

Gender Disparities in Rural works in Mid Hill Agrarian Economy of Himachal Pradesh - An Empirical Investigation

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I. INTRODUCTION

The participation of women in productive or economic labour activities has always been visibly lower than that of men, whether in rural or urban areas. Women in India suffer from a range of discriminatory measures that limit their access to schooling, health care, appreciation and respect for their hard and useful work. As is typical throughout the world, women in India bear the major burden of work in and around the home. In addition to this, in this still largely rural country, women perform much unpaid work in the fields which fails to be reflected in national accounting. The invisibility of much of women's work, in the home and the fields, may contribute to their low status and the ill treatment from which they commonly suffer.

In the view of gender researchers, also reiterated by the national commission on labour, the economic contributions made by women as a labour category grossly underestimated. Undervaluation of women's work also manifests itself in persisting wage-disparity, differential access and control over resources, lack of equivalence in infrastructural support, and above all through disparity in gender work burdens. An economic work, by definition, is usually measured as the contribution of an individual worker but the division of labour that supports it arises from interrelated decisions made within a mutually dependent labour group, such as a society or family. The household thus functions as the basic social unit that allocates labour time towards production and consumption, and household production thus involves the collective generation of goods and services by the household, combining capital assets such as land, tools and implements and skills held or controlled by certain members with the unpaid labour contributed directly and indirectly by other members to support the production process. Women are involved in various forms of economic and non-economic activities. The varieties of gender-based activities that support household production indirectly thus include preparation of meals, cleaning and maintenance of homes, care for children and elderly etc. Unlike rural households, those located in urban areas can also purchase the labour time to be expended on such support activities from the labour market, maximizing their time-utility by choosing combinations of market-produced and home-produced goods and services, subject to availability and time constraints. The theory of the allocation of time by the family (Becker 1965) proves meaningful to this context, usually the household members are seen to make three major decisions about where to allocate their time, i.e. to wage work, household production or to leisure. Despite the crucial responsibilities they undertake within the household, women are generally pushed into subordinate roles as agents of production, based on the perception that the labour time devoted by them to domestic work is not directly productive. In rural households, the economic contributions made by women are fairly visible, since they often assume earning roles besides functioning as home-makers. Even then, control over the resulting family income is generally handed over to their partners because they lack autonomy. When unpaid women's work supports home-based production, the earning accrue from it are ultimately surrogated by the males. Further, in situations where such male earnings do not provide adequate support the rural household, women are compelled to secure subsistence for their family by selling their wage labour below its reproductive cost or by undertaking arduous work that lengthens their working day, sacrificing rest and leisure.

The narrow economic definitions of work pose several conceptual difficulties in dealing with the household division of labour. Since economic work means economically productive participation through activities that lead to the direct production of goods and services for consumption or exchange, activities undertaken by women within the household, such as cooking, laundering, childcare and livestock rearing which do not result directly in the production of visible economic goods and services. These do not fall within the purview of this definition, and are therefore treated as optional or subsidiary activities for the purpose of national accounts. One may make allegation that this fallacy arises from treating women's work as a purely individual function, disregarding the interdependence of work within the family group. The contribution of women to unremunerated and therefore immeasurable work within the household is productive in the sense that it extends the opportunities for other members of the family to participate directly in productive and

remunerated work. The economic logic makes clear that until the cost of labour contributions by the rural family unit is deducted from the production costs of the ultimate good or service, the unpaid contributions of women to household activity and subsistence agriculture as family helpers will remain unquantifiable. This is the labour of rural women embodied in home-based production remains invisible. Further, women also participate directly in the rural production process as cultivators or farm labour, or as petty entrepreneurs and traders and their labour contribution to such economic activities extends beyond the unpaid contributions which they already make in the form of household work, and remains always undervalued. In fact, besides land-based activities like ploughing, tilling and irrigation which are mainly male functions in most agricultural societies, most other cultivation related work such as sowing and weeding and transplantation as well as harvesting, drying and storage is generally shared by both men and women. Paddy cultivation and rubber & tea plantation in India also provide typical examples of female dominated agro activity. Despite minor variations across agro ecological regions, farming systems and socio-cultural zones, rural women play critical but crucial role to all primary producing activities such as crop and livestock production, post harvest activities, agro forestry, fisheries etc. Which are confirmed by studies in India and many other developing countries.

Himachal Pradesh is a hilly state. The cropping pattern, the agricultural income and the consumption pattern of the farmers, therefore, vary with the altitude. On the basis of altitude, the cultivated land in the State has been categorized into four zones, viz., (a) low hill zone ranging between 1200 to 3000 feet, (b) mid-hill zone from 3000 to 5000 feet, (c) high-hill zone from 5000 to 14000 feet and (d) cold zone which is almost covered by snow for more than 6 months with altitude of 14000 ft. and above. In the valley area of low hill zone the main agricultural products are food grains, i.e. wheat, maize, paddy, pulses, sugarcane, oilseeds, etc. Whereas, due to suitable topography and climatic conditions the high-hill and mid-hill zone of the State is widely known for horticultural product, viz., apple, seed, potatoes, apricot, grapes, ginger and dry fruits etc. The agricultural activities in the mid-hill zone bear similarity in some areas to that of low-hill zone while in other areas to high hill zone. The agricultural activities in the cold-zone, due to the coverage of snow in most of the time in a year, bears similarity to some areas to that of high hill zone.

The status of Himachali women in society has been viewed differently with regard to her role in different places of the society. The main occupation of the women in the State is agriculture including horticulture. The women labour accounts for 61 per cent of the total farm work, their participation being greater in activities like animal husbandry than in crop production. But there is some tendency towards sexual division of labour in Himachal Pradesh. The hill women work hard with the men folk and robust. Himachal, like every other society, has latent reserves in its human resources especially in women, who generally work for much longer hours than men. Despite a relatively higher contribution of women in the development of economy, they lack an equal access to opportunities and other resources. Gender equality can be a potent force for initiating acceleration of development and placing it on a sustainable path.

Objectives

The present study has been taken up for detailed empirical verification with a view to achieve the following objectives:

1. To study the socio-economic conditions of the sample households among the different size of holdings; and
2. To quantify the allocation of labour time by rural households between different forms of activities among the sample households.

Sampling

The present empirical investigation is confined to Mandi District of Himachal Pradesh. For the present empirical investigation this district has been selected purposely because this district has got peculiar vagaries not only in terms of terrain but also in terms of socio-economic demographic structure. This district has a mixture of most progressive and most backward areas of Himachal Pradesh. Administratively the Mandi district has been divided into ten development blocks, viz. Mandi Sadar, Rewalsar, Drang, Chauntra, Chachyot, Siraj, Dharampur, Gopalpur, Sunder Nagar and Karsog. At the first stage all the development blocks have been arranged in an ascending order on the basis of their respective population and two blocks have been selected randomly. At the second stage all the panchayats in each selected development block have been arranged in an ascending order on the basis of their respective population and two panchayats have been selected randomly from each selected block. Thus total four panchayats have been selected randomly in the study area. At the third stage a list of villages have been obtained from the office of each selected panchayats and all the villages in each selected panchayats have been arranged in an ascending order on the basis of their respective population and three villages have been selected randomly from each selected panchayat of each selected development block. Thus total twelve (12) villages have been selected randomly in the study area. At the fourth stage a list of the households have been prepared in each of the selected village and all the households in all the selected

villages have been arranged in an ascending order on the basis of their respective size of holdings viz. marginal (0 – 1 hectare), small (1 – 2 hectare), medium (2- 4 hectare) and large size of holdings (4 hectare and above) and about 300 households proportion to the total number of household falling in each category have been selected randomly for collecting the required first hand information, out of which 150 households falls in the category of the marginal, 90 on the small, 45 on the medium and remaining 15 households on the category of large size of holdings groups.

Data Collection

The required primary data have been collected with the help of pre-tested scheduled from 300 sample households and the information pertaining to age, sex, family composition, occupation (main and subsidiary), educational status, value of household assets (i.e. both productive and household durables) have been recorded as existed at the time of survey. The schedule had both open ended and close ended questions. In addition to interview schedules, non-participant observation methods have also been followed in order to understand the way in which they share the household responsibilities with other members of the family.

II. RESULT AND DISCUSSION

Socio-economic Characteristics of the Sample Households:

Out of the total 300 sample households, 150 households fall in the category of marginal farmers having land less than one hectare, 90 households fall in the category of small farmers, having 1-2 hectares of land, 45 households are the medium size of holdings (2-4 hectares) and remaining 15 households fall in the category of large farmers (4 hectare and above). Out of the total population of 1941, 983 are males and 958 are females. The average size of family is the highest on the medium size of holdings as compared to the other class of holdings, followed by large, marginal and small size of holdings group respectively. The average size of family among all the sample household came out 6.47, which is larger as compared with average size of family at the state level as a whole, i.e. 4.97 (According to Census, 2011). The percentage of labour force has been worked out 72.35, 72.30, 73.65 and 60.40 per cent on the marginal, small, medium and large size of holdings group respectively. Among all the land holdings together this percentage came out 72.49. The percentage of dependants is the highest on the large size of holdings group (i.e. 39.60 per cent) as compared to the other class of holdings, followed by marginal size of holdings group (i.e. 27.65 per cent) and medium size of holdings group (i.e. 26.35 per cent). The lowest percentage of dependants is on the small size of holdings group (i.e. 25.70 per cent). Among all the holding groups together the percentage of dependants came out 27.51. The literacy level of sample households has been shows that illiteracy was more among women (i.e. 18.27 per cent) as compared to men (i.e. 12.72 per cent). In the sample as a whole 84.54 per cent of the population is literate, out of which 87.28 per cent are males and 81.73 per cent are females. The literacy percentage is the highest on the large size of holdings i.e. 88.11 per cent and it decreases to 86.52, 84.99 and 83.24 per cent on the medium, small and marginal size of holdings respectively. About 16.07 per cent women had education up to primary level and about 24.84 per cent could go up to Matric level only. At post graduation level the percentage is very low (i.e. 4.27 per cent). This shows that education level of women in the study area is not so satisfactory yet. On the other hand about 32.15 per cent male had education up to Matric level and 10.98 per cent up to primary level. The percentage of higher education among females is very low because females often fear that education will make a girl less attentive to household chores and less willing to obey both her parents and household. This is why they discontinue their education at an earlier stage as compared to men. Therefore, they have virtually no choice than to accept life as it is made up of combination of household and agricultural tasks. The per household total area operated has been worked out 0.57 hectares on the marginal, 1.78 hectares on the small, 2.67 hectares on the medium and 7.41 hectares on the large size class of holdings. Among all the sample households, together per household total area operated has been worked out 1.59 hectares. (Appendix-I).

The present paper represents the gender dimensions of work in rural Himachal worked out by time used methodology and analysis for capturing the working roles of women and making their dual contributions to economic and subsidiary household activities fairly visible. It has been divided into four sections: Section 1 deals with the pattern of weekly time commitments to different categories among the sample households. Average labour time commitments by rural workers to SNA, E-SNA and Non-SNA activities: disaggregated gender analysis has been presented in section 2. Section 3 explains pattern of average labour time commitments by rural workers to SNA, E-SNA and Non-SNA activities: analysis of variational patterns. Whereas, section 4 witnessed the gender Division of labour among rural households: shared and autonomous activities.

1. Pattern of Weekly Time Commitments to Different Categories among the Sample Households

The pattern of time allocation by rural men and women among sample households across 26 SNA, E-SNA and Non-SNA activities which they perform regularly during the survey has been presented in Table no 1. Divergent work patterns were observed between women and men. Women's work spread over a much larger

number of activities, compared to men’s work which remained focused towards a few activities. Women’s time commitments also showed greater variability across rural households in comparison to the time allocations to a few primary activities made by men where variability is less, except in a few widow-headed households; households where the spouses were not present with family due to their services outside the station or for any other reason, and women bore the brunt of the work.

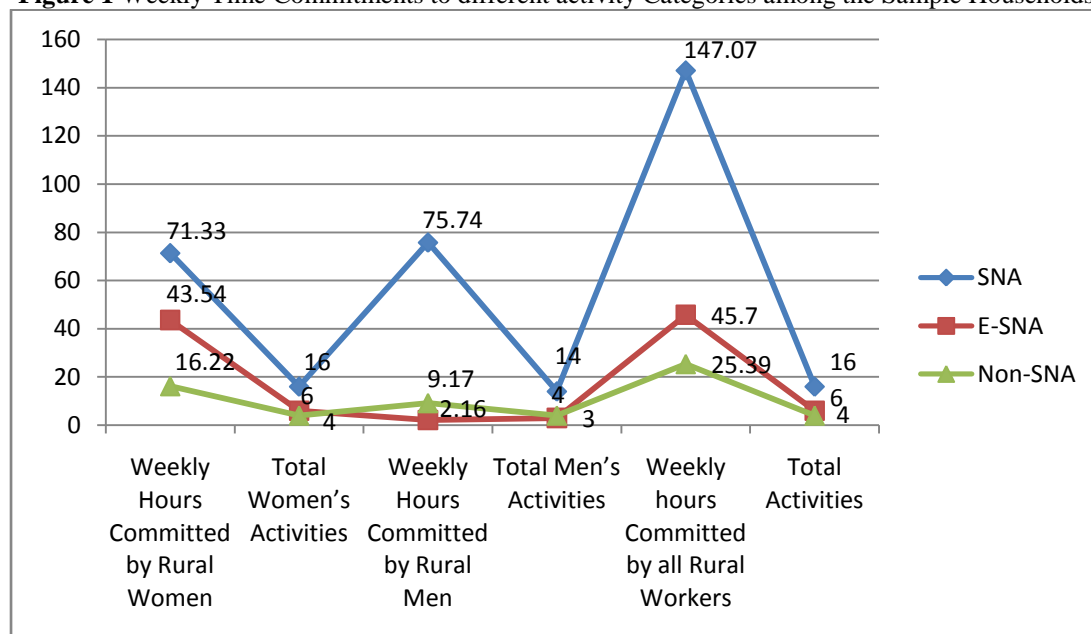
Table 1 Pattern of Weekly Time Commitments to Different Activity Categories among the Sample Households

Activity Type	Weekly Hours Committed by Rural Women	Total Women’s Activities	Weekly Hours Committed by Rural Men	Total Men’s Activities	Weekly hours Committed by all Rural Workers	Total Activities
SNA	71.33	16	75.74	14	147.07	16
E-SNA	43.54	06	2.16	03	45.7	06
Non-SNA	16.22	04	9.17	04	25.39	04

Another broad pattern followed more or less consistently indicates that women’s labour time commitments tend to be lower in rural households where the work involvement of men folk was lower, and increased as men’s time allocations increase. However, since rural women participated in more diverse activities as compared to men, such changes in time allocations tend to be interdependent rather than independent and the activity choices of rural men thus influence time allocation by women.

Weekly time commitments to different activity categories among sample households has been presented in Table 1, which shows collective time allocations by all rural workers to different activity categories over the standard timeframe of a week, sharp divergence existed in gender-work profiles among the sample households. The tasking patterns implied within the Table show that rural women workers participated in many more activities than male workers. Women participated in total 26 categories of activities, 16 of which are activities in the SNA category, 6 in the E-SNA category and 4 in the Non-SNA category.

Figure 1 Weekly Time Commitments to different activity Categories among the Sample Households



Male workers participated only in 21 categories activities on the whole, as compared to women in 26 activities, 14 of which are activities in the SNA category, 3 in the E-SNA category and 4 in the Non-SNA category. Work participation by rural woman was thus, far more diversified than that of rural men. But, much more time (i.e. 75.74 hours per week) on the whole has been committed by male workers to the 12 SNA activities they are principally involved in, as compared to women’s 14 SNA activities (i.e. 71.33 hours per week). On the other hand, men committed average 2.16 hours weekly to the 3 E-SNA activities as compared to women’s participation in 6 E-SNA activities average 43.54 hours weekly, which is 21 time more than that of men. Under Non-SNA activities women committed average 16.22 hours weekly to the 4 activities as compared

to men's participation average 9.17 hours weekly in 3 activities. The Table 1 and Figure I clearly revealed the gender disparities in rural works among the sample households.

2. Average Labour Time Commitments by Rural Workers to SNA, E-SNA and Non-SNA Activities: Disaggregated Gender Analysis

Aggregate time commitments to different SNA, E-SNA and Non-SNA activities by men and women from the sample households over the standard time frame of a week has been averaged out in Table 2 to obtain daily time allocations by the members of sample households to each of these activities. However, it may also be noted that not all activities were undertaken simultaneously by all the member of families in the course of a day. Several activities are of a seasonal nature while many others of a skilled or specialized nature were undertaken by fewer rural households. Table 2 makes clear that women workers participated in 17 activities i.e. crop husbandry, post harvest activities, kitchen gardening, livestock tending, livestock grazing, making dung cakes, water and fuel collection, making handicrafts, cooking and cleaning, childcare, care of elderly, community work, education and tutoring, household maintenance, self learning and education, personal care and social conservation. They also shared responsibilities for all other SNA, E-SNA and Non-SNA activities. They also worked independently in some SNA activities i.e. making dung cakes and making handicrafts for home consumption as well as for the purpose of sale. All women workers spent weekly 2763.60 hours in making dung cakes and 1776.60 hours in making handicrafts. The most important in terms of daily time commitments by women included livestock rearing in which, women workers spent weekly 5724.60 hours as compared to men's 491.40 hours, in water and fuel collection 740.25 hours as compared to men's 98.28 hours.

Table 2 Pattern of Average Labour Time Commitments by Rural Workers to SNA, E-SNA & Non-SNA Activities: Disaggregated Gender Analysis

Activity Type	Activities	Weekly Hours Spent by All Women	Weekly Hours Spent by All Men	Daily Hours Expended by All Women	Daily Hours Expended by All Men	Daily Hours Expended Per Women	Daily Hours Expended Per Men
SNA-1	Land Preparation	25168.50	30368.52	3595.50	4338.36	5.10	6.18
SNA-2	Crop Husbandry	1480.50	982.80	211.50	140.40	0.30	0.20
SNA-3	Post Harvest Activities	1677.90	835.38	239.70	119.34	0.34	0.17
SNA-4	Crop Protection	493.50	1228.50	70.50	175.50	0.10	0.25
SNA-5	Kitchen Gardening	888.30	343.98	126.90	49.14	0.18	0.07
SNA-6	Market Sales & Purchase	444.15	731.10	63.45	105.30	0.09	0.15
SNA-7	Live Stock Tending	5724.60	491.40	817.80	70.20	1.16	0.10
SNA-8	Livestock Grazing	1233.75	687.96	176.25	98.28	0.25	0.14
SNA-9	Making Dung cakes	2763.60	-	394.80	-	0.56	-
SNA-10	Poultry Rearing	838.95	933.66	119.85	133.38	0.17	0.19
SNA-11	Water & Fuel Collection	740.25	98.28	105.75	14.04	0.15	0.02
SNA-12	Processing & Storage	592.20	835.38	84.60	119.38	0.12	0.17
SNA-13	Dwelling Construction	987.00	6879.60	141.00	982.80	0.20	1.40
SNA-14	Well/Irrigation Construction	246.75	1375.92	35.25	196.56	0.05	0.28
SNA-15	Common Infrastructure	5922.00	7371.00	846.00	1053.00	1.20	1.50

SNA-16	Making Handicrafts	1776.60	-	253.80	-	0.36	-
XNA-1	Cooking & Cleaning	20727.00	-	2961.00	-	4.20	-
XNA-2	Childcare	4441.50	-	634.50	-	0.90	-
XNA-3	Care of Elderly	1381.80	147.42	197.40	21.06	0.28	0.03
XNA-4	Community Work	1727.25	982.80	246.75	140.40	0.35	0.20
XNA-5	Education & Tutoring	1431.15	245.70	204.45	35.10	0.29	0.05
XNA-6	Household Maintenance	987.00	-	141.00	-	0.20	-
NNA-1	Self Learning & Education	2961.00	2457.00	423.00	351.00	0.60	0.50
NNA-2	Personal Care	2566.20	98.28	366.60	14.04	0.52	0.02
NNA-3	Social Conversation	2457.00	294.84	351.00	42.12	0.60	0.06
NNA-4	Rest & Relaxation	3454.50	3685.50	493.50	526.50	0.70	0.75

Further, the Table revealed that in other sharing SNA activities women spent more time than men in many activities, which witnessed large disparities in rural works between women and men. Approximately, women spent more than double time than men in post harvest activities i.e. 1677.90 hours weekly as compared to men's 835.38 hours and in kitchen gardening i.e. 888.30 hours as compared to men's 343.98 hours weekly. Women also spent more time than men in crop husbandry i.e. 1480.50 hours weekly as compared to men's i.e. 982.80 hours and, 1233.75 hours weekly in livestock grazing as compared to 687.96 hours weekly by men. On the other hand, men contributed their more time than women in land preparation, crop protection, market sales and purchase, poultry rearing, processing and storage, dwelling and construction, well/irrigation construction and common infrastructure. Men contributed 6879.92 hours weekly in dwelling construction as compared to women's 987.00 hours weekly and 1375.92 hours weekly in well/irrigation construction as compared to 246.75 hours weekly by women. SNA activities which were independently carried out by women might be termed autonomous, since they were accomplished irrespective of whether they were shared by men, and without being affected by the participation of women workers in other activities. These independent activities were largely of an income saving or supplementing nature. Although, the autonomous participation of women in these diversified SNA activities limits the time they could freely committed to other economic forms of wage-work, women's time commitments to these were of an essential nature and important to the basic survival needs of sample households. Following Easter Boserup's analysis, these SNA activities in which rural women participate autonomously could conceivably be classified as market oriented home production rather than as domestic work, since they facilitate subsistence production by rural households. Skill based activities autonomously undertaken by women, such as the production of craftwork, also directly embody the value of women's work which enhances the intrinsic valuation of the finished products, whether made for home consumption or market sale. When these are sold, such products directly supplement the incomes of the rural households. Men's autonomous SNA activities, in contrast, are polarized around a more limited set of field activities, construction skills and market trade. However, since all these are core economic activities in rural regions, they place men in a dominant economic role. This also effectively reinforces the proposition encountered elsewhere in the literature that rural women's work remains invisible and is largely unpaid, although women participate and contribute substantially to the rural production process, for instance in surveys on women in agriculture and productive work undertaken in northern and western India, where rural women were seen to do a vast amount of work necessary for supplementary income generation through the growing of vegetables, food preservation etc.

The table further depicts that within the extended SNA group of activities, household cooking and cleaning, childcare and care of elderly, are activities almost undertaken by women and the contribution of male in these activities remain either nil or only participatory, along with household maintenance. Table clearly revealed that women worker contribute autonomously 20727.00 hours per week for cooking and cleaning and 987.00 hours per week in household maintenance, whereas, the contribution of men remained nil in childcare and women undertook this activity independently contributing 4441.50 hours per week. The contribution of men in education and tutoring and care of elderly seems participatory only as compared to women it was quiet low. Although, men devoted more time in community work than in other E-SNA activities but it was near about to 50 per cent of women's contribution in this particular activity. In the Non-SNA group, rural women reported

approximately almost the same amount of rest and free leisure time as rural men. However, women also allocated a certain amount of time everyday to leisure-time activities such as personal care and social interaction, which most men did not report separately. Aggregate time allocations by rural women were thus weighted towards home production activities in the SNA group, as well as to E-SNA and Non-SNA activities. However, a point that is significant to this context women's domestic E-SNA activities have to be undertaken without fail everyday on accounting basis, unlike several SNA activities of men which are periodic or seasonal. Thus, the diversity of women's work and the variety of autonomous tasks they were required to perform each day invariably limit the time they could afford to spend in rest and relaxation throughout the year.

Analysis of cumulative time allocations by rural sample households in the study area has been equally revealing. Although the aggregate numbers of hours per week expended on SNA activities by rural women were slightly short of similar time commitment by rural men, the time cumulatively devoted to SNA and E-SNA activities by women greatly surpassed the aggregate time committed to these activities by men. This was primarily due to the extra time that women committed to E-SNA activities, within which the largest single unit was the performance of daily domestic chores like cooking and cleaning. Further, rural women thus shouldered the heaviest part of the work burden within the home, whereas, the rural men engaged primarily in large-scale field activities that require the periodic application of physical strength, e.g. earthwork, construction and land preparation, crop husbandry and crop protection etc. However, other field activities that require sustained effort and endurance, fetching fuel and water, livestock and poultry rearing, post harvest activities like threshing, winnowing etc., were assigned mainly to women. Other activities that involve direct economic transactions, e.g. market sales and purchases of primary agricultural and other produce, were largely monopolized by men folk in rural households. So, the contribution of time to SNA, E-SNA and Non-SNA activities by rural workers witnessed the great gender disparities in rural works and requires the proper valuation of women's unpaid and unrecognized work.

3. Sex-wise Analysis of Variational Patterns of Average Labour time Commitments by Rural Workers to SNA, Extended SNA and Non- SNA Activities

For measuring the variational patterns of average labour time commitments by rural workers to SNA, E-SNA and Non-SNA activities Standard Deviation and Coefficient of Variation have been used.

It may be noted that many agricultural activities in the SNA group are of a seasonal character do not require steady applications of labour throughout the year. The variations in labour application are attributed due to differences in land and asset holdings between rural households, and thus between their resulting patterns of work. Table 3 takes an account of such heterogeneities among sample households, also shows that rural workers of sample households made heterogeneous time commitments to different activities as a result. Standard deviation (SD) in the Table indicated the absolute extent of variability in labour time commitment among the rural households participated in each activity. While Coefficient of Variation (C.V) indicated the relative extent of variability in labour time commitments among different activities.

Thus, it is clear from the Table that in SNA activities in the construction group involving the construction of dwellings, irrigation systems and common infrastructure activities, time allocations were highly variable between the participating households because of the higher value of standard deviations for these activities, i.e., 19.27, 18.80 and 29.14 respectively. The variational coefficients were appeared to be very high relative to average standard weekly time, indicating that only a few rural households participated in this activity. In contrast, the value of standard deviations for the time contributed by rural households to SNA activities like land preparation (i.e. 38.67) and the making of dung cakes for fuel (i.e. 2.37) and in E-SNA activities like cooking and cleaning (i.e. 6.15) and childcare (i.e. 5.61) were relatively low relative to mean time commitments, i.e., 78.96, 3.92, 29.40 and 6.30 respectively. This indicated that relatively similar time allocations to such activities were made by most of the rural households. Such variations between rural households in time commitments to different activities were mainly based on factors such as differences in household sizes, land holdings, income levels and skills etc. The labour hours expended by each family thus vary on the basis of the activities they choose to undertake. Households with smaller land holdings thus would commit less time to working their own lands. On the other hand, landless households who survived primarily on wage-labour committed more time towards field work on other people's lands. Similarly, the amount of time expended on livestock-related activities would depend on the livestock holdings of the individual households. Rural households with no livestock allocated no time towards such activities. On the other hand, household time expended on domestic E-SNA activities which were performed entirely by women would depend on the size of the household and on the amount of labour available from girl child (ren) and other women in the family, since these activities are otherwise essential to every household.

Attention is thus called immediately to the intrinsic variability between the patterns of labour time commitment to different activities by rural men and women, which clearly point towards the gender divisions of labour that existed within rural households. Weekly time commitments by men showed relatively high

variability due to the higher value of standard deviations across rural households for SNA activities like kitchen gardening (i.e. 3.67), occasional construction of wells and irrigation systems (i.e. 8.34),

Table 3 Sex-Wise Analysis of Variational Patterns of Average Labour Time Commitments by Rural Workers to SNA, E-SNA & Non-SNA Activities

Activity Type	Activities	Weekly Mean Hours Spent by Rural Families	SD	CV	Weekly Mean Hours Spent by Rural Women	SD	CV	Weekly Mean Hours Spent by Rural Men	SD	CV
SNA-1	Land Preparation	78.96	38.67	48.97	35.70	23.75	66.52	43.26	25.80	56.93
SNA-2	Crop Husbandry	4.89	4.21	86.09	2.09	1.57	75.11	1.40	1.17	176.42
SNA-3	Post Harvest Activities	4.01	3.44	85.78	2.38	1.56	65.54	1.63	2.95	180.98
SNA-4	Crop Protection	2.45	2.82	115.10	0.70	1.67	238.57	1.75	2.89	165.14
SNA-5	Kitchen Gardening	1.75	2.58	147.42	1.26	2.63	208.73	0.49	3.67	748.97
SNA-6	Market Sales & Purchase	2.81	3.95	140.56	1.76	6.56	372.72	1.05	2.09	199.04
SNA-7	Live Stock Tending	13.25	11.03	83.24	8.12	7.36	90.64	5.13	6.84	133.33
SNA-8	Livestock Grazing	2.73	3.12	114.28	1.75	3.83	218.85	0.98	1.88	191.83
SNA-9	Making Dung cakes	3.92	2.37	60.45	3.92	2.37	60.45	-	-	-
SNA-10	Poultry Rearing	2.52	4.75	188.49	1.19	3.63	305.04	1.33	3.78	284.21
SNA-11	Water & Fuel Collection	1.19	2.13	178.99	1.05	2.74	260.95	0.14	1.41	1007.14
SNA-12	Processing & Storage	2.03	4.37	215.27	0.84	2.24	266.66	1.19	3.58	300.84
SNA-13	Dwelling Construction	11.20	19.27	172.05	1.40	8.15	582.14	9.80	22.84	233.06
SNA-14	Well/Irrigation Construction	8.04	18.80	233.83	6.08	7.27	119.57	1.96	8.34	425.51
SNA-15	Common Infrastructure	18.90	29.14	154.17	8.40	16.30	194.04	10.50	20.63	196.47
SNA-16	Making Handicrafts	2.52	6.11	242.46	2.52	6.11	242.46	-	-	-
XNA-1	Cooking & Cleaning	29.40	6.15	20.91	29.40	6.15	20.91	-	-	-
XNA-2	Childcare	6.30	5.61	89.04	6.30	5.61	89.04	-	-	-
XNA-3	Care of Elderly	2.17	5.03	231.79	1.96	6.82	347.95	0.21	1.44	685.71
XNA-4	Community Work	3.85	10.23	265.71	2.45	4.63	188.97	1.40	6.72	480.00
XNA-5	Education & Tutoring	2.38	4.54	194.01	2.03	4.36	214.77	0.35	1.90	542.85
XNA-6	Household Maintenance	1.40	1.84	131.42	1.40	1.84	131.42	-	-	-
NNA-1	Self Learning & Education	7.70	3.63	47.14	4.20	3.33	79.28	3.50	3.20	91.42
NNA-2	Personal Care	6.11	3.18	52.04	3.64	1.28	35.16	2.47	1.09	44.12
NNA-3	Social	3.90	2.75	70.51	3.48	2.77	79.59	0.42	0.77	183.3

	Conversation									3
NNA-4	Rest & Relaxation	10.15	6.27	61.77	4.90	2.62	53.46	5.25	4.22	99.42

voluntary E-SNA activities like community work (i.e. 6.72) and the education and tutoring of children (i.e. 1.90). In the case of dwelling construction and the building of common village infrastructure, male time commitments became less divergent. Table further shows that the value of standard deviations for male time allocations to land preparation came out (i.e. 25.80), crop husbandry (i.e. 1.17), self learning and education (i.e. 3.20), personal care (i.e. 1.09) and towards rest and leisure time activities (i.e. 4.22) and were consistent across all households because the value of standard deviations for these activities was less than their weekly mean time contribution, i.e., 43.26, 1.40, 3.50, 2.47 and 5.25 respectively. The value of standard deviations for rural women’s time commitments for SNA activities like crop protection (i.e. 1.67), kitchen gardening (i.e. 2.63), market sales and purchase (i.e. 6.56), livestock grazing (i.e. 3.83), poultry rearing (i.e. 3.63), water and fuel collection(i.e. 2.74), processing and storage (i.e. 2.24), dwelling construction (i.e. 8.15), well/irrigation construction (i.e. 7.27), common infrastructure (i.e. 16.30), making handicrafts (i.e. 6.11), care of elderly (i.e. 6.82), community work (i.e. 4.63), education and tutoring (i.e. 4.36) and household maintenance (i.e. 1.84) was higher than weekly mean hours spent by rural women, i.e., 0.70, 1.26, 1.76, 1.75, 1.19, 1.05, 0.84, 1.40, 6.08, 8.40, 2.52, 1.96, 2.45, 2.03 and 1.40, respectively. This made clear the women’s less consistency between the pattern of labour time commitment to these activities. For rural women, time commitments were much more variable than those of rural men for SNA activities like crop protection and dwelling construction and also showed appreciable divergence in the case of SNA activities like livestock grazing, processing and storage. However, the tending of livestock and the making of dung cake for fuel essentially remained a women’s task and most rural women consistently committed time towards these livestock-related activities. Time expended by rural women on the making of craftwork items which requires requisite skills showed relatively high variability. However, their time commitments to market sales and purchases associated with these handicraft items showed even higher variability, implying that rural women who participated in artisanal work to supplement their household incomes were largely unable to control the earnings that arise from such artisanal sales. Although time commitments by women to post-harvest activities showed high consistency across rural households, the time they expand on other processing and storage activities were much more variable, in keeping with economic differences in the status of agricultural households and their capacity to produce. Among the E-SNA activities, women’s time commitments were more variable in the case of activities like care of the elderly (i.e. 6.82), community work (i.e. 4.63), education and tutoring (i.e. 4.36) and household maintenance (i.e. 1.84), which depend largely on the age structure of the household. For core domestic activities like cooking and cleaning and childcare and activities in the Non-SNA group, time allocations by women were highly consistent across all households, because the value of the standard deviations of these activities were less than the value of their weekly mean time commitments to these activities.

Further the value of Coefficient of variation (C.V) makes the activity-wise comparison between the variational pattern of time commitments by rural men and women. In all groups of activities due to the higher value of C.V for men than women shows more variability between the time commitments to these activities and vice-versa. The time commitment of male to the crop husbandry (i.e. 176.42), post harvest activities (i.e. 180.98), kitchen gardening (i.e. 748.97), livestock tending (i.e. 133.33), water and fuel collection (i.e. 1007.14), processing and storage (i.e. 300.84), well/irrigation construction (i.e. 425.51) and common infrastructure was highly variable than women’s time commitments i.e. 75.11, 65.54, 208.73, 90.64, 260.95, 266.66, 119.57, 194.04, 347.95, 188.97, 214.77, 79.28, 35.16, 79.59 and 53.46, respectively. It reveals that either these activities were seasonal or occasional in nature or these were purely women’s activities, because women’s time commitment to these activities was more consistent than men and further makes clear that women contributed more time than men to these activities. On the other hand women’s time commitment in SNA group of activities like land preparation (i.e. 66.52), crop protection (i.e. 238.57), market sales and purchase (i.e. 372.72), livestock grazing (i.e. 218.85), poultry rearing (i.e. 305.4) and dwelling construction (i.e. 582.14) was highly variable than men. This was because of the fact that either these activities were not regular in nature or purely men’s activities and also depicts that women contributed less time than men to these activities. Whereas, in E-SNA group of activities the value of C.V. in the table reflects the actual nature of these activities that the contribution of time to these activities by men was highly variable than women, as a result in these activities women’s time contribution was maximum and men’s role was only participatory in these activities. Because of the unpaid nature of these activities and then less contribution of men to these activities clearly reveals the gender disparities in rural works.

In Non-SNA group of activities time commitments by men to all the activities was highly variable than women which shows that women contributed more time regularly to these types of activities than men. It is clear from the Table 3 that the value of C.V. was higher for all Non-SNA activities for men, i.e., self learning

and education 91.42 as compared to women 79.28, personal care 44.12 as compared to women 35.16, social conservation 183.33 as compared to women 79.59 and rest and relaxation 99.42 as compared to women 53.46. In all these activities women's contribution was more consistent than men.

4. Pattern of Gender Division of Labour among Sample Households in Shared and Autonomous Activities

Gender division of labour among sample households in shared and autonomous activities has been presented in Table 4. The Table clearly shows that the activities performed autonomously by rural men and women and also to other activities where the household efforts were jointly shared by both men and women, identification of gender structures within such rural activities also uncovers the prevailing gender division of labour among sample households. Structural scheme indicates that 14 out of 16 principal SNA activities, i.e. land preparation, crop husbandry, post harvest activities, crop protection, kitchen gardening, market sales and purchase, livestock tending, livestock grazing, poultry rearing, water and fuel collection, processing and storage, dwelling construction, well/irrigation construction and common infrastructure involved work sharing between rural men and women, but in some of these activities men's contribution was very low, while in some activities women's contribution was also low or just participatory. While in 3 E-SNA activities out of 6 activities, i.e. care of elderly, community work and education and tutoring involved work sharing between rural men and women and in Non-SNA group of activities work was shared by both men and women. Even the contribution of men in these activities was participatory only. Women carried out 2 SNA activities, i.e. making of dung cakes and making handicrafts and 3 in E-SNA activities, i.e. cooking and cleaning, childcare and household maintenance autonomously

Table 4 Gender Division of Labour Among Sample Households in Shared and Autonomous Activities

Activities	Average Daily Hours Contributed By Women	Average Daily Hours Contributed By Men
Activity Shared By Rural Women & Men		
SNA-1 Land Preparation	5.10	6.18
SNA-2 Crop Husbandry	0.30	0.20
SNA-3 Post Harvest Activities	0.34	0.17
SNA-4 Crop Protection	0.10	0.25
SNA-5 Kitchen Gardening	0.18	0.07
SNA-6 Market Sales & Purchases	0.09	0.15
SNA-7 Livestock Tending	1.16	0.10
SNA-8 Livestock Grazing	0.25	0.14
SNA-10 Poultry Rearing	0.17	0.19
SNA-11 Water & Fuel Collection	0.15	0.02
SNA-12 Processing & Storage	0.12	0.17
SNA-13 Dwelling Construction	0.20	1.40
SNA-14 Well/Irrigation Construction	0.05	0.28
SNA-15 Common Infrastructure	1.20	1.50
XNA-3 Care of Elderly	0.28	0.03
XNA-4 Community Work	0.35	0.05
XNA-5 Education & Tutoring	0.29	0.75
NNA-1 Self Learning & Education	0.60	0.50
NNA-2 Personal Care	0.52	0.02
NNA-3 Social Conversation	0.60	0.06
NNA-4 Rest & Relaxation	0.70	0.75
Activities Carried Out Autonomously By Rural Women		
SNA-9 Making Dung Cakes	0.56	-
SNA-16 Making Handicrafts	0.36	-
XNA-1 Cooking & Cleaning	4.20	-
XNA-2 Childcare	0.90	-
XNA-6 Household Maintenance	0.20	-

As the average daily time contributions showed, in most shared SNA activities, except some activities as crop husbandry, post harvest activities, kitchen gardening, livestock tending, livestock grazing, water and fuel collection and the building of common village infrastructure, the roles of rural women were subsidiary to

those of men. In land preparation, market sales and purchase, livestock grazing, poultry rearing, processing and storage and infrastructural activities, rural men and women made nearly matching contributions, and in crop husbandry, post harvest activities, kitchen gardening, livestock tending, water and fuel collection, women took the lead. Among E-SNA and Non-SNA activities, the only ones in which men shared significantly were community work, self learning and education and rest and relaxation. Rural men did not profess to participate in social conservation which they deem to be akin to gossip. Daily opportunities for them to socialize occurred in the midst of work, and were therefore having not recorded separately. However, for rural women who have to work long hours within the home, the hour or so that they spare each day to meet peers and friends were their only social outlet.

Significantly, the autonomous and shared activities carried out by rural women included a large proportion of home production activities in the SNA category, which produce visible inputs for household consumption or market sale. These included post harvest and craft activity in the marketable segment, and livestock and poultry rearing, fuel and water collection and making of dung cakes in the activity segment that generates substantial savings and home consumption benefits for the rural household. In terms of women's time allocations, livestock tending and dung cake manufacture require significant time commitment every day. However, the other autonomous SNA activities performed by rural women also add fairly significantly to women's workloads. Daily cooking and cleaning and childcare are autonomous E-SNA activities to which every rural woman has to devote a substantial part of her day. The first two activities also add substantially to women's workloads, while childcare becomes a major commitment in families with every young children. Personal care and grooming was the only Non-SNA activity on which rural women has spent time autonomously. Very often, this was accompanied by the washing of utensils and clothes, which was not recorded separately among women's activities. It would also appear that the large number of E-SNA activities to which rural women have to allocate time autonomously limits the time they committed autonomously to economic activities in the SNA group. Work sharing by men was limited to SNA activities, and by and large did not extend into the rural household.

In terms of the inherent rural gender structures that create such gender divisions in labour time allocation, the gender division of labour is appeared to be defined socially. In terms of equivalent to women's economic roles which, as seen above, this gender division contributed rather significantly to home production, home consumption and household income-generation within the rural family. Thus, under such social definitions, rural women are essentially assigned a managerial role within the domestic and household economy, which requires that they economise outflows from household resources by substituting their own labour where necessary, thus playing a pivotal role in domestic management within the household and in the management of the livestock production system. In the agricultural economy, rural women again contribute to the management of production system through their participation in post harvesting and processing activities. However their involvement in such managerial functions generally limits the participation of rural women in direct market-related activity. Here, the economic functions that are carried out almost entirely by men give them a disproportionate say in the economic decisions taken by rural household. Male power within rural gender structures stems from this fact, and from their authority in controlling household expenditure budgets even though rural women contribute in no small way to income generation by the rural household.

The rural work participation patterns in the present study reveals that these gender structures were not solidly based on the economic classifications of rural work, but were based instead on dominant ideologies. Rural women tend to reinforce dominant gender ideologies by accepting gender divisions of labour and the invisibility of their own work. Ample evidence of this was found during the study in the way rural women underestimated the social and economic values of their unpaid work. Cooking food and meeting nutritional needs in the family was accepted voluntarily as a major familial responsibility of women, rather than as representing a major commitment of their labour time at the cost of their involvement in other activities. High participation rates of rural women in vegetable farming, seeds storage and post harvest activities and in rearing livestock and poultry were thus regarded as the extension of women's provident responsibilities beyond the domestic domain, rather than as a significant point of entry for women into the economic workforce. Other maintenance activities performed within the household, as well as childcare and care of the elderly and infirm to which rural women make major time contributions were similarly perceived to be familial or social responsibilities that women carry by obligation. Rural women were also involved in the fabrication of essential equipment and accessories for agricultural processing and storage operations, including the weaving of storage baskets. However, none of these activities was perceived by either the women themselves or by their spouses as resulting in economic work. Thus the dominant gender ideologies were equally shared within the rural household.

Besides being the major cause for the impoverishment of landless and marginal farming households, seasonality in agricultural work was also the principal reason for the undervaluation and marginalization of women's labour activities. The peak period for rural activity each year spanned the post-monsoon months from

late September to October when the main rice crop was harvested and taken in, and women subsequently took part in post harvest activities. Cultivation of main crop wheat and winter vegetables in the following period months continued to engage women workers in large numbers upto December. Again peak period for rural activity during summer when the main wheat crop was harvested and taken in, and women subsequently took part in post harvest activities. Thus, in the months from December to late March formed a lean period when rural women generally found fewer opportunities for paid work and engaged in home based craftwork, stitching kind quilts from old clothes and weaving 'Khajoor Leaves' mats, in addition to performing their usual household chores. With the transplanting of new rice in late June and July, rural demand for women's labour rose again. During the lean months, the men folk from smaller size of holdings sought substitute employment in construction activities or left the villages temporarily in search of outside work. Such seasonal instabilities in rural women's work opportunities and incomes played a big part in limiting the economic role of women as earners and confined them mainly to unpaid and marginal work.

The acceptance of gender structures by rural women reflects the livelihood insecurities they have to contend with, despite contributing substantial amounts of labour time to the survival of poor rural families. More complex issues arise, however, when such problems have to be redressed. In theory, agricultural growth would appear to offer a solution because it increases rural labour demands and wage rewards. But in practice, the relation between agricultural progress and women's economic rewards is not so direct. The new economic opportunities generated by agricultural progress are more easily availed by men who do not have to carry an additional domestic workload. In this case, the rural gender structures can become further entrenched if increased participation by men in wage based activities requires that their labour contributions to livestock rearing, processing and other home-based production activities be substituted by equivalent labour contributions from women, as is often the case. New cropping practices that replace subsistence crops by cash crops can fundamentally alter the rural production chain by doing away with the post-harvest and processing activities in which rural women had specialized. Such problematic issues also emphasize that the transformation of social and economic situations of rural women cannot be accomplished solely by economic means. More fundamental transformations in gender structures through socio-legal means, for example, through fundamental changes in land-titling and inheritance systems must also be initiated to induce more equitable distribution of economic and gender rights.

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Appendix-I Socio-Economic Characteristics of the Sample Household

Sr. No.	Particulars	Marginal Holdings	Small Holdings	Medium Holdings	Large Holdings	All Holdings
1.	Total Number of Sample Household	150	90	45	15	300
2.	Total number of family members	973	533	334	101	1941
3.	Average Size of	6.48	5.92	7.42	6.73	6.47

	Family					
4.	Percentage of Family work force					
	(a) Male	69.35	75.27	73.68	62.22	71.41
	(b) Female	75.47	73.28	73.61	58.92	73.59
	(c) Total	72.35	72.30	73.65	60.40	72.49
5.	Percentage of Dependants	27.65	25.70	26.35	39.60	27.51
6.	Literacy Percentage					
	a) Male	85.88	87.82	89.47	91.11	87.28
	b) Female	80.50	82.06	83.43	85.71	81.73
	c) Total	83.24	84.99	86.52	88.11	84.54

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