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This volume aims to shed light on the question of “time poverty” in Sub-Saharan Africa and its relationship with consumption-based measures of poverty, as well as other development outcomes. Time poverty, especially as seen in the “double workday” of women, has long been a staple of discussion of women’s situation in Africa. Yet it is not always clear what is meant by time poverty, how time poverty is measured, or what actions are required to tackle time poverty once identified. The papers presented in this volume seek to address these questions by reviewing the existing literature and analyzing new data available in time use modules of household income and consumption surveys in several African countries. The objective is to provide guidance and examples of how to define and measure time poverty, and also to address ways through which a better understanding of time poverty can inform poverty diagnostics, national poverty reduction strategies, and the design and implementation of development interventions.

Time Use and Africa’s Development

Perhaps nowhere is the asymmetry in the respective rights and obligations of men and women more apparent than in the patterns of time use differentiated by gender, and the inefficiency and inequity they represent. Both men and women play multiple roles (productive, reproductive, and community management) in society (Moser 1989; Blackden and Bhanu 1999). Yet while men are generally able to focus on a single productive role, and play their multiple roles sequentially, women, in contrast to men, play these roles simultaneously and must balance simultaneous competing claims on limited time for each of them. Women’s labor time and flexibility are therefore much more constrained than is the case for men. Comparative time use data reflect these constraints, though it is particularly difficult to capture “simultaneous” tasks and to measure the “intensity” of work, whether for men or for women. The gender division of labor defines women’s and

men's economic opportunities, and determines their capacity to allocate labor time for economically productive activities and to respond to economic incentives. Although some of these differences in time allocation can be explained through economic factors, in many societies these are secondary to non-economic factors in determining time use patterns (Ilahi 2000).

Gender-differentiated time use patterns are affected by many factors, including household composition and life cycle issues (age and gender composition of household members), seasonal and farm system considerations, regional and geographic factors, including ease of access to water and fuel, availability of infrastructure, and distance to key economic and social services such as schools, health centers, financial institutions, and markets. But social and cultural norms also play an important role both in defining, and sustaining rigidity in, the gender division of labor. This is most evident in the division of responsibilities between productive (market) and reproductive (household) work. In addition to their prominence in agriculture and in much of the informal sector, women bear the brunt of domestic tasks: processing food crops, providing water and firewood, and caring for the elderly and the sick, this latter activity assuming much greater significance in the face of the HIV/AIDS pandemic. The time and effort required for these tasks, in the almost total absence of even rudimentary domestic technology, is staggering.¹

It is important to examine time use in Sub-Saharan Africa and to address its policy and operational implications for at least three reasons. First, time use data in Sub-Saharan African countries show what people actually do in their daily lives, and therefore provide important information on work and on labor allocation within households. Second, in doing this, they make apparent not only that there is a division of labor, in that different people do different things, but also that differences in how men and women use their time are of considerable importance in understanding poverty in Africa—the gender division of labor is especially significant. Third, time allocation data reveal not only the substantial market economy contributions of men and women to Africa's development, but also, and just as importantly, the existence of a whole realm of human activity—what is termed here the “household economy”—that is largely invisible and uncounted in economic data and in the system of national accounts (SNA).²

Examination of time use data therefore performs the critically important function of giving policymakers and development practitioners a much more complete and comprehensive picture of employment and labor effort than would otherwise be afforded by labor force data alone. This is done by making visible and providing quantified estimates of non-market contributions to total household production and welfare, alongside market-based

1. Some studies have found high correlation between opportunity costs to the household of children's time and enrollment figures. In Tanzania, on average, the opportunity cost for families to send girls to schools is significantly higher than that of boys. If boys from 13 to 15 years old are in school, households lose about 25 hours of work per week. For girls of the same age, they lose about 37 hours of work (World Bank 1999). Boys may drop out of school to herd, farm, fish, hunt or to engage in petty trade. For girls, the main reasons for dropping out are pregnancy, parental concerns about toilet facilities, long distances, and lack of security.

2. Ironmonger estimates, for example, that labor market employment statistics cover less than 50 percent of all work performed, and that the regularly published labor statistics cover perhaps 75 percent of men's work and 33 percent of women's work. See Ironmonger (1999).

work. Because these contributions are essential for family survival, it is important for policymakers and development practitioners to focus on them explicitly. Non-market labor is of particular importance from a gender standpoint, as the household economy is where women predominantly work.

One of the most important insights from gender analysis of time use in Sub-Saharan Africa is that there are synergies, and short-term tradeoffs, between and within market-oriented and household-oriented activities—economic production, childbearing and rearing, and household/community management responsibilities. These assume particular importance because of the competing claims on women's labor time in most environments. There are interconnections between rural development and transport (Barwell 1996), between education, health, and fertility, between girls' education and domestic tasks, and within the population/agriculture/environment "nexus" (Cleaver and Schreiber 1994). Other critical interconnections illuminated by time use studies exist between the time spent (mainly by women and very young children) preparing and cooking meals in degraded and polluted environments and health, as reflected in high levels of acute respiratory infections related to exposure to air pollutants (for an articulation of this issue in Uganda, see Green 2005). Several studies document that workload constraints limit the likelihood that children will be taken to health posts for vaccinations, or that sick children or family members will access health care in a timely manner. As argued by the World Bank (2006), there is a critically small "window of opportunity" for addressing undernutrition in children, which in turn hinges on timely access to food, including time for breastfeeding and timely preparation of meals in the first two years of life—a period in which, according to time use survey data, women with young children are likely to be especially heavily burdened with work. Building on these cross-sectoral interconnections can have positive multiplier effects for growth and poverty reduction.

A related insight is that some time uses are indispensable, as argued by Harvey and Taylor (2000) when they refer to "household time overhead." This concept refers to the minimum number of hours that a household must spend on the basic chores vital to the survival of the family, that is, the time spent preparing meals, washing clothes, cleaning, fetching water, and gathering fuel for cooking and heating. They argue that, in general, a household with low household time overhead will be better off than a household with high time overhead, though they recognize that the impact of the time overhead will in turn depend on the number of adults and children available to assist in performing these tasks.

Tradeoffs in time allocation, and sometimes harsh choices, are at the core of the interrelationship between the "visible" market and "invisible" household economies, given the simultaneous competing claims on women's—but not men's—labor time. There are tradeoffs between different productive activities, between market and household tasks, and between meeting short-term economic and household needs and long-term investment in future capacity and human capital. The work burden on women, and the disproportionate cost borne by women of reproductive work in the household economy not only limits the time women can spend in economic activities but restricts them (spatially and culturally) to activities compatible with their domestic obligations (Blackden and Morris-Hughes 1993). A review of the relationship between female headship and poverty found that the reasons for greater poverty among female-maintained families lie not in structural factors

in household composition, such as higher dependency ratios, or in gender-related differences in economic opportunity, but in the combination of the two. Where women heads of households have no other adult women to fulfill home production or domestic roles, they face greater time and mobility constraints than do male heads or other women, that in turn leads to lower paying jobs more compatible with childcare (Buvinic and Rao Gupta 1997). The review cites evidence from Malawi indicating that female farmers were inclined to limit their labor time in farm activities due to a heavy commitment to domestic chores, while responsibility for children and housekeeping made it difficult for female heads to opt for regular or off-farm labor activities to increase their earnings. Because they must carry out their multiple roles simultaneously, and because the “household time overhead” is not dispensable, women can only engage in directly productive economic activity (whether measured or not) after or in conjunction with the discharge of their domestic responsibilities. Balancing competing time uses, in a framework of almost total inelasticity of the gender division of labor, presents a particular challenge to reducing poverty. In many circumstances, necessary and essential actions, including both directly productive tasks and meeting the “household time overhead,” must *compete* for scarce labor time.

Here too, though, the situation is not necessarily straightforward. The idea that poverty is a function of time as well as money is not new, as this was articulated by Vickery in 1977 (see Harvey and Taylor 2000). Time poverty and income poverty may reinforce each other with negative consequences for individual and household well-being. For example, the sheer drudgery and low productivity of many non-market tasks, which are time- and labor-intensive, reduces the availability of time for household members engaged in such tasks to participate in more economically productive activities. Given that such tasks are primarily carried out by women, this means that women in particular are less likely to be able to take full advantage of economic opportunities, to respond to changing market conditions and incentives, and to participate in income-generating activities.³ Time poverty also impedes individuals’ ability to expand their capabilities through education and skills development that could enhance economic returns in the market place. However, the question can also be asked in a different way, namely: to what extent could more time spent working (but without making a larger share of the population time poor) help reduce poverty? The logic is then inverted, by showing that even if many men and women work a lot, there may be a reserve of time that, if jobs were available, could be tapped to reduce consumption poverty. Said differently, there are circumstances in which under-employment is widespread, at least at certain periods of the year, and “time poverty” as such does not appear to be the main constraint that prevents the consumption poor to escape poverty.

The above discussion suggests that the time problem is a key component of the more traditional poverty problem, and one which deserves more attention in poverty diagnostics and Poverty Reduction Strategy Papers. A possible avenue for further research is to define more precisely the “household time overhead” and to link it with other dimensions of time use. This would allow for more exact specification of when the household time

3. The wider set of issues linking gender inequality and economic growth are beyond the scope of this paper. Discussion of these issues can be found in World Bank (2001), Blackden and Bhanu (1999), and Gelb (2001).

overhead becomes a constraint on labor use for other tasks, and constitutes a form of time poverty even in environments of under- or unemployment where total time use does not appear to be a constraint. More generally, omission of the household economy from conventional development planning means that:

- The picture is incomplete and our understanding of the total labor effort of households is insufficient—much of what we are (or should be) concerned with occurs in this invisible realm;
- There is a tendency to make misleading assumptions about labor availability and labor mobility treating, for example, women’s capacity to undertake unpaid domestic labor as “infinitely elastic” (Elson 1993)—overlooking the differences in men’s and women’s contributions to household time overhead can lead to inappropriate policies which have the unintended effect of raising women’s labor burdens while sometimes lowering those of men;
- We do not invest in (or prioritize) what is not there—if the household economy is not visible to policymakers and planners, they are unlikely to prioritize investment in it; and
- We do not see the tradeoffs among different tasks and activities, and, by extension, do not place reducing or minimizing these tradeoffs at the core of our response—nor do we see sufficiently the positive linkages, and prioritize the benefits from these linkages in our actions.

Brief Overview of the Contributions in This Volume

Many of the above considerations were reflected in the policy research report “Engendering Development” (World Bank 2001) that addressed the link between time poverty and income poverty as well as growth. Indeed, “time poverty” is not a new concept. Time constraints have been articulated as a central development problem for Africa for many years. Data from two village surveys in the Central African Republic in 1960 confirm the longevity of gender-differentiated time allocation burdens. In one village, men work 5.5 hours per day, women more than 8 (Berio, 1983). The conclusion of this study is particularly interesting: Rural modernization for improving productivity increases women’s workload and reduces men’s working hours. “In these conditions, any programme of rural modernization will soon reach its limits, unless planners can force men to work more on agriculture, and also to release women from part of their workload.” Time—women’s time in particular—can be the scarce production factor in a development process.

The papers presented in this volume are intended to make a contribution to a long-standing debate and field of analysis. The first part of the volume comprises two papers devoted to reviews of the literature and empirical evidence to date on time use and time poverty in Sub-Saharan Africa (SSA). Chapter 2 presents an overview of the “time poverty” problem in SSA. It presents a simplified conceptual framework for analysis of the overlapping domains of work, when market-based and non-market work are combined into a more comprehensive view of total household production. It discusses methodological issues associated with time use surveys, paying particular attention to questions of how work is defined in different frameworks (a topic that is addressed further in Chapter 3).

It also raises issues relating to how intensity of work, and simultaneity of tasks can be captured in time use surveys, and how this can be pursued in analysis. The paper then reviews some of the available literature in SSA on time use, paying particular attention to time problems associated with care for people suffering from HIV/AIDS, and the paper finds that this issue has not received sufficient attention in time use analysis, despite its clear significance in SSA. This is clearly an area requiring much more research and analysis in future, to inform strategies for coping, treatment, and mitigation of the effects of HIV/AIDS. The paper focuses in particular on the importance of developing infrastructure in SSA in ways that are more closely aligned with alleviating the time burdens of household economy production and which are accessible to women, so that they specifically lessen their time burdens.

Chapter 3 picks up on the question of how work is defined, and traces the more recent changes in, and limitations of, the System of National Accounts (SNA), in terms of how these changes capture unpaid non-market work. While some unpaid work is included in the SNA (defined as “contributing” labor), there is still a considerable amount of unpaid, non-market work in the household economy that is not in the SNA, and that is, economically speaking, invisible. The chapter then documents the findings of national time use surveys in several SSA countries, which provide a descriptive foundation for looking more widely at total household production. What these surveys tell us, along with much of the other time use literature in SSA, is how extensive and significant such non-market, unpaid time use is, and that the household economy, if counted, would be one of the largest economic sectors in terms of the labor (time) allocated to it, and the output that it produces.

Part II of the volume comprises two chapters devoted to the measurement of time poverty, with data from Guinea and Malawi. In Chapter 4, it is argued that the availability of better data on time use in developing countries makes it important to provide tools for analyzing such data. While the idea of “time poverty” is not new, and while many studies have provided measures of time use and hinted at the concept of time poverty, we have not seen in the literature formal discussions and measurement of the concept of time poverty alongside the techniques used for measuring consumption poverty. Conceptually, time poverty can be understood as the fact that some individuals do not have enough time for rest and leisure after taking into account the time spent working, whether in the labor market, for domestic work, or for other activities such as fetching water and wood. Said differently, for those who are working long hours, the time constraint makes it necessary for individuals to make hard choices in terms of to what they allocate their time, with these hard choices having implications for the welfare of individuals and the household to which they belong. Unlike consumption or income, where economists assume that “more is better,” time is a limited resource—more time spent working in paid or unpaid work-related activities means less leisure, and therefore higher “time poverty.” The objective of Chapter 4 is to demonstrate with data from Guinea how one may apply the concepts used in the consumption poverty literature to time use, in order to obtain measures of time poverty for a population as a whole and for various groups of individuals.

Chapter 5 is devoted to the issue of seasonality in time use with an exploration of data from Malawi. The available empirical evidence for Malawi and for many other developing countries suggests the existence of labor shortages at the peak of the cropping season, with negative impacts on the ability of households to make the most of their endowments such as land. At the same time, for most of the year, there is substantial underemployment, especially

in rural areas. It could therefore be argued that seasonality in the demand for labor is leading to both underemployment and labor shortages. To assess the validity of this argument, Chapter 5 provides basic descriptive data from a 2004 nationally-representative household survey to assess the typical workload of the population. The data do confirm the presence of strong seasonality effects in the supply of labor, as well as substantial differences in workload between men and women due to the burden of domestic work, including the time spent for collecting water and wood.

The last part of the volume also comprises two chapters devoted to the implications of time use and time poverty for development outcomes. Chapter 6 looks at the link between underemployment and consumption-based poverty. Despite already long working hours for many household members, and especially women, underemployment is nevertheless affecting a large share of the population in many developing countries. Using the same data on time use as in Chapter 4, as well as data on wages and consumption levels from the household survey for Guinea, the chapter provides a simple framework for assessing the potential impact on poverty and inequality of an increase in the working hours of the population up to what is referred to as a full employment workload. The framework provides for a decomposition of the contribution to higher household consumption of an increase in working hours for both men and women. The key message is that job creation and full employment would lead to a significant reduction in poverty, even at the relatively low current levels of wages and earnings enjoyed by the population. However, even at full employment levels, poverty would remain massive, and the higher workload that the full employment scenario would entail would be significant.

Finally, Chapter 7 looks at the links between welfare, time use, and other development outcomes in a case study of orphans in Rwanda. One of the aspects of the orphan crisis in Sub-Saharan Africa indeed relates to time use, both in terms of where orphans end up living and what they spend their time doing in their new household of adoption and in terms of the burdens of care. While some orphans are welcomed in centers and institutions, many live with relatives or other members of their communities, and some others are welcomed by families which are not directly related to them. Orphans are in many ways better off when welcomed by relatives or other families than when living by themselves or in institutions, but there are also concerns that the orphans (and especially girls) that are welcomed in some families may be required to provide more help for the domestic tasks to be performed, with the resulting time pressure in terms of workload preventing them from benefitting from the same opportunities in education and other aspects of their development as other children. The objective of the chapter is to conduct preliminary work to test this assumption using recent household survey data from Rwanda, paying attention not only to traditional variables of interest such as school enrollment, child labor and time use, but also with an eye to assessing other dimensions of welfare.

What Next? Some Areas for Further Research

A workshop was held at the World Bank in November 2005 to discuss all the papers presented in this volume except the Rwanda case study (which was added to broaden the scope of this volume), and to raise issues and concerns relating to the concept, measurement, and implications of “time poverty.” Some of the key points raised at the workshop

are summarized below. Participants noted that even the descriptive data on comparative time uses of men and women were striking in revealing gender-differentiated work burdens, especially in relation to how things have evolved in the context of HIV/AIDS, and notwithstanding the continued lack of adequate data in this area. Shaping the analytical agenda was of concern to many participants, including making better use of existing data, generating new data, and linking the discussion of time poverty to the wider questions of gender inequality in access to and control of resources, addressing the implications of time poverty for women's labor force participation, looking at child labor issues, and tackling the operational question of what investments are required to have the maximum positive impact on reducing time poverty and improving other development outcomes, especially those related to the Millennium Development Goals.

A related set of concerns articulated at the workshop was to pay explicit attention to the time demands of development programs, and to look in a more focused manner at what development outcomes are affected by time poverty. This was especially the case with respect to health and child welfare. Some participants suggested that beyond the definition of a time poverty line (a specific amount of time worked), it will be important to pay more attention to the productivity of time use and to the ways in which time is used. In addition, it was pointed out that in some situations, not having the time (opportunity) to engage in directly productive work can also be seen as an important issue (related to underemployment), just as working more hours and earning more can often be seen as a good thing. Data quality, measurement error, classification of tasks, and capturing both simultaneity and intensity of work, were also raised by participants as issues for further work. These issues all merit further attention in taking the analysis of time poverty forward.

Key challenges identified at the workshop include that of communicating effectively what the time poverty problem is, and how to address it. It is critical to focus attention on development outcomes (informing the "results agenda") that time poverty most affects. This in turn requires much more focus on technology, including labor-saving technology accessible to women to reduce the burden and drudgery of household tasks. In this context, the renewed focus on infrastructure, for example in the World Bank's Africa Action Plan, while welcome, needs to be directed toward meeting the specific needs of the household economy.

For example, the gender division of labor in transport tasks, as revealed in time allocation data, leaves women with by far the most substantial transport task in rural areas. These figures equate to a time input for an average adult female ranging from just under 1 hour to 2 hours 20 minutes every day. Water, firewood, and crops for grinding are transported predominantly by women on foot, the load normally being carried on the head. Village transport surveys in Ghana, Tanzania, and Zambia show that women spend nearly three times as much time in transport activities compared with men, and they transport about four times as much in volume (Malmberg-Calvo 1994). What would happen if all households in SSA were no more than 400 m (about a six minute walk) from a potable water source—a national target once set by the Government of Tanzania—or if woodlots or other sources of household energy were no farther than a 30-minute walk? Barwell (1996) summarizes the results of such analysis in five settings. In the Mbale district in Eastern Uganda, more than 900 hours/year could be saved if these proximity targets were met. This represents a considerable outlay of household time and energy, predominantly by women, amounting to the equivalent of a half year of 40-hour work weeks.

Public policies could have a significant impact on the heavy time burden of domestic work through investment in the household economy. Such investment would aim to reduce the “household time overhead” discussed earlier, and thereby directly relieve the time burdens on women and reduce the tradeoffs among competing uses of scarce labor. Infrastructure to provide clean and accessible water supply, and energy focused on domestic requirements (notably for cooking fuel) is especially critical, in view of its multiple benefits. Labor-saving domestic technology relating to food processing is likely to have a greater immediate impact in raising the productivity and reducing the time burdens of many women. Transport interventions need to reflect the different needs of men and women, so as to improve women’s access to transport services (including intermediate means of transport), commensurate with their load-carrying responsibilities. These investments in the household economy have substantial payoffs in increased efficiency and growth in the market economy. Energy policy and investment priorities need to focus on alternative energy sources, and to address the domestic energy needs of households, especially as concerns fuel for cooking. This will have important multiplier effects on improving health, saving time, and enabling girls to go to (and stay) in school. Investing in labor-saving technologies accessible to women, and focused on reducing the considerable time and effort expended to transform and process agricultural and food products—a time expenditure often greater than the time required to grow and harvest the crops in the first place—deserve high priority.

A critical task for public policy, as articulated in country Poverty Reduction Strategies, should then be to promote concurrent investment across a range of critical sectors aimed at minimizing or eliminating the tradeoffs, and building on synergies identified earlier. Concurrent investment to alleviate the household labor constraint disproportionately affecting females will go a long way to helping to realize the benefits of investment in human development. Investing in cleaner domestic energy sources will have very important multiplier effects on achievement of both education- and health-related Millennium Development Goals. It could actually be argued that access to basic infrastructure provides double benefits by reducing the time spent on domestic chores and the fetching of wood and water, and also increasing the realm of small business opportunities and production activities made feasible thanks to water and electricity.

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