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AN ANALYSIS OF FEMALE LABOR FORCE PARTICIPATION IN TURKEY FROM A GENDER PERSPECTIVE

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TÜRKİYE'DE KADINLARIN İŞGÜCÜNE KATILIMININ TOPLUMSAL CİNSİYET AÇISINDAN BİR ANALİZİ

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LIST OF ABBREVIATIONS

EU	: European Union
FLFP	: Female Labor Force Participation
GDP	: Gross Domestic Product
GNP	: Gross National Product
HLFS	: Household Labor Force Survey
ILO	: International Labour Organization
ITU	: Istanbul Technical University
LFP	: Labor Force Participation
OLS	: Ordinary Least Squares
SHÇEK	: Agency for Social Services and Child Protection Sosyal Hizmetler ve Çocuk Esirgeme Kurumu)
UK	: United Kingdom
UN	: United Nations
US	: United States

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AN ANALYSIS OF FEMALE LABOR FORCE PARTICIPATION IN TURKEY FROM A GENDER PERSPECTIVE

SUMMARY

This study attempts to elaborate the reasons behind women's strikingly low rates of labor force participation in Turkey. In a number of international rankings of gender empowerment involving over 100 countries, Turkey ranks in the bottom ten in terms of female labor force participation. Currently, as low as 19% of adult urban women in Turkey participate in the labor force. Conventional studies relying on application of econometric methods to household data have commonly pointed out women's low levels of education as the main reason for their absence in the labor market. A number of recent field studies from a gender perspective, however, point out to sexual division of labor in the household and the related gender roles in the social and economic spheres as the primary determining factors in women's decision of labor supply.

Following these recent studies, this thesis aims to provide an analysis of the determinants of female labor force participation in Turkey from a gender perspective. A quantitative and qualitative analysis of Household Labor Force Data shows that the sexual division of labor interacting with gender roles and household livelihood concerns shape the gendered patterns of labor force participation. These determinants also exhibit substantial variation by urban versus rural location, level of education as well as through time.

TÜRKİYE'DE KADININ İŞGÜCÜNE KATILIMININ TOPLUMSAL CİNSİYET BAKIŞ AÇISINDAN BİR ANALİZİ

ÖZET

Bu çalışma, Türkiye'de kadınların işgücüne katılım oranlarının çarpıcı bir şekilde düşük olmasının ardında yatan sebepleri irdelemeyi amaçlamaktadır. Uluslararası karşılaştırmalarda, Türkiye 100'ü aşkın ülke arasında, kadın işgücüne katılım oranları bakımından sondan 10. sıradadır. Kentli kadınların %19'u gibi düşük bir oran işgücüne katılmaktadır. Alışılagelmiş çalışmalar, toplulaştırılmış hane halkı verilerine uyguladıkları ekonometrik yöntemlerin sonuçlarına dayanarak, kadının işgücü piyasasında olmayışını düşük eğitim seviyelerine bağlamıştır. Son yıllarda yapılan, toplumsal cinsiyet bakış açısına sahip az sayıdaki birkaç saha çalışması ise, hanede cinsiyete dayalı işbölümü ile sosyal ve ekonomik alandaki toplumsal cinsiyet rollerinin kadının işgücüne katılımında belirleyici etkenler olduğuna dikkat çekmiştir.

Bu çalışmada, Türkiye'de kadın işgücüne katılımını belirleyen faktörler toplumsal cinsiyet bakış açısıyla ele alınacaktır. Hanehalkı İşgücü verilerinin nitel ve nicel analizi göstermektedir ki; toplumsal cinsiyet rolleriyle iç içe geçmiş cinsiyete dayalı işbölümü ve hanehalkı geçim zorunlulukları, işgücüne katılımdaki cinsiyet farklılıklarını şekillendirmektedir. Belirleyici faktörler, yaşanan yerin kırsal veya kentsel bölge oluşuna, eğitim gruplarına ve yıllara göre de değişkenlik göstermektedir.

1. INTRODUCTION

Since 2001, Turkey has been experiencing high growth rates which have stimulated the volume of exports and foreign direct investment. This growth process, however, could not be supported by higher job creation and higher labor force participation. Total employment rate as of 2006 is 43.2% and total labor force participation rate is only 48.0%. 34% of total employment is in agriculture and 51% of total agricultural employment consists of unpaid family workers over 90% of whom are female. Furthermore, total unemployment rate is 9.9% of which non-agricultural unemployment accounts for the biggest share. Non-agricultural unemployment rate is 12.6%, which is one of the highest rates amongst OECD countries and EU countries.[1]

The labor force participation and employment rates vary substantially by sex. Female participation rate for 2006 is at a low of 24.9% versus 71.5% for men. The employment rates for women and men are 22.3 and 64.5% respectively. The female participation rate is even lower for urban women at 19.3% (leaving out the unpaid female family workers in the agricultural sector).

According to United Nations (UN) statistics (2006), Turkey has the 10th lowest female economic activity rate among 130 countries and 13th lowest female share of adult employment.[2] Countries which are similar to Turkey in terms of economic development all have higher female economic activity rates. Turkey ranks with the less developed countries in terms of female employment.[3]

Besides, according to International Labour Organization (ILO) Global Employment Trends Brief 2007, women's average labor force participation rate in 2006 is 29.5%

[1] Average unemployment rate of OECD countries in 2005 was 6.7% and EU-15 average was 8.3%.
[2] Economic activity rate refers to the percentage of the population aged 15 and over, unless otherwise specified, which is economically active, i.e. employed and unemployed persons, including those seeking work for the first time.
[3] The lowest ten countries are Algeria, Iran, West Bank and Gaza Strip, Pakistan, Egypt, Syrian Arab Republic, Guatemala, Tunisia, Oman, and Turkey.

for the Middle East and North Africa, 52.4% for Latin America and the Caribbean, and 36.0% for South Asia. Turkey lies much below these averages with 24.9% female labor force participation (FLFP) rate. Table 1.1 below shows a comparison of some selected OECD countries representing the participation rates by sex.

Table 1.1. Participation rates in some OECD countries in 2005
(% annual average estimates for population of the age 15-64)

Country	Male	Female
Iceland	89.8	83.4
Denmark	83.6	75.1
Canada	82.5	73.1
Australia	82.7	68.4
France	74.5	63.8
Japan	84.4	60.8
Belgium	73.1	59.5
Hungary	67.9	55.1
Greece	79.2	54.6
Korea	78.2	54.5
Italy	74.4	50.4
Mexico	83.1	43.1
Turkey	76.2	26.5

Source: Labor Force Statistics 1985-2005, OECD

The fact that overall labor force participation rate is so low in Turkey is one of the major items in negotiations with the European Union (EU). The EU average female employment rate (for age 15-64) in 2005 is 56.3% and the target rate set by Lisbon criteria is 60% in 2010.[4] Turkey, being far from this target, has to accommodate the twin goals of absorption of approximately 12.8 million women who define themselves as homemakers into the labor force in order to increase the labor force participation rate and decrease the overall unemployment rate (Ilkkaracan and Acar, 2007). Some activist groups, women's organizations and researchers have been trying to draw the attention of policy makers to the ideology and norms behind the unequal rates of male and female participation.

Studies concerning female labor force participation have become common since the second half of 1990s in Turkey. However, only a limited number of studies look at the issue from a gender perspective, particularly in the discipline of economics. A resonating conclusion of most of these studies and related policy documents points

[4] Source: Eurostat News Release 11- September 2006

out “low levels of education” as the main reason for lack of female participation in the labor market.

This research study claims that reasons leading to the low rates of female participation in the labor force cannot be restricted to the simplifying account of “low levels of education”, but rather the social construction of gender roles and sexual division of labor in the family and society need to be fundamental components of an account attempting to explain the gender differences in patterns of participation.

The objectives of this research are to

- identify the factors leading to women’s low rates of labor force participation in Turkey, based on the findings of the Household Labor Force Surveys (HLFS);
- evaluate the variations in the determinants of female labor force participation by rural versus urban location, and by level of education;
- evaluate the variations in these determinants through time based on a comparison of analysis from late 1980s up to date.

The study proceeds as follows: Chapter 2 provides a theoretical background on the various accounts in economics explaining labor force participation and gender differences therein. Chapter 3 highlights the results of the previous empirical work on female labor force participation both in the international literature and on Turkey; Chapter 4 provides an analytical presentation of HLFS data from 1980s to 2000s to present a gendered overview of labor force participation patterns in Turkey. Chapter 5 uses 1988 and 2005 HLFS data to conduct a logit regression analysis for male and female samples as well as for different subgroups of the female sample. Chapter 6 employs a description of the current legal and institutional framework related to female participation in Turkey and offers some policy insights giving examples from other countries which are performing better regarding female labor force participation levels; and finally Chapter 9 concludes.

2. THEORETICAL BACKGROUND

Perspectives concerning labor supply and the determinants of labor force participation have been illustrated in economic theory in different times of history. Here a summary of some of the arguments of various views ranging from classical economists to neoclassical economists and feminist economists will be given.

2.1. Treatment of Labor Supply by Classical Economists

Adam Smith, the founder of the classical school, defines two kinds of wages named as "subsistence wage" and "actual wage". Subsistence wage is the amount which is enough for the population to maintain their lives. Actual wage is the rate which is determined in the market. According to Smith, if the actual wage exceeds the subsistence wage, this will cause the population to increase which will also lead to the rise of labor supply (Kazgan, 1980). This will in the end cause the equalization of subsistence wage and actual wage since the increased labor supply will result in decreased wages.

Like Smith, David Ricardo makes a differentiation between "natural" and "market" wages. According to Ricardo, if the market wage exceeds the natural wage, the worker is capable of affording his/her family's needs and forming a healthy and large family. However if the number of workers increase due to the population increasing effect of high wages, wages fall down to their natural levels again and may even fall below the natural level in order to balance the amount of labor. This analysis is very similar to that of Smith and defers in a few points from Smith's analysis (Kazgan, 1980).

Malthus's population principle is based on the following propositions. The first is that population increases according to a geometrical series when it is unchecked and the second is that food supply increases in an arithmetic progression. Although the trends of his time did not support his theory, he enlarged his findings and tried to offer solutions to the problem of high population and lack of food. He suggested two kinds of checks on population growth; named as the positive checks and the preventive checks. Positive checks are death-increasing events and situations such as diseases, wars, famine and drought. Preventive checks are birth-decreasing controls such as contraception (birth control), abortion and moral restraints. Leaning on these

two propositions, Malthus suggests that workers over reproduce themselves if wages are high, leading to a supply of labor which is larger than the demand. This causes wages to fall to their natural level which only provides the workers a minimum level of subsistence. Unless the population is prevented from increasing without control, workers cannot improve their condition (Kazgan, 1980).

So far we have summarized the views of main classical thinkers on labor supply which are placed somehow in their theories of population or wage theories, assuming that the increase in population will raise labor supply which will lead to a decline in wages. These views were strictly criticized by Marx since the classical school screened the decline in wages as an imperative for capital accumulation in Europe. They also did not make any distinction about the situation of the woman laborers working in absolutely bad conditions in a Europe of industrial revolution.

> Marx rejects the Malthusian population law as the mechanism for producing the infinitely elastic labor-supply curve. Instead, Marx based his explanation on the existence of the "surplus" labor force beyond productively employed workers in the industrial sector, called the industrial "reserve army". The reserve army consists of lumpenproletariat in urban slums who stake out a bare living from various informal activities (from petty trade to pilferage), while seeking formal employment in the industrial sector. As such they are readily available to accept employment at the subsistence wage rate upon recruitment by industrial employers. Therefore, as long as this reserve army exists, the industrial wage rate is prevented from rising above the subsistence level. (Hayami, 2001:123)

So, to Marx, elastic labor supply is the result of the capitalist production relationships which do not allow the reserve army to vanish; not the result of the natural population law. When it comes to the Marxist interpretation of women's labor supply, it is believed that women are exploited more than men by capitalism since capitalism either commits them into their homes for unpaid work or makes them submit to relatively lower wages than those of men (Blau, Ferber, and Winkler, 1998).

2.2. The Neoclassical Model of Labor Supply

The assumptions of the basic neoclassical model are the following:

1) There are only two possible uses of time: labor and leisure.
2) Each individual selects the combination of hours of work and leisure that maximizes his or her level of satisfaction (utility).

Neoclassical framework treats leisure as a good so it constitutes its analysis on the choice of leisure and working for pay. According to the theory, the demand for a good is a function of three factors; the opportunity cost of the good (which is the market price), one's level of non-wage, and one's set of preferences. In this case, the opportunity cost of leisure is the amount which would be earned through working in the labor market instead of having leisure time; in other word the wage rate offered in the labor market. The theory suggests two effects concerning the labor-leisure trade-off. These are the income effect and the substitution effect. Keeping wages and preferences constant, if income rises, the number of leisure hours demanded will rise too. This is the income effect. On the other hand, keeping income constant, if the wage rate increases, the demand for leisure hours will decrease; because the opportunity cost is now higher. This is the substitution effect. The net effect changes depending on the relative magnitude of these two effects. As a result of the net effect, the individual will decide on whether he or she supplies his or her labor or enjoys leisure. Since it is assumed that both leisure and working for pay yield utility, the money income of an individual and the hours of leisure he or she has are substitutes for each other. As a result of the negative marginal rate of substitution between leisure and money income, indifference curves of individuals are negatively sloped. Another property of indifference curves is that they are convex implying the scarcity of one of the substitutes means it is valued more (Ehrenberg and Smith, 2003).

Another aspect of labor supply decision and the most important point for our work is the labor supply decision within the household. This is of crucial importance because it is usually a joint decision in households with more than one adult and because the family is itself an economic unit with different kinds of production circulating in it. There have been two general classes of models which handle the allocation of couples' time between market and home. Neoclassical models propose the familiar assumption of utility maximization goal of the household with perfect information

and independence. The household is perceived as one economic unit making a decision to maximize "joint" utility; hence there is the assumption of no conflict in the household. They emphasize gains from division of labor between spouses through specialization in different types of work (either housework or market work). Feminist economists, on the other side, offer a very different explanation for the division of labor in the household which places the importance of gender roles in the core and allows for potential of conflict of interests between household members.

Generally, from the neoclassical point of view, individuals gain utility from the consumption of goods and services that are produced with a combination of market goods and nonmarket time. In a simple model, it is assumed that the income earned in the labor market is totally spent on market goods; that leisure is not a side of the choice decision so that all time of an individual is distributed between market work and nonmarket work; in other words an individual either supplies labor for the market or works at home for the production of various commodities such as the preparation of a meal, paying the bills of the house, or childcare; and lastly it is assumed that the individual in a family decides on how to act (chooses to supply labor for the market or not) by taking the earnings of the other family members as given. The aim of the individual is to decide on the utility maximizing combination of market time and nonmarket time which depends ob his or her budget constraint and tastes or preferences that can be expressed as a set of indifference curves showing different utility levels. A member of a family will maximize his or her utility at the point where the budget line and the indifference curve are tangent to each other graphically. Every individual has different decision points of supplying labor depending on his or her valuation of the market income and nonmarket production. If a person sets a higher value on nonmarket time than the wage rate available to him or her in the market, that person will maximize utility by spending more time on nonmarket work relatively. This also depends on the value of the nonmarket time which equals the value that person places to his or her time spent on home production (Blau, Ferber, and Winkler, 1998).

To sum up, according to this simple neoclassical model, labor force participation is positively related to the wage rate, which is the value of market time and negatively related to the value of nonmarket time. This simple neoclassical model can be enlarged in order to capture more variables such as nonwage income, limitations on

the working hours, alternative time uses, but the main assumptions do not change; neither does the analysis of labor supply decision of individuals.

The first studies concerning the problem of allocation of time for married couples (in order to maximize family utility) are those of Gary Becker and Jacob Mincer in 1960s. Becker, in his "A Theory of The Allocation of Time" stresses the importance of forgone earnings in all investments and production processes. He points out that there is a general failure of equalizing the value of a commodity to the market price of it, ignoring the forgone value of the time used up (Becker, 1965). He argues that the indirect costs of producing anything should also be taken into account as well as the direct costs. In his paper, he builds a theory of allocation of time between different activities. He assumes that households are both producers and consumers at the same time and that households combine goods and time to produce commodities relying on cost minimizing choices. He sets out the utility function so as to be maximized subject to a goods constraint and a time constraint simultaneously. Then he turns these multiple constraints into one single constraint since time can be converted into goods by using less time in consumption and more time in production. In this way, he measures resources by adding up the money income and the forgone (or unseen) use of time and goods to gain utility. In another paper, "Human Capital, Effort, and the Sexual Division of Labor", Becker builds a model of the optimal division of labor among identical household members who invest in different kinds of activity-specific human capital (Becker, 1985). He suggests that there are efficiency gains from a division of labor if spouses differ in energy and specialize in certain kinds of work. In this way he appreciates the traditional division of labor and legitimizes the specialization of the wife in home work and the specialization of the husband in market work. He models increasing returns from total time allocated to an activity and finds that earnings are maximum when all time is spent on just one activity.

Observing the changing patterns in labor force participation rates in the US in the early 1960s, Jacob Mincer tried to understand the decline in the labor force participation rates of men and the surprising increase in the participation rates of women. He formulated labor supply as a function of family income and individual wage rates of family members. He mentioned the differing substitution rates of family members as a determinant of allocation of labor between market and

nonmarket activities. He put other variables such as education, unemployment, and fertility besides family income and individual wage rate into the labor supply function. He found that wages increased labor force participation of women, which was consistent with the picture of rising wages and labor force participation rates of women between 1890 and 1960 in the US (Mincer, 1962).

2.3. Gender Critiques of the Neoclassical Model and Feminist Theory of Labor Supply

Neoclassical theories of allocation of time have always stressed the relative productivity of the members of a family and emphasized the importance of comparative advantage of specializing in different tasks. Some economists, on the other hand, challenged this idea of comparative advantage in several aspects. Blau, Ferber, and Winkler, in their book "The Economics of Women, Men, and Work" (1998) draw our attention to the possible disadvantages of specialization. They criticize the simple neoclassical model since it assumes there is only one type of home work. In fact, there are a lot of different tasks in the house and the wife (or anybody alone and specialized in home work) may not have a comparative advantage relative to her husband in doing all these tasks. By the way, the neoclassical model assumes that one cannot feel any dissatisfaction or disutility from any kind of work. One may not always gain utility from specializing in home work (or market work). Another factor that reflects the disadvantages of specialization, mentioned in this book, is the determination of the power roles in the family due to bargaining power. Traditional division of labor makes the woman dependent on her husband and it is a very difficult decision for her to get divorced even she wants since she has no financial independence. Finally the authors criticize the neoclassical model since it neglects the life-cycle changes that alter the comparative advantage situations of couples.

Beneria (1979) criticizes the neoclassical point of view since its emphasis on the sexual division of labor takes the factors such as the earning capacity of each individual as given. She highlights that the neoclassical point of view arrives at the result that men's earning capacity is higher than women in a world of women who are harnessed towards housework (domestic work) rather than paid work and men towards paid work (non-domestic work). She emphasizes that the sexual division of

labor at the household level is strengthened by women's essential role in reproduction and reinforced by the hierarchical and exploitative structures of production. She draws attention to the situation that domestic work is done by women all over the world because the common patriarchal belief that women are responsible for reproduction and men should concern themselves primarily with non-domestic production. This conception has several important results according to the author. She stresses that women serve as a source of cheap labor for capitalists because of their intermittent participation in the labor force. She further argues that women's engagement in paid labor is constrained by their reproductive responsibilities which are socially (not biologically) attached to women.

According to Sen (1980), with the advent of capitalist production, the production unit shifted from home to the work place, which made it very difficult to incorporate housework and paid work. Since child care did not interest any individual capitalist, any interruptions caused by pregnancy or child rearing were not favored by the capitalist. Eventually, women were discarded from the labor force after marriage and birth of children until their children grew up, while men did not have to experience such kind of interruption during their employment. The consequences of these interruptions have been occupational segregation in the paid labor force, lower wages for women, and more subservient women in the home.

Heterodox theories happen to serve as alternatives to the mainstream models. There are feminist models such as gender role models, power theory, and Marxist feminist views for analyzing labor force participation. Supporters of gender role theory emphasize the gender specific character of the life roles of boys and girls, which is taught to them by the society and during their education (Neitzert, 1997). They focus on the fact that this is a very crucial determinant of sexual division of labor which is carried through generations by cultural and environmental factors. Supporters of power theory, on the other hand, relate the gender division of labor in the family to the power relationship between the wife and the husband. According to this theory, resources such as a higher level of education or skill will make that partner more independent and powerful. Power theory falls short in explaining the reason why women acquire skills that are paid less in the market whereas gender role theory has an explanation for this which was mentioned above (Neitzert, 1997).

Folbre (1994), one of the feminist economists, challenges the neoclassical reasoning of traditional division of labor by emphasizing the importance of norms and preferences on the determination of utility taken from performing different tasks. She argues that even preferences and tastes can be shaped by social norms and adds that even if men and women are both influenced by technological progress and most of the housework can be done with the help of technology in a smaller amount of time, women are still not accepted to certain kinds of jobs and because of this, labor force participation of women may not increase or even may decrease (Folbre, 1994). When they are accepted into some occupations, these are usually jobs that do not acquire high skill or jobs that are labeled by the society as "women's jobs". She adds that individuals do not act in similar ways in the family, the market and the state since people have different aims and motivations in these differing arenas. She states that women remain economically disadvantaged because of the unequal distribution of social reproduction costs. Patriarchal control over women, especially the imposition of child rearing responsibilities upon women causes women to retreat from the labor force.

Marxist-feminist approach views labor force participation in the context of interweaving class and gender relations and interests. According to this approach, patriarchy and capitalism as two parallel yet interacting systems have led to and are responsible for the current situation of women and their discrimination in the labor force. Gender exploitation is the result of the patriarchal capitalist system and women are in the hope for being engaged in jobs for the maintenance of their lives rather than as a consequence of an independent choice of working or not working.

To sum up, neoclassical models neglect the factors which impose the roles of "motherhood" and "housewife" on majority of women hence at best allowing them only a substantially constrained choice with respect to labor force participation. Following the critiques mentioned above, this thesis aims to draw special attention to the gender-based factors behind women's discrimination from the labor market in Turkey. Through a qualitative investigation of the Household Labor Force Surveys and a quantitative analysis, this paper attempts to answer whether the neoclassical assumption of "free choice" is a realistic one in the case of women's decisions or whether a feminist perspective which handles women's participation decision as a

function of gender roles and sexual division of labor in the home brings a more appropriate explanation to the gendered participation patterns in Turkey.

As Sen (1980) and Folbre (1994) argue, unequal distribution of care responsibilities acts as a serious impediment for female participation, which should be highlighted in analytical considerations. This thesis intends to provide a proper theoretical framework which is fed by the feminist critiques of the neoclassical theory of "utility maximization" and which aims to nourish the analytical inferences that will be elaborated in the following chapters.

3. EMPIRICAL LITERATURE

3.1. International Context

Studies concerning labor force participation (LFP) of women emerged in 1970s. Most applied work until recently is on the UK and US labor markets. From 1990s onwards, we see an accumulation of applied studies on other countries. These are usually country studies and differ in their results in some aspects despite having a number of common points. Here I will attempt to a give a wide variety of examples from both inter-country studies and intra-country studies. A classification will be made upon the mostly stressed factors in each paper.

3.1.1. Effects of macroeconomic changes and structural adjustment

Some studies examine the effects of development and structural adjustment on the feminization of labor force. Cagatay and Ozler (1995) point to the U-shaped characteristic of women's labor force participation which is observed along different stages of capitalist development. They underline the dual work burden on women as reproducers and producers which causes the U-shape. They investigate whether alterations in the paths of economic development have influenced or brought together the feminization of labor force. Using the data of 165 countries for the years 1985 and 1990 from World Bank resources, they estimate the female share of the labor force by ordinary least squares (OLS). The variables expected to determine this ratio are demographic factors like fertility, urbanization and female education; Gross

National Product (GNP) per capita; and other economic variables such as openness, changes in income distribution and degree of economic expansion. The effect of adjustment is included in the model by using a dummy variable representing that the country has been involved in adjustment programs and also by the effects of these programs which are reflected on the economic indicators. The findings can be summarized as follows: The female share of the labor force declines as the urban share of population increases. All structural adjustment variables are found to have significant and positive influence on female share of the labor force. They find out through a deeper investigation that countries which are more intensively involved in structural adjustment processes have turned to an outward oriented growth policy and have increased their share of exports in their Gross Domestic Product (GDP) and experienced a feminization of the labor force. Furthermore, it is found that the worsening of income distribution has a positive impact on feminization.

Neitzert (1997) investigates the effects of corporate restructuring in a town called Elliot Lake in Canada where about 4500 workers of mine closures were laid off between 1990 and 1996. The interviews with the married couples serve as the basis of data to gather information about the demographic and socioeconomic characteristics of the families and the sexual division of labor in the town (both in the household and in the labor market) after restructuring. She formulates the individual working hours in a certain type of work (paid and unpaid separately) as a function of individual, family, and environmental factors. She values unpaid work as it produces output in the form of domestic chores or care work and measures the hours spent on unpaid work as the sum of hours spent on these activities. Individual factors are chosen to be cohort, race, class, health status, gender role ideology, previous work experience, education, and non-labor income. Gender ideology variable is characterized by the answers of a special question in the interview which asks the interviewees whether they agree with the statement that the principal breadwinner of the family should be the husband and the wife should take care of the home and the children. Family characteristics include age, gender, number of children, wages, relative dependence on a partner's income, dual income status and home ownership. Environmental factors are chosen to be the employment-to-population ratio and whether the couple lives in a small or large city. The restructuring effect is measured by a dummy which equals 1 if the husband was laid off between 1990 and 1995. The

author finds that full time market experience has a negative impact on women's unpaid work hours. Furthermore restructuring is found to have a positive significant effect on unpaid work hours of women. This means that if the women were laid off, their average working hours in the home increased. The impact is slightly larger in the case of the husbands. Nevertheless, since they are almost equal impacts, the share of the domestic burden carried by the wives did not change. Surprisingly the poorer the health of the wives, the greater is the number of unpaid working hours in the home. With respect to paid working hours, gender ideology played a significant role on the number of hours worked outside the home. Relative to the women who internalized the traditional gender ideology, those who refused it spent more hours in paid work. Education level had a positive impact on wives' paid working hours as expected. The layoff experienced by the husband was found to increase the wife's share of paid working hours. According to Neitzert (1997), this led to a decrease in the total family income since the wives in the sample faced lower wages than husbands in the labor market. She concludes that restructuring did not result in favorable results since it strengthens and maintains the current gender ideology, affects the lives of children since it leaves families with lower incomes and it increases regional disparities in terms of income inequalities.

The study of Lee and Cho (2005) concentrate on the effects of economic recession and structural adjustment on the reaction of female workers. These are the "discouraged worker effect" and "added worker effect". They question the logic behind these hypotheses for the cases of Argentina and the Republic of Korea comparatively and they claim that there are forces other than substitution effects[5] and buffer hypothesis[6] which cause different effects in both countries. Comparing two metropolitan cities, Buenos Aires and Seoul, they focus on the different reactions of the female workers. They indicate that female LFP rates increase between 1991 and 1995 in Buenos Aires, even in the case of lowly educated women. In contrast, in Seoul, the Asian economic crisis in 1997 led to a decline in the LFP of women from

[5] The substitution hypothesis claims that in times of economic recession, employers aim to decrease their costs by employing more women instead of men since women are offered lower wages and are more disposable. (Lee and Cho, 2005)

[6] The buffer hypothesis claims that in times of economic progress, more female workers enter the labor market since the market is already saturated with all male workers who are assumed to be more efficient. But in times of economic recession, female workers are the first ones to withdraw from the market because they are discouraged. This hypothesis is rooted in human capital theory. (Lee and Cho, 2005)

50.3% to 47.2%. In the writers' point of view, these two opposite outcomes cannot be attributed to substitution and buffer hypotheses. Instead they introduce the "labor market risk aversion hypothesis" (or the so-called gender discrimination hypothesis) to explain the reasons underlying these different outcomes. This hypothesis implies that the driving force of employers which is profit maximization leads to the choice of employing workers with a higher probability of working longer and with higher productivity. Women, in this sense, are the discriminated group since they get maternal leaves and bring up children. The writers point out that this kind of discrimination against women appears either by excluding female participation from the labor market or by employing them at the level of compensation. It is hypothesized that the former took place in the Republic of Korea and the latter in Argentina thereby causing the discouraged worker effect in the Republic of Korea and added worker effect in Argentina respectively. The hypothesis is tested by interviewing personnel managers of 122 firms in the Republic of Korea about their preferences of worker sex and the answer was "men" for 61 firms and "women" for only 6 firms. In this way, the risk aversion of firms and gender discrimination attitudes are evidenced for the Republic of Korea. The writers set out some public policy implications for the Republic of Korea which may also be useful for other developing countries. These recommendations are labor market action programmes targeting women such as the provision of special employment services, training programmes and childcare facilities. Furthermore, they suggest that gender differences in human capital investment should be eliminated. Maternity protection systems should be changed in order to enhance women's productivity levels after marriage and child birth.

To conclude, depending on the country specifications, macroeconomic changes and structural adjustment processes can promote or hinder FLFP. Studies have shown that more women have been entering the labor force in order to contribute to the family survival and maintain household livelihood, especially in the countries where structural adjustment processes, financial crises or economic recessions have prolonged effects. However, many of these countries have been experiencing the "feminization of poverty" in parallel with the "feminization of the labor force" (Lim, 2002). Women are regarded as a cheap labor source by the employers in those countries (such as in Argentina as mentioned above). On the other hand, in countries

where gender ideology is apparently determining, discrimination against women comes into the scene; hence they are excluded from the labor force. Intermittent participation of women because of child bearing and rearing, beside their imposed responsibilities of household care are denoted as the reasons of women's exclusion from the labor force. The cases of Canada and the Republic of South Korea support this idea.

3.1.2. Effects of individual, social and economic factors

Many studies have been proposed to explain women's LFP decision by individual, social and economic factors. This section documents various papers written on various countries ranging from Spain and Hungary to the US and Taiwan. The methodology is different in each study but the main emphasis in all is on the individual, social and economic factors, including education level, age, geographical location, labor market structure, work experience and gender roles which are usually characterized by the effect of having children.

Lázaro, Moltó and Sánchez (1997) are interested in the part time labor force participation probability of women in Spain who do not want to permanently withdraw from the labor force as a result of having children. The variables assumed to explain this probability are total number of household members, number of household earners, household income other than woman's income, woman's own income, higher education, age, occupation, socioeconomic category of woman's job, industrial branch of the job, and living in an urban or rural area. In the analysis it appears that age, presence of small children or old relatives in the household and household income other than woman's own income have discouraging effects on the probability of participation whereas higher education variable has a positive effect. They also point out that demand factors including the industrial sector and socioeconomic category play an important role on part time participation. It is predicted that self employed women will participate less in part time employment than employees.

Bover and Arellano (1995) investigate the factors which caused considerable increases in LFP of women during 1980s in Spain. They make use of the Spanish quarterly labor force surveys to construct the explanatory variables varying from having accomplished secondary education and university education to fertility rates,

real wages and unemployment. They conclude that the structural factors like the increase in university graduates and the decrease in birth rates account for most of the increase in participation rates. High unemployment is found to have a discouraging effect on participation.

Olivetti (2006) constructs a life-cycle model to make prominent the effects of returns to labor market experience on the changes in women's hours of market work in the US between 1970 and 1990. She points out that the hours of market work of married women with young children increased dramatically in the last several decades. A human capital production function is used to handle the accumulation of capital in the form of learning by doing. Human capital production is determined as a function of the number of hours worked in the market and the amount of human capital accumulated up to the current period. Households are assumed to maximize their utility subject to their constraints of human capital stock, initial assets and time. Furthermore she analyzes the labor supply decision as one of the inputs in the production of human capital. She concludes that the increase in returns to experience encouraged married women to increase their employment in the US between 1970 and 1990.

Relying on the labor-leisure choice model for the theoretical construct, Hotchkiss (2006) wonders the factors behind the decline in the LFP of US women for the years 2000-2005. She categorizes the determining variables as the changes in women's characteristics (like changes in a woman's situation of marriage, how many children she has, the amount of non-labor income and racial indicators) and the changes in behavior (like education level, labor market experience, the amount of disability income received by a woman and the current labor market condition proxied by the unemployment rate). She notices that the changes in behavior have played the most influential role in lowering female LFP from 2000 to 2005. The most effective is the weaker pull of education into the labor market which is the largest contributor to the decline in participation. The availability of the disability income also takes more women out of the labor force in 2005 with respect to those in 2000. She also mentions the factors like women's changing responses to marriage and having children that cause a decrease in LFP.

Chuang and Lee (2003) examine gender roles, work interruption and the influence of these on women's labor force participation decisions and earnings in Taiwan

inspecting the 1987 Taiwan Women and Family Survey. The writers stress that women's LFP rate increased rapidly between 1965 and 1988 but the rate became stagnant after the mentioned period. They question this fact which occurred despite the increasing education levels of women in the past decade. They construct a multinomial logit equation to investigate the effects of education, work experience prior to the first birth, living in a city or a town area and husbands' attitudes towards a working wife and reveal that these are all significant determinants of women's LFP. The attitudes of husbands are measured by a question in the survey which asks the individual's thought about "working" women. As a consequence of the analysis, the writers demonstrate that the attitude of husbands towards participant women is negative and stronger than the attitudes of women themselves. They highlight that educating a husband to make him get rid of his traditional opinions about gender roles is much more critical than educating women. Only this way of struggling against negative attitudes can remove the dominance of husbands' decisions on women's choices.

Another study which was written by Saget (1999) investigates the determinants of female labor supply in Hungary. The paper especially focuses its attention on the effects of non-labor income in the household and married women's own wage rate on labor supply decision. The female participation rates in Hungary increased to the ratio of 75% from 1960 to 1987; but then started to decline. Data from the 1992 survey conducted with Hungarian households is used in the paper to supply evidence for the theoretical model chosen. According to this model of participation, labor supply of women is determined directly by the wage rate they face in the labor market and is also a function of total household non-labor income, monthly labor income of the other members of the household and some other independent factors such as education, age, region of accommodation, number of children, and ethnicity. From the analysis of the data belonging to 720 married women aged between 25 and 55, it becomes apparent that the increase in the wage rates of the women is anticipated to increase their participation. Secondly, the income of the other household members which is gained through working in the market is found to have no significant effect on LFP of the women; which implies, according to Saget (1999), the independence of women's labor supply decisions from their husbands' earnings. Thirdly, non-labor income is found to have a positive effect on participation.

Hazan and Maoz (2002) construct an overlapping generations model to demonstrate the role of tradition in the identification of LFP dynamics of married women. Tradition here corresponds to the past employment experience, whose existence is assumed to be decided by social norms. They end up with the result that the past LFP increases of women have a positive impact on the current and future participation of women.

To conclude, a wide range of individual, social and economic factors are found to determine the LFP patterns of women in different countries. While it appears that human capital variables like education and labor market experience encourage FLFP, factors like marriage and presence of children cause a decline in FLFP. Increases in the level of wages and non-labor income available to women are found to increase the participation probability of women in general.

3.1.3. Availability and affordability of care as a determinant of FLFP

Some studies have specifically concentrated on the effect of care work on women's LFP. Among these, Chiuri (2000) investigated the impact of childcare rationing on the female LFP decision in Italy. In this study, it is emphasized that the female LFP rate of Italy is one of the lowest in Europe and the reasons are analyzed using data from the 1993 Bank of Italy Survey of Household Income and Wealth. The findings are that education, age, and high education levels of husbands raise the probability of women's participation whereas the number of preschool and school age children has a discouraging effect as expected. The writer includes a migration dummy in the regression to reveal the effect of living close to family members and relatives on the availability of unpaid care help and the analysis shows that being away from the extended family has a negative influence on women's participation decision.

Chevalier and Viitanen (2002) deal with the problem of formal child care availability as a discouraging effect on women's employment decisions in the United Kingdom. They analyze the relationship through the Granger-causality procedure and find a causal link from child care supply to female participation in Granger sense; but do not find causality in the opposite way. This means that the past values of availability of childcare facilities improves the present value of female LFP.

Another study by Viitanen (2005) on the UK inspects the effect of formal child care costs on female LFP. She analyzes that the employment decision and child care

choice are joint decisions; so she makes use of simultaneous equations to estimate the effect of childcare costs on both decisions. The result is that increases in child care prices lower both employment levels and use of formal childcare.

Conducting interviews with 34 mothers in a specific area in the UK, Himmelweit and Sigala (2002) found that the availability of child care which is flexible for different working hours and acceptable quality were the critical constraints on women's employment. Himmelweit and Sigala (2003) arrive at similar results using quantitative data on attitudes and behavior from the British Household Panel Survey.

Wetzels (2005) examines the effects price and supply of childcare on Dutch women's participation decisions for the year 1995. She observes that the effect of the wage rate women are offered is positive and significant while there is no significant impact of the price of childcare, which contradicts Viitanen (2005).

Wakabayashi and Donato (2005) exhaust the influence of the cost of informal caregiving to elderly family members on the employment decisions of women in the US, using data from the 1987 and 1992 National Surveys of Families and Households. The OLS regression results show that caregiving causes a significant decline in women's employment in varying levels for different groups of women. Among women who started caregiving in the 1987-1992 period, those who were less than high school graduates and those who were high school graduates experienced a higher decline in their weekly paid labor time than those who were at least college graduates.

Lokshin (1999) finds that the impact of cost of childcare on mothers' LFP in Russia is significant, which is consistent with the findings of Viitanen (2005). Russia went through a deep transition period after the collapse of the Soviet Union. The writer indicates that women's LFP rate was very high during the days of the Soviet Union, owing to the availability of government-subsidized childcare facilities. However the Russian government restrained the number of kindergartens and nurseries and as a result of the excess demand for these facilities, the cost of these care programs increased. Data from the Russian Longitudinal Monitoring Survey for the years 1994, 1995 and 1996 is used to estimate the effects of these dramatic changes on LFP decisions of women. The results show that an increase in the price of care decreases the probability of both choosing formal care arrangements and

employment of mothers simultaneously. Furthermore, this analysis reveals that the presence of grandparents and other family members in the household leads them to use informal care instead of formal types.

Lokshin and Fong (2006) examine the LFP of women in Romania, which has experienced a transition period too. Like Russia, Romania had higher female LFP levels under the communist regime, but the rate decreased by 12% since 1990 (from 87% in 1990 to 75% in 1997 for women aged 25-49) as a result of the decline in the number of affordable crèches and kindergartens. Data from Romania Childcare and Employment Survey (1999) and the Survey of Childcare Facilities (1999) are put into the analysis which evidences that an increase in the price of unit quality of childcare lowers the probability of female employment.

For the situation in Kenya, Lokshin, Glinskaya and Garcia (2004) find similar results to those of Romania in terms of the high costs of child care. They rely on the theoretical framework of household utility maximization that is realized through choices of child care quality, quality of children's schooling, consumption of market goods and leisure. The main conclusion that can be derived from their analysis is that economic incentives play the most crucial role on the determination of the LFP of the women in Kenya. Wages and costs of child care are found to significantly influence participation decisions.

This variety of observations on different aspects of women's LFP decisions in different counties alerts us about the necessity of analyzing the issue thoroughly, handling the factors as a combination of gender related roles in the society, livelihood concerns of women and households, human capital characteristics of women and cultural variations which are usually the consequences of the gender roles. The last classification of the empirical studies which specifically deal with the affordability and availability of care for children or needy adults in the household has been encouraging for this paper in the way of opening a new window for the researchers who wonder the rarely (or almost never) pronounced factors behind strikingly low rates of female labor force participation in Turkey.

3.2. The Turkish Context

So far, there have been very few studies concerning the labor force participation characteristics of women in Turkey. Among these, some have been concerned with the demand-side determinants of female LFP such as economic conditions, policies, structural adjustment programs, physical infrastructure of the job environment, the legal system and regulations about women's labor. Others have examined the causes of low participation rates rooted in supply-side factors like sexual division of labor at home, individual characteristics of women, social, cultural and environmental effects on the decision (or inability to make a decision) of participation.

3.2.1. Demand-side factors

Emphasizing the importance of focusing on demand factors without ignoring the vitality of supply factors, Ecevit (1998) argues that the economic crises which have been experienced in many countries since the mid-1980s have altered the LFP rates of women drastically. She mentions two periods of economic processes that affect the labor market outcomes; namely liberalization (since 1980s) and globalization. She discusses that these periods have dismantled labor markets and broken all regulations in order to find cheap and unorganized labor. With the globalization of production and as a result of the structural adjustment policies, global capital succeeded in decreasing its labor costs which meant lower real wages and higher unemployment in developing countries. Decreasing female LFP rates from the 1980s to 1996 act as a mirror of these changes although this decrease is not solely attributable to structural reforms (Ecevit, 1998). Migrations from rural to urban and architectural mechanization were also mentioned as the factors behind decreasing LFP rates of women in many studies (Ilkkaracan, 1998; World Bank 1993; Ecevit, 1998). However these reasons were not supposed to affect male participation rates as much as they affected females; thus we should be in search of other reasons behind the dramatic decreases in LFP of women.

Baslevent and Onaran (2002) explain the factors which cause a decrease in female LFP by pointing to the withdrawal of younger population from the labor force as a result of increased years of schooling and to the housewifezation of the women who were previously unpaid family workers in rural areas as a result of migration to urban areas. They make use of a bivariate probit model to find the likelihood ratio of

becoming a labor force participant of a wife when the husband loses his job. They use data from the 1988 and 1994 Household Labor Force Surveys. They arrive at the result that the added worker effect dominates the discouraged worker effect for the chosen sample. But they also remind us that increases in women's LFP during financial crises have never been proven to be permanent in past studies; therefore they suggest that demand-shifting policies have to be applied in order to have a permanent improvement in female LFP rates. Furthermore, the authors find a significantly positive effect of the growth of per capita GDP on the husbands' employment status whereas they find no significant impact of it on wives' participation status.

Baslevent and Onaran (2004) find that the switch to export-led growth strategies increased the LFP of single or younger women while they find no significant effect of export-orientation on married women's participation decisions. Relying on these results, they stress the importance of the traditional division of labor in the household which leads to the slower and weaker response of married women to macroeconomic changes.

3.2.2. Supply-side factors

Dayioglu and Kasnakoglu (1997) use probit analysis to examine the determinants of LFP of urban men and women using the data from the 1987 Household Income and Consumption Expenditures Survey. They insert the probability of LFP as the dependent variable into the model and independent variables are individual factors (such as age, education level, marital status, and whether the person is the household head or not), family characteristics (such as the number of children who are in the age group of 0-6 and 7-11, household size and the education level of the household head) and finally the socio-economic factors (including the household income other than the individual's income, and the individual's non-wage income). They also include some dummy variables representing five different geographical regions in Turkey. They come up with the finding that the education level of women is the most effective factor on determining their LFP. When the education level rises, the probability of female LFP increases and it reaches the highest rate (67.4%) in case of the women who are university graduates. They find a weaker relationship between male participation rates and male education levels. Furthermore they find that LFP of

the men who are primary school graduates is higher than the ones who are secondary or high school graduates.

Another conclusion that can be derived from the same analysis is that the probability of LFP of married women is lower than that of single men by 44.6%. The concept of marital status draws an interesting picture for men decreasing the probability of married men's participation by 7.2% with respect to single men. Being the household head makes the probability of women's LFP higher. The number of children between ages 0-6 or 7-11 is also found to decrease the probability of women's participation according to the same study.

In the same study, the authors also derive the expected signs for the estimates of socio-economic variables. They analyze that women's having non-wage income and having household income other than individual income have negative effects on LFP of women. They interpret this result as the perception of women that they fulfill their economic responsibility of increasing the household income by contributing their non-wage income. To the authors, the negative effect of household income excluding women's income on their LFP demonstrates the apprehension that women are the secondary labor force in the society and their labor force is not considered equally to men's labor force. A further finding of the study is that household size has a positive effect on LFP of both men and women while the education level of the household head is found to have no significant effect. In spite of all these varying results, the authors mostly emphasize the importance of women's education level and imply that lack of education is the most preventive factor of human capital production for the changing labor market environment and they predict that a rise in the education level of women will increase the LFP of women.

Similarly Tunali (1997) highlights that the close link between education and labor force participation will probably increase urban female LFP. Using the 1994 Labor Force Survey, he analyzes the female LFP probabilities in urban areas of Turkey. In the beginning of his paper, he introduces some factors like time to entry to marital union, pace of fertility, use of child care help and participation decisions of other members of the household as the possible determinants which stimulate women's decision to seek work. In the light of this preliminary presentation, sets out a binary logit model where he uses the indicators such as educational attainment, age, age-squared and regional dummies as the independent variables which are assumed to

determine the LFP decision of women. He especially concentrates on the relationship between education and participation. He finds that higher levels of education correspond to higher possibilities of LFP for women in their early ages while the relationship gets weaker when middle-aged women are concerned. He also estimates another equation taking into account only the participation decisions of married women and this time he includes explanatory variables concerning the husband (husband's education, age, and participation status). He finds no strong evidence of the relationship between the husband's education level and the wife's LFP except when the husband is a university graduate. He finds that there is a positive effect of a university graduate husband on the wife's participation choice. He mentions that the presence of young children in a family restricts the participation of women into the labor market and lays out the picture by showing that the probability of participating is four times higher if the women in the sample had no young children (aged 0-14). He evidences that more females have been participating in education and the duration of education has been getting longer than the past. Therefore, he predicts that this phenomenon will play an important role in increasing the LFP of urban women in the future. He also adds that the effects of technological change will be in favor of female LFP since the newly invented consumer goods such as automatic washing machines and disposable diapers make life easier in the house.

Ozar and Gunluk-Senesen (1998) argue that conventional studies ignore or do not pay attention to the factors which make women "non-participants" in the labor force. Their main effort in this paper is to focus on these neglected issues rather than the determinants of participation decision. With this motivation, they use the data of housewives (in other words, non-participants) from a field survey in four big cities of Turkey (Istanbul, Ankara, Izmir and Adana). They choose women's personal characteristics ranging from their age, education level, the region of origin and city life experience to the factors indicating women's status in the family like their marital status, number of children, children's age groups, husband's education level; and a group of factors representing the economic environment including the income level of the household, the number of working members of the household and the dependency ratio as the independent variables. The dependent variable is specified as the nonparticipation decision taking binary values via the logistic regression. When the regression is executed including all women, the only significant result is that the

higher the education level, the lower the non-participation probability. When the regression is executed only for married women, the results follow that "women in the lower income group are more willing to work". It also appears that it is not the age groups of children, but the number of children which keep married women out of the labor market. They interpret this result as the dependency of children (even of the ages above 10) on their mothers because of lacking number of affordable and high quality child care facilities.

In a more qualitative research of Moghadam (1998), it is argued that there are five main types of constraints on women's ability to enter the labor market. These are namely "household inequalities and traditional sexual division of labor, the broad gender ideology operating in the society, the legal system and regulatory framework, social and physical infrastructure and finally economic conditions and policies". She demonstrates the negative effects of child bearing, early marriage and unequal division of labor in the household which leads to the decision-maker position of husbands and lowly educated girl children. She also challenges the widely accepted gender ideology which is taken as given by the society and points out that it is this ideology that regards women as secondary workers instead of contributors to national development. She adds that the same ideology performs government regulations that constrain women's participation in the economy. Furthermore males are given the opportunity to equip themselves for the market through training facilities and technical schools more than women.

Eyuboglu, Ozar and Tufan-Tanriover (1998) draw conclusions from a field survey executed by interviewing unemployed women of age 15-49 in the four largest cities of Turkey and find that the rate of getting married and having children is increasing with age and this leads to the lower participation of women in the labor market. The writers emphasize that women's participation in the labor force can be thought as a function of women's individual characteristics (education, work experience, etc.) and motivations like the desire to succeed and being determined to work or as a function of the market wage women face only when women individually have an independent status from their family. But evidence shows us that married women's status is derived from the status of their husbands mostly and thus, their LFP can be considered partly as a consequence of their husbands' social status.

Dayioglu (2000) categorizes the factors affecting LFP of women as their personal characteristics, family characteristics and socio-economic background. Using data from the 1987 and 1994 Household Income and Consumption Expenditures Survey, she utilizes a probit model to derive the factors that affect female LFP in both years separately. Since the data she uses do not make any differentiation between not being in the labor force and being unemployed, she handles employment as analogous to labor force participation. Among all the contributing factors mentioned above, she emphasizes the significant relationship between schooling and labor force participation of women. She draws the conclusion that LFP of women increases with education except for the lower education levels. She also evaluates that being married and having a higher number of children reduce the LFP of women significantly. These findings support the study of Ozar and Gunluk-Senesen (1998) as summarized above and resemble the recent findings concerning the effects of women's education levels on their participation. Furthermore, combining the data from the two surveys (1987 and 1994), Dayioglu (2000) looks for the clues of how the relative importance of the determining factors have changed over time. It appears in her analysis that all schooling variables (except university education) have less impact on LFP in 1994 than they have in 1987. She finds a similar pattern for the men who are university graduates between 1987 and 1994. She attributes these changes to the effect of the economic crisis in 1994, adding that less educated women were discouraged from joining the labor market in this year because of the limited number of jobs which already preferred men and because of the high number of female university graduates who were also preferred in the first instance.

Baslevent and Tunali (2002) "examine the participation choices of prime age (20-54) married women whose husbands are employed". Using the 1988 household data, they estimate the probability of participation choice (which was examined in four categories; non-participation, self employment, wage labor and unemployment) through maximum likelihood method. The explanatory variables they insert are handled in three categories, namely individual, household and labor market characteristics. Similarly to the preceding studies, individual characteristics are chosen as age (which is aimed to refer to the experience level) and education level. Differently, they include a dummy variable which represents the women who are married to self-employed husbands. Household characteristics include household

size, the presence of children in the age groups of 0-2, 3-5, and 6-14 including a distinction of girls and boys, and interactions between household size and children dummies. Labor market characteristics comprise the share of textiles in total manufacturing employment in 1988, the GDP shares of finance and agriculture and the net migration rate. Following the mainstream idea of utility maximizing individual, they assume that a woman will choose the best combination of labor and leisure given her constraints on time and contributions of her husband[7]. They arrive at the result that women act differently due to their different tastes and preferences which are their unobservable traits and make their participation decisions according to these traits.

Tansel (2002) investigates the determinants of female LFP rates with pooled data from three years (1980, 1985, and 1990) for 67 provinces, using OLS estimation. She hypothesizes that there is a relationship between female LFP and level of economic development validating that the U-shaped pattern hypothesis is true about female LFP in Turkey. Her analysis shows that this relationship exists and furthermore she finds a positive effect of rate of economic growth and level of education on female LFP while a negative impact of unemployment on female LFP is observed. It is also apparent from her analysis that there are significant regional differences in female LFP rates. She concludes that the most important factor determining women's participation is their education level. She explains this by implying that education can be considered as an investment in human capital; thus a person should work if he or she wants to recover the cost of education. In addition, she argues that education can also be regarded as a consumption activity and therefore an educated person should work because she will have a higher earning potential as the opportunity cost of not working will be higher.

Ince and Demir (2006) aim to explore the possible effects of education levels of women, change in fertility rates, change in female unemployment rates, and the financial crises that appeared in 1994 and 2001 on women's LFP in Turkey. They use 1980-2004 data from ILO Bureau of Statistics and UNDP. They find a negative estimate for unemployment and a positive estimate for the growth rate of GDP,

[7] Baslevent and Tunali (2002) indicate that they follow the unitary household tradition of Mincer (1962) in their paper. Therefore their theoretical framework is based on the independence of individuals to choose the utility maximizing levels of labor.

fertility rate and university graduation. Lower education levels and financial crises seem to have no significant effect.

Ilkkaracan (1998) relies on the findings of an action-research survey executed in Umraniye while investigating the reasons behind women's low rates of participation in urban areas. She emphasizes that the main determinants are the social and cultural factors which are, in detail, the traditional gender based division of labor in the society and the socio-cultural restrictions on women's freedom of mobility. She finds that most of the women surveyed state they were not working for two reasons; unequal division of labor in the home and restrictions on women's freedom of mobility and decision-making. In the case of women who struggled against these preventions, marriage or having children brought an end to their employment because of the heavier burden of housekeeping and working outside at the same time. She adds that the low wages for women and poor working conditions also serve as obstacles for women's entry into the labor market. Ilkkaracan (2000) also reveals some insights into the possible policy implementations such as increasing the consciousness of women for gaining their freedom of movement and to engage in work in order to earn their own money and increasing the awareness of women of their basic human rights. She stresses that job training for women technically or offering more credits to women are not solely enough in order to change the present situation. This perspective distinguishes her from most of the previous authors who concentrate mostly on the importance of women's education level to remove the impediments to participation in the labor market. Her way of analysis is also very different from the preceding studies since she makes use of an action-research field survey which is a direct method of gathering data through scientific tools but with the aim of informing the respondents about the content of the research, increasing their consciousness, and making the results of the survey to be used in order to encourage individual, social and cultural changes.

To sum up, many of the studies on Turkey have adapted the insistently resonating view of women's low education levels as the main bottleneck while only a handful of studies have pointed out that labor market characteristics, sexual division of labor and the interlinked gender roles are mostly preventive. This paper will not be able to pursue a a demand-side analysis of female participation since HLFS data does not involve any information on the demand side characteristics of the Turkish labor

market. A supply side account will be monitored instead. Following the path introduced by a few Turkish authors who adapt an alternative point of view by laying emphasis on the sexual division of labor in the home, mostly characterized by the unequal distribution of care responsibilities, this study attempts to bridge the gap in conventional studies that neglect the importance of gender based division of labor that leads to absence of women in the Turkish labor market. Moreover, this paper intends to have a careful evaluation of reasons of female nonparticipation by going through the raw results of the HLFSs which reveal the unequal division of labor between men and women in the home on the first occasion. These surveys are the main data sources of most of the recent studies, but unfortunately, they are not examined through an eye which tries to inspect the different roles imposed on women by their fathers, husbands, and even their mothers or parent-in-laws. It is hoped that this evaluation of answers which are betrayed by women themselves will shed some light on the reasons for female non-participation in Turkey. Although these surveys contain a few direct questions about the care needs and responsibilities, the institutional and legal circumstances in Turkey tell much about the current situation of women who are regarded as the primary carers. Hence, both the HLFSs and the legal and institutional characteristics of the labor market and care facilities serve as a basis for this paper's arguments.

4. AN OVERVIEW OF THE GENDERED PATTERNS IN LABOR FORCE PARTICIPATION IN THE TURKISH LABOR MARKET

In light of the theoretical context and empirical findings, Chapters 4 and 5 present a gendered analysis of the LFP patterns in the Turkish labor market. The theoretical framework adopted is a feminist model which will allow exploration of the impact of gender roles and sexual division of labor on shaping LFP patterns of women (and men) by the investigation of factors such as being married, having children, availability of care help in the household, besides household livelihood factors, cultural factors and human capital characteristics.

4.1. General Trends

There is a striking gender gap in labor force participation rates in Turkey. While the male participation rate of 71.5 % for 2006 is close to the EU average, the female participation rate of 24.9 % is far below any regional or international average as mentioned in Chapter 1. Table 4.1.1 represents further details of the characteristics of the Turkish labor market in 2006.

Table 4.1.1. Gender characteristics of the Turkish labor market (2006)

	Female	Male
LFP rate	24.9%	71.5%
Employment rate	22.3%	64.5%
Unpaid family workers	39.0%	6.0%
Unemployment rate	10.3%	9.7%
Discouraged workers	1.5%	5.6%
Underemployment rate	1.8%	4.2%

Source: TURKSTAT

What is highly striking is that female labor force participation is not only low currently, but has been experiencing a declining trend since 1950s. Table 4.1.2 and Figure 4.1.1 show the economic activity rates calculated by Turkish Statistical Institute (TURKSTAT) using the census data.[8] Men's economic activity rate declined from 95,3% to 70,6% through 1955 to 2000. Women's economic activity rate was as high as 72% in 1955 thanks to the large agricultural sector in those years and declined to 39.6% in 2000.

Table 4.1.2. Economic activity rates by year, Turkey (%)

	Men	Women
1955	95.3	72.0
1960	93.6	65.4
1965	91.8	56.6
1970	79.5	50.3
1975	80.9	47.3
1980	79.8	45.8
1985	78.3	43.6
1990	78.2	42.8
2000	70.6	39.6

Source: TURKSTAT; calculated using CENSUS data

[8] Household Labor Force Surveys are available only from 1988 onwards, so we do not have comparable data for earlier years.

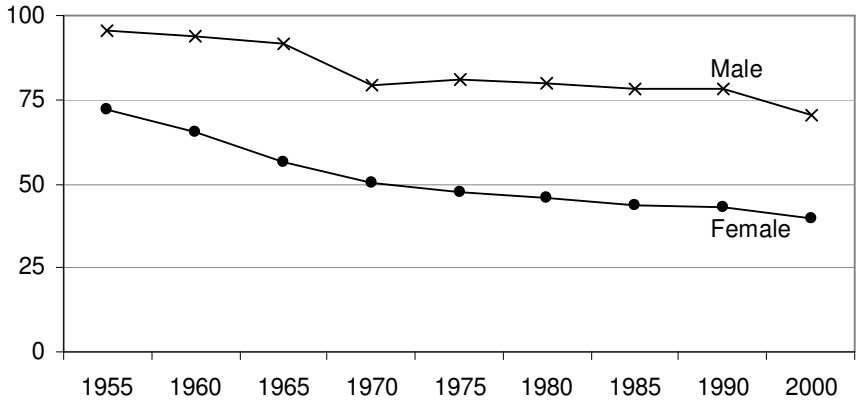

Figure 4.1.1. Economic activity rates by year

4.2. Urban versus Rural Participation Patterns: Can U-shaped Pattern and Education Accounts Explain Them?

Table 4.2.1 and Figure 4.2.1 show the recent labor force participation rates of men and women, derived from Household Labor Force Surveys, according to urban-rural distinction. Once disaggregated by rural versus urban rates, urban rates seem to stabilize around below 20% rather than declining. A number of studies have attempted to explain this trend by the transformation in the labor market and migration from rural-to-urban and the accompanying "housewifezation" of women (World Bank, 1993; Moghadam, 1998).

Table 4.2.1. LFP rates by year, Turkey (%)

	TURKEY			URBAN			RURAL		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1988	57.5	81.2	34.3	48.3	78.1	17.7	67.0	84.7	50.7
1990	57.6	80.5	35.3	48.2	78.0	18.1	67.8	83.4	53.4
1994	54.1	78.6	30.2	46.6	75.7	17.6	63.7	82.4	45.8
1995	54.4	78.3	31.0	45.5	74.5	17.1	66.2	83.3	49.3
1996	54.1	77.6	31.0	44.5	73.3	15.8	67.0	83.5	51.1
2000	49.9	73.7	26.6	44.1	70.9	17.2	58.7	77.9	40.2
2001	49.8	72.9	27.1	44.0	70.6	17.4	58.7	76.4	41.7
2002	49.6	71.6	27.9	44.4	69.8	19.1	57.6	74.5	41.4
2003	48.3	70.4	26.6	43.8	68.9	18.5	55.5	72.9	39.0
2004	48.7	72.3	25.4	44.5	70.8	18.3	55.4	74.7	36.7
2005	48.3	72.2	24.8	45.5	71.5	19.3	53.1	73.5	33.7

Source: TURKSTAT; Household Labor Force Surveys. Note: The years before 2000 were reported for October.

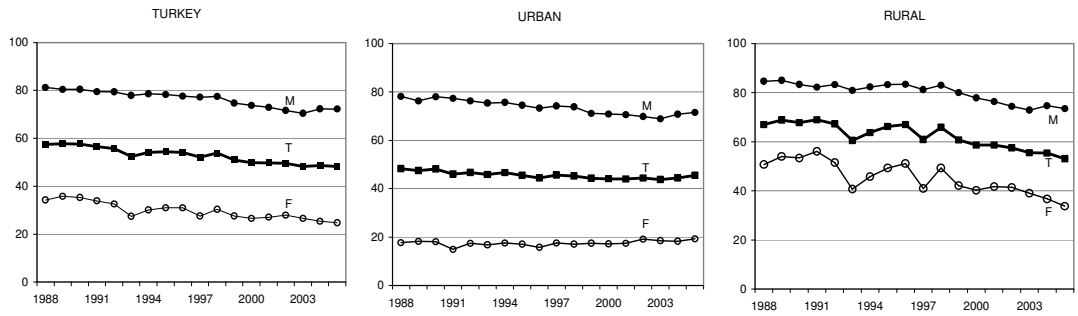

Figure 4.2.1. LFP rates by year, Turkey (%)

Many studies have argued that female labor force participation rates follow a U-shaped pattern along the course of economic development, which was introduced by Goldin (1994). She examines a cross-section of 100 countries and explores that these countries demonstrate a U-shaped figure when their stages of economic development are taken into account. Some groups of countries display a reliable picture with respect to increasing job opportunities during industrialization and these countries can be viewed as having shifted to the upward sloping portion of the U. The U-shaped pattern is also verified for the US alone since 1890s. The author points out to the strong income effect and the weak substitution effect due to the change in production patterns both within the family and the nation, being the reasons for the decline in female labor force participation. Technological changes are considered to count for the displacement of women from farms and small family businesses since these made men involved in those jobs more than women. The effect of migration from rural areas to urban places is also mentioned as a reason of women's disappearance from the labor force. The author claims that higher female education levels, in addition to increasing job opportunities in urban areas, will enable more women enter the labor force and get white-collar jobs.

However, as evident from the statistics, Turkey does not show increasing patterns of female labor force participation despite the steady growth and export-orientation since the early 1980s and despite the increasing female education levels. This phenomenon brings into the mind the question why Turkey is not still able to shift to the upward sloping portion of the U. If we take the U-shaped pattern as the main account for low female labor force participation, the policy implication will not go beyond promoting higher rates of growth and industrialization.

Some other studies have argued that lower education levels of women in Turkey are responsible for women's low participation rates. This argument echoes throughout numerous policy documents such as the World Bank Report (1993), European Parliament resolution on women's role in social, economic and political life in Turkey (2005 and 2006) and Confederation of Turkish Employers' Unions Report (2006); and in published research papers in economics such as Dayioglu and Kasnakoglu (1997); Tunali (1997); Dayioglu (2000); Tansel (2002); Ince and Demir (2006) as mentioned in the previous chapter.

Employers and employer unions blame "lack of female education" for the low levels of female participation and for high unemployment in Turkey. Therefore their policy prescriptions cannot go further than calling the governments to invest in worker training and education.

Nevertheless, the existing economics research on female labor force participation, which has been using HLFS data and applying regression analysis, finds a very high and statistically significant coefficient of university education variable and hence concludes that promoting higher education is of primary importance for increasing female labor force participation.

However, when we examine the labor force participation patterns disaggregated by education level in Table 4.2.2 and shown in Figure 4.2.2, we can note a number of striking points. Generally speaking, reading across each row, labor force participation rate does increase as education level increases, which is most apparent in 2005. Yet; for men, even for the lower education categories of primary, secondary and high school, the participation rates are at least as high as 70% for all years. But for women, the real jump in participation occurs moving from high school to university education. It should be noted here that even the participation rate of university graduates has decreased by 12,5% through 1988 to 2005 noticeably. Participation of university graduate men has also decreased but the shift is less than that of women. For any education level lower than university, participation rates of women are quite low. This is the main problem which needs an explanation (Ilkkaracan 2000). Why do women with lower education levels have very low participation rates while men still have higher rates at low education levels? Also, what is interesting to note is, for women, the difference between "illiterate" category and "lower than high school" category (that includes primary and secondary school

graduates) is quite negligible in 1988, 1995, and 2000. It is only noticeable in 2005. In 2000, illiterate labor force participation rate is even slightly higher than the primary and secondary category.

Table 4.2.2. LFP rates by year and education level, Turkey (%)

	MEN				WOMEN			
	Illiterate	Lower than high school	High school and its equivalent	University	Illiterate	Lower than high school	High school and its equivalent	University
1988	70.5	82.9	78.0	89.5	32.3	32.4	47.4	82.5
1995	63.3	79.6	75.5	88.0	27.6	29.4	36.5	73.0
2000	56.7	74.9	70.8	83.2	25.2	23.0	31.8	70.1
2005	43.5	71.8	73.8	84.7	17.5	21.8	30.9	70.0

Source: TURKSTAT

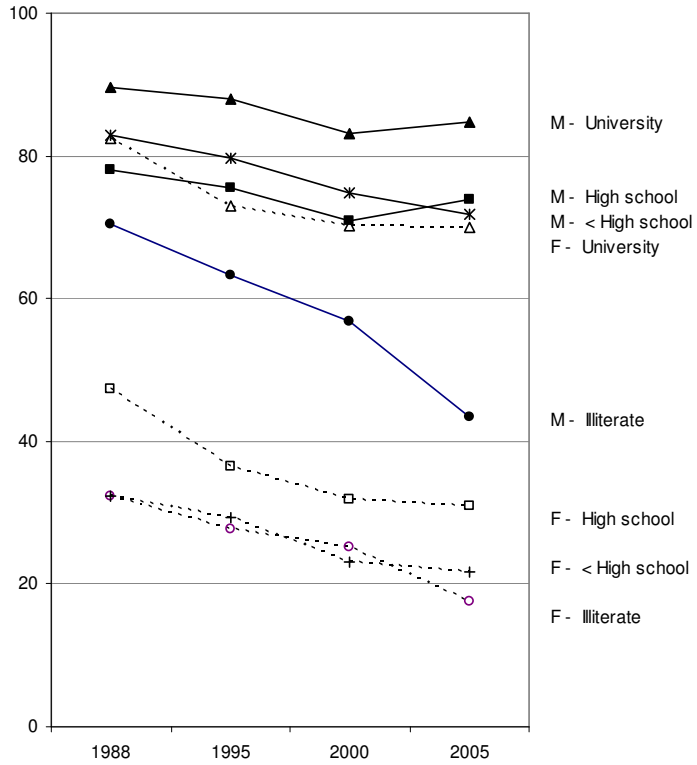

Figure 4.2.2. LFP rates by year and education level, Turkey (%)

Table 4.2.3 and Figure 4.2.3 present gender participation gaps according to education levels in percentage points between males and females (Ilkkaracan and Acar 2007). This table is derived from Table 4.2.2, simply getting the male-female participation rate differences. For all the four years represented, the gender gap between labor

force participation rates of men and women for the education categories of illiterate, primary and secondary, and high school is very huge. For example, in 2005, the gap is 26 percentage points for illiterate category, 50 points for primary and secondary school category, and 43 points for high school category. When we look through the years, the illiterate level is observed as the only category for which we observe a decline in the gap due to a more dramatic decrease in illiterate men's labor force participation from 70,5% in 1988 to 43,5% in 2005. The gap is stable for primary and secondary school graduates across the years. For high school and university graduates, the gender participation gap is increasing across the years.

Table 4.2.3. Gender Participation Gap in Percentage Points (male-female)

	Illiterate	Lower than high school	High school and equivalent	University
1988	38	51	32	7
1995	36	50	39	15
2000	32	52	39	13
2005	26	50	43	15

Source: Ilkkaracan and Acar, 2007

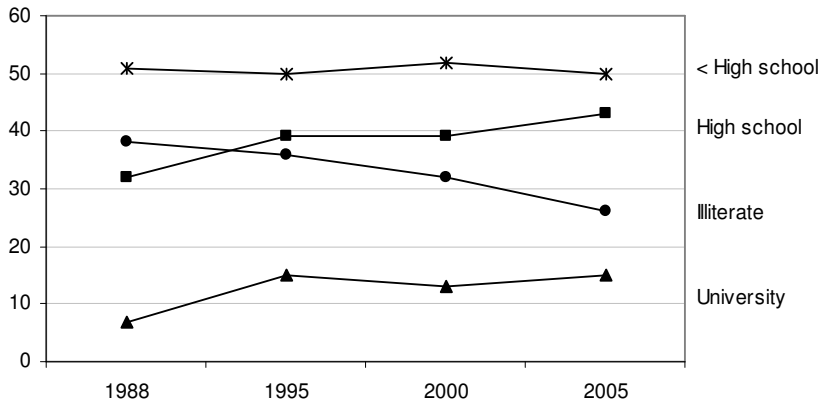

Figure 4.2.3. Gender Participation Gap in Percentage Points (male-female)

4.3. Reasons for Non-participation

These observations alert us for other possible constraints for women and reveals that the differences between high male participation rates and low female participation rates are not mainly rooted in different education levels. Some of these hindrances

for urban women are listed in Table 4.3.1 below, which were announced by TURKSTAT as a result of the household labor force surveys.

Table 4.3.1. Reasons of Non-participation by Year and Sex, (%) Urban

			Not looking for a job but ready to work		Seasonal workers		Busy with house work		Student		Retired		Not able to work		Other	
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
1988	100	100	5.7	3.5	0.3	0.0	-	83.0	35.4	6.0	36.8	2.3	11.0	2.9	10.7	2.3
1996	100	100	2.6	1.0	0.4	0.4	-	80.5	37.0	7.5	40.2	2.5	9.7	4.9	10.0	3.2
2005	100	100	9.3	4.5	0.5	0.7	-	70.2	31.4	8.4	38.9	3.5	11.8	6.7	8.0	6.0
Change between 1988-2005			3.6	1.0	0.2	0.7		-12.8	-4.0	2.4	2.1	1.2	0.8	3.8	-2.7	3.7

Source: TURKSTAT (Changes between 1988-2005 were calculated by Ilkkaracan and Acar, 2007)

From these statistics, the main reason for non-participation for urban women seems to be "busy with housework", whose ratio is over 70% in all the three years. For urban men, it appears to be "student" and "retired" categories which account for at least 30% of the reasons each. This means that they are either preparing for participation as today's students or are enjoying retirement post participation (Ilkkaracan and Acar, 2007).

Although "retired" and "student" categories explain most of the non-participation among men, these reasons make up as little as 12% for women in 2005. Ratio of being a "student" as a reason for non-participation is on an increasing trend from 1988 (6,0%) to 1996 (7,5%) and 2005 (8,4%). Similarly, the "retired" category increased by 1,2% from 1988 to 2005. Furthermore, "busy with housework" category decreased by 12,8% points from 1988 to 2005. However, most of the decrease is absorbed in two amorphous categories "not able to work" (3,8% increase) and "other" (3,7% increase). "Not able to work" category is defined as people who are disabled or ill and hence cannot participate. "Other" category includes individual and family-related reasons and other reasons which are not defined in the survey.

Although the FLFP rate announced by TURKSTAT in 2005 is very low at 24.8%, we face a ratio of 42% as the labor force experience rate of women in 2005 data;

which means that 42% of the women had participated at some point in their life.[9] It is also the case for October 1988 data, where labor force experience rate is 53.3% and FLFP rate is 34.3%. As it was first pointed out by Ilkkaracan (1997), these rates draw attention to the reality that close to half of the women participate in the labor force at some point in their life but quit participating for some reason leading to low FLFP rates.

These surveys reveal that reasons for non-participation are insistently repetitive through time. Both surveys include questions to non-participant adults asking the reasons why they have never participated and why they have quitted participating if they had participated before. 31.3% of the women in the 1988 survey declare that family and individual reasons account for quitting their last jobs while this ratio is only 3.6% for men. 55% of the women in 2005 data declare that child, elderly, disabled, sick care, housework; marriage and family reasons are the obstacles for continuation of participation whereas the ratio is only 1.5% for men. Among those who have never participated in 2005, 79.1% declare that care work, housework and family reasons are the barriers to participate whereas only 5.4% of men announce these reasons.

When we look into different categories of women, the situation gets more striking. 87.2% of non-participant women who are living with a partner express that housework, care work and family reasons account for their non-participation. Regarding the same reasons, the ratios are 47.2% for non-participant women living without a partner, 41.7% for women who are university graduates, 54.1% for secondary and high school graduates and 80.3% for women who are either primary school graduates or lower educated.

Table 4.3.2 below displays the answers given to the question why the non-participant adult has not looked for a job in the past 3 months in the 2005 HLFS. What is the most striking is that a majority of women simply cite “housework” rather than care work. An interpretation may be that given the very acutely defined gender roles, the position of “housewife” is such an integral part of the self-definition of many women; that they do no not seem to distinguish “care work” as separate from

[9] Revised definition of labor force experience rate is used here. It is the share of those who have participated in the labor force at any point in their lives. These were calculated from the raw data of October 1988 and 2005 HLFSs by me.

"housework". Hence, in response to this question, women simply say "I have not searched for a job because I am a housewife".

Table 4.3.2 Reasons for not looking for a job

What is the reason for why you have not looked for a job in the past 3 months? (%)

	Previous participants		Never-participants	
	Women	Men	Women	Men
Busy with housework	61,7	0,0	75,4	0,0
Caring for children and/or needy adults at home	10,4	0,3	2,1	0,2
Total	72.1	0,3	77,5	0,2

5. LOGIT REGRESSION ANALYSIS

The insights provided by the analysis of household labor force data from a gendered perspective as presented in Chapter 4 show that the U-shaped pattern is a superficial account which needs further exploration. Moreover, "low levels of education" cannot explain low participation patterns. Hence it is possible to postulate whether or to what extent a combination of gender based social, cultural and structural factors influence women's labor force participation decisions. Some of these reasons serve as supply-side push factors such as human capital properties of a woman, sexual division of labor at home and household livelihood characteristics. Some others serve as demand-side pull factors such as economic environment and employment opportunities in the region of residence. I have categorized the data such that I have created variables as indicatives of these factors.

Binary logistic regression is used for analyzing the effects of these factors on labor force participation probabilities of women. Logistic regression is convenient for situations in which we have a binary response variable determined by values of a set of predictor variables. Logistic regression coefficients are used to estimate odds ratios which tell us how much more likely a certain outcome than another outcome is to occur for each of the explanatory variables in the model.[10]

[10] Odds ratio is a ratio of two odds and simply equals e to the power b_i when estimated by using a computer package (Kleinbaum 1994). See Appendix B for the logit outputs of my models computed in SPSS.

5.1. Data

I use October 1988 and 2005 household labor force surveys executed by TURKSTAT. October 1988 HLFS is the first nationwide survey which was conducted with 22 320 households and implemented ILO standards. It is eligible for comparisons with recent surveys. 2005 HLFS is used since it was the most recent survey available when I started my study. It was conducted with 126 704 households.

I limit my sample to women of age 15-44 since 80% of participant women in 1988 and 76% in 2005 are lower than 45 years old. Furthermore including women of age 45-65 ends up in bringing together the counteracting effects of age versus care on labor force participation. The age group 15-44 includes women who are usually healthy enough to participate in the labor force and do not need someone else to look after themselves.

51.9% of the adults aged 15-44 surveyed in October 1988 HLFS are women and 48.1% are men. Among 23 926 women aged 15-44, 8 331 are participants, which makes 34.8% of these adult women. 15 595 are non-participants. 83.8% of participant women are employed while 16.2% are unemployed.

In 2005 HLFS data, there are 119 516 women aged 15-44, which makes 52.6% of the 15-44 age population. 32 303 participant women constitute 27.0% of this sample. Among participant women, 28 108 (87.0%) are employed and 4 195 (13.0%) are unemployed.

5.2. Methodology: Logit Regression

In logistic regression the dependent variable is the probability that an event will occur, hence y is constrained between 0 and 1. Logistic regression has the additional advantage that all of the predictors can be binary, a mixture of categorical and continuous or just continuous (Kleinbaum 1994).

The logistic model is written as:

$$\text{Prob(event)} = \frac{1}{1+e^{-z}}$$

where z is $b_0 + b_1x_1 + b_2x_2 + \ldots b_px_p$

The logistic equation can be rearranged, as in the following, into a linear form by converting the probability into a log odds or logit.

$$\text{Prob(event)} + e^{-Z}\,\text{Prob(event)} = 1 \quad (5.3.1)$$

$$e^{-Z} \cdot \text{Prob(event)} = 1 - \text{Prob(event)} \quad (5.3.2)$$

$$e^{-Z} = (1 - \text{Prob(event)}) / (\text{Prob(event)}) \quad (5.3.3)$$

$$\log e^{-Z} = \log [(1 - \text{Prob(event)}) / (\text{Prob(event)})] \quad (5.3.4)$$

$$-z = \log [(1 - \text{Prob(event)}) / (\text{Prob(event)})] \quad (5.3.5)$$

$$-z = \log (1 - \text{Prob(event)}) - \log (\text{Prob(event)}) \quad (5.3.6)$$

$$z = \log (\text{Prob(event)}) - \log (\text{Prob(no event)}) \quad (5.3.7)$$

Hence;

$$\log [\text{Prob(event)}/\text{Prob(no event)}] = b_0 + b_1x_1 + b_2x_2 + \ldots b_Px_P \quad (5.3.8)$$

This produces a relationship similar to that in linear regression except that now each one-unit change in an independent variable is associated with a change in log odds rather than the direct response. Here, odds equals Prob(event)/Prob(no event). Interpretation of the coefficients is complicated as they relate to changes in log odds rather than the response itself (Stock and Watson 2003).

To ease the interpretation, probabilities of participation are estimated by calculating $\exp(\beta_i) / [1+ \exp(\beta_i)]$ for each explanatory variable. Upper and lower bounds for participation probabilities are constructed by adding and subtracting two standard errors to and from the coefficient estimates. Consequently, the exponentials of the upper and lower bounds and the mean values were taken to calculate the probabilities. Appendix B exhibits the probabilities calculated from the logit regression analysis.

In my models, the dependent variable LFP takes 0 when the woman is a non-participant and 1 when she is a participant. The estimates of LFP, determined by a combination of the mentioned factors (explanatory variables), take values ranging from 0 to 1. The estimated coefficient of a categorical explanatory variable reflects the effect of a change in that variable from 0 to 1, on LFP. If the coefficient is approximately zero, it means that when the dummy value of that variable for an observation unit moves from 0 to 1, *ceteris paribus*, the probability of that unit to

participate in labor force is about 0.5. When the coefficient is positive (or negative), the probability is higher (lower) than 0.5.

I categorize the explanatory variables like the following; human capital variables, variables on sexual division of labor and the interlinked gender roles, household livelihood variables and cultural variables.

Age and education level are the human capital variables. Age is considered as a human capital variable because it is an indicator of work experience. However for women, it also shows a life pattern with respect to marriage and child bearing. It is expected that women participate less at lower ages because of the duration of their education, participate more after they finish their education, usually withdraw from the labor force for a few years when they bear children, enter the labor force again after having brought up their children and stay in the labor force at their healthy ages. As they get older, withdrawal occurs. This situation is the commonly known M-shape characteristic of FLFP leading a life-cycle pattern.

Education level also plays an important role on participation since expected wage rate and returns from participation increase as education level rises.

Marital status, presence of children in the household below the age of 12, presence of non-labor force participant and non-student adult woman in the household, whether the woman is the household head or not and household size are categorized as sexual division of labor variables. Living with a partner is expected to be a prohibitive factor for participation of women and encouraging for men. Presence of children below the age of 12 is expected to act as a hindrance since young children have to be looked after and women are seen as the primary carers at home. The variable which I named as “the presence of non-labor force participant and non-student adult woman in the household” is firstly introduced to the Turkish literature, which is intended to capture the effects of a potential caregiver at home. The presence of such a woman who is younger than the age of 65 and is able to supply care for children and engage in housework is expected to increase a woman’s participation probability since it is an indicative of an extra pair of hands at home and potential for no cost domestic help with home care and child care. On the other hand, it may show up with a negative influence on participation reflecting that the non-participant woman herself

is in need of care which may also exert another pressure on a woman's participation decision.

A few articles in the international literature have emphasized the effects of care available in the household. Kamitewoko et al (2005) included a dummy variable called "the presence of other adult in the household who is not in the paid labor force" but did not restrict the characteristics of this adult by age or sex. (I do not personally expect that a non-participant adult man in the household will be helpful in terms of home care and child care.) They found that this variable positively affected the dependent variable which is a dichotomous variable taking the value 1 when the married woman is working and 0 when she is not working. The explanation of this positive effect by the authors is that an additional adult in the family can help with the care work and carry out some of the domestic work so that a woman in the family can work outside the home. Barrow (1998) included an indicator for the presence of a woman's mother/father/stepmother/stepfather/grandmother/grandfather in the household around the birth year to reflect greater access to low cost child care. Her equation estimated the probability of a woman's decision to return to work shortly after the birth of her first child and this variable showed a significant positive effect on deciding to return to work. Chiuri (2000) found that lack of help from the extended family negatively affects women's participation. She uses a migration variable which is an indicator of living away from either spouse's birth place.

Being a household head is expected to increase the participation probability of a woman since the general conception is that male is the breadwinner and only if a male adult is not present in the household, a woman takes on the role of breadwinning for the family.

Household size may affect female participation either negatively, accounting for the increased burden of household care and maintenance; or positively accounting for the need of sustaining the household livelihood.

Household livelihood variables are monthly household earnings excluding the woman's own earnings in New Turkish Liras, which can be computed for 2005 data and not for 1988 data; and the number of employed persons in the household excluding the woman herself computed for 1988 data since October 1988 HLFS does not contain any earnings questions. Monthly household earnings excluding the

woman's should have a negative effect on women's participation decision since they may feel that there is no need to be in paid employment if monthly household earnings are higher. For the same reasons, likelihood of participation is expected to decrease if the number of employed persons in the household excluding the woman herself increases. Household size can also be classified as a household livelihood variable as mentioned before.

To be indicatives of cultural factors affecting women's labor force participation, dummies for education level of the household head, region of residence, and whether the location of residence is urban or rural are used. I expect the participation probability to be higher at higher education levels of the household head. Region of residence may affect positively or negatively depending on the combination of job market opportunities versus cultural characteristics of the region. In urban places I expect the participation probability to be lower compared to rural locations since most of the women assume their full time unpaid reproductive role after migrating from rural places to urban. The structure of the urban production system does not allow the combination of productive and reproductive work as rural agricultural context does. In rural areas, care work is shared in a friendlier environment by neighbors so that women can participate in the labor force or if they are doing farm work, they can take their children with them to the workplace. The problem for urban women is the unavailability of nursing rooms and day care centers in work places. Unfortunately there are no legal or institutional mechanisms to support the compatibility of care work and paid work.

Table 5.2.1 summarizes the explanatory variables as they are coded in the SPSS tables and expected direction of their effects.

SPSS 13.0 version is used to run the logit regressions. SPSS is suitable for this purpose and commonly used in studies concerning labor force participation to estimate logit or probit equations.

All the variables used are dichotomous, getting the values of 0 or 1; except household earnings excluding woman's earnings and household size. Since we cannot apply correlation analysis to categorical variables, only the two non-categorical variables; household earnings excluding woman's own earnings and household size, are examined. Factor analysis was implemented and a condition

number from their eigenvalues was calculated. (See Appendix C for the eigenvalues) The condition number is a way of detecting multicollinearity. It is the condition index with the largest value and equals the square root of the largest eigenvalue divided by the smallest eigenvalue. (SPSS command for factor analysis computes eigenvalues) It is accepted that if the condition number is less than 10, we can confidently say that there is no multicollinearity; if it is between 10 and 30, there exists multicollinearity to some extent but it is not too serious; and if it is higher than 30, then multicollinearity is a real problem that we must get rid of. The condition number appeared to be less than 10 for these non-categorical variables, which means that collinearity is not present between them. [11]

[11] I learnt this procedure from SPSS 13.0 tutorial. The condition number I found for household earnings and household size is 1,046, which means that collinearity does not exist.

Table 5.2.1. Explanatory variables and expected direction of effects

LivingWithApartner	-
HHhead	+
PresenceOfChildrenLowerThanAge12	-
PresenceOfNonlfpWOMENexc.Herself	+
HHsize	+/-
Woman's education level	
LiterateWithoutdiploma	+
Primaryschool	+
Secondaryschool	+
Highschool	+
OccupationalHighschool	+
University	+
Woman's age group	
AGE15_19	-
AGE20_24	+/-
AGE25_29	+/-
AGE30_34	+
AGE35_39	+
Household head's education level	-
HHheadLiterateWithoutDiploma	+
HHheadPrimary	+
HHheadSecondary	+
HhheadHigh	+
HhheadOccupHigh	+
HHheadUniversity	+
HHearningsExcludingOneself	-
URBAN	-
Region of residence	
Istanbul	+/-
West Marmara (Tekirdag-Balikesir)	+/-
Agean (Izmir-Aydin-Manisa)	+/-
South Marmara (Bursa-Kocaeli)	+/-
West Anatolia (Ankara-Konya)	+/-
Mediterranean (Antalya-Adana-Hatay)	+/-
Middle Anatolia (Kirikkale-Kayseri)	+/-
West Black Sea (Zonguldak-Samsun-Kastamonu)	+/-
East Black Sea (Trabzon)	+/-
North-east Anatolia (Erzurum-Agri)	+/-
Middle East Anatolia (Malatya-Van)	+/-

Reference categories:
Woman's education level: Illitereate
Woman's age group AGE40-44
Household head's education level: Illiterate
Region of residence: South-East Anatolia (Gaziantep-Sanliurfa-Mardin)

5.3. Results of the logit regression analysis

9 logistic regressions are computed for the following samples:

1- all men aged 15-44 in 2005 HLFS

2- all women aged 15-44 in 2005 HLFS

3- urban women aged 15-44 in 2005 HLFS

4- rural women aged 15-44 in 2005 HLFS

5- urban women who are primary school graduates or lower than primary educated in 2005 HLFS

6- urban women who are secondary and high school graduates in 2005 HLFS

7- urban women who are university or above educated in 2005 HLFS

8- urban women aged 15-44 in 1988 HLFS

9- urban women aged 15-44 in 2005 HLFS (comparable with the 1988 equation)

Generally the same explanatory variables are used in each regression except the one conducted with 1988 data. We don't have available information concerning household earnings and region of residence in 1988 HLFS. In order to make it comparable with the 1988 equation, another regression was computed for 2005 urban women containing the same variables as those used in the 1988 equation (i.e earnings and region of residence variables from the original 2005 equation were omitted).[12]

5.3.1. All men versus all women in 2005 HLFS

Table 5.3.1.1 represents the comparable results of the logistic regressions for men and women aged 15-44 in 2005 data, which are summarized from the SPSS outputs given in B. In the equation for men, all the explanatory variables are found to be statistically significant. The findings reveal that living with a partner, being a household head, presence of children below the age of 12, and household size increase the likelihood of men's participation. Looking at the SPSS outputs in

[12] The reason why I display only one regression run with 1988 data is that I am especially interested in the urban female participation since FLFP rates are much lower in urban areas than rural areas. Urban FLFP rate in 1988 is 17,7% while rural FLFP is 50,7%. Urban FLFP rate in 2005 is 19,3% while rural FLFP is 33,7%. I also ran separate regressions for all women and rural women aged 15-44; but I do not include them here since I have observed that the signs of the factors occur to be the same as in the case of urban women.

Appendix B (Table B.2), living with a partner increases the odds of participation by a factor of 3,186, given the other variables in the model are held constant.[13] This means that for men, who live with a partner, relative to men who live without a partner, the relative probability of participation in the labor force relative to non-participation would be expected to increase by a factor of 3,186 given the other variables in the model are held constant. This corresponds to a probability of 76% for a man to participate if he is married or living together with a partner, compared to a man who is single. In other words, married men are more likely than unmarried men to prefer participating in the labor force over non-participating.

Table 5.3.1.1. All men versus all women in 2005 HLFS

	MEN	**WOMEN**
Variable	*Coefficient*	*Coefficient*
LivingWithApartner	1,159	-0,769
Hhhead	0,688	0,165
PresenceOfChildrenLowerThanAge12	0,151	-0,328
PresenceOfNonlfpWO/MENexc.Herself	-0,372	-0,109
Hhsize	0,026	0,071
LiterateWithoutdiploma	1,450	0,110
Primaryschool	1,896	0,132
Secondaryschool	1,577	0,144
Highschool	1,359	0,666
OccupationalHighschool	2,252	1,274
University	2,770	3,071
AGE15_19	-1,538	-1,259
AGE20_24	-0,105	-0,367
AGE25_29	0,869	-0,058
AGE30_34	0,666	0,072
AGE35_39	0,398	0,155
HHheadLiterateWithoutDiploma	-0,211	ns
HHheadPrimary	-0,309	-0,195
HHheadSecondary	-0,480	-0,435
HHheadHigh	-0,971	-0,671
HHheadOccupHigh	-0,988	-0,652
HHheadUniversity	-1,280	-0,546
HHearningsExcludingOneself	-0,00012	-0,00018
URBAN	-0,113	-1,010
Regional dummies (11dummies)	yes	yes
Number of observations:	*107667*	*119516*

Reference categories: AGE40_44, Illiterate, Rural, South-east Anatolia
ns: not significant at 5% level.

For the female sample, living with a partner and having children below the age of 12 have a negative effect on women's participation, compared to living without a

[13] Exp (B) in the SPSS logit output means the exponential of each variable's coefficient. It refers to the odds ratio.

partner and not having children below age 12 respectively. The probability of a married woman to participate is about 32%, other things being constant. These results support what has been predicted about gender roles and division of labor in the home. Presence of non-participant adult men in the household has a negative impact on men's participation which may be an indicator of higher-income families in which adult men do not need to participate. Presence of non-participant adult women, on the other hand, decreases the likelihood of women's participation that may be either indicative of the increased burden of care in the home or the traditional large family structure with negative attitudes towards women's LFP.

All education levels compared to being illiterate positively affect both women's and men's participation; but odds of participation sharply increases for women only if they are university graduates. Other levels of education do not have an influence that much. For men, the effect on likelihood of participation is always higher compared to women at all education levels. The probabilities calculated at mean values deserve attention. Other variables being constant, the probability of participation of a woman who is a primary or a secondary school graduate is around 50% while the probability of a same-level graduate man is at a high of 80% (see Appendix B for these probabilities).

Compared to the 40-44 age group, women are more likely to participate at 30-39 ages and less likely to participate below the age of 30. Odds of participation increases mostly at ages 35-39 for women and at 25-29 for men. This finding for women is consistent with the findings of Tunali and Baslevent (2004)[14]. This effect of ages 35-39 may stem from the increase in participation after having brought up the children or may be because widowed and divorced women are higher in percentage in the 35-39 age group. When I checked the data for evidence, I saw that 25.6% (which is the highest percentage among married and never married women) of the divorced women and 34.4% of the widowed women in the labor force are aged 35-39. Furthermore, 24.5% of the married women who are living separate from their partners are also in the 35-39 age group. This reveals that these women are most likely to participate since they should make their livelihood themselves.

[14] Tunali and Baslevent (2004) found that peak rates for married women are observed among the age group 30-34 in 1988 and 35-39 in 1998 from their analysis with HLFSs.

Another thing that attracts attention is that all levels of graduation of the household head decreases the participation probability of both women and men. A priori expectation was that the likelihood of participation increases as level of education of the household head increases, because we had formalized this variable as a cultural variable, indicative of gender attitudes. One possible interpretation of the counteracting findings is that household head's education is an indicator of the income level of the household and hence acts as a household livelihood variable rather than a cultural or attitudinal variable.

Household earnings excluding one's own earnings has a very small but significant negative effect for both men and women as expected. This is due to the unit of measure in New Turkish Liras. In all equations, earnings variable occurred to have a significant but small effect which showed the effect of 1 New Turkish Lira increase on the probability of participation.

Living in urban areas has a discouraging effect for women and men compared to living in rural areas as expected.

Regional variables are all statistically significant. Compared to living in Gaziantep-Sanliurfa-Mardin, living in Trabzon makes the largest shift in the odds of participation of women. As far as we know, Trabzon has varying employment opportunities for women since the production of tea and tobacco has spread over the city and especially the rural parts creating farm work and small factory jobs for men and women. For men, living in Tekirdag-Balikesir and Istanbul make the largest positive effect. Living in the other regions compared to living in Gaziantep-Sanliurfa-Mardin still increase men's participation but the effects are not noticeably different. For women, on the other hand, there is a lot more variation in the regional effects as compared to men (See Appendix B – Table B.1).

5.3.2. Urban versus rural women

Table 5.3.2.1 represents the coefficient estimates of the explanatory variables in the logistic regression conducted for urban and rural women aged 15-44.

Urban women's likelihood of participation is found to increase if they are household heads and if there are non-labor force participant and non-student adult women in their households. Hence, for urban women, the latter variable, which is an indicator of availability of care, has the predicted effect. Living with a partner and having

children lower than age 12 in the household decrease their odds of participation significantly. Increasing the household size results in a decrease in the odds of participation which confirms its effect of increasing the burden of housework and care work at home. Presence of non-participant adult women in the household helps this burden to decrease acting as a no cost means of doing these tasks. The probability of participation for a woman who has an extra pair of hands in the home is 63%, compared to a woman who does not, *ceteris paribus.*

In the case of rural women, living with a partner and presence of children below the age of 12 still cause a discouraging effect on labor force participation of women. Surprisingly, being a household head decreases the likelihood of participation. This reveals a commonly observed characteristic of rural families in which older male children enter the labor force before adult women in the household if a male household head is not present.

Table 5.3.2.1. Urban women versus rural women in 2005 HLFS

	URBAN WOMEN	**RURAL WOMEN**
Variable	*Coefficient*	*Coefficient*
LivingWithApartner	-0,883	-0,408
HHhead	0,301	-0,136
PresenceOfChildrenLowerThanAge12	-0,195	-0,397
PresenceOfNonlfpWOMENexc.Herself	0,513	-0,780
HHsize	-0,049	0,138
LiterateWithoutdiploma	0,388	ns
Primaryschool	0,283	0,132
Secondaryschool	0,556	-0,258
Highschool	1,000	ns
OccupationalHighschool	1,572	0,693
University	3,195	2,564
AGE15_19	-1,359	-1,011
AGE20_24	-0,398	-0,367
AGE25_29	ns	-0,317
AGE30_34	0,216	-0,166
AGE35_39	0,304	ns
HHheadLiterateWithoutDiploma	ns	ns
HHheadPrimary	-0,273	-0,127
HHheadSecondary	-0,368	-0,519
HHheadHigh	-0,633	-0,738
HHheadOccupHigh	-0,593	-0,731
HHheadUniversity	-0,502	-0,821
HHearningsExcludingOneself	0,00004	-0,00069
Regional dummies (11 dummies)	yes	yes
Number of observations:	*82449*	*37067*

Reference categories: AGE40_44, Illiterate, South-east Anatolia
ns: not significant at 5% level.

Furthermore, presence of non-participant adult women in the household has a negative effect on the participation probability of rural women, which may be an indicator of higher income rural families with less pressure for labor force participation or alternatively these non-participant adult women may be in need of care and have to be looked after restricting the participation choices of rural women. An increase in the household size acts as an encouraging factor which may be attributed to the need for maintaining or increasing livelihood capabilities of poorer families.

The most noticeable thing about education levels is that, again, as expected, being a university graduate makes the biggest difference on urban and rural women's participation. Other education levels all increase the odds of participation of urban women compared to the ones in the illiterate category. However, for rural women, being literate without a diploma and being a high school graduate do not have significant effects. The probability of participation is around 50% when the status of a rural woman changes from not having a diploma to being a high school graduate. As distinct from urban women, being a secondary school graduate has a negative significant effect on participation of rural women. Secondary school graduates have sufficient income and act as home makers, which is an indicator of household status.

Being in the age group 15-24 decreases participation probability of urban women attributable to the increase in the duration of education and increase in the number of girls who go to university. From 25-29 onwards, increasing age increases likelihood of participation. The largest impact is of being 35-39 relative to being in the age group 40-44.

The situation is different for rural women in terms of age. Likelihood of participation is influenced negatively but at a decreasing trend starting from age 15 to age 39. This is probably indicative of the rural agricultural work that requires physical strength.

Household head's education levels compared to being illiterate decrease the odds of participation both for rural and urban women except being literate without a diploma, which has no significant effect.

Increase in the monthly household earnings excluding the woman's own earnings has a positive impact on urban women's participation but a negative impact on rural women's participation. The positive impact may be indicative of poorer urban

families which are trapped by higher needs and have to generate higher earnings. Among 12 regions of residence, living in Trabzon has the biggest positive effect on participation of both urban and rural women, compared to living in Gaziantep-Sanliurfa-Mardin. (See Appendix B –Table B.3 and B.4)

5.3.3. Urban Women According to Their Education Levels

Urban women are examined here in three groups according to their education levels: (1) primary school graduates and lower educated (illiterate and literate without a diploma) women, (2) secondary ad high school graduates, (3) university graduates.

It can be seen from Table 5.3.3.1 that the sexual division of labor variables show different impacts on the participation of these 3 education groups. Only the effect of living with a partner is constant in terms of its negative sign for all education groups and particularly discouraging for women with primary and lower education. Even the probability of a university-graduate woman's participation is as low as 32% when the woman's status changes from single to married.

Table 5.3.3.1. Urban women in 2005 HLFS according to their education levels

URBAN Women	**Prmry&lower**	**Sec&High**	**Uni&higher**
Variable	*Coefficient*	*Coefficient*	*Coefficient*
LivingWithApartner	-1,217	-0,804	-0,745
HHhead	ns	0,243	0,697
PresenceOfChildrenLowerThanAge12	-0,359	-0,136	ns
PresenceOfNonlfpWOMENexc.Herself	-0,265	1,261	0,727
HHsize	0,048	-0,166	-0,207
AGE15_19	-0,400	-1,865	-1,383
AGE20_24	ns	-0,467	-0,981
AGE25_29	ns	ns	-0,335
AGE30_34	0,173	0,229	ns
AGE35_39	0,250	0,347	0,293
HHheadLiterateWithoutDiploma	ns	ns	ns
HHheadPrimary	-0,144	-0,259	ns
HHheadSecondary	-0,224	-0,322	ns
HHheadHigh	-0,627	-0,450	ns
HHheadOccupHigh	-0,626	-0,305	ns
HHheadUniversity	-0,987	-0,554	0,554
HHearningsExcludingOneself	-0,00027	0,00010	0,00025
Regional dummies (11 dummies)	yes	yes	yes
Number of observations:	*45000*	*30999*	*6450*

Reference categories: AGE40_44, Illiterate, South-east Anatolia
ns: not significant at 5% level.

Being a household head does not have any statistically significant effect on primary school graduates (in other words, when a primary school graduate becomes a

household head, the probability of participation is around 50%, compared to not being a household head, *ceteris paribus*); but has a significant positive effect on the other groups.

Presence of children lower than age 12 decreases the odds of participation for primary, secondary and high school graduates; but it is no more a statistically significant determinant of participation for university graduates. This can probably interpreted in two ways: The higher wage income of university graduates enables paying for care services. Also university graduates' career track situation increases not only their ability to pay for, but also willingness to arrange for alternative care options.

Presence of non-participant adult women in the household negatively influences the participation decision of primary school graduates but increases the willingness of participation of secondary school, high school and university graduates. High school and university graduates usually have higher monthly earnings than other groups; but the unavailability of crèches and day care centers for 0-3 year old children and lack of affordable public, private or workplace based care centers usually prevent these women from participating in the labor force. Furthermore, there is a common belief in the society that little children cannot be looked after well in care centers; so the mother should be the primary carer especially for 0-3 year old children. This belief also discourages higher educated women to participate if they have little children. The analysis shows that they become participants if they have non-participant and non-student adult women in the household who can look after their children and also help with the housework.

The negative effect of this care variable on the willingness of participation of primary school graduates may be an indicative of large and conservative family types mostly seen in the case of lowly educated families in Turkey, as was the case for rural women. Large families put a higher burden of housework and care work on women decreasing the possibility of participating in the labor force. But the household size variable has a positive impact for this lowly educated group meaning that livelihood concerns are also so dominant that lowly educated women become more willing to participate in the labor force if the household size increases. An increase in the household size has a negative impact on the secondary school, high

school and university graduates. This may again be an indicative of the increasing burden of home care.

Being in the age group of 15-19 decreases the likelihood of participation for primary school graduates. Secondary school, high school and university graduates are less likely to participate in the age group of 15-24 since they are usually continuing their education. Being at 30-34 increases the odds of participation significantly for all the education groups except the university graduates. Women whose education levels are lower than university usually get married and have children early and they usually have brought up their children by the age of 30. That is why they can enter or re-enter the labor force at the beginning of their 30s. For all the education groups, being in the age group of 35-39 consistently makes the highest positive impact on the likelihood of participation. These ages correspond to the period that married women have probably brought up their first children; so children do not require their mothers at home and mothers can participate in paid employment.

Compared to being illiterate, household head's education level, except the case of literacy without a diploma, always has a negative impact on the participation of primary, secondary and high school graduate women. In the case of university graduate women, the effect is statistically insignificant whatever the education level of the household head is; except the case that the head is a university graduate. If the head is a university graduate, this is found to increase the likelihood of participation of university graduate women, which justifies my expectation about the cultural effect of household head's education.

Monthly household earnings have very small but significant effect on women's participation which is negative for primary school graduates and positive for others.

Among 12 regions, living in Trabzon is the common factor making the biggest increase in the odds of participation of primary, secondary and high school graduates, noting that there is much higher regional variation for primary and secondary school graduates than for university graduates. All other regions compared to Gaziantep-Sanliurfa-Mardin region increase the likelihood of participation of women who are not university graduates. Living in Antalya-Adana-Hatay region has the largest positive impact on university graduates' participation, compared to living in Gaziantep-Sanliurfa-Mardin region. What is interesting is that living in Istanbul

has a discouraging effect on university graduates' participation while it increases the participation probability of lower educated groups. High unemployment rate among university graduates in Istanbul may be an explanation of the discouraging effect**.** Living in the more industrialized regions like Bursa-Kocaeli, Kirikkale-Kayseri, Malatya-Van and Trabzon also have encouraging effects for university graduates.

5.3.4. Comparison of results for urban women in 1988 versus 2005

Table 5.3.4.1 displays the results of the logistic regressions computed with the same explanatory variables for 1988 and 2005 enabling a comparison of these two years in terms of the significant determinants of female labor force participation.

Table 5.3.4.1. Urban women in 1988 versus 2005 HLFS

URBAN WOMEN AGED 15-44	**1988**	**2005**
Variables	B	B
AGE15_19	-0,676	-1,467
AGE20_24	ns	-0,524
AGE25_29	0,224	ns
AGE30_34	0,531	0,208
AGE35_39	0,346	0,342
LiterateWithoutDiploma	0,225	0,390
Primary	0,488	0,493
Secondary	0,505	0,786
High	1,817	1,227
OccupationalHigh	2,495	1,831
University	3,821	3,376
LivingWithApartner	-1,590	-0,956
HHheadLiterateWithoutDiploma	-0,203	ns
HHheadPrimary	-0,600	-0,173
HHheadSecondary	-0,480	-0,305
HHheadHigh	-0,458	-0,614
HHheadOccupHigh	-0,490	-0,480
HHheadUniversity	ns	-0,499
WomanHHhead	0,285	0,423
PresenceOfChildrenLowerThanAge12	-0,137	-0,071
HHsize	ns	-0,190
EmployedSumExcludingOneself	0,268	0,419
PresenceOfNonlfpWOMENexcludingHerself	-0,398	0,583
Number of observations:	15376	82449
Reference categories: AGE40_44, Illiterate		
ns: not significant at 5% level.		

Since there is not available data on monthly earnings in October 1988 HLFS, I use "the number of employed persons in the household excluding the woman herself" as an indicative of monthly household earnings excluding the woman's earnings. This variable occurs to have positive effect on participation of urban women in both years

indicating that household livelihood concerns are dominant in the choice of paid employment in both years.

Living with a partner decreases the likelihood of participation in both years, although its effect has become smaller in 2005.

Being a household head is an encouraging factor in both years but the coefficient is higher in 2005.

Presence of children has a negative effect in both years, but it becomes less restraining in 2005 relative to 1988.

Presence of non-participant adult women in the household has a negative effect in 1988 and a positive effect in 2005. The negative effect in 1988 may be an indicative of large and conservative family type common in those years which restrains women's employment capability. In 2005, this variable turns to have an encouraging influence due to the lack of affordable care facilities outside the home.

Hence we observe relatively positive improvements in terms of sexual division of labor variables for women's probability of participation from 1988 to 2005.

Increasing household size has no significant effect in 1988, but has a negative effect in 2005 referring to the increasing effect of this variable as a "care" variable discouraging women's participation.

Compared to being 40-44 year old, being at the ages 30-34 makes the highest positive impact on participation in 1988 while it is the 35-39 period which peaks the likelihood of labor force participation in 2005. Being at 15-19 decreases the likelihood of participation in both years. Thus, it can be said that age profile of LFP is shifting from 1988 to 2005. There is high possibility of non-participation up till 20s in 2005 due to the increased education years.

Likelihood of participation is increasing with increasing education levels compared to being illiterate; but it jumps noticeably at university level in both years. But this effect has dampened substantially from 1988 to 2005, whereas probability of participation has increased for lower education groups from 1988 to 2005.

There is also no data on regions of residence in 1988; so household head's education level is intended to capture the cultural effects alone. Education level of the

household head generally influences negatively except university level being insignificant in 1988 and literacy without diploma being insignificant in 2005.

To sum up, living with a partner, presence of children below the age of 12, being a household head, education level of women, and education level of household head are very determining and restraining, as sexual division of labor variables, both in 1988 and 2005 although there has been some progress since 1988.

6. LEGAL AND INSTITUTIONAL FRAMEWORK

The analysis in this paper has showed that sexual division of labor, cultural factors, human capital characteristics and household livelihood factors account for the limited participation of women in the labor force. However what lies behind and prepares the background for these factors is the patriarchal gender ideology which is legally, socially and institutionally kept persistent.

In this section, the institutional and legal framework in Turkey in regards to promotion of more women to enter the labor force, parental leave arrangements, child care arrangements and part time work opportunities is undertaken and cross-country evaluation of different care policies will be framed to allow for comparison.

6.1. Legal Framework

Until 1990, clause 159 of the Turkish Civil Code had given the right to decide whether a woman can work outside the home or not to her husband. This clause could only be changed by the pressure of the women's movement. However this clause has been replaced by a new clause (clause 192) which says "Either one of the spouses does not need to get permission of the other on the decision of working and on which job to do. But the choice of working should be made by taking family harmony and peace into consideration." This new clause hides the ongoing patriarchal ideology behind. Because in practice, women are the ones who are seen as the homemakers and despite the revision in this provision, men can still assert

pressure to keep women away from the labor force under the pretext of protecting family harmony.

As far as the Labor Law is concerned, there are no legal mechanisms to welcome more women in the labor force. Mentioning equality between men and women in the workplace is not enough for promoting real equality. Nevertheless, the law does not propose any mechanisms to support the compatibility of care work and paid work. It even stimulates employers towards gender discrimination by putting a limit to the number of female workers in order to have workplaces arrange nursing rooms and day care centers. Many workplaces hire a number of women below 150 to avoid establishing day care centers.

Furthermore the Labor Law requires 16 weeks of maternal leave, but none of paternal leave. This is also indicative of the ideology lying behind the law which regards child care as the responsibility of women alone.

6.2. Institutional Framework for Childcare

Beside these constraints, the absence of high quality affordable child care centers still lies as a problem. According to National Education Statistics 2006-2007, there are 20 675 preschool education institutions (public and private kindergartens and nursery classes) in Turkey, which is a small number compared to the number of higher education institutions. 1 372 of them are under the control of the Agency for Social Services and Child Protection (SHÇEK). Others are governed by Ministry of Education. With the currently ongoing public government reform process, all responsibility has been transferred onto the Ministry. This has lead to the conversion of SHÇEK childcare centers to serve to the needy only.

According to the World Bank report on the education sector in Turkey (2006), the ratio of preschool education expenditures to the total budget is only 0.1% while the share of these expenditures in the budget of the Ministry of Education is only 1%. These are too small amounts compared to the education expenditures at primary, secondary and tertiary levels. Turkish Statistical Institute's Education Expenditures Research (2002) reports that the amount of preschool expenditures per student was

171 USD in 2002 while it was 488 USD for primary school, 962 USD for high school and 2254 USD for university education.[15]

Unfortunately, it is very difficult to obtain data on preschool enrolment ratios because there is no updated and officially published data for the whole country. What is reported in the World Bank Report (2006) is that the gross preschool enrolment rate was around 15% in 2005.[16] European Commission's Progress Report on Turkey (2005) reports that only 16% of the preschool age children are involved in early childhood services. If we look at Table 6.2.1 below, we can see that from mid 1980s to mid 1990s, there is a rising trend in preschool enrolment rates (for 36-72 months) and more up-to-date data confirms that it is getting better.[17]

Table 6.2.1. Preschool schooling rates for Turkey (36-72 months)

YEARS	SCHOOLING RATE
1985-1986	4,1
1986-1987	4,2
1987-1988	4,1
1988-1989	4,3
1989-1990	4,6
1990-1991	4,9
1991-1992	5,1
1992-1993	4,9
1993-1994	6,1
1994-1995	7,3
1995-1996	7,6
1996-1997	8,9

Source: http://www.meb.gov.tr/Stats/ist97/MYHTML11.htm

For Istanbul, I was able to obtain some rates verbally over the phone but the officials did not give any reference to a publication. Below are the preschool enrolment rates for Istanbul in Table 6.2.2. While the enrolment rates are on an increasing trend, 60-72 months category is the one which constitutes the highest fraction. This is because of a revision in the system where all primary schools have "preparation" classes for this age group. The officials reported that in Istanbul, 60-72 months enrolment rate is 32%, while 36-48 months enrolment rate is 3% and 48-60 months enrolment rate is 7%.

[15] Turkish Statistical Institute calculated these amounts at the exchange rate of 1 USD=1 520 425 Turkish Liras.
[16] It is far below the average of low income countries which is 23%.
[17] This table is the only series for preschool enrolment rates I could obtain from the Ministry of Education's website.

Table 6.2.2. Istanbul Preschool Enrolment Rates (36-72 months)

YEARS	SCHOOLING RATES (%)
2001-2002	7,83
2002-2003	7,68
2003-2004	8,51
2004-2005	9,14
2005-2006	10,53
2006-2007	12,52

Source: Verbally told by an official in the Ministry of Education

Household Labor Force Surveys are getting more and more progressed in terms of the questions they include about labor force participation constraints and care issues. Before the 2005 survey, there were no detailed questions concerning these. However, this data is difficult to obtain since TURKSTAT insists that these questions are now on trial and that they cannot share. Luckily, we were able to obtain from an official from the Institute, 2006 HLFS raw results which include the distribution of answers to the question of "Why is that you care for children and/or needy adults at home yourself?" and the results are in Table 6.2.3. below.

Table 6.2.3. Reasons of women for caring children and adults at home

Why is it that you care for children and/or needy adults at home yourself?	(%)
Because such care is expensive	29,3
I do not trust the quality of care services	4,7
There are no places in vicinity that offer these services	0,7
Personal preference	64,7
Other	0,7
Total	100,0

Source: 2006 HLFS

This question was asked 4 364 women in the 2006 HLFS. The distribution of the answers reveal that 64,7% of the women have internalized the responsibility of care and perceive it as "personal preference". 29,3% of the women find formal care expensive and 4,7% complain that care services are not of high quality.

According to a research of an international human resources company, the most inconvenient thing about child care for parents in Turkey appears to be the "cost of care" which makes 49% of all the problems about child care.[18] They cite "service quality" (with 25%) as the second important problem. According to the same

[18] The name of the company is Kelly International Human Resources Company. I could not reach the survey. The results given above are published in the daily newspaper Radikal on 06.02.2007.

research, Turkey ranks the highest third in a group of 28 countries after Indonesia and Ireland in terms of the highest costs of care.[19]

Then, how do employed mother tackle with the problem of care when they are at work? The Turkish Demographic and Health Survey (HIPS) done by Hacettepe University in 2003 reveals that 37,1% of the employed mothers themselves care for their children who are lower than 6 years old, 2,5% report that their husbands care, %10,4 report that the oldest female child cares, 30,4% report that the grandmothers care, and only 8,6% report that their children are in paid care. This reveals that a total of 78% of care is done by women in the family. 2,6% of the women report that they have not been working since their child was born. It seems that employed mothers find it much cheaper and perhaps much more reliable when grandmothers and other relatives look after their children. Paid care is very restricted in Turkey and only a small number of families can afford it.

6.3. Reentry into the Labor Force and Part-time Work

If we leave aside all these regulatory and institutional constraints on the compatibility of care work and paid work, other obstacles still exist for women to re-enter into the labor force after having brought up their children. Since they are excluded from paid employment during childrearing, they find it harder to get engaged in the full time employment again. What is more, part time employment opportunities are rather limited in Turkey. According to the ILO Report on Equality at Work (2007), share of women's part time employment in total employment was below 5% in 2005.[20] It is the lowest among 21 countries one of which is Netherlands with part time employment ratio of more than 25% (Ilkkaracan and Acar, 2007).

Gender ideology also influences government policies and programs concerning the promotion of women's employment. Existing programs are usually vocational training programs and technical schools that are not based upon an awareness-raising approach for women. Since the commonly memorized and pronounced constraint on

[19] The countries in the mentioned research are Indonesia, Ireland, Turkey, USA, Netherlands, New Zealand, Australia, Switzerland, Britain, Singapore, Spain, Hungary, Germany, Porto Rico, France, Canada, Italy, Malaysia, Thailand, Hong Kong, Belgium, India, Sweden, Norwegian, Luxemburg, Mexico, Russia and Denmark.

[20] Part time employment is less than 30 hours a week.

the entry of women into paid work is lack of education, the recipe does not go beyond training more women technically.

6.4. Compatibility of Care Work and Paid Work

Compatibility of care work and paid work is supported in varying ways throughout the world since there are different ideologies on caregiving, paid employment, and family and gender relations across countries. How care is understood matters in the process of its production, because care is distinguished from many other services and commodities in the sense that it is not separable from the person delivering it and hence it is a certain form of a relationship, which ensures the sustainability of human beings. The process of care influences both the cared and the carer (Himmelweit 2005).

Moreover, production of care requires time-off which has to be released from paid labor time and increasing the proportion of this time is a substantial priority to increase care standards.

In most of the societies, care responsibilities and the required resources for care are unequally distributed. The distribution of these responsibilities is generally influenced by the social and personal norms which serve as a basis for the constitution of different types of care arrangements in different societies. It can be provided formally or informally. Formal care is in the form of provisions regulated by law or other contracts. Informal care includes mostly unpaid activities performed by a relative or a nonrelative.

Here I will give a number of examples of implications of care arrangements mostly applied in the EU countries and the US.

6.4.1. Care of children

Many industrialized countries devote a high proportion of their public resources in early childhood development and preschool education starting from one-year-olds and extending the scope to older ages. These provisions may be in the form of tax deductions, parental leave facilities, free transport and childcare centers (Gornick and Meyers 2004).

European countries differ much in the form of and extent of these provisions. Tax deductions and family allowances are most generous in Belgium and Luxemburg, while Greece, Spain, Ireland and Italy generate the lowest levels of income support (Bettio and Plantenga 2004)

Publicly provided childcare facilities are mostly common in Denmark, Finland, Norway, Sweden, Ireland, Belgium, France, Finland, Portugal, Germany, Spain and Austria; with Denmark having 75% of children aged one and two enrolled in public care. In France and Belgium, full-day preschool for the over three-year-olds is available. In the Netherlands and Italy, childcare provisioning is mainly a mixture of private and public facilities. In the US and the UK, while public provision of care for the one and two year old children is limited, private provision is more common (Gornick and Meyers 2004). According to the Survey of Income and Program Participation - Child Care Module made in the US, nearly 25% of all preschoolers participated in organized care facilities in 2002.

Scandinavian countries (especially Finland, Denmark, Norway and Sweden) have very equalizing policies for employed parents to enable them equally share the care burden. In these countries, duration of fully paid leaves ranges from 30 weeks to 42 weeks. On the other hand, Belgium, France, Germany and the Netherlands are more conservative than Scandinavian countries in terms of paid leaves. They grant employed mothers only 3 or 4 months of paid leave (Gornick and Meyers 2004). The main result of these policies in two different groups of countries is that maternal employment rates in the more conservative countries lag behind those of Scandinavian countries.

In the US and the UK, working hours are long and parental leave is very limited. These restrict the chance of a more egalitarian division of labor among employed spouses (Gornick and Meyers 2004).

6.4.2. Care of the elderly

Generally speaking, care towards elder people is relatively of less interest to policy makers. There are scarce time-related provisions which give employed people leave for the care of sick and elderly relatives. Countries like Germany, Austria, Denmark, Portugal, Spain and Sweden have leave policies for the sick and elderly care

although not as generous as they do for the support of childcare (Bettio and Plantenga 2004).

Provisions of the elderly care are usually in the form of pensions. Luxembourg, Austria and the Netherlands are ranked at the top according to the average public spending on pensions in 1998. Spain, Portugal and Ireland grant the lowest amount of pensions among 15 European countries (Bettio and Plantenga 2004).

In some countries, the carers of the dependent people are supported with the aim of decreasing the additional care costs incurred to them. For instance, in Germany, cash benefits are paid to the family of the dependent person (Bettio and Platenga 2004).

The most important type of care provision for the elderly is the residential care services which are highly provided in the UK, Denmark, the Netherlands and Sweden (Gornick and Meyers 2004).

In brief, the recognition of women's discriminated position in the labor market and other social spheres, the imposed roles on them regarding child and home care and the identification of the value of care as part of social work is considerably necessary for understanding and altering the factors that lead to the absence of women in the labor force. In Turkey, both the legal system and the institutional arrangements fail to take the cognizance of the limits gender based discrimination has reached and the importance of supporting the compatibility of paid work and care work. The ideology that lies in the background further strengthens the discrimination of women and saddles women with the whole care responsibility. With the lack of affordable and high quality care facilities, Turkey exhibits a very disappointing account in terms of preschool enrolment rates when compared to most of the European countries which she is assumed to catch up with in order to be a member of the EU. Number of workplaces which offer care facilities for parents is far from meeting the requirements. Provisions of care for the elderly are even much worse and less compared to child care provisions in Turkey.

7. CONCLUSION

This study has intended to identify the factors behind low participation rates of women. The qualitative evaluation of the October 1988 and 2005 HLFS results and the quantitative analysis of the determinants of FLFP revealed that sexual division of labor in the household and gender roles, acting as substantial constraints, are the major determinants of FLFP in Turkey.

The role of the woman as the "homemaker" and the role of the man as the "breadwinner" are reflected in the answers of respondent men and women in the HLFSs. Women seem to have internalized their roles as "housewives" and "primary carers of children and needy adults at home" such that they regard these as their personal preferences rather than constraints for labor force participation.

The regression results confirm the negative effect of being married (or living with a partner) on labor force participation for all groups of women mentioned in this study and for both years, although less restraining in 2005 than in 1988. This negative impact is especially apparent in the case of urban women. Besides, having children below age 12 in the household leads to a decline in the likelihood of women's participation for all groups of women examined, except university graduate women. Presence of other non-participant and non-student adult women in the household acts as a potential opportunity of home care and childcare. This variable appears to be positively influential even on the participation willingness of university graduate women in 2005 HLFS, although they are expected to afford formal care facilities or paid helpers for care work more easily.

Being a household head, slightly more influential in 2005 than 1988, plays an encouraging role on urban women's participation.

Yet, household livelihood acts as a pushing factor for labor force participation of women in the lower income strata. Urban women who are primary school graduates and rural women are more likely to participate as their household size increases. For the upper income strata, increasing household size acts as a discouraging effect on participation since the burden of household care increases. Urban women in 1988

and 2005 and secondary school, high school and university graduates in urban areas in 2005 are less likely to participate as household size increases.

Structural and cultural factors are found to be influential both in 1988 and 2005. Region of residence and living in urban or rural areas have significant varying effects on women's participation, reflecting the different structure of economic environment, job market opportunities, cultural characteristics, and perhaps the availability of services that support the compatibility of paid work and care work. More industrialized regions encourage women more to participate. On the other hand, lack of low cost and high quality care services becomes a major problem in urban areas. In rural parts of Turkey, this is not a serious problem since the nature of the jobs such as farm work let women do care work and paid work simultaneously; or large families and neighbors help to care children.

Human capital characteristics like age and education keep being important on women's participation. But what is important to note here is that the logistic regression results show the effect of the explanatory variables which are categorical relative to the reference category of each variable. So it is not surprising to find increasing education levels compared to being "illiterate" increasingly and positively influence the likelihood of participation of women. What is noteworthy from the HLFSs is that there are huge gaps between the participation levels of men and women with the same education levels. If low education levels of women are the primary hindrance for women's participation, then educating all women until they are university graduates should be a solution. But we know that it is not. Will university education abolish all the obstacles to participation? Will it be enough to raise women and men's gender-awareness? Will it help to distribute the care burden equally between men and women? Moreover, Turkey has been experiencing high unemployment rates and high rates of non-participation among university graduate women. Without taking structural precautions and without enhancing the employment raising capability of the economy, educated millions cannot be offered any place in paid employment. Pointing low female education levels and targeting only higher education tools for women's participation is nothing but blaming women for their low levels of participation while undermining the gendered nature of structural and social constraints on their labor force participation.

To sum up, there seems to be an easing of the constraints through 1988 to 2005 owing to the relative improvements in child care facilities and transformation of gender roles. However unequal division of labor keeps restraining many women's participation decision. Sound measures should be taken by the government, private and public institutions and legal bodies. Policies to promote FLFP need to develop the widespread awareness raising programs for the transformation of gender roles towards more equal division of care responsibilities between men and women.

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APPENDICES

A. SUMMARIZED CHARACTERISTICS OF WOMEN

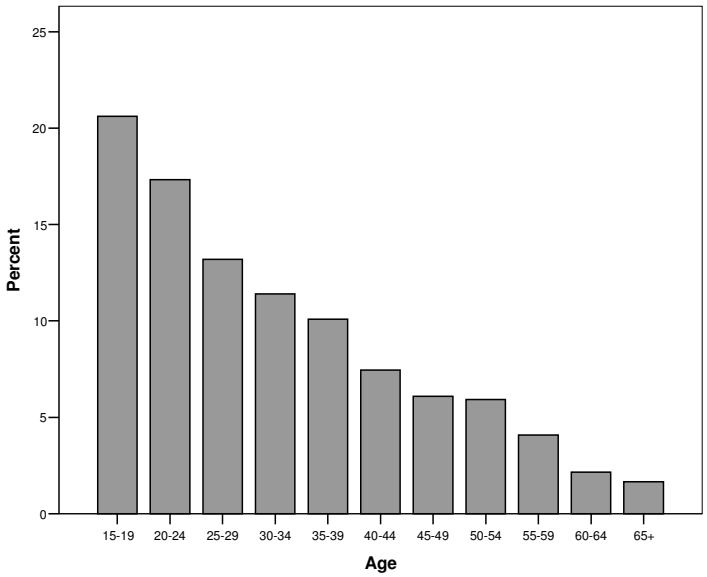

Figure A.1. Age Groups of Labor Force Participant Women in 1988 HLFS

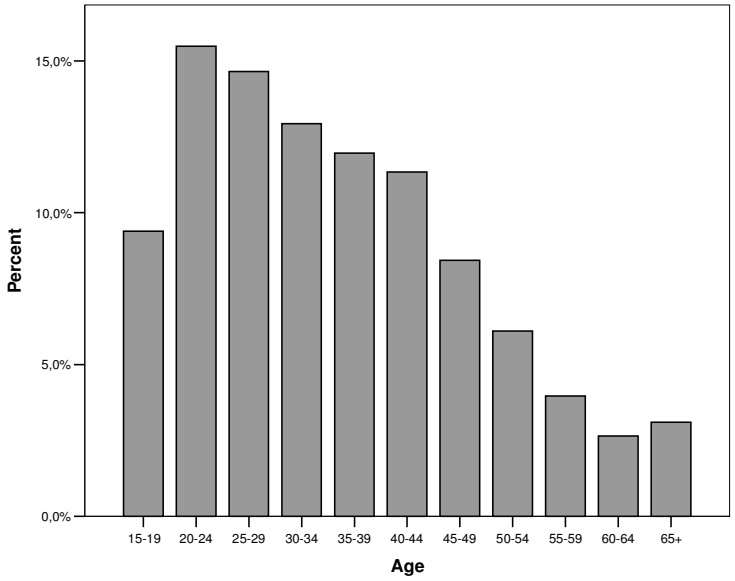

Figure A.2. Age Groups of Labor Force Participant Women in 2005 HLFS

Table A.1. Education levels of women aged 15-44 in 1988 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Illiterate	3454	22,1%	1776	21,3%
Lit. without diploma	1238	7,9%	537	6,4%
Primary school	8131	52,1%	3931	47,2%
Secondary school	1608	10,3%	419	5,0%
High school	879	5,6%	834	10,0%
Occup. high school	205	1,3%	317	3,8%
University	80	,5%	517	6,2%

Table A.2. Education levels of women aged 15-44 in 2005 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Illiterate	10147	11,6%	2466	7,6%
Lit. without diploma	5947	6,8%	1352	4,2%
Primary school	39668	45,5%	12774	39,5%
Secondary school	15150	17,4%	3332	10,3%
High school	10348	11,9%	3853	11,9%
Occup. high school	4328	5,0%	2906	9,0%
University	1625	1,9%	5620	17,4%

Table A.3. Marital status of women aged 15-44 in 1988 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Never got married	4042	25,9%	3377	40,5%
Married	11296	72,4%	4725	56,7%
Divorced	93	,6%	98	1,2%
Widowed	164	1,1%	131	1,6%

Table A.4. Marital status of women aged 15-44 in 2005 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Never got married	27571	31,6%	12618	39,1%
Married	57533	66,0%	18111	56,1%
Living together	77	,1%	25	,1%
Marr. but living separately	409	,5%	237	,7%
Divorced	775	,9%	893	2,8%
Widowed	848	1,0%	419	1,3%

Table A.5. Presence of children below age 12 in the households of women aged 15-44 in 1988 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Children below age 12 NOT present in her hh	4034	25,9%	2637	31,7%
Children below age 12 present in her hh	11561	74,1%	5694	68,3%

Table A.6. Presence of children below age 12 in the households of women aged 15-44 in 2005 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Children below age 12 NOT present in her hh	30065	34,5%	15510	48,0%
Children below age 12 present in her hh	57148	65,5%	16793	52,0%

Table A.7. Household head status of women aged 15-44 in 1988 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Man hh head	15285	98,0%	8070	96,9%
Woman hh head	310	2,0%	261	3,1%

Table A.8. Household head status of women aged 15-44 in 2005 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Man hh head	84022	96,3%	30308	93,8%
Woman hh head	3191	3,7%	1995	6,2%

Table A.9. Household size according to education levels of women aged 15-44 in 1988HLFS

HH size	Illiterate	Lit. without diploma	Primary school	Secondary school	High school	Occ. high school	University
	Col %	Col %	Col %	Col %	Col %	Col %	Col %
1	,1%	,2%	,1%	,1%	,7%	1,0%	3,7%
2	3,0%	3,9%	4,5%	4,8%	8,3%	9,0%	14,4%
3	6,3%	8,1%	11,5%	14,7%	23,7%	23,2%	28,6%
4	12,0%	17,4%	22,8%	28,4%	30,5%	33,9%	34,2%
5	14,9%	22,1%	20,1%	21,1%	15,8%	18,2%	11,6%
6	15,8%	18,4%	14,3%	13,5%	9,9%	8,8%	4,7%
7	13,0%	10,0%	9,5%	8,6%	5,0%	3,4%	1,3%
8	10,6%	7,4%	6,7%	3,7%	2,7%	1,1%	1,0%
9	7,7%	4,3%	4,0%	2,8%	1,3%	,2%	,5%
10+	16,4%	8,3%	6,4%	2,4%	2,2%	1,1%	

Table A.10. Household size according to education levels of women aged 15-44 in 2005 HLFS

HH size	Illiterate	Lit. without diploma	Primary school	Secondary school	High school	Occ. high school	University
	Col %	Col %	Col %	Col %	Col %	Col %	Col %
1	,2%	,2%	,2%	,2%	,8%	,7%	3,7%
2	3,1%	2,8%	5,4%	4,0%	8,5%	8,7%	15,8%
3	7,2%	7,4%	16,8%	16,1%	24,4%	28,0%	32,3%
4	12,0%	15,3%	31,0%	29,4%	32,9%	31,6%	31,4%
5	15,3%	16,5%	20,9%	22,1%	17,7%	16,5%	10,3%
6	14,7%	15,0%	11,0%	12,6%	7,5%	8,2%	4,0%
7	13,2%	12,4%	6,3%	7,2%	4,0%	3,6%	1,2%
8	10,7%	9,4%	3,2%	3,5%	2,3%	1,5%	,8%
9	7,5%	7,0%	1,9%	2,1%	,9%	,7%	,2%
10+	16,2%	14,0%	3,3%	2,8%	1,1%	,4%	,3%

Table A.11. Education level of the household heads of women aged 15-44 in 1988 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Illiterate	1827	11,7%	1696	20,4%
Lit. without diploma	1741	11,2%	1287	15,4%
Primary school	8746	56,1%	3774	45,3%
Secondary school	1147	7,4%	362	4,3%
High school	807	5,2%	348	4,2%
Occup. high school	598	3,8%	256	3,1%
University	728	4,7%	606	7,3%

Table A.12. Education level of the household heads of women aged 15-44 in 2005 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Illiterate	6847	7,9%	2618	8,1%
Lit. without diploma	5207	6,0%	2008	6,2%
Primary school	43657	50,1%	16427	50,9%
Secondary school	9930	11,4%	2927	9,1%
High school	8798	10,1%	2298	7,1%
Occup. high school	6654	7,6%	2030	6,3%
University	6120	7,0%	3995	12,4%

Table A.13. Urban versus rural region of residence of women aged 15-44 in 1988 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Rural	3602	23,1%	4948	59,4%
Urban	11993	76,9%	3383	40,6%

Table A.14. Urban versus rural region of residence of women aged 15-44 in 2005 HLFS

	Non-participants		Participants	
	Count	Col %	Count	Col %
Rural	23381	26,8%	13686	42,4%
Urban	63832	73,2%	18617	57,6%

B. LOGISTIC REGRESSION OUTPUTS

Table B.1. All women aged 15-44 in 2005 HLFS

	B	S.E.	Sig.	Exp(B)	B-2SE	B+2SE	Exp (B-2SE)	Exp (B+2SE)	Lower Pr(X)	Mean Pr(X)	Upper Pr(X)
LivingWithApartner	-0,769	0,023	0,000	0,464	-0,815	-0,723	0,443	0,485	0,31	0,32	0,33
WomanHHhead	0,165	0,035	0,000	1,179	0,095	0,235	1,100	1,265	0,52	0,54	0,56
Pre.OfChildLowerThanAge12	-0,328	0,019	0,000	0,720	-0,366	-0,290	0,694	0,748	0,41	0,42	0,43
Pre.OfNonIfpWOMENexc.Herself	-0,109	0,019	0,000	0,897	-0,147	-0,071	0,863	0,931	0,46	0,47	0,48
EDUCATION											
LiterateW.OUTdiploma	0,110	0,041	0,007	1,117	0,028	0,192	1,028	1,212	0,51	0,53	0,55
Primary	0,132	0,029	0,000	1,141	0,074	0,190	1,077	1,209	0,52	0,53	0,55
Secondary	0,144	0,037	0,000	1,155	0,070	0,218	1,073	1,244	0,52	0,54	0,55
High	0,666	0,037	0,000	1,945	0,592	0,740	1,808	2,096	0,64	0,66	0,68
OccupationalHigh	1,274	0,041	0,000	3,576	1,192	1,356	3,294	3,881	0,77	0,78	0,80
University	3,071	0,047	0,000	21,565	2,977	3,165	19,629	23,689	0,95	0,96	0,96
AGE											
AGE15_19	-1,259	0,034	0,000	0,284	-1,327	-1,191	0,265	0,304	0,21	0,22	0,23
AGE20_24	-0,367	0,028	0,000	0,693	-0,423	-0,311	0,655	0,733	0,40	0,41	0,42
AGE25_29	-0,058	0,027	0,032	0,944	-0,112	-0,004	0,894	0,996	0,47	0,49	0,50
AGE30_34	0,072	0,027	0,008	1,074	0,018	0,126	1,018	1,134	0,50	0,52	0,53
AGE35_39	0,155	0,026	0,000	1,168	0,103	0,207	1,108	1,230	0,53	0,54	0,55
HHheadsEducation											
HHheadLit.W.OUTdiploma	-0,034	0,039	0,381	0,966	-0,112	0,044	0,894	1,045	0,47	0,49	0,51
HHheadPrimary	-0,195	0,029	0,000	0,823	-0,253	-0,137	0,776	0,872	0,44	0,45	0,47
HHheadSecondary	-0,435	0,037	0,000	0,648	-0,509	-0,361	0,601	0,697	0,38	0,39	0,41
HHheadHigh	-0,671	0,040	0,000	0,511	-0,751	-0,591	0,472	0,554	0,32	0,34	0,36
HHheadOccupationalHigh	-0,652	0,042	0,000	0,521	-0,736	-0,568	0,479	0,567	0,32	0,34	0,36
HHheadUniversity	-0,546	0,044	0,000	0,579	-0,634	-0,458	0,530	0,633	0,35	0,37	0,39
HHearningsExcludingwoman	0,000	0,000	0,000	1,000	0,000	0,000	1,000	1,000	0,50	0,50	0,50
REGIONofRESIDENCE											
Istanbul	1,190	0,039	0,000	3,286	1,112	1,268	3,040	3,554	0,75	0,77	0,78
Tekirdag-Balikesir	1,809	0,046	0,000	6,101	1,717	1,901	5,568	6,693	0,85	0,86	0,87
Izmir-Aydin-Manisa	1,480	0,038	0,000	4,392	1,404	1,556	4,071	4,740	0,80	0,81	0,83
Bursa-Kocaeli	1,535	0,040	0,000	4,640	1,455	1,615	4,284	5,028	0,81	0,82	0,83
Ankara-Konya	1,053	0,043	0,000	2,867	0,967	1,139	2,630	3,124	0,72	0,74	0,76
Antalya-Adana-Hatay	1,338	0,039	0,000	3,811	1,260	1,416	3,525	4,121	0,78	0,79	0,80
Kirikkale-Kayseri	1,007	0,046	0,000	2,737	0,915	1,099	2,497	3,001	0,71	0,73	0,75
Zonguldak-Kastamonu-Samsun	1,578	0,039	0,000	4,845	1,500	1,656	4,482	5,238	0,82	0,83	0,84
Trabzon	2,278	0,047	0,000	9,754	2,184	2,372	8,882	10,719	0,90	0,91	0,91
Erzurum-Agri	1,178	0,045	0,000	3,248	1,088	1,268	2,968	3,554	0,75	0,76	0,78
Malatya-Van	0,573	0,044	0,000	1,773	0,485	0,661	1,624	1,937	0,62	0,64	0,66
URBAN	-1,010	0,016	0,000	0,364	-1,042	-0,978	0,353	0,376	0,26	0,27	0,27
HHsize	0,071	0,004	0,000	1,074	0,063	0,079	1,065	1,082	0,52	0,52	0,52
Constant	-1,097	0,055	0,000	0,334	-1,207	-0,987	0,299	0,373	0,23	0,25	0,27

Chi-square: 23969,302 (signif: 0,000) Nagelkerke R-square: 0,264 Percentage correct: 77,4%

Table B.2. All men aged 15-44 in 2005 HLFS

	B	S.E.	Sig.	Exp(B)	B-2SE	B+2SE	Exp (B-2SE)	Exp (B+2SE)	Lower Pr(X)	Mean Pr(X)	Upper Pr(X)
LivingWithApartner(1)	1,159	0,041	0,000	3,186	1,077	1,241	2,936	3,459	0,75	0,76	0,78
Pre.OfChildLowerThanAge12	0,151	0,025	0,000	1,163	0,101	0,201	1,106	1,223	0,53	0,54	0,55
HHsize	0,026	0,006	0,000	1,027	0,014	0,038	1,014	1,039	0,50	0,51	0,51
EDUCATION											
LiterateW.OUTdiploma	1,450	0,073	0,000	4,263	1,304	1,596	3,684	4,933	0,79	0,81	0,83
Primary	1,896	0,064	0,000	6,660	1,768	2,024	5,859	7,569	0,85	0,87	0,88
Secondary	1,577	0,065	0,000	4,842	1,447	1,707	4,250	5,512	0,81	0,83	0,85
High	1,359	0,066	0,000	3,891	1,227	1,491	3,411	4,442	0,77	0,80	0,82
OccupationalHigh	2,252	0,070	0,000	9,509	2,112	2,392	8,265	10,935	0,89	0,90	0,92
University	2,770	0,080	0,000	15,952	2,610	2,930	13,599	18,728	0,93	0,94	0,95
AGE											
AGE15_19	-1,538	0,053	0,000	0,215	-1,644	-1,432	0,193	0,239	0,16	0,18	0,19
AGE20_24	-0,105	0,051	0,039	0,900	-0,207	-0,003	0,813	0,997	0,45	0,47	0,50
AGE25_29	0,869	0,052	0,000	2,384	0,765	0,973	2,149	2,646	0,68	0,70	0,73
AGE30_34	0,666	0,052	0,000	1,947	0,562	0,770	1,754	2,160	0,64	0,66	0,68
AGE35_39	0,398	0,051	0,000	1,489	0,296	0,500	1,344	1,649	0,57	0,60	0,62
HHheadsEducation											
HHheadLit.W.OUTdiploma	-0,211	0,048	0,000	0,810	-0,307	-0,115	0,736	0,891	0,42	0,45	0,47
HHheadPrimary	-0,309	0,036	0,000	0,734	-0,381	-0,237	0,683	0,789	0,41	0,42	0,44
HHheadSecondary	-0,480	0,047	0,000	0,619	-0,574	-0,386	0,563	0,680	0,36	0,38	0,40
HHheadHigh	-0,971	0,049	0,000	0,379	-1,069	-0,873	0,343	0,418	0,26	0,27	0,29
HHheadOccupationalHigh	-0,988	0,057	0,000	0,372	-1,102	-0,874	0,332	0,417	0,25	0,27	0,29
HHheadUniversity	-1,280	0,059	0,000	0,278	-1,398	-1,162	0,247	0,313	0,20	0,22	0,24
REGIONofRESIDENCE											
Istanbul	1,019	0,041	0,000	2,770	0,937	1,101	2,552	3,007	0,72	0,73	0,75
Tekirdag-Balikesir	1,035	0,059	0,000	2,814	0,917	1,153	2,502	3,168	0,71	0,74	0,76
Izmir-Aydin-Manisa	0,830	0,040	0,000	2,293	0,750	0,910	2,117	2,484	0,68	0,70	0,71
Bursa-Kocaeli	0,755	0,042	0,000	2,127	0,671	0,839	1,956	2,314	0,66	0,68	0,70
Ankara-Konya	0,788	0,045	0,000	2,199	0,698	0,878	2,010	2,406	0,67	0,69	0,71
Antalya-Adana-Hatay	0,745	0,041	0,000	2,107	0,663	0,827	1,941	2,286	0,66	0,68	0,70
Kirikkale-Kayseri	0,603	0,051	0,000	1,828	0,501	0,705	1,650	2,024	0,62	0,65	0,67
Zonguldak-Kastamonu-Samsun	0,673	0,044	0,000	1,960	0,585	0,761	1,795	2,140	0,64	0,66	0,68
Trabzon	0,648	0,059	0,000	1,911	0,530	0,766	1,699	2,151	0,63	0,66	0,68
Erzurum-Agri	0,210	0,050	0,000	1,233	0,110	0,310	1,116	1,363	0,53	0,55	0,58
Malatya-Van	0,342	0,046	0,000	1,408	0,250	0,434	1,284	1,543	0,56	0,58	0,61
ManHHhead(1)	0,688	0,045	0,000	1,989	0,598	0,778	1,818	2,177	0,65	0,67	0,69
Pre.OfNonlfpMENexc.Himself	-0,372	0,024	0,000	0,689	-0,420	-0,324	0,657	0,723	0,40	0,41	0,42
URBAN	-0,113	0,022	0,000	0,894	-0,157	-0,069	0,855	0,933	0,46	0,47	0,48
HHearningsExcludingTheManHim	0,000	0,000	0,000	1,000	0,000	0,000	1,000	1,000	0,50	0,50	0,50
Constant	-0,967	0,087	0,000	0,380	-1,141	-0,793	0,319	0,452	0,24	0,28	0,31

Chi-square: 40879,921 (signif: 0,000) Nagelkerke R-square: 0,489 Percentage correct: 86,1%

Table B.3. Urban women aged 15-44 in 2005 HLFS

	B	S.E.	Sig.	Exp(B)	B-2SE	B+2SE	Exp (B-2SE)	Exp (B+2SE)	Lower Pr(X)	Mean Pr(X)	Upper Pr(X)
LivingWithApartner(1)	-0,883	0,031	0,000	0,414	-0,945	-0,821	0,389	0,440	0,28	0,29	0,31
WomanHHhead(1)	0,301	0,045	0,000	1,351	0,211	0,391	1,235	1,478	0,55	0,57	0,60
Pre.OfChildLowerThanAge12	-0,195	0,025	0,000	0,823	-0,245	-0,145	0,783	0,865	0,44	0,45	0,46
Pre.OfNonIfpWOMENexc.Herself	0,513	0,026	0,000	1,670	0,461	0,565	1,586	1,759	0,61	0,63	0,64
HHsize	-0,049	0,007	0,000	0,952	-0,063	-0,035	0,939	0,966	0,48	0,49	0,49
EDUCATION											
LiterateW.OUTdiploma	0,388	0,067	0,000	1,473	0,254	0,522	1,289	1,685	0,56	0,60	0,63
Primary	0,283	0,049	0,000	1,328	0,185	0,381	1,203	1,464	0,55	0,57	0,59
Secondary	0,556	0,056	0,000	1,744	0,444	0,668	1,559	1,950	0,61	0,64	0,66
High	1,000	0,055	0,000	2,719	0,890	1,110	2,435	3,034	0,71	0,73	0,75
OccupationalHigh	1,572	0,057	0,000	4,816	1,458	1,686	4,297	5,398	0,81	0,83	0,84
University	3,195	0,062	0,000	24,415	3,071	3,319	21,563	27,633	0,96	0,96	0,97
AGE											
AGE15_19	-1,359	0,045	0,000	0,257	-1,449	-1,269	0,235	0,281	0,19	0,20	0,22
AGE20_24	-0,398	0,038	0,000	0,672	-0,474	-0,322	0,623	0,725	0,38	0,40	0,42
AGE25_29	0,044	0,036	0,220	1,045	-0,028	0,116	0,972	1,123	0,49	0,51	0,53
AGE30_34	0,216	0,036	0,000	1,241	0,144	0,288	1,155	1,334	0,54	0,55	0,57
AGE35_39	0,304	0,035	0,000	1,355	0,234	0,374	1,264	1,454	0,56	0,58	0,59
HHheadsEducation											
HHheadLit.W.OUTdiploma	0,010	0,060	0,863	1,010	-0,110	0,130	0,896	1,139	0,47	0,50	0,53
HHheadPrimary	-0,273	0,044	0,000	0,761	-0,361	-0,185	0,697	0,831	0,41	0,43	0,45
HHheadSecondary	-0,368	0,052	0,000	0,692	-0,472	-0,264	0,624	0,768	0,38	0,41	0,43
HHheadHigh	-0,633	0,054	0,000	0,531	-0,741	-0,525	0,477	0,592	0,32	0,35	0,37
HHheadOccupationalHigh	-0,593	0,056	0,000	0,553	-0,705	-0,481	0,494	0,618	0,33	0,36	0,38
HHheadUniversity	-0,502	0,056	0,000	0,605	-0,614	-0,390	0,541	0,677	0,35	0,38	0,40
HHearningsExcludingwoman	0,000	0,000	0,040	1,000	0,000	0,000	1,000	1,000	0,50	0,50	0,50
REGIONofRESIDENCE											
Istanbul	1,261	0,052	0,000	3,530	1,157	1,365	3,180	3,916	0,76	0,78	0,80
Tekirdag-Balikesir	1,698	0,064	0,000	5,464	1,570	1,826	4,807	6,209	0,83	0,85	0,86
Izmir-Aydin-Manisa	1,336	0,053	0,000	3,804	1,230	1,442	3,421	4,229	0,77	0,79	0,81
Bursa-Kocaeli	1,428	0,053	0,000	4,171	1,322	1,534	3,751	4,637	0,79	0,81	0,82
Ankara-Konya	1,066	0,056	0,000	2,903	0,954	1,178	2,596	3,248	0,72	0,74	0,76
Antalya-Adana-Hatay	1,399	0,053	0,000	4,049	1,293	1,505	3,644	4,504	0,78	0,80	0,82
Kirikkale-Kayseri	0,671	0,065	0,000	1,956	0,541	0,801	1,718	2,228	0,63	0,66	0,69
Zonguldak-Kastamonu-Samsun	1,216	0,057	0,000	3,375	1,102	1,330	3,010	3,781	0,75	0,77	0,79
Trabzon	1,998	0,071	0,000	7,373	1,856	2,140	6,398	8,499	0,86	0,88	0,89
Erzurum-Agri	0,429	0,075	0,000	1,536	0,279	0,579	1,322	1,784	0,57	0,61	0,64
Malatya-Van	0,190	0,077	0,014	1,209	0,036	0,344	1,037	1,411	0,51	0,55	0,59
Constant	-2,047	0,083	0,000	0,129	-2,213	-1,881	0,109	0,152	0,10	0,11	0,13

Chi-square: 18761,749 (signif: 0,000) Nagelkerke R-square: 0,310 Percentage correct: 82,5%

Table B.4. Rural women aged 15-44 in 2005 HLFS

	B	S.E.	Sig.	Exp(B)	B-2SE	B+2SE	(B-2SE)	(B+2SE)	Pr(X)	Pr(X)	Pr(X)
LivingWithApartner(1)	-0,408	0,037	0,000	0,665	-0,482	-0,334	0,618	0,716	0,38	0,40	0,42
WomanHHhead(1)	-0,136	0,062	0,029	0,873	-0,260	-0,012	0,771	0,988	0,44	0,47	0,50
Pre.OfChildLowerThanAge12	-0,397	0,031	0,000	0,673	-0,459	-0,335	0,632	0,715	0,39	0,40	0,42
Pre.OfNonIfpWOMENexc.Herself	-0,780	0,029	0,000	0,458	-0,838	-0,722	0,433	0,486	0,30	0,31	0,33
HHsize	0,138	0,006	0,000	1,148	0,126	0,150	1,134	1,162	0,53	0,53	0,54
EDUCATION											
LiterateW.OUTdiploma	-0,057	0,056	0,309	0,945	-0,169	0,055	0,845	1,057	0,46	0,49	0,51
Primary	0,132	0,040	0,001	1,142	0,052	0,212	1,053	1,236	0,51	0,53	0,55
Secondary	-0,258	0,057	0,000	0,773	-0,372	-0,144	0,689	0,866	0,41	0,44	0,46
High	0,001	0,064	0,985	1,001	-0,127	0,129	0,881	1,138	0,47	0,50	0,53
OccupationalHigh	0,693	0,079	0,000	2,000	0,535	0,851	1,707	2,342	0,63	0,67	0,70
University	2,564	0,112	0,000	12,991	2,340	2,788	10,381	16,248	0,91	0,93	0,94
AGE											
AGE15_19	-1,011	0,055	0,000	0,364	-1,121	-0,901	0,326	0,406	0,25	0,27	0,29
AGE20_24	-0,367	0,046	0,000	0,693	-0,459	-0,275	0,632	0,760	0,39	0,41	0,43
AGE25_29	-0,317	0,044	0,000	0,729	-0,405	-0,229	0,667	0,795	0,40	0,42	0,44
AGE30_34	-0,166	0,044	0,000	0,847	-0,254	-0,078	0,776	0,925	0,44	0,46	0,48
AGE35_39	-0,048	0,043	0,264	0,953	-0,134	0,038	0,875	1,039	0,47	0,49	0,51
HHheadsEducation											
HHheadLi.W.OUTdiploma	-0,079	0,054	0,148	0,924	-0,187	0,029	0,829	1,029	0,45	0,48	0,51
HHheadPrimary	-0,127	0,040	0,002	0,881	-0,207	-0,047	0,813	0,954	0,45	0,47	0,49
HHheadSecondary	-0,519	0,057	0,000	0,595	-0,633	-0,405	0,531	0,667	0,35	0,37	0,40
HHheadHigh	-0,738	0,070	0,000	0,478	-0,878	-0,598	0,416	0,550	0,29	0,32	0,35
HHheadOccupationalHigh	-0,731	0,076	0,000	0,482	-0,883	-0,579	0,414	0,560	0,29	0,33	0,36
HHheadUniversity	-0,821	0,093	0,000	0,440	-1,007	-0,635	0,365	0,530	0,27	0,31	0,35
HHearningsExcludingwoman	-0,001	0,000	0,000	0,999	-0,001	-0,001	0,999	0,999	0,50	0,50	0,50
REGIONofRESIDENCE											
Istanbul	0,803	0,069	0,000	2,232	0,665	0,941	1,944	2,563	0,66	0,69	0,72
Tekirdag-Balikesir	1,903	0,071	0,000	6,704	1,761	2,045	5,818	7,729	0,85	0,87	0,89
Izmir-Aydin-Manisa	1,613	0,058	0,000	5,017	1,497	1,729	4,468	5,635	0,82	0,83	0,85
Bursa-Kocaeli	1,676	0,067	0,000	5,344	1,542	1,810	4,674	6,110	0,82	0,84	0,86
Ankara-Konya	0,657	0,077	0,000	1,928	0,503	0,811	1,654	2,250	0,62	0,66	0,69
Antalya-Adana-Hatay	1,262	0,060	0,000	3,533	1,142	1,382	3,133	3,983	0,76	0,78	0,80
Kirikkale-Kayseri	1,357	0,068	0,000	3,884	1,221	1,493	3,391	4,450	0,77	0,80	0,82
Zonguldak-Kastamonu-Samsun	1,916	0,058	0,000	6,791	1,800	2,032	6,050	7,629	0,86	0,87	0,88
Trabzon	2,576	0,068	0,000	13,145	2,440	2,712	11,473	15,059	0,92	0,93	0,94
Erzurum-Agri	1,645	0,062	0,000	5,181	1,521	1,769	4,577	5,865	0,82	0,84	0,85
Malatya-Van	0,725	0,057	0,000	2,065	0,611	0,839	1,842	2,314	0,65	0,67	0,70
Constant	-1,250	0,078	0,000	0,286	-1,406	-1,094	0,245	0,335	0,20	0,22	0,25

Chi-square: 6653,518 (signif: 0,000) Nagelkerke R-square: 0,224 Percentage correct: 71,4%

Table B.5. Primary school or lower educated urban women in 2005 HLFS

	B	S.E.	Sig.	Exp(B)	B-2SE	B+2SE	Exp (B-2SE)	Exp (B+2SE)	Lower Pr(X)	Mean Pr(X)	Upper Pr(X)
LivingWithApartner(1)	-1,217	0,045	0,000	0,296	-1,307	-1,127	0,271	0,324	0,21	0,23	0,24
WomanHHhead(1)	0,027	0,062	0,666	1,027	-0,097	0,151	0,908	1,163	0,48	0,51	0,54
Pre.OfChildLowerThanAge12	-0,359	0,036	0,000	0,698	-0,431	-0,287	0,650	0,751	0,39	0,41	0,43
Pre.OfNonlfpWOMENexc.Herself	-0,265	0,041	0,000	0,768	-0,347	-0,183	0,707	0,833	0,41	0,43	0,45
HHsize	0,048	0,009	0,000	1,050	0,030	0,066	1,030	1,068	0,51	0,51	0,52
AGE											
AGE15-19	-0,400	0,070	0,000	0,670	-0,540	-0,260	0,583	0,771	0,37	0,40	0,44
AGE20-24	-0,090	0,054	0,094	0,914	-0,198	0,018	0,820	1,018	0,45	0,48	0,50
AGE25-29	0,009	0,051	0,866	1,009	-0,093	0,111	0,911	1,117	0,48	0,50	0,53
AGE30-34	0,173	0,048	0,000	1,189	0,077	0,269	1,080	1,309	0,52	0,54	0,57
AGE35-39	0,250	0,046	0,000	1,284	0,158	0,342	1,171	1,408	0,54	0,56	0,58
HHheadsEducation											
HHheadLit.W.OUTdiploma	0,086	0,071	0,225	1,089	-0,056	0,228	0,946	1,256	0,49	0,52	0,56
HHheadPrimary	-0,144	0,053	0,006	0,866	-0,250	-0,038	0,779	0,963	0,44	0,46	0,49
HHheadSecondary	-0,224	0,068	0,001	0,799	-0,360	-0,088	0,698	0,916	0,41	0,44	0,48
HHheadHigh	-0,627	0,084	0,000	0,534	-0,795	-0,459	0,452	0,632	0,31	0,35	0,39
HHheadOccupationalHigh	-0,626	0,087	0,000	0,535	-0,800	-0,452	0,449	0,636	0,31	0,35	0,39
HHheadUniversity	-0,987	0,120	0,000	0,373	-1,227	-0,747	0,293	0,474	0,23	0,27	0,32
HHearningsExcludingwoman	0,000	0,000	0,000	1,000	0,000	0,000	1,000	1,000	0,50	0,50	0,50
REGIONofRESIDENCE											
Istanbul	1,728	0,079	0,000	5,628	1,570	1,886	4,807	6,593	0,83	0,85	0,87
Tekirdag-Balikesir	2,409	0,095	0,000	11,121	2,219	2,599	9,198	13,450	0,90	0,92	0,93
Izmir-Aydin-Manisa	1,912	0,078	0,000	6,769	1,756	2,068	5,789	7,909	0,85	0,87	0,89
Bursa-Kocaeli	1,979	0,079	0,000	7,235	1,821	2,137	6,178	8,474	0,86	0,88	0,89
Ankara-Konya	1,499	0,087	0,000	4,479	1,325	1,673	3,762	5,328	0,79	0,82	0,84
Antalya-Adana-Hatay	1,914	0,078	0,000	6,778	1,758	2,070	5,801	7,925	0,85	0,87	0,89
Kirikkale-Kayseri	1,025	0,103	0,000	2,786	0,819	1,231	2,268	3,425	0,69	0,74	0,77
Zonguldak-Kastamonu-Samsun	2,004	0,083	0,000	7,416	1,838	2,170	6,284	8,758	0,86	0,88	0,90
Trabzon	2,907	0,105	0,000	18,306	2,697	3,117	14,835	22,579	0,94	0,95	0,96
Erzurum-Agri	0,628	0,113	0,000	1,874	0,402	0,854	1,495	2,349	0,60	0,65	0,70
Malatya-Van	-0,163	0,140	0,246	0,850	-0,443	0,117	0,642	1,124	0,39	0,46	0,53
Constant	-2,189	0,103	0,000	0,112	-2,395	-1,983	0,091	0,138	0,08	0,10	0,12

Chi-square: 3628,239 (signif: 0,000) Nagelkerke R-square: 0,140 Percentage correct: 79,2%

Table B.6. Secondary or high school educated urban women in 2005 HLFS

	B	S.E.	Sig.	Exp(B)	B-2SE	B+2SE	Exp (B-2SE)	Exp (B+2SE)	Lower Pr(X)	Mean Pr(X)	Upper Pr(X)
LivingWithApartner(1)	-0,804	0,047	0,000	0,448	-0,898	-0,710	0,407	0,492	0,29	0,31	0,33
WomanHHhead(1)	0,243	0,081	0,003	1,276	0,081	0,405	1,084	1,499	0,52	0,56	0,60
Pre.OfChildLowerThanAge12	-0,136	0,038	0,000	0,873	-0,212	-0,060	0,809	0,942	0,45	0,47	0,49
Pre.OfNonlfpWOMENexc.Herself	1,261	0,039	0,000	3,527	1,183	1,339	3,264	3,815	0,77	0,78	0,79
HHsize	-0,166	0,013	0,000	0,847	-0,192	-0,140	0,825	0,869	0,45	0,46	0,47
AGE											
AGE15_19	-1,865	0,069	0,000	0,155	-2,003	-1,727	0,135	0,178	0,12	0,13	0,15
AGE20_24	-0,467	0,063	0,000	0,627	-0,593	-0,341	0,553	0,711	0,36	0,39	0,42
AGE25_29	0,125	0,063	0,049	1,133	-0,001	0,251	0,999	1,285	0,50	0,53	0,56
AGE30_34	0,229	0,067	0,001	1,258	0,095	0,363	1,100	1,438	0,52	0,56	0,59
AGE35_39	0,347	0,068	0,000	1,415	0,211	0,483	1,235	1,621	0,55	0,59	0,62
HHheadsEducation											
HHheadLit.W.OUTdiploma	-0,043	0,116	0,708	0,957	-0,275	0,189	0,760	1,208	0,43	0,49	0,55
HHheadPrimary	-0,259	0,083	0,002	0,772	-0,425	-0,093	0,654	0,911	0,40	0,44	0,48
HHheadSecondary	-0,322	0,090	0,000	0,725	-0,502	-0,142	0,605	0,868	0,38	0,42	0,46
HHheadHigh	-0,450	0,090	0,000	0,638	-0,630	-0,270	0,533	0,763	0,35	0,39	0,43
HHheadOccupationalHigh	-0,305	0,092	0,001	0,737	-0,489	-0,121	0,613	0,886	0,38	0,42	0,47
HHheadUniversity	-0,554	0,094	0,000	0,575	-0,742	-0,366	0,476	0,694	0,32	0,37	0,41
HHearningsExcludingwoman	0,000	0,000	0,000	1,000	0,000	0,000	1,000	1,000	0,50	0,50	0,50
REGIONofRESIDENCE											
Istanbul	1,547	0,095	0,000	4,698	1,357	1,737	3,885	5,680	0,80	0,82	0,85
Tekirdag-Balikesir	1,888	0,108	0,000	6,604	1,672	2,104	5,323	8,199	0,84	0,87	0,89
Izmir-Aydin-Manisa	1,503	0,095	0,000	4,495	1,313	1,693	3,717	5,436	0,79	0,82	0,84
Bursa-Kocaeli	1,652	0,096	0,000	5,218	1,460	1,844	4,306	6,322	0,81	0,84	0,86
Ankara-Konya	1,318	0,098	0,000	3,735	1,122	1,514	3,071	4,545	0,75	0,79	0,82
Antalya-Adana-Hatay	1,466	0,097	0,000	4,334	1,272	1,660	3,568	5,259	0,78	0,81	0,84
Kirikkale-Kayseri	0,842	0,112	0,000	2,321	0,618	1,066	1,855	2,904	0,65	0,70	0,74
Zonguldak-Kastamonu-Samsun	1,174	0,101	0,000	3,236	0,972	1,376	2,643	3,959	0,73	0,76	0,80
Trabzon	2,130	0,116	0,000	8,418	1,898	2,362	6,673	10,612	0,87	0,89	0,91
Erzurum-Agri	0,637	0,132	0,000	1,890	0,373	0,901	1,452	2,462	0,59	0,65	0,71
Malatya-Van	0,615	0,125	0,000	1,850	0,365	0,865	1,441	2,375	0,59	0,65	0,70
Constant	-1,084	0,138	0,000	0,338	-1,360	-0,808	0,257	0,446	0,20	0,25	0,31

Chi-square: 5228,159 (signif: 0,000) Nagelkerke R-square: 0,233 Percentage correct: 79,2%

Table B.7. University graduate urban women in 2005 HLFS

	B	S.E.	Sig.	Exp(B)	B-2SE	B+2SE	Exp (B-2SE)	Exp (B+2SE)	Lower Pr(X)	Mean Pr(X)	Upper Pr(X)
LivingWithApartner(1)	-0,745	0,111	0,000	0,475	-0,967	-0,523	0,380	0,593	0,28	0,32	0,37
WomanHHhead(1)	0,697	0,186	0,000	2,008	0,325	1,069	1,384	2,912	0,58	0,67	0,74
Pre.OfChildLowerThanAge12	-0,119	0,089	0,179	0,887	-0,297	0,059	0,743	1,061	0,43	0,47	0,51
Pre.OfNonlfpWOMENexc.Herself	0,727	0,103	0,000	2,070	0,521	0,933	1,684	2,542	0,63	0,67	0,72
HHsize	-0,207	0,033	0,000	0,813	-0,273	-0,141	0,761	0,868	0,43	0,45	0,46
AGE											
AGE15_19	-1,383	0,387	0,000	0,251	-2,157	-0,609	0,116	0,544	0,10	0,20	0,35
AGE20_24	-0,981	0,131	0,000	0,375	-1,243	-0,719	0,289	0,487	0,22	0,27	0,33
AGE25_29	-0,335	0,119	0,005	0,715	-0,573	-0,097	0,564	0,908	0,36	0,42	0,48
AGE30-34	0,004	0,125	0,973	1,004	-0,246	0,254	0,782	1,289	0,44	0,50	0,56
AGE35_39	0,293	0,132	0,027	1,340	0,029	0,557	1,029	1,745	0,51	0,57	0,64
HHheadsEducation											
HHheadLit.W.OUTdiploma	0,490	0,361	0,174	1,633	-0,232	1,212	0,793	3,360	0,44	0,62	0,77
HHheadPrimary	0,351	0,243	0,149	1,420	-0,135	0,837	0,874	2,309	0,47	0,59	0,70
HHheadSecondary	0,050	0,261	0,847	1,052	-0,472	0,572	0,624	1,772	0,38	0,51	0,64
HHheadHigh	0,100	0,250	0,689	1,105	-0,400	0,600	0,670	1,822	0,40	0,52	0,65
HHheadOccupationalHigh	0,250	0,255	0,326	1,285	-0,260	0,760	0,771	2,138	0,44	0,56	0,68
HHheadUniversity	0,554	0,244	0,023	1,741	0,066	1,042	1,068	2,835	0,52	0,64	0,74
HHearningsExcludingwoman	0,000	0,000	0,000	1,000	0,000	0,000	1,000	1,000	0,50	0,50	0,50
REGIONofRESIDENCE											
Istanbul	-0,423	0,157	0,007	0,655	-0,737	-0,109	0,479	0,897	0,32	0,40	0,47
Tekirdag-Balikesir	-0,080	0,197	0,683	0,923	-0,474	0,314	0,623	1,369	0,38	0,48	0,58
Izmir-Aydin-Manisa	-0,016	0,162	0,922	0,984	-0,340	0,308	0,712	1,361	0,42	0,50	0,58
Bursa-Kocaeli	0,002	0,167	0,992	1,002	-0,332	0,336	0,717	1,399	0,42	0,50	0,58
Ankara-Konya	-0,089	0,164	0,587	0,915	-0,417	0,239	0,659	1,270	0,40	0,48	0,56
Antalya-Adana-Hatay	0,277	0,174	0,111	1,320	-0,071	0,625	0,931	1,868	0,48	0,57	0,65
Kirikkale-Kayseri	0,080	0,197	0,683	1,084	-0,314	0,474	0,731	1,606	0,42	0,52	0,62
Zonguldak-Kastamonu-Samsun	-0,141	0,179	0,430	0,868	-0,499	0,217	0,607	1,242	0,38	0,46	0,55
Trabzon	0,033	0,217	0,878	1,034	-0,401	0,467	0,670	1,595	0,40	0,51	0,61
Erzurum-Agri	-0,436	0,214	0,042	0,646	-0,864	-0,008	0,421	0,992	0,30	0,39	0,50
Malatya-Van	0,002	0,259	0,994	1,002	-0,516	0,520	0,597	1,682	0,37	0,50	0,63
Constant	2,023	0,323	0,000	7,561	1,377	2,669	3,963	14,426	0,80	0,88	0,94

Chi-square: 425,408 (signif: 0,000) Nagelkerke R-square: 0,097 Percentage correct: 77,7%

Table B.8. Urban women aged 15-44 in 1988 HLFS

	B	S.E.	Sig.	Exp(B)	B-2SE	B+2SE	Exp (B-2SE)	Exp (B+2SE)	Lower Pr(X)	Mean Pr(X)	Upper Pr(X)
AGE											
AGE15_19	-0,676	0,110	0,000	0,509	-0,895	-0,457	0,409	0,633	0,29	0,34	0,39
AGE20_24	-0,057	0,099	0,570	0,945	-0,255	0,142	0,775	1,153	0,44	0,49	0,54
AGE25_29	0,224	0,098	0,023	1,250	0,028	0,419	1,028	1,521	0,51	0,56	0,60
AGE30_34	0,531	0,099	0,000	1,700	0,333	0,728	1,396	2,072	0,58	0,63	0,67
AGE35_39	0,346	0,100	0,001	1,413	0,146	0,546	1,157	1,726	0,54	0,59	0,63
EDUCATION											
LiterateW.OUTdiploma	0,225	0,113	0,047	1,252	-0,002	0,451	0,998	1,570	0,50	0,56	0,61
Primary	0,488	0,077	0,000	1,628	0,333	0,642	1,396	1,900	0,58	0,62	0,66
Secondary	0,505	0,103	0,000	1,657	0,299	0,712	1,348	2,038	0,57	0,62	0,67
High	1,817	0,102	0,000	6,154	1,614	2,020	5,023	7,541	0,83	0,86	0,88
OccupationalHigh	2,495	0,130	0,000	12,125	2,235	2,755	9,350	15,724	0,90	0,92	0,94
University	3,821	0,165	0,000	45,668	3,492	4,150	32,865	63,460	0,97	0,98	0,98
LivingWithApartner(1)	-1,590	0,077	0,000	0,204	-1,744	-1,436	0,175	0,238	0,15	0,17	0,19
HHheadsEducation											
HHheadLit.W.OUTdiploma	-0,203	0,095	0,032	0,816	-0,393	-0,013	0,675	0,987	0,40	0,45	0,50
HHheadPrimary	-0,600	0,078	0,000	0,549	-0,755	-0,445	0,470	0,641	0,32	0,35	0,39
HHheadSecondary	-0,480	0,109	0,000	0,619	-0,698	-0,262	0,497	0,770	0,33	0,38	0,43
HHheadHigh	-0,458	0,117	0,000	0,632	-0,692	-0,225	0,501	0,799	0,33	0,39	0,44
HHheadOccupationalHigh	-0,490	0,128	0,000	0,613	-0,746	-0,234	0,474	0,791	0,32	0,38	0,44
HHheadUniversity	-0,605	0,118	0,000	0,546	-0,841	-0,369	0,431	0,692	0,30	0,35	0,41
WomanHHhead(1)	0,285	0,136	0,036	1,329	0,013	0,557	1,013	1,745	0,50	0,57	0,64
Pre.OfChildLowerThanAge12	-0,137	0,059	0,021	0,872	-0,255	-0,019	0,775	0,982	0,44	0,47	0,50
HHsize	-0,020	0,015	0,192	0,980	-0,050	0,011	0,951	1,011	0,49	0,50	0,50
EmployedSumExcludingOneself	0,268	0,031	0,000	1,307	0,206	0,330	1,229	1,390	0,55	0,57	0,58
Pre.OfNonlfpWOMENexc.Herself	-0,398	0,064	0,000	0,672	-0,527	-0,269	0,591	0,764	0,37	0,40	0,43
Constant	-0,559	0,149	0,000	0,572	-0,856	-0,261	0,425	0,770	0,30	0,36	0,44

Chi-square: 2985,154 (signif: 0,091) Nagelkerke R-square: 0,271 Percentage correct: 82,0%

Table B.9. Urban women aged 15-44 in 2005 HLFS (comparable with 1988)

	B	S.E.	Sig.	Exp(B)	B-2SE	B+2SE	Exp (B-2SE)	Exp (B+2SE)	Lower Pr(X)	Mean Pr(X)	Upper Pr(X)
AGE											
AGE15_19	-1,467	0,045	0,000	0,231	-1,557	-1,377	0,211	0,252	0,17	0,19	0,20
AGE20_24	-0,524	0,037	0,000	0,592	-0,598	-0,450	0,550	0,638	0,35	0,37	0,39
AGE25_29	-0,056	0,036	0,117	0,946	-0,128	0,016	0,880	1,016	0,47	0,49	0,50
AGE30_34	0,208	0,036	0,000	1,232	0,136	0,280	1,146	1,323	0,53	0,55	0,57
AGE35_39	0,342	0,035	0,000	1,407	0,272	0,412	1,313	1,510	0,57	0,58	0,60
EDUCATION											
LiterateW.OUTdiploma	0,390	0,066	0,000	1,478	0,258	0,522	1,294	1,685	0,56	0,60	0,63
Primary	0,493	0,048	0,000	1,637	0,397	0,589	1,487	1,802	0,60	0,62	0,64
Secondary	0,786	0,055	0,000	2,194	0,676	0,896	1,966	2,450	0,66	0,69	0,71
High	1,227	0,054	0,000	3,410	1,119	1,335	3,062	3,800	0,75	0,77	0,79
OccupationalHigh	1,831	0,056	0,000	6,237	1,719	1,943	5,579	6,980	0,85	0,86	0,87
University	3,376	0,061	0,000	29,245	3,254	3,498	25,894	33,049	0,96	0,97	0,97
LivingWithApartner	-0,956	0,031	0,000	0,385	-1,018	-0,894	0,361	0,409	0,27	0,28	0,29
HHheadsEDUCATION											
HHheadLit.W.OUTdiploma	0,021	0,059	0,728	1,021	-0,097	0,139	0,908	1,149	0,48	0,51	0,53
HHheadPrimary	-0,173	0,044	0,000	0,841	-0,261	-0,085	0,770	0,919	0,44	0,46	0,48
HHheadSecondary	-0,305	0,051	0,000	0,737	-0,407	-0,203	0,666	0,816	0,40	0,42	0,45
HHheadHigh	-0,614	0,053	0,000	0,541	-0,720	-0,508	0,487	0,602	0,33	0,35	0,38
HHheadOccupationalHigh	-0,480	0,055	0,000	0,619	-0,590	-0,370	0,554	0,691	0,36	0,38	0,41
HHheadUniversity	-0,499	0,055	0,000	0,607	-0,609	-0,389	0,544	0,678	0,35	0,38	0,40
WomanHHhead	0,423	0,045	0,000	1,526	0,333	0,513	1,395	1,670	0,58	0,60	0,63
Pre.OfChildLowerThanAge12	-0,071	0,025	0,005	0,932	-0,121	-0,021	0,886	0,979	0,47	0,48	0,49
HHsize	-0,190	0,008	0,000	0,827	-0,206	-0,174	0,814	0,840	0,45	0,45	0,46
EmployedSumExcludingOneself	0,419	0,014	0,000	1,520	0,391	0,447	1,478	1,564	0,60	0,60	0,61
Pre.OfNonlfpWOMENexc.Herself	0,583	0,026	0,000	1,792	0,531	0,635	1,701	1,887	0,63	0,64	0,65
Constant	-0,949	0,072	0,000	0,387	-1,093	-0,805	0,335	0,447	0,25	0,28	0,31

Chi-square: 17765,178 (signif: 0,003) Nagelkerke R-square: 0,295 Percentage correct: 82,5%

C. MULTICOLLINEARTY TEST (FACTOR ANALYSIS)

Table C.1. Communalities

	Initial	Extraction
HHearningsExcludingwoman	1,000	,522
HHsize	1,000	,522

Extraction Method: Principal Component Analysis.

Table C.2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,045	52,244	52,244	1,045	52,244	52,244
2	,955	47,756	100,000			

Extraction Method: Principal Component Analysis.

CURRICULUM VITAE

Sevil Acar was born in Balıkesir in 1982. She graduated from Balıkesir Sırrı Yırcalı Anatolian High School in 2000 and continued her education in Boğazici University, Economics Department. She graduated from university in 2005 and started her Economics Master at Istanbul Technical University (ITU). She is still a research assistant at ITU.