# Work time allocation and valuation of women's contribution in household activities in the urban economy of Himachal Pradesh

K.C. Sharma[1] and Lalita Devi[2]

[1]Himachal Pradesh University Centre for Evening Studies, Shimla, India.
[2]Department of Economics, Himachal Pradesh University, Shimla, India.

Corresponding author: lalita.negi02@gmail.com

**Abstract**

Women constitute half of the population and so their participation in the household and economic activities at par with men is necessary for the development of mankind. The equality of women with men would remain a myth till women become economically self-reliant. Unpaid works affect women "employment" and income, social benefits and well-being. Women's employment is generally low because unpaid work tends to constrain women's participation in the formal, paid labour market. However, poverty and the financial crisis compel women to engage in economic activities and earn income in the informal economy. Thus women perform subsistence and livelihood activities or engage in micro-enterprises and generate income for the household. But their informal activities do not reduce their unpaid work; in fact, they continue to perform both the unpaid and paid work.

The present empirical investigation has been conducted in the urban economy of Himachal Pradesh based on primary data collected from 150 sample households on the different size of income groups of 9 wards, scattered over 25 wards selected randomly from the urban area of district Shimla of Himachal Pradesh. Unpaid work has remained invisible, but when valued, it can reflect more realistic estimates of total economic production by taking into account all household activities. This would enhance women's economic status in a positive direction and would contribute to long-term endogenous growth strategies by opening up capacity/capabilities in areas such as health and education.

**Keywords:** Population, employment, empirical

Women work both for the labour market as well as for the household sector. Some of this work is recognized and remunerated, while most of it is not enumerated and remains unpaid. Women's contribution to the household, economy and society as they goes unrecognized since in most of the activities female are involved in do not enter the sphere of the market and remain non-monetized. Most of the work undertaken by women is often interspersed with other household chores, making it difficult to separate the various tasks performed. The perpetuation of gender stereotypes and the social division of labour that typecasts women mainly as

workers in the domestic sphere has been the chief barrier to the recognition of women's economic work participation (Bardhan 2007).

Non-recognition of women's participation in an economic activities are not only an outcome of (a) their work being intertwined with household activities; and (b) being unpaid, making it difficult for enumerators to identify women as workers, but also stems from flawed definitions and the limited scope of economic activity (Agarwal 1985). The role played by women in the care sector, predominantly their reproductive work (bearing, rearing, nurturing children and household maintenance), falls outside

the national accounting systems. Many of the tasks 'non-working' women are involved in would be considered work if it is performed by a person hired for the purpose or unrelated to the household (Visaria 1999).

Because women perform roles, which are not statistically counted as economic and hence not monetarily valued, women's roles and their contribution are assigned a lower status. The role fulfilled by women in household maintenance and care activities cannot be trivialized. Assigning monetary value to all the tasks under-taken by them however, it is not very easy. Some efforts have been made to study the manner in which time is spent by women in the course of the day through time use survey (Government of India 2000).

Various studies have been conducted (e.g. Chattopadhyay 2005, Dasgupta and Goldar 2006, Kundu 2007, Kelkar 2009, Ayyangar and Joshi 2010) in different countries concerning the time spent on and amount of unpaid household work. A major chunk of these surveys is devoted to developing appropriate methods for measurement of different categories of work and production done within the households outside the market economy. In an attempt to understand the critical dimension of women's work, this paper sets out to measure the scale and nature of women's contribution to the different categories of work done by women viz-a-viz the man within the sample household. Women's work is greatly under-valued in economic terms. This is due in part to the restricted definition of economic activity and used under the System of National Income Accounting. But a part of the problem is the notion of value itself. To ensure full measurement of the paid and unpaid work of men and women a methodology, which has been widely used for this purpose in both developed and developing countries, has been adopted in the present study.

Himachal Pradesh has emerged as leader in hill area development, horticulture revolution, and ideal destination for investment in industry, power and tourism. The competence and value systems with civilizational heritage, trade liberalization and other measures to increase the competitive environment in the economy in flinching commitments towards improvement in infrastructures has led to robust performance in the economy of the Pradesh. The

mainstay of the people of Himachal Pradesh is agriculture on which 66.71% population depends for their livelihood. The topography being mostly hilly, the type of cultivation is terraced close to 80% of all holdings fall in the category of small and marginal farmers. Due to ideal climate for fruit cultivation, horticulture and vegetable growing (seasonal as well as off-season), well-diversified farm economy has developed rapidly during the past three decades.

The status of Himachali women in the society has been viewed differently with regard to her role in different places of the society. A section of researchers viewed her as a little better than a slave or beast of burden to perform hardest duties and for that reason she was sometimes purchased or sold like any other commodity. But, on the other hand, it is also argued that she has better utility, her resource-fullness in domestic lite, her refreshing company and the affectionate care of children and thus has proved to be a big asset to the family.

Shimla district lies between the longitude 77.00'' and 78.19'' east and latitude 30.45'' and 31.44'' north, has its headquarters at Shimla city. It is surrounded by Mandi and Kullu in the north, Kinnaur in the east, Uttarakhand in the south, Sirmaur in the west. The elevation of the district range from 300 metres (984 ft) to 6,000 metres (19,685 ft).[72] Shimla district in its present form came into existence from 1st Sept, 1972 on the reorganisation of the district of the state. Shimla district derives its name from Shimla town, the district headquarters and now state capital of Himachal Pradesh. Shimla is the capital Town of Himachal Pradesh. It was formerly the summer capital during the British Rule. The town of Shimla is built over several hills and connecting ridges. The important hills are Jakhu (8056 ft), Prospect Hill (7140 ft), Observatory Hill (7050 ft), Elysium Hill (7400 ft), and Summer Hill (6900 ft). These are a great controversy over the origin of the name Shimla. The name Shimla was derived from 'Shyamalaya' meaning blue house said to be the name of house built of blue state by a faqir on Jakhu. According to one version Shimla takes it name from 'Shmla' meaning a blue female another name for Goddess Kali.[73]

The Shimla economy is mainly dependent upon the revenue from travel and tourism industry and the agriculture and horticulture in the region.

The majority of the people are either placed into the tourism industry or into the administrative department of Shimla. A vast number of the people of Shimla have taken the occupation of a travel agent, guide or a photographer or something related to the tourism industry like hotel and the restaurants. The economy is heavily dependent on the leather industry, food processing industry, wood industry and the like. The lakkar bazaar is a major shopping center of Shimla where the tourists gather to pick up their choice that ultimately adds up to the economy of Shimla. As such there are many important departments and offices of the governing body in Shimla. The people working in these offices are the cogs and screws of the economy of Shimla.[74]

Shimla is essentially a white collar and service city with a tiny industrial sector. The pattern of women employment in service sector and found that share of women workers in service sector, both in organized and unorganized has increased especially in urban areas (Dutta 2000).

**Objectives**

In the present empirical investigation an attempt has been made to achieve the following objectives:-

1. to study the socio-economic conditions of urban sample households among the different size of income groups; and

2. to study the role of women in family decision making among the urban sample households in different size of income groups.

**Sampling**

The present empirical investigation district Shimla has been selected purposely from the highest urban population of Himachal Pradesh. The city has the highest proportion of urban population in the state (i.e. 23.15%). The required primary data has been collected from 150 sample households in proportion to the total number of households falling in each category of groups, 9 wards scattered over 25 wards selected randomly from urban area of Shimla district of Himachal Pradesh.

**Analysis of Data**

In the survey of time-use pattern, the data highlights the contribution of women and men to household,

community and economic work. In study area data was collected for both males and females, regarding the various types of work done by them during the year. It needs to be stressed that some persons work slowly, using all the time available to them or due to their inefficiency, while others may spend much less time either due to efficiency, burden of other work or due to their inheriting work culture.

In the present study, due to the foregoing differences in the efforts that people put in while working, the problem faced was of quantifying the amount of work done by all the males and females, forming the sample. Besides, there were other problems faced in data collection as well as its tabulation like problems regarding recall of work done during the whole year, the respondents belonging to different age groups, seasonal nature of some of the rural work, and so on and so forth. These small methodological problems were kept in mind in collecting, tabulating and interpreting the data.

The time taken in work was measured in hours and minutes per day, and then the average over the week/ months was taken which was divided into nine-fold activity classification, as is given below:

  i) Primary production activities

  ii) Secondary sector activities

  iii) Trade, business and services, i.e. the tertiary sector activities

  iv) Household maintenance, management, shopping for own household

  v) Care of children, elderly, disabled of own household.

  vi) Community services

  vii) Self learning and education

  viii) Personal care and self-maintenance

  ix) Social and cultured activities

These nine types of activities were further grouped into three categories. The other surveys carried out in different countries, which were referred above, has also used a similar methodology. The first three items are referred to as the system of National Account Activities (SNA). Next three are called Extended System of National Account Activities (E-SNA), and the last three activities left

out of National Accounts are called Non-Economic Personal Activities. Regarding the last category, the criterion used in the study is, that personal activities cannot be delegated to third parties. No one else can eat your breakfast on your behalf or catch up on your sleep. We have to do it ourselves. Regarding the E-SNA as an activity, the distinguishing feature is, that they can be performed even by hired workers, say, cooking a meal, sweeping the floor, cleaning the utensils and looking after one's children etc. The nature of the system of SNA activities is quite clear because these activities form part of National Income Accounting System in every country. These activities form the exchange system in the market and these can also be purchased and sold.

In the present study, pattern of SNA activities is adopted as follows. The SNA activities comprise of three groups of activities namely Primary Production Activities consist of crop farming (land preparation, Sowing/digging, manuring, harvesting/plucking etc.), animal husbandry, processing and storage etc. Secondary activities consist of construction and manufacturing activities which include, rural activities like making of tools and machinery, molding, welding, assembling machines and equipment, spinning, weaving, processing of textiles, basket making etc. Tertiary sector activities comprise of trade, business and services. The service consist of employment in government, semi-government, private organization, petty services (i.e. working as sweeper, hasher, barber, cobbler and guarding etc.) and professional services (Medical and Educational Services etc.). The second group is Extended System of National Account (E-SNA) activities. This category of activity is mainly related to the household domestic work, which is unpaid, unrecognized and involve no market value in the form of payment of wages. They can also be performed by hired labour that is why referred to as E-SNA activities. The study of such activities is important because these have direct bearing on the status of women in a society. It is well-recognized that this category of work gives rise to gender discrimination and male dominance. The third groups of activities are called non-economic personal activities. They are very important for self-maintenance and for overall development of an individual. In this category of activities people have to work for themselves; no one else can perform for them.

## Monetary Valuation

The unpaid works of women need to be visible, quantified and well-recognized as most of the care work was previously carried out within the confines of household, did not figure into the National Account. The Moment women entered the labour force to do care work, for pay, their labour began to count as labour and started being counted as part of the national income. However, how much work is actually being done is not clear, until and unless it is estimated and valuated. The physical output of household activities had never been sold nor made market-oriented. Therefore, it has no market value and had never been price tagged. It is, however, deemed imperative to express the value of physical output of households in terms of units of money. For the purpose of economic valuation, value is synonymous to the market value or, value is simplified by assuming that an hour of market work and an hour of non-market work, have the same value. All the human activities have been taken as productive, market oriented, productive non-market work and personal activities, called as SNA activities, E-SNA activities and non-personal activities respectively.

The work not included under SNA activities, has been evaluated by using replacement cost (generalist) method in the present study. This method values the unpaid work by the equivalent wages of paid domestic help. The wage rate varies and also depends upon the labour market situation in the concerned area. The replacement cost has been estimated with the help of following formula.

Value of unpaid work = Average time spent for activity X wage rate of domestic worker.

Under SNA activities wage rates are fixed for males and females. In the context of the urban area under SNA activities wage rate in crop farming was ₹ 200/ per day for male and ₹ 150/ per day for female. In manufacturing and construction activities the wage rate were ₹ 250/ and ₹ 200 for males and females during the reference year.

In the E-SNA activities multiple wages rates were prevailing for similar activities, such as cooking at a road side restaurant or at someone's house, washing at home or through washerman. Keeping these actual differences in wage rate, the different average

wage rate of all household activities has been taken. As discussed earlier, the E-SNA activities comprise of four parts. The first one is household management work. Its wage rate is ₹ 1600 per month, which includes cooking meals (₹ 800), cleaning utensils (₹ 500), washing and ironing of clothes (200), and home improvements (₹ 100) per month.

In urban area the family care activities; wage rate is ₹ 1600 per month. It includes physical care of children, accompanying them to school and looking after them, physical care of elderly, sick and disabled family members. For animal-care related activities the wage rate was (₹ 500) and it includes grass collection, grazing, mulching and tending of animals in urban area. For community services the wage rate is (₹ 400) per month. It includes work for individuals, group, travel for local and formal groups, civic responsibilities like (voting, rallies, meetings etc). While performing all the above activities, the time utilization pattern depends upon the individuals' capacity/behavior. In order to derive the daily wage rate from the monthly wage rates, the following method [(1600+1600+500+400)] X 12/30 the average daily wage rates is ₹ 164. Here, in the nominator the monthly wage rates have been added up, multiplied by 12 months and divided by 300 which are the estimated annual days spent by workers on E-SNA activities

## Result and Discussion

### Socio-economic characteristics of the sample households

Out of the total 150 sample households, 23 households fall in the category of group I lowest income groups having income less than 3,000, 30 households are in the category of group II low income groups having income less than 16,000, 39 households are of group III medium income groups having income less than 30,000 and remaining 58 households fall in the category of group IV high income groups above 30,000.

Out of the total population of 671, 333 are males and 338 are females. The average size of family is the lowest on the lowest income groups and shows an increasing tendency with an increase in the size of income groups. The percentage of labour force and percentage of dependents shows a mixed tendency

with an increase in the size of income groups. The literacy level of the sample as a whole 90.31% of population was literate out of which 92.49% were males and 88.16% were females. The literacy percentage was the highest on the large size of holdings, i.e. 92.25% (Table 1).

The literacy percentage was lower among females as compared to male among different size of income groups but highest in large size of income groups. Because females in urban area reveals that as income groups goes up the literacy percentage also increases while considering literacy percentage of both sexes, there exist a huge gap in between lower and higher income groups. This is due to the reason that the highest income groups sample has more resources for education than that of lower income groups. For higher education (i.e. Professional, Technical, Academic, Research, etc.) more capital needed and thus lower income group can't afford such huge investments. Therefore, they indulge in lower status occupations on contrary, higher income group families invest more capital for education of their children and after getting higher education they indulge in higher status occupations. This is also one of the main reasons for lower dependency percentage in higher income groups and vice-versa. As the state government introduced many schemes for better education and tried to give cheaper education, but benefits of such schemes are actually possible upto basic education.

### Sex-wise Distribution Pattern of Annual Time According to Farm-Size of Holdings and Income Groups Among SNA, E-SNA and Non-Productive Activities

The pattern of allocation of male–female time among the above given activities has been discussed, according to the size class of holdings and income groups of the sample households. This has done to notice whether and to what extent time allocation pattern varies according to the economic status of households. Distribution pattern of annual work time according to farm–size of holdings and income groups by male and female has been presented in Table 2. These tables clearly reveals that out of the total percentage of time utilized by males on SNA activities has been work out to 88.59, 84.69, 81.91 and 82.13% on the lowest, low, medium and high income groups respectively.

The above pattern of time utilization by males indicates that in all income groups they have utilized their maximum time on SNA activities. It was also found that their percentage of time utilized in above category of activity was relatively higher due to their comparatively high level of education and therefore they were fit for seeking an employment in manufacturing and service sectors activities with full efficiency because of high and quick monetary returns. The households falling on the lowest income groups in urban area also utilized their major time on SNA activities as construction, wage workers, taxi drivers as well as other avenues to augment their meagre household income. The percentage of time utilized by females on SNA activities has been found half of males time in urban area. In urban area the female of high income groups devotes the highest (i.e. 52.32%) on SNA activities out of the total households activities. The females of high income groups were found to be more aware of this paid work activity. Among l the income groups, this percentage came out 83.44 for males and 44.65% for females in urban area respectively.

On scruting female's participation in above category, it was also revealed that the percentage of work was low due to discrimination in wages, sexual harassment and social constraints etc. But in a few cases on the lowest income groups because of their impoverished condition, every member including women had to work for their daily sustenance. The amount of time utilized in household activities cannot be underestimated. It is equally significant for an entire economy.

The pattern of human labour utilization in the E-SNA activities according to their income groups also presented in the above table. The table clearly reveals that the percentage of time utilized in E-SNA activities by male on an average was very low. The percentage of participation of males shows a mixed trend as the income size increased. They contributed only to essential work outside of this category like accompanying children for their various outdoor activities (i.e. going to school, buying goods for them teaching them) and accompanying adults to religious places or hospitals etc.

On the other hand, the percentages of time utilized by females under E-SNA activities vary according to income groups. The time utilization in

E-SNA activities is the highest i.e. 61.05% on medium income groups followed by 49.33% on low income groups, 46.29% on lowest income groups and 40.07% on high income groups. The above percentage showed the mixed trend with an increased in income groups, which clearly indicates that women devote more than four times in urban area then in comparison to men in E-SNA activities. While further breaking down the E- SNA category it was found that women in the study area spent maximum time in a day for cooking food, cleaning the house and utensils child care and animal care as their main activities while men at all spent hardly any time for performing these activities.

 Interestingly, the percentage of time utilized under the last category of activities namely Non- productive activities were found shows a little difference. Table clearly reveals that though males and females spent time in different modes on this activity but the overall percentage spent in all income groups (i.e. for males 4.59, 4.32, 3.69 and 4.71 and for females 11.47, 11.28, 8.65 and 7.61%) was showing that females utilization on this category was on the higher side than the males. It may be mentioned that females spent more time to sleep, receiving medical and personal care from professionals and household members, rest and relaxation. On the other hand, male spent more time on eating, smoking, drinking alcohol, physical exercise, listening to music and reading the newspaper.

Thus, the composition of activities performed by males is different from that of females. It follows from the data given in the above table that men spent their major share of time on SNA activities (i.e. paid work) in all different income groups. On the other hand, women spent their maximum time on E-SNA activities (i.e. unpaid work) all income groups. The most obvious gender difference is the breakdown of paid and unpaid work: men spent significantly longer hours at paid work than women, and women spent significantly longer hours at unpaid household work which is neither marketed nor recognized.

### Sex-wise Distribution Pattern of Work at the Disaggregated Level Among SNA, E-SNA and Non-Economic Personal Activities

The distribution pattern of time utilized at the disaggregated level has been shown in Table 3. The

table shows the time allocation of average male and female of sample households among SNA, E-SNA and Non-economic personal activities. The SNA activities as mentioned above comprises of three groups of activities, viz. primary production, secondary production and tertiary production. The Table reveals that in urban area, under primary production activities males spent 0.01% of time in crop farming and orchard activities during the year. This percentage is very low because in urban area male involved in service sector activities and very less work in primary production activities has been carried out. The share of females percentage was high to that of males (i.e. 0.02%). In urban area female mostly engaged in family care and household management activities.

The percentage of time utilized in secondary activities was the highest by males 1.04% as compared to females. This category includes manufacturing activities (i.e. making of tools and machinery, molding, welding, assembling machines and equipment) and construction activities (i.e. building and construction of dwellings, bricks plastering, bamboo work, roofing, repair of animal sheds, construction of public works/common infrastructure roads, building and bridges etc.). These activities require much expertise, skill and craftsmanship only expert hands can handle it. Only men can undertake such arduous skilled and hazardous jobs because of their physical superiority and acquired skilled of year together.

The third part of SNA activities are trade, business and services. The services consist of employment in government, semi-government and private organizations. Petty services (i.e. working as sweeper, washer, barber, cobbler and guarding etc.) and professional services (medical and educational services). Out of the total time utilized under all activities with regard to trade and services, the male participation came out to 82.39% and that of female 44.63%. In urban area, men spent more time (i.e. 83.44%) on SNA activities as compared to women (i.e. 44.65%). Analytical studies of area urban for both males and females' participation with regards to SNA activities shows that during a year, former work for longer duration than the latter. So, males receive the lion's share of income and recognition for their economic contribution. The findings presented

above clearly indicates that males are recognized in the society and family because of more participation in this paid labour activity.

At the dis-aggregated level, the extended system of National Account (E-SNA) activities are sub-divided into four groups, namely household management, family care, animal care and community services. The time spent by women viz-a-viz men in this category of activities has been analysed in Table 3. The Table clearly indicates that in urban area, male spent 2.27% of the total time and females spent (i.e. 13.83%) more than five times of male in household management out of the total available time. It happened mainly because this type of activity is time consuming and women remain busy almost throughout the day in household chores, namely cooking food and serving it, cleaning utensils and surroundings, washing and ironing of clothes and other household chores. All the activities under family care like physical care of children, elderly, sick and the disabled accompanying them wherever they want to go are included in this category of activity. The contribution of time utilization by urban females in this category of activity came out 24.53% and urban males contribution was one-fifth (i.e. 5.85%) of it. The reason for difference in the above time allocation is due to the fact that females are more caring and loving by nature. They are much concerned about the up-keep and welfare of family members. Moreover, it involves more consumption of time within the home.

In urban area, male participation in animal care activities came out just 0.03% of the total time utilized by them and females' contribution was 0.11%. Most of the activities under this category take place during early morning and evening times, when females are free from their kitchen-based chores. Under community services, the following activities have been included: community work for individual and groups, participation and travel for local, formal groups, civic and related responsibilities (like voting, rallies, meetings) and informal help to other households. In urban area, the time utilized by females was two times more as compared to males under this category. Where civic and related responsibilities were concerned males played dominant role because they are politically more aware than females. Although females do participate

in these activities, yet not so actively. When informal help to other households was needed, the female participation was on the higher side, mainly due to inherit tendency of females to make their presence felt in community.

The result of E-SNA activities can be summarized that women devotes 84.87% of their total time to E-SNA activities, while men spend an average of merely 46.57% of their total time to E-SNA activities, while men spend an average of merely 12.18%. But it is significant to note that women have devoted four times more in urban area than men to E-SNA activities, which are unpaid, unrecognized and undervalued. This result is significant from the point of view of gender discrimination, in that the females do most of that work which remains unpaid and unrecognized.

The third group of activities which is called Non-economic personal activities. It includes physiological, recreational activities and education. Education is an investment in human capital, as is also the investment in health, which enhances the productivity of the workers. The Non-economic personal activity includes learning, education, and personal care, social and cultural activities. Learning is related to general education. Table 3 indicates that time utilized by men in this activity was 2.24% and women 3.86% of the total time available to them in this activity. Under personal care, though men and women devote different time spans, yet perform differently. Overall percentage of time spent by males was 1.53% and female was 3.54% showing a difference of 2.01%, this being higher on female side.

In the next category of work falling under Non-economic personal activity, the women in the rural area spend time in social and cultural activities (i.e. 1.36%) than men (i.e. 0.59%). Under this group women's time exceeds that of men in participating in wedding, and religious activities etc. On all the activities of Non-economic personal category taken together, the overall difference of time utilized by males (i.e. 4.37%) and females (i.e. 8.77%) was two times more in this activity. The non-economic personal activities may have economic consequences but they do not meet the third person criterion, i.e. nobody else can learn for someone. That is why they are referred to a personal activity.

Therefore, women worked for eight to twelve hours a day. While these women worked to supplement their household income, their work did not carry any recognition by their men-folk. More than fifty% of the women carried this feeling that their work is not been appreciated. It is therefore quite obvious that despite the fact that women worked much more than the men their contribution is not recognized. They therefore do not enjoy high social status. However, the nature of activities performed by males and females under this category has been quite different as noted above.

**Valuation of Women's work**

The monetary valuation of unpaid work is a necessary means of turning "assumed" value into real value; that is, public policies which improve the well-being of women, children and their families. Information on the value of unpaid work offers an important analytical tool to policy makers. It is a means of re-framing basic policy questions regarding the distribution of resources, rethinking who is "deserving" of government support. Monetary valuation of unpaid work is also key to challenging the systemic undervaluation of women's paid work that is a primary factor in women's economic insecurity (Dresher 1999).

Valuing unpaid work makes it possible to compare the value of labour services in the market economy with those engaged in household production. The development of a full satellite account would allow a better understanding the economic dynamics both within and between households, and between the household and other sectors in the economy. The account would provide a database consistent with conventional economic accounts, allowing a structured analysis of the household economy within the context of conventional national measures (Hamdad 2003).

Because women's unpaid work has no monetary value attached to it, it took many years for world governments to even measure the hours dedicated to it. Therefore, the largest share of many women's activities was not taken into an account in the development of laws and policies. This omission served to further exacerbate existing inequalities. Measuring unpaid work was one of the major challenges to governments that emerged from the

UN Third World Conference on Women in Nairobi in 1985 as well as the UN Fourth World Conference on Women in Beijing in 1995. The Platform for Action that resulted from both these Conference called for National and International Statistical Organizations to measure unpaid work and reflect its value in satellite accounts to the Gross Domestic Product (GDP).

As Marilyn Waring wrote "I am talking about attributing a monetary valuation to unpaid work, productive and reproductive. This process called imputation would make [women's] work visible, influencing policies and concepts and questioning values." At the same time, the lack of remuneration for much of women's work has a direct relationship to women's economic security, visibility, and rights (George 2009).

The productive use of time may arise in both labour market and non-market setting. In the labour market, the individual exchanges skilled services for a "rent" called compensation. In a non-market setting, we can divide time into leisure and non-market work. Non-market work includes activities you would be willing to pay someone else to do for you, i.e. grocery shopping, lawn mowing, etc. All other non-market activities, such as sleeping, bathing, eating, etc., we refer to as "leisure". All activities then fall into three categories: market work, non-market work, and leisure (Stephenson 2005).

The first task will be determining the scope of productive activities to be included, and to identify these activities. The Eurostat has identified five activities, namely provide housing, nutrition, clothing, care and education, and voluntary activity. The household satellite account in UK (Holloway, Short and Tamplin 2002) has added one more activity, namely transport. Ironmonger on the other hand, has observed that unpaid household services can be divided into 8 household industries, namely cooking meals, laundry-cleaning, shopping, child care, other care (of the old and the sick), gardening, repair and maintenance and voluntary work. He argues that all these "household industries" can be linked with relevant industries in the market economy. (Ironmonger 1996).

Valuation of unpaid work in production of household own-account services requires special on time spent on unpaid work and the wage rates depending upon the type of valuation applied. The work is not included under SNA activities as it, has been evaluated by using replacement cost (generalist) method in the present study. This method values the unpaid work by the equivalent wages of paid domestic help. The wage rate varies and also depends upon the labour market situation in the concerned area. The replacement cost has been estimated with the help of following formula (Pandey 1997).

**Sex-wise Distribution Pattern of Actual and Imputed Annual Income of All Farms Size of Holdings and Income Groups Among SNA, E-SNA Activities**

Sex-wise distribution pattern of valuated annual income according to the size distribution of the sample households has been presented in Tables 4. This table clearly reveals that the percentage of valuated out of the total earned income by males on SNA activities came out 93.05, 94.71, 94.18 and 97.05% on the lowest, low, medium and high income groups respectively in urban area. The above pattern of valuated income by males indicated that under all income groups, they had put in their maximum effort on the above activity. The households falling on the high income groups category earned the highest income in all sections of the SNA activities it is due to the factors like high income groups, comparatively high level of education and more investment in manufacturing, construction and machinery etc. Table 4 clearly reveals that there is a direct relationship between the income groups and the share of income of males in SNA activities in their total income. In other words, as the income group rises their share also increased. The percentage of valuated income by females from SNA activities has been found very low of males' earnings in both study areas. Their earned income came out 8.85, 12.83, 5.81 and 94.92% on the lowest, low, medium and high income groups respectively. In urban area, this shows a mixed trend with an increase in the income level and highest in high income groups. The females of the high income groups were found to participate more in this type of paid work activity.

They were most active, however, in service sector, like the share of income of the males in total income; the share of income of females in total income in this activity is also seen to be rising with the

income groups. The explanation behind this direct relationship between the two is the same as in the case of males. Among all the income groups, this percentage of valuated income came out 96.05 for males and 39.34% for females in urban area.

The pattern of valuation of E- SNA activities according to the income groups has been presented in Tables that unlike the SNA activities income which is based on the actual earnings of males and females, income earned shown from E-SNA activities is based on the imputed earnings from different components of this category. The tables clearly reveal that the percentage of valuated earned income by males from

E-SNA activities came (i.e. 6.95, 5.29, 5.82 and 2.95%) on the lowest, low, medium and high income groups in urban area respectively. It happened because of their impoverished condition, every member including males has to do household domestic work for their daily sustenance.

On the other hand, the percentage of imputed valuated income of the females under E-SNA activities was found to vary according to size of income groups. The percentage of valuated imputed income in urban area, the highest 94.18% was in the medium income groups followed by 91.15% on lowest income groups, 87.16% on low income groups

**Table 1. Socio-Economic Characteristics of the Sample Households**

| Sr. No. | Particulars | Lowest income groups | Low income groups | Medium Income groups | High income groups | All Income groups |
|---|---|---|---|---|---|---|
| 1 | Total no. of sample households | 23 | 30 | 39 | 58 | 150 |
| 2 | Total no. of family members | 85 | 123 | 179 | 284 | 671 |
| 3 | Average size of family | 3.69 | 4.1 | 4.59 | 4.89 | 4.47 |
| 4 | Percentage of family labour force | 76.47 | 74.79 | 82.68 | 77.82 | 78.39 |
| 5 | Percentage of dependents | 25.53 | 25.21 | 17.32 | 22.18 | 21.60 |
| 6 | Literacy percentage Male | 92.5 | 91.66 | 90.52 | 94.20 | 92.49 |
|  | Female | 82.22 | 84.12 | 90.47 | 90.41 | 88.16 |
|  | Total | 87.05 | 87.80 | 90.50 | 92.25 | 90.31 |

*Source:* Field Survey.

**Table 2. Sex-wise Distribution Pattern of Annual Time on the Basis of Income Group among SNA, E-SNA and Non-Economic Activities by Urban Sample Households**
**(Hours during 2010-2011)**

| Sr. No. | Size of Income Groups | SNA | | E-SNA | | Non-Economic | | Total | |
|---|---|---|---|---|---|---|---|---|---|
|  |  | Male | Female | Male | Female | Male | Female | Male | Female |
| 1 | Lowest Income Groups | 3130.61 (88.59) | 626.52 (42.23) | 240.65 (6.81) | 686.74 (46.29) | 162.39 (4.59) | 170.22 (11.47) | 3533.65 (100.00) | 1483.48 (100.00) |
| 2 | Low Income Groups | 2880.26 (84.69) | 576.33 (39.39) | 373.5 (10.98) | 721.5 (49.33) | 147 (4.32) | 165 (11.28) | 3400.76 (100.00) | 1462.83 (100.00) |
| 3 | Medium Income Groups | 2880.11 (81.71) | 517.19 (30.29) | 514.62 (14.59) | 1041.93 (61.05) | 130.38 (3.69) | 147.69 (8.65) | 3525.11 (100.00) | 1706.81 (100.00) |
| 4 | High Income Groups | 3327.16 (82.13) | 1489.99 (52.32) | 533.02 (13.16) | 1141.29 (40.07) | 190.86 (4.71) | 216.46 (7.61) | 4051.04 (100.00) | 2847.74 (100.00) |
| 5 | All Income Groups | 3091.42 (83.44) | 921.93 (44.65) | 451.5 (12.18) | 961.8 (46.58) | 162 (4.37) | 181.2 (8.77) | 3704.92 (100.00) | 2064.93 (100.00) |

**Note:** Figures in parenthesis indicate percentages to the total.

**Table 3. Sex-wise Distribution Pattern of work at the Dis-aggregate level Among SNA, E-SNA and Non-Economic Activities by Urban Sample Households**

(Hours during 2010-2011)

| Sr. No. | Cate-gory | SNA | | | | E-SNA | | | | | Non-Economic | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Pri-mary Sector | Secon-dary Sector | Trade, Business and Service | Total (SNA) | Home Manage-ment | Family Care | Animal Care | Commu-nity Services | Total (E-SNA) | Learning and Education | Personal Care | Socials Cultural | Total (Non-Eco.) | Total (Hours) |
| 1 | Male | 0.22 (0.01) | 38.4 (1.04) | 3052.8 (82.39) | 3091.42 (83.44) | 84.00 (2.27) | 216.6 (5.85) | 1.2 (0.03) | 149.7 (4.04) | 451.5 (12.18) | 83.1 (2.24) | 56.7 (1.53) | 22.2 (0.59) | 162.0 (4.37) | 3704.92 (100.00) |
| 2 | Female | 0.33 (0.02) | - | 921.6 (44.63) | 921.93 (44.65) | 285.6 (13.83) | 506.4 (24.53) | 2.1 (0.11) | 167.7 (8.12) | 961.8 (46.57) | 79.8 (3.86) | 73.2 (3.54) | 28.2 (1.36) | 181.2 (8.77) | 2064.93 (100.00) |
| 3 | Total | 0.55 (0.01) | 38.4 (0.66) | 3974.4 (68.88) | 4013.35 (69.56) | 369.6 (6.41) | 723.0 (12.53) | 3.3 (0.06) | 317.4 (5.51) | 1413.3 (24.49) | 162.9 (2.83) | 129.9 (2.25) | 50.4 (0.87) | 343.2 (5.95) | 5769.85 (100.00) |

**Note:** Figures in Parenthesis indicates Percentage to the Total.

**Table 4. Sex-wise Distribution Pattern of Annual Actual and Imputed Income of All Income Groups Among SNA, E-SNA Activities in Urban Area**

| Sr. No | Size of Holdings | SNA | | E-SNA | | Total | |
|---|---|---|---|---|---|---|---|
| | | Male | Female | Male | Female | Male | Female |
| 1 | Lowest Income Groups | 66092.9 (93.05) | 1366.84 (8.85) | 4933.33 (6.95) | 14078.17 (91.15) | 71026.23 (100.00) | 15445.01 (100.00) |
| 2 | Low Income Groups | 136979.3 (94.71) | 2177.7 (12.83) | 7656.75 (5.29) | 14790.75 (87.16) | 144636.05 (100.00) | 16968.45 (100.00) |
| 3 | Medium Income Groups | 170671.55 (94.18) | 1317.88 (5.81) | 10549.71 (5.82) | 21359.56 (94.18) | 181221.26 (100.00) | 22677.44 (100.00) |
| 4 | High Income Groups | 359011.44 (97.05) | 43623.32 (94.92) | 10926.91 (2.95) | 23396.45 (5.08) | 369938.35 (100.00) | 45959.77 (100.00) |
| 5 | All Income Groups | 225311.55 (96.05) | 12788.77 (39.34) | 9255.75 (3.95) | 19716.9 (60.66) | 234567.3 (100.00) | 32505.67 (100.00) |

(Value in ₹ )

**Note:** (i) Non- economics personal activities are not evaluated because these are strongly personal and exchange in them is not involved.
(ii) Figure in parenthesis denotes the percentage from the total.

and 5.08% on high income groups. This clearly indicates that women have earned more than men from E-SNA activities, had they been actually paid wages for performing their tasks following under this category. Among all the income groups, this percentage came out 3.95% for males and 60.66% for females in urban area. The yawning gap of earning percentages between males and females (56.71%) in urban area clearly reflects that females carry a large burden of household production system and their role is rather under-played. This is clearly due to the particular division of labour prevailing between males and females in the present society.

The empirical results shown that most of the work under SNA activities of males and females has been recorded, documented, and valued. But very little efforts have been made to record, document and valuate the E-SNA activities by National Income Accounts. This is a reflection of the commonly made hypothesis in women studies these days that women's work remains nationally invisible, unrecognized, underplayed and un-rewarded. This is a clear indicator of what is called gender discrimination. The valuation of E-SNA activities should be taken up on a micro level pilot basis, and this should be done at local, state and national levels for arriving at better economic perspective on the subject.

Thus, it can be concluded from this paper that women allocate their time to market production, home production and reproduction. In market production, they work and earn wages; in home production they are the households managers but their work is considered as non-productive; and reproduction is also considered as part of home production and remains unrewarded. A woman in the present study is responsible for keeping the house. A woman is the mother of the race and liaison between generations. It is the women who have sustained the growth of society and molded the future of nations. In the emerging complex social scenario, women have a pivotal role to play. Women have now taken up professional roles in order to create a meaning for themselves. The traditional role of a house wife has gradually changed into working women and housewife. . Furthermore, she has to be a caring mother, raise children and be a nurse for the whole family. A strongly disproportionate share of the total work load lies on the women's shoulders. Work carried out by women is mostly unpaid and not adequately recognized.

The unpaid work performed by women in and around their homes should be valued to improve the conditions of these unpaid workers and to support policy creation and implementation. If the amount and value of unpaid work were known,

the impact of governmental policy changes such as cutbacks in health care and welfare could be better measured. In order to achieve these aims, some of the factors are responsible for this change are better education, changing socio cultural values and need for supplementary income. Education can be used as an effective tool. If education is to promote gender equality, it must make a deliberate planned and sustained effort to replace harmful traditional values by inculcating new values of gender equality and social justice. Those new values can be built on existing positive values that emphasize the importance of family, caring and nurturing.

## References

Agarwal Bina 1985. Work Participation of Rural Women in Third World- Some Data and Conceptual Biases, *Economic and Political Weekly* Bombay, **20**: 51 to 52.

Bardhan Kalpana 2007. Women's Work, Welfare and Status: Forces of Tradition and Change in India, *Economic and Political Weekly* **20**(50): 2820 Bombay.

Chattopadhyay, Arundhati 2002. "Empowerment of Women and Entrepreneurship, *Yojana* **49**: Jan., 25, 27-34.

Dutta Indira, 2000. Women Employment in Tertiary Sector: Quantity vs Quality, *The Indian Journal of Labour Economics* **43**(4): 897-905. New Delhi.

Dasgupta, Purnamita and Goldar, Bishwanath 2006. "Female Labour Supply in Rural India: An Econometric Analysis, *The Indian Journal of Labour Economics* **49**(2): 293-309. New Delhi.

Dresher Evelyn 1999. *Valuing Unpaid Work,* Women: The Economy - A Project of UNPAC, Brandon, P. 5.

George Beena, Choudhary Natasha and Tripathy Ashutosh 2009. *Women's Economic Contribution Through Their Unpaid Work: The Case of India,* Evangelical Social Action Forum and Health Bridge, Nagpur, P. 1.

Gayatri V Ayyangar and Hansa Joshi, 2010. ICT and Livelihood Opportunity for Rural Women, *Journal of Global Communication* **1**(1): 8-13.

Hamdad Malika 2003. Valuing Households' Unpaid Work in Canada, 1992 and 1998: Trends and Sources of Change, Statistics Canada Economic Conference, Canada, P. 4.

India Government of 2000. Report of the Time Use Survey, Ministry of Statistics and Programme Implementation, Central Statistical Organization, New Delhi, P. 5.

Indira Hirway, Measurments Based on Time Use Statistics, Centre for Development Alternatives, Ahmedabad, India, 2005, P. 10.

Kundu, Amit 2007. "Condition of Work and Rights of Female Domestic Workers of Kolkata", *The Indian Journal of Labour Economics* **50**(4): 853 New Delhi.

Kelkar, Govind 2009. *The Feminization of Agriculture in Asia: Implications for Women's Agency and Productivity*, www.agnet.org/library/ed/594/-cached-similar

Pandey R. N. 1997. *Women Contribution to the Economy through their Unpaid Household Work* Paper, New Delhi, P.15.

Stephenson Stanley P. 2005. *Determining the Value of Household Production as a Component of Economic Damages* NACVA Annual Conference, Philadelphia, Pa, June, P. 2.

Visaria Pravin 1999. *Level and Pattern of Female Employment 1911-1994* Published T. S. Papola, New Delhi, 23 to 51.