (a very small category). The relative magnitudes differ a great deal though. In West Forest, the region with the largest increase in P_0 , virtually the entire effect is due to the fall in the mean — emphasizing again the importance of (the absence of) growth for poverty. In contrast, in Other Cities half the increase in poverty due to falling mean expenditures was offset by the equalizing effect of distributional change. The positive redistribution component in Savannah in the case of poverty, in combination with the negative component in the case of extreme poverty, suggest an increased skewness in the distribution, except at the bottom tail.

The strongest redistribution effect on poverty occurred among export crop farmers — a group were poverty, and especially extreme poverty, increased significantly over the period. This might indicate that the larger and richer farmers were relatively more affected by the negative evolution in export crops, resulting in an equalizing effect. Again though, the drop in mean expenditure far outweighs this effect, resulting in a net increase in poverty. At the same time, very poor farmers were also severely affected, since both falling mean and changing distribution contributed to increasing extreme poverty.

The decomposition of the changes in extreme poverty are of particular use in identifying vulnerable groups, which could be targets for quick intervention by government.

	Growth Component	Redistribution Component	Residual	Total Change
Abidjan	.076	002	.031	.105
Other Cities	.213	111	.072	.174
East Forest	.046	061	.030	.015
West Forest	.355	005	.025	.375
Savannah	.146	.022	018	.150
Export Crop Farmer Food Crop Farmer Public Sector Employee Private Formal Sector Employee Informal Sector Employee Self-Employed	.213 .162 .208 .102 .306 .123	090 037 001 040 042 045	.059 .031 043 .018 .016 .122	.182 .156 .164 .080 .280 .200
Inactive	.126	068	.078	.136
Unemployed	.114	.047	.181	.342
Côte d'Ivoire	.169	060	.049	.158

<u>Table 18: Decomposition of Change in Poverty (P₀, 1985-88) into Growth</u> and Redistribution Components, by Region and Socio-Economic Group

	Growth Component	Redistribution Component	Residual	Total Change
	002	007	000	0.05
Abidjan	.003	007	003	007
Other Cities	.101	062	046	007
East Forest	.047	011	029	.007
west Forest	.127	.003	.015	.145
ou vuimun	.100	.054	.005	.072
Export Crop Farmer	.090	.006	.028	.124
Food Crop Farmer	.125	062	016	.047
Public Sector Employee	.046	003	007	.036
Private Formal Sector Employee	.008	001	008	001
Informal Sector Employee	.126	.013	018	.121
Self-Employed	.079	072	015	008
Inactive	.076	041	026	.009
Unemployed	.041	.088	041	.088
Côte d'Ivoire	.102	043	018	.041

<u>Table 19: Decomposition of Change in Extreme Poverty (P₀, 1985-88) into Growth</u> and Redistribution Components, by Region and Socio-Economic Group

The target groups are not only those with large total increase in extreme poverty, but especially those where the redistribution component is positive - indicating a worsening distribution among the very poor. Those two groups are export crop farmers - the most vulnerable group in rural areas - and the informal sector employees - a notriously underprivileged group in urban areas. The difference with the self-employed, who also operate in the informal sector, is particulary noteworthy. The distribution among the self-employed became more equeal, suggesting that the economic hardships may have equalized opportunities for small entrepreneurs.

5.7 Income and Expenditure Patterns

6. Basic Needs and Poverty

Due to the length of the paper, paragraph 5.7 and chapter 6 have been excluded by the congress organizers in this abridged version. The paper is available in an unabridged draft version and a final version will be become available in 1993, both directly from the author.

7. Summary and Conclusions

This paper has set out to demonstrate what can happen to the welfare of households and individuals, and to poverty, in a low to middle income country, under conditions of structural change and economic recession. The literature on the impact of adjustment has indicated the difficulty of predicting social and poverty outcomes on purely theoretical and *a priori* grounds. In-depth empirical research thus offers the best promise for enhancing our understanding of the process by which macro-economic change is transmitted to the micro level.

In this paper we presented selected results from a case study for Côte d'Ivoire, which was one of the first African countries to launch a structural adjustment program with support from the World Bank and the International Monetary Fund. The program was sustained for six years (1981-86), but then abandoned in 1987-88 when a severe recession hit the country. In 1989, a new economic recovery program was initiated. Côte d'Ivoire presents a unique case study — certainly in Africa — due to the availability of four consecutive years of comprehensive data on levels of living over the period 1985-88 (the Côte d'Ivoire Living Standards Survey — CILSS). The first two years of this data thus capture the situation at the end of a long sustained adjustment effort when the economy was growing moderately, while the last two years represent a period of pronounced macro-economic decline, with increasing internal and external imbalances — in effect, a period of destabilization.

We have utilized the four years of CILSS data to attempt to show the effects of the two macro-economic regimes on the welfare of households and individuals, the incidence and depth of poverty, and the fulfillment of basic needs. To do so, we have purposely avoided the use of a formal macro-economic model, but relied instead on an eclectic approach centered around the construction of a policy relevant poverty profile, and the use of a decomposable poverty index.

Our research builds upon earlier work which used the CILSS data for povertyoriented analysis, but transcends it in several ways. First, to our knowledge, this research is the first to use the full sequence of four years of CILSS data. Especially the fourth year has proven essential to evaluate correctly the impact of macro-economic events. Second, a detailed scrutiny of the reliability of the CILSS data has led us to discover two heretofore unknown sources of error in the data due to sampling bias. We have developed and applied suitable corrective sampling weights. The results from applying these weights have called into question the robustness of findings reported in earlier work. Third, we have developed a detailed regional cost-of-living index based on price data collected under the International Comparisons Project. This index has significantly more comprehensive coverage than earlier available indices, and its use makes a significant difference for the estimation of poverty.

Welfare and Poverty in Côte d'Ivoire, 1985-88

We found that the level of living of the Ivorian people declined over the entire 1985-88 period. Initially, the decline was gradual, but it became rapid and massive in 1988, when the economic recession hit in full force and when adjustment was replaced with destabilization: in one year welfare levels measured by household expenditure per capita fell by 20%. Not everyone was affected to the same degree — in fact, major distributional changes occurred over the period. During the final years of the adjustment phase, 1985-86, the incidence of poverty remained steady and the incidence of extreme poverty even fell. The depth of poverty also diminished. In 1987, on the other hand, poverty and extreme poverty both became more widespread — a trend which accelerated dramatically in 1988. In these two years, the incidence of poverty rose by over 50%, and the incidence of extreme poverty more than doubled. Likewise, the depth of poverty increased.

There were important regional differences, as well as differences across the socioeconomic groups in Ivorian society. The most rapid increase in poverty occurred in urban areas, especially among public sector employees. However, given the initial low degree of urban poverty in 1985, the urban poor still represented only 25% of all poor in 1988. The new urban poor notwithstanding, poverty in Côte d'Ivoire was thus still a predominantly rural phenomenon in 1988. The Savannah remained Côte d'Ivoire's poorest region over the period. Within the other rural areas, a major reversal took place: West Forest, which in 1985 was the most prosperous region after the Abidjan area, became the second poorest region in 1988. The decline in West Forest's fortunes was related to sharply falling farm incomes of export crop farmers, which occurred in spite of the maintenance of nominal official producer prices. Real producer prices fell of course, and the extent of government support to agricultural production proved insufficient to maintain output.

Extreme poverty did not increase in urban areas, but rose sharply in West Forest and Savannah. The two zones contained in 1988 two thirds of all very poor persons in Côte d'Ivoire. In Savannah, two of every three people lived in poverty, and half of them lived in extreme poverty.

Who Gained and Lost?

Judging by what happened in the final two years of the adjustment phase, it would appear that the poor benefitted during this period. The overall incidence of poverty remained stable in 1985-86, but the depth of poverty was reduced, and the incidence of extreme poverty also fell. The improvement occurred for the most part in rural areas and benefitted primarily farmers. This suggests that one of the main policies of the adjustment program, viz. the shift of the urban/rural terms of trade in favor of rural areas, achieved the desired effect. Although the relevant adjustment measures were mostly concerned with the maintenance of export crop prices, benefits occurred for both export crop and food crop farmers. (The government did support the price and production of several food crops.)

In contrast, the adjustment program reduced parastatal wages and froze those of government workers. This is clearly reflected in the CILSS results which show an increase in incidence and depth of urban poverty, especially in Abidjan. Although poverty incidence remained low among public sector employees, it did rise by 14% between 1985 and 1986.

These are clearly the "new poor" as a result of adjustment. However, poverty also rose in the urban private sector — formal as well as informal — although this was probably more the result of the unfavorable macro-economic situation rather than the adjustment program. In particular, the real effective exchange rate rose by 20% and this clearly undermined the competitive position of the industrial sector in the country.

There is little doubt that in this phase of structural change the middle and upper income classes in Ivorian society were affected most. Average expenditure levels of the poor and very poor rose, while those of the non-poor fell significantly. In urban areas, the decline touched the middle class as well — those with welfare levels just above the poverty line — as witnessed by the rise in the number of the urban poor. Our decomposition analysis of the change has shown that it resulted in an equalization of the distribution of welfare, but more so in cities other than Abidjan.

The rapid rise of poverty in 1987 and 1988 stands in sharp contrast with the neutral to improving situation of the first two years. In 1988, the incidence of urban poverty almost doubled relative to the previous year and the depth of poverty also deteriorated, particularly in cities other than Abidjan. In rural areas, poverty also rose, but much less. The biggest rise occurred in West Forest among export crop farmers, due to rapidly falling yields and sales from export crops, especially coffee. This experience suggests that maintenance of producer prices is not always sufficient to generate a positive supply response but that the entire system of agricultural support needs to be maintained and improved as well. While strictly speaking, our methodology cannot prove causality between the accelerating macro-economic deterioration in 1987-88 and the rise in poverty (in the absence of a formal macro-economic model), the evidence during that period, and particularly the difference with the two previous years, points in our view rather overwhelmingly to a link.

The Basic Needs Dimension

Government spending was reduced in real terms during the adjustment phase. However, the Government of Côte d'Ivoire protected spending in the social sectors (health and education) and their share in current government expenditure even rose slightly. Our results suggest though that at least in the short and medium run there is little relation between the level of government expenditure devoted to health and education and achievement or use-of-service indicators in those sectors.

On a country-wide basis, most of the basic needs indicators we considered in this paper (literacy, school enrollment, use of health care facilities, access to safe water, housing amenities) changed little over the period 1985-88. This is an encouraging finding, in that the deterioration in expenditure-based welfare and the concomitant rapid rise in poverty over the period was not matched by a deterioration of the fulfillment of basic needs. Even those indicators which did decline did not do so nearly to the same degree as the monetary indicators. This underscores the importance of looking separately at the different dimensions of the level of living since they clearly need not all move in the same direction.

However, the country-wide results mask very wide differences between the poor and non-poor. We found that basic needs indicators declined systematically for the poorest households, almost regardless of the average trend of a given indicator: net primary school enrollment for girls in very poor households fell from 22.4% to 16.7%; the number of children one year or more behind their grade-for-age doubled to 64% for boys and 53% for girls; the rate of medical consultations of ill women fell from 30% to 16%; the rate of home ownership declined from 92% to 85%; access to electricity fell from 14% to 11%. In addition, the amount of expenditures which very poor households devote to education and health care fell by 50% and 12% respectively. The sole exception to this pattern of deteriorating basic needs fulfillment occurred in health care: the rate of preventive consultations rose for very poor households and more so than the country-wide average. (Access to tap water also improved, but in 1988 it was still at a dismal 3%).

The one social sector specifically addressed in the adjustment program was housing: the government bailed out of the provision of housing. This had no direct effect on the poor since they were not tenants in public housing to begin with.

While the results make it clear that basic needs indicators deteriorated much less than monetary welfare indicators for the country at large, for very poor households the trend was much worse and these households do appear to have suffered serious declines in their basic needs satisfaction. Since the declines occurred both in the adjustment and destabilization phases, the cause must likely be sought in the general economic decline of the 1980s in Côte d'Ivoire and the concomitant deterioration in supply and delivery of public services. On the demand side, very poor households faced tighter budget constraints which reduced household resources available for health and education.

What Happened after 1988?

There are no household survey data available to answer this question directly, but the macro-micro relationship observed between 1985 and 1988 gives a strong clue about the current situation in Côte d'Ivoire. Between 1985 and 1988 GDP per capita had fallen by 13 percent. In 1989-90, it fell by another 17 percent, and private consumption was reduced by a further 10 percent. It is therefore likely that poverty has continued to increase after 1988. The increase could be quite substantial if the observed relation between household welfare and macro-economic decline has continued.

It is more difficult to predict regional and socio-economic trends. In 1989 the government took the drastic step of reducing official producer prices for cocoa and coffee by 50 percent — this had become necessary for fiscal reasons. This will have shifted in a major way the domestic terms of trade against the rural areas, possibly reversing the trend of a faster rise in urban poverty (although it may not have slowed the absolute increase much). Fortunately, the real effective exchange rate did not appreciate further in 1989-90 even though the international terms of trade continued to decline. Coffee and cocoa

production in fact increased significantly and this will have buffered the impact of the reduction in producer prices on farmers' income. On balance, the likely impact will have been a further increase in poverty among export crop farmers, but less so than might have been expected from the drop in official prices. There is no evidence that food prices also declined, so the relative situation of food crop farmers and urban consumers may not have changed much.

On the basic needs side, there is little evidence to suggest that the 1985-88 trends would not have continued — that is, fairly small changes on average, but steady deterioration for the very poor. One (small) bright light is that in 1989-90 the government increased the share of education expenditure going to primary schooling. As we already pointed out though, the key factor in reaching the poor is more efficient service delivery and more effective targeting.

Policy Orientations for Côte d'Ivoire

The case study results contain several useful findings to increase the povertyorientation of a future economic recovery program in Côte d'Ivoire. They also help to identify priority target groups and areas.

First and foremost, poverty alleviation efforts have become much more needed in view of the sharp rise in poverty. Since poverty rose much faster during the destabilization phase, managed structural change should be the underlying framework for poverty alleviation.

Second, over the period 1985-88, inequality actually decreased and the entire increase in poverty was due to the negative growth in household expenditure. The priority in poverty alleviation is thus not so much to change distribution but to generate growth. (However, an important caveat is needed, viz. the negative trickle-down observed during economic decline does not necessarily imply that there will be a positive trickle-down during economic growth).

Third, poverty has become more widespread across the regional and socio-economic spectrum in Côte d'Ivoire, and thus targeting will become more difficult but more important in view of government budget constraints. Especially, urban poverty is a fast growing problem in Côte d'Ivoire and will require increasing attention. The key groups are public sector workers, where poverty incidence has risen most rapidly, and informal sector employees, who are a numerically small but very vulnerable group with the highest incidence of poverty and extreme poverty.

Fourth, among rural areas, the traditionally poor Savannah zone must continue to be a prime target area since almost one third of all poor and one half of all very poor live there. The majority of them are food crop farmers.

Fifth, the dramatic increase of poverty in West Forest has made this the next priority zone. The key target group here is export crop farmers.

Sixth, since 80% of all revenues from cocoa and coffee went to non-poor farmers, the price support policy for these crops had only a limited benefit for the poor. Now that the policy has been abandoned, the promotion of these crops must occur in the context of an overall agricultural support package aimed especially at poor farmers. This is of vital importance in any poverty-alleviation strategy in the Forest regions.

Seventh, there are no explicit "poor foods" in the consumption basket of Ivorian households, except perhaps maize and millet where the poor account for 40% of total consumption. But even for these items, generalized price subsidies will have substantial leakages to the non-poor. The government's support for the price of rice benefitted the poor as producers (both sales and home-produced consumption rose rapidly) but the increased supply induced important shifts in consumption patterns away from other foods, and

increased the total cost of the subsidy. In general, the suitability of continuing commodityspecific subsidies in Côte d'Ivoire must be questioned.

Eighth, the delivery of public services (education, health, tap water) needs to be targeted better to the very poor who are rapidly falling behind in the fulfillment of basic needs.

Ninth, in spite of the large resources which the government continues to devote to education, there are major signs of trouble in the sector under the form of falling enrollment rates, increasing age-grade mismatches due to drop-out and repetition, and sharply falling household expenditures devoted to education. The issue definitely is not the overall level of resources, but the intra-sectoral allocation and the efficiency of service delivery. There is a high need to target the very poor and provide selective subsidies to reduce the cost of school attendance.

Tenth, in the area of health, increased delivery of curative health care and access to tap water for the very poor are top priorities. Savannah and West Forest lag significantly behind the rest of the country.

Beyond the Case Study

While caution is always needed to generalize beyond a case study, we think that this research has some lessons applicable to other countries as well.

One of the most striking findings of this study is the speed with which the recession/destabilization in Côte d'Ivoire in 1987-88 "trickled down" to households, and the magnitude of the effect. There is no reason to assume that such effect could not occur in other countries as well. The explanation probably includes the standard argument that reductions in aggregate demand "bite" much faster than supply incentives and price realignments. The contrast with the adjustment years provides dramatic evidence of the costs

in terms of increased poverty that can stem from even one or two years of unchecked economic decline and destabilization. Unfortunately, there is no guarantee that the trickledown effect will work in the positive direction as well, i.e. when economic growth resumes. In fact, the reduction in the inequality of the distribution of welfare observed during the decline phase, might suggest the opposite. The phenomenon at work could have been a "Kuznets-curve" in reverse: when the economy contracts, the distribution of income gets better before it gets worse. And while the priority for the Government of Côte d'Ivoire is clearly to generate economic growth, once it happens the need for explicit redistribution policies may well re-emerge. At any rate, the important lesson is that it is much more feasible to protect the poor with a managed adjustment program than under conditions of destabilization.

A second general lesson pertains to the fulfillment of basic needs. On the positive side, the Côte d'Ivoire experience highlights the possibility to protect, on the average, the fulfillment of basic needs even in conditions of rapid economic decline. On the negative side, the CILSS data underline the danger that the very poor may suffer serious setbacks in basic needs fulfillment, even when average conditions remain the same or even improve. Indeed, during 1985-88, for Côte d'Ivoire as a whole, the fulfillment of basic needs did not suffer precariously, but the very poor bore almost the entire burden of whatever declines did occur. It would appear that the reasons behind this phenomenon may occur in other countries too: the very poor are often marginal users of health and educational services and any deterioration in supply or demand causes them to relinquish using the service. In the case of a supply reduction, the opportunity cost may become too high, and in the case of falling income the very poor may no longer be able to afford the monetary outlays. Clearly, the lesson for other countries is that it is not sufficient to monitor basic needs trends at the national level, but that disaggregation by region, socio-economic group and welfare level are essential. By the same token, separate targeting and policy design for the very poor may well be essential.

Analytic Methodology

Several lessons can be learned from the methodology we used. First, our results demonstrate the importance of using two poverty lines: cross-sectional and over-time patterns of overall poverty did not parallel those of extreme poverty. This was the case for the expenditure-based P-alpha measures, but even more so for the basic needs indicators. One of our key findings, viz. that the very poor bore the brunt of deterioration in basic needs fulfillment, would have been entirely missed if only the higher poverty line had been used.

Second, it is important to check how robust the results are to changes in poverty lines and poverty measures. Sensitivity analysis showed that all major patterns and trends remained unaffected by small changes (10%) in the two poverty lines. Dominance analysis permitted to broaden that conclusion to all reasonable poverty lines and poverty measures, but did indicate that caution was needed for one or two of the more region-specific findings since they would not hold over the entire range of feasible poverty lines (e.g. the increase in extreme poverty in cities other than Abidjan.)

Third, the decomposition analysis of the over-time changes in poverty into growth and redistribution components was particularly useful to understand the dynamics of poverty and to identify vulnerable groups. It should be a standard ingredient of poverty analysis.

Lastly, and most generally, our use of a multi-dimensional poverty profile in combination with a decomposable poverty index proved to be an effective tool to link macroeconomic change to welfare of households and individuals. The decomposition over socioeconomic group was especially useful, given that those groups were defined according to source-of-income and sectoral criteria — which could be linked directly to policy measures (e.g. relating to public sector, export crops, etc.). We do not claim to have proved causality formally, as perhaps we could have done with a full-fledged economy-wide model. However, the flexibility and ease of use of our analytic tool provides, in our view, an ample trade-off for the loss of formal causality. It seems clear that the possibility of widely applying this type of analysis in most African countries is far greater than that of economywide models.

Data Collection

The data source used for the analyses in this paper was unusually rich — too rich, in fact. One rather overwhelming lesson which the research team learned is the complexity, cost, and time-consuming nature of analyzing four years of integrated household survey data sets with a multi-level hierarchical structure (households, individuals, enterprises, expenditure categories, crops, loans, recipients of transfers, etc.), a highly non-linear questionnaire design with complex skip patterns, over a thousand variables in each year, and a rotating panel design. One cannot do this kind of empirical research and not raise the question whether this type of living standards survey is really the most recommendable approach to data collection for welfare and poverty analysis.

Two lessons are relevant. First, our results indicate the crucial importance of annual monitoring of poverty. Year-to-year changes in Côte d'Ivoire were drastic, and there is no reason to think that such changes could not occur in other countries as well. Second, such monitoring should not be done with complex integrated surveys. Even excluding considerations of cost to the collecting country, the reason is that they simply take too long to analyze. Almost by definition, monitoring is an activity which should produce findings quickly.

What then is the key information needed for poverty monitoring? Our research results suggest that both household expenditure and basic needs information are needed, since neither is able to provide by itself a full picture of welfare. In contrast, income data are much less useful. As we have argued, household expenditure is a preferred welfare indicator conceptually and it is easier to collect. The analysis of the full current account of households, including savings is, in our view, not the top priority for welfare and poverty analysis in a poor country. However, what is important to link macro-economic change to

welfare is the <u>composition</u> of income and changes in it. This can be established through a series of qualitative questions which are much simpler than the literally hundreds of questions needed to build up the <u>level</u> of income. We recognize the potential importance of an integrated living standards survey to provide a base-line data set and to permit in-depth analysis of household behavior and response. For those reasons, such a survey might be undertaken every five years or so (at least if the country has the necessary analytic capacity). Apart from that, the monitoring of poverty should occur annually, or even more frequently if the country undergoes rapid economic change. This can be achieved by a simpler survey focusing only on household expenditure and selected basic needs variables of the sort used in the analysis in this paper. This approach is likely to yield results much faster and thus to be of more interest and use to policy makers. If this then leads to better policy, it might actually help the poor.

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SOME INDICATORS OF POVERTY IN ZAMBIA

PAPER PRESENTED AT THE INTERNATIONAL POVERTY RESEARCH CONFERENCE OSLO, NORWAY

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ABSTRACT OF PAPER ON SOME INDICATORS OF POVERTY IN ZAMBIA

This paper introduces the issue of poverty and how it relates to economic, social and political development of a country especially developing countries. it then proceeds to attempt the definition of poverty given the three approaches, namely the absolutist, relativist and the culturalist. Then characteristics of poverty and its influencing factors are mentioned. This is followed by introducing poverty profile which enables а the identification of the poor in terms of socio-economic variables.

This paper also gives parameters of the measurement and decomposition of poverty given the poverty line and poverty indices. Apart from minimum needs as implied by poverty lines, the paper argues that poverty can be viewed from the basic needs approach.

After some conceptual issues about poverty, the paper presents the zambian economic background so as to understand the evolution of poverty in the country. This is followed by some test results of the poverty analysis study currently going on in Zambia. It should be pointed out that these are in very preliminary stage and further investigations are being undertaken.

This is a 24 page paper including references. PRINCIPAL AUTHOR: W.K. MAZIMBA CO-AUTHOR: E.M. SILANDA

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1.0 INTRODUCTION

During the past two decades, the concern with the plight of the poor increased among developed scholars, policy makers and international development donors. This concern arose due to the increased awareness on the economical, political and ethical implications of poverty affecting a large population of the developing world.

The economical implications of poverty show that a country with a large population of poor people incurs untold economic losses in the form of opportunity costs arising from the failure to harness the full productive potential of its poor, that is, its labour. As a result of lack of enough resources or income to purchase food and basic social services, the poor tend to be malnourished, and that is, affecting their economic productivity.

From the political stand point, poverty has been recognized partly to be influenced by certain developments such as popular revolutions and the ideas of liberation theology which have contributed much to this increased awareness. It therefore happens that when the poor are marginalised by society further beyond a certain point, radical alternative courses of action which offer some hope become more attractive. When this point is reached, the masses are readily politicized and could even cause political instability to the already established order.

Finally, the plight of the poor is partly acknowledged due to the ethical dimension of poverty. It is viewed morally unacceptable, from the perspective of value system of the major religions of the world to allow a situation to continue where a large number of people are poor, hungry, ill, malnourished and illiterate while the rest of society advances in economic progress.

The awareness of the economical, political and ethical implications of poverty on a large population of developing world has been followed with frequent proclamations in public speeches and official alleviation of documents about the poverty and structural changes, but these have remained at the level of rhetoric. Poverty has continued to grow in the developing world and has reached an alarming proportion of as much as 80 per cent of the population living below the poverty line in the 1980s. That is, more than one billion people or almost one-third of the total population of the developing world are struggling to survive on less than \$370 per capita income a year (WB, 1990:1). The percentage of the population living in poverty was especially high in South Asia and sub-Saharan Africa. Other indicators of the quality of life were lower on average in developing countries than in developed countries. For example, in 1985, life expectancy was 50 years for the sub-saharan Africa, 56 years for South Asia, as compared to 76 years for the developed world (Ibid., P.iii).

Women in the developing world, have often constituted a deprived group even among the poor; literacy rates and wages are much lower for women than for men, and access to social services and employment is much difficult.

The plight of the poor women is indeed troubling as their health and education greatly influence the wellbeing and future of their children.

2.0 **DEFINITION OF POVERTY**

It has been discovered, that no completely satisfactory definition of poverty exists. However, three definitions widely used are covered in this section and are here outlined as the absolutist approach, relativist approach and the culturalist approach.

Under the absolutist approach the main thrust of poverty is that it establishes a fixed economic level <u>below which</u> households are considered poor. A fixed annual income cut-off point is established below which households are unable to purchase what are considered the necessities of life. This is the poverty line based on how much it costs to buy a nutritionally adequate diet, clothing and so on.

To determine a poverty line, a measure of the standard of living need to be determined and a level which separates the poor from the non-poor has to be chosen.

There are several measures of standard of living, some of which include; Income, expenditure, the proportion of expenditure allocated to food, caloric intake and nutritional status as well as "intangible" criteria such as freedom, the right to vote, gender equality and other related factors.

Total real expenditure per capita has since been used as a proxy for standard of living of the households in several other studies on poverty. It is upon this measure that the level which distinguishes the poor from the non-poor (poverty-line) is devised.

The relativist approach interprets poverty in relation to the prevailing living standards of the society, recognising explicitly the interdependence between the poverty-line and the entire income distribution.

According to this approach, households are poor relative to some standards, and that standard is partially shaped by the lifestyles of other citizens. It is suggested that relative poverty relate to those households who are on the lowest end of the income scale, say the lowest 10 or 20 percent. It is further suggested that the poor are those living in families with incomes that are less than one-half of the national medium family income. This definition means that poverty would always exist, irrespective of how affluent society becomes. The poor would be those who share the least in such affluence. Infact, using the relative definition, poverty could be eliminated only if the inequitable distribution of resources was eliminated.

The culturalist approach perceives poverty as a cultural as well as an economic condition. Under this definition of poverty, poverty is viewed not only in terms of how many resources households have, but also in terms of why they have failed to achieve higher economic level. For example, some people are poor because they have no job skills that would enable them to get a job.

3.0 CHARACTERISTICS OF POVERTY AND ITS INFLUENCING FACTORS

The condition of poverty in any area is directly influenced by the real income of a person (or his/her family's). It follows therefore that poverty is common in areas with low real income levels.

Other influencing factors include the distribution of income and the provision of social services and accessibility to these services.

Using low real income levels, it should be noted that poverty is at its worst in rural areas characterised mainly with problems of malnutrition, lack of education (hence high illiteracy), low life-expectancy and sub-standard housing. Further, even in rural areas within the same country, the extent of poverty varies due to disparities in regional potentials.

Some of which have potentials in agriculture while other regions (or areas) may be of low agricultural productivity, drought stricken or prone to flood and environmental degradation.

The urban poor may be characterised with squatter settlements, slums, overcrowding, bad sanitation, crime, pollution, forcible evictions. etc.

Lack of human capital is another poverty reinforcing factor. This is characterised with low-levels of technical achievement, e.g the poor, often illiterate women have many children, closely-spaced to the detriment of their health that is,leading to hunger and malnutrition. This undermines the capacity for labour and subjects them to unskilled work for their survival. The other mostly impoverished groups are the elderly, the disabled, the working poor, the unemployed and the homeless. These are the vulnerable groups for which greater concern has often been placed through Socia-Dimension Adjustment Programmes (SDAs).

3.1 <u>POVERTY PROFILE</u>

A poverty profile enables the identification of the poor in terms of socio-economic variables, such as race, location, employment status, occupation, sector of employment, health, education etc. In this case, the incidence of poverty is specified by regions and socio-economic groups.

Objectives; - The main objectives of a poverty profile are to:

identify which are the major poverty groups in the country;
assess how these poverty groups have been affected by structural adjustment programmes or any other programmes which have hitherto been implemented, and;
draw some policy inferences, concerning both the design of adjustment policies and to evaluate their impact on the poor (or on poverty alleviation).

The household is the basic income sharing unit and it is more appropriate for policy purposes to describe the population in poverty in terms of households. Accordingly, the population unit in the poverty profile is chosen to be the household, and the poor households are those with per capita household incomes below poverty line.

To achieve these objectives, a number of income and expenditure based indicators present themselves for consideration. These need to be computed (also imputed) from the raw data collected in the Households budget surveys.

These measures of welfare would include, among the others, the following;-

- Total households income
- total households expenditure
- per capita household income
- per capita household expenditure
- per capita food consumption
- proportion of household budget spent on food.
- total household income per adult equivalent
- total household expenditure per adult equivalent, etc.

Care should be taken however, to ensure that the measures selected and used are appropriate for the purpose in hand. This is so because households surveys have, in several instances overstated expenditures over incomes for many household groups. This has raised questions about the reliability of the income estimates.

3.2 MEASUREMENT AND DECOMPOSITION OF POVERTY

In any measure of poverty, two broad issues present themselves; firstly, the identification of the poverty-line; and secondly, the choice of an index to measure poverty. We briefly turn to look at each of them;

3.2.1 <u>Poverty-Line-</u> Given the fact that the total expenditure will be chosen to measure the standard of living, the next step would then be to choose the poverty-line. This is the level which distinguishes the poor from the non poor.

> Various approaches have since been but for the Zambian case study, we shall use the abolute approach as defined in section 2.

3.2.2 <u>Poverty - Index</u> - Apart from identifying and defining the poverty-line itself, the degree of poverty will depend on three basic factors (Sen, 1976); These are;

> the <u>incidence of poverty</u> - which is the percentage of the population in poverty (ie living below the poverty line)

> the intensity of poverty (or the poverty gap) reflected in the extent to which the incomes of the poor lie below the poverty line or differently put, The total income needed to bring all the poor up to the poverty line and;

> the <u>degree of inequality</u> among the poor, in that transferring income from the poorest to the better-off poor should raise the measure of poverty".Both the incidence and the intensity of poverty are insensitive to the income distribution among the poor. However, any index or measure of poverty should ideally, reflect all three of these dimensions.

> The above mentioned measures have been widely applied in several studies in developing countries due to their decomposability by region or socio-economic group. These indicators would be denoted as follows:

Po - proportion of the population/household in each group of people or household below the poverty datum line (PDL), i.e the poverty incidence.

- Pl the intensity of poverty, i.e the average gap between the income of a poor individual in a group of the people/households and the Poverty line, and;
- P2 the square of the poverty gap measure, i.e
 P1 and is used basically for sensitivity to extreme poverty analysis
- P1 is a bench-mark poverty index that should be the focus of interest in policy oriented analysis.

3.3 **POVERTY AND BASIC NEEDS**

Poverty can be defined as more than just a set of minimum needs for physical efficiency. It may also be defined with reference to the norms for society, and conceived of as a set of 'basic needs' rather than "minimum needs". Basic needs would include those material comforts that will give households an element of choice. These basic needs refer to public goods such as access to education, literacy, numeracy, quality of education, health care and its quality, drinking water, housing amenities, incidence of undernurtrition, etc. These are difficult to be reduced to a single monetary measure. It is therefore important to consider the basic needs dimensions analyse its correlation with separately and income/expenditure dimension. Simple tabulations of basic needs achievements by poverty groups need to be made. It should be noted that the bulk of these basic needs are usually supplied by the government and cuts in government expenditure in these sectors would worsen basic needs achievements of the poor.

4.0 THE ZAMBIAN ECONOMY AND POVERTY IN PERSPECTIVE

It important to is note that Zambia. after independence had one of the strongest economies in Africa. An independent Zambia adopted a mixed economy which centred around high yield copper mining which enjoyed high prices on the world market. The country prospered during the first decade of independence as the economy grew at more than 4 percent annually, faster than most other economies in Africa. With the success of the mining industry, Zambians migrated to the cities for employment. Copper provided more than 90 percent of total export earnings and accounted for more than 25 percent of the total GDP.

However, this success was shortlived as the economy declined progressively over the next two decades. The decline is attributed to falling prices of copper on the international market during that period. This was exacerbated by the introduction of a socialist- one party state in 1972. In keeping with its radical orientation, the Government nationalised private enterprises and established new parastatal companies. Unchecked growth of the public sector and shrinkage in the size and contribution of the private sector contributed to serious fiscal and current account deficits thereby fueling inflation. Aggravating Zambia's plight were volatile swings in world market demand for copper. In 1976, the price of copper collapsed while there was a steep and sudden rise in the price of imported oil.

The value of imports rose. To counteract the declining balance of payments' position, the Zambian government borrowed heavily while still maintaining state subsidies on the essential consumable commodities for the urban poor. As a result of heavy

borrowing, Zambia's external debt stood at \$7.2 billion by 1991. Debt servicing represented 65 percent of GDP. Also, per capita income declined by more than 30 percent, while food production also declined as a result of low profitability. It therefore became prudent and essential to reform the management of the economy. In the 1980's, a series of measures were introduced in order to rescustate the economy. These included, among other measures, structural adjustment programmes.

Structural adjustment is based on two fundamental principles:

- (a) Marco-economic Adjustment
- (b) Liberalisation ad deregulation of the economy.

These principles involve attempts of restoring macroeconomic stability, encouraging factor mobility through trade liberalisation, deregulation of fianancial markets, decontrolling prices, abolishing monopolies etc. These polices can have negative positive or neutral impacts.

Zambia has had a mix of both elements of structural adjustment. This has been manifested in cuts in government expenditure on food subsidies, cost sharing in the provision of social services, restructuring the civil service, price decontrols, privatisation, devaluation and the upping of interest rates. These measures inter-alia, are likely or have already produced in the short-run, a negative impact on poverty levels by reducing real incomes through higher prices or loss of income through retrenchments

5.0 SOME ZAMBIAN PRELIMINARY RESULTS OF THE DATA-TESTS

There is presently a poverty Analysis study going on in Zambia and there are two sets of primary data available for this study, namely:

- 1. The CSO Priority Survey Data of October, 1991
- 2. The PIC Househlds Income and Expenditure Survey of June 1991.

Some preliminary tests have been conducted on the PIC data set as a way of testing the reliability of the data. The original data set consists of about 2,900 households, but only 2,756 households that completed both the income and expenditure sections of the survey successfully have been used in the testing.

This will partially explain the differences in average expenditures and expenditure shares obtained for the poverty analysis and those reported in the PIC Preliminary Expenditure Report of November, 1991. The weights used have been adjusted for the 2,756 households using Lotus 123 and the data testing has been done using SPSS (Statistical Package for Social Sciences) software.

5.1 RURAL AND URBAN HOUSEHOLDS DISTRIBUTION

Of the 2,756 successful households (HH), 1888 are rural and 868 are urban. After weighting, this yields 1,025,049 rural and 406,276 Urban HH giving a Zambia Total of 1,431,325. The distribution of HH by expenditure between the two sectors is shown in (table 1).

Table 1]	Distributio	n of	Household	by	Expendiu	itre	Decile
Expenditure	Dec	ile Rural				Urban		
		Number	(K/A	dequiv)	Num	ber	(K/A	dequiv)
Lowest	1	73,456		279.80		39,396		731,04
	2	88,046		395,07		38,820		1023.06
	3	90,331		516.87		39,102		1278.60
	4	102,991		630.31		39,190		1580.07
	5	100,586		771.29		39,904		1926.86
	б	108,838		968.62		40,343		2339.32
	7.	108,900		1238.44		40,502		2955.33
	8.	106,441		1559.21		43,226		3914.81
	9.	119.180		2357.95		44.196		5720.21
Highest	10.	126,280	ovei	r 2357.95		41,597 o	ver	5720.21
		1,025,049				406,276		

5.2 PDL Test Estimate

The study has as part of the tests on the HEIS data estimated the PDL by fitting an equation of expenditure to daily calorie intake per adult equivalent, as done by Hossain (IFPRI) no,67 1988)

Apart from expenditure, the HEIS data includes quantities of food items consumed by the household. Thus initially, expenditure per adult equivalent (adequiv) is fitted to daily calorie intake per adequiv using calorie conversion tables from the National Food and Nutrition Commission. The form used is:

Calorie per adequiv = $A + B_{expend per Adequiv + e}$ (1) Where:

- Expend per adequiv is monthly expenditure per adult equivalent
- calorie per adequiv is the daily calorie intake per adult equivalent and A and B are the parameters to be estimated
 e is the error term with its classical properties.

Next step is to obtain the level of expenditure that yields a daily intake of 2,100 calories per adult equivalent and take this as the threshold poverty level. The resulting PDL for June, 1991 are shown in Table 2.

Table 2	Threshold PDL Per	Adult Equivalent	and Per HH	I June
	(K) (1991)			
Sector	Per HH	Per Adequiv		
Rural	12,662	726		
Urban	9,489	2,096		
Zambian	4,237	1,071		

This method initially elimates the needs to chose P in the income distribution and when compared to average monthly expenditures reported in Table 3, these estimates show that the PDL would be around 53 percent of mean expenditure in rural areas and 71 percent in urban areas.

Table 3.Average Monthly Expenditure Per AdultEquivalent (K)

Sector	Kwacha	PDL as % of Expenditure
Rural	1,348	53.8
Urban	2,958	70.8

From this we could already see that the estimated PDL for urban areas will be closer to the Mean expenditure than in the rural areas, probably indicating a higher food price in the urban areas. This suggests the need for a differenct choice of PDL estimate, one that will be an acceptable percentage of the mean expenditure say 40 or 30 percent of mean expenditure. Table 3.1 below shows the number of households below the average

expenditure per adequiv.

Table 3.1 Households Below Average Expenditure per Adequiv

Sector	Households Below	Percent
Rural	714,476	69.7
Urban	277,257	68.2

5.3 Head Count of People Below the PDL (P0)

Using the Pdl estimates the HEIS data yields the following proportion of HH below the respective sectors PDL.

Table 4 Proportion of HH below PDL Estimates (P0)

Sector	Total HH	HH below	Percent below
Rural	1,025,049	422,799	41.2
Urban	406,276	216,426	53.3
Zambia	1,431,325	639,328	44.7

The Urban areas seem to have a higher proportion of poor p ople than the rural areas. However caution has to be excercised in that we are merely using the expenditure approach and rural areas are known to have lower food prices. When we use the basic needs approah we may come to a dfferent conclusion altogether.

5.4 Distribution of Poor by HH size

Using the HEIS data, an attempt is made to to obtain the distribution of HH below the PDL by HH size. The results are presented in Table 5. The households are initially divided into 5 quintiles by the number of adult equivalents.

Adamusiu		RURAL			BAN	
Quintiles	Total	Below	Percent	Total	Below	Percent
0 - 2	220,533	78.095	35.4	68.316	25,338	37.1
2.1-4	571,023	249,081	43.6	188,105	97,493	51.8
4.1-6	180,040	79,152	44.0	110,918	62,163	56.0
6.1-8	38,732	13,997	36.1	34,225	27,798	81.2
over 8	14,721	2,510	17.1	4,711	3,637	77.2

Table 5 Distribution of HH below PDL by HH size.

The pattern shows that in the urban areas the proportion of HH below the PDL steadily increases with household size, which for rural areas, it declines after HH size of 6. This pattern seems to indicate that it is increasingly difficult to look after bigger HH in urban areas, while it may be said that is increasingly easier in rural areas to sustain bigger HH which may in part be attributed to the need for labour in agriculture.

5.5 Distribution of Poor HH by sex

It is attempted to show the distribution of households below the PDL by sex of the head of the households. In the rural areas 23 percent of HH are female headed while in the urban areas it is 17 percent, possibly indicating the tendency of males to migrate from rural areas, leaving their female folk. Table 6 Distribution of HH below the PDL by Sex of Head.

	Rural				Urban		
Sex of Head	Total	Below	Percent	Total	Below	Percent	
Male	789,095	20,023	43.6	338,758	182,577	53.9	
Female	235,954	102,776	43 6	67,518	33,852	50.1	

Table 6 shows that a marginally higher proportion of female headed HH in rural areas are below the PDL than male headed HH. In urban areas, we see a rather unusual picture indicating that the proportion of female headed HH below the PDL is less than that of male headed HH. However, we should bear in mind that this may be caused by the tendency of female HH heads to devote more expenditure to food than men, and since our PDL is expenditure calorie derived, it would mean that female headed households would attain their 2,100 calories daily per adequiv at lower levels of expenditure than their male headed counterparts. (This remains to be tested in further analysis).

5.6 Distribution of HH below PDL by Education level.

The distribution of HH below the PDL by the educational level attained by the HH head is shown in table 7

Table 7 Distribution of HH below PDL by Education level of Head

	RURAL			URBAN		
Education	Total	Below	Percent	 Total	Below	Percent
No school Primary Secondary Higher	273,178 597,274 138,505 26,092	137,077 259,282 25,450 990	52.1 43.4 18.4 3.8	31,027 141,007 179.173 55.069	23,840 92,796 86,244 13,549	76.8 65.8 48.1 24.6

At a glance Table 7 shows that in both sectors (Rural and Urban) the educational level attained by the head of the household appears to be important in determining the number of HH below the PDL. The proportion of households below the PDL steadily declines as the level of education attained increases.

5.2 Distribution of HH below PDL by Main Occupation of Head

The HEIS data collected the main and secondary occupations of the households head and other members. Table 8 presents the resulting distribution of household below the PDL by the main occupation of the head. It should be noted that those heads who are salary employees, no attempt has yet been made to break them down into the various sectors. All other sectors other than salary employment represent self employed heads of HH.

	RURAL			URB/	AN	
Main Occupation	Total	Below	Percent	Total	Below	Percent
Agriculture,				 		· · · · · · · · · · · · · · · · · · ·
Forestry and						
fisheries	784,761	350,158	44.6	10,001	7,908	79.1
Trading &						
Catering	11.112	3,241	29.2	37.941	22,028	58.1
Artisan &	1			1		
Mining	24,015	7,626	31.8	24,128	12.982	53.8
Others	17,127	9,331	54.5	18.588	10.406	56.0
Employee	128,991	20,981	16.3	285.039	145,954	51.2
Unemployed	59,043	31,461	53.3	30,578	17,149	56.1

Table 8 Distribution of HH below PDL by main Occupation of Head

In rural areas it is seen that the largest proportion of HH below the PDL are those whose heads are unemployed, while the smallest proportion are those whose heads are salary employees. This category includes teachers agricultural extentsion workers etc. In the urban areas, HH whose head is agriculture, forestry or fishing have the largest proportion of HH below the PDL at 79 percent. While as in the rural areas, the smallest proportion of HH below the PDL are those whose head is a salary employee.

5.8 Food Share and Composition of Food Expenditure

The reported food items consumed by the HH was classifieed into 14 fairly dis-aggregated food groups and their shares of total household food expenditure obtained for HH below and above the PDL by sector. This would enable us identify food items that are important among HH below the PDL. The food groups used are presented below:

Group	Name	Composition
Group	induite.	COMPOSITION

1	Bread	Bread and Wheat flour
••		Broad and model right
2.	Rice	Rice
з.	Cassava	cassava, millet, sorghum
4.	Maize meal	maize grain, and maize from hammer mills
5.	Mealie Meal	Roller and Breakfast meal
6.	Other Cereals	Pasta, biscuits etc
7.	Beef	cattle beef
8.	Chicken	all chickens
9.	Other meat	Ducks, goats, pork, etc
10.	Fish	Kapenta, fresh & dried fish
11.	Milk	Milk and eggs
12.	Oil	Oil and fats (cooking oil,
		margarine etc)
13.	Potatoes	Irish and sweet potatoes
14.	Vegetables	fruits and vegetables
15.	Other foods	Any other foods not covered.

	RURAL		URBAN	
Food group	below 0.1	above റ_5	below 4.9	aboye
2. Rice	Ū.9	1.5	0.6	1.4
3. Cassava	17.9	12.1	0.3	0.1
4. Maize meal	19.9	14.3	0.8	0.5
5. Mealie Meal	3.5	4.0	6.6	5.4
6. Other cereals	1.0	1.2	1.8	2.1
ALL CEREALS	42.3	33.6	15.0	18.3
7. Beef	2.2	4.9	11.3	15.3
8. Chicken	1.6	3.3	5.3	7.6
9. Other meat	0.9	1.2	1.3	1.7
MEATS	4.7	9.4	17.9	24.6
10 Fish	8.2	10.0	16.8	12.3
11 Milk & Eggs	0.6	0.1	2.9	5.2
12 Oil & Fats	0.4	0.2	8.0	6.1
13 Potatoes	5.7	7.5	3.7	2.9
14 Vegetables	32.3	25.9	26.2	19.0
ALL FOODS	86.6	70.7	65.5	47.9

The expenditure shares are reported in table 9

Composition of food Expenditure for HH either side of th PDL

Table 9

Two patterns emerge in the movement of food item shares between households below the PDL and those above it. For some items the shares decline from the HH below the PDL to the HH above the PDL and the converse is true for other food items. Items whose shares decline from HH below the PDL to HH above may be considered as basic essential for HH below the PDL. In rural areas such foods are

Cassava Maize meal Oil and fats and vegetables. While in urban areas, items that may be considered as essentials are cassava maize meal mealie meal fish oil and fats potatoes and vegetables

The data appears to be unreliable in this regard as we would not expect milk and eggs or indeed oil and fats to be essential for poor households. This aspect may need further investigation

Items whose shares increase from HH below the PDL to those above it may be regarded as those which poorer HH can hardly afford and thus tend to devote higher levels of expenditure to such items as their incomes increase.

These items are, as expected, Bread, Rice, Beef, Chicken and other meats in both rural and urban areas. Additional items in rural areas are mealie meal, fish and potatoes. In the urban areas it is only milk and eggs. It is noted that apart from vegetables, the most important food item for HH in the rural areas is maize meal and cassava, jointly accounting for 36.8 percent of total food expenditure for HH below the PDL. Ιt is rather я suspicious result that fish and beef seem to be more important than any of the cereals among the urban HH below the PDL, jointly accounting for 28.1 percent of total food expenditure. The explanation for this could be that urban HH may have under-reported their expenditure on mealie meal due to the use of coupons at that time.

As for the total share of food in total expenditure, at 66 percent this figure indicates that HH below the PDL in the urban areas are rather still well-off. This means that we have to go further and identify the HH that are further below the PDL ie say those whose food shares accout for at least 80 percent of total expenditure.

5.9 Dis-aggregating Food shares by Province and Sector

The HEIS data is nationwide. The 14 food groups were disaggregated by province and sector in an attempt to get an overview of possible variations in the importance of various foods in differenct provinces. The results are reported in table 10a, 10b, 10c. Table 10c: Composition of Food Expenditure for HH Below and Above PDL by Province

Province/PDL Group				MILK EG	GS, OIL	& FATS	, POTATOES, VEGIES & OTHER FOODS				
	MIL	k e egg	OIL	OIL & FATS		POTATOES		ITABLES	OTHE	i	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
CENTRAL											
Below	0.0		0.0		10.6				5.6		
Above	0.7		3.0		11.2				9.8		
C/BELT											
Below		1.6		12.0		5.6				8.7	
Above		3.3		9.7		4.8				13.5	
EASTERN											
Below	0.2	1.6	0.3	7.4	6.6	5.8			5.5	14.0	
Above	0.4	5.0	1.6	8.8	8.7	1.8			10.4	15.5	
LUAPULA											
Below	0.0	1.0	0.8	8.7	6.8	4.8			3.3	9.8	
Above	0.3	2.1	1.7	6.4	8.2	4.3			5.7	12.9	
LUSAKA											
Below		3.7		6.2		2.8				8.8	
Above		6.0		4.9		2.5				9.9	
NORTHERN						,					
Below	0.0	0.0	0.0	6.3	8.7	5.4			1.6	17.2	
Above	0.2	0.6	0.4	8.7	9.0	5.4			5.7	15.1	
N/WESTERN											
Below	0.5		0.0		4.1				5.7		
Above	0.3		0.2		4.2				7.0		
SOUTHERN											
Below	2.6	3.2	0.3	9.3	3.6	3.5			11.6	13.5	
Above	3.0	4.1	2.5	8.3	5.1	1.8			18.6	19.2	
WESTREN											
Below	0.0	1.0	0.3	4.5	1.7				4.5	12.0	
Above	0.7	4.8	1.9	2.3	1.2				8.5	20.1	

Table 10b: Composition of Food Expenditure for HH Below and Above PDL by Province

Province/PDL Group				MEATS							
	BEEF		CHICKEN		OTHER MEATS ALL			MEATS	FISH		
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	
CENTRAL											
Below	0.0		6.8		0.0		6.8		11.8		
Above	5.4		4.7		1.2		11.3		8.1		
C/BELT											
Below		8.2		4.9		1.6		14.7		20.7	
Above		11.9		5.5		3.1		20.5		15.4	
EASTERN											
Below	2.6	15.5	2.2	4.8	2.1	3.5	6.9	23.8	0.7	7.4	
Above	4.5	16.1	3.1	7.2	2.5	0.7	10.1	24.0	1.0	5.8	
LUAPULA											
Below	0.2	1.3	0.8	2.1	0.1	0.1	1.1	3.5	11.0	23.5	
Above	1.5	3.2	1.5	5.5	0.5	0.3	3.5	9.0	17.6	27.3	
LUSAKA											
Below		12.1		6.4	1.3	0.4		18.9		15.0	
Above		16.7		8.7	1.5	0.1		25.5		11.0	
NORTHERN											
Below	1.2	3.7	1.8	0.0	0.4	2.8	3.4	6.5	15.1	25.5	
Above	3.7	7.8	2.6	1.0	0.1	1.5	6.4	10.3	11.7	20.5	
N/WESTERN											
Below	1.0		0.2		0.0		1.2		19.0		
Above	3.2		0.9		1.9		6.0		9.6		
SOUTHERN											
Below	5.6	15.5	2.6	2.5	1.4	0.3	9.6	18.3	4.7	13.4	
Above	8.4	16.8	5.4	5.6	1.8	1.6	15.6	24.0	4.7	8.4	
WESTREN											
Below	2.7	16.9	0.1	1.8	0.3	1.3	3.1	20.0	20.0	31.2	
Above	4,3	17.9	0.5	0.4	0.3	0.0	5.1	18.3	22.9	19.2	

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ENQUETE PERMANENTE SUR LES CONDITIONS DE VIÉ DES MENAGES EN MAURITÀNIE E.P.C.V.

Méthodologie et Analyse critique

Communication au Colloque International sur la Recherche sur la Pauvreté et la Distribution Oslo , 16-17 novembre 1992

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<u>L'ENQUETE PERMANENTE SUR LES CONDITIONS DE VIE DES MENAGES</u> (E.P.C.V.)

1. Contexte général

Jusqu'en 1988, on ne disposait encore d'aucune donnée sur les dépenses et les revenus des ménages en Mauritanie, du moins à un niveau de représentativité nationale. En effet aucune enquête d'envergure nationale visant à disposer d'informations de ce type n'avait été menée jusqu'ici dans ce pays bien qu'une enquête Budget-Consommation ait été programmée depuis 1964.

L'évaluation du niveau de vie était essentiellement fondée sur le PNB par tête.Un tel niveau d'agrégation n'était évidemment pas suffisant pour donner une appréciation qualitative du bienêtre de la population mauritanienne ni pour fonder l'élaboration d'un programme de soulagement de la pauvreté.

L'aide alimentaire gratuite était distribuée par le Gouvernement aux familles necessiteuses sans disposer de base objective pour l'estimation des besoins réels ni de procédure efficace pour le ciblage des groupes éligibles à cette aide.Ce tableau est valable aussi pour d'autres programmes sociaux (santé,etc...) pour lesquels se fait ressentir l'absence de certains indicateurs de base.

Par ailleurs, à partir de 1985, la Mauritanie a adopté et commencé à exécuter un programme d'ajustement structurel dans le but de corriger les déséquilibres financiers et favoriser une reprise de la croissance économique.

Pour pallier en partie à cette cette situation d'absence d'informations pertinentes sur le niveau de vie des ménages et leurs comportements, le Gouvernement a entrepris à partir de 1987 de réaliser un programme d'enquêtes auprès des ménages, en étroite collaboration avec la Banque Mondiale.Il devait en résulter une gamme d'informations pertinentes pour l'analyse de la pauvreté et des dimensions sociales de l'ajustement.

Ce programme d'enquêtes se subdivise en deux phases distinctes:

- La première phase correspond à la réalisation de l'enquête permanente sur les conditions de vie des ménages (EPCV), du type LSMS (Living Standard measurement study).Cette opération a été répétée deux fois,respectivement en 1987-88 et 1989-90.

- La seconde phase (1992-1994) porte sur l'exécution d'enquêtes du type DSA (Dimensions Sociales de l'Ajustement).Déjà,une première opération dite enquête sur les priorités vient d'être réalisée sur le terrain ainsi qu'une enquête sur les déflatés des entreprises parapubliques.Ce programme prévoit encore la réalisation en 1993-94 de plusieurs autres opérations de collecte de données:une enquête communautaire,une autre sur les priorités et une enquête intégrale.Le financement de cette deuxième phase est assurée sur des dons octroyés par la République Fédérale d'Allemagne et la Banque Africaine de Developpement (BAD).

La suite de cette communication sera centrée sur l'EPCV dont les résultats ont servi de base à l'élaboration du profil de pauvreté en Mauritanie.On exposera les choix techniques fondamentaux effectués pour cette enquête ainsi que les remarques critiques qui s'imposent à la suite de l'exécution sur le terrain.

Cette enquête est une adaptation au contexte mauritanien des méthodes de collecte de données relatives au niveau de vie des ménages developpées au début des années 80 par la Banque Mondiale.La Mauritanie est, en effet, l'un des trois premiers pays africains à mener ce type d'opération, outre la Côte d'Ivoire et le Ghana.

Le projet EPCV a bénéficié d'un appui financier de la part de l'USAID ainsi que de la Banque Mondiale.Une importante assistance technique a été fournie par des consultants internationaux pour developper les instruments de l'enquête.

L'enquête a été exécutée à deux reprises par l'Office National de la Statistique: la première opération de collecte a débuté sur le terrain en décembre 1987 pour se terminer en janvier 1989 tandis que la seconde s'est déroulée sur la période octobre 89 - septembre 90.

2. Objectifs et domaines d'étude de l'EPCV

Les principaux objectifs assignés à l'EPCV sont les suivants:

- Fournir assez rapidement des données à jour sur les conditions de vie des ménages et des individus,en tenant compte du caractère multidimentionnel du niveau de vie.

- Etudier les liaisons entre les différentes composantes du niveau de vie ainsi que l'influence sur celles-ci des facteurs liés à l'environnement socio-économique.

- Fournir des éléments objectifs de base pour la politique alimentaire du pays, notamment pour l'estimation des quantités destinées aux trois types d'utilisation de l'aide alimentaire: vente, vivres contre travail et distribution gratuite.

L'enquête a couvert les domaines d'étude suivants:

.démographie:composition du ménage,fécondité et migration

.éducation, habitat, santé et anthropométrie

.activités agricoles et non agricoles, emploi et revenus

.dépenses, consommation, auto-consommation et aide alimentaire

.prix et données communautaires.

Trois types de questionnaires séparés ont constitué le support de collecte de ces informations:

. Un questionnaire administré aux ménages comportant une gamme d'informations variées et détaillées sur les conditions de vie de chaque ménage enquêté.Il se divise en 18 sections détaillées dans le tableau ci-après.L'avantage de saisir un ensemble de données relatives aux différentes composantes du niveau de vie du même ménage et au même moment permet d'analyser les liaisons entre ces différentes composantes par coupe transversale sur l'échantillon.La contrepartie en est que les mesures sont necessairement moins précises que celles effectuées dans des enquêtes spécialisées séparées.

. Un questionnaire destiné à recueillir les informations relatives aux localités rurales dans lesquelles habitent les ménages-échantillons.Ces données communes à tous les ménages de la localité servent à l'analyse de l'influence de l'environnement socio-économique sur le comportement de ces derniers.Il comporte cinq sections décrites dans le tableau ci-dessous correspondant.

.Le questionnaire sur les prix relève des informations sur les prix des denrées alimentaires de base et quelques articles non alimentaires.Ces renseignements permettent d'améliorer l'analyse de la comparaison des niveaux de vie entre milieu urbain et milieu rural.Il permet également d'estimer l'auto-consommation.

Ces trois questionnaires permettent de disposer d'une base de données relativement complète sur les conditions des ménages.La permanence de l'enquête EPCV devrait permettre de mieux suivre l'évolution de ces conditions.

Le ménage est défini comme étant l'ensemble des personnes qui logent habituellement sous le même toit et prennent leurs repas en commun pendant au moins trois des douze derniers mois, à l'exclusion des pensionnaires, des domestiques et de leurs parents ainsi que des personnes décédées au cours de l'année écoulée.Le chef du ménage absent depuis plus de neuf mois est toujours considéré comme membre du ménage ainsi que les nouveauxnés âgés de moins de trois mois.

3. Echantillonnage, méthodes et organisation de l'enquête

L'échantillon de l'EPCV est de 1600 ménages choisis de façon aléatoire selon un sondage à deux degrés.Au premier degré,il est procédé à un tirage systématique à probabilité proportionnelle à la taille des unités aréolaires constituées par les districts de recensement qui ont été auparavant répartis en quatre strates: Nouakchott (21%), autres villes de plus de 5000 habitants (23%), rural fleuve (17%) et autre rural (39%).

Toutefois, pour faire face à l'hétérogenéité de la population de Nouakchott, un quota-double d'unités primaires (UP), contenant chacun 8 ménages-échantillons au lieu de 16 comme dans les autres UP, a été tiré dans la capitale.

Au second degré,les ménages font l'objet d'un tirage aléatoire simple à l'intérieur de chaque grappe à partir de leur liste établie à la suite d'un dénombrement effecttué à cet effet.

L'échantillon est représentatif de la population sédentaire, à l'exclusion des nomades dont le poids est environ de 12% en 1988.

Le respect des contraintes imposées à priori au plan de sondage, auto-pondération et quotas de 16 ménages par grappe, alliées au fait que le nombre de ménages dans l'UP pouvait différer entre la base de sondage et le résultat du dénombrement, a necessité l'introduction d'un coefficient aléatoire portant sur le nombre de "quotas" à enquêter dans chaque grappe.Cette procédure a engendré d'importantes difficultés dans la gestion des équipes de terrain.Il aurait mieux valu abandonner la contrainte d'auto-pondération, quitte à calculer des coefficients d'extrapolation différents selon les grappes, et garder une simplicité de la planification des travaux de terrain.

Une difficulté importante à signaler à ce niveau est la forte mobilité des ménages selectionnés pour faire partie de l'échantillon.Le remède utilisé pour contourner cet handicap a été de rapprocher au maximum possible le moment du dénombrement de celui de l'interview.

Par ailleurs la faiblesse de la taille de l'échantillon empêche de mener des analyses au niveau des groupes de population et des zones géographiques, hors strates, pour lesquels le nombre d'observations n'est pas significatif.

Afin de s'assurer que les données recueillies sont de bonne qualité et rapidement disponibles, un certain nombre de modalités techniques ont été arrêtées.

Les ménages sont interrogés en deux passages espacés de deux semaines environ.Lors du premier passage,l'enquêteur relève les renseignements individuels (éducation,santé,activités économiques et migration) ainsi que la situation du logement.Au cours du second passage,les dix sections restantes du questionnaire sont complétées.Cette stratégie à deux passages a été adoptée pour les deux raisons suivantes.

D'une part, cela permet de fixer une date de reférence correspondant à celle du premier passage, date assez proche pour
permettre aux enquêtés de se rappeler des informations relatives aux dépenses et à certaines recettes assez fréquentes.Cette méthode a été choisie à celle des carnets de relevé des dépenses et recettes pour son moindre coût et le fait qu'elle n'exige pas de l'enquêté de savoir écrire et compter bien qu'il en résulte des données moins précises.

D'autrepart, le deuxième passage constitue l'occasion de vérifier et corriger auprès des enquêtés certaines erreurs commises lors de la première interview et detectées grâce aux contrôles automatiques effectués par le programme de saisie.Cette procédure a sans doute largement contribué à renforcer l'exactitude et la bonne qualité des données.

Le questionnaire sur les ménages est presqu'entièrement précodé de sorte que les données peuvent être directement introduites sur micro-ordinateur dès leur retour du terrain sans qu'il y ait besoin d'entamer une opération de codification. Cette disposition a largement permis d'écourter le temps necessaire pour obtenir une base de données sur ordinateur.

D'autres modalités de technique de collecte introduites au niveau du questionnaire visent à améliorer la qualité des données recueillies.Il s'agit notamment de l'explicitation des questions, de l'utilisation de réponses fermées, du choix des unités de temps par l'enquêté lui-même et du choix du répondant comme étant le membre du ménage qui connait le mieux le sujet.De plus le questionnaire a été imprimé en Arabe et en français.

L'exécution de l'enquête sur le terrain a été confiée à cinq équipes composées d'un superviseur, de deux enquêteurs, d'un agent anthropomètre, d'un(e) opérateur(trice) de saisie et d'un chauffeur.La supervision est considérée comme relativement forte étant donné le nombre d'agents par superviseur.Ces derniers procèdent à un grand nombre de contrôles de qualité telles que le suivi des enquêteurs, la reprise d'interviews partielles et la vérification de la complétude.La saisie des données est effectuée dans quatre sites décentralisés et proches de la zone de collecte.

Les travaux de recueil de l'information durent environ une année de manière à prendre en compte la saisonnalité qui affecte certaines variables de dépenses, de revenus et de production.

Dans le contexte mauritanien caractérisé par de longues distances à parcourir et des difficultés de communication, l'organisation en équipes mobiles autonomes chargées de la collecte et de la saisie permet une plus grande efficacité dans la réalisation de ces travaux.

Malgré toutes ces dispositions tendant à assurer une rapidité de sortie des résultats de l'enquête, cet objectif n'a pas pu être pleinement atteint à cause de l'absence de conception préalable d'un plan de traitement et d'analyse et de la faiblesse des capacités de l'ONS en cette matière.L'exploitation des données de la première année d'enquête a dû être effectuée essentiellement par la Banque Mondiale (Washington) et l'Universiité de Warwick (Royaume Uni).Les données issues de la seconde année d'enquête ont pu être traitées à Nouakchott en collaboration avec le consultant chargé de l'étude sur le profil de pauvreté,mais non suffisamment analysées.

QUESTIONNAIRE AUPRES DES MENAGES (PREMIER PASSAGE)

	SECTION	INFORMATION RELEVEE
1.	Composition du ménage	Identification des membres.Relevé des données démographiques.Information sur la parenté des membres du ménage.
2.	Logement	Type d'habitat occupé par le ménage. Dépense et mode d'occupation du logement. Mode d'approvissionnement en eau, source d'éclairage et combustibles utilisés. Confort de logement.
3.E	ducation	Alphabétisation, niveau scolaire et coranique des membres du ménage de 5 ans ou plus. Dépenses scolaires au cours des 12 derniers mois. Education des enfants n'habitant pas dans le ménage.
4.	Santé	Nombres de jours de maladie ou blessure. Temps perdu du à l'état de santé. Dépenses de santé et utilisation des services de santé au cours des 12 derniers mois. Médecine préventive et dépenses de santé au cours des 12 derniers mois.
5.	Emploi	Activités principales et secondaires des membres du ménage âgés de 7 ans ou plus, pendant les 7 derniers jours et les 12 derniers mois. Type et secteur d'activité. Temps consacré aux activités. Revenus et prestations sociales. Recherche de travail des sans-emplois. Recherche de travail supplémentaire. Période de chômage. Historique de l'emploi. Activtés domestiques.
6.	Migration	Changement de résidence des membres du ménage âgés de 7 ans ou plus. Mobiles de la migration.
7.	Enquêtes pours le deuxième passage	Identification des membres du ménage à interviewer au deuxiéme passage.
8.	Caractéristiques du logement	Matériaux de construction et dimensions du logement.

8A. Anthropométrie Poids et taille de tous les membres (ler passage) du ménage.

QUESTIONNAIRE AUPRES DES MENAGES (2eme passage)

SECTION INFORMATION RELEVEE

- 10. Agriculture Superficie et type des terroirs utilisés. Achats, ventes, cessions de terrains dans les 12 derniers mois. Production. Intrants agricoles.Revenus et dépenses des exploitations agricoles et des activités de transformation des produits agricoles. Equipements et outils agricoles.
- 11. Elevage Iventaire du bétail. Achats et vente de bétail dans les 12 derniers mois. Autoconsommation. Revenus de la vente des produits d'origine animale. Entraide pastorale. Dépenses pastorales.
- 12. Emploi Indépendent Revenus, dépenses, capital et biens possèdés par les trois plus importantes entreprises non-agricoles gérées par le ménage.
- 13. Dépenses et inventaire des biens durables
 Dépenses journalières dans les deux dernières semaines. Dépenses nonalimentaire au cours des deux dernières semaines et des 12 derniers mois. Inventaire des biens durables. Dépenses de soutien familial.
- 14. Dépenses et consommations alimentaires
 Dépenses alimùentaire au cours des deux dernières semaines et les 12 derniers mois . Auto-consommation alimentaire des 12 derniers mois. Aide alimentaire.
- 15. Fécondité Concerne une femme âgée de 15 ans ou plus, choisie au hasard lors du premier passage. Nombre d'enfants, nombre de grossesses et utilisation des services publics de maternité lors du dernier accouchement.
- 16. Autres revenus Transfert de revenu familial et autres revenus du ménage non pris en compte dans les sections précédentes.
- 17. Credits et Epargne Prêts, emprunts et épargne du ménage.
- 18B. AnthropométriePoids et taille de tous les
membres du ménage.

QUESTIONNAIRE VILLAGE

SECTION	,	INFORMATION RELEVEE
1. Démo	graphie	Population. religion. Groupe Ethniques. Migration.
2. Econ Infr	omie et astructure	Activités économiques principales. Tendances économiques. Transports et communications. Marchés. Autres infrastructures socio-économiques. Marché du travail saisonnier.
3. Educ	ation	Caractéristiques et localisation des écoles primaires et secondaires les plus proches. Programmes d'Alphabétisation.
4. Sant	é	Services et personnel de santé. Problèmes sanitaires.
5. Agri	culture	Commercialisation et distribution. Encadrement agricole. Coopératives. Equipements collectifs. Irrigation, Salaire agricole. Métayage.

QUESTIONNAIRE SUR LES PRIX

SECTION		INFORMATION RELEVEE			
1.	Produits	Les prix des produits d'usage courant: mil, riz; maïs, sucre, huile, pain, sel, lait, fruits, etc.			
2.	Soins Personnel	Les prix des articles de toillette (savon, dentifrice, aspirine, nivaquine, coiffeur etc.)			
3.	Produits non-alimentaires	Prix des articles ménagers (casseroles, seaux assiettes, couverts, couvertures, draps, savon, pétrole, bois, charbon de bois etc.). Prix des articles d'habillement (chemises, robes, chaussures, etc.). Prix d'équipement (tables, chaises, fauteuils, lits, matelas, radios,			

etc.).

MESURE DE LA PAUVRETE : LES TRAVAUX EN COURS En republique centrafricaine

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Assez longtemps, les études sur la pauvrété se sont intéressées à présenter des indicateurs de type Indice de GINI et courbe de LORENZ sur l'inégalité des revenus. Dans les pays africains, la collecte des données sur les revenus et dépenses ne se fait pas encore de manière fiable ; ainsi l'application de ces indicateurs s'en trouve limitée.

Depuis l'adoption des programmes de redressement économique à partir des PAS, les études sur la pauvrété ne doivent plus se borner seulement à l'analyse du revenu, mais plutôt à la manière dont les ménages réagissent au processus d'ajustement.

Nous présenterons ici succintement les travaux qui sont en cours de réalisation en République Centrafricaine, dans le programme des Dimensions Sociales de l'Ajustement (Projet D.S.A.D, Banque Mondiale).

Nous attendons donc de ces conférences et séminaires des enseignements pour améliorer notre méthodologie de travail afin de faire connaître la situation de la pauvrété dans notre pays.

1. APPROCHE METHODOLOGIOUE

Une série d'enquêtes sont programmées sur une période de quatre années (Enquête Prioritaire, Enquête Intégrée incluant une Enquête Budget et Consommation des Ménages, et une Enquête sur les infrastructures économiques des villages).

La base de sondage que nous avons établie tient compte des spécificités agro-climatiques du pays. Le pays est subdivisé en zones :

- Savane (culture de coton)
- Forêt (culture de café, tabac)
- Minière
- Zone extrême (activité non spécifique).

On a ensuite stratifié en milieu urbain et rural. Ces découpages en zones agro-climatiques permettent de cerner les activités principales de la population dans chaque zone afin d'en faire le suivi au cours du processus d'ajustement.

La première Enquête Prioritaire en cours a pour objectif de cibler des groupes socio-écomiques (G.S.E) afin d'analyser leur réaction au processus d'ajustement. Les G.S.E sont déterminés à partir de l'occupation principale du Chef du ménage et son milieu de résidence (Urbain ou Rural). Les G.S.E sont définis à priori. Notre plan de sondage retiendra les G S E suivants : En milieu Urbain :

- Salariés du secteur Public/Para-Public;
- Salariés du secteur Privé;
- Secteur informel moderne;
- Autres (agriculteurs vivant en milieu urbain etc...).

En milieu Rural :

- Cultivateurs de culture d'exportation;
- Cultivateurs de cultures vivrières;
- Non cultivateurs (salarié, petit commerçant et indépendant informel).

2. LES SUJETS ABORDES

Comme nous le disions ci-dessus, l'étude de la pauvrété ne doit plus s'arrêter qu'à l'analyse des revenus des ménages. Tous les facteurs qui sont susceptibles de contribuer à la formation du revenu doivent être analysés afin d'expliquer le niveau de vie des ménages.

Les sujets abordés dans l'enquête en cours sont les suivants :

2.1 Education

L'éducation des enfants et de manière générale, le niveau d'éducation de la population, est un facteur explicatif important du niveau de vie.

Au cours du processus d'ajustement, les dépenses du Gouvernement baissent. Le financement de l'éducation subit le contre coup de cette baisse. Le nombre de salles de classes restent le même alors que l'effectif des enfants scolarisables augmente. Il y a une dégradation de la qualité des services scolaires, voire la fermeture ou l'inexistence de ces services dans certaines zones. Les ménages doivent prendre la relève pour financer l'éducation des enfants. Or, les ménages pauvres n'ont pas cette capacité.

C'est ainsi que l'analyse de l'éducation permet de mesurer les déperditions scolaires (abandon du système éducatif), les taux d'echec et de scolarisation.

2.2 <u>Santé</u>

Pour les mêmes raisons, les services publics de santé deviennent moins accessibles aux ménages pauvres. L'analyse de la santé permet de mesurer la capacité des ménages à recourir aux services de santé. Si le recours est faible, les gens se soignent plutôt à la médecine traditionnelle. On pourait alors s'attendre à un taux de mortalité élevé, ce qui est un indicateur de pauvreté et de sous développement.

2.3 La Nutrition

Nous recherchons d'abord les dépenses consacrées à l'alimentation de base de la population, puis les indicateurs anthropométriques.

2.4 Logement

Les conditions du logement sont indubitablement un facteur conséquent du niveau de vie des ménages. L'accès à l'eau potable, le mode d'éclairage sont les indicateurs qui sont recherchés.

2.5 Accès aux services

Nous cherchons à mesurer l'accès des ménages aux services publics de santé, d'éducation et autres services collectifs.

2.6 <u>Emploi</u>

L'emploi est en général la principale source de revenu du ménage. L'analyse de l'emploi au cours du processus d'ajustement est importante. Elle permet de voir les changements qui se sont opérés, le taux d'activité de la population, les pertes d'emploi pour cause de restructuration économique et le taux d'inactivité. On mesure également les nouveaux emplois qui sont porteurs de manière à les favoriser par un programme d'investissement. Les régions dans lesquelles l'emploi principal n'est plus porteur et où il y a perte du niveau de revenu, il faut penser à une réallocation des ressources afin de faire participer les populations au développement.

L'emploi des femmes est également analysé.

2.7 <u>Revenu et Dépenses</u>

Naturellement, l'analyse du niveau des revenus et dépenses vient compléter et expliquer le niveau des indicateurs susmentionnés. Une classification ou typologie des ménages se fera à partir des différentes classes de niveau de revenu qui seront déterminées.

2.8 Activités ou Entreprises Non Agricoles

Le secteur informel comme pourvoyeur d'emploi et source importante de revenu est pris en compte dans nos enquêtes.

Au cours du processus d'ajustement, les ménages ne peuvent plus se contenter uniquement du revenu du salaire ou de l'emploi principal. Ils sont obligés de chercher des compléments de revenu dans les activités non agricoles, essentiellement informelles. Les activités ou entreprises non agricoles sont également un moyen important de réinsertion professionnelle des personnes victimes des programmes de réforme économique.

3. LA PERIODICITE

Les informations collectées doivent avoir une périodicité annuelle ou biannuelle. Nous cherchons à disposer de séries complètes et longues de données sur les conditions de vie des ménages afin de mesurer les changements au cours du temps.

Ces données ne doivent pas servir uniquement pour les instituts d'études ou organisation internationale. Elles doivent servir à l'établissement de programmes de développement socioéconomique. C'est pour cette raison que l'enquête prioritaire doit fournir des informations rapides à mettre à la disposition du Gouvernement et des autres utilisateurs. QUELQUES RESULTATS DE L'ENQUETE PILOTE REALISEE EN JUILLET-AOUT 1992

L'Enquête pilote qui a permis de tester le questionnaire de l'Enquête Prioritaire et préparer tous le processus de l'enquête a fourni les résultats que nous publions ci-après.

Ces résultats n'ont aucun caractère définitif car ils sont tirés d'un échantillon non représentatif de 200 ménages de la capitale et de trois autres villes. Ils donnent malgré tout un premier aperçu de la situation.

1. Structure de la population par âge et sexe (%).

	Hommes	Femmes	Total
-5 ans	14.1	15.1	14.8
5 à 14 ans	29.2	31.1	30.1
15 à 24 ans	23.6	21.4	22.6
25 à 59 ans	29.3	28.2	29.0
60 ans et +	3.8	3.1	3.5

Comme la plupart des populations africaines, la population centrafricaine est jeune.

2.	Education	Hommes	Femmes
a/	Taux de scolarisation au primaire(5 à 15 ans)	70.1	63.0
	Taux de scolarisation au secondaire(16 à 24 ans)	28.9	13.6
	Taux d'alphbétisation	66.1	49.1
b/	Niveau d'éducation (5 ans et +) sans niveau Primaire Secondaire1 Secondaire2 Supérieur	22.9 47.5 18.7 8.5 2.4	37.4 48.6 10.7 3.1 0.2
c/	Les principales raisons de non fréquentation scolaire(% Manque de moyen Echec scolaire Mariage(grossesse) Activité professionnelle Autres raisons(maladie etc)) 29.6 30.9 0.7 9.2 29.6	25.6 27.0 10.4 0.7 36.3

Ces tableaux montrent qu'il ya un problème sérieux d'éducation en Centrafrique. L'éducation des filles reste encore très faible.

EMPLOI ET CHOMAGE (population âgée de 6 ans et plus)

	hommes	femmes
Population active	285	151
-	65.4%	34.6%
dont chômeurs	65	16
	22.88	10.6%
Inactifs	345	465
··· #· ·	46.48	71.0%

La population active représente en gros 41% de la population enquêtée(1246 personnes). Sur ces 436 personnes, 355 sont occupées et 81 sont au chômage. Les inactifs (enfants, femmes, au foyer, vieillards, retraités)sont en nombre important.

Les groupes Socio-economiques (GSE).

La distribution des chefs du ménages par GSE a donné le tableau suivant:

Strate GSE	Bangui	Autres Villes	Savane Centrale	Zone Forestière	Total
Salariés du Secteur Public et Para-Public	16	13			29
Salariés du Privé formel	8	4			12
Privé informel	56	26			82
Autres	20	17			37
Cultivateurs autres cultures	, e		14	5	19
Non cultiva- teurs			6	14	20
Ensemble	100	60	20	19	199

6 Revenus et dépenses.

a) Dépenses

Les données relatives aux dépenses de consommation ne concernent que les dépenses prioritaires effectuées par les ménages.

Part de dépenses par GSE

Dépenses/GSE	Educa tion	Santé	Logem ent	Alimen tation	Autres
Salariés Secteur Public/Para-Public	3,8	5	18,5	48,8	6,6
Salariés Secteur Privé Formel	1,7	4,7	19,7	49,9	11,5
Privé Informel Bangui	0,7	4,4	16,1	53,7	8,1
Privé Informel Autres Villes	1	5,3	12,8	59,4	6,3
Autres	1,4	4,4	16,6	65,3	2,0
Cultivateurs Autres Cultures (savane)	0,4	10,1	8,2	67,5	1,0
Cultivateurs Autres Cultures (Forêt)	0,7	1,6	20,2	67,2	0,9
Non-Cultivateurs (Savane)	1,06	4,5	13,8	39,4	27,4
Non-Cultivateurs (Forêt)	0,7	4,5	18,0	60,9	7,9

Les dépenses d'éducation sont le poste de dépenses le plus faible (1,27%) des dépenses totales) surtout dans les ménages où le chef est un cultivateur de culture vivrières (0,51%).

b) Revenus du Ménages

Les revenus saisis par l'EP comprennent les revenus des activités agricoles, de la pêche, des entreprises non agricoles, des salaires de secteur public ou privé, des loyers perçus, des transferts et des autres sources de revenus. La structure des revenus (voir Tableau ci-dessus) fait apparaître la prédominance des revenus en provenance des entreprises non agricoles (35,9%) étant donnée l'importance du secteur informel comme source de revenus. La seconde source par importance est le revenu salarial du chef du ménage et du conjoint qui constitue pour 26,% au revenus total. Les "autres sources de revenus" représente 13,7% du revenu global. Le secteur primaire (cultures d'exportation, culture vivrières, élevage, pêche...) constitue pour 14,07%.

Structure des revenus dans l'ensemble de la population en %

Revenus	Part dans le revenu global
Salaires du chef de ménage et du conjoint	26,14
Cultures d'exportation	0,46
Cultures vivrières	4,56
Elevage/pêche/Chasse/forêt	9,05
Entreprises non-agricoles	35,95
Salaires des autres membres du ménage	10,15
Autres sources de revenus	13,69
Ensemble	100

EP Pilote RCA 1992

La structure de revenus selon les GSE (tableau ci-après) donne les résultats suivants: Les ménages dont le chef est un indépendant du secteur informel tirent l'essentiel de leur revenu des entreprise non agricole: 66,18%

Les revenus des ménages dont le chef est salarié du secteur public ou privé sont issus du salaire (79,18% et 38,20%) et des entreprises non-agricoles (11,73% et 52,92%). Les non-agriculteurs (en milieu forestier) se procurent l'essentiel de leurs revenus des salaires 51,62% et des entreprises non agricoles (28,07%) Il en est de même en zone de savane(28,02% et 32,58%).

En milieu rural le secteur primaire et notamment l'élevage/ pêche/chasse/forêt/ constitue 30,13% du revenus global. Les revenus issues des salaires des conjoints et chef de ménages constituent une part plus importante encore (35,15%) PART DES REVENUS PAR GSE.

Revenus GSE	Salai res CM et con- joint	Cult. Expor tation	Cult. Vivri ères	Elev age/ pêch e	Ent. Non- Agri.	Salai- res Autres mem- bres
Salariés Secteur Public/Para -Public	69,5		1,5	0,1	11,7	3,7
Salariés Secteur Privé Formel	38,2		2,3	2,2	52,7	
Privé Informel Bangui	6,0		3,2	3,6	72,9	1,4
Privé Informel Autres Villes	5,3	3,8	1,8	14,4	59,4	2,3
Autres		0,3	0,7	0,6	40,4	12,6
Cultivateur s Autres Cultures (savane)			15,7	60,3	23,1	
Cultivateur s Autres Cultures (Forêt)	70,29		13,3		7,1	9,3
Non- Cultivateur s (Savane)	17,9		2,6		32,6	36,8
Non- Cultivateur s (Forêt)	20,1			0,2	23,7	25,1

EP Pilote RCA 1992

