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Resources, Poverty and Human Development in Rural Uganda*

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Résumé: Dans les limites des facteurs et méthodes actuels de production, les ménages ruraux ougandais maintiennent l'équilibre entre le nombre des consommateurs, celui des fermiers et la taille des fermes cultivées. Les bourgeois, avec plus de terre, plus de têtes de bétail et de main-d'œuvre familiale bénéficient d'une meilleure productivité et d'une modeste amélioration de leurs revenus par tête d'habitant. Un quart de tous les revenus proviennent des secteurs non agricoles, ce qui en fait un important instrument en vue de la réduction de la pauvreté, même dans les ménages ruraux.
Cependant, les dépenses faites par ceux qui sont au-dessus du seuil de pauvreté sont égales à celles des populations qui sont en dessous. Il existe une grande différence entre le revenu par tête des ménages bourgeois et celui des pauvres. Quand un indice de développement humain incluant le patrimoine, les revenus, les dotations sociales et autres résultats positifs du processus de développement est calculé, les écarts diminuent considérablement, mettant en évidence la proximité économique et sociale des ménages ruraux.

> Much about poverty is obvious enough. One does not need to elaborate criteria, cunning measurements, or probing analysis, to recognise abject poverty and to understand its antecedents. It would be natural to be impatient with long-winded academic studies on 'poor, naked wretches' with 'houseless heads and unfed sides' and 'loop'd and windowed raggedness' (Sen 1984:vii). The latter in quotation are from King Lear's graphic description...

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Introduction

Poverty stubbornly persists as a major blemish on the face of the developing world. Despite raising development to the level of ideology and policy, in the mid-eighties, 610 million people in the developing world had a real consumption worth less than India's[1] Poverty Line[2] (PL) per capita income of US$23/month[3]. (World Bank 1991, 1992). If $1/day/person is taken as the Poverty Line datum, the number of people struggling to subsist below this increases to 1 billion or is as high as one-third of the total population. While the *proportion* of the poor has fallen since the 1970s, the *absolute number* has increased. In Sub-Saharan Africa [SSA] as a whole, not only absolute numbers but even the proportion of the poor may have increased. What is more alarming for SSA is that now it is at par with South Asia in the percentage of people living on less than US$1/day. It has even overtaken South Asia as the region with the greatest depth and severity of poverty measured by the Poverty Gap.

Apart from the physiological limits it imposes, poverty still stunts the wishes and aspirations of millions who are proportionately more of children, rural dwellers, the elderly and women, especially those who are old and/or single among the latter. Yet, given sustainable human development as in East Asia in the last 30 years, its reduction or even eradication is by no means an impossible task. In fact, according to the sources above, bringing the poorest fifth of people in the developing world above the poverty line was worth only about 1 percent of the total consumption by the developed countries in 1985; for the poorest third, it was 3 percent[4]. This suggests that a modest transfer from the developed

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[1] In the light of the enormous number of the poor and the severity of poverty, India is often taken as an extreme yardstick for comparison.

[2] For more on the concept, measurement tools and its construction, see Sen: 1984, Lipton: 1987 and Townsend: 1974.

[3] In 1985, US dollars adjusted for differences between countries.

[4] This brings to the fore the wide income gap between the developed and the developing world on the one hand and the marginal effect of the transfer on the rich countries if a genuine international solidarity exists, as shown by some countries such as those in Scandinavia. By contrast, within rural Uganda, redistribution of expenditure to bring

world can eradicate poverty as defined above. To banish poverty in the long term, however, sustained good macro-economic performance[5] and proper targeting to meet the needs of the poor and more importantly empowering them with assets, skills and incentives for production will be critical. This has become even more essential in the context of Structural Adjustment Programmes (SAPs) the world over[6]. However, *it is also important that the pattern, causes and the implied policies of poverty reduction be contextualised within national and local specificities.* Based on quantitative and qualitative data from 14 villages in 7 districts among 356 rural households in Uganda, this study aims to contribute in that direction.

Before setting out the empirical data for analysis and inference, in the light of the dominance of agriculture [employing 90 percent of the population and generating about 50 percent of GNP] and the more pronounced impact of adjustment on trade-ables, it might be useful to bear in mind the following salient features of the rural economy of Uganda [World Bank: 1996].

i. In Uganda, it is found that the poor and the non-poor grow cash crops in equal proportions. In fact, in the Central Region, many of the poor grow coffee, which has benefited the most from structural adjustment measures, as evidenced in the significant increase in its output, value and in the share of producer prices.

ii. The poor and the non-poor have participated in the cultivation of the emerging non-traditional crops such as maize, fruits, etc., which now have high export demand.

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the poor up to the poverty line will exhaust all the surplus income of those above this line, thus putting everyone on the poverty line! This is because many people above this line are only slightly better off than those below it.

[5] The macro-economic framework sets out the totality of the enabling or otherwise of the economic environment faced by the surveyed households in their efforts to produce and consume goods and services, save and enjoy leisure. It is more or less an independent variable set outside the realms of their direct individual control.

[6] In the context of Uganda and this article, see Tenkir Bonger. 1999. 'Structural Adjustment in Uganda and Implications for Rural Poverty'. *Journal of Development Economics for Southern Africa*, vol. 1, nos. 6 and 7, p. 39-83.

iii. Women-headed households have been found to be no poorer than others at least in terms of expenditures.

iv. As in many African societies, the continuous rural-urban interaction has poverty reduction and re-distribution implications.

v. A proportionately higher frequency of non-farm income such as remittances are earned by the poor[7].

vi. These are juxtaposed at a macro-level access to *land, its equitable distribution* and two seasons cropping in most parts of the country[8].

Given a steady level of increase in national output averaging 6.5 percent per annum for the last 12 years and a commensurate share for agriculture, the above structural foundations of the Ugandan rural economy imply a likely positive contribution of SAP and the reduction of poverty in particular.

On the other hand, the decline of public expenditure on education, health and agriculture in absolute terms, heavy dependence on external resources and, to some extent, the governance system at the district level in which most of the resources targeted towards primary health and education did not reach their targets[9] may have contributed negatively in the pace towards the alleviation of poverty. Reflecting this macro-trend, notwithstanding the positive macro-economic achievements, at the community level, poor parents, especially in the rural areas, are not able to pay for education and health services. Drop-out rates in primary schools, particularly among the children of the poor in rural areas, are very high—a drain on their already constrained resources[10]. At the national level, the economy is plagued by unemployment, a situation

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[7] See section 2.

[8] Cf the possible outcomes of these variables impacting on the distribution of income and expenditure presented in Section 3.

[9] In a study by the Economic Policy Research Centre [EPRC] and the World Bank, only 36 percent of the funds allotted to primary education and health care actually reached their grass-roots targets. EPRC/World Bank. *Tracking Public Expenditure on Primary Education and Health Care in Uganda.* n.d., 7.

[10] See the EPRC/AAU study.

worsened by retrenchments. While food prices are high and rising, they are not reflected by increases in producer prices at the farm gate.

Despite the multi-faceted dimensions of poverty cited above, the central parameter in the measurement of a formal poverty boundary consists in determining the Poverty Line and estimating the Poverty Gap. By capturing the above measures but also overcoming their shortcomings, [Sen: 1984:37] proposes the *Poverty Measure,* P, which is a weighted sum of shortfalls of all people who are considered to be poor. In both cases, *the central objective is to arrive at the monetary equivalents or the actual needs for basic biological survival*[11].

In a rural economy like Uganda's, where there is an almost universal access to land and two-season rain offering a substantial potential to grow essential food crops, the constituents which go into being perceived as poor and the 'feeling of being poor' are bound to vary. If such felt needs are more accurately identified, the response to poverty reduction programmes are likely to be more successful and cost-effective.

Following this Introduction, the next Section provides an exposition of the approaches, methods and models used in the study. The Section goes into detail on how the poor themselves and the community at large identify them and perceive poverty. As a background to the main empirical model section to follow it, Section 3 surveys the bases of the rural economy in the studied villages and the differential resources, other endowments, productivity, income and expenditures. Section 4 begins with the assessment of some of the major 'outcomes' of the development process expressed in the consumption of nutritious food, modern durables and exposure to extension, family planning and literacy. Together with resource endowments, these are then used to develop a human development index for each of the analytical categories. Taking the better-off households as the reference group, a discussion of the gap between them and the others follows. The last section summarises the findings and sets out their policy implications.

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[11]A common feature of the rural economy, reciprocity further limits the accuracy of the income and expenditure data such that those below the Poverty Line are not demarcated with a degree of precision.

Approaches, Methods and Models Used in the Study

Approaches

In this study, instead of measuring the social status of the poor with a pre-determined expenditure and Poverty Line datum, the households themselves and the community at large[12] were made to *identify and establish the criteria for being poor or non-poor.* Such aggregative household and community classification scheme captures not only the economic, but also the social and cultural dimensions of poverty. The derived economic and social gap measures are used to construct a human development index for each of the socio-economic and other analytical groups with better-off households as reference point [See below for details]. The aim is to assess the absolute level of living, the commensurate monetary value and the socio-economic gap between the social groups in the context of post-SAP. These are then employed to appraise the requisite value of gaps between minimum requirements and the current status of others[13].

Three comparisons of the social status of households were made. Under the Participatory Rapid Appraisal (PRA) component of the study, community groups were asked to classify all households in the village as poor/destitute, average, rich or very rich. With regard to those interviewed at the household level, the community's social classification of the household was verified against the households' categorisation of their respective social status. To cross-check for consistency, the household questionnaire contained questions on the socio-economic position of the

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12 This approach of drawing social boundaries between households has of course the well-known subjective biases compared with a numerical divide such as the Poverty Line. Moreover, it entails the compilation of many open-ended questions. This in turn increases the possibility of errors arising from the setting of the question, the respondents, enumerator understanding and performance level, data coding and entry etc. Since this is a comparative study of different groups, if the errors are random and equally distributed among the studied groups, the conclusions may, to a large extent, be still tenable.

13 Ideally, if baseline data in the areas of study were available, a 'before/without' and 'after/with' analytical scheme could have assessed directly the impact of SAP.

respondent in two places. First, households were asked to categorise themselves as very poor, poorer, average, rich or very rich in comparison with others in the sub-county (Q7.4.1). Secondly, having been interviewed for a while about the bases of classification for the different groups, they were asked to classify their household without being given choices as in the first case (Q7.4.5). There was a very high correlation of classification by households themselves in different parts of the questionnaire in some varying degree between the different social categories[14]. Compared to the community's assessment of their social status, richer households underrated their position. At the lower end of the social scale, while the community ranked households as poor and very poor, some classified themselves as average. In the analysis of data on the characteristics of the poor (endowments, needs identification etc.) and the possible factors of poverty, the adapted community classification of socio-economic status was used. However, since it had four classifications, this was reduced to three (Better-off, Average and Poor). Depending on the age and to some extent the sex composition, households of the same size could vary in their consumer demand and supply of labour. One way to standardise these differences is via conversion to consumer and labour units (CU and LU) and their ratio (CULU) where individual members are weighted by age on the basis of their potential demand for consumption and supply of labour[15]. The standardised values rather than head counts are used in the analysis of labour supply, consumer demand, per capita income, productivity, etc.

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[14]The variation in the scale of classification between Q7.4.1 and Q7.4.5 from the household interviews was only 8 percent. In most of the cases, the ranking difference was 1.

[15] For consumer units, taking 0-1 yr = 0.3 units, 2-3 = 0.4, 4-6 = 0.5, 7-8 = 0.7, 9 -10 = 0.8, 11-12 = 0.8, 13-15 = 1, 16-19 = 1.2 and >20 =1 and for labour units: 0-4 yrs = 0, 5-9 = 0.25, 10-14 = 0.5, 15-19 =0.75, 20-50 = 1 50-60 = 0.75 and >60 = 0.5. Guveya, E. 'A Comparative Socio-economic Analysis of the Production of Leucaena and Cassava Feeds for Livestock Enterprises in the Communal Areas of Zimbabwe', MSc. Thesis, University of Zimbabwe, 1995.

Study Methods

Fieldwork was preceded by literature-based survey on poverty in general and on Uganda in particular. This was followed by a reconnaissance visit to the identified districts. Initially, two districts from each of the four regions and a poor urban location in Kampala were to be selected[16]. The then prevailing security situation in Arua did not allow for its inclusion to represent North-west Uganda. Hence, in addition to Lira, Apach was included in the study to represent the North. Soroti and Iganga, Bushenyi and Ntungamo were purposefully selected to represent the Eastern and Western Regions respectively.

The study was confined to only rural Uganda and Mpigi District in the Central Region in the final stages as a result of limited resources, thereby bringing the total number of districts to seven. The rich[17] and poorest counties and sub-counties were identified in collaboration with administrative authorities for each district. Within them, Local Council [LC] officials[18] successively identified the poorest and better-off parishes and villages within. At the study site, the first step in fieldwork began with discussions with district and county personnel about the level of poverty and the specific problems of development in their respective areas. This was followed up at lower levels with sub-county, parish and village functionaries. After the identification and preliminary discussions held with the LC officials and other members of the village community, a sketch map of the villages to be studied was drawn with their assistance. Every household and prominent landmarks such as wells, forests, paths, etc., were located on the map. This was followed by Participatory Rapid

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16 See Appendix Table 1 for the names of the districts, counties, sub-counties and parishes where the surveyed villages were located.

17 Both socio-economic groupings and villages were first categorised as 'rich' and 'poor'. In the course of data analysis, due to the economic and social classification of the categories, while the term 'poor' was maintained, 'rich' was changed to 'better-off', the more relative term.

18 The hierarchy of local government in Uganda consists of village, parish, sub-county, township/county and district councils designated as Local Council [LC] I, II, III, IV and V respectively.

Appraisals (PRAs) which were concluded with the classification of the households on the map according to four socio-economic groupings viz: poor/destitute, average, better-off and rich[19]. A few case studies were also carried out to probe into some of the issues raised in the PRAs[20].

From a socially stratified list prepared from the PRAs, a proportionate random sample of thirty[21] household heads from each of the villages were selected for interview and this gave a targeted total of four hundred and twenty households. About fifty households per district, were actually interviewed. Half [50.4 percent] of the interviewed households are from the better-off villages and the remaining half from poorer ones. The actual interviewees were three hundred and fifty-six with a maximum of fifty-four in Mpigi and Bushenyi districts and a minimum of fifty in Ntungamo. Prior to a detailed statistical analysis of the survey data, entries were checked from a random sample of twenty households for about one-quarter of the set of questions (Village names and locations are found in the Appendix Table 1).

Modeling and Measurements

Apart from measuring the overall pattern [given as TOTAL in the tables] of the causes and manifestations of relative affluence and poverty, the basic mode of analysis adopted for the study consisted in examining the extent of differences at six levels, which may be grouped into four by putting the spatial ones together[22].

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[19] This was done in connection with the location of households on the sketch map along with in-depth discussions and sometimes heated argument about borderline cases. The group invariably consisted of LC1 members and other notables and interested members of the villages.

[20] For the result of this exercise, see Tenkir Bonger. 1999. *The Quest for Adaptive Institutions: Observations from Rural Uganda.* DENIVA (Development Network of Voluntary Associations) Special Paper No. 2, Kampala, Uganda.

[21] Of the thirty sampled, five were kept in reserve for replacement in case any of the first twenty-five households on the list could not avail themselves of the interview.

[22] Note the respective abbreviations of the categories used subsequently in the tables.

A.0 Socio-economic Grouping: This is the central analytical category consisting of::

A.1 Better-off Households (BOH),
A.2 Average Households [AVH] and
A.3 Poor Households [POH].

Poverty in Uganda has a very significant locational dimension. Therefore, data analysis is also carried out in three spatial categories.

B.0 Spatial Configurations

B.1 Village Level

B.1.1 Better-off Villages [BOV]
B.1.2 Poor Villages [POV]

B.2 District Level[23]

B.2.1 Lira 2.2.2 Apach 2.2.3 Soroti
B.2.4 Iganga 2.2.5 Mpigi 2.2.6 Ntungamo
B.2.7 Bushenyi

B.3 Regional Aggregation of Districts: only Mpigi on its own constitutes the Central Region.

B.3.1 North - N [Lira and Apach]
B.3.2 East - E [Soroti and Iganga]
B.3.3 Central - C [Mpigi]
B.3.4 West - W [Ntungamo and Bushenyi]

Since female-headed households mostly have only one main breadwinner thereby raising the potential for increasing the severity of poverty[24], to

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[23] When the distribution of variables are similar, in some cases, only regional data are provided.

[24] One of the main findings of the study, as set out in detail in Sections 4 and 5, is that female-headed households do not only do as well as male-headed households; they out-perform the latter in such vital measures as labour productivity and the consumption of selected nutritious diets.

test the hypothesis and derive other policy implications, the data set is also split by gender of household heads:

C.0 Gender

C.1 Male-headed Households (MHH)
C.2 Female-headed Households (FHH)

Finally, given the up, down and the current upward trend of Uganda's socio-economic performance, which has exposed the population to varying socio-economic experiences, and the cyclical nature of the peasant household economy, another analytical category is the age of households. Forty years divide the total number of household heads almost into two equal halves[25].

D.0 Life Cycle

D.1 Young [< 40 years]
D.2 Old [> = 40 years]

Better-off, Average and Poor households make up 10 percent, 45 percent and 45 percent of the total respectively. Although statistically not very significant, Mpigi and the Western districts of Ntungamo and Bushenyi and their respective regions have more than the average level of better-off households. Together with Lira, the Eastern districts fall on the other extreme. Mpigi and the West also have lower rates among the poor, which indicates that not all *the better-off households have necessarily emerged from the misery of the poor, for some of them succeeded through improved productivity in the West and non-farm activities in the Centre.*

In the North and East, insurgency and the very slow pace of re-establishment of the hitherto cash crops, such as cotton, could have accounted for the lag. The proportion of the poor decreases from the North to the West. At regional level, the *within and between differences* in the distribution of socio-economic groupings is significant. A similar pattern

[25] A typical young traditional peasant household has to contend with one of the major factors of production, labour, and because of the size of land under cultivation. With ample supply of land, as family size and age increase, both factors increase with time, peak in middle age and decline progressively. Dividing age categories into three groups could have offered more interesting results but the number in the old-age group would not have met the minimum statistical requirements for comparisons.

is also observed between the better-off and poor villages, male- and female-headed households.

With average number of better-offs but lowest average and highest percentage of poor households among all the analytical categories, female-headed households appear to have the highest level of social differentiation. On the other hand, there is no such difference between old and young households. As will be shown subsequently, although the old may have more assets, labour and income, compared to the young, these are offset by the non-farm income, small family size and more human capital endowments by the young.

A breakdown of the distribution of female-headed households shows their high prevalence in the districts of Mpigi [39 percent][26], Lira [38 percent] and Iganga [37 percent] and low incidence in the better-off district of Apach and the West. The difference narrows down and becomes statistically insignificant at regional level. While most male-headed households [55 percent] are found in poorer villages, 60 percent of the female-headed households are found in better-off villages. More female-headed households are in the old age category [54 percent] compared to the male-headed ones [46 percent]. The age categories are equally distributed in space—at village, district and regional levels. However, Mpigi district, which encloses the capital city, Kampala, has not only the highest proportion of female-headed households, at 53 percent, but also the highest proportion of old households[27]. The reverse applies to Apach and the Western districts. Details of the spatial, socio-economic, gender and age distribution of the studied households are given in Tables A.2 and 3 in the Appendix.

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[26] This partly appears to have resulted in contrasting patterns of development between Mpigi and Bushenyi, which have implications for development strategies.

[27] This partly explains the direct/inverse relation between being worse-off/better-off respectively.

The major variables, whose magnitudes and differences are analysed by categories, include:

i. Endowments such as land, labour, livestock, skills etc.

ii. Income and expenditure

iii. Access to education, health, extension services and family planning

iv. Quality of life, as reflected in diet and acquisition of consumer durables

v. Human development index.

Data analysis was carried out by using *Statistical Package for Social Scientists [SPSS] for Windows*. The statistical sub-packages employed are:

1. *Descriptive Statistics*

Showing the percentage distribution of the above variables and their derivatives.

2. *Cross-tab and its Chi-square test*

These are widely used to measure the significance and validity of the differences. Reports on distributions and the significance of their variations are established by means of the Chi-square statistics highlighting the degree of freedom and level of significance. Such statistics measure the significance of the *within differences of the variables between the analytical categories.*

Since the level of poverty is hypothesised to increase spatially by socio-economic grouping, type of village, by the gender and age group of household heads, the Chi-square result is followed by the Spearman Rank Correlation Coefficient.

3. *Spearman Rank Correlation Coefficient*

These are statistics used to indicate *the significance of the differences between each set of analytical categories.* Negative and positive coefficients indicate the direct and negative relationship of the variable examined and the numerical rank of the analytical categories.

Resources, Income and levels of livelihood

The Bases of Social Differentiation

In the household questionnaire, after households classified their own socio-economic position/status, three related questions were used to obtain the perceptions and causes of poverty and relative affluence. These were:

i. The reason for self-ranking by the households [Q7.4.2]

ii. The defining characteristics of the five socio-economic groups [Q.7.4.3] and

iii. A summary of how each socio-economic group was identified [7.4.4].

Even among the very poor/destitute, lack of food was mentioned as the most defining characteristics by only 39 percent of the respondents. Among the poor, it even went down to 20 percent. In other words, to designate the very poor and the poor, *more than 70 percent of the respondents did not consider lack of food as the most important defining characteristic*[28]. The poor and the very poor are said to be easily identifiable, as they have no permanent abode from where to function as economic and social agents in the community. Lack of shelter figures more among the poor than among the very poor probably because the destitute are already excluded from such provision.

[28] Cf. with expenditure and strictly biological approaches to the measurement of poverty, which accordingly classifies more than 60 percent of the rural households as poor (Appleton: 1995; World Bank: 1996).

Table 1: Defining Characteristics of Social Groups [percent]

	Total		VP	P	AV	R	VR
	No	%	%	%	%	%	%
Food	652	26	31	36	26	19	15
Clothing	495	20	24	30	21	13	9
Shelter	487	19	27	11	17	18	22
Assets	388	16	6	8	13	23	29
HH Items	342	14	8	11	17	18	14
Fam Size	89	4	2	2	3	5	6
Wives	51	2	1	2	3	4	4
Total	2,504	101	99	99	99	100	99

VP= Very Poor; P= Poor; AV= Average; R= Rich; VR= Very Rich; HH= Household

The other major variable defining characteristic, money, is a proxy for the purchase of non home-produced goods and services such as education but, more importantly, health. On a scale of the defining characteristics of social classes among the peasants, the average households figure on 'having just enough' of the three important provisions—food, clothing and money/income together with a semi-permanent shelter. In addition, they possess some education, property and bicycles. Hence, they are not only in a position to satisfy their day-to-day needs for production and reproduction, but they also have some savings/endowments to position themselves in future productive undertakings.

As might be expected, the significance of the availability or otherwise of food and clothing steadily declines as one moves from the very poor to the very rich on the socio-economic scale. *More than by their food, shelter and clothing, the rich and the very rich are distinguished by their assets, which include vehicles, houses and modern farms.* The availability and type of shelter, a readily visible component of the quality of life and economic status, appear to serve as a measuring tool for all social classes covering

about one-quarter of the responses equally. The rich and the very rich also have more family members and tend to be more polygamous.

According to more than 50 percent of the respondents, owning assets, including vehicles, constitutes the most important defining characteristics of the rich and the very rich rural households. Unlike the very poor, the poor and the average, these groups are not overly bothered about their day-to-day physiological fulfilment, as stated under the term 'can afford everything'. Rather than 'digging gardens', the rich and the very rich are engaged in modern farming. Their operation is enhanced by their education and income from other businesses. Their permanent homes and vehicles are their exterior possession attributes which mark them out from the rest of the community. It is interesting to note that the most differentiating variable in other agrarian economies, ownership/access to land, is not mentioned by any group. Here, the nearest to a proxy for land is 'graduation' to modern farming by the rich and the very rich.

The respondents were asked to state the reasons for their status in the social hierarchy. Among the first reasons advanced were resources [38 percent][29], hard work [19 percent], remittances [15 percent], availability of adequate labour [9 percent], God's will [8 percent], non-farm income [6 percent] and inheritance [5 percent]. Among those listed in second position, the most important reasons were more evenly distributed between hard work [26 percent], remittances [22 percent], availability of labour [15 percent], resources [12 percent] and God's will [11 percent]. The breakdown by social class, type of villages and regions is given in Table 2.

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29 The score may be higher partly because this point was the first item in the questionnaire.

Table 2: Factors for determining Current Socio-economic Status[30][%]

	All		Status			Regions			
Reasons	**N°**	**%**	**BOH**	**AVH**	**POH**	**N**	**E**	**C**	**W**
Resource	177	38	31	39	38	34	26	31	52
Hard Work	90	19	27	21	14	26	19	22	13
Remittances	62	15	14	16	16	12	18	13	9
Labour	43	9	8	8	10	6	13	9	9
God's Will	37	8	8	6	9	10	12	6	2
Non-Farm Y	27	6	2	5	7	6	4	9	6
Inheritance	24	5	6	5	5	4	6	5	8
Rich Relative	3	1	4	-	1	-	-	2	1
Total WFr	463	101	100	99	100	100	98	98	100

WFr= Weighted frequency where 1st ranking= 1, 2nd ranking= 0.5 and 3rd ranking= 0.33.

Hard work comes ahead of important resources such as land, labour, number of dependent members and/or non-farm income, which are very important operational constraints in most rural societies elsewhere. The contribution of rich/powerful relatives is captured under the significant role of remittances, which is the main transmission mechanism of non-agricultural income figuring significantly in both first and second-level explanatory factors.

Partly reflecting its location bias, slightly more than one-third of the respondents say that their current status is due to the level of their resource endowment. Better-off households say so to a lesser extent and most of them ascribe their current position to hard work. This is so in descending order from the better-off to the poor. In equal proportion and across economic status, about 10 percent of each group explain their position as being due to the level of labour supply and God's will. Lack of access to non-farm income was mentioned by average and poor households more than by the better-off ones. Factors such as lack or abundance of inheritance and rich relatives

[30] See sub-section on 'Labour' for the abbreviations and designations.

were minor in comparison with others. Regionally, in the West, where there is more affluence and a process of social differentiation[31], more than half of the households ascribed their current social position to resources.

In most parts of the rural developing world, the structural causes of poverty are embedded in lack of ownership/access to the vital means of production, especially land, exorbitant tenancy rates and the limited and/or imperfect labour factor and product markets. When wage opportunities are available, they are either sporadic or below subsistence levels. The following sub-sections report on the absolute and differential distribution of resources, income and productivity among the households surveyed, as per the classificatory categories, spelt out in the preceding section.

Labour

The adult population in the 20-59 age group is only one-third of the total population. About 50 percent are below age 15, thus giving a dependency ratio of about 2:1. Labour supply is further constricted by the low participation rate for adult males, the full engagement of an otherwise child labour in Universal Primary Education [UPE][32] for most of the year and by the fact that female labour is already over-burdened with production and reproduction. The average family size is around 7.9 in the better-off households, thus exceeding the poor [4.4] and average households [6.0] by 64 percent and 35 percent respectively. Except for villages, there is a statistically significant difference in household size in comparison with the more affluent Central and Western districts, better-off, male-headed and older households with larger family size.

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[31] See Section 3.

[32] This scheme provides access to free primary education for up to four children. Since its introduction in the 1997 academic year, the number of Primary 1 enrolments has doubled and this indicates the high proportion of children of the poor who had been forced to remain outside the school system because they could not pay school fees. Given the constricted labour supply, however, the scheme needs reforms in curriculum and scheduling so that poorer households can access education without having a high trade-off in the loss of child labour. Already, drop-out rates are reportedly very high.

When household size is adjusted for age on the basis of consumer demand and the potential for labour supply, the standardised consumer units and the labour units are slightly more than 75 percent and 50 percent of the average household size respectively. On average, whereas three out of four household members are full consumers, one out of two is a potential worker. For every labour unit, there are one and a half consumer units. The distribution of labour and consumer units by analytical categories is similar to that of household size and this indicates an even spread of age groups between households. This is further corroborated by the fact that the ratio of consumers to labourers [CULU] by analytical categories is almost the same [Table 3, Columns 7 and 8].

Land and Livestock

Next to labour, the most important resource determining the well-being of a rural community is land, with regard to quality, quantity, access and the terms of utilisation. While most of the rural poor in Asia, Latin America and parts of Africa are paying high rent for their small plot cultivators and/or agricultural labourers, an overwhelming majority of the surveyed households cultivate their own holdings. About 94 percent of the holdings are owned, 5 percent rented and 1.0 percent leased; 1 percent gave no response. Thirty-five households with mainly fishermen in poor villages, reported that they had no plots. Nearly 60 percent of the holdings are less than 2 acres[33] [less than a hectare] while as many as 84 percent are below 5 acres. The maximum holding was 30 acres in Bushenyi. Differences in the level of land ownership/access to land are statistically insignificant except for socio-economic grouping and life cycle. When controlled for consumer and labour units [acre per consumer and labour unit], even the significance of the above two becomes negligible. With the minimal rate of labour employment even by the better-off households[34], the similarity of crops grown and the level of farm technology adopted, when adjusted for the size of labour, differentiation based on holding size is

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[33] It is worth noting that the actual cultivated land is less. This may be compensated for by multiple cropping where two-season cultivation regimes prevail.

[34] EPRC/AAU. Rural Poverty and Structural Adjustment in Uganda; p. 115.

minimal[35]. [Table 4.4]. Given the current factors and methods of production, the Ugandan rural households surveyed balance the number of consumers, labourers and size of cultivated holdings.

The other striking characteristic of the farming systems consists in the very low level of livestock ownership. With easy access to land, investment in the form of livestock is the more stratifying variable between the better-offs and the poor households and regions. Hence, as with the spatial trend of poverty, in the critical indicator of livestock wealth, lactating cows, oxen and other cattle, the percentage of ownership, though low in total, declines significantly from North to East, to the Central Region and culminates in the more affluent West. At the analytical category level, better-off households have twice the number owned by the poor and the averagely poor. The average gross yield per acre land evaluated at 178,000 Uganda Shilling [Ush][36] was worth aproximately 600 kgs of maize. At about Ush300/kg, this signifies the low physical yield rate and value of output. Output per acre decreases substantially and at a statistically significant level as one moves from the North to the East, Centre and West. While about one-quarter of households in the West reported productivity ratio of over Ush200,000/acre, only 7 percent did so in the North. The productivity ratio of better-off villages is about twice that of the poor.

Productivity

Subject to the shortcomings of a point estimate based on recollections, discounting double cropping by many at district and regional levels, there is a glaring disparity in productivity at different socio-economic levels. Although the productivity ratio of the average and better-off households is similar, that of the poor is only 39 percent. The percentage of poor households with land productivity ratio of over Ush200,000/acre is less than half of the percentage for the better-off households. On the other hand, there is no significant difference in terms of gender or age of household heads. Another measure of productivity similar to land productivity is the distribution of gross output per labour unit.

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[35] A major area of rural economic activity leading to more pronounced differentiation is livestock ownership, especially those for dairying and trading, as reported below.

[36] At the time of the field-work, 1,080 Uganda Shillings were worth 1 US dollar.

Table 3: Comparison of Household Size, Consumer Unit, Labour Unit and Consumer Labour Ratio

	HHS	Index	CU	Index	LU	Index	CULU	Index
1.0 TOTAL	5.5 100	100	4.3	100 78	2.9 53	100	1.5	100
2.0 DISTRICTS	[.14, 000]		[.02,000]		[.01,00]		[.24,.44]	
2.1 Lira	5.0	91	4.0	93	2.7	93	1.5	100
2.2 Apach	5.1	93	3.8	88	2.7	93	1.4	93
2.3 Soroti	4.3	78	3.5	81	2.6	90	1.4	93
2.4 Iganga	5.4	98	4.2	98	2.8	96	1.6	07
2.5 Mpigi	5.6	102	4.5	105	2.9	100	1.6	107
2.6 Nnun	6.6	120	4.9	114	3.3	114	1.5	100
2.7 Bush	6.6	120	5.1	119	3.6	124	1.4	93
3.0 REGIONS	[.14,00]		[.006,001]		[001,07]		[.001,.47]	
3.1 North	5.1	93	3.9	91	2.7	93	1.5	100
3.2 East	4.9	89	3.8	88	2.6	90	1.5	100
3.3 Cent	5.6	120	4.5	105	2.9	100	1.6	107
3.4 West	6.6	120	5.0	116	3.5	121	1.5	100
4.0 VILLAGES	[.55,.11]		[.04,01]		[.40,03]		[.27,08]	
4.1 Bett	5.8	105	4.5	105	3.0	103	1.5	100
4.2 Worse	5.3	96	4.0	93	2.8	97	1.5	100
5.0 SOCIO-ECON	[000,00]		[000,00]		[.002,00]		[.14,.26]	
5.1 Bett	7.9	144	5.8	138	4.1	141	1.5	100
5.2 Aver	6.0	109	4.7	109	3.1	107	1.5	100
5.3 Poor	4.4	80	3.5	81	2.5	86	1.5	100
6.0 Gender	[002,000]		[0.19, 02]		[01, 00]		[00,.21]	
6.1 MHH	5.8	105	4.5	104	3.1	107	1.4	93
6.2 FHH	4.8	87	3.8	87	2.5	87	1.6	107
7. LIFE CYCLE	[004,.01]		[000,00]		[.000,00]		[.01,.56]	
7.1< 40	5.1	92	3.8	88	2.5	88	1.6	107
7.2>=40	6.0	108	4.8	112	3.4	116	1.5	100

CU = Consumer Unit LU = Labour Unit CULU = Consumer Unit /Labour Unit

Table 4: Size and Index of Holdings and Per Acre , Consumer and Labour Units

	HLDG	Index	A/CU	Index	A/LU	Index
1.0 TOTAL	3.4	100	0.8	100	1.2	100
2.0 DISTRICTS	[.001,.34]		[30.6,24,.16]		[28,24,.16]	
2.1 Lira	2.5	73	0.8	100	1.2	100
2.2 Apach	4.1	123	1.1	137	1.6	133
2.3 Soroti	2.5	73	0.8	100	1.1	92
2.4 Iganga	2.2	65	0.5	62	0.9	75
2.5 Mpigi	3.0	91	0.8	100	1.3	108
2.6 Ntungamo	4.5	132	0.9	112	1.3	108
2.7 Bushenyi	4.5	132	0.8	100	1.1	92
3.0 REGIONS	[.003,.49]		[0.83,. 21]		[.54,.25]	
3.1 North	3.3	100	1.0	125	1.4	117
3.2 East	2.3	68	0.7	87	1.0	83
3.3 Central	3.0	91	0.8	100	1.	108
3.4 West	4.5	132	0.8	100	1.2	100
4.0 VILLAGES	[.54,.15]		[.86,03]		[.82,.97]	
4.1 Better-off	3.8	119	0.8	100	1.3	108
4.2 Poor	3.0	88	0.8	100	1.1	92
5.0 SOCIO-ECON	[000,000]		[009,09]		[.16,.33]	
5.1 BOH	7.4	218	1.4	175	2.0	167
5.2 AVH	3.5	103	0.8	100	1.2	100
5.3 POH	2.3	68	0.7	87	1.1	92
6.0 GENDER	[.98,.71]		[.18,.01]		[.10,.01]	
6.1 MHH	3.3	98	0.8	100	1.1	92
6.2 FHH	3.4	100	0.9	112	1.5	125
7. LIFE CYCLE	[002,00]		[02,00]		[03,00]	
7.1< 40	2.6	76	0.9	112	1.4	117
7.2>= 40	4.0	123	0.7	87	1.0	83

A=Acre CU=Consumer Unit LU=Labour Unit

Income

An average income of Ush482,000 per household is derived from crops [65 percent], livestock [10 percent] and the remaining 25 percent from non-farm products. Following disparities in holdings and productivity levels, there is a significant difference in the various levels of income and their distribution between districts and regions. Average income levels vary from a very low of Ush 151,000 in Lira to Ush 835,000 in Bushenyi District. Income levels in the West and the Central Region are thrice and twice as much in the North and East respectively.

The average income of poor villages is 63 percent of the package for the better-off households—a much lesser disparity than that between districts and regions. More than the spatial differences, the highest disparities in income are between socio-economic groups. Thus, better-off households have 4.2 times the average income of poor households and 2.5 times the level of income for the average households. There is no significant difference in total income level between male- and female-headed households and between the young and the old.

While per capita income of over Ush200,000 is still enjoyed by only the better-off households and the Central Region, the margin of their betterment from the total average income drops drastically and is just less than twice the overall average. Because of increasing family size with socio-economic implications, the nearly quadruple income gap between the poor and better-off households narrows to a mere double when measured in terms of per capita income.

Non-farm income, of which nearly half comes from trading, is inversely related to socio-economic position—the poorer groups have the higher share of non-farm income. The highest non-farm income is earned in Mpigi, which represents the Central Region with 43 percent of the total income. Here, non-farm activities and remittances are the highest income earners—more than farming. Non-farm income also makes up as high as 37 percent and 36 percent of the income for female-headed and young households respectively, which makes it an important policy instrument for alleviating poverty among the poor households in general and the female-headed ones in particular.

Expenditure on Education and Health

With an average expenditure of Ush 73,500/year or 42 percent of the total cash outlay, school fees constitute by far the most important volume of expenditure, as reported by 51 percent of the households surveyed[37]. Expenditure in terms of school fees varies enormously within villages, districts and regions on the one hand and between gender and age groups on the other, but not so much within and between the socio-economic groupings. Forty-two (42) percent of the children in school reported paying fees. These included schoolchildren who are not covered by the Universal Primary Education (UPE) scheme in the lower grades and others in primary and secondary schools, some of which are boarding schools. About 4 percent of the overall fees exceeded Ush500,000, rising to as high as 17 percent in Mpigi district. Only 15 percent of the schoolchildren paid less than Ush20,000/year. Twenty-five (25) percent of the households paid between Ush20,000 and 100,000. Notwithstanding the quality of the social and physical infrastructures of the schools, and despite the proximity of most households to primary schools and the recent free education under the UPE scheme, school facilities constitute the most crucial concern of the rural communities. While 21 percent ranked it as their first priority, the equivalent costs of family feeding and health care were 10 percent and 11 percent respectively.

Average health cost was about Ush8,500 and only 14 percent reported to have paid less than Ush500. Compared to their total household numbers in the study, many of the average households reported to have paid medical fees; perhaps this reflects the healthiness of the better-off and the inability of the poor to pay. The distribution of health cost *within* differs significantly at the district, regional and village levels, unlike the case of socio-economic groupings, gender and age groups. While the latter two have a cross-section of households making similar payments

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[37] The actual percentage of payers is however much higher as the above table features only on those who responded to the questionnaire. Whereas the UPE scheme has removed a substantial burden from primary education, the cost of secondary education is still prohibitive for many of the rural households.

for a common health hazard, the similarity between socio-economic groupings implies an inverse health cost burden on the poor.

Human Development Index

Although the processes for attaining human development have some values in themselves, resources, endowments, income and expenditures are means of raising living standards. This section attempts to bring together the outcomes of the development process and estimate variations between the categories hypothesised to exhibit differences in welfare. Prior to that, the next three sections report on some of the outcomes of the development process which are then used in the computation of the human development index in the last sub-section.

Consumption of Selected Food Items

The food items listed were selected for their nutritive values and potential and actual availability in the localities. In most of the villages surveyed, whereas arable farming is not supplemented by cattle rearing, meat and dairy products appear to be the least frequently consumed. These products are mostly purchased when they are readily available sometimes in a given month and season.

Vegetables and beans compensate for the apparent deficiency in animal protein-yielding diets. As could be discerned from Table 5, 74 percent and 88 percent of the responding households respectively reported consuming the latter all year round and sometimes throughout the week. About three-quarters of the respondents access them from home production. Small grains are also part of the staple food of which about half is purchased.

Table 5: Consumption of Selected Food Items

	Frequency of Consumption							
	AYR	STIW	STIM	STIS	AYR+STW	Total		HP
Food Item	%R	%R	%R	%R	*	No	%	%
Meat	3	23	30	44	26	331	100	13
Milk Products	12	16	27	44	28	104	99	17
Milk	28	24	17	31	52	199	100	25
Small Grains	47	14	18	20	61	193	99	53
Vegetables	55	19	10	15	74	328	99	77
Beans	64	20	6	10	84	339	100	64
Others	43	28	17	11	71	88	99	42
Average	36	21	17	25	57	226	100	42

AYR=All Year Round; STIW=Sometimes in a Week; STIM=Sometimes in a Month; STIS= Sometimes in Season; R=Reporting; HP=Home Produced* = AYR plus STIW

Although produced in the rural areas, the purchase of small grains for consumption by nearly half of the rural households brings to the fore the need for a food policy matrix to balance strategies for increasing income for producers and proposing affordable prices to consumers, including the rural ones. This is because, given the 88:12 split between the rural and the urban population in the country as a whole, among those who purchase grains from the market for consumption, rural dwellers are bound to outnumber the urban dwellers.

Apart from meat, which the poorer households reportedly consume proportionately, the relatively expensive goods derived from milk and milk products are consumed more regularly by the better-off, the average and the poor households in the descending order. The households in better-off villages consume meat more regularly than those in the poorer ones. However, in the consumption of all other food items, as in the urban-made standard-of-living indicators below, the difference between the various socio-economic groupings is not large and among the poor and the average, there is close proximity in the range of food items and in the regularity of consumption.

Hence, the combined all-year-round and weekly consumption of the main sources of protein and other important minerals, such as beans and vegetables in diet, is near and above 75 percent for all social groups. With respect to small grains, beans and other milk products, proximity in the regularity of consumption is also high. As shown in Table 5.2 below, except at the regional level, where there is a total and apparent deficit of beans in the East, there is no significant difference in the consumption of beans among all the analysed categories. The distribution and statistical results are similar for milk and meat.

Access to Consumer Durables

The three selected proxies for modern utilities and the frequency of their acquisition are as follows. Between 33 percent and 52 percent of the rural households have at least a pair of shoes, a radio, a watch or a bicycle. At the socio-economic grouping level, except with regard to radio, where acquisition by the better-off households is higher than the poorer ones by 11 percent, in relation to other items, the maximum difference between the groups is only about 5 percent. The difference in level of ownership/access between the average and the poor households is insignificant. The poorer households and the average ones access the facilities in equal measure. Another salient feature of the overall access is the relatively high level of bicycle ownership as a cost-effective and efficient means of transport and the radio as a source of modern communication. Although statistically insignificant, their ownership is inversely related to socio-economic groups at 38 percent, 41 percent and 42 percent of all the households respectively. This is because they perform the dual function as a luxurious means of transport for household members and a source of income when hired out to drivers.

Table 6: Consumption of Quality Food and Consumer Durables [%]

	Food			Consumer Durables		
	Beans	Milk	Meat	Bicycle	Radio	Tape
1.0 TOTAL	77	29	23	41	37	23
2.0 DISTRICTS		[.00]	[.16] [.00]	[.00]	[.00] [00]	
2.1 Lira	96	8	18	50	6	4
2.2 Apach	76	41	35	45	57	33
2.3 Soroti	56	30	20	32	32	20
2.4 Iganga	47	14	18	35	49	39
2.5 Mpigi	94	57	39	68	57	28
2.6 Ntungamo	18	28	?	38	36	22
2.7 Bushenyi	11	20	32	20	26	17
3.0 REGIONS		[.00]	[00] [.00]	[.00]	[.00] [.17]	
3.1 North	86	25	27	47	32	19
3.2 East	52	22	19	34	41	30
3.3 Cent	94	57	39	68	56	28
3.4 West	86	24	16	29	31	19
4.0 VILLAGES		[.04]	[.62] [.87]	[.37]	[.33] [.93]	
4.1 Better-off	78	28	23	44	35	24
4.2 Worse off	79	30	24	39	40	23
5.0 SOCIO-ECON		[.90]	[.25] [.03]	[.87]	[.46] [.79]	
5.1 Better-off	78	40	40	38	46	27
5.2 Average	78	27	21	41	37	24
5.3 Poor	76	27	22	42	35	22
6.0 GENDER		[.72]	[.46] [.32]	[.74]	[.08] [.33]	
6.1 MHH	78	27	18	40	40	24
6.2 FHH	76	31	37	43	31	20
7.0 LIFE CYCLE		[.61]	[.32] [.39]	[.15]	[.46] [.60]	
7.1 < 40	76	31	25	45	39	27
7.2 > =40	79	26	21	37	35	19

The difference between the poor and better-off villages is more pronounced than that between the better-off and poorer households while the average households straddle in the middle. Except for radios, where the gap in ownership rate is smaller, there is a significant difference between the villages in accessing amenities. On the average, whereas half of the households in the better-off villages are able to access the amenities only one-third in the poorer villages are able to do so.

Aggregating across the four amenities, the Central Region fares better than average especially with the high ownership ratio for bicycles and radios. The North and the West are at average levels [41-42 percent] while the East and West are below average levels. Given its more suitable terrain, next to the Central Region, the North is well ahead in the use of bicycles with 47 percent ownership against an overall ownership of 41 percent. In the other regions, about one-third of the households reportedly own bicycles. The North is behind with regard to radios and watches. Except between regions and gender, the differences in the percentage of ownership of bicycles are insignificant. The differences are equally insignificant for radios and tapes.

Exposure to Innovative Practices

Exposure to Extension Services [Ext], Family Planning [FaP], Migration [Mig] and the Education of Household [EHh] head and spouses [Esp] is hypothesised as one aspect of innovative practices with potential impact on improved productivity, a more positive attitude towards modernisation and increased acceptance of other innovations.

An otherwise important means of reducing poverty through better farming practices, *extension*, at an overall exposure of only 12 percent, is very underdeveloped. There is a significant difference in exposure to it only between villages and socio-economic groupings. Better-off villages near urban centres and better-off households access them more at statistically significant levels. However, even among these, the rate is limited at 15 percent and 21 percent of the respective total households. The rates are similar at district, regional, gender and age-group levels.

Table 7: Innovative Practices

Regions	Ext	FaP	Mig	EHh	Esp
1.0 TOTAL	12	17	20	71	61
2.0 DISTRICTS	[.44]	[.01]	[.02]	[002]	[007]
2.1 Lira	4	4	18	74	63
2.2 Apach	12	20	35	92	82
2.3 Soroti	14	20	22	71	60
2.4 Iganga	10	18	10	63	57
2.5 Mpigi	19	31	26	78	71
2.6 Ntungamo	12	10	12	59	45
2.7 Bushenyi	11	17	15	61	54
3.0 REGIONS	[.23]	[.01]	[.04]	[.002]	[.00]
3.1 North	8	12	27	83	72
3.2 East	12	19	16	67	58
3.3 Cent	19	31	26	78	71
3.4 West	12	14	14	60	49
4.0 VILLAGES	[.08]	[.08]	[.2]	[.05]	[00]
4.1 Better-off	15	21	23	78	71
4.2 Worse off	9	14	17	65	51
5.0 SOCIO-ECON	[.05]	[.98]	[.10]	[.05]	[.64]
5.1 Better-off	22	16	32	70	64
2.2 Average	13	17	20	76	64
5.3 Poor	8	17	17	65	59
6.0 GENDER	[.53]	[.22]	[.22]	[00]	[.16]
6.1 MHH	18	18	78	67	68
6.2 FHH	13	16	24	54	59
7.0 AGE GROUP	[.18]	[.44]	[.01]	[1	[.00]
7.1 < 40	9	19	15		72
7.2 > =40	14	16	25		51

At 17 percent, exposure to *family planning* is higher than extension. There is 'within significant difference' in the rates of adoption in districts and regions but not across regions. At spatial level, both the 'within and between differences' are significant among villages. The poor, average, young and male-headed households practise family planning more than their other counterparts.

The two main causes of *migration,* and the resultant direct interaction with the urban social formations, are the attraction for post-primary education, need for economic survival and the promise of multi-faceted opportunities. A relatively high proportion, 20 percent, of the households surveyed had a migrant member on permanent or part-time basis. With Apach and Mpigi at 35 percent and 26 percent respectively, there is a significant difference in the rate of migration between and within districts and regions. Iganga and the Western districts have the lowest rates. The rate of migration is directly related, at significant levels, to the socio-economic status of households both at within and between levels and also between young and old households, with the latter having more migrants.

With 71 percent and 61 percent of household heads and their spouses being at least *literate*, this component of exposure is by far ahead of the others cited above. In both cases [heads and spouses], the North and Mpigi are at higher levels and there is a significant difference within and between districts and regions. The situation is similar at village level with the better-offs having a decisive sway over the poorer villages. At the socio-economic level, however, while the case for the heads is similar to the above trend, there is no significant difference between the spouses. The heads and spouses of young male-headed households are more educated than their old counterparts. The following section summarises the findings together with the other human development indicators discussed in the preceding sections.

Towards the Human Development Index

In the construction of the human development index, two of the variables are assets in the form of land and livestock. In most parts of Uganda, although land holdings embody investments in the form of clearance and land is not a very scarce factor, clearance and continuous cultivation bear purchase value and therefore constitute the bases for the continuous flow of income. Ownership of livestock is incorporated in the analysis because it is the most socially differentiating asset in rural Uganda.

Consumption is the major ultimate objective of land use. The composite distribution of consumption of beans, milk and meat consumption is taken as a proxy for quality diet. Apart from the immediately exhausted consumer items, including food, consumer durables provide a continuous supply of utilities and also enhance social status. The most important means of transport, the bicycle, was chosen as a proxy. Literacy is hypothesised as an imput to more rational decisions on income-generating activities their management and also as a guide to the enhancement of educational standards for the coming generation and to the provision of support/pension income for parents.

The level of adoption of extension services reinforced by education would put households on a better footing in the management of their resources now and in the future. Distance from health centres can justify the cost of travel and other provisions, as morbidity and the ability to pay remain constant[38]. And finally, the level of indebtedness stands as a variable differentiating between independent peasants and others who have to borrow to meet requirements for subsistence. Its realism will depend on the extent to which debts are incurred for consumption or business purposes.

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38 This is perhaps the weakest proxy standing for welfare in terms of health care. Better ones would have been life expectancy, infant mortality rate, etc., which were not collected.

To partly ease calculation, the ten variables selected from the field data are: holding in acre per consumer unit [ACU], size of livestock unit [LIU], per capita income [PCI], quality of food consumption [FD], ownership of consumer durables [CD], literacy of household head [LIT], exposure to extension [EXT], adoption of family planning[FaP], distance from health centre [DHC] and the level of indebtedness[39] [IND]. While ACU, LIU, PCI and DHC are measured in absolute terms, percentage levels are taken for others [See Table 8]. The better-off households were taken as a reference group[40]. Each of the ten variables in Table 8 were then converted as ratio of ten sets for the reference group of better-off households. By adding up to 100 for the latter, comparisons with the other nineteen analytical categories could be made in terms of percentage deviations[41]. The results are presented in the following Tables 8 and 9.

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[39] It is worth noting that the fraction in the computation of the index is reversed in this case since the higher the level of indebtedness, the less it becomes a positive addition to welfare.

[40] If baseline data were available for comparison, although changes may not have been fully explained by SAP, a pre- and post-SAP period analytical construct could shed more direct light on the relationship with poverty. Conversely, in cross-sectional analysis, the exercise undertaken here could have been based on a certain set of target variables of welfare and a measure of the distance of each category in the study. Here, since the aim is to estimate the relative welfare of the poor, the better off households are taken as the reference group.

[41] In all cases, it should be borne in mind that the exercise does not take into account intra-group variations which could be enormous especially within better-off households. Even when such variations are discounted, the true portrayal of the inter-grouping variation in the human development index suggested by the exercise is subject to the accuracy of the data, which depends on respondent bias and the enumerator's capacity to properly understand and translate the questionnaires.

Table 8: Distribution of Assets, Income and Other Inherent Endowments

	ACU	LIU	PCI	FD	CD	LIT	EXT	FaP	DHC	IND
1.0 TOTAL	0.8	0.7	122	43	41	77	12	17	9	35
2.0 DISTRICTS										
2.1 Lira	0.8	0.3	43	40	50	78	4	4	12	28
2.2 Apach	1.1	0.7	108	51	45	82	12	4	9	29
2.3 Soro	0.8	0.4	81	35	32	80	14	20	13	30
2.4 Igan	0.5	0.6	101	26	35	74	10	18	5	35
2.5 Mpigi	0.8	1.0	234	63	68	89	19	31	10	39
2.6 Ntung	0.9	0.9	134	25	38	64	12	10	11	54
2.7 Bush	0.8	1.2	142	63	20	68	11	17	6	32
3.0 REGIONS										
3.1 North	1.0	0.5	75	45	47	80	8	12	11	29
3.2 East	0.7	0.5	91	31	34	77	12	19	6	33
3.3 Cent	0.8	1.0	234	63	68	89	19	31	10	39
3.4 West	0.8	1.0	138	42	29	68	12	14	8	35
4.0 VILLAGES										
4.1 Bett	0.8	0.9	134	43	44	86	15	21	9	43
4.2 Poor	0.8	0.6	110	44	39	68	9	14	8	28
5.0 SOCIO-ECON										
5.1 Bett	1.4	2.7	209	53	38	86	22	16	10	40
5.2 Aver	0.8	0.8	122	42	41	82	13	17	9	35
5.3 Poor	0.7	0.3	104	42	42	74	8	17	7	34
6.0 GENDER										
6.1 MHH	0.8	0.8	121	41	40	79	11	18	8	34
6.2 FHH	0.9	0.5	125	48	43	74	13	16	9	38
7.0 AGE GROUP										
7.1 < 40	0.9	0.5	127	44	45	76	9	19	9	33
7.2> = 40	0.7	1.0	118	42	37	79	14	16	10	37

When all the surveyed households are taken together, *their human development index is less than that of the reference group, the better-off households, by only 18 percent.* Even then, the better-off households scored less than the overall index in consumer durables [partly because the bicycle was used as a proxy], in the application of family planning [having considerably larger family sizes], mean distance from a health centre and the level of indebtedness. The latter is admittedly higher because of borrowing for business rather than to alleviate distress. *The overall index for the average households is almost the same. The index for poor households is less than the one for the better-off ones by only 21 percent.* Of this aggregate variation, the widest gap is due to the ownership of livestock. Whereas the poor households had half of the per capita holding size and income of the better-off households, their livestock ownership was only 10 percent. There is no significant difference between the socio-economic groups with regard to exposure and application of family planning, literacy rates and indebtedness.

At 81 percent and 80 percent, the male- and female-headed households are respectively equidistant from the reference group. Compared to the better-off households, their human development index is close to the level of the poor households. It is instructive to note that in almost all the components of the index, when the two gender groups are not equal, the maximum difference between the two groups is not more than 10 percent. Both are poorer than the better-off households of their own sex and that of the opposite sex by about 20 percent. Since most food production is 'gardening-based' and involves the use of simple tools, human labour and small plots of land near the homestead, both male- and female-headed households get good food. However, given the patriarchal and domineering position of males in most African social formations when the value of their relative freedom from possible male domination is added, such socio-economic record by female-headed households implies a higher level of welfare. Subject to the quality of the data base on poverty reduction, this has far-reaching implications in the future conception and organisation of the family, rural credit, technology transfer, etc.

Table 9: Ratio of Assets, Income and Other Inherent Endowments

[BOH =10]	ACU	LIU	PCI	FD	CD	LIT	EXT	FaP	DHC	IND	TOT
1.0 TOTAL	06	03	06	09	11	09	05	11	11	11	82
2.0 DISTRICTS											
2.1 Lira	06	01	02	08	13	09	02	03	10	12	66
2.2 Apach	08	03	05	10	12	09	05	13	10	12	87
2.3 Soro	06	01	04	07	08	09	06	13	08	12	74
2.4 Iganga	04	02	05	05	09	09	04	11	20	11	80
2.5 Mpigi	06	04	11	12	18	10	09	13	10	10	103
2.6 Ntun	06	03	06	04	10	07	05	06	09	08	64
2.7 Bush	06	04	07	12	05	08	04	10	15	11	82
3.0 REGIONS											
3.1 North	07	02	04	08	12	09	04	08	09	12	75
3.2 East	05	02	04	06	09	09	05	12	15	11	78
3.3 Cent	06	04	11	12	18	10	09	13	10	10	103
3.4 West	06	04	07	08	08	08	05	09	12	11	88
4.0 VILLAGES											
4.1 Bett	06	03	06	08	11	10	07	13		09	85
4.2 Poor	06	02	05	08	10				12	10	7
5.0 SOCIO-ECON											
5.1 Bett	10	10	10	10	10	10	10	10	10	10	100
2.2 Aver	06	03	06	08	11	10	06	11	11	11	83
5.3 Poor	05	01	05	08	11	10	04	11	13	11	79
6.0 GENDER											
6.1 MHH	06	03	06	08	10	09	05	11	12	11	81
6.2 FHH	06	02	06	09	11	09	05		11	10	80
7.0 AGE GROUP											
7.1 < 40	06	06	02	06	08	12	09	04	12	11	76
7.2 > =40	05	04	06	08	10	09	06	06	10	10	74

At the age group level, though at 5-6 percent lower than the reference group, the index for young and old households is similar. But unlike the case of gender categories, the differences in score components are more dispersed when viewed both in relation to the reference group and within the age group of household heads. Thus, youth-headed households marginally excel better than the reference group in the level of literacy and indebtedness. On the other hand, the index components among the old households are closer but lower than those of the reference groups in all cases. For the same reason as above, within the age groups, the young ones score highly with respect to literacy and consumer durables and extension gaps while the older households fill in the extension gaps with their far higher level of per capita income.

The overall index of better-off villages is less than that of the better-off households by as much as 15 percent and this indicates the uneven distribution of better-off households between villages. On the other hand, at 9 percent, the difference between the poor and better-off villages is less. They have similar levels of such vital assets as per capita holdings, livestock and sources of income. Due to their accessibility, the better-off villages fared much better in exposure to family planning and extension services. Intermediate variation in the index is between villages; this makes the availability of innovative practices in the 'remote' villages more difficult in addition to turning the terms of trade against them. This underscores the fact that physical infrastructure mainly accounts for the micro-spatial differences rather than social or resource endowment.

At a broader spatial level, the overall human development index for Mpigi District and consequently for the Central Region, is higher by 3 percent in comparison with the reference group mainly because it performs better than the latter in per capita income, quality food consumption, consumer durables purchase and adoption of family planning. At the district level, the lowest indices are closely shared by Ntungamo and Lira. Obviously, Lira scored much less than others in the livestock ownership, adoption of family planning and extension services.

When its poor village is also included, Ntungamo District lagged far behind in livestock ownership and consumption of quality food. Soroti's attributed to 25 percent lag behind the reference group is again attributed to livestock and per capita income. At 80 percent ahead of the reference group, Apach, Bushenyi and Iganga emerged as better-off districts in their regions. Due to this averaging impact of having one district each with higher score, the regional index shows less dispersion than among districts from the reference group and also shows a geographical trend increasing from North to East, Centre and West. *With the poorest region having 75 percent of the reference group's human development index, the regional disparity is higher than the social one between the better-off and poor households.*

The following table gives the comparative differences in the established human development index.

Table 10: Within and Between Variations in Human Development Indices [%]

	Within	Gap From RG:[RG=100]		
Unit of Analysis	Variation	Highest	Lowest	Mean
1. All	NA	NA	NA	18
1. District	39	-36	3	21
2. Region	28	-25	3	14
3. Soc-econ	21	-21	-17	19
4. Villages	11	NA	NA	11
5. Gender	1	NA	NA	1
7. Life Cycle	2	NA	NA	2

RG = Reference Group

The overall deviation of the human development index from the reference group is 18 percent, which is almost the same as the mean difference within the socio-economic groupings. Both the within and between variations among districts is higher than the socio-economic groupings, villages, sexes and age groups and this points to the vital role regional policy plays as an instrument of equity in the Ugandan polity. Agricultural development modeling, including education, technology transfer, etc., needs to take this phenomenon into account.

Conclusions and Policy Implications

In a rural economy like Uganda, where there is an almost universal access to land and two rainy seasons offer a substantial potential for the cultivation of essential food crops, the constituents underlying the perception of poverty and the 'feeling of being poor' are bound to vary. When the criteria for being poor and non-poor were identified by the households themselves and the community at large, 70 percent of the respondents did not consider lack of food as the most important characteristic defining 'poor' and 'non-poor'. More than by their food, shelter and clothing, the rich and the very rich are distinguished by their assets, which include vehicles, houses and modern farms.

Rather than 'digging gardens', the rich and the very rich are engaged in modern farming. Mpigi and the Western districts of Ntungamo and Bushenyi and their respective regions do not only have more than the average level of better-off households but also a lower number of poor groups, which indicates that some of *the better-offs emerged from the misery of poverty through improved productivity in the West and non-farm activities in the Centre. With their average number of better-offs but lowest average and highest percentage of poor households among all the analytical categories, the female-headed households appear to have the highest level of social differentiation.* Such an aggregative household and community classification system captures not only the economic, but also the social and cultural dimensions of poverty. It is also observed that nobody mentions the most differentiating variable in other agrarian economies—ownership/access to land. Here, the nearest to a proxy for land is 'graduation' to modern farming by the rich and the very rich.

This is attributed to the minimal rate of hired labour employment even by the better-off households, the similarity of crops grown and the level of farm technology adopted, when adjusted to the size of labour. Another observation is that a differentiation based on holding size is minimal. Given the current factors and methods of production, the Ugandan rural households surveyed balance the number of consumers, labourers and the size of cultivated holdings.

The other striking characteristics of the farming systems are the very low levels of livestock units. With easy access to land, investment in the form of livestock is the more stratifying variable between the better-offs and the poor households and regions. Hence, as with the spatial trend of poverty in the critical indicator of livestock wealth, lactating cows, oxen and other livestock, the overall low percentage for ownership declines significantly from the North to the Centre through the East and culminates in the more affluent West. At the analytical category level, better-off households have twice the number of livestock owned by the poor and average households.

Output per acre decreases substantially and at statistically significant levels as one moves from the North to East, Centre and West. The productivity of better-off villages is about twice that of the poor. Average income levels vary from a very low of Ush 151,000 in Lira to Ush 835,000 in Bushenyi District. Income levels in the West and in the Central Region are thrice and twice that of the North and the East respectively. The average income of the poor villages is 63 percent for the better-off ones—a much lesser disparity than between the districts and regions. As family size increases with socio-economic status, the nearly quadruple income gap between the poor and better-off households narrows to a mere double when measured in terms of per capita income.

The highest non-farm income is earned in Mpigi, which represents the Central Region. Here, at 43 percent of the total income, non-farm activities and remittances are the highest income earners—more than farming. Non-farm income also makes up as high as 37 percent and 36 percent of the income for female-headed and young households, thus making it an important policy instrument for alleviating poverty among the poor households in general and the female-headed ones in particular.

Notwithstanding the quality of the social and physical infrastructures of the schools and despite the proximity of most households to primary schools and the recent free education programme under the UPE scheme, such facilities are still the major concern of the rural communities. While 21 percent ranked this factor as their first ambition, the equivalent for feeding family and accessing health care were 10 percent and 11 percent respectively. Compared to their total household numbers in the study, many of the average households reported having paid for health care. The similarity between the socio-economic groupings implies an inverse health cost burden on the poor.

Although produced in the rural areas, the purchase of small grains for consumption by nearly half of the rural households highlights the need for a food policy matrix to balance strategies aimed at increasing producers' income and establishing affordable prices for consumers, including the rural ones. This is because, given the 88:12 split between the rural and the urban population in the country as a whole, among those who purchase grains from the market for consumption, those dwelling in the rural areas are bound to be more than the urban ones. In all other food consuming sectors, as reflected in the urban-made standard-of-living indicators, the difference between the various socio-economic groupings is not large and among the poor and the average, there is close proximity in the range and regularity of consumption. Their human development index is less than that of the reference group—the better-off households—by only 18 percent. The overall index for the average households is almost the same. That of poor households is less than the better-off ones' by only 21 percent. Of this aggregate variation, the widest gap is due to the ownership of livestock.

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Abstract: Within the current factors and methods of production, Ugandan rural households balance the number of consumers, labourers and the size of cultivated holdings. The socially and spatially better-offs, who have more investments in livestock and family labour, enjoy higher levels of land productivity and modest improvement in their per capita income. A quarter of the total income originates from non-agricultural sectors, thereby making these sectors important avenues to poverty reduction even among the rural households.

However, expenditure by those above the Poverty Line is equal to expenditure by those below. A large gap exists between the per capita income of the better-off households compared to the poor. When a human development index, including assets, income, social endowments and other positive outcomes of the development process are computed, the differentials narrow down considerably, bringing to the fore the social and economic proximity of the rural households.

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Appendices

A.1 Districts, Counties, Sub-Counties and Parishes of the Studied Villages

District	Vill Type	Vill Name	Nos in Surv	Parish	Sub-county	County
1.Apach	POV	Cunga	26	Kungu	Akokoro	Maruzi
	BOV	Adyeda	25	Adyeda	Aduku	Kwania
Total			51			
2.Lira	POV	Aputi	25	Ado'imo	Aputi	Kioga
	BOV	Ateri	27	Banya	Amach	Erute
Total			52			
3.Soroti	POV	Ajuba	25	Iruko	Kadungulu	Kasilo
	BOV	Magengo	24	Madela	North Divison	Soroti
Total			49			
4.Iganga	POV	Bulagala	25	Bubago	Nsinze	Busiki
	BOV	Nawan'ge	24	Bikoyo	Bulamaji	Kigulu
Total			49			
5.Mpigi	POV	Kaweeli	25	Gwatilo	Budde	Katambala
	BOV	Mbiziz'a	29	Mbizzinya	Bwama	Mawokota
Total			54			
6.Bushenyi	POV	Kayonza	25			Buhweju
	BOV	Bugarama	27	ale	Kigarama	Sheema
Total			5			
7.Ntungamo	POV	Rweberere	24	Kashenyi	Ngoma	Rushenyi
	BOV	Ruguma	25	Kikoni	Ntungamo	Ruhaama
Total			49			
All	POV		175			
	BOV		181			
Total			356			

No of Households Interviewed; POV = Poor Villages; BOV=Better-off Villages.

A.2 Distribution of Gender and Life Cycle Among the Analytical Categories

	GENDER				LIFE CYCLE					
	MHH		FHH		TOT		YOUNG		OLD	
	No	%	No	%	No	%	No	%	No	%
1.0 TOTAL	254	71	105	29	359	100	183	51	174	49
2.0 DISTRICTS	[12.4,6,0.05;-0.03(.50)]						[1.4,6,.96;-00(.96)]			
2.1 Lira	31	62	19	38	50	14	25	50	25	50
2.2 Apach	41	80	10	20	51	14	29	57	22	43
2.3 Soroti	37	74	13	26	50	14	24	49	25	51
2.4 Iganga	32	63	19	37	51	14	25	49	26	51
2.5 Mpigi	33	61	21	39	54	15	25	47	28	53
2.6 Ntungamo	41	84	8	16	49	14	29	54	23	47
2.7 Bushenyi	39	72	15	28	54	15	29	54	25	46
3.0 REGIONS	[5.1, 3, 0.16; -0.04(0.45)]						[.9,3, .81; 00(.96)]			
3.1 North	72	71	29	29	45	45	54	53	47	46
3.2 East	69	68	32	32	51	51	49	4	51	51
3.3 Cent	33	61	21	39	24	44	25	47	28	53
3.4 West	80	22	23	22	40	39	55	53	48	47
4.0 VILLAGES	[6.4, 1, 0.01;-0.13(0.01)]						[.13,1,0.71;-0.01(.71)]			
4.1 BOV	115	45	63	60	178	50	89	50	88	51
4.2 POV	139	55	40	40	181	50	94	52	86	49
5.0 AGE GROUP	[1.8, 1, 0.17; 07(0.18)]									
5.1< 40	136	53	47	46	183	51				
5.2>=40	118	46	56	54	174	49				

A.3 Distribution of Socio-economic Groupings Among the Analytical Categories

	BOH		AVH		POH		TOT	
	No	%	No	%	No	%	No	%
1.0 TOTAL	37	10	161	45	160	45	358	100
2.0 DISTRICTS			[16.4, 12, 0.17; -0.09 (.08)]					
2.1 Lira	2	4	23	46	25	50	50	14
2.2 Apach	5	10	26	51	20	39	51	14
2.3 Soroti	2	4	22	44	26	52	50	14
2.4 Iganga	3	6	22	44	25	50	50	14
2.5 Mpigi	9	17	21	39	24	44	54	15
2.6 Ntungamo	6	12	27	55	16	33	49	14
2.7 Bushenyi	10	18	20	37	24	44	54	15
3.0 REGIONS			[11.1, 6, 0.08; -0.08(0.09)]					
3.1 North	7	7	49	48	45	45	101	28
3.2 East	5	5	44	44	51	51	100	28
3.3 Cent	9	17	21	39	24	44	54	15
3.4 West	16	15	47	46	40	39	103	29
4.0 VILLAGES			[4.2, 2, 0.12; 0.10(04)]					
4.1 BOV	21	12	87	49	70	39	178	50
4.2 POV	16	9	74	41	90	50	180	50
5.0 GENDER			[5.7, 2, 0.05; 0.08(.09)]					
5.1 MHH	25	10	124	49	104	41	253	71
5.2 FHH	12	11	37	35	56	53	105	29
6.0 LIFE CYCLE			[1.7, 2, 0.42; 00(93)]					
6.1< 40	16	9	87	48	79	43	2	51
6.2>=40	21	12	73	42	80	46	4	49