

Gender issues in the measurement of paid and unpaid work

Expert Group Meeting on
Methods for Conducting Time-Use Surveys
23-27 October 2000
New York

**Tabulation and analysis of the Indian
time use survey data for improving
measurement of paid and unpaid work**

Tabulation and Analysis of the Indian Time Use Survey Data for Improving Measurement of Paid and Unpaid Work

*Indira Hirway**

Human activities carried out in any society can be divided into three broad groups:

1. Market oriented and non-market oriented economic activities falling within the SNA production boundary which could be termed as “SNA activities”;
2. Non-market oriented "non-economic activities which essentially generate services (and some goods) which are produced by households without undergoing monetary transactions. These activities fall outside the SNA Production Boundary, but within the General Production Boundary. These activities can be termed as "extended SNA activities"¹, and
3. Personal activities, as defined by the third person criterion, i.e. activities which cannot be delegated to others, and need to be performed by a person himself/herself. These activities are usually known as non-SNA activities.

It is clear that all the three types of human activities contribute to human well being as they provide goods and services of different types for human consumption. However, not all these activities are enumerated and included in conventional official statistics. National income statistics, for example, include mainly paid and only a part of the unpaid activities which are covered conceptually under the SNA production boundary, and workforce statistics exclude a large part of unpaid activities performed by people in a country.

In practice, however, conventional official statistics frequently, exclude unpaid SNA activities (through these are covered under the SNA Production Boundary). This exclusion of unpaid SNA activities and extended SNA activities can be considered as a serious lacuna in a national statistical system; as it fails to provide a proper data base for policy formulation as well as policy monitoring. It is important therefore to devise ways and means of broadening the data base to incorporate all the paid and unpaid activities within the purview of the data base. The brief history of time use surveys shows that the time use surveys technique has the potential of contributing significantly in this direction.

* Director, Centre For Development Alternatives, Ahmedabad and
Chairperson, Technical Committee on Time Use Survey, appointed by Government of India, New Delhi.

¹ The term "extended SNA activities has been coined/used by the Technical Committee on Time Use Survey in India to indicate the extended SNA nature of these activities. It also indicates a potential of these activities to be included in the SNA boundary some time in the future.

The present paper discusses the experience of the Indian (pilot) time use survey in this context. It discusses the tabulation and analysis of the time use survey data, as designed in the Indian Survey, for improving measurement of paid and unpaid work of people. The paper is divided into four sections: Section One discusses the conceptual aspects of measuring paid and unpaid work in a time use survey; Section Two deals with the scheme of analysis of the time use data for measuring paid and unpaid work; Section Three discusses the major results of the Indian time use study with respect to paid and unpaid work; while Section Four concludes the major observations that emerge from the discussion in the earlier sections.

1

Measuring Paid and Unpaid Work Using Time Use Survey Data

We have noted above that the present system of statistics fails to include unpaid, and even some paid activities in the estimates of national income and workforce/labour force. Though SNA activities, conceptually includes some non-market oriented activities (for example, goods manufacture for household consumption, free collection of water etc.), in reality not all national accounts systems include these in practice. The extended SNA activities are of course, outside the purview of official statistics. As a result, the statistics used as the basis for formulating most macro policies, which affect the entire society, cover only a part of the society. That is, though remunerated and unremunerated work contribute to human well being, the official data cover only the remunerated part of work. This limitation of economic statistics was pointed out way back by Kuznets who observed that the these major activities, namely, housewife's services, household goods for self consumption and voluntary work, that contribute to improved levels of living of people, lie outside the purview of economic activities. Their exclusion, however, was justified on the ground that economics is a science that covers only those activities which are exchanged in the market.

The 1993 SNA contributed significantly towards including some unpaid work within the purview of national accounts. This unpaid work primarily includes production of non-marketed goods which are produced for self consumption. These goods were included because: there is a possibility of their sale if the production is more, and in that sense

these goods are potentially marketable².

This conceptual expansion of the coverage under the 1993 SNA, however, has not been enforced in several countries. It seems that conventions, and not just concepts, play an important role in determining the production boundary of national accounting systems (Kulshreshtha 1999). For example, illegal activities like smuggling or prostitution are covered under the 1993 SNA but not included in actual practice in most countries. Similarly, production of goods for home consumption, though included conceptually, is excluded in practice in several national accounts systems. One reason for their exclusion is of course the lack of the required data.

Though the 1993 SNA has taken a progressive step of including some non-market unpaid production in the national accounts system it still excluded non marketed domestic services from the purview of the SNA boundary. The only exceptions are (1) the services of owner occupied dwellings, i.e. imputed housing services for own consumption produced by owner occupiers in their capacity as unincorporated enterprise and (2) domestic services produced by paid employees who are to be treated as independent unincorporated enterprises serving household. According to the official view of the 1993 SNA, these services are excluded firstly because they have a limited repercussion for the rest of the economy; secondly, it is difficult to determine their meaningful price as these are not actually exchanged in the market, and thirdly, their imputed values have limited uses - for example, it does not make much sense to conclude that all men and women are fully employed! It is argued that since these activities are relatively isolated and are independent of market activities, it is extremely difficult to make economically meaningful estimates of their values. Such valuation can perhaps have an adverse effect on macro economic policy formulation!

² These goods include:

1. Production of agricultural goods and their subsequent storage, gathering berries and other crops, forestry, wood cutting, collection of fire wood, hunting and fishing,
2. Production of other primary products such as mineral salts, cutting peat, water supply etc.
3. Processing of agricultural products; grain production by threshing; flour production by milling; curing of skins and leather production; production and preservation of meat and fish products; fruit preservation by drying bottling etc;' production of dairy products like milk, butter, cheese etc; production of beer, wine, sprits; production of baskets, mats etc.
4. Other kind of processing, such as weaving cloth, dress making, tailoring and production of footwear, pottery, utensils, durables, furniture, fumishings etc, and
5. Storage of agricultural goods produced by households (included as an extension of goods production process) and supplying water.

The list is not exhaustive, but it covers the most common types of production activities. Generally, when the amount of goods produced within households is believed to be quantitatively important in relation to the total supply of that good in a country its production is included in the SNA.

In short, the following paid and unpaid activities are likely to be excluded from the national accounts systems and from the official labour force/work force statistics in several countries, and particularly in developing countries. That is, the following are the major gaps in the data system in these countries as far as the inclusion of paid and unpaid work in the data system is concerned:

1. Underestimation of work force/labor force, mainly its unpaid component, and the consequent underestimation of national income in the conventional official data related to market oriented SNA activities
2. Underestimation or even exclusion of production of goods for home consumption (covered under the non market oriented SNA activities) and the consequent underestimation of the work force,
3. Exclusion of extended SNA activities and the consequent exclusion of the work force engaged in these and the income generated by these activities.

The time use survey technique seems to have the potential of including all the three kinds of activities within its purview.

Time Use Surveys For Measuring Paid and Unpaid Work:

Historically speaking, the Time Use Survey technique was first used in the early years of the twentieth century as a means of understanding lifestyle of people, including their social life, on the basis of the pattern of time use by them. These surveys were thus designed to understand that part of life of people for which no information was available from conventional data sources, such as, national income statistics, labour and employment statistics, population statistics etc. In the second part of twentieth century, and particularly during the last few decades of the century, however, a need was felt to measure the “invisible” unpaid work of men and women to estimate the contribution of unpaid work to human welfare. Since the need was first expressed by some feminist groups in industrialized countries in the North, several of these countries depended on time use surveys to estimate the time and value of unpaid work of women. Canada and Great Britain conducted such surveys in the 1960s, and were followed by Norway, Bulgaria, Japan, Finland, Hungary, Austria and others in the 1970s and 1980s (Goldschmidt Clermont and Pagnossin – Aligisakis 1995, Ironmonger 1999, Niemi 1983 and others). These countries gradually evolved their concepts and methodology to measure and analyze unpaid work of men and women in their respective data systems.

With the emergence of developing countries on the scene, time use surveys have acquired an additional focus. These countries have seen several additional uses of these surveys, in addition to the uses visualized by industrialized countries. These additional uses are netting economic work of the poor (men and women both) and improving thereby the work force/labour force statistics; improving estimates of national income by getting better data on SNA activities, including additional activities into the national accounts system incorporated in the 1993 SNA; and drawing useful policy guidelines for poverty reduction, employment generation and welfare promotion. These countries are gradually

evolving suitable concepts, survey methodology, classification of activities, and valuation techniques for their own keeping, in mind their constraints and needs.

It is gradually realized, however, that though developed and developing countries seem to be having a different focus with regard to time use studies, the difference is mainly of the emphasis and not of the substance. That is, even in developing countries a good amount of work is done which is outside the SNA production boundary, and similarly, even in developed countries there is some economic work carried out by workers under the putting out system, sub contracted work or home based work that is not netted adequately by conventional statistical methods. Time use surveys thus help in netting SNA work as well as extended SNA work in both, developed and developing countries.

What is more important to note, however, is that a time use survey can go much beyond this role. A time use survey can present a complete picture of the society by providing detailed information about how people spend their days on different economic and non-economic activities. In fact, it can be said that time use survey is the only survey technique available to us at present that provides a comprehensive information on how individual spend their time in paid and unpaid activities, on a daily and weekly basis, and “reveals the details of an individual’s daily life with a combination of specificity and comprehensiveness not achieved in any other social survey (Gershuny 1992). Conceptually speaking, time use studies contribute in three major areas, and in that sense this survey method stands on three main pillars:

1. Time use studies provide complete picture of the society by making those areas visible which are not visible in the present statistical system, and thereby provide a sound data base for formulating macro policies of different types,
2. Time use studies throw light on the unpaid extended SNA work of men and women, (and estimate the contribution of unpaid work to human well being) which may help in integrating paid and unpaid work in national policies, and in policy formulation for gender equity; and
3. Time use surveys provide better estimates of economic or SNA work and workers as well as of national income, and thereby contribute significantly towards improvement in the conventional economic statistics.

Complete Picture of the Society: As discussed earlier, conventional statistics which are used as the basis for formulating all macro policies that touch the entire society. That is, though both remunerated and unremunerated work or marketed and non-marketed activities contribute to human welfare, the conventional economic data cover only remunerated part of activities. This leads to several distortions in measurement of welfare and in macro policy formulation. For example, conventional data on human welfare fail to give proper estimates of the welfare levels enjoyed by human beings. Also, conventional labour statistics are misleading as they do not provide complete information about the efforts that go behind maintaining and improving human consumption of goods and services. This also leads to faulty policy formulation as well as faulty policy

responses. In the context of globalization in India in the recent years, for example, conventional data will not show how reduction in subsidies and public expenditure can lead to increased burden of work on women or what kind of survival strategies they are forced to adopt as a response to these changes. In short, time use surveys provide a sound and comprehensive data base for understanding, measuring and monitoring the activities in a society over which macro policies can be formulated, assessed and modified.

Unpaid Extended Work: The second major contribution of time use studies is that they throw light on unpaid extended SNA activities in a society. This can have useful implications for poverty, gender equity and human development. This unpaid work which is also known by different terms like unremunerated work, non-market work, social reproduction, domestic work or “care” activities, can be defined as those services which contribute to human well being, but which are not exchanged in the market and are not therefore included in national income statistics. These activities exclude personal services, the activities which are done for personal welfare and which cannot be delegated to others (For example, resting, sleeping, eating etc.). Unpaid extended SNA work basically includes (a) household management (cooking, cleaning washing, etc.), (b) “care” activities (taking care of children, elderly people, sick and disabled), (c) production of goods for self consumption (such as stitching clothes, making mats, jams and pickles for family on small scale), (d) other services such as, transporting children etc. as well as servicing and repair house and household durables, home decoration and (e) social work – voluntary work for the community. Though men are observed to be participating in these activities, it is women who are primarily responsible for performing these activities.

These activities are essential for human survival as the basic physiological and psychological needs of human beings are met with through this domestic unpaid services. These activities also contribute to production of human capital by improving health, nutrition and education of family members. These activities contribute to human development by improving human capabilities in areas like physiological and psychological care and good nurturing. Some of these activities also provide social security to the old, sick and disabled persons.

In spite of this contribution, however, these activities do not appear in any conventional statistics of national economies. The work is not recognized and therefore the workers, mainly women, are considered inferior to others, mainly men, whose contribution is visible in official data. Since unpaid workers are deprived of exposure to outside world and outside opportunities, they have limited life chances in the society. And when unpaid workers, women, participate in the formal economy, they suffer from several disadvantages, such as, carrying extra burden of domestic responsibilities, poor human capital for the formal labour market, inferior status and poor prospects of getting good jobs in the core sector as well as poor upward mobility also due to the burden of domestic responsibilities. In short, the distribution of paid and unpaid work between men and women determine the hierarchy within the household. The roots of gender inequality are to be found in this division of labour between men and women.

It is important therefore to give visibility to this unpaid work in formal statistics, to understand the linkages between paid and unpaid work, and to integrate paid and unpaid work in national policies in a way that gender equity is not sacrificed. Time use surveys can perform the first two tasks and can help in the third task. It needs to be kept in mind, however, that these data and valuation of unpaid work cannot reflect the emotional energy and the sense of responsibility underlying unpaid domestic work. Unpaid work is much more than their statistical recognition.

It is not surprising therefore that the Platform For Action (PFA) adopted at the Fourth World Conference on Women in Beijing in 1995 has called for developing “suitable statistical means to recognize and make visible the full extent of the work of women and all their contribution to the national economy including their contribution in the unremunerated and domestic sectors, and to examine the relationship of women’s unremunerated work to the incidence of their vulnerability to poverty”(UN, Beijing Declaration and Platform for Action 1995).

Netting Better Statistics on Economic Work and Workers, and on National Income:

The third major rationale of time use studies is that they improve even the conventional data, particularly on work and workers, and thereby improve the existing national income data.

It has been observed that statistics on market oriented work and workers are grossly underestimated, particularly in developing countries because of the inadequacy of the prevalent concepts and methods used in capturing these data. In the case of India, for example, it has been observed that in spite of the efforts of the national statistical machinery, the data on the work of the poor, and particularly of poor women, are not satisfactory (Hirway 1999). This is because the work of women as well as that of the poor is frequently seasonal, intermittent and uncertain, with the result that it is not demarcated clearly from the unpaid household work which is non-SNA in character. Investigators frequently find it difficult to net this work in statistics. Secondly, under the prevailing socio-cultural values, (a) women are not expected to involve themselves in paid employment, and working women are frequently held in low esteem in the society; (b) women do not consider their economic work as “work” as they perceive their work as non-work of low status in the economy and (c) even investigators also frequently do not perceive women’s economic work as work and report it as domestic work.

These conceptual and definitional as well as methodological problems of capturing economic work and workers can be overcome by a well designed time use survey. Since time use surveys collect data on how human beings spend their time on different activities in a comprehensive way as well as without any bias, these data can be used for estimating labour force/ work force data correctly with the help of a well designed activity classification. Time use data can be particularly useful in getting realistic estimates of work and workers engaged as self employed workers and unpaid family workers in the subsistence sector and informal sector including home based work (Hirway 1999).

Better estimates of work and workers would also contribute to better estimates of national income or Gross Domestic Product in the economy. This will happen largely by improved workforce participation rates of men and women (and also children some times) in those sectors the output of which is estimated by multiplying average productivity of workers (arrived at by primary surveys) and the total number of workers.

It is important to note at this stage that with economic growth there is a tendency to transfer unpaid household work to paid economic activities. For example, a lot of food processing activities like husking, grinding or cleaning activities like laundrying, or child care, care of the sick etc. are transferred from “domestic work” to “economic work” as the economy grows. Since different countries are at different levels in this process of transferring domestic work to economic work, estimating national production and national work force/labour force only in terms of economic work will not present internationally comparable data on human consumption / welfare levels. Time use surveys can help in bridging the gap and can explain the inter country variations in a better way.

To sum up, time use studies can contribute significantly towards improving measurement of SNA and extended SNA activities³, mostly unpaid in nature, and can help in providing comprehensive data base for the society for integrating paid and unpaid work in the statistical system as well as in policy formulation.

2

The Indian Time Use Survey and Measurement of Paid and Unpaid Work

The Indian time use (pilot) survey was designed keeping in mind the potential of the time use survey technique in improving the data base of the economy. In fact, it needs to be noted that one major factor that led to the decision of undertaking a pilot time use survey in India was the long struggle of women’s movement, academics and statisticians for estimating women’s SNA work (and also extend SNA work) accurately⁴.

Following the demand from the women’s movement in India on the one hand and appreciating the value of time use surveys on the other hand, the Government of India in the Department of Statistics decided to organize a pilot time use study at the national level. A Technical Committee was set up to undertake the following tasks.

³ Personal services or non-SNA activities are excluded here as “these cannot be delegated to other”. However, their importance in human life and welfare cannot be denied. For example, the availability of personal time, the time spent on leisure, the time available for rest/sleep etc do indicate the welfare enjoyed by people.

⁴ For a detailed account of this struggle and the resultant decision of undertaking the pilot time use survey see Hirway Indira, “Estimating Work Force Using Time Use Study Results and Its Implications for Employment Policy in India” in “Proceedings of the International Seminar on Time Use Studies, 7 – 10 December 1999, Central Statistical Organisation, Government of India, New Delhi, 2000.

- To advise the Government on designing, planning and related matters leading to conducting a time use survey,
- To suggest appropriate definitions and concepts, schedule of inquiry and a suitable reference period for the purpose of data collection through a survey,
- To suggest an appropriate methodology for building up the annual estimates of time disposition based on the survey data, and
- To advise on any other matter referred to the Technical Committee by the Department of Statistics in respect of time use survey.

Keeping in mind these Terms of Reference, the Technical Committee laid down the following as the objectives of the pilot time use survey:

- On the statistical side, the objective was to develop a conceptual framework and a suitable methodology for designing and conducting time use studies in India on a regular basis. Also, to evolve a methodology to estimate labour force / work force in the country and to estimate value of unpaid work in the economy in the satellite account.
- To collect and analyze the time use pattern of people in the selected states in India in order to have a comprehensive information about the time spent by people on marketed and non-marketed economic activities covered under the UN-SNA 1993, non-marketed non-SNA activities covered under the General Production Boundary and on personal care and related activities that cannot be delegated to others.
- To use the data in generating more reliable estimates on work force and national income as per the SNA 1993, and in computing the value of unpaid work through separate satellite account,
- To infer policy / programme implications from the analysis of the data on (a) distribution of paid and unpaid work among men and women in rural and urban areas, (b) nature of unpaid work of women including the drudgery of their work and (c) sharing of household work by men and women for gender equity
- To analyze the time use pattern of the poor to understand the nature of their work so as to draw inference for employment and welfare programmes for them.
- To analyze the data of the time use pattern of the weaker sections including the poor, the child and women to draw inferences for welfare policies for them.

In short, the time use survey aimed at evolving suitable concepts and methods, as well as appropriate survey design, to estimate accurately the invisible, and mostly unpaid, SNA and extended SNA work of men and women; and estimate its value to improve (conventional) national income statistics to the extent possible, and to compile satellite accounts for valuing the unpaid extended SNA work performed in the economy.

The major aspects of the time use survey, which were designed for facilitating the collection of data for improving the estimates of paid and unpaid work and for valuing this work systematically are (a) The survey method, (b) The schedules and (c) The classification of activities. All the three components helped in designing an appropriate

scheme of tabulation and analysis of the data for estimating the paid and unpaid work of the sampled population.

The following paragraphs discuss these components to show how they helped in estimating paid, and particularly unpaid work of the population.

1. The Survey Design:

Since it was realized right in the beginning that this survey was different from the regular surveys and that collecting data on unpaid activities of different types was not an easy job, particularly in a country like India, the method of conducting the survey was designed carefully:

Selection of States: Since we wanted the selected sample to be broadly representative of India, so that the results could be used as an input to policy formulation at the all India level, the selected sample, included six states, each representing one of the six broad regions of the country⁵. The states selected for the survey were Haryana (North India), Gujarat (West India), Tamil Nadu (South India), Orissa (East India), Madhya Pradesh (Central India) and Meghalaya (North-East India). Our cross checking of the results has confirmed that the sample is fairly representative of the country⁶, and the results can be used for analyzing as well as utilizing the analysis of paid and unpaid activities in India.

Methodology of Data Collection: In view of the specific objectives as well as the Indian population, it was necessary to develop appropriate methods for data collection for the survey. An Instruction manual was therefore designed carefully to incorporate ways and means for netting paid and unpaid work of the population:

- * Since the level of literacy is low in India, the urban, rural and total literacy rates being 73.1 percent, 44.7 percent and 52.2 percent respectively as per the 1991 Census of Population (These rates are expected to be much higher in the 2001 Census of Population), the diary method was rejected in favour of the One Day Recall method, according to which an interviewer is expected to collect time use data for the previous day through a well designed interview.
- * Time pieces and clocks are not followed by people in many rural parts of India, though they have a fair sense of time while going about their daily chores. It was difficult therefore to use 10 minutes slots as done in some industrialized countries. Investigators were therefore trained to ask questions carefully about the chronology of activities and help respondents in reporting his time use for every hour of the day.

⁵ Another reason for selecting the states was to test the schedule and the methodology of this pilot survey in the different socio-economic environment in the country.

⁶ This cross checking was done by comparing broad results of the time use survey regarding characteristics of the households and members of the households of the sampled population with the corresponding results from the established surveys like the National Sample Survey Organisation, Census of Population and National Family Health Survey. Our cross checking suggested that both the sets of data are fairly comparable.

- * Since women were many times reluctant to respond to the schedules and men wanted to respond on behalf of their women, women investigators were employed and trained carefully about getting the right response from women about their paid and unpaid work.
- * Since the character of the paid and unpaid work changes significantly, in different seasons, particularly in a predominantly agricultural country like India, the survey was conducted in four rounds to collect data about the four different seasons in the country.

2. Training, Retraining and Monitoring:

Considering the fact that pilot time use survey was different, if not difficult, survey from the regular surveys, special emphasis was placed in training, retraining, and close monitoring of the survey. Apart from carefully designing the Training Manual, an all India training as well as state level training were organized in the six states in their respective regional languages. A close monitoring was organized in all the states and retraining programmes were implemented whenever it was found necessary.

In short, careful and systematic efforts were made to collect reliable data on the time use pattern of people on the different paid and unpaid SNA, extended SNA and non-SNA activities during the survey.

3. The Schedules:

Three schedules were designed for the survey: 0.1 was House listing Schedule for Rural Areas, 0.2 House listing Schedules for Urban Areas and 1.0 Time Use Survey Schedule for Rural and Urban Areas. Schedules 0.1 and 0.2 : After Identification of Sample collected some basic information about the sampled households, after the identification of the sample. The 1.0 schedule, the main schedule of the survey, was divided into three blocks. Block One collected data on Household characteristics of the selected households, Block Two collected particulars of household members, while Block Three collected data on the time disposition of the members of the selected households.

A. *Household Characteristics:* The major information collected on household characteristics included the following:

- General information – head of the household, size of the household etc.
- Principle Industry⁷ and Principle Occupation of the household⁸
- Type of the household⁹

⁷ Principle Industry refers to Industry Code (NIC 1987 to 3 digit), and Principle Occupation refers to Occupation Code (NCO 1968 to 3 digit)

⁸ Principle Occupation refers to Occupation Code (NCO 1968 to 3 digit)

⁹ For Rural areas the codes are:

- Religion and social group/caste of the household
- Land possessed and owned by the household
- Average monthly expenditure of the household and average monthly per capita expenditure
- Having homestead (Yes/No) and structure of the dwelling ¹⁰
- Number of disabled person (physically and mentally disabled)

B. Individual Characteristics of Household Members: The following information was collected for each member of the selected households:

- Name, age, sex and marital status of each member
- Education level of each member
- Information of disability if a member is disabled
- Usual Activity Status of each member in Principal Activity and one Subsidiary Activity¹¹
- Whether participating in decision making¹²
- Number of Days in the reference week: (Normal day, weekly variant (holiday) and abnormal day) for which the data are collected.

-
1. Self employed professional in non-agricultural
 2. Self employed non-professional in non-agricultural
 3. Agricultural Labour
 4. Other Labour
 5. Self employed in agriculture
 6. Others

For Urban areas, the codes are:

1. Self employed professional
2. Self employed non-professional
3. Regular wage/salary earner
4. Casual labour
5. Others

¹⁰ The structure of the dwelling has 3 codes: Non-durable and Non-serviceable (Kutchha) Dwelling, Non-durable and Serviceable Dwelling (Semi Pucca), and Durable and Serviceable Dwelling (Pucca).

¹¹ Usual activity status was divided into two parts, namely, principal activity status and subsidiary activity status. The codes of the activity status included the following:

- status: work in household enterprises (self employed): own account worker – 11, employer – 12, worked as helper in hh enterprise (unpaid family worker) –21, worked as home based worker – 22, worked as regular salaried/wage permanent employee – 32, worked as regular salaried/wage non permanent employee – 33, worked as casual and contractual wage labour : in public works – 41, in other type of works – 51, worked as trainee/intern(paid) – 52, worked as exchange labour – 53, did not work but was seeking as/or available for work – 81, attended educational institutions – 91, attended domestic duties and was also engaged in free collection of goods (vegetables, roots, firewood, cattle feed. Etc), sewing, tailoring, weaving etc. for household use – 93, rentier/pensioners/remittance receipts, etc. – 94, not able to work due to disability – 95, Beggars, prostitutes – 96, others – 97.

- It is to be noted that the activity codes status give complete details of the different activity status of prevailing in the labour market in India.

¹² Participation in decision making includes decision pertaining to purchase of durable consumption goods.

C. Time Use Pattern of Each Member of the Household (6+ age group): The third block of the schedule collected the actual information about the time use of each individual. The information was collected for the previous day (for all 24 hours) – for a normal day, weekly variant day (if any) and an abnormal day (if the selected day happens to be an abnormal day). The information was collected in the following way:

- Information was collected by a trained interviewer/investigator about how the respondent spent the previous day (One Day Recall Method).
- The information was collected for the full day (24 hours) in a one hour time slot, to help respondents, by noting down actual time spent on each activity that the individual performed the previous day.
- Information was also collected on multiple activities, i.e. activities performed simultaneously by individuals
- Two context variables were used for the collected information, namely whether the work was paid or unpaid, and whether the activity was performed within the home or outside home.

Three blocks of the schedule thus provide information on the three important aspects of time use patterns:

- How do people distribute their time on different paid and unpaid activities?
- What are the characteristics of these individuals?
- What are the characteristics of the households to which these individuals belong?

4. Classification of Time Use Activities:

Statistical Classification is defined as “a set of discrete values which can be assigned to specific variables that are to be measured in a statistical survey, or registered in administrative files, which will be used as basis for the production of statistics (Hoffmann 1997). Classification of activities thus plays an important role in linking analysis of data to the objectives of the survey.

When India started designing its pilot time use survey, it had the following sets of activity classifications available to choose from:

1. Time use classifications used by developed / industrialized countries like Australia, Canada, Japan, Finland, Eurostat countries etc.
2. The Expert Group Classification of Time Use Activities (The Trial Classification).¹³

¹³ The Expert Group Classification was an outcome of the Expert Group Meeting on Classification of Activities organized by UNSD in October 1998, at New York. This meeting discussed the Trial Classification of UNSD and the Alternative classification of the ILO, and came out with a modified Trial Classification, which we call Expert Group Classification.

3. The ILO classification of the time use activities (The Alternative Classification).¹⁴

The first set of classifications has been designed by industrialized countries mainly to capture unpaid domestic work (i.e. extended SNA work) of women (and men) in countries. These classifications focus mainly on non-economic activities, and collect minimum data on economic activities as it is assumed that reliable data on economic activities are available in conventional data (Hirway 2000). Even the International Standard Activity Classification (ISAC) presented by Harvey and Niemi (1993), which is presumably meant for developed and developing countries also focuses primarily on non-economic activities and refers to economic work very briefly. These classifications were therefore not useful to India as Indian survey wanted detailed information also about the economic activities of the population.¹⁵

The Expert Group classification or the Trial Classification was a result of the Expert Group Meeting on Classification of Time Use Activities organized by UNSD in 1997. This classification was accepted after the discussion on the first draft of the Trial Classification of the UNSD and the Alternative Classification presented by the ILO. The two main principles underlying the Expert Group Classification are: (1) to provide a structure which is consistent with the conceptual framework of the SNA and which allows for compiling satellite accounts, and (2) to ensure comparability with other time use activity classifications.¹⁶

This classification has certain advantages, like (1) it has the SNA framework, (2) it has comparability with the established classifications used in industrialized countries, (3) it avoids duplications – both internal and external, (4) it attempts to meet the specific needs of developed and developing economies, and (5) it provides a classification that can be used at the global level. We in India, however, found several problems with this classification at the conceptual and operational levels.

¹⁴ The ILO classification has been prepared by Eimind Hoffman AND Andriana Mata (ILO 1998). This classification was presented at the Expert Group Meeting on classification, in 1998 at UNSD, New York.

¹⁵ Refer to details, Indira Hirway(2000), Time Use Survey: Concept, Classification of Activities and Related Issues: Lessons from the Indian Pilot Time Use Survey, Paper prepared for the Training Workshop at Bangkok, 11-15 September 2000.

¹⁶ This Expert Group Classification divided the activities into the following major groups: (Appendix 9)

1. Employment for Establishments
2. Primary production activities (not for establishments)
3. Services for income and other production of goods (not for establishments)
4. Household maintenance, management and shopping for own household
5. Care for children, the sick, elderly and disabled for own household
6. Community services and help to other households
7. Learning
8. Social and cultural activities
9. Mass media use
10. Personal care and self maintenance

It is clear that 1 to 3 major groups are within the SNA Production Boundary, 4 to 6 outside the SNA boundary but within the General Production Boundary and 7 to 9 and 10 are in non-production activities.

The main problem of the Expert Group classification is with regard to the first three groups, namely, Employment for Establishments, Primary Production Activities (not for establishments) and Services for Income and Other Production of Goods. The first group is vague as the definition of establishment as “fixed structure and large holdings”, irrespective of industrial sector of the activity is not only confusing, but also not relevant and valid, particularly for developing countries. If the objective behind designing the first group is to distinguish between formal and informal activities, the objective is not served as there can be informal units in fixed structure or formal units without a fixed structure. If the objective is to distinguish between subsistence and non-subsistence (market oriented) activities, small farms can be market oriented and large farms with low productivity can be subsistence farms. In short, the first group seems to be confusing and does not help much in identifying formal or informal activities or subsistence or market oriented activities. The next two groups also therefore do not serve much purpose.

The Technical Committee in India therefore designed a new classification of time use activities. The major groups of this classification are as follows:

1. Primary Production Activities
2. Secondary Sector Activities
3. Tertiary Sector Activities (Trade, Business and Services)
4. Household Maintenance, Management and Shopping for own households
5. Care of children, elderly, disabled for own household
6. Community services
7. Learning
8. Social and Cultural Activities
9. Personal care and self maintenance

It is clear that the first three activities refer to SNA activities falling under the Production Boundary; the next three activities are non-SNA activities falling in the General Production Boundary; while the last three activities are personal activities which are non-delegable activities. This classification is further divided into two digit classification to indicate the major sub groups, and into three digit classification to describe the actual activities. This classification has the following advantages:

Serves the Major Objectives: The Indian classification seems to serve the major objectives of time use surveys, for developed and developing countries. That is, it presents time use data in a way that the presentation reveals the major time use patterns in the SNA framework which, in turn, helps in policy formulation and policy monitoring for integrating paid and unpaid work. The classification can also be used in compiling satellite accounts measuring the value of unpaid work. The classification can thus take care of the objectives of the time use survey.

Weightage to SNA Activities: The Indian classification gives due weightage to both, SNA and non-SNA activities. Economic activities which are usually neglected in the classifications of industrialized countries, including the ISAC (International Standard

Activity Classification) presented by Harvey and Niemi (1993), get their due importance in the Indian Classification. With the two contextual variable, namely, paid/unpaid work and location of work (within and outside home), the classification of economic activities provides the required information on paid and unpaid SNA work conducted within and outside homes.

Comparability with the Existing Classifications: Another advantage of the Indian Classification is that it is comparable with the existing standard classification of SNA activities as well as non-SNA activities. It is within the SNA framework distinguishing clearly the paid and unpaid SNA activities, extended-SNA activities and non-SNA personal services. It also is in line with the existing workforce/labour force statistics as it provides information on persons (and the time spent by persons) engaged in paid and unpaid economic activities as well as on forced leisure time. The classification also is comparable with the established classifications of non-SNA activities.

Flexibility in the Classification: The Indian time use classification is flexible enough to allow for the inclusion of specific paid and unpaid activities conducted in different developed and developing countries. The three-digit classification is largely meant for allowing this flexibility.

In short, the classification provides a sound data base for further analysis of the time use data for measuring different paid and unpaid SNA, extended SNA and non-SNA activities.

Tabulation and Analysis of Time Use Data:

The scheme of tabulation and analysis of time use data followed the design of the schedules and the classification of activities in order to achieve the objectives of the time use survey.

Since it was not possible to compile all the tables in one go, it was decided to compile some general tables in the initial stages. Though these tables throw useful light on the paid and unpaid SNA activities, extended activities and non-SNA activities, they do not provide adequate information on these activities so as to improve the workforce estimates or understand the nature of paid and unpaid work in a comprehensive way. We shall, however, (1) discuss the existing set of tables, (2) analyze the major findings emerging from these tables, and (3) discuss the future tabulation plan for the further analysis of time use data for improving measurement of paid and unpaid work in India.

The present set of tables can be broadly divided into the following categories:

General Characteristics of the Selected Households:

These tables provide information on the main characteristics of the sample households, such as, number of households and their distribution in rural and urban areas, size distribution of households, principal industries and principal occupation of the

households, monthly expenditure and average monthly per capita expenditure of the households, social groups of the households, head of the household and structure of the dwelling of the household.

General Characteristics of the Members of the Selected Households:

These tables provided data on some major individual characteristics of the population, such as, age, sex, social groups and religion, education levels¹⁷, disability¹⁸ and the types of disability, usual activity status¹⁹ by principal and subsidiary activity - of the members etc.

Time Use Tables:

In the background information of the sampled households and the members of the household as above, a set of tables were compiled to measure and analyze the time use pattern of the members (6+ years). These tables are mainly as follows:

1. The first set of tables refers to the days for which the data are available in the four sub rounds of the survey. These tables present data on the number of normal days, weekly variant days and abnormal days for which time use data are collected. The table also provides information on how many persons, males and females responded to the time use schedule in the selected six states in India.
2. These tables were followed by another general set of tables that present the overall time use pattern of the population. These tables were designed primarily to analyze and understand how people distribute their time on SNA activities, extended SNA activities and non-SNA activities. These tables thus provided information on how many men and women (and children) participate in SNA and extended SNA activities (it is assumed that all participate in non-SNA activities), and for how many hours in a week. This information on the overall time use pattern was collected with reference to
 - Age and sex of the population
 - Marital status and educational level of the population, and
 - Rural and urban areas (i.e. place of residence) of the population
3. Analysing the Time Use in SNA Activities: Since getting better estimates of workforce/ labour force is an important objective of the pilot time use study, analysis of the time use pattern on SNA activities constituted an important component of the time use data analysis.

The main tables compiled for the SNA activities are as follows:

¹⁷ Please refer to the earlier discussion on the codes for these activities

¹⁸ Please refer to the earlier discussion on the codes for these activities

¹⁹ Please refer to the earlier discussion on the codes for these activities

- Men and Women Engaged in SNA activities by two and three digit activity classification²⁰ in rural and urban areas,
- Average **Number of hours** spent by participating men and women on these activities in rural and urban areas.
- Participation by men and women in SNA activities and hours spent by them with reference to **paid and unpaid activities**, and activities performed **within the home and outside**.
- **Number of men and women** engaged in SNA activities and hours spent by them in these activities by **age groups** and **place of residence** in major SNA activities (2 and three digit levels)
- **Number of men and women** engaged in SNA activities and average number of hours spent by them at two digits in rural and urban areas by **level of literacy**.
- **Number of men and women** engaged in SNA activities and hours spent by them in these activities by **marital status**.
- **Number of men and women** engaged in SNA activities and hours spent by them in these activities by the **usual activity status** (principal and subsidiaries) in rural and urban areas.

The above tables present a complete picture of the participation of the sampled population in SNA activities at the two and three digit levels by the major individual characteristics of the population. It is to be noted that while the two digit classification gives information on the time use as per the industry classification, the three digit level classification provides additional information about age and gender specific participation and average time spent on specific activities. The three digit classification provides the following details of the time spent on:

- Home based production activities

²⁰ Two digit classification includes the following SNA activities

1. Primary Production Activities:
 - 11 - Crop farming, kitchen gardening, etc.
 - 12 - Animal Husbandry
 - 13 - Fishing, Forestry, Horticulture, Gardening
 - 14 - Fetching of fruits, water, plants etc. storing and hunting
 - 15 - Processing and Storage
 - 16 - Mining quarrying, digging, cutting, etc.
2. Secondary Activities:
 - 21 - Construction Activities
 - 22 - Manufacturing Activities.
3. Tertiary Activities:
 - 31 - Trade and Business
 - 32 - Services

The three digit classification refers to actual activities carried out by people.

- Free collection of fruits, fodder, fuel water etc.
- Food processing, storing etc., home-based work
- Petty services and petty trade vs. professional services and activities
- Sale and purchase related activities
- Supervision related work vs. hand work of production
- Government employment programmes
- Low productivity activities vs. skilled/technical work
- Production of goods for self consumption- crafts, artisan work etc.

And all this information is presented with reference to

- Education status of people
- Marital status
- Age groups
- Place of residence (rural and urban areas)
- Paid and unpaid activities
- Work done in and outside home.

4. Analysis of Time Use in Extended SNA Activities: Extended SNA activities have been classified in the following broad groups:

- Household maintenance, management and shopping
- Care of children, the sick, elderly and disabled of own household
- Community services and help to other households.

These are further subdivided into three digit activities²¹ which relate to the actual activities that are carried out by men and women in the country (in six selected states). Tables have been compiled to analyze how time is spent by the sampled population on these following major activities falling in the purview of extended SNA activities:

- Cooking, cleaning, washing and up keeping of the household
- Care of textiles - mending, washing, ironing, etc.
- Shopping of goods of different types for the family
- Household management, supervision, planning, paying bills etc.
- Pet care, and misc.
- Care of the elderly
- Care of the sick, disabled
- Community organized work - community assets related and collect collaborative etc.
- Voluntary work with an organization
- Voluntary work with an organization

²¹ Two digit classification is implicit, and not stated explicitly in the scheme of classification.

- Voluntary work without an organization to individuals etc.
- Participation in meetings of union, informal groups, associations and other organization
- Participation in civic and related activities.

As in the case of SNA activities, the tables for the extended SNA activities are compiled on the number of persons participating and average number of houses of participation (for participants and for the total population) by gender in rural and urban areas with respect to the following parameters:

- Educational level
- Marital status
- Age group
- Usual activity status, and
- Inside and outside home.

5. Analysis of Time Use Pattern in Non-SNA Activities (Falling Outside General Production Boundary): Since non-SNA activities or personal services cannot be delegated to others, the time spent on these activities is personal time, the time exclusively available to them persons, These activities are broadly classified into the following groups under the scheme of our classification of activities:

- Learning - education and training of one's own self
- Participation in socio-cultural activities
- Personal care and self maintenance

These are further subdivided into three digit activities²² which relates to the actual activities which are carried out by men and women actual practice. Tables have been compiled to analyze how time is spent by sampled population and how much time is spent by them on the following major activities falling within the purview of non-SAN activities.

- General education at school/college/university or at other educational institutions
- Non-formal education through night school, adult education classes, non-formal education schemes etc.
- Self education - homework, self study
- Training, technical, professional, vocational under government programmes or otherwise
- Participation in social events, religious events and community functions
- Socialization at house and outside
- Participation in sports and games
- Participation in arts, music, hobbies, concerts, museums etc.
- Watching TV, radio, mass media and related entertainment

²² Two digit classification is implicit, and not stated explicitly in the scheme of the classification.

- Sleep, rest, relaxing, gossiping etc.
- Eating, drinking and related activities
- Personal hygiene and health
- Walking, running, exercise, yoga etc.
- Religious activities
- Receiving medical attention
- Forced leisure, searching jobs, etc. (including un/under employment)

As done earlier, these tables are also compiled with respect to the following parameters:

- Educational level
- Marital status
- Age group
- Usual activity status, and
- Activity done inside and outside house.

6. Other tables: In addition to the tables mentioned above, some additional tables have been compiled to focus on some important aspects of the time use pattern.

- **Travel time** : The time use survey collected data on the travel time for each of the activities performed by the respondents. The travel time refers to the time spent on reaching the destination where the activity is performed. Conceptually, the travel time can be treated as a part of the time spent on the activity for which the travel is made. However, keeping in mind the increasing importance of travelling, commuting for work or for any other purpose, separate estimates were made for the travel time for the different SNA, extended SNA and non SNA activities - for men and women in rural urban areas.
- **Child Labour**: Since child labour is an important socio-economic problem in India, separate tables were prepared for child labour. The available data of the time use survey allowed for the following tables.
 - Number of child participating and average number of hours spent by them in the week on SNA activities (by three digit activity codes) in the age group 6 to 9 years and 10 to 14 years by gender in rural and urban areas.
 - Number of children participating and average number of hours spent by them in the age groups 6 to 9 years and 10 to 14 years in general education and non-formal education by gender in rural and urban areas.
 - Number of children participating and average number of hours spent in the week by them on extended SNA activities (by three digit activity codes) by age groups 6 to 9 years and 10 to 14 years and by gender in rural and urban areas.

These tables present estimates of the number of children participating in SNA activities extended SNA activities as well as in general education activities. Indirectly they give some broad estimates of children missing their school education, working in SNA activities and engaged in extended activities.²³

- **Un/Under Employment:** The nature of unemployment in India, as in several other developing countries, is peculiar. The unemployment here is more of underemployment rather than open unemployment. Time use data can be very useful in measuring this underemployment as it collects data on (a) time spent on looking for work and (b) time spent on forced leisure during which the person is available and willing to take up work if work is available. The following tables have been compiled in this context:
 - Number of persons seeking work/employment and time spent on seeking work by gender in rural and urban areas in the six states and in combined state.
 - Number of persons enjoying forced leisure and the time spent on forced labour by gender and age groups in rural and urban areas, and by educational status.
 - These tables have been compiled with reference to the age groups, marital status and educational levels of the respondents.

3

Major Results Regarding Paid and Unpaid Work of the Population

About the Sample:

It is important to note some basic characteristics of the sampled population to start with. These are discussed below:

- The Indian time use survey covered 18591 households spread over the six selected major states in India. Of the total households 68.5% were rural while 31.5% were urban (Table T₁)
- The average size of the household was 4.16 persons (4.21 in rural areas and 4.04 in urban areas); about 41% possessed land while about 59% were landless, about 90% household were Hindus and the rest belonged to other religions; about 9.5% households were female headed households (9.91% in rural areas and 8.6% in urban areas); and 37.7% households lived in Kutcha houses, that is non durable and non serviceable houses (46.46% in rural areas and 15.55% in urban areas).

²³ These estimates are not adequate to present statistics on the incidence of child labour. This point is discussed at a later state.

- In all, 63,304 persons were investigated for their time use. Of these, 68.6% were from rural areas and 31.4% were from urban areas; and 48.48% were women and 51.52% were men. Also, 6.4% of the persons were above 60 years, 19% were between 40 years and 60 years, 41.8% were between 75 years and 40 years, and the rest were below 15 years (Table T2)
- About 45.6% persons were never married (for all age groups), 49.13% were married, 4.89% were widowed and 0.37% were divorced or separated. The corresponding percentages for women are 41.15%, 50.73%, 7.64% and 0.48% respectively.
- About 32.94% respondents were illiterate (43.97% women and 22.62% men); 28.93% households in rural areas and 8.82% households in urban areas had no literate member; while 57.14% of rural households and 26.26% of urban households had no literate female member.
- On an average, of the total 7 days, 6.51 days were normal, 0.44 day weekly vacant day and 0.05 day was abnormal day. Weekly vacant day was more pronounced in urban areas than in rural areas where people continue their normal activities on holidays also.

Distribution of Time Between SNA, Extended SNA and Non-SNA activities:

Participation in SNA and Extended SNA Activities: In general, more men participate in SNA activities than women, while more women participate in extended SNA activities than men in all the six states in India (Table T₃). In the case of India (combined states) about 62.85% of men and 62.85% of women participate in SNA activities, while 88.72% of women and 46.61% of men participate in extended SNA activities. The participation in SNA activities is much greater in rural areas (79.39% for men and 72.59% for women) than in urban areas (70.04% for men and 41.28% for women).

In general a higher percentage of men participate in extended SNA activities in urban areas than in rural areas, while a lower percentage of women participate in extended SNA activities in urban areas than in rural areas. In other words, participation of women is much higher in both SNA and extended SNA activities in rural areas as compared to urban areas (Table T₃). Though there are some inter state variations, the general pattern of participation in SNA and extended SAN activities by men and women is more or less the same in all the states.

Time Spent on SNA, Extended SNA and non-SNA Activities: On an average men in India spend 41.96 hours in a week (168 hours) on SNA activities, 3.65 hours on extended SNA activities and 122.42 hours on non-SNA activities. As against this, women spend 18.72 hours in a week on SNA activities, 34.63 hours on extended SNA activities while 114.58 hours on non-SNA activities. In other words, men spend about 25% of their total weekly time on SNA activities, 2.17% on extended SNA activities and 72.86% on non-SNA activities, while women spend 11.15% of their time on SNA activities, 20.62% time on extended SNA activities and 68.23% time on non-SNA activities (Table T₄).

To put it differently, men spend 27.14% of their weekly time on work, SNA and extended SNA combined and 72.86% time on personal activities, while women spend 31.77% of their time on work and 68.23% time on personal activities.

Once again, rural men, and particularly rural women, carry greater burden of work in terms of the time spent on work. While rural men spend 27.41% of time on total work, urban men spend 26.40% of their time on this work, and while urban women spend 27.14% of the total week time on total work, rural women spend 43.6% of their time on the total work. As a result they get much less personal time (66.38%) than their urban counter part (72.86%).

Table T₅ converts the SNA and extended SNA work into person hours to examine sharing of the total work in India (combined states) by men and women. The table shows that while women perform about 30% of SNA work in terms of person hours put in, men perform 70% of the SNA work. On the other hand, women share about 90% of the extended SNA work, men share only 10% this work in person hours. In terms of the total work hours, thus women share a much bigger burden of work than men. Once again rural men and women are in a disadvantageous position with rural women in the worst position. Rural women share 33.51% of the total SNA work in person hours while urban women share only 17.09% of the SNA work hours. Both, rural and urban women share 89.90% of the extended SNA work hours, with the result that rural women share 54% of the total work hours (SNA + extended SNA), while urban women share 52% of the work hours.

Table T₆ presents data on percentage distribution of weekly average time on SNA, extended SNA and non-SNA activities for the entire population. This once again shows that women spend 31.7% of their time on work while men spend 26.9% time on the total work. (SNA + extended SNA work)

The above findings of the time use survey about the distribution of time by people among SNA activities, extended SNA activities and non-SNA activities, throws useful light on the nature of paid and unpaid work in India.

1. The first major point is with regard to a high level of participation by men and women in SNA activities in India. It is true that the participation discussed here does not reflect the workforce participation rates in the economy as, according to the established definition, a person is a worker only if he/she has worked for at least one hour on any day of the reference week, and the participation computed here is not as per this definition. However, the high level of involvement of men and women in SNA activities does indicate the presence of a significant number of unpaid family workers and own account workers in the country. In other words, the time use survey can improve the estimates of work force in the country.²⁴

²⁴ The comparability of the TUS data on workers with the official data is discussed at length later on.

2. An implication of this is the declined relevance of labour statistics in the country. According to the official statistics the work force participation are much less (Table T₇). The gross underestimation of work and workers in the official statistics does reduce the relevance of the official work force data.
3. Extended SNA activities constitute a significant portion of the total work (SNA + extended SNA) in India. The total person hours spent on extended SNA activities constitute 37.80% of the total person hours spent on the total work. That is, 37.8% of the work time (which is unpaid) that contributes to human wellbeing does not get reflected in the official data on wellbeing or national income! Macro and micro policies for human wellbeing are formed without having a complete estimate of the total wellbeing in the country. This certainly raises questions about the relevance of GDP as a measure of human wellbeing.
4. The third major implication of these results is with respect to gross gender inequality in the sharing of time in the country. To start with, women share a larger burden of total work than men. Secondly, women's work is grossly underestimated in official statistics as their extended SNA work is totally missing from the official data and their SNA work also is underestimated more than the same of men. As a result, their needs and their development is undermined in official policies. Thirdly, women's work is more unpaid in nature than the men's work. Their work is therefore treated as inferior and unimportant. Their low status originates from this. And lastly, women's burden of domestic work puts them in a disadvantageous position in the labour market. Their low status and poor performance in the employment market needs to be addressed by reducing their burden of domestic work.
5. Women get less personal time than men. That is, the time at their disposal for their own use is less than the same available to men. This once again indicates the lower position of women.

Participation in Paid and Unpaid SNA Activities

Unpaid work constitutes an important part of the total SNA work in the Indian economy. The results of the time use data are extremely revealing in this context.

1. About 57.11 percent of the total SNA workers (i.e. engaged in SNA activities) in India (combined states) are engaged in unpaid work, and about 38.29 percent of the time spent by them on SNA activities is unpaid (Table 8). That is, more than one third of the SNA time spent by them is not directly exchanged in the market! When the total SNA work is converted into person hours (by multiplying the number of workers by the average number of hours spent by them on SNA activities), the results show that 45.24 percent of the person hours spent on SNA work in India is unpaid in nature. This implies that a little less than half of the SNA person hours are put in either of these activities:

- (1) Unpaid family work in family enterprise including family farms,
 - (2) Unpaid work as assistants to another family member in homebased work.
 - (3) Production of goods for home consumption.
 - (4) Collection of water, fuel, fish etc.
 - (5) Several specific activities like grazing animals, caring of animals, food processing and storage etc.
2. The predominant share of unpaid work falls on women through men also are not excluded from it. About 51.67 percent of the men and 65.27 percent of the women engaged in SNA activities work in unpaid work (Table 8). However, the percentage of the average number of hours spent in the reference week on unpaid work by men is 33.15 as against 50.52 hours by men. That is, more than half of the weekly SNA time spent by women is unpaid in nature! When the total SNA work is converted into person hours, the results show that 45.24 percent of the person hours spent on SNA work in India is unpaid in nature. The corresponding percentages for men and women are 34.65 and 65.74 respectively.
 3. There are considerable interstate variations as well as rural-urban variations with respect to the share of unpaid work and unpaid workers. The average time spent on unpaid work in a week by participants in SNA work, varies from 12.04 hours in Tamil Nadu and 14.05 hours in Gujarat to 30.44 hours in Meghalaya. The incidence of unpaid work in terms of average number of hours spent on unpaid work by SNA workers in rural areas is much higher than the same in urban areas. It seems that with urbanization and modernization, the unpaid work gradually gets converted into paid work.
 4. Also, the incidence of unpaid work is likely to be higher on the poorer section of the society. This is because the poor predominate in the subsistence sector and informal sector of the economy. Further data analysis (on going) is likely to throw more light on this aspect of unpaid work.

Activity Classification of Workers in SNA Activities:

Table T₈ and T₉ present distribution of workers and work time in different SNA activities as per the time use survey.

As far as participation in terms of persons is concerned, as expected, the predominant sector is the primary sector in rural areas as well as in rural and urban areas combined. About 71.34 percent workers are engaged in the primary, sector 9.48 percent in the secondary sector and 19.18 percent in the tertiary sector. The corresponding percentage as per the Census of Population data (1991) are 67.37 percent, 12.13 percent and 20.15 percent. This indicates good matching of the two data sets. The only major difference between the two data sets is regarding urban workers, and particularly women workers, in the primary sector. The share of women

workers in the primary sector in urban areas is 52.99 percent as per the time use data, while it is 22.94 percent as per the Census of Population data. This implies that women workers, particularly in small and urban towns participate in large number in the primary sector, such as free collection of water, etc. About 32 percent women workers in urban areas is engaged in this and all of it is unpaid work.

Table T₉ present the data on the distribution of time by men women workers across the different categories. The table shows that as far as the distribution of time among the SNA activities is concerned, men spend less time, 52.20 percent of their time, on the primary sector, and 15.11 percent time on secondary sector activities and 29.65 percent time on tertiary activities. In the case of women, the data show that they spend 78.47 percent time on the primary sector, 9.83 percent time on the secondary sector and 11.75 percent time on the tertiary sector.

Some of the interesting aspects of the time disposition by men and women in SNA activities are discussed in the following paragraphs.

1. Within the primary sector, about 38.54% of men and 25% of women workers (of the total workers) are in crop farming, 24.56% of men workers and 25.83% women workers are engaged in animal husbandry and 3.76% of men workers and 3.12% of women workers are in fishing, forestry, horticulture etc. Animal husbandry emerges as an important sector of employment for both, men and women.
2. In the case of collection of fuel, fodder, water, etc. 7.82% men workers are engaged in these activities against 28.40% of women workers. In other words, the most important activity (in terms of persons engaged) for men is crop farming, followed by animal husbandry while for women it is collection of free goods, crop farming as well as animal husbandry.
3. In terms of the distribution of time, however, for both men and women crop cultivation is the most important activity on which they spend more than 40% of their time. The other activities for women workers are animal husbandry and collection of goods, while for men workers it is animal husbandry.
4. Women spend considerable time on collection of fuel, fodder, water, fruits, raw materials etc from forests or nearby open lands / command lands. Women spend 14.80 hours on this (rural women spend 15.62 hours); while men spend 2.17 hours on these activities. Within this group, collection of fuel wood seems to be one of the most important activities for women. Women workers who are engaged in this activity spend 10.66 hours in a week on these activities. The share of men workers (particularly children) is 20% in this activity and they spend about the same time on collecting fuel wood, things etc.
5. Another important activity within the group is collection of water. In fact, in terms of number (of women) who go out to collect water this is the most

important activity within this group. About 20% of women workers are engaged in this activity and they spend 5.27 hours on this work.

In short, the activity distribution in the primary sector clearly reflects the drudgery of women's unpaid work.

6. In the tertiary sector, services is the most important activity for both men and women. Against the 9% of women workers engaged in this activity, about 16.96% of men workers are engaged in this. About 1527 men and 1563 women are engaged in petty services, and they spend about 19.44 hours and 11.25 hours per week on this. This implies that on an average petty service does not provide enough work to men and women. The share of women workers engaged in petty services is larger in the case of women (1005) than men (956) in rural areas while in the case of urban areas the share is marginally higher for male workers. Petty trading is another activity of men and women. About 624 men and 155 women spend 46.51 hours and 29.38 hours respectively on this work. Petty traders work of larger period (not necessarily with higher productivity or higher remuneration) than those working in petty services.

Participation of Children in SNA Activities:

Time use survey data provide useful information on children's participation in SNA activities as well as in extended SNA and non-SNA activities.

Table 10 presents data on the participation of children on SNA activities. It shows that 22.21 percent children in the age group 6-9 years and 33.11 percent children in the age group 6-14 years participate in SNA activities in India (combined states). These children put in 7.05 hours in a week (6-9 years children) and 14.14 hours (6-14 years) in SNA activities. These data imply that a large proportion of children (one third children in the age group 6-14 years) participate in SNA activities, and on an average they spend 14.14 hours on this work. The table shows that though a smaller proportion of girls (31.29 percent) of the age group 6-14 years participate in SNA activities as compared to boys in the same age group (34.68 percent), girls put in longer hours of SN work on an average. While girls (6-14 years) spend 15.62 hours on SNA work in a week, boys spend 12.74 hours on this work.

Major SNA activities undertaken by children are unpaid activities, like crop cultivation, animal grazing, collection of fodder, fuel etc and unpaid work in family enterprise. A small percentage of children also work in petty trade and petty services.

These children, however, cannot be treated as child labour as they are not "workers" as per the established definition of a worker and they do not necessarily miss their school education.

Table 10 also presents data on the number and percentages of boys and girls in the age groups 6 to 9 and 10-14 years going to school. The table shows that 71 percent children in the age group 6-9 years and 64.65 percent of the children in the age group 10-14 years spent their time in the school. That is, 29 percent of children in the age group 6-9 years and about 35 percent children in the age group 10-14 years did not attend the school.

Though we do not have information on how many children not attending school participate in SNA activities, the available data do indicate a high level of participation of children in SNA activities.

Table 11 presents information on weekly average time spent by children on different activities (6-14 years age group). The table shows that major activities of children consists of non-SNA and extended SNA activities, schooling, playing, unpaid SNA work and taking care of children. On an average children spend 1.68 hours (boys) and 7.03 hours (girls) on unpaid SNA activities; 0.12 hours (boys) and 0.57 hours (girls) are spent on taking care of siblings.

Unpaid Work in Extended SNA activities:

As discussed above, the participation in extended SNA activities is quite high in India, mainly because a large number of activities, which are in the market in industrialized countries, are still in the sphere of domestic work in India. About 88.72% of women and 46.61% men participate in extended SNA activities in India, and they spend 34.63 hours and 3.65 hours in a week respectively on these activities.

Some of the important aspects of this unpaid work are discussed below: (Table T8)

1. The predominant extended SNA activity is maintenance and management of the household, followed by care activities; including care of children, the elderly and the sick, and then by community services. About 62.29% of the population participates in household management and maintenance in a small or a big way, while 26.46% persons participate in care activities and only 1.41% persons participate in community services. The average number of hours put into these activities are 24.60, 10.69 and 8.52 in a week (in household management, care activities and community services) respectively.
2. Within the activities pertaining to household management and maintenance the maximum time is spent on cooking and serving (18.66 hours a week). It is followed by cleaning and up-keeping of dwelling and home improvement, repair, maintenance etc., both of which together take away, on an average, 13.12 hours of the total population. This is mainly because of the structure of most of the dwellings which requires continuous maintenance and upkeep. The other activities are care of textiles (5.91 hours) and cleaning of utensils (5.82 hours). Shopping does not need so much time as the time spent on shopping is less than four hours a week, 3.65 hours.

3. Considerable time is spent on taking care of children, the elderly and the sick. Maximum time is spent on caring children - their physical care, teaching and training them, accompanying them to school/games/doctor etc and on supervising them. About 70% of the care time is spent on child care. The next important care activity is taking care of the elderly, the sick and the disabled in the family. About 5 hours in a week are spent on these activities. It is worth noting that households provide an important physiological and psychological care to family members in India where the use of hospitals is not common for most illness, and where home-based social security to the old is very common.
4. Community services and help to other households also form a component of care activities. Participation in these activities, however, is not very large. About 1.41% of the population participate in these activity, and on an average 8.52 hours in a week are spent on these activities by people. The most important activity here is voluntary work through organizations, implying community organizations. This is followed by community work organized through informal organizations of castes, tribes, unions etc. The data show that community services do occupy considerable time, though of a small section of the population.
5. Women bear the major burden of extended SNA activities except in community services which are usually performed outside the home., About 87% of women participate in the activities related to management of household, and spend on an average, about 34.39 hours in a week. Men also participate in household management, the percentage of participants being 39.5% though they spend only 6.74 hours on this work. It is interesting to note that rural men spend marginally more time on household management than their male counterparts (they spend 7 hours in a week on these activities against 6.24 hours by urban men).
6. On an average, within the extended SNA activities, men spend maximum time on community services (7.91 hours), followed by household maintenance and management (6.74 hours) and on care of children, the old and the sick (6.65 hours). While in the case of women maximum time is spent on household management (34.39 hours in a week), followed by care activities (12.38 hours) and community services (9.33 hours). It is worth noting, however, that though women spent the least time on community services, the time spent is more than the time spent on these activities by men.

The burden of the extended SNA work on men and women is presented in Table T12. The table shows that there is a wide gap between the time spent by activities. For example, men spend 0.52 hours in a week on cooking as against 14.93 hours by women; they spend 0.21 hours on cleaning the household against 4.55 hours by women; spend a mere 0.10 hours in a week on cleaning whereas against 3.39 hours by women; and spend 0.32 hours on child care against 3.16 hours by women. The only activities where the gender gap is low are accompanying children to place (activity performed outside home), care of guests and pet care.

In short, the unpaid extended SNA works is important in India not only because women in large number participate in these activities and spend long hours on these, but also because men also spend significant amount of their time on these activities. It needs to be reiterated that the predominance of extended activities in the time use pattern of the population in India reflects the fact that several activities like food processing, cooking & food processing, care of textiles, maintenance & upkeep of dwelling, child care, care of the elderly, sick and the disabled etc. which have entered the market in industrialized countries, are still in the sphere of domestic work in India. It is only the time use survey that can make them visible.

Valuation of Unpaid Work:

Since the time use survey contributes to improved measurement of SNA activities as well as extended SNA activities, the valuation of the time spent on these activities could provide improved value of the GDP as well as of the extended GDP (satellite account of unpaid extended SNA activities).

Time use studies can provide improved estimates of the GDP or the national income in two ways:

1. Time use studies can provide better estimates of workers employed in different activities, particularly at the three digit level. This can help in improving the value of production of those sub sectors/activities for which the value is computed, by the national income department, by multiplying the average production (arrived at by special surveys) with the number of workers employed.
2. Time use studies can also provide data on the sectors, which are non-market oriented SNA activities, such as free collection of water, fodder, fruit, fish etc. and production of goods for self consumption. Both these data can be converted into appropriate values by valuing the output by the market price, or by multiplying the time by the suitable wage rate.

Valuation of extended SNA activities is not a simple task.²⁵ Though the use of the output method is desirable as the national income under the SNA is computed in this fashion, there are problems about the availability of the output data. In practice therefore, most countries use, the input method, or only a partial input method under which an attempt is made to value the time spent on the extended SNA activities with the help of (1) Generalized Wage Rate, (2) Specialized Wage Rate or (3) the Opportunity Cost. A careful review of the literature shows that the use of generalized wage rates tend to

²⁵ Refer to "Valuation of Unpaid Work: Issues Emerging from the Indian Pilot Time Use Survey" by Indira Hirway (2000). Paper presented at the Training Workshop on Integrating Paid and Unpaid Work organized by UNESCAP at Bangkok, 11th - 17th September 2000.

underestimate the value of unpaid work, the use of specialized wage rates tend to overestimate the value, while the use of the opportunity cost gives varied results.²⁶

In spite of these limitations, however, an attempt has been made in India of valuing the unpaid SNA and extended SNA work as emerging from the time use survey: During the time use survey, information was collected on the prevailing wage rates of the following categories of workers:

1. Agricultural labour
2. Non-agricultural labour
3. Mining & Quarrying workers
4. Processing and storage workers
5. Construction workers
6. Factory workers, and
7. Urban unskilled manual workers.

Using these wage rates, value for the time spent on extended SNA activities was computed. The value of these activities contributed to 26% to 50% of the value of the respective state SDPs. In other words, roughly speaking, the state domestic products of the selected states increased by 26% to 50% when the value of extended SNA activities was added.

This valuation, however, has several limitations:

1. The value added refers to extended SNA activities only. There is also a need to compute improved estimates of the GDP under the SNA 1993 by using the data of the time use survey.
2. The value addition includes only the value of the labour, while all the other factors of production are neglected. Conceptually speaking, this valuation is not complete.²⁷
3. A large number of assumptions are made with respect to the time use data (in terms of productivity and efficiency) and prices/wages. The valuation done therefore is only a crude estimate of the value of the extended SNA.²⁸

4

Some Observations

The discussion in the earlier sections leads to the following observations:

1. The time use survey technique is an important statistical tool for understanding how people distribute their time between SNA, extended SNA and non SNA activities. This understanding can prove to be very useful in macro policy

²⁶ Indira Hirway (2000) Op.cit.

²⁷ Indira Hirway (2000) Op. Cit. Pp 16-17.

²⁸ Indira Hirway (2000) Op. Cit. Pp 16-17.

formulation as well as in measuring and monitoring paid and unpaid economic and non-economic work in a society.

2. The Indian time use survey aimed at tapping this potential of the survey technique. The survey design, tabulation scheme and classification of activities facilitated this.
3. The results of the time use survey are extremely revealing: Unpaid (SNA and extended SNA) work is very important in the Indian society; extended SNA activities contribute significantly to the welfare of the Indian population, and women play a predominant role as far as the total work in the society is concerned.
4. The paid and unpaid SNA and extended SNA work, however, is highly unequally distributed across age, gender, social groups and place of residence. There inequalities are highly unjust, and they have important policy implications.
5. The time use survey also indicates gross inadequacy of some established statistics like labour force / work force statistics and national income.

The analysis of paid and unpaid work presented in this paper, however, is far from complete as not all the required tables have been generated so far. Since it was not possible to bring out all the required tables simultaneously, it was decided to generate only some basic tables in the first phase. The rest of the tables will be generated in the coming months to facilitate further analysis of the data.

In the context of the measurement of paid and unpaid work falling under SNA and extended SNA categories, some more analysis is expected. The major aspects of the future work is discussed below:

1. Estimating Workforce Using Time Use Survey Data:

One major limitation of the present time use data is that the definition of "worker" here is not comparable with the definition of worker used in the conventional labour statistics in India. The time use data on participation of workers therefore are not strictly comparable with the established data, with the result that it is not possible to arrive at an improved estimate of work force using the time use data.

The employment and unemployment survey of the National Sample Survey Organizations classify activities of persons in the context of three reference periods, namely, one year, one week, and each day of the week. A person is defined as a worker as per the weekly status only if he has put in at least one hour of work on any one day of the week. Though the estimates of employment as per the weekly status of the NSSO have one week as the reference period as in the case of the time use survey, the data on worker are not comparable as the condition of at least one hour of work on any day in the week is not fulfilled by the time use data.

An exercise has therefore been planned to identify workers engaged in an SNA activity or in more than one SNA activity for at least one hour under the time use survey. This will help in generating comparable data on workers, which, in turn, will improve the estimates of the workforce defined as per the conventional statistics.

2. Understanding the Nature of the Workforce:

The improved estimates of the work force, as per the time use survey, will be used in understanding the major characteristics of the work force by further analysing the data:

- (A) The work force data will be further classified into detailed economic activities to estimate the distribution of workers into the primary, secondary and tertiary sector activities as well as into detailed economic activities at the three digits. All these data will be analysed for paid and unpaid work. These data will present improved data on distribution of workers across industries/occupations.
- (B) The work force estimates will be related to some important household characteristics, such as, its total and per capita monthly consumption expenditure, main industry/occupation, caste and social group, the level owned and operated, the head of the household and the place of residence (rural and urban areas). These tables will be extremely useful in understanding the characteristics of the work force.
- (C) The work force estimates, including the paid and unpaid characteristics, will also be related to some important individual characteristics like age, gender, marital status, education, usual activity status etc. Such data will help in understanding the nature of paid and unpaid work better.
- (D) The work force data will also be related to the extended SNA and non-SNA work of individuals to understand the unequal burden of non-economic work carried by men and women in the labour market.

3. Further analysis of child labour:

The time use survey provides indepth information on how children spend their time on paid and unpaid SNA activities, extended SNA activities and non-SNA activities. There is a need to generate further tables to study the nature of work done by children.

- (A) Number of children participating in SNA activities and the hours spent by them on these activities by their participation in general education - related (school going) activity.
- (B) Number of children participating in SNA activities and the hours spent on these activities by their participation in non-formal educational institutions.

- (C) Number of children participating in on these by the time spent on sleep & rest, play, leisure, sports and games.
- (D) Estimates of child labour in terms of the NSSO definition of worker, and the relationship of the incidence of child labour with per capita monthly expenditure, social group and industry/occupation of the household.

4. Further Analysis of Extended SNA Activities:

The present tables generated on extended SNA activities are inadequate to understand the nature of extended SNA activities adequately. Some further analysis, including generation of new tables, is needed:

The nature of unpaid domestic work or extended SNA activities needs to be viewed with reference to certain basic characteristics of households, such as, the monthly expenditure and the per capita monthly expenditure of the household, the main industry/occupation of the household, the social group and religion as well as the head of the household, the size of the household and the number of children in the household etc. These tables will enable one to understand further the nature of unpaid domestic work.

5. Poverty and Paid and Unpaid Work:

It is important to understand the distribution of time by persons on SNA, extended SNA and non-SNA activities with reference to monthly per capita expenditure or the poverty level. It is necessary therefore to generate additional tables relating per capita monthly consumption expenditure by (a) the personal time and free time available to the person (b) the participation and time spent on the various extended SNA activities, and (c) the paid and unpaid nature of the SNA activities performed by persons.

It is to be noted that the time use survey can provide useful information on the time disposition of the poor in a country as no other survey can provide. It can throw useful light on the unpaid and paid nature of the work of the poor, on the drudgery of the poor on the struggles of the poor in and outside the labour market. All these can be useful inputs in policy formulation for poverty reduction.

6. Time stress and social indicators based on Time Use:

In order to understand the time stress of men and women, and of the poor and rich, it is necessary to analyse the multiple activities undertaken by men and women. These additional tables can be listed as follows:

- Analysis of the nature of multiple activities - what kind of activities are performed simultaneously by men and women, and how much time is spent on these
- The distribution of multiple activities by gender, age, place of residence and by the monthly per capita consumption expenditure.

Some of the additional tables are already planned, some will be planned in the near future. It is hoped that when the analysis mentioned above is completed, we will get additional about the paid and unpaid work in India, which will provide useful inputs into macro policy formulation in different sectors.

Skepticism About Time Use Studies

Before we end the discussion, it will be useful to examine the limitations of time use studies in measuring and monitoring paid and unpaid work of a population and the resultant skepticism expressed against such studies.

It is frequently argued that time use surveys do not consider the efforts and efficiency of activities. For example, no distinction is made between a slow and a fast worker, or an efficient and inefficient person. It is also argued that time use studies do not consider the environment (for example, hazards of a job) or technology used in an activity. They do not distinguish between cooking in a modern kitchen and cooking on a wooden stove. Time use data do not provide information on labour productivity. Though all these arguments are correct, they are applicable to labour statistics also as these statistics also provide time measurement of work. Time use data present data on the time use, and they should be used only for what they are.

It is argued that time use surveys are difficult surveys as it is not easy to get the right response of people to the complex schedule of the survey. However, it must be noted that such arguments are made about established surveys also. Experts from India have argued that the Census of Population or the NSSO Surveys do not provide reliable data (Visaria 1998). It is to be noted that the time use studies are new, their concepts and methods are not yet well-established as the "work is in progress". One can hope for better results after a few years.

Time use surveys are too costly as (a) they need a careful and systematic, and therefore time consuming investigation, (b) investigators have to spend long periods in the field to establish rapport with respondents and (c) some times monetary incentives are needed for respondents. Though this is true, the cost of a survey is to be viewed in the context of the utility of the output.

Time use surveys, being time consuming and difficult, cannot be undertaken with a large sample. Time use surveys are therefore usually small sample surveys. This tends to raise sampling errors on the one hand and limits the possibility of a detailed break down of the data on the other hand. Both these factors tend to reduce the utility of the results. Time use surveys can thus supplement major labour force surveys, but cannot replace them. Also, time use studies cannot provide estimates of informal labour etc. for the entire labor market. The answer to this criticism lies in the perceived utility of the survey, which may lead to increased sample size gradually.

To sum up, the time use survey technique has a great potential of understanding human activities in a comprehensive way. The Indian survey has shown that the survey can provide extremely useful information on paid and unpaid SNA, extended SNA and non-SNA activities of the population. The improved measurement of these activities and their characteristics can prove to be critical inputs in macro policy formation and monitoring for several sectors.

SELECTED REFERENCES

Acharya Meena (1999): "Time-Budget Studies for Measurement of Human Welfare", Integrating paid and unpaid work into national policies: Selected papers, Edited by Margarita Guerrero, UNDP, Manila.

An Agenda for Action (1997): "The Platform for Action of the Fourth World Conference on Women", Workshop on Integrating Paid and Unpaid Work into National Policies 28-30 May, Seoul, Republic of Korea.

Bakker Isabella (1999): "Integrating Paid and Unpaid Work into Economic Growth and Human Development Strategies", Integrating paid and unpaid work into national policies: Selected papers, UNDP.

Bediako, Grace and Vanek Joann (1998), "Trial International Classification of Activities For Time-use Statistics", Statistics Division, United Nations, New York, Paper presented at the International Seminar on Time Use Studies at 7-10 December 1999, Ahmedabad, India.

Bhattacharya, B.B. (1997), "Measurement of non-market informal activities: some conceptual issues", Paper presented at the National Seminar on Informal Sector: Emerging Perspectives in Development, December 22-24, 1997, Delhi.

Budlender, Debbie (1999), " The Policy Implications of Time Use Surveys: Lessons From South Africa", Department of Statistics, South Africa, Paper presented at the International Seminar on Time Use Studies at 7-10 December 1999, Ahmedabad, India.

Ghosh Jayati (1996): "Trends in Female Employment in Developing in Developing Countries: Emerging Issues", Background Papers Human Development Report 1995, UNDP, New York.

Goldschmidt, Luisella Clermong (1997), "Measuring and Valuing non-SNA Economic Activities", Paper presented at the Expert Group Meeting on Household Satellite Accounting, 6-10 October 1997, New York, USA

Goldschmidt-Clermont Luisella and Elisabetta Pagnossin-Aligisakis (1996): "Measures of Unrecorded Economic Activities in Fourteen Countries", Background Papers Human Development Report 1995, UNDP, New York.

Government of India, Time Use Survey Report (1999): “Survey Data on Paid and Unpaid Work: New Resources from Policy-Driven Initiatives”.

Hirway Indira(2000) “Time Use Surveys: Concept, Classification and Related Issues: Lessons from the Indian Pilot Time Use Survey”, the Paper presented at the Training Workshop during 10-17 September 2000, Bangkok.

Hirway Indira(2000) “Valuation of Unpaid Work: Issues Emerging from the Indian Pilot Time Use Survey”, the Paper presented at the Training Workshop during 10-17 September 2000, Bangkok.

Hirway, Indira (1998) “Contribution of the informal sector to the national economy – some issues”, Paper presented at the Workshop on Integrating Paid and Unpaid Work into National Policies, Seoul, Korea, 28-30 May 1997.

Hirway, Indira (1999) " Estimating Work Force Using Time Use Statistics in India and its Implications for Employment Policy”, Centre For Development Alternatives, Ahmedabad, India, Paper presented at the International Seminar on Time Use Studies at 7-10 December 1999, Ahmedabad. India.

Hirway, Indira (1999) " Time Use Studies: Conceptual and Methodological Issues with Reference to Time Use Survey in India”, Centre For Development Studies, Ahmedabad, India, Paper presented at the International Seminar on Time Use Studies at 7-10 December 1999, Ahmedabad. India.

Hoffmann Eivind (1997): “ Methodological issues in the development, use, maintenance and revision of statistical classifications”, Third Meeting of the Expert Group on International Economic and Social Classifications, 1-3 December, New York.

Husmanns, Ralf. (1999) "Labour force estimation and Employment Policies." Discussant, Bureau of Statistics, International Labour Office (ILO), Geneva, Paper presented at the International Seminar on Time Use Studies at 7-10 December 1999, Ahmedabad. India.

Ironmonger, Duncon (1993), “The Design of Input-Output Accounts for Non-Market Production”, Paper presented at the conference on National Accounting, La Trobe University, 22 September 1993

Ironmonger, Duncon (1999), " An Overview of Time Use Surveys", Households Research Unit, Department of Economics, The University of Melbourne, Australia, Paper presented at the International Seminar on Time Use Studies at 7-10 December 1999, Ahmedabad. India.

Kulshreshtha, A.C. and Gulab Singh (1997), “1993 SNA Production and Assets Boundaries: Issues and Problems in Measurement in the Context of Indian National

Accounts". Paper presented at the Workshop on Integrating Paid and Unpaid Work into National Policies, Seoul, Korea, 28-30 May 1997.

Kulshreshtha, A.C. and Gulab Singh (1999) "Valuation of Non-Market Household Production." Central Statistical Organisation, New Delhi, India, Paper presented at the International Seminar on Time Use Studies at 7-10 December 1999, Ahmedabad. India.

Kulshreshtha, A.C. and Gulab Singh (1999), "Domestic Product by Gender in the Framework of 1993 SNA, Paper presented at the Workshop on Integrating Paid and Unpaid Work into National Policies, Seoul, Korea, 28-30 May 1997.

Kulshreshtha, A.C. and Gulab Singh (1999), "Services Sector in National Accounts: Methodology Data Quality, Gaps and Possibilities of Improvement", Paper presented at the 21st Biennial Conference, 1999, Indian Association for Research in National Income and Wealth.

Kulshreshtha, A.C. and Ramesh Kolli (1999), "Some Issues Relating to Estimates of Gross Domestic Product", Paper presented at the 21st Biennial Conference, 1999, Indian Association for Research in National Income and Wealth.

Lazo Lucita (1999): "Enumerating Homeworkers in the National Statistical System: A Pilot Study in the Philippines", Integrating paid and unpaid work into national policies: Selected papers, Edited by Margarita Guerrero, UNDP, Manila.

Lazo Lucita S.(1999),"Counting Paid and Unpaid Work: The State of the Art in the Asia-Pacific Region," Integrated Paid and Unpaid Work into National Policies: Selected Papers, UNDP, New York

Narasimhan, R.L. and R.N. Pandey (1999), " Some Main Results of The Pilot Time Use Survey in India and Their Policy Implications, Central Statistical Organisation, Ministry of Statistics and Programme Implementation, New Delhi, India

Niemi, Iris (1998), "Towards harmonized time use surveys in Europe", Engendering Labour Force Statistics, New York 31.3-2.4.98

Pandey, R.N. (1999), "Operational Issues in Conducting The Pilot Time Use Survey in India", Central Statistical Organisation, Ministry of Statistics and Programme Implementation, New Delhi, India, Paper presented at the International Seminar on Time Use Studies at 7-10 December 1999, Ahmedabad. India.

Pandey, R.N., (1999), "Quantifying The Value of Unpaid Activities of Women- A Case Study", Central Statistical Organisation, Ministry of Statistics and Programme Implementation, New Delhi, India, Paper presented at the International Seminar on Time Use Studies at 7-10 December 1999, Ahmedabad. India.

Rajivan, Anuradha. K. (1999) "Policy Implication for Gender Equity: The India Time Use Survey, 1998-1999. Tamil Nadu Corporation for the Development of Women, Chinnai, India, Paper presented at the International Seminar on Time Use Studies at 7-10 December 1999, Ahmedabad. India.

Shon Ae-lee, (1999) "Methodological and Operational Dimension on Time Use Survey in the Republic of Korea." National Statistics Office, Korea, Paper presented at the International Seminar on Time Use Studies at 7-10 December 1999, Ahmedabad. India.

Sivakumar, Sujai (1997), "Valuation Women's Work: Theoretical Constraints in Determining the Worth of Household and Other Non-Market Activity", Paper presented at the Workshop on Integrating Paid and Unpaid Work into National Policies, Seoul, Korea, 28-30 May 1997.

UNDP (1995): Human Development Report 1995 , Oxford University Press, Delhi

UNDP (1999): " Human Development Report 1999", Oxford University Press, Delhi.

UNDP (1997): " Promoting Gender Equality in the Asia Pacific Region", Preparatory Assistance Documents, Inter-country Programme of the Asia Pacific Region.

UNDP, (1996), "Background Papers : Human Development Report 1995", UNDP, New York.

United Nations Secretariats, Statistics Division (1998): "Gender Issues in Labour Force Statistics", Expert Group Meeting, 31st March – 2 April 1998," United Nations Secretariats, Statistics Division, New York, USA.

United Nations Secretariats, Statistics Division, (1997): "Expert Group Meeting on Trial International Classification for Time Use Activities", Report of the meeting held in New York, 13-16 October 1997.

United Nations Secretariats, Statistics Division, (1999) "Towards International Guidelines in Time-Use Survey: Objectives and Methods of National Time-Use Surveys in Developing Countries." United Nations Secretariats, Statistics Division, New York, USA.

Table T₁**Statewise Number of Households Selected in the Sample According to Place of Residence**

States	No. of Households		
	Rural	Urban	Total
Haryana	984	360	1344
Madhya Pradesh	3801	1260	5061
Gujarat	1676	1485	3161
Orissa	2244	552	2796
Tamil Nadu	3637	2016	5653
Meghalaya	408	168	576
Combined States	12750	5841	18591

Source: Report of the Time Use Survey, Central Statistical Organisation, Government of India (2000).

Table T₂**Statewise Number of Persons selected in the Sample According to Place of Residence and Sex**

States	Male				Female				Persons			
	<6 Years	6-14	>14	Total	<6 Years	6-14	>14	Total	<6 Years	6-14	>14	Total
Haryana	687	595	2011	3293	514	419	1772	2705	1201	1014	3783	5998
Madhya Pradesh	2640	1865	7255	11760	2284	1541	6620	10445	4924	3406	13875	22205
Gujarat	1322	1194	4963	7479	1120	964	4676	6760	2442	2158	9639	14239
Orissa	1068	1040	4048	6156	1000	990	4044	6034	2068	2030	8092	12190
Tamil Nadu	1442	1201	7513	10156	1406	1125	7604	10135	2848	2326	15117	20291
Meghalaya	419	159	765	1343	387	178	762	1327	806	337	1527	2670
Combined States	7578	6054	26555	40187	6711	5217	25478	37406	14289	11271	52033	77593

Source: Report of the Time Use Survey, Central Statistical Organisation, Government of India (2000).

Table T₃

A State-wise person involved in SNA Activities by Sex and Place of Residence (Participants)
Percentage of persons involved in SNA, Extended SNA and Non-SNA Activities by Sex and Place of Residence (participants)

States	Activities	Rural			Urban			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Haryana	SNA	1469	1276	2745	447	268	715	1916	1544	3460
	% to Total	77	80	78	65	46	56	74	70	72
	Extended - SNA	556.00	1415.00	1971.00	302.00	498.00	800.00	858.00	1913.00	2771.00
	% to Total	28.97	88.27	55.96	43.96	84.69	62.75	32.92	87.31	57.77
	Non-SNA	1919.00	1603.00	3522.00	687.00	588.00	1275.00	2606.00	2191.00	4797.00
	% to Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Madhya-Pradesh	SNA	5602.00	4530.00	10132.00	1620.00	823.00	2443.00	7222.00	5353.00	12575.00
	% to Total	82.00	73.23	77.83	71.21	41.93	57.65	79.30	65.69	72.87
	Extended - SNA	3791.00	5592.00	9383.00	1307.00	1769.00	3076.00	5098.00	7361.00	12459.00
	% to Total	55.49	90.40	72.08	57.45	90.12	72.58	55.98	90.33	72.20
	Non-SNA	6832.00	6186.00	13018.00	2275.00	1963.00	4238.00	9107.00	8149.00	17256.00
	% to Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Gujarat	SNA	2529.00	2114.00	4643.00	1992.00	912.00	2904.00	4521.00	3026.00	7547.00
	% to Total	77.96	70.75	74.50	68.38	34.39	52.18	73.43	53.65	63.97
	Extended - SNA	1217.00	2764.00	3981.00	1257.00	2377.00	3634.00	2474.00	5141.00	7615.00
	% to Total	37.52	92.50	63.88	43.15	89.63	65.30	40.18	91.15	64.55
	Non-SNA	3244.00	2988.00	6232.00	2913.00	2652.00	5565.00	6157.00	5640.00	11797.00
	% to Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Orissa	SNA	3084.00	2967.00	6051.00	636.00	441.00	1077.00	3720.00	3408.00	7128.00
	% to Total	74.66	71.37	73.01	66.46	50.29	58.72	73.11	67.70	70.42
	Extended - SNA	1741.00	3545.00	5286.00	520.00	753.00	1273.00	2261.00	4298.00	6559.00
	% to Total	42.14	85.28	63.78	54.34	85.86	69.41	44.44	85.38	64.80
	Non-SNA	4131.00	4157.00	8288.00	957.00	877.00	1834.00	5088.00	5034.00	10122.00
	% to Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

This paper, prepared by Indira Hirway of the centre for Development Alternatives, Ahmedabad, has been reproduced as submitted. It has been issued without formal editing.

Table T₄

**Statewise Weekly Average Time (in hours) spent on SNA, Extended SNA and Non-SNA Activities by Sex and Place of Residence (All)
Percentage of Person Hours Put in SNA Activities by Sex and Place of Residence (participants)**

States	Activities	Rural			Urban			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Haryana	SNA	37.98	23.49	31.36	36.54	11.21	24.97	37.72	21.26	30.19
	Person Hours	72883.62	37654.47	110449.9	25102.98	6591.48	31836.75	98298.32	46580.66	144821.4
	Extended - SNA	1.74	30.67	14.91	3.11	32.74	16.68	1.99	31.06	15.24
	Person Hours	3339.06	49164.01	52513.02	2136.57	19251.12	21267	5185.94	68052.46	73106.28
	Non-SNA	128.22	113.81	121.69	128.31	124.08	126.36	128.23	115.67	122.52
	Person Hours	246054.2	182437.4	428592.2	88148.97	72959.04	161109	334167.4	253433	587728.4
	Total	167.94	167.97	167.96	167.96	168.03	168.01	167.94	167.99	167.95
	Total Person Hours	322276.9	269255.9	591555.1	115388.5	98801.64	214212.8	437651.6	368066.1	805656.2
	Total Persons	1919	1603	3522	687	588	1275	2606	2191	4797
Madhya-Pradesh	SNA	43.55	22.62	33.64	36.35	8.5	23.37	42.07	19.85	31.54
	Person Hours	297533.6	139927.3	437925.5	82696.25	16685.5	99042.06	383131.5	161757.7	544254.2
	Extended - SNA	4.42	35.47	19.12	4.43	36.99	19.6	4.43	35.79	19.22
	Person Hours	30197.44	219417.4	248904.2	10078.25	72611.37	83064.8	40344.01	291652.7	331660.3
	Non-SNA	119.98	109.85	115.2	127.19	122.53	125.03	121.47	112.38	117.19
	Person Hours	819703.4	679532.1	1499674	289357.3	240526.4	529877.1	1106227	915784.6	2022231
	Total	167.95	167.94	167.96	167.97	168.02	168	167.97	168.02	167.95
	Total Person Hours	1147434	1038877	2186503	382131.8	329823.3	711984	1529703	1369195	2898145
	Total Persons	6832	6186	13018	2275	1963	4238	9107	8149	17256

Table T₄ Contd.

Meghalaya	SNA	48.28	29.12	38.45	35.42	14.42	24.23	45.94	26.34	35.88
	Person Hours	31478.56	19073.6	50254.15	9527.98	4080.86	13374.96	42310.74	24706.92	66700.92
	Extended - SNA	7.02	34.55	21.13	7.96	34.39	21.99	7.16	34.52	21.28
	Person Hours	4577.04	22630.25	27616.91	2141.24	9732.37	12138.48	6594.36	32379.76	39559.52
	Non-SNA	112.7	104.31	108.38	124.6	119.24	121.77	114.78	107.15	110.84
	Person Hours	73480.4	68323.05	141652.7	33517.4	33744.92	67217.04	105712.4	100506.7	206051.6
	Total	168	167.98	167.96	167.98	168.05	167.99	167.88	168.01	168
	Total Person Hours	109536	110026.9	219523.7	45186.62	47558.15	92730.48	154617.5	157593.4	312312
	Total Persons	652	655	1307	269	283	552	921	938	1859
Combined State	SNA	42.31	22.53	32.72	41.06	9.16	25.77	41.96	18.72	30.75
	Person Hours	942878.4	476058.9	1420539	423123.3	87468.84	511637.6	1367476	574310.9	1945522
	% to Total Person Hours	25.18	13.41	19.48	24.44	5.45	15.33	24.97	11.15	18.30
	Extended - SNA	3.74	33.95	18.4	3.44	36.44	19.26	3.65	34.63	18.69
	Person Hours	83345.9	717363.5	798836	35449.2	347965.6	382388	118953.5	1062414	1182498
	Non-SNA	121.98	111.5	116.89	123.47	122.44	123.03	122.42	114.58	118.62
	Person Hours	2718324	2355995	5074779	1272358	1169180	2442638	3989668	3515200	7504969
	Total	168.03	167.98	168.01	167.97	168.04	168.06	168.03	167.93	168.06
	Total Person Hours	3744549	3549417	7294154	1730931	1604614	3336663	5476098	5151924	10632988
	Total Persons	22285	21130	43415	10305	9549	19854	32590	30679	63269
Note: The figure of total time for each may not be exactly equal to 168 due to effect of rounding										

Table T₅

Statewise Weekly Average Time (in hours) spent on SNA, Extended SNA and non-SNA Activities by Sex and Place of Residence (All) Percentage of Person Hours put in SNA Activities by Sex and Place of Residence (participants)

States	Activities	Rural			Urban			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Haryana	SNA	37.98	23.49	31.36	36.54	11.21	24.97	37.72	21.26	30.19
	Person Hours	72883.62	37654.47	110449.92	25102.98	6591.48	31836.75	98298.32	46580.66	144821.43
	Extended - SNA	1.74	30.67	14.91	3.11	32.74	16.68	1.99	31.06	15.24
	Person Hours	3339.06	49164.01	52513.02	2136.57	19251.12	21267	5185.94	68052.46	73106.28
	Non-SNA	128.22	113.81	121.69	128.31	124.08	126.36	128.23	115.67	122.52
	Person Hours	246054.18	182437.43	428592.18	88148.97	72959.04	161109	334167.38	253432.97	587728.44
	Total	167.94	167.97	167.96	167.96	168.03	168.01	167.94	167.99	167.95
	Total Person Hours	322276.86	269255.91	591555.12	115388.52	98801.64	214212.75	437651.64	368066.09	805656.15
	Total Persons	1919	1603	3522	687	588	1275	2606	2191	4797
Madhya-Pradesh	SNA	43.55	22.62	33.64	36.35	8.5	23.37	42.07	19.85	31.54
	Person Hours	297533.6	139927.32	437925.52	82696.25	16685.5	99042.06	383131.49	161757.65	544254.24
	Extended - SNA	4.42	35.47	19.12	4.43	36.99	19.6	4.43	35.79	19.22
	Person Hours	30197.44	219417.42	248904.16	10078.25	72611.37	83064.8	40344.01	291652.71	331660.32
	Non-SNA	119.98	109.85	115.2	127.19	122.53	125.03	121.47	112.38	117.19
	Person Hours	819703.36	679532.1	1499673.6	289357.25	240526.39	529877.14	1106227.29	915784.62	2022230.64
	Total	167.95	167.94	167.96	167.97	168.02	168	167.97	168.02	167.95
	Total Person Hours	1147434.4	1038876.8	2186503.28	382131.75	329823.26	711984	1529702.79	1369195	2898145.2
	Total Persons	6832	6186	13018	2275	1963	4238	9107	8149	17256

This paper, prepared by Indira Hirway of the centre for Development Alternatives, Ahmedabad, has been reproduced as submitted. It has been issued without formal editing.

Table T₅ Contd.

Meghalaya	SNA	48.28	29.12	38.45	35.42	14.42	24.23	45.94	26.34	35.88
	Person Hours	31478.56	19073.6	50254.15	9527.98	4080.86	13374.96	42310.74	24706.92	66700.92
	Extended - SNA	7.02	34.55	21.13	7.96	34.39	21.99	7.16	34.52	21.28
	Person Hours	4577.04	22630.25	27616.91	2141.24	9732.37	12138.48	6594.36	32379.76	39559.52
	Non-SNA	112.7	104.31	108.38	124.6	119.24	121.77	114.78	107.15	110.84
	Person Hours	73480.4	68323.05	141652.66	33517.4	33744.92	67217.04	105712.38	100506.7	206051.56
	Total	168	167.98	167.96	167.98	168.05	167.99	167.88	168.01	168
	Total Person Hours	109536	110026.9	219523.72	45186.62	47558.15	92730.48	154617.48	157593.38	312312
	Total Persons	652	655	1307	269	283	552	921	938	1859
Combined State	SNA	42.31	22.53	32.72	41.06	9.16	25.77	41.96	18.72	30.75
	Person Hours	942878.35	476058.90	1420538.80	423123.30	87468.84	511637.58	1367476.40	574310.88	1945521.75
	% to Total Person Hours	25.18	13.41	19.48	24.44	5.45	15.33	24.97	11.15	18.30
	Extended - SNA	3.74	33.95	18.4	3.44	36.44	19.26	3.65	34.63	18.69
	Person Hours	83345.9	717363.5	798836	35449.2	347965.56	382388.04	118953.5	1062413.8	1182497.61
	Non-SNA	121.98	111.5	116.89	123.47	122.44	123.03	122.42	114.58	118.62
	Person Hours	2718324.3	2355995	5074779.35	1272358.4	1169179.6	2442637.6	3989667.8	3515199.8	7504968.78
	Total	168.03	167.98	168.01	167.97	168.04	168.06	168.03	167.93	168.06
	Total Person Hours	3744548.55	3549417.40	7294154.15	1730930.85	1604613.96	3336663.24	5476097.70	5151924.47	10632988.14
	Total Persons	22285	21130	43415	10305	9549	19854	32590	30679	63269
	Percentage of Male&Female									
	Persons Hours put in									
	SNA Activities	66.37	33.51	99.89	82.70	17.10	99.80	70.29	29.52	99.81
Note: The figure of total time for each may not be exactly equal to 168 due to effect of rounding										

Table T₇**India: Worker Population Ratios by Sex and Rural-Urban Residence, 1951 to 1993-94**

Year/Source/ (NSS Round)	India Rural India			Urban India					
	Per- sons	Males	Females	Per- sons	Males	Females	Per- sons	Males	Female
1951 Census	39.1	53.9	23.4	39.5	53.5	25.0	37.1	56.4	14.7
1955 NSS (9)	-	-	-	43.2	59.2	26.6	32.4	51.4	11.6
1961 Census	43.0	57.1	28.0	45.1	58.2	31.4	33.5	52.4	11.1
1971 Census	34.0	52.7	13.9	36.1	53.6	15.5	29.6	48.9	7.1
1972-73 NSS (27)	41.3	53.5	28.2	43.5	54.5	31.8	33.1	50.1	13.4
1977-78 NSS (32)	42.2	54.2	29.3	44.4	55.2	33.1	34.4	50.8	15.6
1981 Census@	36.8	52.6	19.8	38.9	53.8	23.2	30.0	49.1	8.3
1982 NSS (38)	42.2	53.8	29.6	44.6	54.7	34.0	34.3	51.2	15.1
1987-88 NSS (43)	41.1	53.1	28.1	43.4	53.9	32.3	33.9	50.6	15.2
1989-90 NSS (45)	41.2	53.9	27.6	43.7	54.8	31.9	33.9	51.2	14.6
1990-91 NSS (46)	40.4	54.3	25.4	42.7	55.3	29.2	33.8	51.3	14.3
1991 Census*	37.5	51.6	22.3	40.0	52.5	26.7	30.2	48.9	9.2
1992 NSS (48)	41.2	54.3	27.0	43.8	55.6	31.3	33.6	50.7	14.6
1993-94 NSS (50)	42.0	54.5	28.6	44.4	55.3	32.8	34.7	52.0	15.4

@ Excludes Assam

* Excludes Jammu & Kashmir

Sources : Censuses of Population, NSSO Rounds, Government of India

Table T₈**Statewise Distribution of time spent (in hours) in SNA activities by mode of payment & sex (Participants)**

States	Male			Female			Total		
	Paid	Unpaid	% time on Unpaid Activities	Paid	Unpaid	% time on Unpaid Activities	Paid	Unpaid	% time on Unpaid Activities
Haryana	33.09 (1152)	18.12 (1347)	35.38	4.13 (215)	25.34 (1494)	85.99	20.06 (1367)	21.37 (2841)	51.58
Madhya Pradesh	29.41 (5247)	23.34 (6311)	44.25	14.31 (3072)	15.75 (4391)	52.40	22.99 (8319)	20.12 (10702)	46.67
Gujarat	44.37 (3959)	14.17 (3897)	24.21	17.18 (1747)	13.87 (2541)	44.67	33.26 (5706)	14.05 (6438)	29.70
Orissa	31.25 (2103)	22.42 (2589)	41.77	8.00 (583)	18.18 (3235)	69.44	20.55 (2686)	20.47 (5824)	49.90
Tamil Nadu	41.42 (5633)	13.36 (4863)	24.39	21.8 (3034)	10.32 (4280)	32.45	32.74 (8667)	12.04 (9143)	26.89
Meghalaya	17.34 (374)	35.39 (740)	67.12	7.83 (196)	25.34 (692)	76.39	12.65 (570)	30.44 (1432)	70.64
Combined States	36.54 (18468)	18.12 (19747)	33.15	14.87 (8847)	15.18 (16633)	50.52	27.16 (27315)	16.85 (36380)	38.29

Source: Report of the Time Use Survey, Central Statistical Organisation, Government of India (2000).

TABLE T₉**A: Percentage of Persons Engaged in on SNA Activities by Sex and Place of Residence (General)**

SNA Activities	Activity Code	Rural				Combined State	
		Male	% Male	Female	% Female	Total	% Total
Crop Farming, Kitchen Gardning etc.	11	11050	38.54	6487	25.05	17537	32.14
Animal Husbandry	12	7043	24.56	6690	25.83	13733	25.16
Fishing, Forestry, Horticulture, Gardenig	13	1079	3.76	809	3.12	1888	3.46
Fatching of fruits, water, plants, etc. storing and hunting	14	2241	7.82	7356	28.40	9597	17.59
Processing and storage	15	281	0.98	1068	4.12	1349	2.47
Mining, quarrying, digging, cutting, etc.	16	374	1.30	125	0.48	499	0.91
Primary Activities	11-16	22068	76.97	22535	87.01	44603	81.73
Construction Activities	21	1107	3.86	249	0.96	1356	2.48
Manufacturing Activities	22	1396	4.87	1169	4.51	2565	4.70
Secondary Activities	21-22	2503	8.73	1418	5.47	3921	7.19
Trade , Business and Services	31	1264	4.41	374	1.44	1638	3.00
Services	32	2821	9.84	1550	5.98	4371	8.01
Community Organised Constructions and repairs: building	611	16	0.06	23	0.09	39	0.07
Tertiary Activities	31-611	4101	14.30	1947	7.52	6048	11.08
Total SNA	Total SNA	28672	100.00	25900	100.00	54572	100.00
		17693		15339		33032	

B: Percentage of Persons Engaged in on SNA Activities by Sex and Place of Residence (General)

SNA Activities	Activity Code	URBAN				Combined State	
		Male	% Male	Female	% Female	Total	% Total
Crop Farming, Kitchen Gardning etc.	11	512	5.83	350	6.82	862	6.19
Animal Husbandry	12	257	2.93	331	6.45	588	4.23
Fishing, Forestry, Horticulture, Gardenig Fatching of fruits, water, plants, etc.	13	189	2.15	125	2.43	314	2.26
Storing and hunting	14	384	4.37	1690	32.91	2074	14.90
Processing and storage	15	74	0.84	196	3.82	270	1.94
Mining, quarrying, digging, cutting, etc.	16	117	1.33	29	0.56	146	1.05
Primary Activities	11-16	1533	17.46	2721	52.99	4254	30.57
Construction Activities	21	445	5.07	114	2.22	559	4.02
Manufacturing Activities	22	1220	13.89	794	15.46	2014	14.47
Secondary Activities	21-22	1665	18.96	908	17.68	2573	18.49
Trade , Business and Services	31	1955	22.26	254	4.95	2209	15.87
Services	32	3623	41.25	1243	24.21	4866	34.96
Community Organised Constructions And repairs: building	611	6	0.07	9	0.18	15	0.11
Tertiary Activities	31-611	5584	63.58	1506	29.33	7090	50.94
Total SNA	Total SNA	8782	100.00	5135	100.00	13917	100.00

C: Percentage of Persons Engaged in on SNA Activities by Sex and Place of Residence (General)

RURAL URBAN COMBINED

Combined State

SNA Activities	Activity			Total		Combined State	
	Code	Male	% Male	Female	% Female	Total	% Total
Crop Farming, Kitchen Gardning etc.	11	11562	30.96	6837	22.03	18399	26.86
Animal Husbandry	12	7300	19.55	7021	22.62	14321	20.91
Fishing, Forestry, Horticulture, Gardenig	13	1268	3.40	934	3.01	2202	3.22
Fatching of fruits, water, plants, etc.							
Storing and hunting	14	2625	7.03	9046	29.15	11671	17.04
Processing and storage	15	355	0.95	1264	4.07	1619	2.36
Mining, quarrying, digging, cutting, etc.	16	491	1.31	154	0.50	645	0.94
Primary Activities	11-16	23601	63.20	25256	81.38	48857	71.34
Construction Activities	21	1552	4.16	363	1.17	1915	2.80
Manufacturing Activities	22	2616	7.01	1963	6.33	4579	6.69
Secondary Activities	21-22	4168	11.16	2326	7.49	6494	9.48
Trade , Business and Services	31	3219	8.62	628	2.02	3847	5.62
Services	32	6333	16.96	2793	9.00	9237	13.49
Community Organised Constructions							
And repairs: building	611	22	0.06	32	0.10	54	0.08
Tertiary Activities	31-611	9574	25.64	3453	11.13	13138	19.18
Total SNA		37343	100.00	31035	100.00	68489	100.00

Source: Time Use Survey, 1998-99, India

TABLE T₁₀**A : Percentage of Weekly Average Time Spent on SNA
Activities by Sex and Place of Residence (General)**

Combined State	Rural							
SNA Activities	Code	Male	% Male	Female	% Female	Total	% Total	
Crop Farming, Kitchen Gardning etc.	11	22.76	53.79	10.80	47.94	16.96	51.83	
Animal Husbandry	12	5.01	11.84	4.19	18.60	4.62	14.12	
Fishing, Forestry, Horticulture, Gardenig	13	1.04	2.46	0.45	2.00	0.75	2.29	
Fatching of fruits, water, plants, etc.								
Storing and hunting	14	1.18	2.79	3.52	15.62	2.3	7.03	
Processing and storage	15	0.22	0.52	0.4	1.78	0.31	0.95	
Mining, quarrying, digging, cutting, etc.	16	0.81	1.91	0.18	0.80	0.5	1.53	
Primary Activities	11-16	31.02	73.32	19.54	86.73	25.44	77.75	
Construction Activities	21	2.04	4.82	0.36	1.60	1.22	3.73	
Manufacturing Activities	22	2.77	6.55	1.37	6.08	2.1	6.42	
Secondary Activities	21-22	4.81	11.37	1.73	7.68	3.32	10.15	
Trade , Business and Services	31	2.37	5.60	0.28	1.24	1.35	4.13	
Services	32	4.11	9.71	0.98	4.35	2.61	7.98	
Community Organised Constructions and repairs: building	611	0.01	0.02	0.01	0.04	0.01	0.03	
Tertiary Activities	31-611	6.49	15.34	1.27	5.64	3.97	12.13	
Total SNA		42.31	100.00	22.53	100.00	32.72	100.00	

**B : Percentage of Weekly Average Time Spent on SNA
Activities by Sex and Place of Residence (General)**

Combined State		Urban					
SNA Activities	Code	Male	% Male	Female	% Female	Total	% Total
Crop Farming, Kitchen Gardning etc.	11	1.89	4.60	0.80	8.73	1.38	5.36
Animal Husbandry	12	0.3	0.73	0.45	4.91	0.37	1.44
Fishing, Forestry, Horticulture, Gardenig	13	0.26	0.63	0.09	0.98	0.18	0.70
Fatching of fruits, water, plants, etc. storing and hunting	14	0.22	0.54	0.87	9.50	0.54	2.10
Processing and storage	15	0.21	0.51	0.14	1.53	0.16	0.62
Mining, quarrying, digging, cutting, etc.	16	0.76	1.85	0.13	1.42	0.45	1.75
Primary Activities	11-16	3.64	8.87	2.48	27.07	3.08	11.95
Construction Activities	21	2.84	6.92	0.42	4.59	1.67	6.48
Manufacturing Activities	22	7.29	17.75	1.71	18.67	4.64	18.01
Secondary Activities	21-22	10.13	24.67	2.13	23.25	6.31	24.49
Trade , Business and Services	31	10.46	25.47	0.67	7.31	5.76	22.35
Services	32	16.83	40.99	3.88	42.36	10.62	41.21
Community Organised Constructions and repairs: building	611	0.00	0.00	0.00	0.00	0.00	0.00
Tertiary Activities	31-611	27.29	66.46	4.55	49.67	16.38	63.56
Total SNA		41.06	100.00	9.16	100.00	25.77	100.00

**C : Percentage of Weekly Average Time Spent on SNA
Activities by Sex and Place of Residence (General) (RURAL URBAN COMBINED)**

Combined State		Total					
SNA Activities	Code	Male	% Male	Female	% Female	Total	% Total
Crop Farming, Kitchen Gardning etc.	11	16.79	40.01	7.97	42.57	12.52	40.72
Animal Husbandry	12	3.62	8.63	3.13	16.72	3.41	11.09
Fishing, Forestry, Horticulture, Gardenig Fatching of fruits, water, plants, etc.	13	0.82	1.95	0.34	1.82	0.59	1.92
storing and hunting	14	0.91	2.17	2.77	14.80	1.82	5.92
Processing and storage	15	0.21	0.50	0.32	1.71	0.27	0.88
Mining, quarrying, digging, cutting, etc.	16	0.81	1.93	0.16	0.85	0.5	1.63
Primary Activities	11-16	23.16	55.20	14.69	78.47	19.11	62.15
Construction Activities	21	2.27	5.41	0.37	1.98	1.34	4.36
Manufacturing Activities	22	4.07	9.70	1.47	7.85	2.82	9.17
Secondary Activities	21-22	6.34	15.11	1.84	9.83	4.16	13.53
Trade , Business and Services	31	4.68	11.15	0.39	2.08	2.61	8.49
Services	32	7.76	18.49	1.8	9.62	4.87	15.84
Community Organised Constructions and repairs: building	31-611 611	0.00	0.00	0.01	0.05	0.01	0.03
Tertiary Activities		12.44	29.65	2.20	11.75	7.49	24.36
Total SNA		41.96	100.00	18.72	100.00	30.75	100.00

Source: Time Use Survey, 1998-99, India

Table T₁₁**Number of Children Participating in SNA Activities and in School Education**

Age Group	Total	Participation in SNA Activities	Hours Spent on SNA work	Participation in School Education
<u>6-9 Years</u>				
Males	2362	492(20.83)	6.70	1706(72.22)
Females	1978	472(23.86)	7.41	1379(69.72)
Total	4340	964(22.21)	7.05	3085(71.08)
<u>10-14 Years</u>				
Males	3687	1606(43.55)	12.74	25.21(68.37)
Females	3234	1159(35.84)	15.62	1952(60.35)
Total	6921	2765(36.95)	14.14	4475(64.65)

Note: Figures in the brackets indicate percentages of the totals.

Table T₁₂**Weekly Average Time Spent by Children (Aged 6-14 Years) on Various Activities
(Combined State)**

Activity	Rural		Urban		Total	
	Male	Female	Male	Female	Male	Female
Worked for Payment	0.00	0.00	0.00	0.00	0.00	0.00
Worked Without Payment	1.82	7.93	1.26	4.54	1.68	7.03
Taking Care of Sibling	0.14	0.65	0.05	0.33	0.12	0.57
Schooling	34.70	29.95	37.35	327.52	35.39	31.95
Playing	16.12	13.11	15.52	12.32	15.96	12.90
Others	115.22	116.36	113.81	113.35	114.86	115.57
Total	168.00	168.00	168.00	168.00	168.0	168.02
Sample No. of Children	4271	7970	1779	3293	6050	11263

Table T₁₃**Weekly Average Time Spent (in hours) on some peculiar activities by sex (All)**

Activities	Haryana		Madya Pradesh		Gujarat		Orissa		Tamil Nadu		Meghalaya		Combined States	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Cooking	0.36	11.37	0.62	14.24	0.38	13.85	0.86	19.28	0.38	14.74	1.26	13.74	0.52	14.93
Cleaning Household	0.12	4.37	0.28	4.44	0.16	5.06	0.15	3.72	0.26	4.80	0.35	3.26	0.21	4.56
Cleaning Utensils	0.10	4.68	0.13	3.71	0.10	4.28	0.10	2.45	0.06	2.62	0.32	3.90	0.10	3.39
Washing and Mending clothes	0.09	4.02	0.28	2.12	0.11	4.03	0.13	1.05	0.21	2.81	0.37	3.10	0.18	2.71
Shopping	0.39	0.34	0.64	0.31	0.45	1.56	1.03	0.23	0.48	0.50	0.40	0.44	0.59	0.64
Pet care	0.01	0.02	0.08	0.10	-	0.02	0.01	0.04	0.01	0.03	0.02	0.05	0.03	0.04
Care of Children	0.18	3.91	0.26	3.23	0.33	3.25	0.53	3.92	0.29	2.36	0.47	4.44	0.32	3.16
Teaching own Children	0.08	0.18	0.14	0.10	0.17	0.33	0.27	0.18	0.11	0.18	0.35	0.29	0.16	0.19
Accompanying Children to places	0.03	0.06	0.23	0.21	0.02	0.04	0.02	0.02	0.05	0.09	0.05	0.23	0.08	0.09
Care of sick and elderly	0.06	0.11	0.02	0.12	0.04	0.16	0.10	0.54	0.01	0.08	0.03	0.19	0.04	0.19
Supervising Children	0.12	0.89	0.25	0.96	0.51	1.13	0.24	0.54	0.16	0.45	0.98	1.79	0.28	0.78
Care of guests	0.04	0.04	0.01	0.01	0.04	0.11	0.04	-	0.02	0.02	0.15	0.24	0.03	0.04

Note: 1. The entry '-' in a cell indicates that no corresponding observation was found in the sample

2. M : Male, F : Female

Source: Report of the Time Use Survey, Central Statistical Organisation, Government of India (2000).