

## The Commodity Chain of the Household: From Survey Design to Policy Planning

**AIM:** To establish how the concept of the household is defined and used in household surveys in sub-Saharan Africa and the implications of these definitions for analyses and policy-making.

### **OBJECTIVES:**

- Review of definitions and applications of the concept of households in household surveys in sub-Saharan Africa, post 1970.
- Review the understanding and awareness of varying concepts of the household by key international and national producers and consumers of household survey data.

### **CONTEXT AND RATIONALE:**

The practicalities of data collection and the need for meaningful data analysis (e.g.: demographic, socio-economic) and policy formulation require a social unit to be defined. In practical terms, this basic social unit is generally referred to as a household. The ‘household’ is almost universally used as a unit of enumeration, and is a “fact of life” for the analyst (van de Walle, 2006), although evidence from diverse disciplines (sociology, anthropology, demography, economics) have noted that the household as defined by survey practitioners frequently bears little resemblance to the social units that people live in (Rao, 1992).

Household sample surveys are integral to planning for development in most poor countries and there is a growing demand for demographic and socio-economic data to inform development strategies in general. The last four decades have seen a large expansion in requests for, and provision of, such data. A series of international conferences and world summits identified indicators for targets, monitoring and evaluation, supported by efforts to improve the quality of survey data in developing countries (1981-95: National Household Survey Capability Programme). This demand received further impetus from the Millennium Development Goals (MDGs). Household surveys are the most effective (time and cost) way of providing that evidence, alongside routinely collected census and administrative data. There are 48 key indicators for the MDGs, and household surveys identified as key to their monitoring and evaluation include LSMS, DHS, MICS, Child Labour Surveys, World Health Surveys, and CWIQ<sup>1</sup>. Household sample surveys are now “indispensable” (UN, 2005: 4) for development planning. Recent efforts have emphasised the need to improve the quality of household survey activities from planning to design to execution and analysis. The Marrakech Action Plan for Statistics (MDR, 2004) emphasises the need to improve the collection and use of existing nationally representative household surveys rather than develop entirely new data collection mechanisms (Action 4). In 2005 the UN produced “state of the art” (p.iii) publications on aspects of conducting household surveys in developing countries. However, despite international support for household surveys as providers of development planning data, virtually no attention is paid by international and national agencies to the issue of what a household is, how it may have been defined for data collection purposes and what this means for interpreting analysis and outputs.

Most nationally-representative household surveys in developing countries use a multistage survey design for reasons of cost (UN 2005), with the sampling frame usually derived from the census. The UN (1997) defines a household as ‘based on the arrangements made by persons, individually or in groups, for providing themselves with food or other essentials for living’. This definition is somewhat Eurocentric, lending itself well to representing stable nuclear conjugal family units, but more problematic when forming the basis for data collection in sub-Saharan African countries where prevailing models of social organisation may be much more diverse and flexible (van de Walle 2006). Recognising that, for a census, it is essential that each individual is counted once and once only, national statistical offices have tended to use (or only modify marginally) this UN minimal definition of a household that reduces the possibilities of omission or double counting. Such a household definition has wide-ranging ramifications because it takes the smallest (generally, Anglophone countries *de facto*, Francophone *de jure*) existing residential/consumption group, which is often substantially smaller than the economic cooperating group. Because the census determined ‘household’ is integral to the construction of national sampling frames from the census (e.g.: NASSEP, Kenya, National Master Sample, Tanzania), household survey practitioners are implicitly working with a potentially biased

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<sup>1</sup> World Bank: Living Standard Measurement Surveys. USAID: Demographic and Health Surveys. UNICEF: Multiple Indicator Child Surveys. CWIQ:Core Welfare Indicators Questionnaire

sample. Whilst this minimal ‘household’ may be an effective practical definition for a *de facto* census as a count of population, it is much less useful if one wants to understand social and economic dynamics at the level of the locally important social unit, itself also understood by both researchers, analysts and policy makers to be something called a ‘household’. Thus, despite recognizing that, ‘*the household is central to the development process. Not only is the household a production unit but it is also a consumption, social and demographic unit*’ (GoK, 2003:59), the unit used in most household surveys is usually not the locally understood and lived basic social unit. A preliminary review of LSMS and DHS documentation reveals that most manuals take the definition of a household for granted, often based on the census definition. A review of the DHS precursor, the WFS, concluded that there was a serious lack of evidence about the extent of error due to ambiguous household definition (Scott and Harpham 1987), but no analyses were published. The result is a type of ecological fallacy. By collecting data on the household, even if these data are at the individual level, an *a priori* and acontextual definition of the household, forces conclusions to be drawn about something (a survey household), that in reality might not exist.

A linguistic dimension arises from the use of the word ‘household’ for the minimal data collection unit, which can probably be understood as a legacy from Europe where modern censuses developed and where such minimal data units were, usually, the basic residential, social and economic unit of society. For the practicalities of data collection and meaningful analysis, some kind of social unit must be defined, and a minimal residential household has a physical presence that is bounded and distinct (Hosegood & Timaeus, 2006). The logistical advantages of such residential groups are many because they tend to be associated with a particular physical location, and a fixed structure, thus facilitating mapping, listing, finding and interviewing. However, through linguistic elision of two concepts called ‘household’ a situation arises whereby there is an implicit assumption that such units are not only units of residence but also of production and consumption, and are often also related through marriage and kinship. The situation is made more complex and subject to both bias and misinterpretation by the use of the same term ‘household’ for such potentially different social units.

## **REVIEW OF EXISTING RESEARCH**

Household survey evidence is critically important for the development planning process (*cf* MDGs). We now focus on a review of ways in which standard definitions of households in these surveys may result in misreporting and / or under-enumeration biases for analyses and policy planning, and consider: intrahousehold resource allocation; poverty mapping; sex of the household head; and cash transfer payments.

Intrahousehold resource allocation is a key issue in the construction of development policies in a range of spheres, including: nutrition, gender-based violence, fertility determinants and environmental degradation (Haddad et al, 1996). For example, understanding intrahousehold decisions about food allocation can determine the beneficiaries of health and nutrition interventions (Abdullah and Wheeler, 1985; Doss, 1996), with recent impetus in sub-Saharan Africa added as a result of the HIV pandemic (Zivin et al, 2006). Studies of intrahousehold resource allocation tend to rely on household surveys with *a priori* definitions of the household (ethnographic work is much less well-represented; exceptions include Duflo & Udry, 2003). Fafchamps (1998) argues that whilst such approaches generally suffice in settings where the nuclear family model is dominant, research tends to have serious shortcomings in settings where the social unit is larger and/or more complex and cites examples from vertically integrated households. Recent work has been based on individual-level production and consumption data from household members, resulting in a series of new theoretical frameworks, including bargaining frameworks, Pareto efficiencies, and models of intrahousehold conflict (Haddad et al, 1997). However, scant attention is paid to the issue of how the household differs in reality from the household definition used in the survey. Analyses based on such surveys tend to exclude households that do not conform to some standard definition. For example, Bhalotra & Attfield’s (1998) study of intrahousehold resource allocation in Pakistan used a household survey (n=18,000 households, but removed all households with more than 20 members (accounting for more than 50% of the sample). No doubt such households were significantly different in many dimensions from those with fewer than 20 members. Quisumbing & Maluccio’s (2000) work on intrahousehold allocation in four countries attempted to integrate qualitative information into a cross-national comparable household survey on intrahousehold resource allocation, but then restricted their analyses to currently married husband-wife couples, thereby excluding many other types of households. This exclusion had particularly serious implications for the conclusions they were able to draw from South Africa.

Poverty mapping, a key tool in intervention design (Bigman & Fofack 2000, Bigman *et al.* 2001), relies heavily on accurate household definition in terms of incomes and access to resources. Poverty mapping is generally based on linking detailed household budget survey data with census household data (Benson *et al.* 2005, Hyman *et al.* 2005, Government of Kenya 2005, United Republic of Tanzania 2005). In contexts where there is significant temporal change in household composition (e.g.: temporary rural-urban migration, mining communities), interventions based on standard household definitions could bias (in both directions) the derived poverty level (Hentschel, J. & Lanjouw, P. 1996; Lanjouw, P. 1998). Poverty mapping can contribute to identification of recipients of household cash transfers, and pilot studies have tested their utility in a sub-Saharan Africa setting (Save the children UK 2005, Schubert, 2005). Because cash transfers are allocated on the basis of household needs and composition, again generally based on standard household surveys, such surveys might ignore significant household income streams such as remittances from members of the social unit resident elsewhere. Even where poverty mapping is used to identify pockets of poverty above the household level, data on numbers of poor households or poor individuals from poor households are a critical stage in identifying the poor (Bigman *et al.*, 2001; Krisjanson *et al.* 2006), yet the research which regularly discusses the reliability of such mapping never mentions the fundamental reliability of the baseline unit at which most data were collected – the household.

Gendered development interventions have focused on linkages between poverty and female household headship, with targeted interventions (Buvinic and Gupta, 1997). However, the common practice of classifying households according to the sex of the reported household head can result in misleading conclusions. For example, Lloyd & Brandon (1993) and Rosenhouse (1989) reveal that a significant proportions of households reported as male-headed were in reality maintained by women in Peru and Ghana, respectively; whereas in Kenya and Tanzania the treatment of polygamous households in the census has the opposite effect of inflating female headed households<sup>2</sup>. Mis-reporting of the *de facto* household head versus the survey definition of household head can cause erroneous conclusions to be drawn about the relationship between sex of the household head and child poverty (Handa, 1994). Using standardised minimal definitions of household in a polygamous setting, or in a context where there is substantial mobility of adult men either for local production (pastoralism, fishing) or labour migration can result in the enumeration of excess small female headed households, apparently without an adult male (Randall 2006). One consequence of this is substantial problems in identifying, for example, mean household size, available income, and access to material resources. The consequences can be seen in the Kenya Poverty Report (GoK, 2005), where of the 33.8% female-headed rural households, many are in reality probably headed by polygamous men. Poverty may be exaggerated by such a household definition because, where assets are owned by a man but all his wives and children benefit from them, such assets will be invisible for ‘households’ where the man is not recorded.

Narrow conceptions of the household are inadequate at dealing with issues of population migration. For example, what time-bounded definition specifies whether an individual is a member or is excluded? If individuals, for example migrants, can have multiple belongings, then this is problematic for analyses which are predicated on the understanding that each individual only has one household to which they are attributed. There are many significant relationships with social, economic and demographic outcomes that operate beyond, between and within households. Thus, the concept of the household is not just about where an individual lives (or sleeps in the strict sense of many survey and census definitions) but also about where they obtain allegiance and support (political, kin, practical) (Adams *et al.* 2002), access to resources (political, economic, subsistence, social, cultural), opportunities (employment, marriage) and obligations (possibly reciprocal). There are also negative outcomes of membership, which might include exposure to risks of morbidity and mortality (Sauerborn *et al.* 1996, Bhuyia & Chowdhury 1997) or violence (Mumtaz & Salway, 2005). These multiple relationships are critical because they have impacts on socio-demographic outcomes. For example, co-residence with mother-in-law has been shown to impact on gendered child health outcomes in Asia (D’Souza & Chen, 1980; DasGupta, 1987) and on child welfare in Kenya (Whyte & Kariuki, 1991).

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<sup>2</sup> Government of Kenya ‘In a polygamous marriage, if the wives are living in separate dwelling units and cook and eat separately, treat the wives as separate households. The husband will be listed in the household where he will have spent census night’ (from Republic of Kenya, Enumerators’ Instructions Manual p8)

Standard household definitions developed in settings (e.g.: Europe) where nuclear families are the main form of living arrangement. Hence areas where ethnographic data suggest that many characteristics of households are likely to differ from the European norms are likely to experience most problems and distortions by imposing a Eurocentric household definition. However having identified the scale of the problems with household definition where it is likely to be particularly self-evident, the lessons learnt can also be applied to contexts where the scale of differences may be reduced but the situations are similar.

## ***RESEARCH METHODS, DATA AND ANALYSES***

### **Survey document review**

**Aim:** To understand how the concept of household has been used in household surveys in sub-Saharan Africa.

**Methods:** Review of existing household surveys in sub-Saharan Africa post-1970 and censuses post-1950.

**Analysis:** Textual analysis of description of differences in standard household definitions by country, survey types and/or linguistic grouping, including whether household definitions have changed over time.

### **In-depth interviews with household survey producers and consumers**

**Aim:** To identify how the concept of the 'household' is produced, understood, interpreted and used at all the different stages of the data production and utilisation chain.

#### **Methods:**

- Review of household survey documents (e.g.: enumerators' manuals, methodology reports)
- Semi-structured interviews with key informants:
  - o Producers of data: individuals in charge of census and diverse surveys, demographers in charge of the practicalities of survey planning, cartographers, trainers of interviewers, professional interviewers, casually employed interviewers, academics.
  - o Commissioners and users of data: statisticians or information officers from key government departments who both commission and use household survey data for planning and interventions; senior policy makers in key government departments; international organisations (e.g.: UN, WFP, UNICEF, EU, UNDP, UNFPA, World Bank, USAID, DFID) and NGOs (e.g.: Oxfam, Care, World Vision)
- The interviews focus on:
  - o Understandings of the concept of household as used in survey data collection
  - o Awareness of which types of individuals are/are not included in survey 'households' and why they are excluded
  - o Perceptions of the divergences (if any) between survey 'households' and their own experience of the primary social units in that country
  - o Understanding of the survey 'household' as a unit of residence, economic production, consumption, kinship, and other organisational principles
  - o Perceptions of the general and specific validity of the survey 'household'
  - o Attitudes towards the importance of 'household' as a basic social unit
  - o Understanding and representation of the concept of 'household head'

**Analysis:** Recorded interviews transcribed and translated verbatim and analysed for both content and language used. Noted where there are particular social groups (ethnic or economic or marginalised populations) for whom household structure is considered to be particularly problematic) and the vocabulary used to describe their residential arrangements. Content is analysed to ascertain respondents' knowledge and understanding of the conventions dictating household definitions in that country and whether there are steps in the chain of data production and analysis where unfounded assumptions are made about how 'household' has been used.