Labor Force Participation, Gender and Work in South Africa:

What Can Time Use Data Reveal?*

by

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ABSTRACT

The utilization of time use data for exploring employment issues has received little attention in economic analysis. Using data from the 2000 South African national time use survey we argue that a gender-aware understanding of how men and women organize their daily life can help identify labor market and subsistence work that are missed in labor force surveys, thus complementing the information they provide. Further, information on the time spent in job-related search and household work provide insights on the interconnectedness of gender inequalities in the labor market and within the household. Our analysis of the time use patterns of 10,465 working age women and men, shows that a non-trivial proportion of men and women classified as either ‘not in the labor force’ or ‘unemployed’ actually engaged in subsistence, temporary and casual forms of employment. Secondly, we find that regardless of their labor force status, women’s and men’s hours of unpaid work do not vary greatly. These affect not only employment options of women but also their ability to look for work. Thirdly, time use data helps identify the salient characteristics of these individuals and the type of occupations they are engaged.

Keywords: time allocation, gender, labor force participation, South Africa.

JEL Codes: E24, J22
I. Introduction:

There have been many studies analyzing South Africa’s labor market problems, particularly its high unemployment and slow employment growth. The high unemployment problem, however, is only one aspect of the labor market conundrum. Like other developing countries, job insecurity and the growth of low quality types of employment are important concerns in South Africa. We examine in this paper South Africa’s labor market situation by analyzing people’s use of time, with data obtained from the 2000 South Africa National Time Use Survey (TUS). Though not designed to focus on the labor market, the TUS offers useful information for exploring the participation of women and men in the labor market and for examining the time allocated to other economic activities. We demonstrate that the information regarding how individuals use their time and organize their daily life can provide useful insights on crucial labor market issues. It allows us to identify the economic contributions of men and women that are likely missed or overlooked in labor force and other surveys. We argue that time use information is helpful in understanding work activities that are not adequately captured by standard labor force indicators such as subsistence farming, fishing and hunting activities, irregular, very short-term and sporadic types of employment, and unpaid household work including cooking, cleaning, shopping and care for children, sick and elderly. They also help us better understand the nature of these activities that are underestimated and little understood, and who are likely to perform them.

In recent years, a growing number of researchers have focused attention on the prevalence of low quality jobs and precarious livelihoods in South Africa (Miriam Altman 2007, Michael Aliber 2003, Colette Muller 2003, Geeta Kingdon and John Knight 2001, 2004). Although South Africa has several social safety nets (e.g. the old-aged pension and child support grant) in place, it is important to note that there are no social programs aimed specifically at providing support to the long-term unemployed.¹ Thus, the unemployed have to seek out whatever paid work opportunities they can find, however inadequate or temporary, in order to
survive. The realities associated with precarious jobs precariousness and casual and very short-term jobs can be so disempowering that in several cases, workers either become discouraged or view themselves to be no different from the unemployed (Hans de Witte 2005, Geeta Kingdon and John Knight 2004).

There are crucial gender dimensions regarding the opportunities and constraints faced by workers in the labor market. Women’s ability (or lack thereof) to find labor market work is closely linked to their gender roles and to the amount of unpaid work for household maintenance and care work that they perform. Much of the growth in employment since the end of apartheid, especially for African women, has been in relatively low-skilled informal sector jobs that allow time flexibility but also yield lower earnings (Richard Devey et al, 2006; Daniela Casale and Dori Posel, 2002; Abhijit Banerjee et al, 2007). This trend is in part due to the historical legacy of apartheid, during which most Africans, particularly women, were not allowed to work in the formal sector and had to subsist on menial types of jobs at the margins of the economy (Imraan Valodia 2001). Gender norms reflected in the unequal household division of labor have also posed greater hurdles for women in search of jobs, as compared to men.

The paper is organized as follows. We provide in Section II, an overview of the labor market issues in South Africa. We discuss in Section III, the method used in the classification of the labor force status of the respondents of TUS. Although the South Africa labor force surveys (LFS) and the TUS were set up for different purposes and have different specific sampling frame, weighting and methodology, the questions used for classifying the labor force in the 2000 TUS and 2000 LFS data are very similar. In Section IV, we explore how South African women and men’s time use patterns differ according to their labor force status. In particular, we examine the time they allocate to subsistence production and labor market activities including casual and temporary employment and to other activities such as the unpaid work in household maintenance and care of its members.2
We find that some individuals who are either not in the labor force (NLF) or are unemployed actually performed labor market activities using the past 24 hours as the reference period. We also examine the characteristics of these NLF and unemployed women and men whose labor market and subsistence production activities are not captured in employment statistics. We find that the majority of them are men, African, with little or no wealth, living in rural areas and are married. Our findings also suggest that the time spent in unpaid work activities by men, including gathering fuel and water, doing unpaid care and domestic work, do not vary greatly across labor force categories. Finally, we use the TUS data to examine the types of labor market and subsistence activities performed by NLF and unemployed African men and women. The results suggest that the majority of these individuals were engaged in subsistence production activities such as farm, fishing or tending to animals. Some of the women were engaged in making and selling textiles and leather, or petty trade that are considered informal work, while some men were engaged in some type of wage employment. A summary of the main points and policy considerations concludes the paper.

II. Labor Market Issues in South Africa

In this section, we briefly describe the labor force participation, employment and unemployment trends, using South African labor force survey (LFS) data. This section also discusses the labor force classification methodology used in the LFS and demonstrates that the respondents in the TUS can be classified using the same methodology. Table 1 shows the participation, employment and unemployment rates of men and women in South Africa over the period 1995-2005 based on the official definition of unemployment, using LFS data. The official definition requires that those without work must be actively seeking work and therefore treats discouraged job seekers as part of the not-economically active population (also referred as ‘not in the labor force’ or NLF). It is evident that the unemployment rates in South Africa have increased, particularly among women. A number of studies have examined the factors that may explain these trends. First, as Daniela Casale and Dori Posel (2002), Abhijit Banerjee et al (2007), and
Dani Rodrik (2008) point out, the rise in unemployment has been a result of increased labor supply, particularly among black Africans, at a much faster rate than the growth of new employment opportunities. Casale and Posel (2002) and Daniela Casale (2004) argue that this is particularly striking among women such that the feminization of the labor force has been associated with rising rates of female unemployment and the predominance of women in insecure forms of employment (Casale and Posel (2002) p. 13). Table 1 also shows that gender is an important marker of labor market outcomes in South Africa. Fewer women are employed compared to men and larger numbers of women are unemployed over time even though women’s labor supply has increased substantially in the period 1995-2005.

[Table 1 about here.]

Institutional changes that were brought about by the political transition in South Africa in the mid-nineties also facilitated the increase in labor force participation, especially of African women. They were disadvantaged by the apartheid legislation that controlled the movement of black Africans into urban areas, and are now able to move into the main urban centers in search of better opportunities. This helps explain the growth of informal self-employed jobs in South Africa (Richard Devey et al, 2006; Geeta Kingdon and John Knight 2004, Daniela Casale 2004). Another explanation for the high unemployment has to do with the barriers to entry in productive and high income generating informal sector activities such as mechanical repair shop, commercial merchandise retail, etc. that are faced by many unemployed black Africans. The barriers include the lack of capital, lack of entrepreneurial skills and inability to penetrate informal community networks (Geeta Kingdon and John Knight 2004, Rob Davies and James Thurlow 2009).

The evolving gender dynamics in the post-apartheid era have also affected the labor market situation in South Africa. Casale (2004) argues that the increase in female headship of households and the erosion of male income support help explain the significant rise in women’s labor force participation, a key factor driving the high female unemployment rate. She shows that
the number of women of working age and living at least with one employed male in the household had decreased substantially, at least during 1995-99 period.

However, it must be acknowledged that the rising trends in labor force participation rates, especially between 1995 and 2001, can be partly attributed to the improvements made by Statistics Africa in data collection. This has been done through the reframing of work questions and the introduction of probing questions in the 2000LFS and thereafter. These provided better guidelines for both interviewers and respondents regarding what constitutes employment, especially in the informal sector (Collette Muller 2003). Statistics South Africa (SSA) has revised and modified the survey questionnaires in order to better estimate and correctly classify individuals as economically inactive, unemployed and employed. For example, the activity question (question 2.1) in the 2000 LFS is considered to be more comprehensive than those in previous household surveys. A detailed list of the different kinds of activities that should be considered work is also supplied, including activities such as guarding cars, brewing beer, regular work, contract work, domestic work, unpaid work in a family business, farming (e.g. plowing, harvesting, and catching fish/wild animals for food or sale). These modifications have led to more comprehensive documentation of small-scale and own-account work. Although there have been substantial improvements made by Statistics South Africa (SSA) in labor force survey data collection, capturing the non-standard activities continues to be challenging. LFS are still likely to miss various forms of informal (or non-standard, atypical, alternative, irregular, precarious) employment. During the 2001 Expert Group on Informal Sector Statistics meeting in India, R. Hussmanns (2001) noted that informal sector workers or persons engaged in very small-scale or casual self-employment activities may not report that they are self-employed, or employed at all, even though their activity falls within the enterprise-based definition (p. 1). These varied forms of informal employment comprise: a) self-employment in informal enterprises (i.e., small and/or unregistered); and b) wage employment in informal jobs (i.e., without secure contracts, worker benefits, or social protection). Informally employed workers who perform short term and
sporadic type of jobs such as day laborers or seasonal farm workers working for formal firms or farms but without contracts or benefits, can be very difficult to capture in surveys such as the LFS.

A number of studies on poverty and employment in South Africa have drawn attention to the poor quality of employment including own-account, paid work that exist. Michael Aliber’s (2003) study of chronic poverty, for example, shows that jobs such as self-employment tend to be precarious. In examining transitions between different employment status, he noted that half of those who were engaged in self-employment in 1993, ended up either unemployed or out of the labor force by 1998 (p.20).

Statistics South Africa (2001) acknowledges that “even the new approaches are not capturing all work activity as the instruments contend with the strong perceptions and assumptions of both interviewers and respondents as to what constitute work” (p. 50). Similarly, Colette Muller (2003) points out that there are still problems in capturing information on who works, especially in the informal sector, and concludes that it is probable that certain types of employment continue to be underestimated.

Thus, it is very likely that employment estimation problems using LFS continue to exist. Some of these have to do with methodological issues such as the failure of the survey questionnaire to obtain useful information about people’s secondary employment, and to instruct interviewers to read the explanation on the difference between formal and informal sector employment to respondents (Collette Muller 2003). In addition, there are estimation problems related to the perceptions and assumptions of interviewers and respondents themselves as to what constitutes “economic work”.

In the 2000 LFS, Statistics South Africa included a question asking all those classified as unemployed or as economically inactive—as determined by responses elsewhere in these surveys—how they support themselves. This option allowed respondents to indicate that the odd jobs that were performed during the past week as a means of support. Individuals who performed odd jobs
should be coded as employed so the respondent was asked to return to the beginning of the labor market section of the survey and to provide details of the work done. Muller (2003) points out that in the 2000 LFS, there are indications that the respondents who worked few hours in the reference period or did an occasional odd job, may not have been directed back to the labor market questions and are thus misclassified. In response to these issues, the Socio-economic Study of the Persistence of Poverty and Inequality (SEPPI) adopted an innovative participatory method to trace and explain changes in household poverty status over time (Michelle Adato, Frances Lund and Phakama Mhlongo 2007). Using family histories and detailed stories, the SEPPI study is able uncover ambiguities and under-reporting of even detailed household surveys such as those used in the first large-scale longitudinal study of household poverty in South Africa called the Kwazulu-Natal Income Dynamics Study (KIDS). For example, the SEPPI study has found a great deal of informal work that are often missed in surveys in part due to the short and frequently interrupted duration of many work episodes involving casual employment (Adato et al 2007, p. 258). The SEPPI research has also attributed the inadequacy of employment statistics to the insecure status of work along with the attrition in memory on such episodes of work.

Estimation issues also arise from translation and accompanying interpretation that may make it difficult to capture the meaning of labor market work performed by respondents that speak in a local language. It is possible that a respondent may have an understanding of ‘economic work’ which is inconsistent with that of the LFS. Two studies illustrate this point. The SEPPI study mentioned above argues that one reason for the inadequacy of employment statistics has to do with the local definitions of ‘work’ that can affect the responses to survey questions. It gives the example of an African woman named Bongokile who was classified as unemployed, whereas in fact she ‘worked full time as a domestic worker for the local school teacher’ (Adato et al. 2007, p. 258). The authors suggest that the misclassification may be due to the fact that the local Zulu language speakers’ understanding of ‘work’ varies, depending on whether it is being done for ‘one of the community’ or whether it is being done ‘in the suburb’” (Ibid). By means of
qualitative methods involving probing questions, the SEPPI research team was able to gather enough information to detect the problem and to illustrate that surveys are vulnerable to these varying social interpretations. Another study by the Sociology of Work Program (SWOP) concluded that there were inconsistencies between responses and what was captured by the enumerators, for the latter found it difficult to translate the English questionnaire in a manner that adequately captures the definition of work in local languages. This makes the documentation of economic work such as those involving activities of very short duration and odd jobs very difficult, even with the use of the improved LFS guidelines and questions.

The above points are consistent with the findings of a 2008 research report prepared for South Africa’s Department of Labor by the Sociology of Work research unit of University of Witwatersrand (Edward Webster, Asanda Benya et al. 2008). The report concludes that national surveys of households, such as the biannual Labor Force Surveys issued by Statistics South Africa, are unable to satisfactorily measure the size of informal employment.

Further, the sporadic and the precarious nature of some jobs may lead respondents to view themselves as not employed since the work they perform is considered to be only temporary or very short-term. Some studies on job insecurity such as those by L. Greenhalgh and Z. Rosenblatt (1984), and M. de Witte (2005) point out that workers in highly insecure jobs experience a discrepancy between the preferred and the perceived level of security offered by the work that they do. According to de Witte (2005), this perceived discrepancy largely results from conditions of precariousness and job instability that creates a feeling of powerlessness and lack of self-worth so that these individuals view their situation to be no different than those who are not employed.

Time Use Surveys (TUS) can provide useful information that complements the information collected in other surveys. It enables us to approach the issue of work using the lens people’s time use and to serve as a check on the estimates of other surveys. It also allows us to examine what women and men who are classified as economically inactive and unemployed do
with their time, particularly in other activities such as job-related search and unpaid household work activities. In the following section, we show that the TUS questionnaire asks probing questions regarding employment in the same way as they are asked in the LFS. This allows us to examine the extent to which reported labor market activities in the TUS match the employment status of individuals as determined by the employment questions.

**III. Labor Force Classification of South Africa Time Use Survey (TUS) Respondents**

This section describes how we classified the TUS respondents into labor force categories, using the method similar to that used in the LFS. Both the TUS (the employment part of the questionnaire) and LFS have the same reference period (past seven days) and use exactly the same questions (see Figures 1 and 2) to derive the employment and unemployment estimates. In our calculation of unemployment, not in the labor force (NLF), and employment rates of the 2000 TUS sample, we make use of the person-weight variable in the TUS data that is calculated by SSA so as to adjust the raw survey data for under-enumeration and to align the survey estimates with independent population estimates (Statistics South Africa 2001a, pp112-113). We show below that the individual respondents in TUS, aged 15-64, are classified as: 1) NLF; 2) unemployed; or 3) employed, using exactly the same set of questions that are used for the LFS estimates.

The 2000 LFS estimates of persons in the different labor force categories are based on a number of hurdle questions. The first question asked whether the respondent performed any work in the last seven days in Q2.1. The definition of work includes whether the respondent runs a business, works for a wage employment, as a paid domestic worker, grows crops and vegetables on a family farm, raises animals, catches fish, performs any construction or repair work, or begs for money or food.

A positive response to any one of the above questions classifies the respondent as employed as shown in Figure 1. A “No” response to Q2.1 is followed by a set of questions that
explore whether the individual is economically active. In order to be classified as unemployed using the broad definition of unemployment, those without work have to be willing to accept work within a week. In contrast, those classified as unemployed using the official definition, refers to individuals without work, are available to accept work in the next week, and have taken action during the previous four weeks to seek employment. So, under the official definition of unemployment, those who have not actively sought employment because they have given up hope of finding work or are “discouraged job seekers” are classified as not-economically active, but under the expanded definition of unemployment, they are classified as unemployed.

The 2000 TUS also asks work situation questions similar to those used in the Statistics South Africa household and labor force surveys (Statistics South Africa 2001b, pp. 13-14). Figure 2 provides an overview of the labor force classification of respondents in the 2000 TUS. A comparison of Figures 1 and 2 shows that the TUS questionnaire contains exactly the same hurdle questions as the LFS, which we use to generate the TUS-based estimates of employment and unemployment. We also make use of these hurdle questions to identify those who are underemployed and those who are part-time employed (Figure 2).

The classification of the labor force status of the TUS respondents in our study therefore follows closely that of the LFS. A TUS respondent is classified as employed if s/he performed any of the following activities in the week prior to the time-use survey: a) run any kind of business for yourself; b) help a family business, without payment; c) do any kind of work on a household plot, food garden, or animal husbandry; d) catch any fish or wild animals for food or sale; e) do any domestic work for another household for payment in cash or in kind; or f) do any other work for wage, salary, piecework pay, commission or payment in kind (Statistics South Africa 2001b). A person is also classified as employed if s/he did not work in the last seven days, but has a job to return to, or did not look for work because the respondent is satisfied with the current work.
A TUS respondent is classified as underemployed if s/he is: a) employed according to the employment definition, but worked less than 4.4 hours on the day the time-use survey was conducted; and b) has looked for work in the last four weeks.\textsuperscript{12} This follows closely the ILO definition of underemployment, which specifies that an underemployed person is: a) willing to work more hours; b) available to work more hours; and c) worked less than a threshold (ILO 1998).

South Africa does not have an official definition of part-time work. Statistics South Africa makes use of different working thresholds in different surveys (Dori Posel and Colette Muller (2008). In our study, part time work is defined as less than 22 hours per week\textsuperscript{13}. We define employed persons in the TUS sample to include both part-time and full-time workers.\textsuperscript{14} In doing so, we make a distinction between part-time workers and underemployed. The former refer to workers who are in part-time jobs because they do not want to work full-time, while the latter are those that would like to work full time but are unable to do so because of lack of opportunity.

Finally, we classify a TUS respondent as unemployed if s/he did not perform any of the above-mentioned activities in the last seven days, but is available to start work in a week. This definition follows the “expanded (or broad) definition” of unemployment specified in the LFS, which includes respondents who did not actively search for work in the past four weeks (Statistics South Africa 2001b).\textsuperscript{15} Instead of the official definition of unemployment, we use the expanded definition because of its broader and more realistic coverage: i.e. it includes discouraged workers, namely those that did not look for work because they had given up hope of finding work.

Table 2 compares the 2000 estimates for the labor force status of respondents in the TUS data with those of the LFS. For our study purposes, we focus on a subsample of 10,465 TUS respondents in 6,752 households, aged 16-64 years, who have completed time use diaries.\textsuperscript{16} We use the employment information of the TUS respondents that were collected preceding the 24-hour diary interviews. Using the expanded definition of unemployment, the unemployment rate in the TUS sample is estimated at 31.8 percent and 18.3 percent for women and men, respectively.
These are significantly lower than the unemployment rate estimates of 41.1 percent and 30.8 percent in the LFS. About 32.4 percent and 23.6 percent of the working age women and men in the TUS sample are economically inactive or ‘not in the labor force’ compared to 36.2 percent and 27.5 percent in the LFS sample.

[Table 2 about here.]

Comparing across gender groups, Table 2 shows that a higher percentage of women are ‘not in the labor force’ and unemployed compared to men, using both LFS and TUS data. The estimates, however, using LFS data are higher compared to the estimates in the TUS. This difference is most striking for male unemployment rate (22.3 percent using LFS vs. 13.9 percent using TUS). We also provide an estimate of time-related underemployment rate using TUS data. In terms of underemployment, the proportion of underemployed women in the TUS sample (5.9 percent) is slightly lower than those of men in the TUS sample (7.9 percent).

The differences in the above estimates using the LFS and TUS data can be attributed to the difference in sampling frames and methodologies between the two surveys. The LFS is a household survey that collects data on all eligible members of randomly selected households. Moreover, the LFS is a much larger survey of 30,000 households and is specifically aimed at deriving estimates of employment and unemployment. On the other hand, the TUS covers only 8,564 households and selects two people from the randomly selected households, regardless of the household size. If larger households are more likely to have unemployed people or those not in the labor force, then selecting two members regardless of household size would create a downward bias in the number of unemployed. Their data are also weighted differently from the LFS. In particular, the TUS data are weighted “to reflect the 25,000 odd individuals aged 10 years and above whom one would have expected to find in 10,800 dwelling units rather than the number of people of this age in the full population.” (Statistics South Africa 2001, p. 18)

The diary method for collecting information makes TUS a useful instrument for probing the work performed both in the labor market and in non-SNA activities. The time use diary asks
open-ended questions about the activities the person had performed in the previous day. It should be noted that the time use diary in the TUS records activities only for the past 24 hours, whereas the classification of their labor force status asks whether they performed any work in the past 7 days. Therefore, if one examines the economic activities of respondents in the last 24 hours and these individuals are categorized by their labor force status, one should expect a downward bias in the labor market activities recorded in the time use diaries since it only records a seventh of the reference period for classifying their labor force status. Some of the respondents reported their activities over Saturday and Sunday, thereby creating a further downward bias in labor market activities since these often are not ‘normal’ work days in South Africa. However, as the following section will show, the reported activities in the TUS diary do not match the employment status of some individuals as derived from the employment questions. There are NLF and unemployed women and men in the TUS sample who actually performed at least one labor market activity, excluding employment search. We also examine the characteristics of these NLF and unemployed individuals who undertook labor market work and explore how they reallocate their time in other economic activities, particularly household and care work.

**IV. What Time Use Survey Reveals about the Activities of Unemployed and Economically Inactive Women and Men.**

Appendices B and C provide information regarding the subsample households’ and respondents’ characteristics. More than a third of the households have young children aged 0-6 years and nearly 65 percent have access to water on the site or in the dwelling (see Appendix B). Nearly two-thirds of the households live in the urban (formal and informal) areas and almost half, or 48 percent of the households earn monthly income of R 799 (about $91 equivalent) or less, while over 7.3 percent earn at least R 5000 (or $651) in 2000. Slightly over half (52 percent) of the respondents are women, about 45 percent of whom are married, compared to 49 percent among men (Appendix C). The mean ages of men and women in the sample are similar, about 34.5 and 34.8 years respectively. Men have slightly higher mean years of schooling compared to
women; almost 11 percent of women have no schooling compared to about 9 percent of men. In terms of race/ethnicity, more than three-quarters (76 percent) of the total respondents are black Africans while 11 percent are Coloured. Whites and Indians (more generally speaking Asians) represent 10 percent and 2.7 percent of the subsample respectively.

The time use diary, divided into 30-minute slots, records the varied activities performed by each respondent in the previous 24-hour period. Within each household, two people aged ten years and above were asked what activities they had performed on the previous day. Respondents were able to report three activities per time-slot, and were asked whether these activities were conducted sequentially or simultaneously. Each of these activities was classified by Statistics South Africa using the United Nations Statistical Division System of National Accounts (SNA) activity classification system (Statistics South Africa 2001a, pp. 18-22). We use the TUS diary information to determine the participation rates of and time spent by respondents in performing labor market and subsistence work and household work as well as non-work activities such as employment search, social and leisure and personal care.

A. Time Use Patterns of Men and Women

In reporting the time use patterns of the TUS men and women respondents, we consider all activities reported during a given time slot including activities that are performed either simultaneously with or sequentially after the main activity. We use a modified System of National Accounts (SNA)-based activity classification to define the following time use activity categories: a) subsistence production and labor market work; b) household and care work activities; c) volunteer and community service activities; d) leisure and social activities; and e) personal care and self-maintenance activities. The last three activity categories are not covered by the SNA.

There are a few caveats regarding the activity classification that need to be mentioned. First, we classify labor market work and subsistence production to include wage employment and other production of goods and services for income. For brevity, we refer to this activity category
in the tables as ‘labor market work’. We exclude:  a) ‘collecting fuel and water’ activities b) travel to and from work’, c) activities related to employment search, and d) travel related to looking for employment. Activity a) is treated in this study as part of household, unpaid work. In excluding activity b) from our labor market activity classification, we provide a closer match between the latter and the labor force survey classification in the LFS. Activities c) and d) are treated separately and referred in this paper as ‘employment search’ activities.

Secondly, we classify activities associated with a) household maintenance, management and shopping for own household, b) water and fuel collection, and c) care for children, the sick, elderly and disabled for own household as ‘household work’. Next, we classify community service activities and those to help other households as ‘community service and volunteer activities’. Social and cultural activities as well as mass media use are identified as ‘leisure and cultural activities’. Finally, we include all other activities associated with learning, personal care and doing nothing as ‘personal care and self-maintenance’.

Some limitations of the TUS data must also be acknowledged. First, there are likely to be problems of misreporting on time spent in different activities since not everyone has a watch. This suggests that time spent on a particular activity may be influenced by the respondent’s perception or notion of time itself. Second, some respondents, women in particular, may have been acculturated into and/or have adopted the performance of two or more activities sequentially or simultaneously in the given time frame without being conscious of it. These are likely to result in non-reporting of time spent in such activities, which often are performed in combination with other activities.

Table 3 shows a gender-differentiated pattern of time use that is consistent with the findings of other time use studies. Men on average spent 210.16 minutes (or 3.5 hours) per day in labor market (and subsistence) work, which is 82.6 minutes (or 1.4 hours) more per day than women. Men also spent more time on average (10.95 minutes) in looking for employment, compared to women (2.14 minutes). These time differences between women and men are
statistically significant, using the Wald equality of means test. Women, on the other hand, spent nearly 300 minutes (or 5 hours) on average per day performing household maintenance, water and fuel gathering and care work, about 185 minutes (or 3.1 hours) more than men and the difference is also statistically significant. With respect to volunteer and community service activities, both women and men in the TUS subsample seem to allocate very little time (about 5-8 minutes per day). In terms of social and leisure activities, men spent longer time, 442.7 minutes on average, compared to women (370.6 minutes). The majority of their activities involve spending time with friends and other non-family members. In terms of personal care, both men and women spend about the same amount of time on personal care, although men tend to spend slightly more time in learning compared to women.

The gender-based difference in time use suggests that higher unemployment among women may be also due to their onerous share of the household and care work. The burden of home maintenance and caregiving tasks that need to be carried out influences not only women’s availability for labor market work, but also their ability to seek employment, to take up learning, and/or to socialize outside the family. It is not surprising, therefore, that women find that they face fewer job options than men and are likely to face higher unemployment rates.

[Table 3 about here.]

**B. Participation of Non-Labor Force and Unemployed Men and Women in Labor Market Work**

In this section, we examine the time spent in labor market work (30 minutes or more) by men and women TUS respondents, classified by their labor force status. Table 4 presents the participation rates and average time spent by NLF, unemployed, underemployed and employed (part-time and full-time) women and men for labor market work, employment search activities and household work activities such as preparing meals, cleaning, fuel and water gathering, animal care, household repair and care of children, the sick and disabled, shopping and accessing
government services using the time use diaries. The participation rate is calculated as the percentage of respondents who performed at least 30 minutes of the activity in the past twenty-four hours, which is the TUS diary reference period.

The time use pattern of NLF and unemployed men and women yields some striking observations. First, 11.1 percent women and 15.8 percent of men who are classified as “not in the labor force” spent an average of 159 (2.6 hours) and 218 minutes (3.6 hours) respectively, in labor market activities. Nearly twelve percent of unemployed women and 26.7 percent of unemployed men spent about 172.9 (2.9 hours) and 277.2 minutes (4.6 hours) in the labor market. The gender differences in the average time spent on these activities are statistically significant using t-tests. Second, Table 4 shows that unemployed men are even more likely to participate in labor market activities percent compared to underemployed men, 26.7 percent and 24.5 percent respectively. This is not the case for women in similar labor force categories. In fact, the average time spent by unemployed men in labor market economic activities is greater than those spent by underemployed men, about 346.6 minutes 146.2 minutes respectively. We will examine the types of labor market work performed by the NLF and unemployed in the next section.

[Table 4 about here]

Some gender dimensions in employment search activities are worth noting. Table 4 shows a significant difference between the participation rate and average time spent by unemployed men and women in looking for market work (conditional on participation) during the TUS reference period. Since we adopt the expanded definition of unemployment, which includes discouraged workers, one possible reason that a large proportion of the unemployed have not looked for work is because they have given up hope. As will be shown, another possible reason is that women simply do not have time to undertake job search because of household responsibilities. Table 4 suggests that the proportion of unemployed that undertook job search is significantly lower for women (1.7 percent) than for men (14.9 percent). Moreover, those women that actively sought employment seem to spend significantly less time (215 minutes on average)
compared to the time spent by unemployed men (300 minutes on average). This gender difference in labor market participation and time spent in employment search also appears among the underemployed. Underemployed men are three times more likely to seek additional labor market work and spend more time in such activities than women.

Women’s ability to participate in the labor market and/or to look for work is closely linked to the division of work in the home. We next examine the participation rates of NLF, unemployed and underemployed men and women in household and care work. The data in Table 4 shows that, with the exception of employed men, the participation rates remain almost the same across the labor force categories. While this figure significantly drops from 79 percent to 66 percent when men shift from being unemployed to employed, it remains to be very high (93 percent to 97.6 percent) for women in the same labor force categories. Moreover, women consistently spend nearly double the amount of time in unpaid housework and care work as men across all labor force categories. Overall, the division of labor within the household therefore seems to be persistent, regardless of their labor force status.

Using the activities recorded by TUS, we find that only 68.1 percent and 75.4 percent of employed women and men respectively performed at least 30 minutes of labor market work in the past twenty-four hours. This is not necessarily anomalous; for the results may be due to the difference in the reference periods used in classifying the labor force status and in calculating the participation rate of a particular activity in the time use diary. As discussed earlier, the TUS is based on activities performed in the past 24 hours, while the labor force status is based on performing work in the past seven days. Hence, some employed men and women may not have participated in a labor market activity during the TUS reference period either because they are sick, on leave or because the previous day was not a workday.

Who are these non-labor force and unemployed men and women that performed at least 30 minutes of labor market work? What types of labor market work are they likely to engage in? Table 5a shows that an overwhelming proportion of these individuals are African. Moreover, the proportion of African men in the NLF and unemployed categories who performed labor market work are 24 percent and 25 percent respectively. When the level of education is taken into account, Africans with less than 8 years of education are about 10 percentage points higher than the labor market participation rates of all NLF and unemployed men in the sample (see Table 5b). The proportion of NLF and unemployed African women with less than 8 years of education who performed labor market work are 19 percent and 16 percent respectively, about 9 and 7 percentage points higher than the proportion of total NLF and unemployed women in the sample that did. These results suggest that the type of labor market work performed by African men and women with low level of education are likely to be missed or not captured in labor force surveys.

[Tables 5a and 5b about here.]

We next use probit analyses to examine the characteristics that may be associated with the probability that NLF and unemployed women and men perform at least 30 minutes of labor market work. The econometric analyses allow us to explore the possible reasons why some labor market work performed by individuals in the TUS classified as either ‘not in the labor force’ or ‘unemployed’ is likely to be missed using standard labor force survey-type questions. The dependent variable in the probit models identifies whether or not an NLF or unemployed respondent has performed at least 30 minutes of labor market work in the past 24 hours. We use a number of individual and household characteristics that may indicate a person’s likelihood of undertaking labor market work even though they are classified as NLF and unemployed. The results provide useful information on possible factors that help explain why the labor market work of these individuals is not captured by labor force surveys.

We propose that such individuals are not likely to be captured by the LFS-style questions for the following reasons. First, they are likely to undertake subsistence production activities
and/or sporadic, casual work and occasional odd jobs in order to earn some income to meet their subsistence or survival needs, no matter how temporary these jobs are. Second, there maybe some communication and/or translation issues that lead to misclassification of the respondent’s employment status. In the empirical analysis that follows, we frame our discussion around these two main arguments.

The probit model for estimating the likelihood that an individual \( i \), is likely to perform labor market work is:

\[
Y^*_ij = \mathbf{X}_ij \beta + \mathbf{Z}_ij \gamma + \epsilon_{ij}
\]

where \( Y^*_ij = 1 \) if they performed labor market work, and \( Y^*_ij = 0 \) otherwise. Model 1 is run for those individuals who are not in the labor force (\( j=1 \)) while Model 2 is run for those who are unemployed (\( j=2 \)). \( \mathbf{X}_ij \) and \( \mathbf{Z}_ij \) are vectors of observable characteristics at the individual and household levels respectively, which influence the dependent variable. Both \( \beta \) and \( \gamma \) are unknown parameters to be estimated.

We run the base models for the NLF (referred to as Model 1a) and for the unemployed (referred to as Model 2a) with the low-skilled African (proxied by African and low education interaction variable) as the main regressor. The interaction term infers how the effect of having low education on the dependent variable depends on the respondent being African. Hence it is not so much the effect of low education per se, as the effect of being African interacted with low education influences his/her likelihood to undertake temporary subsistence production or casual or odd jobs. We argue that the economic compulsion to perform or accept any type of job is more likely to occur among low-skilled Africans than among other individuals who are either unemployed or who have given up their job search, because high poverty, large costs of job-search, long duration of unemployment, and adverse local economic conditions, such as high local unemployment. The lower education of Africans is a manifestation of pre-labor-market discrimination that was systemic under the apartheid regime (Geeta Kingdon and John Knight...
Differential treatment in the schooling system has subjected Africans to poorer access to education, and the apartheid location policies has forcibly confined Africans to the former homeland regions which offer little employment. Kingdon and Knight (2004) also point out that many discouraged workers who are part of the NLF and the unemployed are unable to engage in informal sector work because the informal sector has historically been inhospitable to Africans in South Africa. Although the harsh licensing laws, strict by-laws preventing street vending, laws to discourage mobility of black people to non-homeland areas, and very limited access to credit, etc have been either removed or modified in the last decade, their historical legacy continues to create mental barriers. Unemployment is also inequitably distributed in South Africa across socio-economic groups (Geeta Kingdon and John Knight 2005). Uneducated Africans, for instance, are particularly vulnerable to unemployment, especially those living in homelands and remote areas. According to Kingdon and Knight (2005), the characteristics such as education and work experience of the African group dramatically reduce the chances of employment.

We include the following individual and household characteristics in the model: a) lifecycle stage, represented by the age and age-squared of the individual, b) gender represented by woman dummy, c) race (represented by the African dummy variable), d) educational attainment, e) marital status, f) household size and composition, g) wealth and h) access to government grants. Education attainment is defined as dummy variables indicating low level of schooling (less than eight years of education) and medium level (eight to 11 years of education), with high level of schooling (12 years or more) serving as the reference. The household size and composition variables are represented by two variables namely: a) the number of young children aged seven or less, and b) the number of household members aged 10 or more years in the household. We expect that NLF and unemployed respondents living in households with young children or in bigger households will be more likely to undertake primary production, odd jobs and temporary casual work to help make ends meet. Since the wealth indicators in the data are found to be highly correlated with race, we use instead a community-level proxy, access to health services
and access to private transfers such as remittances. We also take into account the respondent household’s access to public transfers such as the unemployment insurance fund (UIF) and government grants. We predict that household access to these non-labor incomes has a negative effect on the dependent variable. A location (proxied by a rural dummy) variable controls for unobservable locational characteristics while “wearing a watch” dummy variable takes into account captures the respondent’s ability to know time. In the case of NLF respondents (Models 1a and 1b), we also include controls for whether the person is a student or disabled.

We next test a variation of the base probit models, referred to as Model 1b and Model 2b, to examine whether or not language communication affects the answers received in TUS survey questions that are like those of standard labor force surveys. We use the same independent variables as in Models 1a and 2a except that we use as the main regressor a language proxy, represented by an interaction dummy variable, which indicates whether a language other than English or Afrikaans was used in the interview, and low education (proxied by a dummy for 8 years of education or less). We argue that the local terms for ‘work’ may have a different meaning or interpretation than the direct or literal translation of the term that is used in the interview with a low educated respondent that speaks another language. The latter refers to any of the local languages spoken by Africans as well as by Coloured respondents. The respondent can therefore easily misinterpret or misunderstand the LFS style questions pertaining to work. The interaction term captures how the effect of conducting the interview in another language on the dependent variable is contingent on whether the respondent has low education.

[Table 6 about here.]

The probit regression results are given in Table 6. The marginal effects in Model 1a suggest that NLF individuals who are likely to perform some labor market work, holding all else equal, are lower educated African, men and married respondents and these results are statistically significant in the 5 percent and 10 percent levels. The interpretation of marginal effects of the interaction term requires the performance of a t-test. The result suggests that Africans with less
than eight years of education are approximately 2.7 percent more likely to perform market work (significant at the 10 percent level) compared to those with more than 12 years of education, which is consistent with our findings in the descriptive statistics in Table 5b. On the other hand, NLF Africans with 8-11 years of education are less likely to perform market work compared to those with more than twelve years of education. The African dummy variable is not statistically significant. The marginal effects of the education dummy variables are found negative and statistically significant indicating that the NLF respondents with 12 years or more of education, all else equal, face a higher probability of engaging in market work compared to other groups. The results in Model 1a also indicate that NLF individuals who engage in labor market work tend to reside in larger households compared to those who don’t. However, the effect of the number of young children is not statistically significant. NLF individuals living in households that receive unemployment insurance are 9.3 percent more likely to perform market work (statistically significant at 10 percent level) but those in households with access to state grants are 4.2 percent less likely to do so (statistically significant at 1 percent level). Access to remittances is not statistically significant. Individuals living in a rural area and with no access to health services are more likely to participate in labor market work, most likely subsistence production activities; this result is statistically significant at one percent level.

Contrary to our hypothesis, the marginal effects on the variable in being interviewed in a language other than English or Afrikaan are not statistically significant (see Model 1b). This suggests that language communication issues may not be a major factor in the classification of respondent who performed some labor market work as NLF. The other results in Model 1b are similar to Model 1a.

Among unemployed respondents, the marginal effects results in Model 2a show that Africans with less than eight years of education are more likely to perform at least 30 minutes of labor market work in the TUS reference period and this is significant at the 10 percent level. The t-test shows that these characteristics increase the likelihood of performing labor market work by
20.4 percent, confirming the findings in Table 5b. We also find that males, African, and married unemployed respondents are more likely to engage in labor market work compared to other groups. Having young dependents and larger households, also increases this probability and these effects are found to be statistically significant in the 5 percent level. In terms of access to non-labor income, those unemployed living in households that receive remittances are more likely to engage in market work or subsistence production (statistically significant at 10 percent level). However, access to unemployment insurance fund and state grants are not statistically significant, while that the coefficients for not wearing a watch and living in a rural area are highly significant at the one percent level.

Unemployed respondents who are interviewed in a language other than English or Afrikaans and have less than eight years of education are four percent more likely to perform labor market work suggesting that those with low educational attainment and who speak a local language, have difficulty answering LFS style questions and reporting labor market work (see Model 2b). The results for the other independent variables in MODEL 2b are similar to those in Model 2a.

These findings suggest that while some characteristics of the NLF and unemployed are associated with the likelihood to perform labor market work, there may be other unobserved characteristics and situations faced by the NLF and unemployed in the TUS not captured by our models. This is in part due to the absence of information on conditions faced by the respondents, such as duration of unemployment, and local labor market conditions, among others that make it difficult for unemployed respondents to be hired in jobs that are regular, typical or have longer duration. There may also be situations or conditions faced by the NLF respondents that make them withdraw from the labor force, such as the cost of job search, high local unemployment, and chronic illness. Additionally, we don’t have information on the incidence of income or consumption shocks, that may compel NLF and unemployed individuals to undertake irregular and very short term work. It may also be that these individuals are doing unpaid subsistence
farming, hunting or fishing, which they don’t see as “work”, or they don’t count odd jobs as “work”. There is also the possibility of errors in data entry, coding and data processing.

We next examine what types of labor market activities these NLF and unemployed individuals are engaged in (see Table 7a). Since we find that NLF and unemployed Africans with less than eight years of education are more likely to perform at least 30 minutes of market work compared to other groups, we focus on the labor market activities of this particular group.

[Table 7a about here]

An overwhelming proportion (about 73 percent) of men respondents who are classified as either NLF or unemployed perform subsistence types of work in fishing, hunting and farming, compared to 58 percent of NLF women and 52 percent of unemployed women. About 11 percent and 8 percent of all NLF and unemployed men respectively performed wage employment activities, compared to 5 percent and 7 percent of NLF and unemployed women. Outside subsistence farming activities, a significant proportion of NLF and unemployed women, about 20 percent and 26 percent respectively, were engaged in making or selling textile or leather products. These activities were performed either in mobile locations or not in establishments, which suggest that they are likely to be informal and precarious jobs.

The labor market work of NLF and unemployed African men and women that are likely not captured by the LFS-style questions in the TUS are predominantly in farming, tending to animals or fishing (about 85 percent for men and 66 percent for women) and less likely in wage employment as shown in Table 7a. Among African women with low educational attainment, 15.2 percent and 19 percent of those NLF and unemployed who did some labor market work were involved in precarious and/or home-based types of jobs making and selling textile, leather and related craft respectively. Another 14 percent of African unemployed women with low education are engaged in other services that include transport, baby-sitting, hairdressing, massages and prostitution not for establishments. Among NLF African women, 6 percent are engaged in food
preparation or petty trade. In the case of men, 6.9 percent of NLF men and 3.8 percent of unemployed men worked in wage employment. Another 8 percent of African unemployed men are engaged in other services that include transport and production of goods and services for income.

The above findings suggest that TUS can be useful in identifying the economic contributions of women and men that questions used in standard labor force surveys do not adequately capture. This is certainly the case for household work and care of other family members such as children, the sick and elderly, as well as certain types of economic activities that are likely to be unreported or underestimated since they are irregular or sporadic. The latter include subsistence production and informal employment (whether as wage workers or as self-employed) and other types of activities. The results also suggest that language issues, particularly among those with low educational attainment, could have contributed to the non-reporting of labor market work. This seems especially true for respondents with low education in the unemployed category.

V Concluding Remarks

The preceding discussion demonstrates the usefulness of the type of questions that are specific to time use surveys in providing information that complements those obtained from questions that are typical of labor market surveys. In this study, we explore the subsistence production activities, labor market work and household work of men and women in South Africa through the lens of their use of time. We find that a non-trivial proportion of men and women classified as either ‘not in the labor force’ or ‘unemployed’, on the basis of the TUS questions that are comparable to LFS questions actually engaged in labor market activities. Secondly, time use survey data can explore the time-related constraints faced by workers that affect not only availability for employment but also their ability to find jobs. We find that regardless of their labor force status, men’s hours of unpaid work tend to vary less (between 136-200 minutes on
Women’s ability (or lack thereof) to find labor market work is closely linked to the amount of unpaid household work they perform. Thirdly, time use data helps identify the salient characteristics of these individuals classified as “not in the labor force” and unemployed but who perform labor market activities along with the type of activities they undertake. Time use data sheds light on an important labor market concern namely the subsistence activity, and the insecure and/or precarious nature of some jobs.

Although our findings are exploratory, we show that a gendered understanding of women’s and men’s lives in South Africa provides useful insights for labor market and social policies. For example, individuals’ responses to high unemployment may involve coping mechanisms that affect individuals’ use of time and the nature of their labor force participation. Sporadic work in the informal economy (e.g. petty trading, door-to-door vending, etc.) and unpaid subsistence activities (e.g. livestock raising, vegetable gardening), help earn income and provide the household food needs even as these individuals continue to look for more secure wage work. There are also language issues especially among those who do not speak English or Afrikaan, that need to be addressed.

The findings give a fuller picture of how people in South Africa try to survive. They are far from idle. While unemployment is a critical problem in South Africa, there is need to better document and address the sporadic, very short term and temporary jobs that people, especially Africans with low education, take.

As mentioned earlier, subsistence farming and fishing as well as informal, temporary and sporadic types of manufacturing and service sector work are often irregular and difficult to measure; they are also unlikely to be considered even by respondents themselves as “economic work” or “economically meaningful”. Because of the nature of these types of economic activities, a person may report that he or she did not do any “work” in the past seven days, and is therefore classified as ‘unemployed’ or ‘not in the labor force’. During periods of slow growth of formal
sector employment as in the case of South Africa, some people could have withdrawn from the organized or formal labor market. A decline in labor force participation, or an increase in unemployment could therefore be due to increased participation of men and women in these ‘irregular’ and very short term activities while technically such persons should be classified as employed, these jobs are by no means decent or desirable.

Our study findings highlight the need for policymakers to create jobs and promote decent employment. The issue of decent (paid) work cannot be adequately addressed, however, without taking into account the unpaid work that individuals, particularly women, also perform. More research is needed to further explore the link between household work and labor market outcomes in order to better inform policy on how to address the burdens of balancing labor market work with household and care work.
References


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Figure 1
South Africa Labor Force Survey Employment Classification Method

Q2.1 Did you do any work in the last seven days?

Yes

Employed

Unemployed (Expanded definition)

Not in Labor Force

No

Q3.7 Are you willing to accept work in the next week?

Yes

No

a. Question 3.7 to actively seek work is not used because the expanded definition of unemployment is used.

b. Includes those who may have been away from their job due to illness or other reasons, even if they responded no to this question.
Figure 2
South Africa Time Use Employment Classification Method

Q2.11 Did you do any of the following activities in the last 7 days? (show prompt card)

Yes

- Worked over 4.4 hours a day on the day of time use survey

- Worked less than or equal to 4.4 hours a day on the day of time use survey

No

Q2.14 If work or activity were available, would you be available to start work in a week?

Yes

- Q2.15 Have you taken any action to look for work in the last 4 weeks?
  - Yes
  - No

No

- Fully Employed
- Under-employed
- Part-time
- Unemployed (Expanded definition)
- Not in LF

a. Q2.15 in survey questionnaire is not used since, under broad definition of unemployment, discouraged workers are part of unemployed.
b. Includes those who have a job to return, or did not look for work because they are satisfied with current work, even if they responded no to this question
c. The South African definition of part-time work is adopted here.
d. The respondent then answers the question: "Is the organization/business/enterprise where works in a formal sector, or an informal sector" that indicates whether s/he is works in the formal or informal sector.
The Unemployment Insurance Fund (UIF) provides a short-term (6 months) safety net for those in cyclical unemployment.

Subsistence production refers to production of goods for the household’s own use involving subsistence farming, animal husbandry, hunting, fishing, etc.

The ‘labor force’ consists of all adults (typically persons aged 16-64) who are available, willing, and wanting to do economic work. There are two main definitions of unemployment: the narrow and the broad. The narrow definition counts as unemployed all jobless persons who want work and searched for work, in the four weeks prior to the survey interview. These people are referred to in this paper as the ‘searching unemployed’. The broad definition drops the search criterion and counts as unemployed all jobless persons who report that they want work even if they did not search in the reference period. In other words, the broad definition includes both the searching unemployed and discouraged workers. The official statistical agency (Statistics South Africa) adopted the narrow concept as its official definition of unemployment in 1998.

The International Labor Conference defines the term “informal economy” as referring to “all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements”. The 2002 ILO report on ‘Decent work and the Informal Economy’ define employment in the informal economy as comprising two components namely: (a) employment in the informal sector as defined by the 15th International Conference on Labor Statistics, and (b) other forms of informal employment outside the informal sector.


In addition to the time use diary, the TUS questionnaire contained standard household survey questions that are asked before administration of the diary. They are basic employment questions including work situation of the respondent in the past seven days.

TUS-based unweighted estimates of unemployment, employment and not in the labor force are available upon request.

Note that there are a number of questions which would qualify a ‘no’ response to account for persons who may have been temporarily away from work due to illness, or other such events. Such persons would be classified as employed.

For coding the recorded economic activities, the TUS made use of the UN Statistical Division-based classification for economic activities. This was purposely done so that TUS can contribute towards “a better understanding of productive activities” (Statistics South Africa 2001a, p.2).

Until recently, the estimation of underemployment has not been addressed in the LFS.

The South Africa Labor Force Survey has two additional criteria for underemployment, which are those: a) who work less hours than the normal hours worked in a specific activity; and b) have no choice but to work less hours (Statistics South Africa 2001b). However, this information is not available in the time-use survey.

Based on the South African labor legislation to part-time work for the service sector.

Part-time workers are employed persons whose normal hours of work are less than those of comparable full-time workers”. The concept of a "comparable" worker vary considerably according to the profession or activity concerned” (ILO, 1992, p. 5). In this study, we use the South Africa Central Statistical Service definition of full-time workers (permanent and temporary), as referring to employed persons who normally work 35 hours or more per week . Part-time workers are those who normally work more than 20 hours and less than 30 hours per week.

The official definition of unemployment has an additional criteria that the respondent actively looked for work in the past four weeks (Statistics South Africa 2001b).

The rest of the households in the TUS sample were dropped due to incomplete diaries.

The sample frame uses the 1996 population census enumerator areas (EAs) and the number of households (Statistics South Africa 2001a). The EAs were stratified by province, which were then divided into four areas: formal urban, informal urban, ex-homeland and commercial farming area. Primary Sampling Unit (PSU) is an EA of at least 100 dwelling units. The numbers of PSUs were selected in proportion to the number of dwelling units in a PSU. The survey was conducted over three periods namely, February, June and October 2000. This is to ensure that any seasonal variations are captured in the survey. Two respondents – aged ten years or above – were selected in each sampled household.

The field teams listed all members of the household above 10 years old. Based on a grid supplied by Statistics South Africa to ensure randomness in the selection, two members of the household were selected.

The System of National Accounts (SNA), from which the gross domestic product (GDP) is calculated, takes certain productive activities into account but not others. The UN activity classification system adopted by Statistics South Africa group activities according to who they are treated in the SNA and thus in the calculation of GDP. Activities that are referred to as SNA production activities include: a) work for establishments e.g. for government, factory, mines; b) primary production such as growing maize or vegetables on a household plot, or collecting fuel and water; and c) work in non-establishment such as selling fruit and vegetables in the streets, or running a retail store at home. There are productive activities that are not counted as part of SNA such as: household maintenances, for example cooking, cleaning and care of persons in the households.

Statistics South Africa used two different methods of assigning minutes to multiple activities. When there were two or three activities in a half hour that were performed sequentially, then each activity was assigned 10 or 15 minutes. However, when two or more activities were performed simultaneously, then it assigned 30 minutes to each of the three activities in order to show a more accurate duration of a particular activity.

The last three activity categories are not covered by the SNA and are considered to be ‘non-productive’ activities. These activities fail what is referred to as the ‘third person’ test’ in that these activities cannot be performed for a person by someone else.

Activities related to looking for work are excluded from labor market work.

Access to health services is correlated with the income level of the household and private transfers is part of household non-labor income.

Standard errors were computed for a linear combination of point estimates and t-statistics were calculated.