

Full Length Research Paper

Labor force participation of women in forest villages and their income status: A case study of Trabzon

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All around the world, women are mostly responsible from nourishing their families. To perform this, women conduct respective economic activities either unpaid in their households, or paid in the public sphere. In a seemingly more agriculture-oriented country of Turkey, while women's labor force participation is higher than that of men's in rural areas, most of the agricultural and stock-breeding activities are performed by women labor. This study is based on the data from a survey in 68 forest villages of Trabzon province in Turkey, performed among 611 rural women and 237 rural men. Consequentially, it has been found out that, while nearly all of the household activities are undertaken by women, women labor is also higher than that of men's in a range of activities from stock-breeding to agricultural activities. Men take a slightly more active role in the sale of agricultural and animal products, and in forestry. It has also been understood that, agricultural and stock-breeding activities in forest villages are performed mostly for subsistence production, and that the substantial income source of forest villagers includes fees, wages, etc., being earned from activities outside the villages. The higher the household incomes rise, the lower the dependency to forestry falls. Average per capita income in these villages is \$1936, namely at a level lower than its Turkish average.

Key words: Forest villages, rural women, income, labor force.

INTRODUCTION

Differing from other villages with their settlement either inside, or aside forests, forest villages are to be situated at higher elevations, thus forcing their inhabitants to challenge harder geographic and climatic conditions. Due to the shortage and roughness of arable lands, their lower productivity, and usually limited means of transport to market are among other negative living factors of forest villages. Women are the ones suffering from such hardships more. Trabzon, having been chosen as the field of this survey, is located in Eastern Black Sea Region of Turkey. With regard to the population of Trabzon, 53.6% of it is living in urban areas, while the remaining 46.4% is living in rural areas. Considering that 75% of Turkey's population is living in urban areas

(according to TÜİK - Turkish Statistical Institution, 2009), our field of survey reveals a rural structure. Among the total 476 villages in Trabzon, 211 (44.3%) of them are forest villages. Coming to the fore as being Eastern Black Sea Region's province of education, health, transport, culture, and art, Trabzon is of a quality to represent whole of the region with its socio-economical and cultural structures. As being an emigrant province, Trabzon is among the fastest emigrating provinces of Turkey, with its emigration rate of -11.1 (DİE – State Institute of Statistics, 2002) during the period of 1995 - 2000. As per its level of development, Trabzon is below the averages of Turkey.

Advancements in industrialization and technology have brought forth an increase in consumption requirements. While cities have thus become centers of attraction, departures from villages and soil have resulted in decrease in rural population, and increase in urban population. In our field of survey with its rural population rate higher than that of its average in Turkey, emigration,

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a process not yet completed, maintains its effects even today (Alkan and Toksoy, 2008). Labor force participation of women in Turkey has reached to an incontrovertible level. Mostly occupied as wage-laborers in urban areas, women maintain agricultural and stock-breeding activities in rural areas in addition to their presupposed inherent domestic duties. Parallel to their positions as producers, processors, assessors and marketers in these activities, women also undertake key responsibilities in their households. Among the rural employee population, women's 93.9 and men's 65.4% are being employed in agriculture sector (TÜİK, 2009). According to 2007 data, while labor participation rate of women in urban areas is 20.2%, the same rate is 32.7% in rural areas. Despite such a higher rate of rural women, 83% of these women work in agriculture sector, 77% of which work as domestic laborers without any wage (KSGM, 2009). All around the world, women are responsible to provide the nourishment of their households. In cases not producing food, they labor in gaining the income for purchasing food (FAO, 1998). In the rural areas of most of the countries, women are the ones mainly responsible for shepherding sheep and goats, and herding the animals of their households (Molnar, 1987). Both from economical and social points of view, women are afar from attaining the socio-economical position they deserve. The most relevant factor underlying this situation is that, women are not deemed to be producers or farmers similar to men in the rural life (URL-1, 2003). Women of the rural areas experience the fact of "being disregarded" due to two significant reasons, avoiding them from being superior. First of these two is women's economic dependency against men's material power, and the second is the sexist perception, underestimating the activities of women against those of men. Most of the women are made to believe that, they are to deal with domestic activities, both according to such a perception arising from such a sexist ideology, and as a matter of their female identities (O'toole and Macgarvey, 2003). Socio-economic, climatic, and geographic structures of the villages both inside, and aside forests also have importance in the utilization, and sustainable management of natural resources, particularly those of forests. Putting forth the rates of participation of women in daily activities, and in income-generating activities, and amounts of women's incomes out of these, this study is intended for casting predictions with regard to the future of the forest villages within the field of study.

MATERIALS AND METHOD

Method

Original data of this study has been attained from the filling of questionnaires at the end of on-site face-to-face meetings, as well as from semi-structural meetings. Outputs of the studies from both Turkey, and around the world have also been made use of. There are 211 forest villages in Trabzon, as being the field of this study.

Due to the awareness of sample size of the main body, and for the variables were to be attained by counting as well, size of the example have been estimated pursuant to the following formula (Yavuz, 2007).

$$n = \frac{N * t^2 * P * Q}{(N - 1)d^2 + (t^2 * P * Q)}$$

n= Sample size

N= Unit number (211 forest villages)

P= Estimated rate of socio-economic structure

Q= 1-P

T = Confidence level (% 95, coefficient 1.96)

d= Error margin (%10)

While 66 villages may represent the main body out of a confidence level of 95%, and an error margin of 10%, the study was conducted in 68 forest villages. By making use of the same formula, number of women to be interviewed was estimated as 382 out of a confidence level of 95%, and an error margin of 5%, however 611 women were interviewed for enhancing the credibility of the study. In addition to the questionnaires being conducted with women, a number of men (237), corresponding to 30% of the number of questioned women, were also questioned. Attained data were used for making a comparison between women and men. Due to the redundancy of the number of the variables to be measured, as well as to the lack of any initial information or study output with regard to these variables, P value was taken as 0.5.

Villages of study were elected via a fully randomized process of balloting. Having 3 canvasser worked at the villages, they entered the villages from different points, and made questionnaires with their randomly selected subjects. In order to assess the levels of participation to the works to be done, works being done at the villages were listed, and the question of "How much help do you get from men while doing the following works?" was asked. Options of the question were scored as "None=0%", "Rarely = 5%", "Occasionally = 25%", "Doing it collectively = 50%", "Frequently = 75%", "Most of it being done by men = 95%", "Whole of it being done by men = 100%" and assessed accordingly. The same question was made available for the men, asked to them accordingly.

Household incomes were calculated according to the related statement from the person being canvassed from each household. Part of the products being obtained by a household from agricultural and stock-breeding activities is being marketed, while the remaining part is being utilized for personal consumption. Data as per the amounts of the products being bred and sold have been attained from the participants during their questionnaires. Having these amounts multiplied by their market prices as of June 2007 by virtue of the method being given at Hedge and Enters (2000), both their gained incomes, and the amount of their participations in the household budgets out of their subsistence productions have been put forth. The data were transferred to SPSS statistics packet program (SPSS Inc., 2003). Having frequency distributions at SPSS packet program, frequency and cross Tables have been formed. In order to seek for any meaningful connection between variables with class (categorical) qualities, Ki-kare Independency Test (cross table analysis) was made use of.

RESULTS and DISCUSSION

Labor force participation

Insufficient and unproductive arable lands, as well as

Table 1. Labor force participations as per men and women.

Work	From the point of view of women		From the point of view of men	
	Women (%)	Men (%)	Women (%)	Men (%)
Clearing fields and turning soil	63	37	56	44
Planting	69	31	68	32
Harvesting and transporting	68	32	61	39
Marketing	48	52	39	61
Collecting fuel wood	45	55	44	56
Transporting fuel wood	56	44	67	33
Collecting and transporting forage	74	26	65	35
Domestic stock	91	9	90	10
Feeding family	96	3	98	2
House cleaning	98	2	99	1
Child care	97	3	99	1

poor climatic conditions due to high elevations at the forest villages of the field of this study limit agricultural and stock breeding outputs therein. Low production, not fully compensating the subsistence of households, leads men to move out of villages for working. Such a circumstance forces women to work harder, and take more responsibilities. In cases men may gain enough income to compensate the subsistence of their households from their working outside their villages, there occurs immigration from villages to cities.

At the forest villages of the field of this study, women, beside the domestic activities mostly under their responsibilities, they participate to labor force at many outdoor production activities more than men. There two reasons of this. Firstly, men's being outside the villages for work, and secondly men's non-participation of particular works, being conventionally deemed as "women's works" by men. While production is usually made for "subsistence", and that outputs are not marketed, women are avoided to be described as "farmers" with regards to a production, despite stages of which are actively participated by women. Thus, such works come to be perceived as "fundamental duties" of women. Such a perception is adopted both by men and women as well. Labor force participation rate of women and men to various activities being conducted in villages according to the statements of both women, and men, is given respectively at Table 1. As being understood from Table 1, while dealing with most of the domestic activities, women's labor participation to most of the outdoor activities ranging from animal breeding to farming, is higher than that of men. Introduction of power-saws increased the responsibilities of men in chopping woods from the forest trees, or from the ones amassed around the arable lands. Moreover, men are also more active in the activities related with the marketing of the produced agricultural and animal products. Considering the participation to works being done, a similar spectacle is seen from the point of view of men. Besides their

participation to agricultural and stock breeding activities as unpaid family workers, though scarcely available, women may also be employed at waged works. Such an employment is mostly in the form of working as per diem employees at the agricultural activities of elder households. In consideration of women's current ages and educational statuses, being informed of the works in which they spend most of their working hours is illustrative for foreseeing the structure of the forest villages in the future. Distribution of the works in which women spend most of their working hours is displayed at Table 2, with respect to age groups of the canvassed women.

In this study, animal breeding, including heaping and carrying grass, is the work in which women spend most (44%) of their working hours. Cooking comes the second by 16.1, and agricultural activities comes third by 15.3%. Only 7.9% of the women spend most of their working hours in caring with their children. As a result of the Chi-Square test being conducted with regard to the age groups of women, and the works in which they spend most of their working hours, the relationship between these two variables has been found statistically significant (Chi-Square calculation =137.9; sd = 49; $P < 0.001 < 0.05$). While 24% of the women from the age group of 15 - 24 spend most of their working hours in stock breeding, 33.3% of them spend time in domestic cleaning activities. The same ratios in the age group of 45 - 54 are respectively 60.2 and 5.5%. Relationship between the questionnaire participants' educational statuses and the works in which they spend most of their working hours has also been sought. Such a relationship has been thought to be suggestive with regard to the labor force of forest villages in the future, as well as to the contribution of this labor force to production. Yet, educational statuses of women living in forest villages are on a continuous rise. It is quite likely that, the higher the educational status will rise, the more varied the labor force participation and production choices will become. Distribution of the works in which

Table 2. Distribution of the works in which women spend most of their working hours with respect to their age groups.

Work age	Feeding family		Child care		House cleaning		Domestic stock		Planting and harvesting		Collecting and ransporting firewood		Collecting and transporting forage	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
15 - 24	14	18.7	9	12.0	25	33.3	18	24.0	7	9.3	2	2.7	0	0
25 - 34	15	14.4	17	16.3	22	21.2	36	34.6	11	10.6	1	1.0	2	1.9
35 - 44	16	13.6	9	7.6	18	15.3	46	39.0	28	23.7	1	0.8	0	0
45 - 54	13	10.2	9	7.0	7	5.5	77	60.2	17	13.2	4	3.1	1	0.8
55 - 64	9	10.0	2	2.2	11	12.2	46	51.2	18	20.0	4	4.4	0	0
65 - 74	16	26.7	1	1.7	3	5.0	33	55.0	7	11.6	0	0	0	0
75 - 84	11	42.3	0	0	3	11.5	7	26.9	5	19.3	0	0	0	0
85 - 94	4	50.0	1	12.5	1	12.5	2	25.0	0	0	0	0	0	0
Total	98	16.1	48	7.9	265	14.8	90	43.5	93	15.3	5	1.9	7	0.5

-Chi-Square calculation =137.9; sd = 49; P <0.001 <0.05.

Table 3. Distribution of the works in which women spend most of their working hours with respect to their educational statuses.

Education	Feeding family		Child care		House cleaning		Domestic stock		Planting and harvesting		Collecting and transporting firewood		Collecting and transporting forage	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Illiterate	38	15.5	9	3.7	20	8.2	136	55.5	37	15.1	5	2.0	0	0
Literate	15	16.5	8	8.8	9	9.9	39	42.9	17	19.7	3	1.7	0	0.4
Primary School	33	15.3	27	12.6	43	20.0	77	35.9	30	14.0	4	1.9	1	0.5
Secondary School	5	12.8	3	7.7	13	33.4	10	25.6	7	17.9	0	0	1	2.6
High School and above	7	36.8	1	5.3	5	26.3	3	15.8	2	10.5	0	0	1	5.3
Total	98	16.1	48	7.9	265	14.8	90	43.5	93	15.3	12	1.9	3	0.5

Chi-Square calculation = 74.6; sd = 28; P < 0.001 < 0.05.

women spend most of their working hours is displayed at Table 3. Distribution of the works in which women spend most of their working hours is displayed at Table 3, with respect to with respect to their educational statuses. As a result of the Chi-Square test being conducted with

regard to the works in which they spend most of their working hours as per their educational statuses, the relationship between these two variables has been found statistically significant (Chi-Square calculation = 74.6; sd = 28; P<0.001<0.05). Having Table 4 reviewed, it is

seen that illiterate women are mostly occupied with stock breeding by 55.5%. The same ratio becomes 15.8% among the ones graduated from high-school or above. While 26.3% of the women graduated from high-school or above spend most of their working times in domestic cleaning, the

Table 4. Distribution of values, comprising the overall production, to the resources of production.

Production resources	Percentage of production resource within the overall production (%)
Incomes from wages, fees, etc	61.6
Production from stock breeding	20.4
Agricultural production	16.8
Production from forestry	1.0
Incomes from handicrafts	0.2
Total	100

same ratio is 8.2% among illiterate women. Younger and educated women do not spend more time in agricultural and stock-breeding activities. While elderly women do not employ their younger daughters in such works, younger women lack experience and skill in them. Overall educational statuses in forest villages are on a continuous rise. While educated women, without any background information and skill in agricultural and animal production, will be unable to perform such activities, therefore production in forest villages will decrease. Under such a circumstance, the first occupation being abandoned becomes stock breeding. As a result of another study, it has been found out that, number of animals of the households in the region decreased by 66.6% during the last decade (Alkan, 2007).

Women's responsibilities to a considerable extent in domestic activities is not a situation peculiar to our field of study, but a course of action spread country-wide, even world-wide. As a result of a study, having been conducted in Netherlands and France, among EU States, it has been found out that, women spend most of their times in domestic activities, while they work for half of men's working time in agricultural activities (Keskin, 2004). This is less so in Africa, where men may be providers of the land and managers of the farms on which the women produce food for the family. There may also be large differences in food handling, food preparation, child care, and feeding, in which men's participation is usually low (Wandel, 1995).

Income status

Income status of the inhabitants of forest villages is an important factor, giving shape to their life-qualities, social statuses, and cultural structures, while being the chief indicator of villagers' levels of dependency to forest resources as well. Inhabitants of the forest villages at the field of this study, where stock-breeding and agricultural activities are performed generally for subsistence, earn most of their incomes from outside their villages. Distribution of cash incomes of households, agricultural and animal products they both make use for their demands and sell, and forestry products, altogether

comprising the total production of the households to the total production resources is displayed in Table 4. Having reviewed Table 4, it is seen that, 61.6% of the household incomes is comprised of wages and fees. Incomes from agricultural and stock breeding comprise 37.2% of the total incomes. Higher level of wage incomes in total incomes is a process peculiar not only to the field of this study, but to the whole of the country. Yükseler (2003) indicated that, portion of transfer incomes from the state (retirement pays, social benefits, agricultural incentives, etc.) in the household incomes Turkey-wide raised to a considerable rate. Taking the household income statuses in forest villages into consideration, it is seen that most of the incomes is gained from outside the villages. Production amounts in the villages do not compensate the ever increasing and varying needs of households, as well as their service demands. Thus, men move out of villages for work, and women therefore undertake the works and responsibilities both in and out of the households. Throughout such a wearing process for women, in times men begin earning sufficient incomes, they invite their families alongside themselves. This process accelerates emigration from villages. The persons moving out usually do not break their ties with their villages. They temporarily come back to their villages in order to take their holidays, and to harvest their crops. Upon being retired, they move back in their villages for permanent stay. Therefore, villages become residences for retirees, not actively involved in the production process.

In the field of this study, average per capita annual output amounted to 1936 \$, when per capita gross national income in Turkey amounted 5477 \$ (URL-2). In other words, forest villagers earn incomes amounting considerably lower than the averages of Turkey. Average daily incomes as per the total production outputs of the inhabitants of the villages of the field of this study amount to 5.3 \$. Despite amounting higher than absolute poverty line of 4 \$ (DPT – State's Planning Organization – 2001), specified by World Bank with regard to the region in which Turkey is also located, this is such an amount considerably lower than the values of similar quality of the developed countries. In addition to women's contribution in most of the products being produced, and

sold in forest villages, 4.3% of the same women population generates a slight, but direct contribution to their household incomes by selling the handicrafts they make in their spare times. The relationship between per capita annual income amounts and amounts of consumed firewood has been found statistically significant (Ki-kare calculation = 42.0; sd = 16; $P < 0.001 < 0.05$). Improvements in the income statuses of the inhabitants of the forest villages lower the amount of their consumption in the forestry products, particularly in firewood, and thereby enlarge the presence of the forests. Such improvements also bring along lessening of the number of domestic animals, utilization of washing machines, bottled gas and electric heaters in the households, purchase of coal, houses' becoming heat-insulated, and all these developments lower the amount of firewood consumption as well.

Conclusion

Forest villages are usually situated on sloped lands, at a distance from city and district centrums relatively farer than other villages. Their inhabitants maintain their agricultural and stock breeding activities usually via conventional methods, on lands not suitable for agriculture as per both their qualities, and their sizes. Climatic hardships as per the locations of such villages add up to living difficulties in these regions. Due to men's obligation to move out of their villages for work usually arising from socio-economical structure, land and climatic conditions, and rural poverty, women becomes obliged to perform most of the works both in and out of their households. Women labor force in Turkey is concentrated particularly in agricultural sectors. Departure of men labor force from agriculture leads to a decline of men labor force in agriculture, and thereby to an increase of women labor power in agriculture as a replacement.

As a result of the increase in the incomes being gained outside the villages, and that of the rise in the educational statuses of women, firstly stock breeding activities become abandoned. Desire to leave village, and to live in district and city centrums comes thereafter. Developments in natural, economical, and social conditions and in means of transportation as well, together with the attraction of cities, all these factors accelerate emigration to bigger cities. While forest villages tend to become villages in which mostly retirees live, and being visited by the remaining members of the households only in summers for taking their holidays, their economies thereby become more consumption-oriented than production-oriented. Decrease in the population of the villages, as well as tendency towards alternative resources, have altogether lowered firewood consumption. Therefore, threats against forests from the forest villages, in which firewood is being supplied from the nearby forests, and usually in illegal ways, have become

lessened. Despite such positive developments for sustainable forestry, unproductive utilization of arable lands and stock breeding potentials are altogether to be considered as an economical loss. Moreover, the ones immigrating to cities with insufficient infrastructural conditions generate an element of threat towards unplanned urbanization. Women's lack of sufficient educational and occupational knowledge and skills at the time of emigration to cities avoids them to participate in the urban labor force market, and leads them mostly to become "housewives". Women, in need to work due to lack of incomes, are obliged to be employed in works with lower incomes-statuses without any social security (KSGM, 2009).

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