ORGANIZATION FOR SOCIAL SCIENCE RESEARCH IN EASTERN AND SOUTHERN AFRICA (OSSREA)

The Gender Division Of Labour In Ethiopian Agriculture: A Study Of Time Allocation Among People In Private And Co-Operative Farms In Two Villages

Dejene Aredo

Research Report Series No. 1

ORGANIZATION FOR SOCIAL SCIENCE RESEARCH IN EASTERN AND SOUTHERN AFRICA (OSSREA)

The Gender Division Of Labour In Ethiopian Agriculture: A Study Of Time Allocation Among People In Private And Co-Operative Farms In Two Villages

Dejene Aredo

Research Report Series No. 1

December 1995

P.O. Box 31971, Addis Ababa, Ethiopia
Tel 119705, Tlx. 21646, Fax 551399

ACKNOWLEDGEMENT

I am grateful to the Organization for Social Science Research in East Africa (OSSREA) for gratuitously covering the research cost of this study I am also grateful to the Project on African Agriculture of the Joint Committee on African Studies of the American Council of Learned Societies and the Social Science Research Council for providing me with financial assistance (with funds provided by the Ford foundation and the Rockefeller Foundation) which enabled me to make consultations abroad with other researchers concerning the conceptual and methodologic problems of this study.

ABSTRACT

In this study, different but complementary approaches were employed to investigate three types of variations (inter-regional, intra-household, and inter-farm organization) in the household time allocation and access to resources with a view to making visible the relative contributions of women to planners and to development agencies, and to shed some light on the problems of applying existing theories and concepts to the conditions of peasant households. The highlights of the findings of this study can be summarized as follows. Considerable variations in the gender division of labour have existed between the two case study areas and between the private and socialist sectors of the rural economy. In the Ethiopian context, existing theories have limited relevance to the peasant households. The gender division of labour in both of the case study areas was somewhat different form what is commonly found in sub-Saharan Africa. Women's and children's contributions to agricultural production and to the survival of the household must be greater than what is given in official statistics. Time required for housework was downward rigid suggesting an additional constraint to the programmes of mobilising women's labour for directly productive activities. The co-operativizaiton programme had varying effects on women's labour; it has given rise to both underutilization and exploitation of women's labour depending upon location-specific mode of its implementation. Some degree of inequality has existed in respect of access to resources and decision-making by men and women in the study areas. Children's labour has been found to be substitutable for and complementary to women's labour thus suggesting possibilities of women having pronatalist incentives within the rural household. Similarly, women's and children's labour has been found to be substitutable for and complementary to men's activities while men's labour is little involved in housework suggesting rigidity in factor (time) substitution within the household.

The findings of this study, therefore, must have some relevance for the design of national income accounting systems and for rural development projects as well as for theories explaining the gender division of laour in peasant agriculture.

TABLE OF CONTENTS

1. INTRODUCTION

Presently, production in Ethiopian agriculture is presumably taking place inside the production possibility frontier. In that case, a movement towards the frontier can, under favourable circumstances, be possible by effectively mobilizing the available physical resources with limited recourse to imported technologies. Household labour, being one of such resources, deserves close economic investigations.

In this study, different but complementary approaches were used to investigate three types of variations (inter-regional, intra-household and inter-farm organization) in the household time allocation and access to resources with a view too making visible the relative contributions of women and children to planners and to development agencies, and to shed some light on the problems of applying some of the existing theories and concepts to the conditions of peasant households.

This paper is organized as follows. The first five sections deal with the general aspect of the topic and the rest of the sections with the case studies. A review of the theoretical framework of the study in the second section is followed by a review of the state of the art (in the Ethiopian context) in the third section. For analytical reasons, section four reviews the conceptualization problems following presentation of the sources of data in the preceding section. The two case studies are presented in the sixth and seventh sections. The seventh section briefly considers patterns of access to resources and decision making. the last section provides conclusions.

2. THE THEORETICAL PERSPECTIVES

Women have remained invisible to both the neoclassical economic analysis and Marxist analysis. For the former, the household, as a single utility maximizer, remained almost a "closed box" as if economic analysis stops at the door of the home (Ellis 1988). The Marxist school of thought, obsessed as it is by the question of the class struggle, has virtually remained sex-blind and neglected the intra-household relations (Lenin 1966, Molyneax 1981, Hartmann 1979, White 1982, Folbre 1986, Ellis 1988).

The dynamics of the role of women in agricultural development was for the first time formulated by Boserup (1970). According to Boserup, technological progress in agriculture (itself resulting mainly from growing population pressure over land) is accompanied by changes in the status of women. The lower stage of agricultural development (shifting cultivation) is designated as "female farming system" on the basis of the preponderance of women in food production. The next higher stage of agricultural development (extensive plough-cultivation), in which women are supposed to be progressively confined to the house, is referred to as "male farming system".

However, this simplistic form of classification is no longer accepted as an accurate presentation of the diversity of women's engagement in cultivation worldwide (Ellis 1988: 171) and so is the contention of this study.

The notion that the growth of productive forces is accompanied by a progressive diminution in the economic contributions of women was later elaborated by other scholars (Ridly 1972, Nash 1975, Saffioti 1978)[1].

The incorporation of pre-capitalist societies into colonial modes of production has influenced the patterns of sex distribution of agricultural work. For example, when European colonial powers encouraged the production of cash crops for exports through the use of migrant male-labour, village women had to shoulder an increasing portion of fieldwork in order to support the family. Therefore, it has been contended that the character of women's participation in agricultural production reflected conditions that serve to maintain the supply of cheap labour force for capitalist expansion and accumulation (Boserup 1970, Allen 1974, Caulfield 1974, Deere 1979).

A theory that appears to be a step forward in making peasant women's contributions visible to economic analysis is the new home economics,[2] which some scholars think is by now an established part of economic theory (e.g., Gronau 1977). This theory was originally formulated by G.S. Becker (1965) in an attempt to integrate production and consumption theories which had remained separate since the emergence of the neo-classical economic theory.

The relevance of the new home economics to the analysis of the gender division of labour in peasant agriculture was discussed in (Ellis 1988: 174-177). Among the major short comings of the theory, the assumption of altruism within the home (i.e., the assumption that the household is a single utility maximizer) and the logic of explaining the division of labour between women and men on the basis of static comparative advantage[3] in the maximization of household welfare can be mentioned. An assumption of altruism within the household rules out the possibility that husband and wife may have conflicting economic interests. The major shortcomings of the premises of comparative advantage in the maximization of household welfare, according to Ellis (1988), are as follows:

a. it relies on market prices as the sole explanatory force;
b. it rules out all non-market reasons for the division of labour and resources in the home;
c. it rules out men and women having unequal power in deciding household goals;
d. it rules out men and women possessing areas of separate decision-making in the home;

e. in short, it captures only one facet (the opportunity cost of labour in the market) of the multi-faceted social concept of the gender division of labour" (Ellis 1988: 177).

One way towards the development of analytical framework for the gender division of labour in peasant agriculture is to make a distinction between market and non-market areas of intra-household economic decisions. With respect to the latter, the concept of "conjugal contract" (Whitehead 1984, Ellis 1988: 178-179) can be employed to describe the situation where husbands and wives exchange goods, incomes and services, including labour, within the household. Women and men may also possess areas of independent economic action within which they are able to make economic decisions on the basis of market criteria (Ellis 1988: 178).

The market and non-market areas of intra-household economic decisions can, in some peasant societies, be referred to as "gender-specific" or "gender-sequential" farm work of women (Whitehead 1984: 42-44, Ellis 1988: 179). In the former, women work their own plots of land, separate from those of men, and carry out all the seasonal activities from sowing through harvesting or, in some cases, women may gain a genuine degree of economic independence from men by marketing produce from their own plot of land (Ellis 1988: 179).

In the latter case, "women and men work the same land, but there is a seasonal or task-specific division of labour in which, for example, men may do the ploughing, participate in the harvesting, and market the produce; women may do the weeding and spraying, participate in the harvesting, but have no hand in marketing" (Ellis 1988: 179). In this case women may lack economic independence and their contributions may be undervalued and unremunerated and in any case, existing theories must be further developed in order to sufficiently explain the nature of intra-household economic relations in peasant societies.

3. A REVIEW OF EVIDENCES FROM ETHIOPIA AND STATEMENT OF THE PROBLEM

It is well-known that in sub-Saharan Africa women play an important role in food production. For example, in a FAO study the gender division of labour was characterized as follows:

> Men tend to do the heavy intermittent jobs of land clearing, fencing and preparation. They also trim the crops. Women and men share equally in planting, as they do in the case of domestic animals. Women, however, hoe, harvest, transport, store, process, market much more than men do. Farm women use few of any modern tools or implements... In each community women are likely to have more responsibilities for food than for commercial crops although they work in both (FAO 1986: 43).

Concerning the Ethiopian case, the fragmentary evidences that we have consisted of references made in some anthropological studies (e.g., Messing 1957, Donham 1978),

some village studies conducted in the package project areas of Arsi region (Leander 1969, Polluha 1975, Hanna 1976, Tiruneh 1976), agro-economic surveys conducted by the C.S.O. and by individual researchers (C.S.O. 1985, Fassil and Asmerom 1979), and other research works (e.g., Shack, 1966, Solomon 1986).

A number of studies have indicated that the primary tasks of males included such activities as clearing the land, planting, piling up harvested crops, transplanting *enset*, guarding crops against wild animals at night (Tiruneh 1976, Leander 1969, Shack 19665, Messing 1957, Fassil and Asmerom 1979, Demelash 1988). Some of these activities were considered to be arduous (e.g., see comments by Shack 1966: 63-64, Messing 1957: 17).

Women are primarily engaged in domestic work including food preparation, fetching water, gathering fuel, washing, taking care of children, etc. (Polluha 1975: 19-22, Messing 1957: 175, Hanna 1976, Leander 1969, Fassil and Asmerom 1979). Of all the various types of domestic tasks, it has been observed that grinding of grain is the most arduous one (Alemayehu and Dejene 1988).

Existing studies have suggested that women have less "leisure time" than men (Leader 1969: 24, Bauou 1987: 62-77, Hanna 1976: 24, Tiruneh 1976: 13-17).

The household being the basic unit of decision-making regarding the questions of production and consumption in rural Ethiopia, women participate in the decision-making process to a limited degree, the prerogatives being that of the male partner (Semeneh 1983: 13, Polluha 1975: 28, Lakew and Hirut 1986: 57-69).

However, it is difficult to make generalizations regarding the degree of women's participation in the decision-making process. For example, in Menz area of Northern Shoa, where wool processing (as a means of livelihood) is primarily undertaken by women, wives have greater say in the household than might be expected from plough-agriculture based economies (Helen Pankhurst 1989).

These studies have suffered from a number of shortcomings of which the following can be mentioned: (1) in almost all cases a single method of data collection was employed as a result of which valuable information was either left out or possibly distorted; (2) in many cases the gender division of labour was treated as a by-product of other studies; (3) almost in no cases the gender division of labour was treated from the point of view of economic theory; (4) in most cases no attempt was made to consider the inter-regional variations in the gender division of labour; and (5) in no case the impact of the cooperativization programme (on the gender division of labour) was considered (except Solomon 1986), *albeit* to a limited extent.

The major finding of the existing literature being what has been stated above, in what follows we will attempt to review, at length, the major results of the nation-wide rural Labour Force-Survey of the Central Statistical Organization (CSO) (1985) which has, so far, been unparalleled both in its coverage and the techniques of data collection. During

the initial stage of the survey 500 Peasant Associations (PAs) in the twelve administrative regions (Eritrea and Tigrai were excluded) were selected. The survey, covering holders only, was conducted in five different rounds.

Relevant findings of the survey can be summarized as follows: Economic activity status survey covered all persons of age ten and above in spite of the possibility that children in rural Ethiopia involve themselves in productive activities from about the age of seven.

The CSO used a very narrow definition of "work" as a result of which women's contribution to agricultural production was underestimated[4]. "Productive work" was defined as "work that is used in the production of goods and services that will be sold in the market or are consumed in the household" (CSO 1985: 36). Housework was considered as "productive work" only when it was performed for pay and not for own household consumption purposes (CSO 1985: 36). In other words, only income-generating activities were covered by the CSO survey.

According to the CSO, the labour force was constituted by the "employed" and the "unemployed" in line with the standard definition used to measure industrial employment. Such concepts, of course, may be largely meaningless in rural Ethiopia. For example, the "unemployed" consisted of those who did not have any jobs and those who were actively seeking employment in a rural setting where the available work is possibly shared by the household members and where employment opportunities are virtually non-existent[5].

Economic activity status was collected by using two approaches: the usual status approach (activity during the previous 10 months or the previous 3 months) and the current status approach (activity during the previous 7 days). Persons reported in productive work for at least one day in the seven days before the survey date were considered to have been currently employed. Then, the results of the usual status approach obtained in the first round (activity during the previous 12 months) provided the base-line information on the activity status of the respondents.

The economic activity rate (economic participation rate) was computed as the ratio of the economically active population to the population aged 10 years and over multiplied by 100.

The economic activity rate[6] among the total population in the first round, using the usual status approach, was reported to be 87.6% for males, 47.9% for females and 68.4% for both the sexes combined. The highest activity rate for females was reported from Gojjam (82.2%) and the lowest rate (12%) was reported form Hararghe region (CSO 1985: 46)[7]. Thus, the CSO survey has clearly suggested that there were sharp contrasts between women in Gojjam and Hararghe in respect of the degree of participation in income-generating activities. However, two questions remain unanswered: (1) whether such a difference is due to defects in the techniques of data collection; and (2) why such differences exist, if there is any. These questions should be the point of departure for further empirical investigations.

According to the CSO survey, "there were only about half as many females as males in the labour force" (CSO 1985: 94)[8]. The CSO survey has also suggested that female-headed households had a participation rate of 65%, which was the highest among the females (CSO 1985: 94).

The major causes of diversion of labour from farm work were identified as housework, schooling, social reasons, and physical incapacity (CSO 1985).

With the medium age of 15.8 years for the total population and 31.5 years for the economically active population, the rural labour force of Ethiopia has been found to be very young (CSO 1985: 93).

Moreover, with economic dependency burden of children[9] amounting to 85.7%, the economically active population has to feed many mouths (CSO 1985: 94). However, if, through further research, we are able to show that child labour is vital to food production, then, children can be considered as an asset rather than a burden to the household.

It was also reported that the economic participation rate was high for migrant operators than for non-migrant and this was found to be true for most of the regions of the country (CSO: 96).

The CSO survey has also considered the relationship between the level of literacy and the participation rate. It was reported that "among the literate population those who had attained highest levels of schooling ... showed lower participation rate" (CSO 1985: 7).

The CSO survey has also suggested that women have higher participation rate than men in respect of manufacturing and trade, (two of the occupations which are relatively insignificant in rural areas). In Sidamo region, for example, 24% of the economically active women were engaged in trade as contrasted to only 0.2% for men. However, the national average was 2.7% for females and 0.1% for males. In Hararghe region, where the production of cash crops is relatively important, 10.8% of the females (4.8% for males) were reported to have been engaged in the production of cash crops (CSO 1985: 119).

In respect of access to resources, the CSO survey reported that "most women do not own the business they work in. Among the total population, it was observed that 84% of the females were unpaid family workers. The females in Sidamo showed the highest proportion of own account workers, while the females in Gojjam and Gonder showed the least" (CSO 1995: 116). However, the survey did not consider how decisions were reached within the household and how income was distributed among its members.

Few hired workers,[10] most of them boys (90%), were employed mainly as shepherds and were paid in cash and in kind.

The seasonally adjusted mean number of days worked in a week for the total population was 4.2 days for the males 3.3 days for the females and 3.9 days for both the sexes (CSO 1985: 129). It was also observed that the number of days worked declined constantly with the age of the persons. This was perhaps due to the fact that the young (children) are mainly engaged in animal herding, a task which is regularly performed including holidays.

Strong inter-regional variations were observed in respect of the numbers of working days per week ranging from 3.2 days in Gojjam (females 2.7 days) and 5.5 days in Hararghe (females 5 days). However, no information was collected on the length of a day's work in different PAs. "The length of a full day's work was taken to be the accepted length of a day in the society, and half days or more were also recorded as full days". In recognition of the weakness of the data, the CSO suggested that "for the proper analysis of the actual amount of work performed in different regions, a very detailed time budget survey is necessary" (CSO 1985: 130).

Another aspect of the rural labour force that the CSO survey covered was types of activities carried out during holidays. It was reported that, although holidays were numerous in the predominantly Orthodox Christian areas of Gojjam and Gondar, some useful activities such as mending fences, herding cattle, guarding crops were actually performed during holidays (CSO 1985: 130).

Finally, the CSO survey has shown strong seasonal variations in labour use without, however, considering how people actually spent their time during the slack seasons (CSO 1985: 40, 148).

By way of conclusion, the CSO survey not only undercounted the contributions of women but has failed to: (1) consider the differences in the length of the working days between different regions; (2) to clearly bring out the contribution of children to agricultural production; and (3) to consider the difference in labour deployment between co-operative farms and private peasant farms, and above all, it has failed to throw light on the problems of identification and measurement of leisure time.

Therefore, in the light of the issue raised above, the following specific questions must be addressed with a view to improving food security situation in the country by mobilizing the household labour:

1. Who does farm work and housework in rural areas?
2. To what extent are the different components of household labour substitutable?
3. What is the impact of the co-operativizaiton programme on the pattern of the gender division of labour in the rural areas. Has the co-operativizaion programme succeeded in mobilizing the household labour for directly productive activities?

4. To what extent are women entitled to the results of their labour?
5. Does significant inter-regional variations in the gender division of labour (such as that reported by the CSO) actually exist? If so, why?
6. To what extent can women's labour be mobilized for farm work?
7. To what extent do existing theories explain the gender division of labour in rural area?

The broad objective of this study was, therefore, to address the questions raised above with the specific objectives of identifying and characterizing the distinct dimensions of the gender division of labour in private peasant farms and in co-operative farms, in selected case study areas, with a view to draw implications for the theory and for the design and implementation of rural development policies.

4. SOURCES OF DATA

This study was based on data generated at the micro level[11]. Two villages, one each from Gojjam and Hararghe regions, were selected as case study areas. Gojjam and Hararghe are contrasting regions in many ways[12]. Hararghe region, compared to Gojjam region, has been characterized by a high degree of irrigation practice, extreme shortage of oxen, limited participation of women in fieldwork (CSO 1985), production of highly diversified cash crops (coffee, *chat*, vegetables), and by a relatively high degree of women's participation in marketing. In Gojjam, farmers heavily depend upon a single major crop (*teff*) both as a subsistence and cash crop. These regions are also contrasting from the cultural point of view. In Gojjam, where the people are followers of the Orthodox Christianity, too many "holidays" are observed while in Hararghe, Islam is the dominant religion.

The case study villages were Debre-Mewi Peasant Association (including Debre-Mewi Agricultural Producers' Co-operative)[13] in Gojjam and Legambo Agricultural Producers' Co-operative (and the adjacent private peasant farms) in Alemaya Wereda of Hararghe region.

In the absence of a single effective technique of data collection concerning the gender division of labour, we employed different but complementary approaches to generate the required information. This method has enabled us to cross-check the validity of evidences and to appreciate the complementarity and interaction of the various ramifications of the socio-economic dimensions of the village economic life.

The procedure we followed in both villages were similar in their content. Field work was initiated with a series of discussions with local development agent (D.A.) of the Ministry of Agriculture who provided us with information on the physical and socio-economic background of the study areas. The D.A. also provided us with documentary evidences

concerning certain specific topics such as the cropping calendar, demographic structure, resource use patterns, the general features of the gender division of labour, and specific problems of the study areas.

The community level study was continued with a series of group interviews with leaders of peasant associations and elderly men and women. Basic information concerning the general patterns of the gender division of labour, access to resources and decision-making was collected in this way[14]. Further information was generated from documents of peasant organizations.

The next stage was to employ the participant-observation and intensive interview method with randomly selected women from both the private and the socialist sectors (female-headed households included)[15]. This approach was found to be extremely useful compared to the dubious method of relying on structured questionnaires filled in by not-always-reliable enumerators. This approach has enabled the researcher to see, feel and appreciate not only how peasant women actually allocated their time across various activities but also how they lived[16].

The final stage of the field work was to carry out a time budget study during peak seasons, in order to take snapshots of the patterns of time allocation by different demographic groups of people from households selected from both the private and co-operative farms. The time budget study, which lasted for a minimum of seven consecutive days[17], covered 36 persons from 8 households in Debre-Mewi and 51 persons from 10 households in Legambo. An attempt was made to draw the sample households from different economic and demographic background.

In Debre-Mewi the household size of the sample households ranged from 3 to 12 and in Legambo from 4 to 10. The size of livestock owned by the sample households ranged from 1 to 10 heads of cattle in Debre-Mewi and from 1 to 4 in Legambo. In the latter case (Legambo), in addition, the size of sheep and goats owned by the sample households ranged from none to 10 animals.

Similarly, the size of holding (for the private peasants), in Debre-Mewi, ranged from 0.75 ha. to 2 ha. and in Legambo from 1.5 ha. to 4 ha. The sample households were also drawn from those who lived in attached houses and corrugated houses.

In the time budget study all activities undertaken by the subject, right from the time of waking up to the time of going to bed were contemporaneously recorded[18] to the last detail on the special form prepared for this purpose (see, for example, the format of Tables 6 and 7). The study covered all persons of age 7 and over within the selected households.

5. THE CONCEPTUALIZATION PROBLEMS

As has been indicated above, the concepts underlying existing rural labour force statistics have built-in tendency to underestimate the contribution of women and children to agricultural production and to the well-being of the household. The main defect of such survey is that they are based upon concepts which were essentially designed for studying industrial employment. One major reason why women have remained invisible to the statistician and to the planner is that only income-generating activities (fieldwork in particular) are covered in the survey while housework and other activities are excluded.

Moreover, in peasant societies, men and women may be engaged in non-economic activities which may be vital for the survival of the individual and of the society itself. Elliot (1969), for example, noted that:

> Detailed studies of how farmers actually spend their time particularly in seasons, in which demand for agricultural labour is lower, reveal that although they may be then economically unproductive they are socially at their most productive, maintaining social bonds, giving and receiving status gifts, transacting legal proceedings, and generally serving the intricate fabric of their society.

Whether we employ the broader definition of "work" (fieldwork plus housework) or not in measuring women's contribution depend upon our concept of "leisure" in peasant societies. In conventional economic theory, the leisure time is simply equated to absence of work and nothing else[19]. The problem is that in peasant societies the boundary between work and leisure is usually blurred. To take but few cases, consider the fact that in peasant agriculture that the conventional dichotomy between the firm and the household vanishes, that both production and consumption decisions are combined; that the homestead is not only the place of consumption but the place of production. Moreover, overlapping activities are very common in rural areas. For example, a mother may prepare food with her baby on her back thus simultaneously undertaking two separate activities: cooking food and childcare.

In a nutshell, to the best of the present author's knowledge, no definition of leisure, in the context of peasant societies, exist. As a result, we have found it extremely difficult to determine whether certain activities belong to the work or the leisure category[20]. For example, how can one consider housework or attending funerals as idle time? If we restrict the definition of "leisure" to "time free from employment during which a person may *indulge in rest, recreation, etc.*" (Webester Dictionary), we will be left perhaps with limited number of activities (or non-activities) which can tentatively fall within the purview of the leisure time (e.g. "rest" and "conversation"). However, if "leisure" is to signify enjoyment, how can one take as leisure a situation where an unfortunate peasant sits on a stone brooding on whether life was worth living?

Perhaps, one way out is to make a distinction between "leisure" and "home" activities (Ellis 1988: 120-122) in recognition of the possibility that "leisure" does not necessarily

mean idle time. "Home activity", as contrasted to directly productive activities (DPA), includes the entire range of activities associated with the daily maintenance of the household (Z-goods production as contrasted to X-goods production in the neoclassical literature). In other words, the "work" time can be decomposed into two major activity categories: (1) directly productive activities (DPA), and (2) household maintenance activities (HHMA) which includes food preparation, childcare, fetching water, gathering fuel, etc. The rest of the activities (e.g. social engagements, personal hygiene, eating meals) can be included under the "non-work" time. The latter ("non-work"), in certain cases, may incorporate a strong leisure element in itself.

In fact, a review of the literature (Dixon-Mueller 1995, Ellis 1988, IDS 1984, Naget *et al.* 1980, Beneria 1981, Yotopouylos & Mergas 1986) in the light of the concrete conditions of the study area has suggested the foregoing scheme of classification of activities as appropriate to the present study (see Appendix 2 for definition of concepts).

The time allocated to each activity category was cross-tabulated by different demographic groups (adult females, adult males, and children) from the two types of production systems (private peasant and co-operative farms) found in the case study areas. This method has allowed us to identify three types of variations in time allocation: (1) variations between private and co-operative farms, (2) variations between the case study areas, and (3) variations between different demographic groups.

6. THE CASE OF THE LEGAMBO VILLAGE (HARARGHE REGION)

6.1. Background of the Study Area and the Emerging Features of the Gender Division of Labour

The study area, which is adjacent to Alemaya Agricultural University, is located about 540 kilometers to the east of Addis Ababa in Hararghe region (see map). The altitude of the area ranged from 1700 to 2000 meters above sea level. This area is one of the few places in rural Ethiopia where production of cash crops is important.

The foci of the study were a co-operative farm (named Legambo Agricultural Producers Co-operative) and neighbouring private peasant farm households found within a separate peasant association (named Damota Biftu Peasant Association). The co-operative farm consisted of 335 member households in 1988 (of which 21 were women) operating on a total land area of 600 ha. The local population is predominantly Moslem and the only monthly holiday observed is Friday.

The major crops grown in the area, in order of importance, are maize, sorghum (in the private sector) and vegetables. Shifts in the cropping patterns have become important

features of the area in recent years. Sorghum which used to be the single major crop in the area some ten years back, has now been increasingly replaced by maize in almost all the co-operative farms in the area in line with the instructions given by the Ministry of Agriculture.

Vegetables, which are well-known high-value crops in the area, are increasingly produced on irrigated private and co-operative farms. The production of *chat* a widely used stimulant in the area, has been somewhat reduced in the co-operative farm [21].

Progressive intensification of land, including switch to high-value crops and an increase in the use of compost and other types of fertilizers, has created additional demand for household labour.

Somewhat heavy traditional farm implements (e.g. the *dengora* which weighs about 5 kg) are widely used by males, in addition to oxen and tractors, for soil preparation and for similar purposes.

Household labour and collective labour (see below) constituted the two major forms of labour in the study area. The former is the single major form of labour in the private peasant sector.

Regarding women's labour, it is possible to distinguish between three types of labour, viz, (1) women's labour in the private sector, (2) housewives' labour in co-operative farm and (3) labour of women members (female-headed households) of co-operative farm.

Women in the private peasant sector (Peasant Associations), rarely participate, on regular basis, in fieldwork with the exception of taking meals to the field.

Wives of co-operative farm members (who are not members themselves) are virtually relieved of fieldwork, including taking meal to the field, and they are increasingly participating in petty trade and handicraft and otherwise enjoy more leisure time.

The position of women members of the Legambo Agricultural Producers' Co-operative (LAPC) can better be reviewed in conjunction with patterns of organization of the labour process (in the co-operative) in line with the guidelines set by the Ministry of Agriculture as can be seen below.

In the LAPC which has already reached the *welba*[22] stage of development, income is officially distributed according to the socialist dictum: "From each according to his ability, to each according to his work". Thus members are assigned work-points on the basis of the quality and quantity of work done during an agricultural year. The quality of a specific task depends on four indicators, i.e. (1) the skill demanded by the task, (2) degree effort required to carry out the task, (3) extent of contribution to output, and (4) conditions of work. The following tasks, which were considered to be the domain of males, were singled out as high (work) point activities: clearing land with the *dengora*, spraying

chemicals, constructing houses, forging iron, driving tractors and preventing flood with stone walls. The female members of the collective farm are assigned tasks such as weeding, harvesting, cleaning offices and stores, picking *chat*, tasks which are classified as "light" and, thus to which lower work-points are assigned. In other words, women members of the collective farm are not involved in tasks which are either heavy or are associated with certain types of modern technology (e.g. spraying chemicals).

The quantity of work done by a member is recorded in terms of hours spent on a specific task. Women members often work for less hours than men because of absenteeism and lack of punctuality arising from engagement in housework in addition to fieldwork. In particular, those women who do not have grown up daughters or those who send their children to school are hard pressed with both fieldwork and housework. The latter is usually carried out before and after fieldwork.

Consequently, women earned much less income than male members of the collective farm. For example, during the agricultural year 1986, women members earned, on average, 21 percent less income than the male members. In the same year women accounted for 7.7% of the total membership of the co-op. but accumulated 6.2% of the total work-points.

How much a member of the co-op. farm can earn depends on the following factors: (1) the amount of work-point accumulated by an individual member, (2) the total work-points accumulated by members of the collective farm, (3) productivity of labour, (4) requirement for seeds and for reserve, and (5) other factors such as the amount of grain needed to meet the compulsory quota delivery requirements of the AMC. The relevance of some of this factors has been illustrated in Appendix 3 with reference to the income of Amina, a woman member of the co-operative farm.

In the co-operative farm collective labour is often supplemented by household labour during busy seasons. For example, in 1986 a total of 97 "children" (aged, 10 to 18) were engaged in such tasks as weeding and transporting organic fertilizers and earned a total of work-points amounting to 5,162.7 (i.e. 4% of the total points).

Similarly, housewives are involved in farm work during peak season in the form of campaigns. However, it should be noted that the co-operative farm heavily depends on the labour of household heads (94% males) and household labour plays a limited role in agricultural production with the exception of side-line farms operated by individual members of the co-operative[23]. In other words, in the co-operative farm labour of woman and children is largely marginalized.

Presently, the labour force in the co-operative farm is organized into twelve functionally separate work-brigades. In the past women members constituted a separate brigade which was later disbanded when it was discovered that the women were unable, on their own, to bring an agricultural operation to its completion due to the fact that certain activities (e.g. ploughing) are not carried out by women. That is, labour use in the co-operative farm is

still influenced by existing social and cultural norms to the extent that the gender division of labour is concerned.

6.2 Time Allocation Across Different Activities

In what follows, we will attempt to closely investigate patterns of the gender division of labour in Legambo on the basis of the Time Budget Study. Our point of departure will be an overview of time allocation across all activities by all demographic groups as can be seen from Table 1. In other words, we will first consider the general picture of time use by the sample persons irrespective of differences in demographic composition and structure, and irrespective of differences in type of peasant organization.

The non-sleeping time (which consists of work and "non-work time") averaged 14.7 hours during the study period. This time is almost equally divided between work (48.7%) and "non-work" time (51.3%). The former (the work time) is equally shared by directly productive activities (24.2%) and household maintenance (24.5%). With regards to specific activities, the leading ones in terms of time absorption, are agricultural work (16.3%), other household maintenance (9.8%), animal care (7.7%), rest (7.5%), and visits (6.9%).

The time spent on directly productive activities by all demographic groups averaged 3.6 hours (of which agricultural work was 2.4 hours).

The above, therefore, can tentatively suggest that: (1) the sample households had too many activities to attend to in addition to fieldwork, (2) the non-sleeping time was quite long, and that (3) indications of high leisure time existed in respect of the sample persons (see magnitude of time allocated to visits, conversation, rest and *chat*-chewing).

In what follows, we will attempt to closely investigate the details of time allocations by the sample persons in order to address the question, "who does what?"

Variations in time allocation among various demographic groups, and between the two types of peasant organizations (i.e. private and co-operative farm) are indicated in Table 2 and in the subsequent tables.

The non-sleeping time, which averaged 14.7 hours, ranged from 13.3 for children (private) to 15.8 adult female (co-operative). Obviously, children need more sleeping time.

Directly productive activities (DPA) are carried out mainly by men and children (private) while the involvement of women in these activities is very much limited. However, noticeable variations can be observed between members and non-members of the co-operative farm in respect of involvement in directly productive activities (Table 2). All non-member households (private peasants), irrespective of their demographic characteristics, have allocated more labour to directly productive activities (DPA) than

member households. For example, adult males (private) allocated 40.1% (6 hours per day) of their available time to DPA while adult male (co-op.) allocated only 31.7% (4.6 hours per day) of their available time (Table 2). Here, it should be noted that the involvement of women and children in DPA is more limited in the co-op. farm than in the private sector to the extent that the sample households are concerned. For example, children (private) worked for an average of 5.1 hours in DPA while children (co-operative) worked only for 2.3 hours. This point may throw some light on the degree to which the co-operative farm, which is organized on the basis of a fixed time schedule and membership of which is limited to household heads, is able to mobilize the household labour for agricultural production.

In what follows we will attempt to consider how the labour time was allocated across specific activities within the broad activity categories.

Of DPA, agricultural work was carried out mainly by men, animal care by children (private), and handicraft by women (co-operative) (Table 3). The latter points suggest that the demand for children as herders must be high in the private sector and that housewives in the co-operative farm are taking up handicraft in place of their traditional task of taking meals to field.

The allocation of time within household maintenance activities (HHMA) is indicated in Table 4. Food preparation and "other household maintenance" are the two major tasks which take up most of the time of women. It can also be observed that housework consists of numerous and regular activities across which women distribute their available labour time. On the other hand men's involvement in household maintenance is largely limited to "other household maintenance" which includes work in backyard farms. Members of the producers co-operative, in particular, have spent 91.7% of their HHMA on "other household maintenance" implying the importance of individual plots as sources of supplementary income as is the case of in other socialist countries.

Among women those who are in the private sector have spent 59% of their time (an average of 8.4 hours in a day) on household maintenance against those in the co-op. farm suggesting that the latter are relieved of a substantial portion of their traditional task of preparing and taking food to field.

Children (co-operative), being relieved of much of farm work, spent a considerable portion of their time (27.8%) on HHMA. In fact, child labour in both sectors (private and co-operative) seems to be partially substitutable for women's labour thus reinforcing the argument that in peasant societies the demand for child labour (by women) is considerable.

The "non-work time" for women (co-operative) was more than double that of women (private) thus suggesting that housewives in the co-operative farm were, most likely, enjoying more leisure time than those in the private sector.

Allocation of time across diverse activities, which were lumped together under the "non-work time" (in the absence of a better category), is indicated in Table 5.

It can be seen from Table 5 that all sample demographic groups within the co-op. farm have spent considerably more time on "non-work" than the private households during the study period. Adult females (co-operative), in particular, have spent 9.9 hours per day, on "non-work" compared to only 4.7 hours by adult females (private). However, it should be noted that housewives within the co-operative farm spent 46.2% of this time (4.6 hours per day) on Marketing[24] compared to only 10.2 % (0.5 hours per day) for those in the private sector (Table 5). Such a switch to marketing (including petty trade in *chat* and vegetables) by housewives of members of the co-operative farm was either caused or facilitated by (1) the fact that membership in the co-operative was restricted to household heads, (2) the fact that housewives were largely relieved of their traditional task of taking meals to the field, (3) the fact that husbands (members of the co-op.) rarely participate in marketing [25], and (4) the availability of marketing opportunities in the Legambo area.

In the Legambo village, women go to market in the afternoons and return home late in the evenings, often around 9.00 p.m. Members of the co-op., when off duty, spent a substantial portion of their time on backyard farms (private plots)[26]. In fact, it has now been a common phenomenon for members of the co-op. to work well into the night (usually up to about 10:00 p.m.) on their individual plots of land from which they generate substantial portion of their income. Time spent on backyard farms (by male members of the co-op.), together with other miscellaneous activities, accounted for 20.6% of the total time allocated to "non-work" time (1.7 hours per day) (see "miscellaneous" in Table 5).

In Legambo chewing *chat* is an important practice. This stimulant is taken by all demographic groups. Men in particular spent an average of 2 to 2.2 hours on chewing *chat* alone during the study period.

Finally, for illustration purposes, a snapshot of daily chores undertaken by typical women in Legambo is presented in Tables 6 and 7. In Table 6 a housewife (named Derene Abdulahe) who spent much of her time on trade (in *chat*) and leisure has been presented. This woman typifies those housewives who are relieved of their traditional tasks and who are now increasingly engaging themselves in trade and who also enjoy more leisure time. On this particular day, this woman allocated 42% of the non-sleeping time to rest, eating meals and to playing and chatting with family members (Table 6). In Table 7 a women member of the co-op. (named Kedija Adem) who spent much of her time on field work is presented. Here it should be noted that this woman was engaged in light work such as picking *chat* and weeding onions. It appears that this woman had less leisure time compared to the housewife mentioned above (see Tables 6 and 7). On this particular day she allocated 20% of the non-sleeping time to rest, eating meals, playing and chatting with family members (Table 7)[27]. Both women were helped by grown up girls.

Before turning to the other case study area we can briefly summarize the highlights of the gender division of labour in Legambo village as follows:

1) Traditionally women used to participate in farm work only to a limited extent.

2) Housewives within the co-operative farm are increasingly turning towards trade and handicraft and are also enjoying more leisure time.

3) Night work, though a traditional practice, has been on the increase in recent years in response to the peak season demand for labour in the co-operative farm and to the growing importance of backyard farms.

4) It appears that women household heads have less leisure time than housewives.

5) A paradoxical situation exists in Legambo Co-operative: labour shortage and labour underutilization co-exist in the sense that household labour is marginalized while co-operative members (males) sometimes work throughout the night.

7. THE CASE OF DEBRE-MEWI VILLAGE (GOJJAM REGION)

7.1 Background of the Study Area and Review of the Traditional System of Labour Use

Debre-Mewi Peasant Association is located along the Addis Ababa-Bahir Dar road some 8 kms away from Addet town. The altitude of the area ranged from 2200 to 2390 meters above sea level.

The local people produce *teff* as the main subsistence and cash crop on the red, light brown and black soil. Other crops produced in the area are barley, wheat, maize, pulses, etc. With a high oxen/man ratio, unlike Legambo village, plough cultivation is extensively used.

Population pressure has given rise to a considerable reduction in the size of the operational holding as well as to virtual absence of fallow land and to shifts in the cropping patterns in favour of cereals *vis-a-vis* pulses (IAR 1988).

The major marketing outlet in the area is the Agricultural Marketing Corporation (AMC) which buys farm products, on a quota basis, at fixed and relatively low prices.

"Holidays" account for about 41% (214 days) of the calendar year (see Appendix 4). The major activities forbidden during "holidays" included clearing the land, planting seeds, weeding, mowing, winnowing, cutting trees, making fences, constructing houses, grinding and dehusking grains, and handicraft such as spinning. Otherwise, most of all other activities including tending animals, food preparation, fetching water, gathering firewood,

child care, transporting and piling up harvested crops, preparing ground for threshing crops, visiting friends and relatives, going to markets and mourning are permissible during holidays.

From the above, it appears that the so-called holidays do not necessarily signify *idle* time since some of the directly productive activities and most of the household maintenance as well as those socially useful activities (e.g. visiting friends) are, as usual, carried out during holidays. Moreover, it should be noted that women's tasks, which are regular and numerous, are little reduced during "holidays".

Women's labour in the study area, unlike Hararghe region, constituted an integral part of the labour force required for farm work. In respect of such activities as weeding and gathering harvested crops women participate on almost equal basis with men. In some cases (e.g. planting) women help men in fieldwork. Certain activities such as land clearing, planting, mowing, and trashing are traditionally considered to be men's domain. On the other hand, household maintenance is basically carried out by women assisted by children. In the case of food preparation, in particular, it is unusual for men to participate, the only exception being slaughtering of animals. Children help their parents in the field and in particular, tend animals when not going to school.

7.2 The Co-operativization Programme and Women's Labour

In what follows, we will attempt to consider the role of women in Debre-Mewi Agricultural Producers' Co-operative. This co-operative, though established almost a decade ago, consists of 88 member households (6.7% of the total number of households in Debre-Mewi Peasant Association) and is still found at the lower stage of development of collectivization known as "melba". The co-operative has a relatively large tract of land (407.9 ha.) at its disposal. Land under annual crops alone amounted to 3.6 ha. per household or almost double the size in the neighbouring private sector.

The Co-operative's repeated failure in economic performance (in terms of productivity and accumulation[28]) had prompted authorites concerned to salvage it by introducing the contractual system of farming (the Chinese or the Vietnamese approach) in 1985.

The contractual system, the idea of which first originated in China and Vietnam, signifies a farm organization system in which individual members (or group of members) of an agricultural producers' co-operative contract land and other means of production from the co-operative in return for a predetermined amount of output and in which the contractee keeps for himself (or herself) anything produced over and above the agreed quota.

In Debre-Mewi Co-operative the contractual system was introduced in 1985 on an experimental basis. Presently, this system covered three crops, *teff*, wheat and chickpeas. The contract was first entered into with individual members but later only with a group of

member farmers in an attempt to thwart "the emergence of capitalist tendencies.[29] The co-operative provides the contractee with land (1 ha. for *teff*, 0.2 ha. for wheat and 0.2 ha. for chickpeas), oxen, farm tools, seeds, fertilizers, and with pesticide.

The contractee agrees to deliver (to the co-operative) 9 quintals of teff, 1.4 quintals of wheat, and 2 quintals of chickpeas and keep the excess for himself[30]. The amount of output to be delivered to the co-operative (the quota) varies according to (1) type of crop, (2) land size allocated to each crop, (3) yield, and (4) labour requirements. In case a contractor fails to meet the delivery quota, he will be obliged to surrender a portion of his share from the common harvests or buy the equivalent of the differences (the shortfalls) and pay the co-operative.

So far, the contractual system, compared to the conventional type of socialist organization of agriculture in Debre-Mewi, has produced better results. Net per capita earnings, which averaged 12.55 quintals before the introduction of the contractual system, rose to 13.9 quintals after its establishment. During its first year, the contract farm produced 47% of the total output (of the co-operative) from a land area which accounted for only 40% of the total operated by the co-operative. Output per work-point averaged 0.8 kg and 0.96 kg, respectively, before and after the implementation of the new system thus suggesting some increases in labour productivity (Table 8). Similarly yield increased from an average of 6.2 quintals/ha. to 7.2 quintals/ha. following the implementation of the contractual system (Table 8).

The relative economic advantages of the new system must have arisen from the following factors: (1) an increase in labour input in physical terms, and (2) an increase in productivity arising from a better system of farm management.

The incentive system that has been created by the new type of farm organization has perhaps motivated the contractee to mobilize household labour and to improve the farm management system. For example, child labour, which was earlier excluded from farm-work is now being mobilized for work on contract farms. Better timing of agricultural operations has often been cited as a factor behind the increase in yield.

However, the contractual system has registered mixed results with respect to the three crops selected for experimentation. The most encouraging results were obtained from teff of which the net over-fulfillment (production in excess of quota) in one agricultural year stood at 81 quintals vis-a-vis net under-fulfillment for wheat and chickpeas amounting to 41 quintals in the same year. This point can, perhaps, reinforce the argument that the contractual system is less appropriate to economies with complex product-mix than to those based on mono-culture (e.g. the rice-based rural economy of Vietnam). The success of the contractual system depends upon information on the technical coefficients of production and upon proper farm-level book-keeping system.

It is possible that the contract farm and the collective farm proper compete for the farmer's labour. However, in the case of Debre-Mewi the labour input in the collective farm proper has increased by 13% following the implementation of the contractual system.

Having reviewed the economic impact of the contractual system in Debre-Mewi Co-operative, let's consider the position of women in the same production system.

One problem with some producers' co-operatives in rural Ethiopia, as has been indicated in the case of Legambo co-operative, is that household labour is marginalized in the sense that women's and children's labour is largely divorced from farm work. Under such conditions it is possible that labour shortage could occur in the midst of a labour surplus village economy unless labour-saving technologies and other development take place concurrently.

The advantage of the so-called Vietnamese approach (the contractual system) is that it facilitates the participation of women and children in farm work vis-a-vis the collective farm proper which in many cases, depend almost solely upon the labour of household heads (mostly males).

However, in Debre-Mewi women were largely precluded from taking advantage of the implementation of the contractual system not because they were confined to the house but, on the contrary, their labour had already been made part and parcel of the collective labour long before the introduction of the new system Of course, this point may seem awkward and strange. But once we understand that the co-operative farm is facing extreme shortage of labour, in particular, during peak seasons, and that the co-operative is neither mechanized nor could it use hired labour the only option it has is to encroach upon women's labour.

During peak seasons women spent much of the day time in field work and attended to housework at night. In fact, in recent years, night work has become increasingly common for both men and women in Debre-Mewi co-operative women's labour in the co-operative farm was so important that even maternity leave was limited to a mere ten days. In cases where they have extra time, women participated in the contract farm along with other household members.

On the other hand, women in the private sector participated in farm-work to a lesser degree as compared to those in the co-operative farm. In the private sector peak season labour shortage is met in two ways: (1) through the use of hired labour, and (2) though the use of the traditional system of labour exchange (e.g. the *debo*). The co-operative farm has done away with both traditional practices.

Thus the role of women in the Debre-Mewi co-operative farm can be considered quite different from that of Legambo co-operative and, for that matter, can perhaps be considered quite uncommon in many other co-operatoves found in rural Ethiopia.

Here it should be noted that not a single woman has joined the co-operative as a member in spite of the fact that 20% of households in Debre-Mewi Peasant Association are female-headed (there were 245 female-headed households)[31]. The contradiction, here, is that those who are divorced from the decision-making process are yet part and parcel of the labour process. (In the co-operative, decisions are "made" by members only.)

In Debre-Mewi co-operative women's contribution to agricultural production has remained substantial. During the period 1981-1987 the share of women in the total work-points, accumulated by the co-operative members averaged 24% per year (Table 8).

Moreover, it appears that the implementation of the contractual system did not bring about a reduction in the contribution of women to the collective labour. On the contrary, women's share in the total work-points increased from an annual average of 23% during the period 1981-1984 to 25% during the period 1985-1987 (Table 8).

The programme of increasing women's participation in farmwork without the provision of labour-saving home production technologies (e.g. bio-gas stoves)or facilities such as canteens and crèches may adversely affect the well-being of children and women themselves. Pressed with farmwork and housework, women may neglect their health, pay less attention to children, and may become less efficient in production.

In some cases women in the co-operative are forced to combine two or more traditionally separate activities in an attempt to save time. For example, at one time, this author saw a large group of women trying to combine farmwork with childcare and with water-fetching (see Appendix 5).

In the next section we will try to look closely at the points mentioned above and also try to further investigate the patterns of the gender division of labour on the basis of data generated by the time budget study.

7.3 Time Allocation Across Different Activities

In what follows we will attempt to closely investigate and quantify the gender division of labour on the basis of the results of the time budget study. A summary of the activities carried out by all sample demographic groups from both the private sector and the co-operative farm is presented in Table 9.

Directly productive activities and household maintenance activities respectively, have accounted for 42.4 and 30% of the available time during the study period while the "non-work" time accounted for only 27.6% of the time in sharp contrast to the Legambo area where the "non-work" time accounted for half of the time. The daily average time spent on directly productive activities and household maintenance, respectively, stood at 5.8 and 4.1 hours while only 3.8 hours were spent on "non-work" time in contrast to 7.5 hours of "non-work" in the Legambo area. On the other hand, the "day-light time" (the non-

sleeping time) was lower in the Debre-Mewi area by one hour (13.7 hours against 14.7 hours in Legambo, Table 1 and 9).

The pattern of allocation of time within directly productive activities is similar in the study areas. In both cases agriculture, followed by animal care and other household maintenance, *mutatis mutandis*, has ranked first while off-farm occupation is absent. However, time allocated to animal care in Debre-Mewi was double of that in Legambo. The major factor behind such a differential may be the relatively large livestock population kept in Debre-Mewi. Following agriculture, animal care and other household maintenance activities, the important activities in Debre-Mewi were food preparation, gathering fuels, and eating meals in contrast to Legambo where the corresponding activities were rest, visit and chewing *chat* all of which have considerable leisure elements (Tables 1 & 9).

Allocation of time by various demographic groups across broad activity categories is indicated in Table 10. The length of the "day light time" (the non-sleeping time) ranged from 10.9 hours for children (private) to 17 hours for males (co-operative) who were working well into the night during the study period. The latter (i.e. members of the co-operative) spent an average of 12.3 hours a day (more than double the time spent on DPA by members of Legambo Co-operative) on directly productive activities (DPA) alone. Both men and women in the co-operative have spent much more time on DPA than those in the private sector (Table 10). It is clear that adult persons in the co-operative have overworked during the study period.

Adult females (co-operative) spent an average of 4.2 hours (more than double of that of their counterparts in the private sector) on directly productive activities in conformity with what we discussed above. Moreover, the sample women in the co-operative farm had only an average of 3.2 hours per day for the "non-work" time since they had spent on average 11.6 hours (almost double that spent by their counterpart in Legambo) on DPA and HHMA during the study period. More participation of these women in farm work did not mean less labour input into HHMA. On the contrary, they spent on average 7.4 hours on HHMA (almost the same as women in the private sector). This point suggests that time required for HHMA is a fixed cost meaning that the labour coefficient in home production is downward rigid. The major implication of this point is that an increase in women's participation in fieldwork without the use of labour-saving technologies in home production and without the provision of facilities such as crèches may mean long working hours for women.

Men's involvement in HHMA was very much limited. For example members of co-operative, on average, spent only 1 hour (6% of their time) on HHMA in spite of the possibility that their help was much needed given the fact that housewives were hard-pressed with farm work.

Children, in addition to their involvement in fieldwork, spent more than an average of 3 hours on HHMA. But it should be noted that children (co-operative), whose parents were

hard-pressed with work pressure, have allocated less time (than children in the private sector) to the "non-work time" (Table 10).

Allocation of time across the components of DPA is depicted in Table 11. Agricultural work, like Legambo village, is carried out mainly by adult males. However, it should be noted that women (co-operative) and children (private) have been involved in agricultural work to considerable extent.

Children's contribution to animal care was highly significant. For example, children (co-operative) spent an average of 3.6 hours on animal care during the study period.

A reallocation of the labour time in the co-operative farm was indicated by the fact that, there, all households have spent more time on animal care than the private farms (Table 11). This point suggests the possibility that the livestock sub-sector can be used as a mechanism for partially absorbing the household labour in co-operative farms. Here it should be noted that in co-operative farms all livestock (except oxen) are private property.

Hard-pressed with peak season farm work, women in the co-operative farm were forced to reallocate their time whenever possible. For example, they spent less time on handicraft as compared to those in the private sector (Table 11).

Time allocation across various activity groups within household maintenance activities (HHMA) is presented in Table 12. Women in both system of production have allocated their time across those numerous and regular activities constituting HHMA in a more or less similar manner, most of the time going to "other household maintenance" and "food preparation". Males (private sector) participation in HHMA was limited to gathering fuel, other HHMA, and to going to a mill. In other words, no adult male involvement was reported in respect of such activities as child care, food preparation, and fetching water. In this respect, we observe strong similarity between Debre-Mewi and Legambo (see also Table 4). Children, on the other hand, have involved themselves in all activities within HHMA but "going to mill" which was found to be insignificant.

Details of the "non-work" time are presented in Table 13. Men and women within the co-operative farm have spent less time on "visits" than the private peasants in contrast to Legambo where the situation was the reverse. Perhaps, time spent on "visits" can thus be taken as a variable cost in the sense that this activity is elastic with respect to changes in the demand for the household labour.

All the demographic groups, with the exception of children who did not involve themselves in "mourning and funerals" and prayers, have participated in all of those numerous activities included under the "non-work" time (Table 13).

In Debre-Mewi, perhaps, the only time when the too-busy women relax on a daily basis is the coffee ceremony on which an average of 0.8 hours were spent during the study period (Table 13).

A snapshot of daily chores undertaken by a typical woman in Debre-Mewi is presented in Tables 14 and 15. Compared to Legambo Village, women in Debre-Mewi are extremely busy; they work with few respites. They attend to too numerous household chores in a single day as can be seen from Tables 14 and 15, where 27 different chores were recorded. In one particular day a housewife in the co-operative spent 5 percent of her time on pure rest, eating meals, playing with children, chatting with family members and on drinking coffee while her counterpart in Legambo spent 20% of her time on similar activities (see Tables 15 and 7). The ratio for a housewife in the private sector within Debre-Mewi was slightly higher; it was 10% (see Table 14). It should be noted that in Legambo a woman from the private sector spent 42% of her time on similar activities as indicated above (see Table 6). This point reinforces our argument that women in Legambo Village have enjoyed more leisure time than those in Debre-Mewi.

Before turning to the question of access to resources and decision-making we will summarize the highlights of the gender division of labour in Debre-Mewi Village as follows:

1) Traditionally, women's labour has remained an important component of the labour force required for farm work. In this respect, the findings of this study are in conformity with CSO's report that the economic participation rate for women in Gojjam is higher as compared to Hararghe region (CSO 1985).

2) The situation of women in the co-operative farm is totally different from what has been observed in Legambo. In Debre-Mewi, the co-operativizaiton programme has overburdened women with farm work. This programme has thus, varying effects on women in the case study areas. Nevertheless, in both cases the gender division of labour in co-op. farms have been subjected to the same social norms as in the private sector.

3) Night work, which has damaging physiological, psychological, medical and social effects (Carpentier & Cazami, 1977), has been on the increase in Debre-Mewi co-operatove as well as in Legambo co-operative as a result of organizational problems created by the co-operatives themselves.

4) Compared to Legambo there has been extreme shortage of labour in Debre-Mewi village (during peak seasons). Why? The most likely reasons are: (a) no labour-saving modern technologies are used in Debre-Mewi [32], (b) *teff*, the major crop produced in Debre-Mewi is highly labour intensive, (c) the land/man ratio in Debre-Mewi co-operative is relatively high, and (d) the demand for women's labour in home production in Debre-Mewi is extremely high vis a vis Legambo where women have only few things to do.

8. ACCESS TO RESOURCES AND DECISION MAKING [33]

A discussion of the gender division of labour cannot be complete without a consideration of the extent to which women have access to resources.

On the basis of a series of separate interviews with wives, husbands, and community leaders, we have been able to distinguish between two types of ownership of productive assets in the study areas to the extent that women are concerned: (1) all major assets (with few exceptions) such as land[34] and livestock are owned jointly by husband and wife, and (2) assets of low value (e.g. chicken) can be privately owned by wives. That is, the form of ownership, to a great extent, depends upon the value of the asset under consideration.

The manner of asset disposal, too, depends upon the value of the asset under question. A woman can sell a chicken without consulting her husband but when it comes to the question of selling a cow, a joint decision is required.

In Legambo village, in the past, a woman used to have a usufruct right over a plot of land [34] as a bride price. However, in recent years bride price is increasingly taking a different form: wrist watch (SEIKO brand) and gold ornaments.

One area in which women usually make independent decisions is the decision to join *equb* (the traditional saving association). However, this possibility is normally applicable to those women who are engaged in cash income-generating activities such as trade and sales of local beer, *tella*, and local spirits, *araki*.

In some cases, the decision-making power is closely associated with the patterns of the gender division of labour. For example, farm work decisions are largely made by men while household maintenance decisions are essentially made by women. Decisions regarding the acquisition and disposal of farm implements are largely made by men.

In cases where decisions cannot be reached through consensus, we were told, the husband has the final say.

Decisions in the co-operative farms are made, reportedly, by the general assembly on the basis of guidelines set by the Ministry of Agriculture and by other government organizations. The local development agent often closely watches the activities of the producers' co-operatives.

In Debre-Mewi co-operative, where membership is limited to men, women and do not participate in the decision-making exercise, though they are part and parcel of the laobur force.

In sub-Saharan Africa, it is common that women are active in the production of subsistence crops and men in cash crops. However, in both the case study areas no such crop-specific dichotomy in the division of labour was observed. The only exception we

observed was that, in Legambo, a type of vegetable, pumpkin, is by tradition, produced and marketed by women.

The use of modern farm technologies (e.g. spraying of chemicals, driving tractors) is virtually limited to men who have direct access to extension facilities.

The major sources of cash income for women in the study areas were: (1) trade in *chat* and vegetables in the Legambo area, (2) sales of chicken, eggs, dairy products, vegetables, small batch of grain, and (3) earnings from collective produce in the case of women members of the Legambo Co-operative. In the case of marketing of agricultural produces, it should be noted, women sell products of small batch while men take charge of big lots of products. For example, in Legambo, potatoes in small sacks are taken to the market by women and those in big sacks by men. Thus, women, in general, market items of low value since, to the extent that most agricultural products are concerned, value and size are directly related.

Similarly, women, in general, buy from markets items of low value which are usually consumed by the household. For example, women in Legambo usually buy salt, kerosene, spices, cooking oil, sugar, etc. In the case of purchases of high value products (e.g. a blanket) joint decision with the husband may be required. The marketing practice of a woman in Legambo is depicted in Appendix 6 by way of illustration.

9. CONCLUSIONS

The findings of this study have cast doubt on the relevance of the Boserup (1970) thesis to Ethiopian agriculture which has its own specific features compared to agriculture in many parts of sub-Saharan African and Asian countries. The mixed farming system of the Ethiopian highlands, far from being characterized by the how-culture, is dominated by widespread plough-culture. Moreover, the rain-fed Ethiopian agriculture, unlike southeastern Asia where irrigation and landless rural labourers are important, is based upon large-scale use of household labour for food and fiber production. Besides, *teff*, a crop which requires unusually high labour input is extensively cultivated in the Ethiopian highlands. In addition, the food (and drinks) consumption patterns in many parts of Ethiopia is so complex that the pressure on women's labour is very high. Under such conditions, therefore, women are neither confined to the house nor dominate food production.

The findings of this study may also be considered from the point of view of the new home economics. No evidences are produced (at least in the case study areas) in support of the contention that the gender division of labour is determined by the opportunity cost of labour in the market.[35] But, rather, the most likely factors that have influenced the gender division of labour, as suggested by the analysis of the cross-section data, are cropping patterns, cultural background, type of peasant organization, and type of farm technology in use. Similarly, no strong evidences are produced in support of the contention that the

household is a single utility maximizer. Although most decisions are said to be jointly made by husbands and wives, it has been reported that the former has the final say in cases where consensus is not reached. In some limited cases, men and women have areas of separate decision-making. The sale of low value products (e.g. chicken, eggs, small batch of grain) by women is a case in point. Although the "gender-sequential" farm work of women (task-specific division of labour) is undoubtedly the dominant feature of the gender division of labour in the case study areas, "the gender-specific" type of women's work was detected in one isolated case in Legambo where pumpkin is produced and marketed solely by women. Here it should be mentioned that, unlike the rest of sub-Saharan Africa, no women are primary producers of subsistence crops and men are producers of cash crops. That is, in general, the gender division of labour in the case study areas was not crop-specific but rather was task-specific ("gender-sequential") in many cases. Household maintenance, as activity that is often disregarded by official statistics, was found to be very substantial in absorbing a large portion of women's labour time. Moreover, as was indicated in the case of housewives in one of the case study areas (Debre-Mewi Co-op.), most of HHMA must be performed no matter how much the total time is. In other words, the number of hours which must be spent on household chores are largely irreducible.[36] This point suggests that the degree to which women can participate in farm work is constrained by time requirement for housework. This constraint, i.e. the minimum time requirement for housework which can be empirically determined at the micro level, may be considered as "fixed cost" in home production. On the other hand, such activities as visit, conversation, rest, chewing *chat*, etc., which are relatively elastic to changes in the economic and social environment, may be considered as "variable (time) resources" that can, under favourable circumstances, be mobilized for directly productive activities.

Besides, the minimum time required for HHMA can be taken as an additional restriction in the linear programming approach to the optimization of enterprise combination at the micro level.

Women's and children's labour has been found to be partially substitutable for and complementary to men's activities while men's labour is little involved in housework which is considered to be the domain of women and of children to some extent.

The fact that child labour is found to be considerably substitutable for women's labour in home production may reinforce the hypothesis that the women in agricultural households must have a pronatalist incentives in the sense that the value of children (to mothers) as producing agents must be high.[37] This point can remind us of the aphorism that: "the wheelbarrow is the best contraceptive"[38], meaning that the use of labour-saving technologies by women may contribute to reduction in the fertility rate. [39]

In one of the case study areas (Legambo village) strong indications of underutilizaiton of the household labour were produced while in the other case study area (Debre-Mewi) both men and women, the latter in particular, were overworked.[40] Moreover, it should be noted that the degree of underutilizaiton was affected by the co-operativizaiton

programme which, in Legambo, largely marginalized household labour and, in Debre-Mewi, overburdened men, women and children. The possible existence of underutilization can suggest that, under favourable circumstances, it may be possible to increase food production by effectively mobilizing the available household labour time.

As has been indicated in the study, strong inter-regional variations in the character of the gender division of labour were observed implying that policies and plans which affect women's labour must, to some extent, be location-specific.

The generalization that "men control the purse string" must be modified in the context of the study areas; rather it belongs to wives and the former to husbands, meaning that women have direct access to low value assets and products while high value assets and products are largely controlled by men.

The fact that the contributions of women to agricultural production (in Debre-Mewi) and to the household survival is considerable suggests that rural labour force surveys and the national income accounting system be properly designed with a view to capturing the true magnitude of such contributions. Moreovèr, designers of rural development projects and extension workers need to incorporate women into their programmes, in a more systematic and effective way than the present practice. The role of women in agricultural production is a newly emerging area on which little research has so far been undertaken. Of a number of relevant questions that need an indepth economic analysis, one can point out the following: (1) How do female-headed households differ form joint households in their economic behaviour? (2) To what extent does the demand for child labour affect the human fertility rate in the Ethiopian context? (3) How and to what extent does labour productivity differ between men and women? and (4) What is the effect of night work on productivity?

NOTES

1. A critique of Boserup's thesis is given in Lourdes Beneria and Sen (1981).

2. The explanation and development of this theory are given in (Evenson 1981, Becker Michael and Becker 1973, Barnum and Square 1979, Low 1986, Ellis 1988). The essence of this theory is that market goods and services are not themselves the agents which carry utility but are rather inputs in a process that generates commodities (characteristics) which in turn, yield utility. Households are assumed to combine time and market goods to produce more basic commodities that directly enter their utility functions. Thus, "in this formulation households are both producing units and utility maximizers" (Becker 1965: 495).

3. "This means that individual household members specialize in those tasks at which they are relatively more efficient compared to other members. For example, if men and women are equally efficient at household chores, but men receive higher wages than women in the market, then men go out to work and women stay in the home" (Ellis 1988: 176).

4. The CSO itself has confirmed that the contributions of women were undercounted (CSO 1985: 39-40).

5. This point was also confirmed by the CSO report (CSO 1985: 42, 118).

6. No adjustments were made for seasonal variations in labour use.

7. Slight different results were obtained by using the current activity approach (CSO 1985: 52).

8. This and the following information are based upon the results of the first round (round 0).

9. Economic dependency (Children below 10 years/Economically active persons) X 100.

10. The land reform proclamation of 1975 forbids the use of hired labour with few exceptions.

11. Aggregate data, such as that of CSO (1985) may hide vital information on the characters of the gender division of labour in peasant agriculture while micro-level data can allow us to capture location-specific characters of women's work.

12. Details are given in CSO (1985) and Appendix 1.

13. In rural Ethiopia, a Peasant Association may be wholly or partially collectivized. Debre-Mewi Peasant Association private sector and a small co-operative farm (i.e. Debre-Mewi Agricultural Producers' Co-operative). In Legambo the whole of the Peasant Association (P.A.) was fully collectivized a long time ago. Thus, in the absence of a private sector within Legambo village, we extended the coverage of our study to the adjacent private peasant farms in order to make a comparative analysis of the two types of peasant organizations.

14. See forms attached at the end of this paper.

15. Given the fact that this approach is extremely time-consuming, the sample size was limited to six women from each village (a total of twelve women).

16. Of course, repeated visits were required to gain intimate access to the peasant way of life.

17. The total number of observations for the whole sample stood at 609 persons.

18 The recording was undertaken by carefully selected and trained enumerators (living in the area for long time) under the close supervision of the researcher and his assistants. The results of the time budget study were found later to be consistent with information collected by using other approaches which were described above.

19 "Leisure" is mentioned, in passing, in connection with the common discussion of the work vs. leisure trade-off only. Dictionary meaning: "freedom from occupation or business; idle time; time free from employment during which a person may indulge in rest, recreation, etc." (the Webester Dictionary).

20 Researchers have used arbitrary methods of classification. For example in one study "leisure" included eating meals, personal hygiene, social engagements, etc. (McSweeney 1979 as quoted in Ellis 1988). In another study "leisure" included rest, personal hygiene, prayers, visitings and social events (FAO 1981), still in another "leisure" included "time spent sleeping and rest during the day other than mid-day rest, gossiping and doing nothing" (Barakat-E-Khuda 1980: 54).

21. The possible causes of the shifts in the cropping patterns and some of the consequences of this development were considered in Dejene (1987).

22. The term "*welba*" stands for advanced forms of agricultural producers' co-operative.

23. Even the side-line farms (individual plots) are mainly operated by adult males. Here it should be noted that private plots account for as high as 29% of the total food requirements of the members of the collective farms (Shiferaw 1986) vegetables, maize and *chat*, in that order, are the major crops cultivated on private plots which are less than 1/10 of a hectare.

24. It has been very difficult to classify "marketing" under any of the broad activity categories used above because the term may assume different meanings under different conditions. In some cases "marketing" may mean purchases of consumption items, in other cases it may mean petty-trade oriented towards income-generating activities. Moreover, in rural Ethiopia, "marketing" may mean something more than the act of buying and selling; it is during the market day that people visit friends, drink the local beer and spirit, go to grain mills and attend to other social and personal matters. It was under such a situation that in Legambo we placed "marketing" under "other household maintenance". The fact that we treated "marketing" as a separate activity category in Legambo has enabled us to determine the magnitude of its relative importance with the set of activity categories. "Marketing" in Legambo largely included petty-trade in *chat* and vegetables while in Debre-Mewi it was limited to purchases of consumption items.

25. Members of the co-operative, who work according to a fixed time schedule, do not have enough time to involve themselves in marketing. In fact, as can be seen from Table 5, no marketing time was reported by members of the co-operative during the study period.

26. In the absence of a better scheme of classification, work in backyard farms (though an income-generating activity) is placed under "miscellaneous" in the case of Legambo Village. The major problem with this task is that it often overlaps with housework activities. In Debre-Mewi it was placed under "other household maintenance".

27. The situation in Debre-Mewi (Gojjam region) is totally different as will be seen below.

28. Before the introduction of the contractual system, the co-operatives was operating at a loss amounting to Birr 3,474 per year and the introduction after its net gain averaged Birr 1,732 per year.

29. The information was first obtained from document, of the *woreda* MOA office and was later confirmed by co-op. leaders.

30. That is, the estimated average yield is: *teff*: 9 Q/ha., wheat: 7 Q/ha. and chickpeas: 10 Q/ha.

31. The ratio of female-headed household to the total, in Debre-Mewi, is double that of the national average of 10% (CSO 1985). Nobody knows why.

32. In Legambo, on the other hand, there were 2 tractors, 1 truck and 1 shelling machine in use. In addition, irrigation farming has perhaps made possible a more or less even distribution of labour over the year in the Legambo Village.

33. Here it should be noted that in the Ethiopian context the peasant's ability to make production, marketing, and consumption decisions are highly circumscribed by institutional factors. For example, in some areas, as in Gojjam, marketing outlets and product prices are largely determined by non-economic mechanisms.

    Besides, in rain-fed peasant agriculture where nature plays a predominant role, the household has limited capacity for making production decisions. For example, the planting date depends upon the availability of moisture.

34. The Land Reform Proclamation of 1975 provided that: "without differentiation of the sexes, any person who is willing to personally cultivate land shall be allotted land sufficient for his maintenance and that of his family" (Article 4 No. 1).

35. Robert E. Evenson, for example, has noted that "gains from specialization are generally sufficient to explain why men spend little time in household work in all societies" (Evenson 1981: 185). A brief critique of the implications of the approach of static comparative advantage in the context of the new home economics is given in Ellis (1988: 176-177).

36. The possibility that household chores are downward rigid has already been suggested in the literature (Ellis 1988: 179-180, Barakat-E-Khuda 1980: 35, Yotopoulos and Mergos 1986: 92).

37. For example, see Yotopoulos and Mergos 1986, Kelley *et al.* 1982: 45-68.

38. This aphorism, which was coined by Elisa Boulding, was quoted in Yotopoulos and Mergos (1986: 95).

39. For the review of the literature see, for example, Kelley *et al.* (1982: 45-68).

40. Of course, the study was undertaken during a peak season.

Table 1. Allocation of Time Across All Specific Activities by All Demographic Groups in Legambo: Daily Average and Percent of the Available Time

Activities	Daily av. (hrs)	Percent	Activities	Daily av. (hrs)	Percent
Directly Productive Activities	**3.6**	**24.2**	**"Non-Work Time"**	7.5	51.3
1. Agricultural work	2.40	16.3	1. Personal hygiene	0.20	1.3
2. Animal care	1.10	7.7	2. Visits	1.03	6.9
3. Handicraft	0.04	0.3	3. Mourning and funerals	0.17	1.2
4. Off farm Occupations	0.00	0.0	4. Conversation	1.00	6.7
			5. Eating meals	0.72	4.9
Household Maintenance	**3.60**	24.5	6. Drinking coffee	0.02	0.2
1. Child care	0.12	0.8	7. Rest	1.11	7.5
2. Food preparation	0.90	6.4	8. Schooling and reading	0.53	3.6
3. Gathering fuel	0.40	2.8	9. Chewing chat	1.00	6.8
4. Fetching water	0.46	3.1	10. Marketing	0.85	5.7
5. Going to mill	0.22	1.5	11. Prayers & going	0.03	0.2
6. Other household maintenance	1.45	9.8	to church		
			12. Sickness	0.04	0.3
			13. Miscellaneous	0.88	6.0
			All Activities	**14.70**	**100.0**

Note: Figures may not add up to totals due to rounding of average values.

Source: Results of the Time Budget Study.

Table 2. Allocation of Time Across Broad Activity Categories by Demographic Groups in Legambo

Demographic Group	Directly Productive Activities		Household Maintenance		"Non work" time		Total "daylight" time	
	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%
Adult female (private)	1.0	7.1	8.4	59.2	4.7	33.7	14.1	100
Adult female (coop.)*	0.9	6.1	5.0	31.7	9.9	62.2	15.8	100
Adult male (private)	6.0	40.1	1.0	6.8	7.9	53.1	14.9	100
Adult male (coop.)	4.6	31.7	1.5	10.2	8.4	58.1	14.5	100
Children (private)	5.1	38.6	2.9	21.6	5.3	40.0	13.3	100
Children (coop.)	2.3	14.7	4.3	27.8	9.0	57.5	15.6	100
All Demo. Groups	**3.6**	**24.2**	**3.6**	**24.5**	**7.5**	**51.3**	**14.7**	**100**

Note : Figures may not add up to total due rounding of average values
* Female-headed households (women co-operative members) were included.

Source: Results of the Time Budget Study.

Table 3. Directly Productive Activities in Legambo: Allocation of Time Across Various Activity Groups

Demographic Group	Agricultural Work		Animal Care		Handicraft		All Directly Productivity	
	Daily average (hrs)	%	Daily average (hrs)	%	Daily average (hrs)	%	Daily average (hrs)	%
Adult female (private)	0.4	40.4	0.6	59.6	0	0	1.0	100
Adult female (coop.)*	0.3	36.8	0.3	30.1	0.3	33.1	0.9	100
Adult male (private)	5.1	85.0	0.9	15.0	0	0	6.0	100
Adult male (coop.)	4.2	91.1	0.4	8.9	0	0	4.6	100
Children (private)	2.1	41.0	3.0	59.0	0	0	5.1	100
Children (coop.)	0.7	32.5	1.5	67.5	0	0	2.3	100

Source: Results of the Time Budget Study.

Table 4. Household Maintenance in Legambo: Allocation of Time Across Various Activity Groups

Demographic groups	Child Care		Food Preparation		Fuel Gathering		Water Fetching		Going to Mill		Other Household Maintenance		All Household Maintenance	
	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%
Adult female (private)	0.2	2.3	3.0	36.2	1.0	12.5	1.1	13.1	0.6	7.6	2.4	28.4	8.4	100
Adult female (coop.)*	0.1	1.9	2.7	53.0	0.4	8.7	0.4	8.0	0.1	2.6	1.3	25.6	5.0	100
Adult male (private)	0	0	0	0	0.3	27.8	0	0	0	0	0.7	72.0	1.0	100
Adult male (coop.)	0	0	0	0	0.1	6.9	0	0	0	0	1.4	91.7	1.5	100
Children (private)	0	0	0.1	3.7	0.2	6.0	0.5	17.6	0.4	14.3	1.7	58.4	2.9	100
Children (coop.)	0.1	9.8	0.7	17.0	0.4	9.9	0.8	19.7	0.2	5.7	1.6	37.8	4.3	100

Source: Results of the Time Budget Study.

Table 5. The "Non-work" Time in Legambo: Allocation of Time Across Various Activity Groups

Demographic Groups	Personal Hygiene		Visit		Mourning & Funeral		Conversation		Eating Meals		Drinking Coffee		Rest	
	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%
Adult female (private)	2.0	4.9	0.9	19.8	3.0	5.8	0.3	7.3	0.7	15.1	0.1	1.8	0.9	18.7
Adult female (coop.)*	0.1	0.4	1.1	11.5	0.3	3.5	1.9	19.3	0.6	6.3	0.1	0.9	0.6	
Adult male (private)	0.3	4.4	0.8	10.0	0.2	2.0	0.5	6.5	0.8	10.0	0	0	1.3	6.6
Adult male (coop.)	0.1	0.4	1.3	15.0	0.2	2.9	1.1	13.4	0.7	8.3	0	0	0.5	17.0
Children (private)	0.2	4.0	0.4	7.6	0.2	2.9	0.4	7.9	0.6	12.0	0	0	1.4	
Children (coop.)	0.2	1.7	1.6	17.6	0	0	1.8	20.6	0.8	8.6	0	0	0.2	5.3
														26.7
														17.0

Demographic groups	Schooling & Reading		Chewing Chat		Marketing		Prayers & Going to Church		Sickness		Miscellaneous		All "Non-work" Time	
	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%
Adult female (private)	0.1	1.9	0.7	14.1	0.5	10.2	0	0	0	0	0	0	4.7	100
Adult female (coop.)*	0	0	0.2	2.2	4.6	46.2	0.1	1.0	0	0	0.2	1.3	9.9	100
Adult male (private)	0.9	11.8	2.0	25.0	0.5	6.8	0.1	1.1	0.1	0.4	0.4	4.9	7.9	100
Adult male (coop.)	0.4	5.0	2.2	26.4	0	0	0	0	0.2	2.6	1.7	20.6	8.4	100
Children (private)	0.5	9.9	0.4	6.9	0.5	9.9	0	0	0	0	0.7	12.7	5.3	100
Children (coop.)	0.7	8.3	0.1	0.5	0.2	1.6	0	0	0	0	2.2	24.2	9.0	100

Note: 1. In cases where the daily average time comes to zero, the corresponding percentage share is scaled down to zero (e.g. "Miscellaneous" for adult female, private).
2. Figures may not add up to total because of rounding off.

Source: Results of the Time Budget Study.

Table 6. A Day in the Life of a Woman: Legambo, a Housewife, Legambo Coop.

Name: Woizero Derene Abdulahe*, Age: 34, Day : Wednesday

Sr. No.	Activities	Time taken in Minutes
1	Time she rose from bed: 6 a.m.	
2	Personal hygiene	20
3	Preparing breakfast (in very leisurely manner)	100
4	Eating breakfast with children	20
5	Simply sitting	40
6	Buying chat	290
7	Selling chat	40
8	Eating lunch	10
9	Playing with children	40
10	Dehusking grain with another person	95
11	Entertaining herself in a neighbour's house	85
12	Starting fire for cooking food	20
13	Boiling nifro (a type of food)	40
14	Playing with children and taking rest	120
15	Eating dinner	30
16	Chatting with family members	130
	She retired at 12 p.m.	
	Total hours 18	

* This women has virtually taken trade in *chat* as her main occupation.

Source: Results of the Time Budget Study.

Table 7. A Day in the Life of a Woman: Legambo, Co-operative Member

Name: Woizero Kedija Adem, **Age:** 37, **Day:** Wednesday

Sr. No.	Activities	Time taken in Minutes
1	Time she rose from bed: 6 a.m.	
2	Personal hygiene	10
3	Going to field (coop. farm)	20
4	Picking chat for use by men working in the co-operative farm	150
5	Going back home (with chat in her hands)	30
6	Eating breakfast	15
7	Taking the chat to the field	30
8	Taking rest	15
9	Collecting green pepper for use in the co-operative canteen	120
10	Taking rest	30
11	Boiling *hoja* (a kind of stimulant)	40
12	Pinking chat for use by men working in the coop. farm	70
13	Taking rest	20
14	Weeding onion field	80
15	Going home (at 4:30 p.m.)	30
16	Eating snack and taking rest	60
17	Fetching water from a spring	45
18	Playing with children while doing handicraft	135
19	Eating dinner while chatting with children	45
	She retired at 9:45 p.m.	
	Total: 15 hours 45 minutes	

Source: Results of the Time Budget Study.

Table 8. Debre-Mewi Co-operative: Work-points Accumulated by Men (Members) and Women and Productivity Before and After the Introduction of the Contractual System

Year	Membership (all male)	Area under Crops	Wor-kpoints Accumulated by Members (hours)	Work-points Accumulated by Women (hours)	Total Work-point	Gross Output (quintals)	Work-points per member in hours (3÷1)	Share of Women in the total work- point (4÷5x 100)	Yield in quintals (6÷2)	Output per Work-point in kg (6÷5)
	1	2	3	4	5	6	7	8	9	10
1981	31	77.96	44488	15662	60150	489.77	1435.10	26.04	6.30	0.81
1982	35	102.60	56551	16462	73013	729.90	1615.74	22.55	7.11	1.00
1983	37	96.40	63334	10365	73699	570.52	1711.30	14.10	5.90	0.77
1984	61	145.50	90332	37133	127465	810.84	1480.85	29.13	5.57	0.64
1985	61	188.94	82837	35404	118241	1119.52	1357.98	30.00	7.51	1.20
1986	61	208.66	111205.50	30618.55	141824.05	1348.35	1823.00	21.60	6.46	0.95
1987	61	184.25	146041.59	47213.50	193255.09	1398.77	2116.54	24.40	7.60	0.72

Source: Computed from various documents of the Debre-Mewi Co-operative.

* Gross output consists of out put from the common farm and be contractual farms.

Note: The contractual system was implemented in 1985.

Table 9. Allocation of Time Across All Specific Activities by All Demographic Groups Debre-Mewi: Daily Average and Percent of the Available Time

Activities	Daily Av. (hrs)	Percent
Directly Productive Activities	**5.8**	**42.4**
1. Agriculture	2.9	21.0
2. Animal care	2.4	17.7
3. Handicraft	0.5	3.7
4. Off-farm occupation	0	0
Household Maintenance	**4.1**	**30.0**
1. Child care	0.3	2.4
2. Food preparation	0.9	6.5
3. Gathering fuel	0.7	5.0
4. Fetching water	0.4	2.6
5. Going to mills	0.2	1.5
6. Other household maintenance	1.6	12.0
"Non-work" Time	**3.8**	27.6
1. Personal hygiene	0.5	3.9
2. Visits	0.6	4.2
3. Mourning and funerals	0.1	0.8
4. Conversation	0.2	1.6
5. Eating meals	0.7	5.3
6. Drinking coffee	0.4	2.8
7. Rest	0.5	3.4
8. Prayers and going to church	0.1	0.9
9. Sickness	0.1	0.5
10. Miscellaneous	0.6	4.2
All Activities	**13.7**	**100**

Source: Results of the Time Budget Study.

Table 10. Debre-Mewi: Allocation of Time Across Broad Activity Categories by Demographic Groups

Demographic Groups	Directly Productive Activities		Household Maintenance		"Non-work" Time		Total "Day-light" Time	
	Daily average (hrs)	%	Daily average (hrs)	%	Daily average (hrs)	%	Daily average (hrs)	%
Adult female (private)	1.8	13.0	7.2	52.0	5.0	35.0	14.0	100
Adult female (coop.)	4.2	28.0	7.4	50.0	3.2	22.0	14.8	100
Adult	7.9	54.0	2.1	14.0	4.7	32.0	14.7	100
Adult male (coop.)	12.3	72.0	1.0	6.0	3.8	22.0	17.0	100
Children (private)	4.3	39.0	3.9	36.0	2.7	25.0	10.9	100
Children (coop.)	4.4	37.0	3.4	29.0	3.9	33.0	11.7	100

Table 11. Directly Productive Activities (DPA) in Debre-Mewi: Allocation of Time Across Various Activity Groups

Demographic Groups	Agricultural work		Animal care		Handicraft		All DPA	
	Daily average (hrs)	%	Daily average (hrs)	%	Daily average (hrs)	%	Daily average (hrs)	%
Adult female (private)	0.3	19	0.2	9	1.3	72	1.8	100
Adult female (coop.)	2.0	49	1.1	27	1.0	24	4.2	100
Adult	5.0	63	2.9	37	0	0	7.9	100
Adult male (coop.)	8.3	68	4.0	32	0	0	12.3	100
Children (private)	1.4	33	2.4	55	0.5	12	4.3	100
Children (coop.)	0.5	12	3.6	81	0.3	7	4.4	100

Source: Results of the Time Budget Study.

Table 12. Household Maintenance (HHM) in Debre-Mewi: Allocation of Time Across Various Activity Groups

Demographic Groups	Child Care		Food Preparation		Fuel gathering		Water fetching		Going to mills		Other HHM		All HHM	
	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av (hrs)	%
Adult female (private)	0.2	3.2	2.1	29.3	0.5	7.4	0.7	10.3	0.7	9.3	2.9	40.5	7.2	100
Adult female (coop.)	0.5	6.0	2.4	33.0	0.7	9.0	0.6	8.0	0.3	4.0	3.0	40.0	7.4	100
Adult	0	0	0	0	0.3	15.0	0	0	0.4	19.0	1.4	66.0	2.1	100
Adult male (coop.)	0	0	0	0	0.2	21.0	0	0	0	0	0.8	79.0	1.0	100
Children (private)	0.5	14.0	0.6	15.0	1.4	36.0	0.4	10.0	0	0	1.0	25.0	3.9	100
Children (coop.)	0.5	17.5	0.4	12.2	0.7	21.5	0.4	11.0	0	0	1.3	37.5	3.4	100

Source: Results of the Time Budget Study.

Table 13. The "Non-Work" Time in Debre Mewi: Allocation of Time Across Various Activity Groups

Demographic	Personal Hygiene		Visit		Mourning & Funerals		Conservation		Eating Meals		Drinking Coffee		Rest		Prayers & Going to Church		Sickness		Miscellaneous		All non-work time	
Groups	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%	Daily Av. (hrs)	%
Adult female (private)	0.4	8.0	1.0	19.0	0.4	9.0	0.1	2.0	0.4	8.0	0.8	17.0	0.3	7.0	0.3	5.0	0.4	7.0	0.9	18.0	5.0	100
Adult female (coop.)	0.7	20.0	0.3	8.0	0.1	2.0	0.3	9.0	0.5	15.0	0.8	25.0	0.2	5.0	0.1	4.0	0	5.0	0.4	12.0	3.2	100
Adult Male (private)	0.4	8.0	1.3	27.0	0.2	3.0	0.3	7.0	0.7	14.0	0.4	9.0	0.3	6.0	0.4	8.0	0	6.0	0.8	17.0	4.7	100
Adult male (coop.)	0.7	20.0	0.6	17.0	0	0	0.3	8.0	0.8	23.0	0.1	0	0.2	5.0	0.2	4.0	0	5.0	0.7	18.0	3.7	100
Children (private)	0.4	16.0	0.5	19.0	0	0	0.1	4.0	0.5	17.0	0.1	5.0	0.7	25.0	0	0	0	25.	0.4	13.0	2.7	100
Children (coop.)	0.5	13.0	0.1	4.0	0	0	0.3	6.0	1.3	35.0	0.1	4.0	1.0	25.0	0	0	0	25.	0.5	12.0	3.9	100

Note: Figures may not add up to 100% because of rounding off.

Source: Results of the Time Budget Study.

Table 14. A Day in the Life of a Women: Debre-Mewi, private

Name: Woizero Yesasu Mandefro, **Age:** 38, **Day:** Wednesday

Sr. No.	Activities	Time taken (minutes)
1	Time she rose from bed : 5:30 a.m.	0
2	Personal hygiene	5
3	Fetching water from the river (twice)	35
4	Starting fire	5
5	Baking *enjera* and spinning cotton	95
6	Preparing stew (*wat)* and spinning	40
7	Grinding peas for next day's stew	70
8	Serving lunch (to children)	5
9	Making a grain store *gusgusha* from mud	65
10	Eating her lunch (at 10:50a.m.)	10
11	Making a grain store *gusgusha* from mud	25
12	Preparing malt for *tella* (the local beer)	35
13	Washing rough peas	25
14	Washing the big pot to make it ready for holding *tella*	25
15	Spinning cotton	130
16	Collecting *Kubet* (dried up cow-dung to be used as fuel)	60
17	Entertaining a guest with whom she ate food	15
18	Frying grain (to make *kollo*)	15
19	Spinning cotton while eating *kollo*	30
20	Fetching water from the river	30
21	Preparing *wat* while spinning cotton	40
22	Warming up water while spinning cotton	10
23	Drinking coffee from a neighbour's house	70
24	Serving dinner to family (at 7:30 p.m.)	10
25	Preparing the dough	20
26	Eating dinner	10
27	Chatting with family while spinning cotton	50
28	Arranging things and going to bed (retired at 9:10 p.m.)	10
	Total	**15 hrs 40 minutes**

Source: Results of the Time Budget Study.

Table 15. A Day in the Life of a Women: Debre-Mewi, Co-operative

Name: Woizero Kassu Debebe, **Age:** 40, **Day:** Friday

Sr. No.	Activities	Time taken (minutes)
1	Time she rose from bed : 4:20 a.m.	0
2	Attending to her baby	10
3	Personal hygiene	15
4	Fetching water (three times)	61
5	Sweeping the floor	10
6	Preparing *tella* (the local beer)	24
7	Preparing *(wat)* the local stew	30
8	Going to mill (from 6:50 a.m. to 9:50 a.m.)	180
9	Breast-feeding her baby	8
10	Washing her baby	7
11	Harvesting chickpeas (from 10:05 a.m. to 2:51 p.m.)	286
12	Eating lunch	19
13	Fetching water	20
14	Taking rest	10
15	Pounding barley	10
16	Fetching water (for the calf)	10
17	Fetching water	30
18	Pounding noug (a type of oil seed)	10
19	Grinding peas for *wat*	50
20	Frying grain (to make *kollo*)	10
21	Bringing *gesho* seedlings from the riverside and planting them	190
22	Cooking potatoes	30
23	Warming up water	10
24	Washing her husband's feet	5
25	Washing her hands and feet	5
26	Serving dinner to family (at 9:40 p.m.)	10
27	Eating her dinner	20
28	Making her bed (retired at 10:13 p.m.)	3
	Total	**17 hrs 53 minutes**

Source: Results of the Time Budget Study.

REFERENCES

Alemayehu Lireonso and Dejene Aredo (1988). A Socio-economic Study of Three Service Co-operatives Grain Mills in Ethiopia (IDR Research Report No. 31, Addis Ababa University).

Allen, Judith Van (1974). "Women in Africa: Modernization Means More Dependency." *The Center Magazine*, 12, No. 3

Berakata-E-Khuda (1980). *Time Allocation Among People in Rural Bangladesh* (Bergen: DERAP Publications).

Barnum, H.N. and Squire, L. (1979). *A Model of an Agricultural Household: Theory and Evidence*. World Bank Occasional Paper No. 27, Washington D.C. World Bank.

Becker, G.S. (1965). "A Theory of the Allocation of Time." *The Economic Journal*, Vol. L XXV No. 299, September.

Beneria, Lourdes (1981). "Conceptualizing the Labour Force: The Underestimation of Women's Economic Activities," *in African Women in the Development Process*, ed., N. Nelson (London: Frank Cass) pp. 10-28.

Beneria, Lourdes and Sen, Gita (1981). "Accumulation, Reproduction and Women's Role in Economic Development: Boserup Revisited". *Signs* Vol. 7, No. 1, pp. 279-298.

Boserup, Ester, (1970). *Women's Role in Economic Development* (New York: St. Martin Press).

Carpetier, J. and Cazamian, P. (1777). *Night work: Its Effects on the Health and Welfare of the Worker*. ILO.

Caulfield, Mina Davis (1974). "Imperialism, the Family and Culture of Resistance", *Socialist Revolution* No, 20.

Connell, John and Michael Lipton, (1977). Assessing Village Labour Situations in Developing Countries. (Delhi: Oxford University Press).'

C.S.O. (1985). Rural Labour Force Survey, April 1981 - April 1982. Statistical Bulletin No. 51, Addis Ababa.

Deere, C. Diana (1979). "Rural Women's Subsistence Production in the Capitalist Periphery" in *Peasant and Production: the Struggle of Third World Workers*, ed. R. Cohen *et al.*

Dejene Aredo (1987). Economic Study of the Establishment of Sorghum Mill and Dehuller in Ethiopia: Final Research Report. (IDR Research Report No, 29, AAU, Addis Ababa).

Demelash Lema (1988). Farming System in South-West Ethiopia: A Case Study of Villages Around Gore (Senior Paper, Department of Economics, AAU).

Dixon-Mueller, Ruth, (1985). Women's Work in Third World Agriculture. ILO, Geneva, *Women, Work and Development*, No. 9.

Donham, D.L. (1978). *Production in Male Community, southern Ethiopia*, 1974-75.

Elliot, C.M. (1969). "Agriculture and Economic Development in Africa: Theory and Experience 1880-1914", in *Agrarian Change and Economic Development in Africa*, (ed.) Jones and Woolf.

Ellis Frank (1988). *Peasant Economics: Farm Households and Agrarian Development.* (Cambridge: Cambridge University press).

Evenson, Robert E. (1981). "Food Policy and the New Home Economics". *Food Policy*, August.

FAO, 1986. Preparation of Baseline Studies of Women in Rural Households (Home Economics and Social Programmes Service).

FAO, (1986). Population and the Labour Force in Rural Economics. FAO Economic and Social Development Paper No. 59, Rome.

Fassil G. Kiros and Asmerom Kidane (1979). Socio-economic Baseline Survey of Welmera II. Economy (Mimeo, IDR, AAU).

Folbre, N. (1986). Hearts and Spades: Paradigm of Household Economics. *World Development*, Vol. 14 No. 2.

Gronau, Reubeu (1977). "Leisure, Home Production, and Work Theory of the Allocation of Time Revisited", *Journal of Political Economy* Vol, 85, No. 6, December.

Hanna Kebede (1976). Attitudinal Case Study of Farm Families in Robe, Gobbessa and Lemu (Assela: ARDU Publication No. 1).

Hartmann, Heidi I. (1979). "The Unhappy Marriage of Marxism and Feminism: Towards a More Progressive Union" *Capital and Class*, No. 8 pp. 1-33.

IAR (1988). Addet Mixed Farming Zone Diagnostic Survey Report: Gojjam Region (Research Report No. 4/88.

IDS (Sussex), 1984. Research on Rural Women: Feminist Methodological Questions. Bulletin Vol. 15, No. 1, January.

Kao, Anscell and Eicher (1969). "Unemployment in Agriculture: A Survey", in Eicher and Witt (eds.) *Agriculture in Economic Development.* (New York: McGraw Hill). Disguised.

Kelley, Allen C., A.M. Khalifa, M.N. El-Khorazaty (1982). *Population and Development in Rural Egypt.* (Durham: Duke Press Policy Studies).

Lakew Wolde Tekle & Hirut Terefe (1986). Study of the Situation of Women in Ethiopia (IDR Research Report No. 23).

Lars Leander (1969). A Case Study of Peasant Farming in Degelu and Yeloma Areas, Chilalo Awraja, Ethiopia (CADU Publication No. 22).

Lenin, V. (1966) *The Emancipation of Women.* International Publishers, New York.

Leon, Magdalena (1984). "Measuring Women's Work: Methodological and Conceptual Issues in Latin America", Research on Rural Women (Feminist Methodological Questions) IDS, Sussex, Bulletin. Vol. 15, No. 1, January.

Low, A. (1986). *Agricultural Development in Southern Africa: Farm Household Economics and the Food Crisis.* (London: James Currey).

McSweeney, B.G. (1979). "Collection and Analysis of data on Rural women's time Use". *Studies in Family Planning.* Vol. 10, No. 11/12.

Messing, S.D. (1957). The Highland-plateau Amhara of Ethiopia (A Dissertation in Anthropology, University of Pennsylvania).

Michalel, R.T. & Becker, G.S. (1973). The New Theory of Consumer Behaviour. *Swedish Journal of Economics,* Vol. 75, No. 4.

Molyneux, Masine (1981). "Women in Socialist Societies: Problems of Theory and Practice," in K. Young *et al.* (eds.), *Of Marriage and the Market.* CSE Books, London.

Nag et al. (1980). "An Anthropological Approach to the Study of the Economic Value of Children in Java and Nepal", in Hans P. Binswanger *et al.* (eds.) *Rural Household Studies in Asia.* (Singapore: Singapore University Press).

Nash, June (1975). The Integration of Women (Mexico City: International Women's Year).

Pankhurst, Helen (1989). Women in Menz. Paper Presented at a workshop on Alternatives in Rural Development in Ethiopia, Michelsen Institute, Bergen.

Polluha, Eva (1975). A Social Anthropological Study of 5 Peasant Families in Munessa Village, Arussi. Mini Research Task (CADU Publication).

Ridley, J.C. (1972). "The Effects of Population Change on the Role and Status of Women: Perspectives and Speculation", in *Towards a Sociology of Women,* (ed.), Constantina Safilios Rottchid.

Saffioti, Heleith I.B. (1978). *Women in Class Society.* (New York: Monthly Review Press).

Semench Tamrat (1983). The Role of Women in Agricultural Production. National Workshop on Women in Agricultural Development, Awassa, Ethiopia.

Sen, A.K. (1975). *Employment, Technology and Development.* (Oxford: Clarenden Press).

Shack, William A. (1966). The Gurage: A People of the Enset Culture (International African Studies and Oxford University Press, London).

Shiferaw Gurmu (1986). Baseline Survey of Production, Marketing and Processing of Sorghum and Other Cereals in Alemaya Area. (IDR Research Report No. 25).

Singh, Ram O. and G.E. Schuh (1986). "The Economic Contribution of Children and the Household Fertility Decisions: Evidence from a Developing Country, Brazil". *Indian Journal of Agricultural Economics,* Vol. 41, No. 1, January-March.

Solomon Ayalew (1986). The Problem of Labour Supply in Agriculture: A Strategy for Development (the National Workshop on Food Strategy for Ethiopia, Alemaya Agricultural University)

Tiruneh Zena (1976). Economic Characteristics of Peasant Families in the Awassa Area, Chilalo Awraja (Assela ARDU Publication, No. 3)

Whitehead, A. (1984). "I am Hungry Mum: The Politics of Domestic Budgeting", Ch. 5 in Young *et al.* (eds.).

White, Christine Pelzer (1982). "Socialist Transformation of Agriculture and Gender Relations: The Vietnamese Case", in *Agriculture the Peasantry and Socialist Development.* (IDS, Sussex, Bulletin Vol. 13, No. 4).

Yotopoulos, Pan A. & Mergos, George J. (1986). "Family Labour Allocation in the Agricultural Household". *Food Research Institute Studies,* Vol. XX, No. 1, pp. 87-105.

Appendix 1

Farming System in Ethiopia: National Averages and Contrasting Features of Gojjam and Hararghe

Features	National	Gojam	Hararghe
Percent of farmers practicing mixed farming	85.0	89.50	79.40
Average arable holding (ha.)	1.3	1.80	0.91
Average grazing land (ha.)	0.3	0.18	0.02
Fallow area as % of total cultivated area	13.1	7.70	14.40
Irrigated area as % of total cultivated area	0.9	0.70	4.40
Percent of farmers practicing irrigation	4.9	4.80	24.00
Percent of total area, under major crops, allocated to the major crop (*teff* national and Gojjam, and sorghum in Hararghe)	25.5	75.0	60.8
Percent of farmers with one or more oxen	62.3	82.0	52.0
Economic activity rate (participation rate), male	89.1	94.9	91.6
Economic activity rate (Participation rate), female	46.9	82.9	10.0
Economic activity rate (Participation rate) both sexes	68.7	89.2	52.7
Mean no. of days worked (days per week), male	4.2	3.4	5.5
Mean no. of days worked (days per week), female	3.3	2.7	5.0
Mean no. of days worked (days per week), both sexes	3.9	3.2	5.5
Average per capita income (Birr)	435.0	456.0	484.0

Notes:

1. The economic activity rate or the economic participation rate was computed as the ratio of the economically active population aged 10 years and over multiplied by 100 (C.S.O. 1985, p. 37).
2. US$ 1 = 2.07 Birr.
3. The per capita income refers to the rural population.

Sources:

1. Ministry of Agriculture (MOA, 1983) General Agricultural Sample Survey.
2. Central Statistical Office (CSO, 1985) Rural Laobur Force Survey April 1981 - April 1982.

Appendix 2

Meaning of the Various Categories of the Use of Time

1. **Directly Productive Activities (DPA):** Any time used for work that entitles a person to cash earning or subsistence requirements. Within the definition of DPA is included agricultural work, animal care, handicraft and off-farm occupations. Agricultural work consisted of any type of farm activity including land preparation, planting, weeding and harvesting. Animal care consisted of any activity involving the tending and feeding of animals including veterinary services and milking of cows. Handicraft refereed to art or craft meeting skill with hand (e.g. pottery, woodwork, wearing, hat making, basket making, spinning). Off-farm occupation referred to work carried out outside the farm in exchange for cash earning.

2. **Household Maintenance Activities (HHMA):** Any time used within the homestead for the purpose of maintaining the productive capacity and generational survival of the household as a unit of production and consumption. Activities included here are child care, food preparation, gathering fuel, fetching water, going to mill, and other types of housework. It should also be noted that numerous activities which were found to be extremely difficult to classify them elsewhere were included under "other household maintenance". Some of these activities were cleaning the compounding and the house, grinding and dehusking, churning milk, errands, washing utensils, preparing grain for processing, making bed, selling *tella* and spirits (which is a very rare case), washing clothings, etc. Thus, no wonder, time allocated to "other household maintenance" may be inflated compared to other housework activities.

3. **The "Non-work" Time**. It is extremely difficult to define this category of activities. That is why we placed it within inverted commas. Some of the activities included here are either physiologically necessary (e.g. personal hygiene, eating meals), or socially necessary (e.g. visits mourning and funerals); others may have strong leisure element (some degree of idleness in them), e.g. rest, conversations, etc. "sickness", a non-activity, is also included here, "prayers and going to church", an activity that gives spiritual satisfaction is included here. In one of the case study area, (Legambo), "Chewing *chat*" has been separately treated by placing it under "non-work" time. Similarly in Legambo where some children were going to school during the study period, we placed "schooling and reading" here. In the other case study area (Debre-Mewi) students were not included in the sample. "Miscellaneous" included all other activities which cannot be placed under the activities placed under "non-work". In addition, time unaccounted for and personal matters are included here. In Legambo, two important activities, listening to the radio and entertainment are included here.

Appendix 3

Amina's Share in the Total Amount of Maize Distributed in 1986

The following illustration shows how maize, the single major crop produced by the LAPC, is distributed among members after seed and reserve requirements are deducted form the gross output.

1. Amount produced during the agricultural year 1986.....	5006 quintals
2. Seed requirements.....	60 quintals
3. Reserve.....	4419 quintals
4. Amount available for distribution.....	4505 quintals
5. Total work points accumulated by members in 1986.....	118,164.5 quintals
6. Earning per workpoint in terms of maize (4505 - 118,164.5).....	0.038 quintals

That is, the amount of maize a member can get is arrived at by multiplying 0.038 by the individual workpoint accumulated as can be seen below with reference of Amina Yobie Sulie:

The total workpoint accumulated by Animal	276.9
Amina's share in the total maize distributed (276.9 x 0.038).....	10.5 quintals

In addition, Amina got from the collective farm 187.45 Birr cash from sales of vegetables in 1986. Besides, Amina had her own share from other types of produce in the same year.

Appendix 4

"Holidays" Observed in the Debre-Mewi Area*

Annual Holidays

Name	Date**
1. Debre-Mewi Mariam	Meskerem 21
2. Abo	Tikimt 5
3. Michael	Hidar 12
4. Tsion Hidar	Hidar 21
5. Tahissas Bahita	Tahissas 3
6. Gebriel	Tahissas 19
7. Christmas	Tahissas 29
8. Kana-Zegilila (Michael)	Tir 12
9. Sibrete-Atsemu (Giorgis)	Tir 18
10. Astero Mariam	Tir 21
11. Kidane Mihiret	Yekatiti 16
12. Abo	Megabi 5
13. Beale-igziabiher	Megabit 19
14. Miazia Giorgis	Miazia 23
15. Easter	(Variable date)
16. Lideta	Ginbot 1
17. Erget	Ginbot 17
18. Sene Michael	Sene 12
19. Sene Mariam	Sene 21
20. Hamle Abo	Hamle 5
21. Filseta	Nehassie 16

* Our informants were the local priest and elders.
** It is appropriate to use the Ethiopian Calendar here than the Gregorian one.

In addition, the weeks immediately preceding and following the Easter are also observed thus, bringing the total number of annual holidays to about 30 days.

Monthly holidays, which number six, are as follows: Abo, Michael, Gebriel, Mariam, Medhanealem and Baleigziabiher. Thus, after taking into account overlapping with annual holidays monthly holidays come to about 62 days per year.

The weekly holidays are Saturdays and Sundays which total about 59 days per year after roughly taking into account possible overlapping (with other holidays).

Thus, with a total of 151 days, "holidays" account for about 41 percent of the calendar year.

Appendix 5

Women Harvesting Chick-peas

One of the scenes I observed during one of my fieldworks in the Debre-Mewi village may illustrate the conditions of women in the cooperative farm. From a distant I saw a long line of women working in the field and as I approached the field I heard the cries of babies from under shades of trees. When I reached the place, I saw a contingent of 53 women moving their bent backs with almost perfect rhythm with the movement of the sickles in their hands. Apparently adamant to the cries of their little babies they were in a hurry to finish the harvesting of chick-peas in time and then take up housework. The group leader (a male) asked one of the mothers to interrupt her work and breast-feed her baby. When I asked this woman why she works in the field, she said "it is a matter of survival, what should I eat?". When I asked, "doesn't your husband work?", she said, "yes, he does but what he produces is not enough, for a family of four." When I turned my eyes towards a corner of the field I saw rows of pots (kept by the women) to be used for fetching water on their way back from fieldwork. Moreover, I was told that, at the same time, their husbands were winnowing harvested crops. However, this type of laobur must be exceptional in rural Ethiopia.

Appendix 6

Marketing Days of a Woman (Woizero Razia Ibrahim) in Legambo

a) Purchases

Date (Ethiopian Calendar)	Items	Price (Birr)*
25/11/80	Salt, Tea	1.25
26/11/80	Linseed, Salt	0.75
27/11/80	Leeks, Salt	1.40
28/11/80	Coffee	4.10
1/12/80	Cooking oil, Kerosene, Salt	0.95
4/12/80	Kerosene	0.50
6/12/80	*Chat*	2.00
7/12/80	Sugar	1.00
10/12/80	*Chat*	2.00
12/12/80	*Chat*	4.00
21/12/80	*Chat*	0.50
22/12/80	*Chat*	0.50
23/12/80	*Chat*	0.50
24/12/80	*Chat*	0.50
26/12/80	*Chat*	2.50
27/12/80	Salt, Sugar	3.75
	Total	**26.20**

* US$ 1= Birr 2.07

b) Sales

Date (Ethiopian Calendar)	Items	Price (Birr)
25/11/80	Milk	2.50
26/11/80	Milk	1.30
27/11/80	Milk	2.30
28/11/80	Milk, Lettuce	5.25
29/11/80	Milk	2.25
		13.60

Memorandum Items

1. Frequency of going to market: about 16 days per month.
2. Average expenditure per marketing day: Birr 1.65.
3. Average Sales per Marketing day: Birr 2.75.

Appendix 7

The Use of Time

Name of the Informant: _____ Sex _____
Age _____ Day _____
Date _____
P.A. _____

Sr. No.	Activities	Period	Hrs Min.
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
	Total		

Recorded by _____
Supervisor _____
Principal Investigator _____

Appendix 8

Ownership of Means of Production by Male and Female

List of means of production	Owned by male only	Owned by women only	Owned by both	Owned by Coop.	Other type of ownership
1. Oxen					
2. Cows					
3. Calves					
4. Goats					
5. Sheep					
6. Poultry					
7. Farm tools					
8. Coffee trees					
9. *Chat* trees					
10. -----					
11. -----					
12. -----					
13. -----					
14. -----					
15. -----					

Appendix 9

Male and Female Decision-Making

Sr. No.	Decisions	Decisions are made by husband alone	Decisions are made by wife alone	Decisions are mad by both husband & wife	Decisions are made differently (write it)
1	Carry out agricultural production				
2	Use chemical fertilizers				
3	Use organic fertilizers				
4	Join Co-operatives				
5	Join local *equob**				
6	Join literacy classes				
7	Sell grain				
8	Sell vegetables				
9	Sell animal products				
10	Sell Livestock				
11	Participate in food-for work project				
12	Buy utensils				
13	Buy Clothings				
14	------				
15	------				
16	------				

* "Equib" strands for a form of traditional saving associations.


34°E
36°
38°
40°
42°
44°
46
18°
16°
14°
12°
10°
8°
4°N
ETHIOPIA
ERITREA
ASMERA
LEGEND
International Boundary
Administrative Region Boundary
Scale
0 80 160 240 320 40
km.
TIGRAY
MEKELE
GONDER
GONDER
SURVEY AREA
WELO
DESE
GOJAM
DEBRE MARKOS
WELEGA
NEKEMTE
ADDIS ABEBA
HARER
SURVEY AREA
SHEWA
METU
ILLUBABOR
ARSI
ASELA
JIMA
KEFA
AWASA
GOBA
HARERGE
BALE
ARBA
MINCH
GAMO
GOFA
SIDAMO