

**CONTRIBUTION OF WOMEN’S UNPAID
HOME-BASED WORK TO HOUSEHOLD
SAVINGS IN RURAL SIKKIM**

A Dissertation submitted

To

Sikkim University



In Partial Fulfilment of the Requirement for the

Degree of Master of Philosophy

By

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February, 2020

Date: 07.02.2020

DECLARATION

I, **Rosen Kaphlay**, hereby declare that the research work embodied in the dissertation titled "**Contribution of Women's Unpaid Home-Based Work to Household Savings in Rural Sikkim**" submitted to Sikkim University for the award of Master of Philosophy, is my original work and it has not been submitted to this or any other University for any degree.


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CERTIFICATE

This is to certify that the dissertation titled "**Contribution of Women's Unpaid Home-Based Work to Household Savings in Rural Sikkim**" submitted to the **Sikkim University** for partial fulfilment of the degree of **Master of Philosophy** in the Department of Economics, embodied the result of bonafide research work carried out by **Rosen Kaphlay** under my guidance and supervision. No part of the dissertation has been submitted for any Degree, Diploma, Association and fellowship.

All the assistance and help received during the course of investigation have been duly acknowledged by him.

I recommend that the dissertation be placed before the examiner for evaluation.

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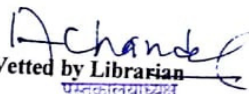
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**“Contribution of Women’s Unpaid Home-Based Work to Household Savings
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Submitted by Rosen Kaphlay under the supervision of **DR. Ruma Kundu**,
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Dedicated to

Innumerable Women

Who silently contribute to

The National Income

CHAPTER 1

POLITICAL ECONOMY OF WOMEN'S WORK

1. INTRODUCTION

The *Devi Sukta* hymn of Rigveda, a scripture of Hinduism declares women as the feminine energy which is the essence of the universe, the one who creates all matter and consciousness, the eternal and infinite, the metaphysical and empirical reality the soul of everything. The woman is celebrated as the most powerful and the empowering force in Hinduism's Devi Upanishads, and Bhagavata Purana. But today the scenario has changed - once regarded as the creative force of the universe, woman today is treated as a mere element of the labour force, usually unaccounted and unrecognized with regard to their work.

In developing countries like India where goods and services are not marketed properly due to less market integration, women's contribution in the form of productive labour remains highly invisible, unpaid and unrecognized. This may be largely attributed to the socially dominant concept of what constitutes work and how it is valued. Women throughout the world bear major responsibilities for unpaid work, which includes housework and taking care of people at home and in communities for no explicit monetary reward. Unpaid work is essential to the development of human capabilities and well-being. Through its contribution to human and social capital formation, unpaid work also plays a pivotal role in generating and sustaining economic growth (Folbre and Nelson 2000). However, due to time constraints, unpaid work limits women's ability to participate equally with men in the labour market and reduces the time available to them for self-care, human capital investment, socializing with other people, political participation and relaxation (Cagatay et al. 1995).

Despite its important implications for well-being and gender equality, unpaid work is not counted in conventional income and labour force statistics. The provision of household and care services, viewed as “the natural duty of women,” is commonly taken for granted in policy making (Beneria 2003). Feminist scholars have challenged conventional concepts of work and economic welfare, calling for unpaid work to be “counted” in economic statistics, “accounted for” in representations of the economy and “taken into account” in policy making (Elson 2000). As seen in India, two types of unpaid¹ workers are to be found. The first type consists of those self-employed women who act as mere helpers in the family business and are not subject to any¹ regular wages. The second type is made up of those who are engaged in an economically gainful work but are out of the scope of the definition of workers, thereby forming the so-called unpaid workers. Although efforts are being undertaken to count and value the efforts of these unpaid workers, it remains largely underestimated in national income statistics and labour force surveys and is therefore largely ignored.

It’s a known fact that throughout the world women devote more time to household duties compared to men (Frances and Russel, 2005) and this is the reason behind the backwardness of women in seeking employment and income, which in turns holds them back economically and therefore obstructs their economic empowerment. According to Kulshreshtha and Singh (2005), throughout the world women perform most of the domestic tasks - including both household maintenance and childcare - even when they are employed part time or full time; the mean time spent on unpaid domestic work by women is more than twice of that for men. A study based on the thirty-second and thirty-eighth rounds of the NSSO employment-unemployment

¹ In this work, the term “unpaid work” refers to the unpaid services excluded from the calculations of GDP based on the System of National Accounts (SNA) while the term “paid work” refers to all the activities included in the SNA production boundary.

survey reveals that 90 per cent of women who did not participate in the workforce revealed a need of domestic work as the primary cause for their non-participation (Kundu and Premi, 1992).

Unpaid works remain hidden in the national economy because these are activities which do not come within the general boundary of SNA. The reason behind the exclusion of the unpaid work from SNA is because of the problem of measurement of unpaid activities in monetary terms. National surveys like NSSO or Labour force statistics fail to provide any data related to unpaid domestic works (Hirway, 2011). The visibility of unpaid household work will help the government agencies to design new schemes and come up with policies in favour of household women.

The time-use survey provides a better picture of unpaid works done by women in the household surroundings as compared with the various labour force statistics. Time-use survey records both paid and unpaid work and also estimates the contribution of unpaid work to human wellbeing.

1.1. DEFINITION OF HOUSEHOLD WORK AND IMPORTANCE OF TIME-USE SURVEY

There is no official definition of household unpaid work sanctioned by the United Nations, International Labour Organisation, or the Organisation for Economic Co-operation and Development. Nonetheless, several definitions of unpaid household work or production have been proposed and are discussed below.

The production of goods and services by the households can be categorized into production done for the market purposes and production done for the non-market purpose, which is to be consumed by the members of the household itself. The economic production directly related to market comes within the boundary of the

System of National Accounts (SNA) whereas the non-market production can be further divided into three sub-categories viz. the production of goods, the production of paid domestic activities and owner-occupied housing services and the production of other services. The first two categories fall within the framework of the SNA economic production boundary and are referred to as SNA non-market production. The third category can be divided into two parts viz. 'personal activities' and 'the unpaid household activities including care activities'. Personal activities are those which are performed by the individual itself and cannot be done by anyone else. Such activities are not included in the production boundary of SNA. On the other hand, unpaid household activities including care activities are those which are performed mainly by household women but consumed by the rest of the family members of the household. They are definitely productive activities but not included in the SNA economic production boundary. (Anindita, 2016).

The goods and services produced by the family members are not sold in the market though it has a market value and these works are considered as unpaid household work. The products of unpaid work can also be consumed by people other than the household members; for example cooking for guests, buying groceries for a relative or for a friend, educating children etc. The boundary between the unpaid work and the personal care activities can be differentiated by the 'third person criterion' i.e. if a third person is paid to do the activity then is considered as work. Cooking, cleaning, childcare, laundry, walking the dog and gardening are therefore all examples of unpaid work. On the other hand, someone else cannot be paid to watch a movie, play football, read a book or sleep, as the benefits of the activity would be enjoyed by the performer, i.e. the third person, and not to the hirer (Ironmonger, 1999). Consequently, these latter activities are considered to be 'personal care or leisure'.

However, some kinds of unpaid work, e.g. playing with children, walking the dog, etc. are often enjoyable. This form of satisfaction is a benefit that cannot be transferred to another person. Still, such activities are considered to be unpaid care work. Thus the level of enjoyment of the person doing the activity cannot be used to distinguish between work and leisure (Hill, 1979).

Ironmonger in her work has mentioned that people use the word 'work' just to refer to paid work that is why when they are challenged to consider household chores they often refer them as 'non-work' performed in leisure time and they enjoy doing it. If works were to be judged according to the likes of people then, 'How many people would enjoy cleaning the toilet?' Thus, this point out clearly that all the household works are not dependent on someone likes or dislikes and this is not the criterion for distinguishing between work and leisure.

Statistics are not only pervasive in the common talk of economists but have been elevated to major tools of economic and social policy-making in every country of the world (Alec Cairncross 1988). And a need was felt among many economists to estimate the 'invisible' unpaid work for the justification of human welfare.

Many countries like Canada, Great Britain in the 1960s and Norway, Bulgaria, Finland, Hungary, Austria and others in the 1970s and 1980 (Goldschmidt Clermont and Pagnossin – Aligisakis 1996, Ironmonger 1999 and others) depended on time use surveys to estimate the time and value of unpaid work of women. Time-use surveys record how people allocate their time, typically using a 24-hour diary. It is the only survey technique available to us at present that provides comprehensive information on how individuals spend their time, on a daily or weekly basis (Gershuny, 1992).

1.2. STATEMENT OF THE RESEARCH PROBLEM

Gross Domestic Product (GDP) measures the market value of final goods and services produced in a country. How can women's unpaid contributions to household work be valued in economic terms? The limited definitions applied to 'economic' activity results in undervaluation and invisibility of unpaid women's work when measuring GDP.

The main issue in the non-recognition of unpaid work lies in the concept of economic value. In the economy, there are many non-market goods and services which have economic importance but are not valued directly. The estimation of the true value of women's unpaid work is important in the analysis of economic development. Women participate both directly and indirectly in production. Much of the work done by men would not have been accomplished without the work contribution of women to the household.

The study proposes to understand the issues around the valuation of women's unpaid work as a contribution to household savings. This is expected to open the way for the inclusion of women's work in estimates of economic activity.

1.3. OBJECTIVES OF THE STUDY

The study attempts to determine the socio-economic status of unpaid home-based work of women in rural Sikkim.

The specific objectives of the study are to

1. Understand the pattern of different categories of workers and their utilization of time in Sikkim in relation to the other NE States of India.
2. Examine the socio-economic status & the demographic profiles of women engaged in rural Sikkim.
3. Investigate the nature and categories of unpaid home-based activities performed by women, their utilization of time in different activities, and health issues, if any.
4. Estimate the monetary values of those activities performed by women in the study area.
5. Examine the determinants of women's contribution to family well-being & their decision making.

1.4. RESEARCH QUESTIONS

1. What is the contribution of household unpaid work to the status of women, as well as to the household well being in rural Sikkim?
2. What is the demographic profile of women engaged in these kinds of activities?
3. What are the attendant health issues?
4. What are the categories of unpaid home-based activities performed by women and how do they utilize their time in such activities?
5. What is the monetary value of these activities?
6. What are the factors determining women's contribution to family well-being & decision making?

1.5. RESEARCH HYPOTHESIS OF THE STUDY

1. Contribution of unpaid activities by both men and women are not lesser than the paid activities.
2. There are similar allocation and utilization of time for unpaid home-based activities by both men and women.
3. Socio-economic determinants do not play any role in women's contribution to family well being and decision making.

1.6. DATABASE AND METHODOLOGY

1.6.1 DATA COLLECTION

The study is based upon both primary and secondary sources. The secondary data and information has been collected from ILO, WEIIGO, PAHO, MOSPI, Agricultural Census of India, Socio-Economic Census of India, Census of India, DESME Sikkim, Sikkim Human Development Report 2003, Sikkim Human Development Report 2014, Statistical Handbook of Sikkim etc. Along with these various published books, handbooks, annual reports released by both State and Central governments, statistical abstracts, and reports studied by various research organizations has been also referred to in the study.

Since this research is based on the unpaid household activities Time Use Survey of India done in the year 1998-1999 in six different states of India will help in giving huge ideas like; the number of hours spent by an individual in doing household works like cooking, washing, fetching water, social works etc. TUS's data on six different states of India has also revealed that an individual spends more of their time in doing household and unpaid activities as compared with paid activities. It has also shown that women at home spend larger hours in performing household activities than men. Thus this type of relevant facts and evidence from the secondary sources like TUS will help the present research to go forward in studying the status of women in Sikkim.

However, from the secondary data, it has been difficult to get the cause and effect relation between the inequalities of men and women in Sikkim. The secondary data along will not help one to know the value of unpaid works done by household women of rural Sikkim.

So, primary data will help to identify the problems and challenges faced by the household women and will also let to know why women are working in their homes instead of working outside because maybe they are been forced to work at home by their family members or are working by their own will. So, for this purpose primary data has been conducted where both qualitative and quantitative data has been recorded from the different blocks of West Sikkim.

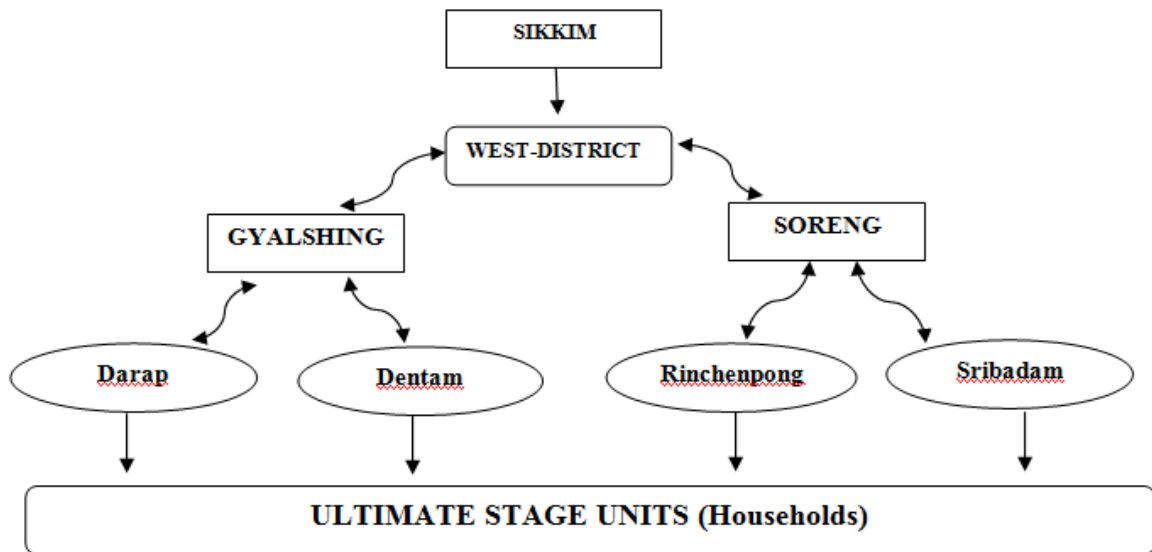
The field study has been done in the West district of Sikkim. The district is surrounded with an International border of Nepal in the east along with West-Bengal in the south. In the north and west, the district shares its border with North Sikkim and South Sikkim respectively. The district has 112 villages which are 2nd most in the state next to South Sikkim and has five Municipal wards including two towns.

In the area the district is 2nd largest in Sikkim (i.e. 7096 sq. km) whereas it comes at 3rd position in case of population. From the data analysis, it has been known that West Sikkim has the third largest number of non-workers next to East Sikkim and South Sikkim. In the West district, the people of rural areas are mainly depended on agriculture and domestic works for income generation. Whereas most of the urban workers are not engaged in agricultural works and are regular employees. In the Sub-Divisions, i.e. Gyalshing and Soreng, women in both rural and urban are engaged in domestic works like cooking for family members as well as farm labour, housekeeping, childcare, care of livestock, storing food grains, collecting grass for cattle, collecting fire woods and other related activities. In our society, these types of household works are not recognized as works since they are unpaid and are not valued in monetary terms that is why they are not even recorded in the national statistics. Hence to reduce such type of 'invisibility' of unpaid works performed by rural and urban women, our study carries out a primary survey in Gyalshing-Soreng GPU's

(Gram Panchayat Units) and Municipal Wards. The survey will record the information on how women spent their 24x6 hours of last week workings days (i.e. diary recording).

1.6.2. SAMPLING DESIGN

The study has been carried out in the four different villages across West district of Sikkim. In each village, the respondents were been chosen on the basis of multistage



sampling and random sampling. Multistage sampling refers to a sampling procedure which is carried out in different stages. The population is first divided into large groups called first-stage units. These first stage-units are again divided into smaller units called second stage units; then again this second-stage unit is further divided into third-stage units and so on. The procedure goes on until we reach the last and the ultimate stage units. In our study, Sikkim has been considered as a first stage unit and then the unit was been further divided into four districts. Then in the second stage, West district is been chosen and further in the next stage, West district is been divided into two different Sub-divisions i.e. Gyalshing and Soreng. After that, for the fourth stage, four different villages viz. Darap, Dentam, Rinchenpong and Sribadam have

been selected for the ultimate stage. Finally, after selecting the ultimate stage units, the samples from these units were collected randomly (for conducting a household survey). In our study, sample of 140 respondents from four villages of Soreng and Gyalshing sub-division was been selected. The selection of the sample as mentioned earlier is based upon the multi-stage random sampling method. From four different villages, a sample of 35 each respondent had been chosen randomly.

1.6.3. ANALYTICAL TOOLS

In order to justify the above-stated objectives both qualitative and quantitative analysis has been carried out. The following are some of the analytical tools:

- a) Descriptive statistics: Simple descriptive statistics like mean, standard deviation, diagrams, graphical analysis etc. has been used to understand the status of unpaid home-based work of women in India in general and Sikkim in particular.
- b) Chi-Square Test Statistic and ANOVA: Apart from the simple descriptive statistics, in order to examine the second, third and a part of the fifth objectives (i.e, in analysing the determinants of women's contribution in family well-being) chi-square test statistic and ANOVA technique has been employed.
- c) Replacement-cost Method: These methods will be used for calculating/computing the monetary value of unpaid home-based activates performed by women & their time use pattern and its contribution to family well-being.
- d) Logit Model: In order to examine the perceptions of women regarding their decision-making process in their families, the Logit model has been used.

CHAPTER 2

ANALYTICAL REVIEW OF LITERATURE ON VALUATION OF WOMEN'S WORK

2.1. THEORETICAL ISSUES IN HOUSEHOLD AND WORK.

Although the idea of the household unpaid work has been debated since its inception in Africa in the early 1970s, it has been continued to be used by many policymakers of different countries, labour advocates, and researchers because the reality it seeks to capture, the large share of the global workforce that remains outside the world of full time, stable, and protected job continues to be important. Therefore at present, there is renewed interest in unpaid labour markets. The informal sector being an important source of labour in the present world, it is important to link it with labour theories in Economics.

In the work of Gary Becker (1965), he has mentioned that Childcare and other housework are tiring and limit access to jobs requiring travel or odd hours. These effects of housework are captured by the model known as the Theory of Allocation of Time. He further mentions that if child care and other housework demand relatively large quantities of energy compared to leisure and other non-market uses of time by men, women with responsibilities for housework would have less energy available for the market than men would. This would reduce the hourly earnings of married women, affect their jobs and occupations, and even lower their investments in market hours as married men. Consequently, the housework responsibilities of married women may be the source of much of the difference in earnings and in job segregation between men and women.

Becker's theory of the allocation of time (Becker 1965) was the first to methodically incorporate time in economic models. "Throughout history, the amount of time spent at work has never consistently been much greater than that spent at other activities. Economic development has led to a large decline in the work week so that today time spent at work is less than a third of the total time available. Consequently, the allocation and efficiency of 'nonworking' time may now be more important to economic welfare than that of working time. Yet the attention paid by economists to the latter dwarfs any paid to the former" (Becker 1965).

Becker's household production theory assumes that the household behaves as if it maximizes a utility function defined over commodities, where these commodities are produced by the household using the inputs of market goods and time. Thus he unified Marshallian demand functions for goods with labour supply and related time use decisions within the household. By maximizing the utility function subject to the technology, the time and the income constraints, the demand for market goods, the allocation of nonmarket time, and the household labour supply are determined simultaneously. Hence Becker created the foundational modelling framework for virtually all modern household level analyses of consumption and time use, called the New Home Economics (Becker 1981).

2.2. STUDIES OF PRODUCTIVE AND RE-PRODUCTIVE WORK.

Unpaid care work was not incorporated in earlier development theories in classical economics., thus the classical economists did not differentiate 'household' and 'individual' (Gronau 1973). Economists like Jacob Mincer, Glen Cain and Marvin Kusters proposed that the classical dichotomy of 'work in the market' versus 'leisure' may serve as a good approximation of the role the husband plays in the production activities of the household. But it does a grave injustice to the wife. By calling the

whole time spent by the wife outside the market sector as 'leisure' they overlooked the production activities in which women engage at home. Those activities the women do at home can be better termed as 'work at home' rather than 'leisure'.

Marxist economists considered unpaid work which is primarily women's household work as 'reproductive work'. The notion of 'reproduction' referred to the reproduction of the workforce on a daily basis and between ages. They differentiated 'reproduction of labour' from 'production', and did not treat it as a part of the production of surplus value. Both spheres are interdependent, as the organization of production presupposes and reinforces a certain way of organizing household work. Depending on the difference in the interest of the capital and the nation, parts of the reproductive functions of the family sometimes are taken over by public facilities and at other times given back to the family. (Swiebel, 1999).

Neo-classical economists considered unpaid work as a form of consumption, which is a rational consequence of the weight put on market phenomena. The consumption activity is considered as a production process in which time and products are mixed to produce utility. Unpaid work, especially of married women, is taken into relation in the study of women labour supply, but it is still treated as a form of leisure. The early neoclassical economists proposed that the people are perfectly self-interested in the market and there is no harmony and humanity. 'They are interested only in themselves' (Folbre 1998). The theory is based on the concept of self-interest in the market and perfect humanity in the household. Thus, in neoclassical belief, all inequalities are voluntary and they suggest that people practically choose them. Women have some choices and respond to social rules (Breadwinner model). Neoclassical theories never try to ask from where those choices come from, what women want and what they think about what they want (Folbre 1998).

(Kelly- 1989): When it comes to gender and development, it has been witnessed that differential impact has been observed upon men and women with women often being sidelined from the benefits of such development projects. This analysis has brought about increased awareness among the masses with regards to the deteriorating condition of women and as such policy makers are very much keen on propagating policies and programs for women's emancipation and up gradation. However, it is important to note here that the concept of gender lies beyond pragmatic policies and its implication. It is rather embedded in the socio-economic and political set up where class and ethnicity determine social status and distribution of power, i.e. to say the society witnessed a separation of economic activity. One was characterized by unpaid domestic labour and the other was the presence of wage employment. As such women were increasingly segregated more and more towards the care economy and moreover with the advent of factory employment it made it further difficult for women to balance wage employment and domestic work. Thus, men took over even those areas of production which were under the female domain and thus they emerged as the ultimate "bread-winner", making women depend further on men. This provides us about the fact that gender plays a vital role with regards to its effects on the labour market highlighting the fact that job requiring similar educational qualification, training, responsibility, etc. pay more to men than women as it is believed that men are ought to higher wages as they have families to support whereas women's earnings are considered just as an addition to their family's gains.

(Kak- 1994): The market definition of labour as developed by advanced capitalist economies along with the existence of wage and non-wage labour has made it difficult to measure women's contribution to the nation's GDP. Along with that, society guided by patriarchal ideologies has further led to marginalization of women's work providing

them with no other work option apart from being “stay-at-home” mother and engaging oneself in household activities making them further vulnerable to exploitation both in the wage market and in the family (either by husbands or male members) thus, thereby reducing their bargaining power and keeping them at the tail end of the economic process. Tracing the history of women’s work we find that as opposed to hunting and other activities women engaged themselves mostly in agriculture and its associated work. This sex typing in the production process has become further relevant in the present day world whereby we witness that men still have an upper hand over work that requires skill and physical power whereas women are mostly segregated to low wage sector pushing them further in the unskilled labour pool. They basically end up forming reserve labour both in agriculture and industry. It is noteworthy here that women not only get pushed to the low-wage sector but they even receive lower wages as compared to their male counterparts. The underlying rationale- women are supposed to depend on the male family members for financial support. But the economy hardly takes notice of those large percentages of families solely run by women. Maybe this has a lot to do with the complex interplay of patriarchal ideologies, sex typing and socio-economic and cultural factors that our society is driven by. As such proper understanding and analysis of these factors are of utmost importance in order to determine the role and status of women in the nation’s economic activities.

(MacDonald, Phipps and Lethbridge- 2005): A lot has been written, said and analyzed about the impact of double-day work that women do on the workforce participation rate and on the labour market but hardly anything has been written and analyzed about its impact on women’s quality of life and their health. With the passage of time, however, care economy is gaining importance and increased attention is being given to its invisibility and unaccountability along with improving women’s health and quality of

life. It is of great importance to note here that like any other paid work caregiving too can pose a threat to women's health and may turn out to be stressful if time and required resources turn out to be insufficient. This burdensome, caring labour is experienced a day in and day out in each and every household across the globe. As such feminist economists are in a constant struggle to draw the policy maker's attention to burdensome unpaid caregiving sector.

According to the data provided by the TUS of 1998-1999 done in the six India states, it reveals that out of 168 hours (No. of hours in a week), on an average, male spent about 42 hours in SNA activities as compared to only about 19 hours by females. However, the situation completely changes when we consider extended SNA activities. In these activities, male spent only about 3.6 hours as compared to 34.6 hours by females. In non -SNA activities, which pertains to learning, leisure and personal care, male spent about 8 hours more as compared to females. On average, 71% of the time is spent on non -SNA activities. The SNA and extended SNA contribute for 18% and 11% respectively. The study becomes a matter of fact that the household unpaid works i.e. Non-SNA cannot be excluded from National accounts since it contributes a number of working hours against SNA activities.

Dong and An in their works on unpaid activity explain that there is a negative trade-off between the empowerment of women in relation to their household works and leisure. According to them, women tend to decrease their leisure looking at the time they devote to their household chores which set back them from empowering and exploring their right. The double burden faced by the household women leads to decreasing their wellbeing as well as free time. But according to the Burda et al, the gender gaps between man and women's paid and unpaid work in most of the countries has led in decrease because of increase in the per capita income and equal distribution

of total work between women and men has actually been achieved in a number of high-income countries.

Ironmonger, 1996 has mentioned that the aggregate value of the goods and services produced in the household sector of the economy is almost equivalent to the entire output of the market economy. It certainly is like an iceberg - a huge invisible mass of value. By ignoring the unpaid work of men and women and the use of their own household capital, concentrating exclusively on the market economy, economists remain blind to half of all economic activity. Not only do we blind ourselves, but we also obscure the view for others.

2.3 EVOLUTION OF POLICIES ON GENDER AND WORK.

NATIONAL POLICY FOR THE EMPOWERMENT OF WOMEN

National Policy for The Empowerment of Women (2001) reforms the objectives with the major following goals;

- To bring about the advancement, development and empowerment of women.
- Equal access to participation and decision making of women in the social, political and economic life of the nation
- Equal access to women to health care, quality education at all levels, carrier and vocational guidance, employment, equal remuneration, occupational and health safety etc.
- Changing societal attitudes and community practices by active participation and involvement of both man and women

RASHTRIYA MAHILA KOSH (RMK)

It was established by the Government of India in March, 1993 as an autonomous body under the Ministry of Women & Child Development. The aims and objectives of the Kosh are to undertake activities for the promotion of credit as an instrument of socio-

economic change and development through the provision of package of financial and social development services, to demonstrate and replicate participatory approaches in the organization of women's groups for effective utilization of credit resources leading to self-reliance, to promote and support experiments in the voluntary and formal sector using innovative methodologies, to promote research, study, documentation and analysis, to promote the federation and networking of women's organizations for shaping & exchange of experience and information and to develop skills in response management & social mobilization, to promote and support the expansion of entrepreneurship skills among women, and promote and support grass root level societies and organizations and other participatory structures for providing for women effective access to decision making.

BETI BACHAO, BETI PADHAO (BBBP)

It is a Government of India social campaign that aims to generate awareness and improve the efficiency of welfare services meant for girls. The scheme was launched with an initial corpus of Rs. 100 crore (US\$15 million). The Beti Bachao, Beti Padhao (BBBP) Scheme was introduced in October, 2014 to address the issue of declining child sex ratio (CSR). This is implemented through a national campaign and focused multi-sector action in 100 selected districts with low CSR, covering all States and UTs.

In August 1995, Indira Mahila Yojana, to promote awareness generation among the women from both rural and urban slum, and economic empowerment of the women. The Department of Women and Child Development impart training of women to women for their upliftment and income generating activities like knitting, cutting, tailoring and weaving etc.

2.4. RESEARCH GAP AND JUSTIFICATION FOR THE STUDY

There are limited empirical works existing in the literature on the role of unpaid household work in the northeast in general and Sikkim in particular. The NSSO and various labour force statistics for India shows the participation rate of men and women, there is no data highlighting the cause and effect relationship between the unpaid activities and paid activities of household economy. So for the welfare of people study on unpaid household work becomes very crucial. A study based on findings of unpaid work could help the government to frame new policies in favour of unpaid workers.

The invisible and unrecognized work performed by household members needs to be studied in order to have a better understanding of the labour market and the informal economy. Using techniques like Time-Use survey the present study will examine the household economy of unpaid work performed by both men and women. Different methodologies including the diary recordings and the number of hours spent on various activities like cooking, cleaning, washing, childcare, fetching water, social works etc. performed at home will be studied.

To the best of my knowledge, no such work has been carried out so far with regard to Sikkim in particular or the northeast in general. Though time use survey has been carried out in Meghalaya but does not show any information regarding Sikkim, so a study based on unpaid household work in Sikkim will help one to know about the various household work performed at high altitude region. The main focus will be in knowing the in-depth status of women in an economy of the rural areas and their invisible contributions made to their family well being. With the help of Time-Use Survey and literature, the present study will try to find out a way for estimating the

unpaid works done by both men and women and make a possible way to give a monetary value for the various household works.

The main issue of studying about the household unpaid work is to have complete knowledge about the labour market since without it one could not have a proper idea of the market. Existing literature postulates that incorporating the value of unpaid work in national income will lead to overestimation of the GDP. This is why studying about household economy becomes important.

PLAN OF THE STUDY

Chapter- I: Political Economy of women's work.

The first chapter deals with the introduction of unpaid household work, the importance of unpaid household works, statement of the problems, research questions, objectives of the study, hypotheses of the study, data and methodology.

Chapter –II: Analytical review of literature on valuation of women's work

The second chapter gives theoretical background and extensive review of literature on study related issue to throw the light on issues which had been studied and take out the research gap for further study.

Chapter- III: Regional Patterns of women work in India.

This chapter will discuss different types of household work in which women are involved across different regions in India.

Chapter- IV: Socio-Economic status of women in Sikkim

This chapter will deal with the primary studies about the socio-economic status of women in Sikkim.

Chapter-V: Economic valuation of women's work in Sikkim.

The fifth chapter will discuss time allocation between men and women's work, labour laws, minimum wages in various states and Equal remuneration act (ERA) in order to estimate the economic value of unpaid household activities.

Chapter-VI: Time Allocation patterns of women's work in Sikkim.

In this chapter time allocation patterns of women's work in Sikkim will be done with the help of time use study. This chapter will also deal with summary, policy recommendations and limit of the study.

CHAPTER 3

REGIONAL PATTERNS OF WOMEN WORK IN INDIA

3.1. HISTORY OF TIME-USE SURVEY IN INDIA

The first ever Pilot Time Use Survey in India was conducted from July 1998 to June 1999. Incidentally, this survey with its sample size of about 18600 households spread over six states of India (Haryana in the North, Madhya Pradesh in Central India, Tamil Nadu in South, Gujarat in West, Orissa in East and Meghalaya in North East India), may be the first among all developing countries. An attempt was made to present the various details of the Indian Pilot Time Use Survey as per the guidelines provided by the UN Statistics Division.

The first serious demand for conducting the Time Use Survey in the country was made by the International Seminar of Women Economists held at Bangalore in 1997 to discuss the Human and Gender Development Indices. In this Seminar, the recommendations of the Beijing Platform for Action, 1995² were also discussed. Since then, governments, civil society and the public have translated the promises of the Platform for Action into concrete changes in individual countries.

So as per the guidelines of UN Statistical Division CSO finally conducted the survey.

The main objectives of the Time-Use Survey in India were the:

- Valuation of Unpaid Work in the Country and
- Estimation of Labour Force Using Time Use Survey Data.

The analysis of the time-use survey has shown that the TUS-based Workforce Participation Rates are much higher for both men and women than that NSSO-based Workforce Participation Rates as well as the Workforce Participation Rates based on

² The main objective of the Platform of Action was about the access to freedoms and choices for each woman and girl and realising all her rights, such as to be able live free from violence, to go to school, to participate in decisions and to earn equal pay for equal work.

the 2001 Census of Population (Hirway). In fact, the study shows that the pilot-survey of TUS in India has proved the fact that TUS can provide more supplementary information on the labour force in India in order to obtain more accurate estimates and improve understanding of the workforce in India (Anindita, 2016). Some of the major findings of the TUS 1998 and 1999 of all the six states are shown in the table below:

Table 3.1. TIME SPENT ON VARIOUS ACTIVITIES (SIX STATES)

WEEKLY AVERAGE TIME (IN HOURS) SPENT ON SNA, EXTENDED SNA AND NON-SNA ACTIVITIES BY SEX AND PLACE OF RESIDENCE									
Activities	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
SNA	42.31	22.53	32.72	41.06	9.16	25.77	41.96	18.72	30.75
Extended SNA	3.74	33.95	18.40	3.44	36.44	19.26	3.65	34.63	18.69
Non – SNA	121.98	111.50	116.89	123.47	122.44	123.03	122.42	114.58	118.62
Total	168.03	167.98	168.01	167.97	168.04	168.06	168.03	167.93	168.06
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.

Source: Time Use Survey of India, conducted from July 1998 to June 1999.

Table 1 gives the average time spent on various activities assuming that all individuals participate in various activities. The advantage of this approach is that the total of average time on all activities will add to 168.

On average, males spent about 42 hours in SNA activities as compared to only about 19 hours for females. However, the situation completely changes when we consider extended SNA activities. In these activities males spent only about 3.6 hours as compared to 34.6 hours for females. Therefore, females spent about ten times more time in extended activities as compared to males. In Non-SNA activities, which pertain to learning, leisure and personal care, males spent about 8 hours more

compared to females. On average, 82% of the time is spent in non-SNA and extended SNA activities and just 18% in SNA activities.

Time Use variations for males were not found to be significantly different in rural and urban areas. However, female participation in SNA activities (5%) in an urban area was much lower as compared to 13% in rural areas. This may be due to the fact that women in rural areas generally participate in agricultural activities, which are treated as SNA activities.

The above study serves as a justification for the following work as it highlights the important issue of unpaid household work. The study from the above table reveals that on average men or women spend 82% of their weekly time in performing non-SNA activities and these activities are hidden from SNA data. Now the question is, do SNA (which provides only 18% of labour activities) which do not record 82% of weekly human activities give us a correct measure of labour force participation rate of an economy? Can we depend only on the NSSO and some other National Statistical data on labour force to know the entire labour force participation of a country? Or is that we need to have a closer look with the help of TUS to know more about the household hidden economy and the participation therein of the labour force of a nation?

With the help of the TUS study (which acts as a methodology for the present study) and primary survey, the present work will try to highlight more an in-depth manner about the unpaid labour force participation and domestic activities performed within households in Sikkim.

Table 3.2. WEEKLY AVERAGE TIME SPENT (IN HOURS) ON SELECTED HOUSEHOLD ACTIVITIES BY GENDER

Activities	Combined data of Six States	
	Male	Female
Cooking	0.52	14.93
Cleaning Household	0.21	4.55
Cleaning Utensils	0.1	3.39
Washing and Mending clothes	0.18	2.71
Shopping	0.59	0.64
Pet care	0.03	0.04
Care of children	0.32	3.16
Teaching own Children	0.16	0.19
Accompanying Children to places	0.08	0.09
Care of sick and elderly	0.04	0.19
Supervising children	0.28	0.78
Care of guests	0.03	0.04
Total hours spent	2.54	30.71

Source: TUS, 1998-1999

The above table presents the average time spent in a week on some of the important activities which generally fall in the domain of women's life. Women reported that they spent about 2.1 hours per day on cooking food and about 1.1 hours on cleaning the household. Participation of men in these activities was just nominal. Taking care of children was also mainly the women's responsibility as they spent about 3.16 hours per week on these activities as compared to only 0.32 hours by males. Women reported less than 1 hour of time spent on activities relating to shopping, pet care, teaching own children, accompanying children to places, care of sick and elderly, supervising children and looking after guests. However, if this time is calculated over a one year period it will become quite significant. The findings are very interesting because on an average in a week women spend 30.71 hours doing various household

activities whereas men spend only 2.54 hours performing various household activities. Such number of hours (i.e. 2.54 of men and 30.71 hrs) spent in unpaid activities of women are not recorded in the National accounts or labour force statistics because these activities do not come within the boundary of SNA. Thus while studying about the labour force participation rate of a country we cannot depend only on the data shown by the National Accounts because it hides a major difference in the participation rate between males and females. In order to know the actual participation rate of unpaid labour one should also rely on time use statistics or surveys.

3.2. A SNAPSHOT OF TIME-USE SURVEY IN NORTH-EAST INDIA WITH SPECIAL REFERENCE TO MEGHALAYA.

The northeastern area has been a sanctuary for some individuals, as it provides a place with different positions, religions and ethnic gatherings in different verifiable ages. The region incorporates the states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim. It imparts 40,000 km of universal fringe to Bhutan, Tibet and China on the north, Myanmar on the east and Bangladesh on the South and West. The area is wealthy in normal assets, secured with thick timberlands, has the most noteworthy precipitation in the nation, with expansive and little stream frameworks settling the land and is a place for widely varied vegetation. Set apart by a decent variety in traditions, societies, conventions and dialects, it is home to diverse social, ethnic and etymological gatherings (Ministry of Development of North Eastern Region, 2008).

Serious issues related to women and children in the North Eastern Region (NER) are the industriously high infant and maternal mortality proportions. With regard to newborn child death rates, some northeastern States like Assam (66.1) and Arunachal

Pradesh (60.7) recorded extremely high infant death rates which was much more than the all India normal of 57.0 per cent (Ministry of Health and Family Welfare, 2007). Among the northeastern states, Assam recorded the Maternal Mortality proportion at 480 against the all India normal of 254 (Special Bulletin, 2009). This naturally affects the general human advancement of these States and the nation above all. An examination of the human advancement file of some northeastern states uncovers that Arunachal Pradesh and Assam rank 29th and 26th in correlations with different states. Meghalaya positions 24th, Tripura positions 22nd and Sikkim eighteenth. Nagaland and Mizoram demonstrated moderately better positions at eleventh and seventh positions in the year 2001 (Human Development Report, 2001).

Though the status of women in North Eastern Region and the population sex ratio is relatively better than their counterparts in many States of the country yet they cannot be said to be an empowered group. Women in this region take an active part in economic activities, particularly in the hill and tribal areas, but their participation in the decision-making process is low like in many parts of the country. Even in many tribal societies social system and certain customary laws reveal gender discrimination (Samantroy). Their participation in economic activities and their double burden of work are important dimensions for understanding the overall well being of women in the region. As all women also participate in housework apart from other kinds of work, a lot of their work disappears from the statistics and therefore from public perception (Mies, 1998).

The Time Use Survey of 1998 and 1999 was done only in Meghalaya among the northeastern states. The survey reveals that women spent maximum time in extended SNA activities which constrains them from participating in the labour market activities. However, in the case of women in Meghalaya, the 'double burden' was more visible since

women had to travel over hilly terrain for collecting fuel or water for domestic use. In some parts of Jaintia Hills, West Khasi Hills and Garo Hills in Meghalaya where forests have been degraded through rat-hole mining, drinking water sources have dwindled and women had to travel around two kilometres for a pot or bucket of water (Mukhim, 2010). Time use survey provides an important contribution of women's time spent in activities like fetching water, fuel, firewood, forest produce, etc in mountainous regions. Time Use Survey in Sikkim would be an interesting one to know more about women's household work as the state has different characteristics in comparison to geographical regions, social and cultural activities.

Table 3.3 TREND OF FEMALE WORK PARTICIPATION IN THE NORTH-EASTERN REGION - COMBINED DATA FOR BOTH RURAL AND URBAN AREAS

States	1981	1991	2001	2011
Assam	N/A	21.6	20.7	22.5
Arunachal	45.6	37.5	36.5	35.4
Manipur	39.4	39.0	39.0	38.6
Meghalaya	37.4	34.9	35.1	32.7
Mizoram	37.7	43.5	47.5	36.2
Nagaland	43.2	38.0	38.1	44.7
Tripura	12.7	14.9	21.1	23.6
Sikkim	37.6	30.4	38.6	39.6
India	19.6	22.0	25.6	25.5

Source: *Source: Office of the Registrar General, India*

From the Table 3, it is evident that the trend of female work participation in the North Eastern Region continues to increase, except in case of Arunachal Pradesh; all the states are above the national level, with the exception of Assam and Tripura. However, in Tripura, the female work participation is continuously increasing from 12.7% in 1981 to 14.9% in 1991 and 21% in 2001 to 23.6% in 2011. It is a good indication of increasing female workforce participation in the state. Among all the

northeastern states Nagaland has the highest level of female workforce participation with 44.7% in 2011. In Assam, female work participation was 21.6% in 1991; and slightly decreased to 20.7% in 2001; again increasing to 22.5% in 2011. Mizoram also has a trend of decreasing female work participation. The table shows that in Mizoram the ratio was 47.5% in 2001 and it declined to 36.2% in 2011. In the case of Manipur,, it is noticed that the state has been continuously maintaining the same level of female workforce participation from 1981 to 2001, though it declined to 38.6% in 2011. Sikkim's female workforce participation rate of 2011 reveals that its participation rate of 39.6 is quite better compared to that of the other states, with the exception of Nagaland.

TABLE 3.4. DISTRICT AND SUB-DIVISION WISE DISTRIBUTION OF MAIN, MARGINAL AND NON-WORKERS OF MALE AND FEMALE OF SIKKIM.

DIST/SD	PERSONS/ M/ F	TOTAL POPULATION	MAIN WORKERS		MARGINAL WORKERS		TOTAL WORKERS (MAIN AND MARGINAL WORKERS)		NON WORKERS	
			NUMBER	PERCENTAGE	NUMBER	PERCENTAGE	NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
2	3	4	5	6	7	8	9	10	11	12
SIKKIM	Persons	610577	230397	74.77	77741	25.23	308138	50.47	302439	49.53
	M	323070	160513	82.59	33845	17.41	194358	60.16	128712	39.84
	F	287507	69884	61.42	43896	38.58	113780	39.57	173727	60.43
CHUNGTHANG	Persons	10038	5958	59.35	968	9.64	6926	69.00	3112	31.00
	M	6932	5120	73.86	499	7.2	5619	81.06	1313	18.94
	F	3106	838	26.98	469	15.10	1307	42.08	1799	57.92
MANGAN	Persons	33671	11258	33.44	5175	15.37	16433	48.80	17238	51.20
	M	17798	7557	42.46	2759	15.50	10316	57.96	7482	42.04
	F	15873	3701	23.32	2416	15.22	6117	38.54	9756	61.46
NORTH										
	Persons	43709	17216	39.39	6143	14.05	23359	53.44	20350	46.56
	M	24730	12677	51.26	3258	13.17	15935	64.44	8795	35.56
	F	18979	4539	23.92	2885	15.20	7424	39.12	11555	60.88
GYALSHING	Persons	71675	29527	41.20	9112	12.71	38639	53.91	33036	46.09
	M	37177	18360	49.39	3516	9.46	21876	58.84	15301	41.16
	F	34498	11167	32.37	5596	16.22	16763	48.59	17735	51.41
SORENG	Persons	64760	21698	33.51	10011	15.46	31709	48.96	33051	51.04
	M	33061	14894	45.05	4002	12.10	18896	57.15	14165	42.85
	F	31699	6804	21.46	6009	18.96	12813	40.42	18886	59.58

WEST	Persons	136435	51225	37.55	19123	14.02	70348	51.56	66087	48.44
	M	70238	33254	47.34	7518	10.70	40772	58.05	29466	41.95
	F	66197	17971	27.15	11605	17.53	29576	44.68	36621	55.32
NAMCHI	Persons	98895	34697	35.08	14078	14.24	48775	49.32	50120	50.68
	M	51339	23788	46.34	6256	12.19	30044	58.52	21295	41.48
	F	47556	10909	22.94	7822	16.45	18731	39.39	28825	60.61
RAVONG	Persons	47955	16201	33.78	9777	20.39	25978	54.17	21977	45.83
	M	25331	11483	45.33	3773	14.89	15256	60.23	10075	39.77
	F	22624	4718	20.85	6004	26.54	10722	47.39	11902	52.61
SOUTH	Persons	146850	50898	34.66	23855	16.24	74753	50.90	72097	49.10
	M	76670	35271	46.00	10029	13.08	45300	59.08	31370	40.92
	F	70180	15627	22.27	13826	19.70	29453	41.97	40727	58.03
GANGTOK	Persons	219450	87541	39.89	19980	9.10	107521	49.00	111929	51.00
	M	118229	63230	53.48	9369	7.92	72599	61.41	45630	38.59
	F	101221	24311	24.02	10611	10.48	34922	34.50	66299	65.50
PAKYONG	Persons	36392	15007	41.24	4816	13.23	19823	54.47	16569	45.53
	M	18795	9782	52.05	1915	10.19	11697	62.23	7098	37.77
	F	17597	5225	29.69	2901	16.49	8126	46.18	9471	53.82
RONGLI	Persons	27741	8510	30.68	3824	13.78	12334	44.46	15407	55.54
	M	14408	6299	43.72	1756	12.19	8055	55.91	6353	44.09
	F	13333	2211	16.58	2068	15.51	4279	32.09	9054	67.91
EAST	Persons	283583	111058	39.16	28620	10.09	139678	49.25	143905	50.75
	M	151432	79311	52.37	13040	8.61	92351	60.99	59081	39.01
	F	132151	31747	24.02	15580	11.79	47327	35.81	84824	64.19

Source: Census of India, 2011

The work participation rate for total workers is defined as the percentage of total workers to the total population. The above table shows the gender wise work participation of the population at the sub-divisional and district level. The total population has been divided into three categories viz. the main workers, marginal workers and the non-workers. All those who had worked for the major part of the one year i.e. more than six month or 183 days preceding the date of enumeration were recorded as main workers. Those who have worked but for a period less than six months or 183 days are termed as marginal workers. The marginal workers are again classified into two categories i.e. 3 to 6 months and less than 3 months. Persons engaged in household duties, students, dependent, retired persons, renters and beggars are grouped as non- workers. Accordingly, there are 308,138 working persons which constitutes 50.47% of the total population out of which 230,397 (37.73%) are main workers and 77,741 (12.73%) are the marginal workers in the state. The total non-working population of the state is 302,439 (49.53%).

The highest percentage of Main Workers at the district level is recorded in North District at 39.39% while in absolute numbers East District occupied the top position with 111,058 persons recorded as main workers. In the sub-divisional level, Chungthang in the North District occupied the top position with 59.35% whereas in absolute numbers it is the Gangtok sub-division occupied the top position with 87,541 persons recorded as main workers. The highest percentage of male workers is seen in the Chungthang sub-division with 73.86% while among the females it is the Gyalshing sub-division with 32.37% as main workers. The highest percentage of marginal workers is recorded in Ravong sub-division with 20.39% comprising 14.89% male and 26.54% female.

CHAPTER 4

SOCIO-ECONOMIC STATUS OF WOMEN IN SIKKIM

4.1. INTRODUCTION

In this chapter we have presented the socio-economic analysis of rural household women from four villages viz. Dentam, Darap, Rinchonpong and Sribadam of West-Sikkim selecting two different villages from each sub-divisions i.e. Gyalshing and Soreng, so that we can deeply investigate the nature of women work participation as per different household activities, family wise income distribution, occupation, different age groups, nature of family, educational level, economic status, sanitation facilities, social category, religion, years of marriage of the respondents etc. so that the socio-economic condition may differ from one region to another.

Table: 4.1. DEMOGRAPHIC PROFILE OF THE HOUSEHOLD WOMEN

	GYALSHING				SORENG				WEST-SIKKIM	
	DARAP		DENTAM		RICHENPONG		SRIBADAM		NO	%
	NO	%	NO	%	NO	%	NO	%		
SOCIAL CATEGORY										
ST	16	46	12	34	9	26	21	60	58	41
SC	5	14	3	9	13	37	2	6	23	16
OBC	11	31	18	51	10	29	8	23	47	34
GENERAL	3	9	2	6	3	9	4	11	12	9
TOTAL	35	100	35	100	35	100	35	100	140	100
RELIGION										
HINDU	17	49	15	43	21	60	22	63	75	54
BUDDHIST	11	31	15	43	14	40	10	29	50	36
CHRISTIAN	7	20	5	14	0	0	3	9	15	11
TOTAL	35	100	35	100	35	100	35	100	140	100
FAMILY TYPE										
NUCLEAR	26	74	23	66	21	60	22	63	92	66
JOINT	9	26	12	34	14	40	13	37	48	34
TOTAL	35	100	35	100	35	100	35	100	140	100

YEARS OF MARRIAGE										
0-9	7	20	6	17	8	23	8	23	29	21
10-19	14	40	12	34	10	29	10	29	46	33
20-29	12	34	14	40	14	40	11	31	51	36
30-39	2	6	3	9	2	6	6	17	13	9
40-49	0	0	0	0	1	3	0	0	1	1
TOTAL	35	100	35	100	35	100	35	100	140	100
AGE GROUPS										
21-30	10	29	9	26	9	26	8	23	36	26
31-40	13	37	11	31	11	31	12	34	47	34
41-50	9	26	4	11	10	29	10	29	33	24
51-60	3	9	11	31	5	14	5	14	24	17
TOTAL	35	100	35	100	35	100	35	100	140	100
HOUSEHOLD MEMBERS										
1-3	7	20	6	17	5	14	6	17	24	17
4-6	24	69	23	66	25	71	19	54	91	65
7-9	4	11	6	17	5	14	10	29	25	18
TOTAL	35	100	35	100	35	100	35	100	140	100

Source: Primary Survey

Abbreviations: ST=Schedule Tribe, SC= Schedule Caste, OBC= Other Backward Classes, NO=number of Household women.

The above table shows the demographic profile of the household women of rural Sikkim (viz. Sribadam, Darap, Dentam and Rinchenpong) and it includes the various parameters like Social Category (i.e. ST, SC, OBC & General), Religion, Types of Family, Years of marriage, Age Groups and the size of the family.

CASTE-WISE DISTRIBUTION

It is usually understood that caste plays an important role in determining the nature of women's work in an economy. In our study area we have obtained four broad categories of caste i.e, Schedule Tribe (ST), Schedule Caste (SC), Others backward Castes (OBC) and General.

The figures in table 4.1 depicts that out of the total 140 respondents, 58 which amounts to 41 per cent belong to Schedule Tribe, 47 i.e. 38 percent belong to Other

backward caste and both Schedule Caste and general category constitutes 16 percent and 9 percent respectively. It is also seen that out of the four villages surveyed Sribadam with 21 respondents has the highest number of Schedule tribes, Rinchenpong has 13 schedule caste which is highest among the four and Dentam with 18 has highest number of respondents from Other Backward class.

RELIGION

Religion is one of the most important determinants of socio-economic analysis. The people of Sikkim broadly follow three religions i.e. Hinduism, Buddhism and Christianity and we have collected information on the basis of these religions. From the category of religion in the above table it can be seen that 54 percent of the household women are Hindu, 36 percent are Buddhist and only 11 percent are Christian. The followers of Hinduism are more because of the fact that the majority of the followers in Sikkim are Hindu as per 2011 Census.

FAMILY TYPE

Studying about the works done by household women in the economy the types of the family in which they live plays an important role because women tends to perform more of household work more in a nuclear family than in the joint or extended family because the presence of the older generations increases the gender division of labour between spouses and decreases in nuclear families. (Shirley, 2008).

Family types have been divided into two categories i.e. Nuclear and Joint family. These types are based on certain basic terms with unique implications, to make it more clear nuclear family means a couple with or without unmarried children and a family is joint if it consist of two or more allied duo (related couples).

We can see from the above table that 66% of the total respondents live in a nuclear family and only 34% in joint family in West Sikkim. We had also surveyed the

number of household women living in the extended family and found that none of the respondents were living in it.

YEARS OF MARRIAGE

Marriage is the legalising of a relationship in general, between a man and woman to which the society gives its approval. (Nwoye,1991)

Years of marriages has been broadly classified into five categories viz. 0-9, 10-19, 20-29, 30-39 and 40-49. The women who were married since 20-29 years were among the highest respondents constituting 36 per cent, followed by 10-19 and 0-9 years of marriage with respectively 33 and 21 per cent. The least percentage of women whose years of marriage was between (40-49) is 1 percent.

AGE WISE DISTRIBUTION

Age is one of the essential features of a person associated with his significantly, physically well being and efficiency level. In the present study, it refers to the sequential age of the respondents in years during the time of survey.

Since respondents are adult having active work participation, almost all the respondents surveyed were between the age group 16 to 59. From the above table we can infer that out of the total 36 per cent i.e. 51 of the household women belong to age group 31-40, 26 per cent falls under age group 21-30, 24 per cent in 41-50 group followed by 17% under 51-60 age group.

We can thus see that more than 36% of the unpaid work at home is performed by the household women from age 31 to 40 which can be considered as the active group related to unpaid household activities.

SIZE OF THE FAMILY

The size of the family is a matter of great importance for the welfare and health of the individual, family and the society despite for the nation. (Arthur, 2005)

Like often said in English short stories unity is strength, greater the size of the family members lesser the time is spent on performing various activities. It is seen from table 4.1, under Household Member category, 65% of the total families has member between 3 to 6 persons, 18% of the household women's had family member in between 7 to 9 and only 17% of the women had families less than 3 people. This may be due to the fact that in rural areas most of the works are meant to be done by the family members.

TABLE 4.2. SOCIO-ECONOMIC PROFILE OF HH WOMEN

	GYALSHING				SORENG				WEST-SIKKIM	
	DARAP		DENTAM		RICHENPONG		SRIBADAM		NO	%
	NO	%	NO	%	NO	%	NO	%		
EDUCATION										
ILLITERATE	12	34	12	34	11	31	8	23	43	31
PRIMARY (1-5)	12	34	16	46	10	29	15	43	53	38
SECONDARY(6-12)	9	26	4	11	13	37	10	29	36	26
GRADUATE & ABOVE	2	6	3	9	1	3	2	6	8	6
TOTAL	35	100	35	100	35	100	35	100	140	100
PRIMARY OCCUPATION										
CULTIVATOR	18	51	17	49	16	46	13	37	64	46
LIVESTOCK FARMER		0	1	3	3	9	3	9	7	5
AGRI LABOUR		0		0	1	3		0	1	1
CASUAL LABOUR		0	1	3	1	3	1	3	3	2
SALARIED EMPLOYEE	13	37	13	37	9	26	15	43	50	36
PETTY BUSINESS	1	3		0	1	3	2	6	4	3
ARTISTANSHIP	1	3	2	6	1	3	1	3	5	4
OTHERS	2	6	1	3	3	9		0	6	4
TOTAL	35	100	35	100	35	100	35	100	140	100
SECONDARY OCCUPATION										
CULTIVATOR	15	43	16	46	8	23	15	43	54	39
LIVESTOCK FARMER	1	3	3	9	11	31	6	17	21	15
AGRI LABOUR		0		0		0	1	3	1	1
CASUAL LABOUR	11	31	11	31	11	31	4	11	37	26
SALARIED EMPLOYEE	2	6	2	6	3	9	3	9	10	7
PETTY BUSINESS	2	6		0	1	3	2	6	5	4
ARTISTANSHIP	1	3	1	3		0	2	6	4	3
OTHERS	3	9	2	6	1	3	2	6	8	6
TOTAL	35	100	35	100	35	100	35	100	140	100

Source: Primary Survey

LEVEL OF LITERACY

Education plays a vital role in the creation of human capital of a society and also provides a strong base for the socio-economic development of the nation by increasing the efficiency and productivity of a person (Memon, 2007).

The entire literacy level of the respondents has been categorised into Illiterate means no formal education, Primary i.e. from class (1-5), Secondary level ranging from class (6-12), Graduate and above. It is seen that 38% of the respondent household women had attended school from class 1 to 5 whereas 33% of the respondents were still illiterate which can be considered as perceptibly high. 26% have attained up to secondary level of education. And only 6% of the respondents have education ranging to graduate and above. Overall we found that most of the household women are educated i.e. 67% which is quite higher than the female literacy rate of India i.e. 65.46% but lesser as compared to the female literacy rate of Sikkim which is 75.61%. (Census, 2011).

OCCUPATION

Occupation here refers to the main source of livelihood of the respondent family. Occupation has been broadly classified into two type viz. Primary Occupation and Secondary Occupation.

a. Primary Occupation:

It is defined as the main source of income to the family of the respondents. The different types of primary occupations classified during the time of survey were Cultivator, Livestock farmer, Agriculture labour, casual labour, salaried employee, petty business, artisanship and others. From the above table 4.2 we can depict that 46% of the respondent's family depended on cultivation for livelihood purpose, 33% of the household women's primary occupation was salaried employee. Only 21% of the families were engaged in the other activities such as livestock farmer, Agri, casual labour, petty business etc. Overall we can still see that more 50% of the rural families

of west Sikkim are still dependent on agricultural works. From the data shown above, we can thus infer that the main occupation of the household women was cultivation.

b. Secondary Occupation:

It refers to the occupation of the family other than the primary source of income.

Likewise primary occupation, secondary occupation was also classified into Cultivator, Livestock farmer, Agriculture labour, Casual Labour, Salaried Employee, Petty Business, Artisanship and others. It is seen from the table above that 39% of the respondent's secondary occupation was again cultivation whereas 26% depended on casual labour and only 7% as salaried employees. The increase in the percentage of casual labour in Secondary occupation as compared with primary occupation may be due to the fact that most of the people of rural areas are mostly engaged in the occupations like MGNREGA etc.

From both Primary and secondary occupations of the household women's family we can thus conclude that still majority of the population in the rural region of West Sikkim are still dependent on primary sector for their livelihood.

TABLE 4.3 SOCIO-ECONOMIC PROFILE OF HOUSEHOLD WOMEN

	GYALSHING				SORENG				WEST-SIKKIM	
	DARAP		DENTAM		RICHENPONG		SRIBADAM		NO	%
	NO	%	NO	%	NO	%	NO	%		
LIVESTOCK ASSETS										
BOVINES	33	21	33	18	41	22	32	27	139	22
OVINES	54	35	34	19	43	23	21	18	152	24
PIGS	10	6	11	6	19	10	8	7	48	7
POULTRY	59	38	105	57	85	45	58	49	307	48
TOTAL	156	100	183	100	188	100	119	100	646	100
FARM LAND (in acres')										
≤ 2	23	66	25	71	26	74	29	83	103	73.57
2<acre≤4	5	14	6	17	6	17	2	6	19	13.57
<4	7	20	4	11	3	9	4	11	18	12.86
TOTAL	35	100	35	100	35	100	35	100	140	100
INCOME/MONTH										
0-10000	3	8.57	2.00	5.71	7.00	20.00	9.00	25.71	21.00	15.00
10000-20000	10	28.57	10.00	28.57	11.00	31.43	13.00	37.14	44.00	31.43

20000-30000	4	11.43	7.00	20.00	9.00	25.71	6.00	17.14	26.00	18.57
30000-40000	11	31.43	7.00	20.00	2.00	5.71	2.00	5.71	22.00	15.71
40000-50000	2	5.71	3.00	8.57	3.00	8.57	2.00	5.71	10.00	7.14
50000-60000	1	2.86	2.00	5.71	1.00	2.86	2.00	5.71	6.00	4.29
60000-70000	1	2.86	2.00	5.71	2.00	5.71	0.00	0.00	5.00	3.57
70000-80000	1	2.86	1.00	2.86	0.00	0.00	1.00	2.86	3.00	2.14
80000-90000	2	5.71	1.00	2.86	0.00	0.00	0.00	0.00	3.00	2.14
TOTAL	35	100	35	100	35	100	35	100	140	100

Source: Primary Survey

LIVESTOCK POSSESSIONS

In animal husbandry women have a multiple role. With regional disparities, women take care of cattle production. Their activities vary wildly from care of animals, grazing, and fodder collection, cleaning of animal sheds to processing milk and livestock products. In livestock management, indoor jobs like milking, feeding, cleaning etc. are done by women in 90% families while management of male animals and fodder production are effected by men. (FAO, United Nation)

During the primary survey it was seen that most of the domestic animal related works were done by women alone. Their shares of work as compared with their male partners are very high. On an average women in all the four villages surveyed spent more than 18 hours weekly alone in taking care of animals and fodder collection.

In the above context by livestock possessions we mean the total distribution of livestock assets in the four village viz. Darap, Dentam, Rinchenpong and Sribadam of the respondent.

The total livestock of the respondent families has been distributed among Bovines (cattle/Bufaloes/Yaks etc), Ovines (Goats/Sheep), Pigs and Poultry Chickens. The above table illustrates that in total the possession of Bovines (Cattles/Bufaloes/Yaks) in the four villages is 139, Ovines 152, pigs 7 and 307 poultry chickens. Richnepong has the highest number of Bovines i.e. 41 whereas Darap has 54 numbers of Ovines (goats and sheep) which is the maximum among the four villages. Rearing of poultry

chicken was mostly seen in Dentam with 105 numbers. Such amount of livestock population in 140 houses expresses to the fact the greater extent of significant role played by women in caring, feeding the domestic animals and poultry including its marketing and thus contribute to the primary income of the household.

LAND ASSETS HOLDING OF THE RESPONDENTS FAMILY

In country like India ownership of the land holdings affects all the economic activities in rural areas as larger the size of land holdings, wealthier the family is considered. But the fact today is that the size of the land holdings is declining due to the rapid increase in the population leading to the disintegration of land. But from the field of observation it was also seen that women spends more time doing agricultural works in the families with larger areas of land holdings.

It can be elucidated from the above data that 73.57% or 103 of the total sample population has the land holding only up to less than 2 acres, 13.57% i.e. 19 people have land between 3 to 4 acres and only 12% of the total family surveyed has more than 4 acres of land holdings. Thus we can see that there is a huge disparity in the possession of land holding among the respondents.

INCOME DISTRIBUTION OF RESPONDENTS FAMILY

Income is one of the most important factors which show the socio-economic status of a person. For simplicity purpose and to begin with the better understanding, all the 140 respondents have been classified into nine broad categories on the basis of the household income level. Income-wise distribution of respondents obviously shows the differences in the level of income of the household women. The content of table 4.3, illustrates that (15%) 21 out of 140 respondent's families earns an income ranging from 0 to 10,000 rupees per month. At the same time 31% and 19% of the surveyed population earns an income ranging from (10000-20000) and (20000-30000) rupees

per month respectively. In other words 50% of the families average income is approximately rupees 20,000 per month. The highest average month income of Rs 30357.14 of the respondent's family is to be found in Darap followed by Rs 30,294.29 in Dentam. And the lowest average monthly income was found in Sribadam with Rs 20,111. The average monthly income of Rinchenpong was also recorded as Rs. 22,740.

TABLE 4.4 LIVING CONDITIONS OF HOUSEHOLD WOMENS

	GYALSHING				SORENG				WEST-SIKKIM	
	DARAP		DENTAM		RICHENPONG		SRIBADAM		F	%
	F	%	F	%	F	%	F	%		
HOUSE TYPE										
KUTCHA	5.00	14.29	2.00	5.71	13.00	37.14	10.00	28.57	30	21.43
SEMI-PUCCA	17.00	48.57	18.00	51.43	12.00	34.29	12.00	34.29	59	42.14
PUCCA	13.00	37.14	15.00	42.86	10.00	28.57	13.00	37.14	51	36.43
TOTAL	35	100	35	100	35	100	35	100	140	100
HOUSE STATUS										
SELF-OWNED	29.00	82.86	31.00	88.57	23.00	65.71	26.00	74.29	109.00	77.86
FAMILY OWNED	4.00	11.43	3.00	8.57	8.00	22.86	8.00	22.86	23.00	16.43
RENTED	0.00	0.00	0.00	0.00	1.00	2.86	0.00	0.00	1.00	0.71
CMRHM	2	5.71	1.00	2.86	3.00	8.57	1.00	2.86	7	5
TOTAL	35	100	35	100	35	100	35	100	140	100
TOILET FACILITY										
OPEN	0	0	0	0	0	0	0	0	0	0
PUCCA	30	85.71	34.00	97.14	32.00	91.43	33.00	94.29	129.00	92.14
KUTCHA	5	14.29	1.00	2.86	3.00	8.57	2.00	5.71	11.00	7.86
TOTAL	35	100	35	100	35	100	35	100	140	100
ELECTRICITY										
YES	35	100	35	100	35	100	35	100	140	100
NO	0	0	0		0		0		0	0
TOTAL	35	100	35	100	35	100	35	100	140	100
DRINKING WATER SOURCE										
GOVERNMENT	4	11.43	2.00	5.71	3.00	8.57	4.00	11.43	13.00	9.29
PRIVATE	31	88.57	32.00	91.43	31.00	88.57	30.00	85.71	124.00	88.57
OTHER	0	0.00	1.00	2.86	1.00	2.86	1.00	2.86	3.00	2.14
TOTAL	35	100	35	100	35	100	35	100	140	100
ENERGY SOURCE										
FIREHOOD COLLECTED	17	48.57	13.00	37.14	18.00	51.43	11.00	31.43	59.00	42.14
FIREHOOD PURCHASED	2	5.71	3.00	8.57	2.00	5.71	4.00	8.57	10.00	7.88
LPG	16	45.71	19.00	54.29	15.00	42.86	20.00	57.14	70.00	50.00
TOTAL	35	100	35	100	35	100	35	100	140	100

ECONOMIC STATUS										
BPL	14	40	14.00	40.00	10.00	28.57	15.00	42.86	53.00	37.86
APL	21	60	21.00	60.00	25.00	71.43	20.00	57.14	87.00	62.14
TOTAL	35	100	35	100	35	100	35	100	140	100

Source: Primary Survey

The notion of “living conditions” has developed from a comparatively narrow economic and material definition to the present concern with human capabilities and how people use their abilities (Heiberg, 1993). The basic amenities which defines the better quality of live and standard of living are; the types of house in which one lives, house status, sanitation and drinking water facilities, availability of electricity etc. But the basic amenities in the rural and urban areas are quiet different because nowadays internet connection may be of great use in the urban areas but people in rural areas may not find much interesting as they stay busy with their rural live doing typical activities.

HOUSE TYPE

As per 1971 census, 'House' was defined 'as a building or part of a building having a separate main entrance from the road or common courtyard or stair case etc. Used or recognised as a separate unit. It may be inhabited or vacant'. (The Housing and Urban Development Corporation (HUDCO). Housing condition is one of the important factors in defining the standard of living of an individual.

According to the concept given by Housing and Urban Development Corporation (HUDCO), in India household has been categorized into ³Pucca, ⁴Semi-Pucca and ⁵Kutchha houses.

³ Pucca House: A pucca house is one, which has walls and roof made of the following material. Wall material: Burnt bricks, stones (packed with lime or cement), cement concrete, timber, ekra etc

⁴ Semi -Pucca house: A house that has fixed walls made up of pucca material but roof is made up of the material other than those used for pucca house.

⁵ Kutchha House: The walls and/or roof of which are made of material other than those mentioned above, such as un burnt bricks, bamboos, mud, grass, reeds, thatch, loosely packed stones, etc. are treated as kutchha house.

As per the table 4.4 it shows that 21.43% of the respondents live in poor condition houses, 36.43% of the people lives in the good quality of houses made of Bricks, cement etc. However 42.14% of the women live in the semi pucca houses.

The overall house type data shows that more than 78% of the household women live in good condition of houses which reflects a good standard of living as per the type of house in which they live in.

HOUSEHOLD STATUS

In the above context by household status we mean the ownership of the house in which the household women and their family lives. On the basis of ownership household property can be Self owned houses, family owned, Rented and CMRHM⁶. According to National Family Health Survey ownership of the houses can be Self occupied (it is used for one's own purpose), Inherited property (i.e. one bequeathed from parents, grandparents etc) and Let Out Property (which is rented by an individual for the purpose of residing for a period of one year).

From the primary survey it is known that 77.86% of the total 140 respondent lives in the houses owned by themselves, 16.43% resides in their inherited property and only 0.71% lives in a rented house. As per the survey 5% of the families of respondent live in houses built by the government of Sikkim under Chief Minister's Rural Housing Mission.

SANITATION AND DRINKING WATER FACILITY

As per Ministry of Drinking and Water and Sanitation (Government of India), Sikkim was awarded the first place in the category of 100% ODF (Open Defecation Free) and

⁶ CMRHM: The Chief Minister's Rural Housing Mission was launched in the year 2010 in Sikkim, under the state plan with sole target of converting the existing 6000 dwellings to a single storey, earthquake resistant Pucca house and achieving the status of a Kutcha House Free State.

IEC (Information, Education and Communication) campaign at the Swatch Bharat Puraskar, 2019.

We can infer from the above table that in case of sanitation facilities all the four villages has obtain 100% Open Defecation Free and 92.14% of the household women has access to pucca toilets in the houses they leave, while only 7.86% of the household women has the facility of Kutcha toilets.

Another basic human need for survival is the drinking water facility. In Sikkim most of the households have managed to get private sources for drinking water while in most of the urban and rural areas Public Health Engineering Dept. (Govt of Sikkim) has helped the people by providing the facility of drinking water to a large extent. While some has to still depend on the local springs, ponds, and river etc.

From the above table it can be highlighted that on an average 88.57% of the household surveyed has access to private sources for drinking water and 9.29% of the people depends on the Public Health and Engineering Department (PHE) and RMDD (Rural Management and Development Department) Government of Sikkim. The government has also helped the local bodies in rural areas by providing different water drinking facilities by building water tanks, pipe lines, small cannels etc.

Despite this still a small percentage of households (2.14 per cent) depends on jhoras (local springs) and other sources. In our analysis it may be significant to say that conventionally the women are responsible for fetching drinking water from jhoras and other sources in baskets which they carry in a Dokko⁷ on their backs. Apart from this women usually carry drinking water from close by PHE's mainly of those houses that do not have access to private taps in their homes. It also shows another crucial task done by household women.

⁷**Dokko:** it is a kind of basket made from bamboo.

ENERGY SOURCE

According to the type of fuel used in rural part of Sikkim, the above table elucidates the distribution of families in the four villages of West-Sikkim, viz. Darap, Dentam, Rinchenpong and Sribadam. Some important types of fuels used in the rural part of Sikkim are Firewood Collected from the forest, Purchased from the nearby jungles and Liquefied Petroleum Gas (LPG). The data in the above table interprets that 42.17% of the families are still dependent on the use of firewood collected from the forests for cooking purposes and 7.9% of the families depends on firewood purchased from the nearby jungles. It also highlights that 50% of the respondent family uses LPG as their main source of fuel for cooking.

Collection of firewood in a Himalayan state like Sikkim is a challenging task, unlike plain regions it is really difficult to cut and collected from different places. When surveyed many women expressed that collection of firewood is one of the most difficult housework which they face daily in their live since they need to spend more than two to three hours whenever they visit forest. It indicates that the larger extent of using firewood as fuel in most of the houses in rural Sikkim. Since women are core responsible for most of the household chores including collecting of firewood, it authenticates the major part played by women and its contribution in their family.

ECONOMIC STATUS

As per the data of released by Reserve Bank of India on 16th Sept. 2013, Sikkim is ranked at 4th position in terms of low BPL in the country. According to the latest data released by the Planning Commission of India, it reveals that in Sikkim, the proportion of people below the poverty line (BPL) came down from 30.9 per cent in 2004-05 to 8.19 per cent in 2011-12.

The above table explains the economic status of household women in rural area of West-Sikkim. It discloses that 37.86% are below poverty line and 62.14% are living in Above Poverty Line (APL). The data is according to the ration cards issued by the Government of Sikkim and who are still getting benefits from the local fair price shops.

4.2. CHI-SQUARE TEST OF INDEPENDENCE

In order to examine the intensity of unpaid household work across different per capita income, age groups, education and size of the family members the chi-square test of independence is used. As the test of independence is based on two attributes, the data are been grouped into different classes.

4.2.1 INTENSITY OF UNPAID HOUSEHOLD WORK ACROSS DIFFERENT PER CAPITA INCOME CLASSES.

Table 4.5 Observed Frequency And Expected Frequency Of The Time Spent By Household Women With Respect To Different Level of Per Capita Income And Work Intensity.

				Hours of unpaid work (Intensity of unpaid			
				High	Medium	Low	
				10<W.Hr.	6<W.hr≤10	W.Hr≤6	Row
PER CAPITA INCOME	LOW PCI	PCI ≤ 4000	OF	25	32	11	68
			EF	25.7	31.1	11.2	68.0
	MEDIUM PCI	4000 < PCI ≤ 10000	OF	23	27	5	55
			EF	20.8	25.1	9.0	55.0
	HIGH PCI	PCI < 10000	OF	5	5	7	17
			EF	6.4	7.8	2.8	17.0
Column Total			OF	53	64	23	140
			EF	53.0	64.0	23.0	140.0

Source: Primary Survey

Abbreviations': W.Hr. = Hours of Work, OF=Observed Frequency and EF=Expected frequency, PCI=Per Capita Income

The above table depicts the per capita income and the hours of time spent by women on unpaid activities. In order to capture the intensity of time spent by women on

various unpaid activities across different per capita income level, we have segregated both the PCI and Hours of Unpaid into three categories. Therefore PCI is grouped into the following ways:

- a. Low Per-Capita Income ($PCI \leq 4000$)
- b. Medium Per Capita Income ($4000 < PCI \leq 10000$)
- c. High Per Capita Income ($PCI > 10000$)

And hours of unpaid work into different intensity level viz.

- a. High Intensity ($10 < W.Hr.$)
- b. Medium Intensity ($6 < W.Hr \leq 10$)
- c. Low Intensity ($W.Hr \leq 6$)

In the above table by ⁸observed frequency we mean the number of women who works for certain hours with given per capita income. As we have mentioned earlier that our interest here is to find whether the time spent by women varies along different per capita income or not. Whereas ⁹expected frequency is the probability count ratio or in other words it shows the number of probability of women who may work for certain hours with given per capita income.

Here our null hypothesis is;

H₀: PCI is independent of the hours of unpaid household work.

And alternate hypothesis is;

H₁= PCI and hours of unpaid household work are dependent on each other.

From table 4.5, it is seen that as we move from low PCI group to medium and high PCI group the number of women who spent more than 10 hours on unpaid activities

⁸ Observed Frequency: are the counts made from experimenting data or measurement done after retrieving the original data.

⁹ Expected Frequency: are the counts calculated using probability theory before the original data are known.

at first is more and as PCI increases, the number of women performing longer hours of work decreases.

In other words as PCI increases, the number of women in the high intensity group decreases showing a negative relationship between PCI and hours of time spent by women on unpaid activities.

TABLE 4.6 RESULTS OF CHI-SQUARE TEST FOR EVALUATING THE INTENSITY OF UNPAID WORK ACROSS DIFFERENT PCI CLASSES.

Chi-Square Tests			
	Value	DF	P Value (2-sided)
Pearson Chi-Square	9.865	4	.043
N of Valid Cases	140		

Source: Authors' Calculation

In table 4.6 we have performed Chi-Square test and have found that the calculated chi-square value is 9.865 which is greater against chi-square tabulated value 9.488 , at 5% level of significance; hence it falls in the rejection area. From the table it is also known that since P-Value is less than 0.05, we may reject our null hypothesis that PCI is independent of the hours spent on unpaid household activities. Thus it has clearly established a relationship between intensity of work and time spent on unpaid activities.

To be more specific in our result we again calculated the value of pearson correlation coefficient i.e. -0.137, and it indicates that there is an inverse relationship between PCI and intensity of work on unpaid activities.

It is quite a natural phenomenon because as woman who earns more tends to devote lesser time in performing household activities.

TABLE 4.7 RESULTS OF CHI-SQUARE TEST FOR EVALUATING THE INTENSITY OF UNPAID WORK ACROSS DIFFERENT LEVEL OF EDUCATION.

Chi-Square Tests			
	Value	DF	P-Value
Pearson Chi-Square	9.947	4	.041
N of Valid Cases	140		

Source: Authors Calculation

It can be highlighted from above table that the calculated value of chi-square (9.95) is more than the tabulated or critical value of chi-square (9.48) at 5% level of significance; hence it falls in the rejection region. Moreover it is also confirmed from its P-value (0.041). This implies that different education level among household women has significant impact on intensity of unpaid household work.

TABLE 4.8 RESULTS OF CHI-SQUARE TEST FOR EVALUATING THE INTENSITY OF UNPAID WORK ACROSS SIZE OF THE FAMILY MEMBERS.

Chi-Square Tests			
	Value	DF	P-Value (2-sided)
Pearson Chi-Square	10.244	4	.037
N of Valid Cases	140		

Source: Authors' Calculation

Similarly, the above table depicts that the calculated value of chi-square (10.244) is more than the tabulated or critical value of chi-square (9.48) at 5% level of significance, Moreover it is also confirmed from its P-value (0.037). This implies that different family size has significant impact on intensity of unpaid household work.

TABLE 4.9 RESULTS OF CHI-SQUARE TEST FOR EVALUATING THE INTENSITY OF UNPAID WORK ACROSS DIFFERENT AGE GROUPS.

Chi-Square Tests			
	Value	DF	P-Value
Pearson Chi-Square	12.751 ^a	6	.047
N of Valid Cases	140		

Source: Authors' Calculation

Again, from table 4.9 it can be cited that the calculated value of chi-square (12.751) is more than the tabulated or critical value of chi-square (12.592) at 5% level of significance; hence it falls in the rejection region. Moreover it is also confirmed from its P-value (0.047). This implies that different age groups have significant impact on intensity of unpaid household work.

Hence Chi-Square test shows that there is a significant relation between per capita income (PCI), different age groups, educational level and size of the family members and their time spent on unpaid activities.

4.3. ANALYSIS OF VARIANCE (ANOVA)

To test the statistical significance between the group means in the intensity of unpaid household activities of women, ANOVA has been estimated and the results are given in the following table:

Table 4.10 ANOVA – BETWEEN PCI AND UNPAID WORK OF WOMEN

SOURCE	SS	DF	MS	F	VALUE
Between groups	9.42	11	0.857	1.92	0.0418
Within groups	56.99	128	0.445		
Total	66.43	139	0.477		

Source: Authors' Calculation

As can be seen from table 4.10 that the value of the F-Cal is (1.92), and its P-Value is ≤ 0.05 , which is statistically significant. It indicates that there is significant difference in group means towards time spent on unpaid household activities. In other words the average time spent by women on unpaid household activities seems to differ with respect to different levels of PCI.

Table 4.11 ANOVA – BETWEEN SOCIAL CATEGORY AND UNPAID WORK OF WOMEN

SOURCE	SS	DF	MS	F	P-VALUE
Between	51.488	3	17.162	2.9	0.0371
Within groups	803.6827	136	5.9		
Total	855.171	139	6.152		

Source: Authors' Calculation

Similarly from the table we can see that the value of the F-Cal is (2.9), and its P-Value is ≤ 0.05 , which is statistically significant. It indicates that there is significant difference in group means of different social category towards time spent on unpaid household activities. In other words the average time spent by women on unpaid household activities seems to differ with respect to different Social Categories.

CHAPTER 5

ECONOMIC VALUATION OF WOMEN'S WORK IN SIKKIM

5.1. MONETARY VALUATION OF UNPAID WORKS OF THE RESPONDENTS.

It is an evident that women from rural area spend much more longer hours than men but unfortunately their works are not been accounted in any national statistical records since these are unpaid works and have no any monetary value. In this study, we have tried to calculate monetary valuation of the different household activities done by women. In order to do the economic valuation we have used the replacement cost approach as per the existing literature but doing so was not an easy task. The replacement cost approach considers the third person criterion i.e. it reflects what it may cost to pay a worker while performing various household chores (OECD, 2011). The formula assigned by Danhoa Harpreet and Uppal Anupama (2014), for the estimation of unpaid household activities for replacement cost method is:

$$\begin{aligned} \text{Value of unpaid work} &= (\text{average time spent for activity}) * (\text{wage rate}) * (\text{no. of} \\ &\quad \text{persons}) \\ &= (\text{total time spent for activity}) * (\text{wage rate per unit of time}). \end{aligned}$$

Where, (*) =multiply.

We have used the replacement cost approach to calculate the monetary value of unpaid household activities of 140 rural women of West-Sikkim for six days excluding Sunday since the day does not follow the regular working hours due to national holiday.

The government of Sikkim has not formulated any laws to estimate minimum wages of household worker; hence in the absence of it we have used the All-India average wage/salary earnings. The survey report has given the average wage/salary earnings according to their education level per day received by regular workers wage/salaried employees of division 97 according to NIC classification, 2004, as mentioned in 68th round Employment-Unemployment Survey of NSSO.

TABLE 5.1 MONETARY VALUES OF UNPAID HOUSEHOLD ACTIVITIES DONE BY 140 WOMEN INTERVIEWERS.

Educational Qualification	Average wage per day (9 hours)	Average working hours per week	Total no. of women	Average wage per hour	Value of unpaid activities in rupees
Not literate	89.31	59.08	45	9.92	26382.174
Literate and up to primary	104.27	58	54	11.58	36285.96
Secondary & higher secondary	179.98	53.1	33	19.99	35042.106
Graduate and above	377.85	60.53	8	41.98	20330.00933
Total			140		118040.2493
Per capita value					843.1446381

Source: Authors' Calculation and NSSO, 68th Round Employment-Unemployment Survey

Using the same technique we have calculated the average working hours of household working women and arranged the respondents according to the level of their education. Considering average working hour as 9 we converted the daily wages to wages per hour and then used the replacement cost approach's technique to estimate

the monetary value of unpaid household activities of women in 6 different days taking into consideration the earlier week. Then we divided the total estimated monetary value by the number of respondents in order to compute the per capita value of unpaid workers.

The study reveals that, the total value generated by 140 women respondents of our sample in the six working days of the previous week is estimated to be Rs. 118040/-. And the per capita value of unpaid work of women is Rs 843. In other words the contribution of women from unpaid home-based work to their family saving is Rs. 118040 weekly.

5.2. WOMEN PARTICIPATION IN DECISION MAKING PROCESS.

Women in Sikkim are much concerned about their family, children etc as compared to the central part of India and when it comes about decision making in the family they are quite quick in participation. Our study has tried to find out the major variables which allow a woman to take decision in her household. The study has used logistic regression model to study the impact of various factors on the decision making process of a woman. The independent variables which we have taken into consideration are educational status of respondents, their age, family size in which they live, an estimated income, farm size of the family in which they live and the total livestock assets. Since the dependent variable is dichotomous in nature, we have assigned a value 0 to the respondents who are allowed to take part in decision making process and 1 if they are not allowed to participate. The logistic equation is given as:

$$Li = \ln(Pi/1-Pi) = \beta_1 + \beta_2edu + \beta_3age + \beta_4familysize + \beta_5estimatedincome + \beta_6farmsize + \beta_7hhla + u_i$$

Where,

Pi=Probability of making decision,

1-Pi=absence of decision making

Edu=educational level of the respondents

Age=Age of the respondents

Familysize= total family members of the respondents

Estimatedincome= proxy income of the household women

Farmize= total farmland of the family in which they live

Hhla=household's total livestock assets.

Table 5.2. LOGIT ESTIMATION FOR DETERMINING THE FACTORS OF WOMEN'S HOUSEHOLD DECISION MAKING

Decision	Coef.	Z	P-value
Edu	0.3055316*	2.38	0.017
Age	0.0439202*	2	0.045
Familysize	-0.0084324	-0.06	0.949
Estimatedincome	-0.0000331	-0.08	0.938
farm_size	0.028323	0.21	0.837
Hhla	0.0338797	0.67	0.506
_cons	-1.256356	-1.04	0.3
Log likelihood	-68.837035		
Number of obs	140	Pseudo R²	0.07
Count R²	0.7857	No. of correct predictions	110

Source: Authors' Calculation based on field survey, 2019. (*)= significant at 5% level.

Results of the Logit model has been shown in the above table and can be illustrated that the coefficient of education is found to be statistically significant at 5% level showing a positive relationship between educational level of women and her decision making in the family. The significance of the variable suggested that as women becomes more and highly educated than the chance of women decision making power increases in the family.

Similarly, the age of the women is found to be significant at 5% level of significance with a positive relation between age and decision making power. The significance of this variable imply that when women gets older by a year, her maturity level increases as a result her chance of taking decision in the family increases by 0.43 percent.

The number of correct prediction is found to be 110 and count R^2 is 0.78. The implication is that in 78% of the cases the finding of marginal probabilities supports the actual decision making of women. The significant value of count R^2 indicates that the considered socio-economic variables adequately influence the decision making power of household women.

CHAPTER 6

TIME ALLOCATION PATTERNS OF WOMEN'S WORK IN SIKKIM

6.1. TIME-USE SURVEY ON UNPAID HOME-BASED WORKS

Time-use surveys records how people allocate their time, typically using a 24-hour diary. It is the only survey technique available to us at present that provides comprehensive information on how individuals spend their time, on a daily or weekly basis (Gershuny, 1992).

“Time is a direct source of utility- a fact very easily understood but ignored in economics. Rarely has it been put in any utility function by itself” (Rajivan). Within time use study, work is normally defined as an activity other people do for us or what is labeled as a third person criterion. It implies the fact that work is undertaken for its results as well as for the intrinsic value attached to it rather than for work itself. As a result both paid and unpaid work can involve certain benefits and pleasure and leisure which may be instrumental in shaping one's life (Blekesaune). Normally, time use studies do not provide hardcore results (with regards to various activities that are performed) whether these activities are instrumental or are done just for one's own sake as it is difficult to study the impact and effects of these activities on one's quality of life, However, whatever the implied problem be with regards to the use of time use, it is considered as the most reliable method to use basically to study and measure the value of women's unpaid work in terms of time committed to particular activities. It is categorized as SNA (System of National Accounts), Extended- SNA and Non- SNA activities. SNA activities consists of primary production activities like animal care, water collection, fuel collection, fodder collection, kitchen gardening,

market sales/purchasing, land preparation, crop husbandry and post harvest activities. Extended- SNA activities include household washing, cooking, care-giving to children, elders, community works, preparing breakfast, pet care, teaching own children and care of guest. And Non- SNA activities include activities related to leisure time, social conversation, reading, watching TV or using mobile phones, listening to music, sleep and eating/drinking. All individuals who contribute to the nation's GDP conceptually form the total workforce in any economy. However, a difference exists between the GDP generated in the economy and the total workforce that constitute to its generations (Hirway). Tracing the history of labour statistics in India we witness that continuous efforts were made to protect the workforce and although so far considerable success has been achieved with regards to WPR, particularly that of women workers is underestimated. This may be largely attributed to the seasonal, intermittent and uncertain nature of agriculture and along with that household and economic work frequently gets mixed making it difficult to demarcate between the two on a conceptual level (Hirway). This underestimation of women's work and their contribution may be largely due to the prevailing socio-cultural values whereby women who perform domestic household work is assigned the highest prestige whereas women who perform manual (paid) work are frequently held in lower esteem in the society.

We conducted the time-use survey in the four different villages of West-Sikkim viz. Darap, Dentam, Rinchenpong and Sribadam in order to know how men and women spent their 24 hours daily and multiplied the daily hours by six in order to know the weekly average time spent by the household women and men. We excluded Sunday from our study since it does not follow the normal working pattern due to holiday and

on this day most of the family members stays at home itself and works are been shared among them.

TABLE: 6.1. WEEKLY AVERAGE TIME SPENT (IN HOURS) OF FOUR VILLAGES ON SELECTED HOUSEHOLD ACTIVITIES BY GENDER

ACTIVITIES		Male	Female
SNA	ANIMAL CARE	4.68	9.26
	WATER COLLECTION	0.68	1.70
	FUEL COLLECTION	1.25	3.28
	FODDER COLLECTION	1.68	3.50
	KITCHEN GARDENING	0.08	3.92
	MARKET SALES/PURCHASING	2.15	3.26
	LAND PREPERATION	1.98	5.60
	CROP HUSBANDRY	0.72	1.98
	POST-HARVEST ACTIVITIES	5.25	2.51
ESNA	HOUSEHOLD WASHING	0.35	2.80
	HOUSEHOLD COOKING	0.65	13.05
	CARE-GIVING TO CHILDREN	0.58	4.48
	CARE-GIVING TO ELDERLY	0.08	0.83
	COMMUNITY WORKS	0.68	1.13
	PREPARING BREAKFAST	0.21	1.16
	PET CARE	0.05	0.44
	TEACHING OWN CHILDREN	0.35	0.09
	CARE OF GUESTS	0.02	0.09
NON-SNA	LEISURE TIME	6.78	4.73
	SOCIAL CONVERSATION	2.56	1.94
	READING	0.25	0.19
	WATCHING TV/USING MOBILE	5.89	7.33
	LISTENING TO MUSIC	0.88	0.28
	SLEEP	52.68	48.13
	EATING/DRINKING	3.25	3.59
Total	93.73	125.22	

Source: Primary Survey done by author.

The total unpaid activities of rural men and women are categorized into three categories viz. SNA, Extended-SNA and Non-SNA (the subcategories of works are

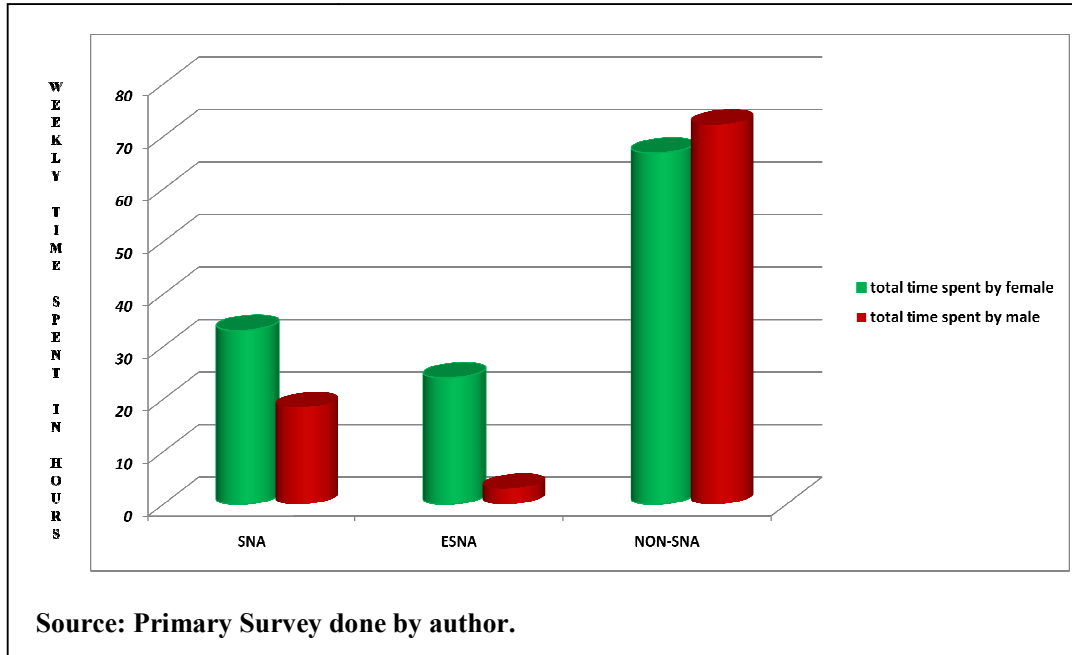
explained in the above context). From the above table it can be interpreted that as compared with men, women spend more number of hours in performing household activities. In the SNA category we can see that male contribution of working hours is much less even though they are male related works. On an average women spent around 9.26 hours on animal care, 1.70 hours on water collection, 3.28 hours on fuel collection, 3.5 hours on fodder collection, 5.6 hours on land preparation and so on weekly where as men spent only 4.68 hours on caring animals, 0.68 hours on water collection, 1.25 hours on fuel collection, 1.68 hours on fodder collection, 1.98 hours on land preparation etc. Thus it can be seen that the time spent by men is very nominal as compared with that of women in regards to SNA activities.

In case of Extended-SNA activities women reported that they spent about 13.05 hour per week on cooking food, 2.80 hour on washing and cleaning utensils. Even in these activities time spent by men is very much less. Care given to children was also mainly the women's responsibility as they spent about 4.48 hours per week on these activities as compared to only 0.58 hours by males. While taking about the Non-SNA activities on an average, women spent less number of hours on leisure time, reading, social conversation, sleeping, listening to music etc as compared to their male counterparts.

Hence it can be noted that on an average women spent 125.22 hours weekly on performing SNA, Extended SNA and Non- SNA activities whereas men had spent only 93.73 hours for the same activities.

To be more specific and clear the graphical representation of the average time spent by men and women for SNA, Extended SNA and Non-SNA in shown below:

Figure 6.1 Graphical Analysis of Weekly Time Spent on SNA, ESNA and NON-SNA activities by Male and Female of Four Villages.



Thus there is a huge inequality in the proportion of time spent by both men and women on unpaid activities because on an average women spent 19.39% of their total time on performing unpaid activities whereas men spent only 2.97% of their total time. Hence this large amount of time spent by women on unpaid activities restricts them from doing paid works.

CHAPTER 7

CONCLUSIONS AND POLICY SUGGESTIONS

CONCLUSIVE OBSERVATIONS

Our dissertation provides an overall analysis of the unpaid household works performed by the rural women in Sikkim. Over the years, there has been alternation in the dating among gender in inequality and time use. Avoidance of unpaid works by men and non-stop contribution in the direction of it by women has somewhat turned out to be tenuous. This change may be visible as a result of adjustments in time use among men and women. Although, women preserve to do extra unpaid works and less paid work than men, men are now observed to contribute greater time to center unpaid work. This changing relationship between gender courting and work may be seen as a gradual evolution in our social installation nonetheless, women nevertheless at massive are sufferers of societal norms and values whereby confusion nonetheless exist about how department of time is to be made on the unpaid works that women and men do. Women still form a huge percent of low wage labour force with little or no blessings and prestige whereas, maximum of the paid works available are male oriented imparting little scope for women to discover the process opportunities. Still today, effective contribution of women in the form of family maintenance, rearing and bearing the next generation, fulfilling the needs of the family and tons of other women's work remains highly invisible and unaccounted. As such inadequate interest is paid to women's work and monetary price. Still war persists over time spent on household unpaid works and toddler care versus time spent on paid work and even today, majority of girls people are determined to be devoted best to unremunerated unpaid works. It is also located out that the unpaid invisible work that women do has a tendency to get too little attention and consequently its social and economic value too remains unreasonably low, highlighting the reality that the rewards and situations associated with this invisible unpaid unpaid works is very plenty unsatisfactory. Rewards in a sense is largely supposed in the shape of time to be had for enjoyment and personal care while maximum of the men were discovered to spend their amusement time

taking naps and looking T.V. women however have been found to spend their entertainment time ironing, sewing, tutoring their children and in other similar activities that might seem to bypass for unpaid works and despite the fact that they indulged their little spare time watching T.V. Many girls had been to take their unpaid works in front of the T.V. Set like cutting and peeling vegetables.

Some of the major conclusive findings of the research are:

- The study has found that there is a wide disparity in the nature and characteristics of the allocation of time of men and women for SNA, ESNA and Non-SNA activities.
- It has also found that women having lower level of education devote more time in unpaid activities as compared with the higher level of education.
- Irrespective of men and women the amount of time spent on unpaid activities is more than that of market activities.
- Chi-Square test shows that there is a significant relation between:
PCI and time spent on unpaid activities
Educational level and time spent on unpaid activities
Age-Group and time spent on unpaid activities
Family size and time spent on unpaid activities
- Pearson's Correlation reveals that a family with higher PCI may be able to spend less time on home based work.
- There is a huge inequality in the proportion of time spent by both men and women on unpaid activities because on an average women spent 19.39% of their total time on performing unpaid activities whereas men spent only 2.97% of their total time. Hence this large amount of time spent by women on unpaid activities restricts them from doing paid works.

- ANOVA reveals that there is a significant difference between different social categories and PCI with respect to the average time spent on unpaid household activities by women.
- Socio-economic variables like education and age group has a positive relationship with women power of making decision in the family. Logit regression proves this.
- Our study reveals that, total value generated by 140 women respondents of our sample in the six working days of the previous week is estimated to be Rs. 118040/-. And the per capita value of unpaid work of women is Rs 843/-. In other words the contribution of women from unpaid home-based work to their family saving is Rs. 118040 weekly.

POLICY RECOMMENDATIONS

It is an evident from the literature that until date no any technique has been designed that can estimate the monetary value of the unpaid household work that women perform daily. Besides, in the process of capturing paid employment, women's work basically unpaid domestic labour, informal income generating activities, family farm work, subsistence production are largely eliminated from the national income accounting statistics. Over the past decades researchers from several fields have tried to document and analyze the reasons behind such unaccountability of women's unpaid work and its exclusion from the national income accounting statistics. As such, besides enlarging market definition of work, certain other recommendations are put forward. The first is the opportunity cost theory. It is counted as the amount that women could earn if they are engaged in the paid labour market rather than doing unpaid invisible work. Another recommendation could be by replacing the values of unpaid work with paid work. Here the valuation can be made on the basis of how

much cost can be incurred while replacing unpaid work with paid work based on current hourly wages for comparable work. The other method that can be adopted is the output method. Here the household is considered to be a producer and the production is to be counted with respect to the pieces of work done, like number of clothes washed, number of rooms cleaned and then price it. Besides, valuation can also be made by focusing in the work done rather than focusing on the persons doing it, i.e. to say by evaluating effort, working conditions and terms of skill. But a major problem arises with this theory and that is evaluating care giving, like what is the value of love, what is the value of hug. It is to be noted here that one way or the other all these methods have their own merits and demerits. No method can provide us with an accurate answer and give us exact economic values of the unpaid invisible tasks that women perform day in and day out.

Our work is an addition to the literature informal labour statistics which will help in understanding the labour force participation of women more genuinely. With the help of this research the government can frame various rules and regulations, different laws in the favor of rural women in uplifting the socio and economic condition of women from remote areas.

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