Determinants of Gender Discrimination in Working Hours: The Blinder-Oaxaca Decomposition Method[*]

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Abstract

This study aims to analyze the determinants of gender-based working hours discrimination in the Turkish labor market with the Blinder-Oaxaca Decomposition method by using the TURKSTAT Household Labour Force Survey data. The human capital variables (age group, marital status, education level, registration, working type, income, number of employees, occupation, and industry) were included in the explained part of the model; while the unexplained part of the model was labeled as discrimination. The findings of the study show that the coefficient of discrimination arising from the different treatment of women and men in the labor market is higher than the coefficient arising from human capital. It is found that the variables with the highest contribution to the coefficient of discrimination are marital status, working type, and education level, respectively. The findings show that there are differences and discrimination in working hours between women and men. Therefore, the importance of both social norms and labor market institutions in determining working hours is once again seen.

Keywords: Blinder-Oaxaca, Gender Discrimination, Labor Market, Turkey, Working Hours.

Article Type: Research Article

Çalışma Saatlerinde Cinsiyet Ayrımcılığının Belirleyicileri: Blinder-Oaxaca Ayrıştırma Yöntemi

Öz

Bu çalışma, TÜİK Hanehalkı İşgücü Anketi verilerini kullanarak, Türkiye işgücü piyasasında cinsiyete dayalı çalışma saatleri ayrımcılığının belirleyicilerini Blinder-Oaxaca Ayrıştırma yöntemiyle analiz etmeyi amaçlamaktadır. Modelin açıklanan bölümünde beşeri sermaye değişkenleri (yaş grubu, medeni durum, eğitim düzeyi, kayıt, çalışma türü, gelir, çalışan sayısı, meslek ve sektör) yer almış; modelin açıklanamayan kısmı ise ayrımcılık olarak adlandırılmıştır. Araştırmanın bulguları, işgücü piyasasında kadın ve erkeklere farklı muameleden kaynaklanan ayrımcılık katsayısının beşeri sermaye farklılığından kaynaklanan katsayısından daha yüksek olduğunu göstermektedir. Ayrımcılık katsayısına en yüksek katkıyı sağlayan değişkenlerin sırasıyla medeni durum, çalışma şekli ve eğitim düzeyi olduğu bulunmuştur. Bulgular, çalışma saatlerinde kadınlar ve erkekler arasında farklılıklar ve ayrımcılık olduğunu göstermektedir. Dolayısıyla çalışma saatlerinin belirlenmesinde hem toplumsal normların hem de işgücü piyasası kurumlarının önemi bir kez daha görülmektedir.

Anahtar Kelimeler: Blinder-Oaxaca, Cinsiyet Ayrımcılığı, Çalışma Süreleri, İşgücü Piyasası, Türkiye.

Makale Türü: Araştırma Makalesi

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1. INTRODUCTION

Working has ever been a social phenomenon since prehistoric times; however, the concept of working time emerged and became a subject of debate with the industrial revolution that started in the late 18th century and became widespread in the 19th century. Working time is determined within a complex network of traditionally designed institutions such as the market, technological and macroeconomic forces, trade unions, and government policy, as well as cultural developments and social relations. In recent decades, working time has undergone a major transformation in most countries, particularly in industrialized countries, becoming increasingly flexible and variable, triggered by a combination of economic, technological, and cultural influences.

There can be considerable variation in working hours across and within countries, depending on economic conditions, lifestyle, the state of an individual's livelihood, industry, occupation, age, educational level, marital status, gender, race, family type, and time zone. An individual's average, annual, and weekly hours of work determine the level of both in-market and non-market activity in an economy. Both normative expectations and the actual employment patterns of men and women require separate discussions and assessments of their preferences regarding working hours. Since men around the world often work for longer hours on average, their preferences for changes in working hours take on a different meaning than those of women. However, it is also argued that the factors influencing working time preferences can be quite different for the two gender groups (Stier ve Lewin-Epstein, 2003).

Since working life is a reflection of social life, it brings along many problems in social structure and social relations. One of these problems is discrimination based on differences in practices in favor of or against a certain group for any reason. Previous research on discrimination in labor markets had started with the "discrimination" approach, which examined whether there were raw wage or earnings differences between groups and individuals. In recent years, however, there has been a significant increase in empirical research on labor market discrimination. The gender factor has emerged as a very common discrimination problem, in terms of working time discrimination due to the different roles, responsibilities, goals, and opportunities of women and men according to the norms of the society in which they live. Discrimination based on gender is not only a problem of the present day, but it is an issue that has existed in the labor market since ancient times. It has been reported that gender discrimination in the labor market is caused by discrimination in access to employment, working conditions, education and career choice, recruitment and promotion, wages, benefits from social rights, and working hours. The common point of recent studies is that gender is one of the deepest examples of stratification (Giddens, 2009).

Working life is accepted as a reflection of social life and brings along many problems in social structure and social relations. One of these problems is the problem of discrimination between genders in working life. To better understand the problem of discrimination, firstly, various definitions of discrimination are expressed as follows:

"It means treating a person differently and unequally from others in similar situations and conditions, without any public interest or rational justification." (Çelenk, 2010: 211).

"It is the act of treating people differently and unfairly because of some personal characteristics or membership in certain social groups." (Baybora, 2010: 34).

"It is defined as "any distinction, exclusion or preference made on the grounds of race, colour, sex, religion, political opinion, national origin or social origin which eliminates or impairs equality of opportunity and treatment in employment or occupation." (ILO, 2003: 16).

In economic theory, discrimination focuses on wage inequality, recruitment, promotion, and dismissal of men and women with similar qualifications. Neoclassical theory explains these inequalities as a result of free and rational choices of individuals, based on biological differences between the sexes (Boserup, 1989, p. 65). Focusing on the biological differences between the sexes, the neoclassical theory defines inequality between the sexes as a discriminatory situation arising from the distinctive characteristics of young against old, national citizens against foreign citizens, and whites against blacks. All these inequalities have characterized societies since prehistoric times (Boserup, 1970).

In radical feminist theory, gender discrimination also determines the division of labor in the capitalist economy, which constructs a society suitable for men. The hierarchical classification of labor, which is thought to maximize profit and the benefits of the system, is also formed in a way that favors men over women. This classification creates space for both social and economic segregation of women's labor, leading to visible differences between domestic and non-domestic workers. Socially, capitalism relies on unpaid labor to create a form of equilibrium that includes domestic work, which is usually done by women (Yenilmez, 2019: 42). It is a well-known fact that most unpaid domestic work is performed by women. However, in cross-gender labor, unpaid domestic labor is not considered an economic activity. If an activity or labor is not paid for, it is not considered an economic activity. With the increasing participation of women in social life, the labor force and unfavorable working conditions of women in households considered to be a poor class or lower class have brought the debate on unpaid and paid labor to the economy. The radical feminist theory states that if these women are accepted as "paid workers" and included in the working class, there will be less poverty in the both income and human dimensions (Yenilmez, 2019: 42).

The study aims to determine the change in the working hours of male and female household workers in Turkey and the reasons for this change. In addition, in light of the findings of the study, it is aimed to develop policy recommendations to eliminate the differences in working hours on the based on gender. A review of the relevant national and international literature reveals that there are significant gender differences in working hours across the world, including Turkey, and that although inequalities in economic and social development have decreased in some societies in parallel with the level of development, these problems have not completely disappeared in any country. One of the most prominent types of discrimination can be labeled as the inequalities in working hours by gender. The importance of both social norms and labor market institutions in determining working hours and reducing discrimination suggests that examining average working hours by gender may shed light on this problem. For these reasons, it is important to examine the working hours data of male and female employees in Turkey. For this purpose, within the scope of our study, the 2018 household labor force survey data set prepared by Turkish Statistical Institute (TURKSTAT) was analyzed to identify the existence and determinants of gender-based working hours inequality among household workers in Turkey.

2. CONCEPTUAL FRAMEWORK: WORKING TIME IN GENERAL

The concept of working time is defined in Labor Law No. 4857. Pursuant to Article 63 of the Law, "in general terms, the working time is a maximum of 45 hours per week. Unless otherwise agreed, this period shall be divided equally among the working days of the week in the workplaces". Article 3 of the Working Time Regulation, which was prepared on the basis of Article 63 of the Law, defines working time as follows "Working time is the time spent by the worker in the work in which he/she is employed. The periods written in the first paragraph of Article 66 of the Labor Law are also considered as working time. The breaks granted pursuant to Article 68 of the same Law are not counted as working time". The hours that the worker is ready to work despite not working are also counted as working time. Thus, it is underlined that working time does not only consist of the periods in which the worker is working (Labor Law, 2003).

As can be understood from both the law and the aforementioned regulation, working time includes the periods spent at work by actually working (actual working time) as well as the periods that are considered legal working time even though they are not worked (the hypothetical working time) (İnci, 2019: 6). The hypothetical working periods of the daily working time, which are not worked but counted as working time, are listed in Article 66 of the Labor Law. These periods will be discussed in the next section.

In addition, according to the Regulation on Working Hours related to the Labor Law "The rest breaks are arranged by taking into consideration the climate, season, traditions in the region and the nature of the work, taking into account the uninterrupted twelve-hour rest period within twenty-four hours. The provision of the last paragraph of Article 69 of the Labor Law No. 4857 is reserved." It is also seen that the concepts of working time and the "work time" are used as synonymous concepts.

While the working time draws the limit of the worker's obligation during the working time, it also provides the opportunity to evaluate the return of the work (Erdut, 2002: 7).

2.1. The Working Time Concept at the International Level

When the concept of working time is examined at the international level, working time within the scope of ILO and working time within the scope of the European Union are mentioned.

2.1.1. Working Time According to the ILO

Before the ILO was established, the main demand of the working class all over the world was that the working week should be 48 hours a week, 8 hours a day. The extension and generalization of the eight-hour working day for workers represented a reform that no other reform could replicate in terms of giving the working class a share in the new distribution of wealth created by modern industry outside these hours. More generally, the need to protect the health and well-being of workers was recognized and overtime work was seen to be detrimental to the material and moral well-being of workers as well as to economic efficiency (ILO, 1958: 3).

In some quarters, international standards on working hours could be a useful tool to limit the opportunities for unfair competition. Reflecting this trend in world opinion, the adoption of an 8-hour working day and a 48-hour week was among the ILO's main objectives. The first (No. 1) ILO Hours of Work (Industry) Convention was adopted in 1919, establishing the principle of "8 hours a day and 48 hours a week" for the manufacturing sector. Following this convention, numerous working time conventions were adopted. The 1930 Hours of Work (Trade and Offices) Convention (No. 30) extended the 48-hour working week to workers in trade and offices. In 1935, a time when the world was devastated by the economic crisis and war, the Forty-Hour Working Week Convention (No. 47) was adopted, setting a new standard for the 40-hour working week. The principle of at least one day's rest per week was introduced by the Weekly Rest (Industry) Convention, 1921 (No. 14), and the Weekly Rest (Trade and Offices) Convention, 1957 (No. 106). Conventions on night shifts and paid holidays followed (Dinh, Strazdins, ve Welsh., 2017, pp. 1-2). While determining the minimum conditions of occupational health and safety, the ILO has also attached importance to the regulation of working time and has implemented many relevant conventions.

ILO has defined working time around the concept of commitment. Accordingly, the periods from the moment the worker enters the employer's service in order to perform his/her work until the moment he/she leaves, even if he/she does not actually work, are considered as working time (Astarlı, 2008: 4).

2.1.2. Working Hours within the European Union (EU)

The EU Working Time Directive No. 2003/88, which tries to cover all employees in terms of the direct relevance of working time to the health and safety of workers, defines a working time in Article 2. The purpose of the Directive is to determine health and safety measures in determining the working hours of employees. Studies show that long working hours and insufficient rest periods increase accident rates and health problems such as stress and fatigue.

The European Court of Justice has stated that the Directive's provisions on working and rest periods, annual paid leave, etc. must be in the interests of employees. Similarly, according to Article 31(2) of the Charter of Fundamental Rights, which is included in the European Commission report on working time: "Every worker shall have the right to the limitation of maximum working hours, to daily and weekly rest periods and annual paid leave."

The working time directive sets a common minimum requirement for EU Member States. These conditions are defined as "working time (not exceeding 48 hours per week on average, including overtime), minimum daily and weekly rest periods (at least 11 consecutive hours of daily rest and 35 hours of uninterrupted weekly rest), paid annual leave (at least 4 weeks per year), additional protection measures for night workers." (European Working Time Directive, 2003).

3. DATA, METHODOLOGY AND FINDINGS

The study aims to identify the determinants of gender-based working time inequality, the analysis was carried out using the TURKSTAT 2018 Household Labour Force Survey (HLFS) data set. The reason for choosing the 2018 dataset is to avoid the impact of the covid-19 pandemic that emerged at the end of 2019 and the pandemic announced afterward on labor markets. The dataset includes information on the labor force status of individuals, as well as demographic characteristics of individuals and job-related information of the employed.

For the average weekly working hours between genders, which is the subject of the study, the logarithm of the variable "hours worked in a week in the main job" in the HLFS is used. The vector X, which represents the variables associated with weekly working hours, includes variables such as age, marital status, education level, registration, working type (full time-part time), income, number of employees, occupation, and industry. In this part of the study; descriptive statistics of the 2018 HLFS data for the variables analyzed within the scope of the study, "Heckman Sample Selection" and "Blinder-Oaxaca Decomposition" methods were used.

3.1. Descriptive Statistics of the Variables

Descriptive statistics for the variables analyzed within the scope of the study from TURKSTAT 2018 HLFS data are summarized in Table 3.1. The data in Table 3.1 were obtained from 106614 individuals who reported their weekly average working hours; 74401 of whom were male and 32213 of whom were female.

According to the descriptive statistics in Table 3,1, 32 % of employed individuals in 2018 in Turkey are women and 74 % are married. The average household size is 3,9. When the distribution of participants by age group is analyzed, the most concentrated age groups are 35-44 years, 25-34 years, and 45-54 years, while the least concentrated age groups are over 65 years, 55-64 years, and 15-24 years, respectively. Vocational education holders constitute 10,3 % of employed individuals. The rate of those working in the private sector is approximately 82 %. While those with administrative responsibilities account for 6%, those without social security records account for 38%. Occupational classification is based on ISCO 08. The most common occupations are agriculture, service, and unqualified occupation groups. NACE v2 was used in sector classification. It is seen that employees are concentrated in the agriculture, trade, service, and manufacturing sectors.

Table 1. Descriptive Statistics of Variables

Variable	Explanation	Mean	Std. Dev.
Average working time per week	Overall average working time per week	45,93	15,07
ln hours worked	Weekly overall average the logarithm of working time	3,76	0,426
Demographic			
15-24 years	individual's age (If 1=15-24, 0=not)	0,132	0,338
25-34 years	individual's age (If 1=25-34, 0=not)	0,224	0,417
35-44 years	individual's age (If 1=35-44, 0=not)	0,275	0,447
45-54 years	individual's age (If 1=45-54, 0=not)	0,212	0,409
55-64 years	individual's age (If 1=55-64, 0=not)	0,113	0,317
65 vs years	individual's age (If 1=65+ etc, 0=not)	0,043	0,202
marital status	marital status (1=married, 0=not married)	0,741	0,437
University Above	education level (1=university above, 0=others)	0,212	0,409
vocational training	Individual's vocational training status (1=yes, 0=no)	0,103	0,304
continuing education	Continuing education status of the individual (1=yes, 0=no)	0,091	0,288
Gender	Gender (1=female, 0=male)	0,326	0,468
household size	Number of people living in the household	3,98	1,79
Working condition			
private or public	Sector in which the individual works	0,824	0,380

	(1=private, 0=public)		
Registration	Status of being registered with the Social Security Institution. (0=not registered, 1=registered)	0,618	0,485
Experience	Working time at work (months)	9,42	11,32
Number of Employees	Number of employees at the place where the individual works (1=more than 10, 0=10 and less)	0,412	0,492
Administrative Responsibility	The individual has administrative responsibility in the workplace (1=yes, 0=no)	0,060	0,238
Working type	İndividual working type (1=full time, 0=part time)	0,873	0,333
Job			
Executive	The profession of the individual. (1=administrator, 0=if not)	0,046	0,211
Professional	The profession of the individual. (1=professional, 0=if not)	0,098	0,297
Technician	The profession of the individual. (1=technicians, technicians and assistant professionals, 0=if not)	0,052	0,222
Office Services	The profession of the individual. (1=office services, 0=if not)	0,062	0,241
Service	The profession of the individual. (1=service and salesperson, 0=if not)	0,186	0,389
Agriculture	The profession of the individual. (1=skilled agriculture, forestry and fisheries worker, 0=if not)	0,192	0,394
Artist	The profession of the individual. (1=artist and related jobs, 0=if not)	0,126	0,332
Operator	The profession of the individual. (1=plant and machinery operator and assembler, 0=if not)	0,086	0,28
Unqualified	The profession of the individual. (1=unqualified jobs, 0=if not)	0,151	0,358
Industry			
Agriculture	The industry in which the individual works. (1=agriculture, 0=not)	0,243	0,429
Production	The industry in which the individual works. (1=manufacturing industry, mining and quarrying, and other industries, 0=if not)	0,173	0,379
building	The industry in which the individual works. (1=construction, 0=if not)	0,065	0,247
Trade	The industry in which the individual works. (1=wholesale and retail trade, transportation and storage, accommodation and food service, 0=if not)	0,221	0,415
Information and Communication	The industry in which the individual works. (1=information and communication, 0=if not)	0,006	0,076
Finance and Insurance	The industry in which the individual works. (1=finance and insurance activities, 0=if not)	0,008	0,088
Real estate	Industry in which the individual works (1=real estate activities, 0=if not)	0,009	0,095
Professional Activity	Industry in which the individual works (1=professional, scientific and technical activities, administrative and support services, 0=if not)	0,057	0,232
Service	An Industry where the individual works (1=public administration and defense, education services, human health and industry service, 0=if not)	0,181	0,385
Other services	Industry in which the individual works (1=other service activities, 0=if not)	0,037	0,188

3.2. Heckman Sample Selection

The "sample selection bias problem" arises as a result of selecting some observations intended to be analyzed from the cross-sectional data collected for different purposes and including them in the analysis (Taşçı ve Darıcı, 2009: 146). In this study, the data obtained from TURKSTAT were collected in a way to represent all individuals living in the country. However, the study aims to determine the reasons for the differences in working hours between men and women with average weekly working hours data. The coefficients resulting from the inclusion of some of the data collected for a different purpose in the analysis will be biased (Şentürk ve Demir, 2022: 163). However, the reason for choosing the Heckman model is that the labor market in Turkey has a heterogeneous structure by gender and this causes deviations in the estimation coefficients. To avoid this problem, the sample selection method developed by Heckman (1979) can be used.

Heckman sample selection consists of two stages. In the first stage, a selection model is created to determine whether the individuals in the data group are employed or not. For this selection model to be correct, at least one of the independent variables used should be different from the independent variables to be used in the second stage. If this is not the case, it is not possible to interpret the coefficients as the model will be defined only functionally (Lavallée ve Roubaud, 2015: 186).

In the first stage, the working time status of the individual can be analyzed with the following equation:

$$cls_i = a_i x_{i1} + u_{i1} \tag{1}$$

In Equation 1, the dependent variable shows the status of the employed. It can take the values 1 and 0. It takes the value "1" when the individual is employed and "0" when the individual is not employed. In the equation to be formed in the second stage, the differences in the working hours of men and women are decomposed.

3.3. Blinder-Oaxaca Discrimination

The Blinder-Oaxaca method is a methodology often used to examine labor market outcomes by group (gender, race, etc.). In its original form, the method decomposes differences in wages between men and women. In the literature, this is known as the Blinder-Oaxaca decomposition (Blinder, 1973; Oaxaca, 1973). This method investigates the effect of the differences that exist between individuals and the discrimination that individuals face due to some different characteristics. With the decomposition, a regression equation is created for two advantaged and disadvantaged groups and the averages and differences between these groups are separated and analyzed. The Blinder-Oaxaca decomposition method defines the wage gap as a model consisting of explained and unexplained parts. In this model, the human capital characteristics of the employee (age, education, seniority, experience, etc.) are included in the explained part, while discrimination is included in the unexplained part. In this study, working hours between men and women are analyzed based on the Blinder-Oaxaca decomposition method.

The purpose of the Blinder-Oaxaca decomposition is to explain how much of the difference between the means of two groups is due to group differences in the levels of explanatory variables and how much is due to differences in the magnitude of regression coefficients (Oaxaca, 1973; Blinder, 1973).

Let's label these two groups as Group A and Group B. The difference between the means to be explained ($\Delta \bar{Y}$), equals the mean difference between the observations in Group A ($\bar{Y}_A$) and Group B ($\bar{Y}_B$);

$$\Delta \bar{Y} = \bar{Y}_A - \bar{Y}_B \tag{2}$$

3.3.1. Binary decomposition

Alternatively, a binary Blinder-Oaxaca decomposition can also be estimated. The binary approach decomposes the difference in the mean outcome with respect to the vector of reference coefficients $\hat{\beta}_R$. In the literature on labor market discrimination, the reference coefficient vector is typically defined as "no discrimination". In other words, it is interpreted as the set of regression coefficients that would arise in a world without labor market discrimination.

$$\Delta \bar{Y} = \underbrace{(\bar{X}_A - \bar{X}_B)'\hat{\beta}_R}_{Explained} + \underbrace{\underbrace{\bar{X}_A'(\hat{\beta}_A - \hat{\beta}_R)}_{Unexplained\ A} + \underbrace{\bar{X}_B'(\hat{\beta}_R - \hat{\beta}_B)}_{Unexplained\ B}}_{Unexplained} \tag{3}$$

Equation 3 shows that the two-fold decomposition splits the difference in mean outcomes into two parts, one part explained by between-group differences in explanatory variables and another part unexplained by between-group differences in explanatory variables.

The unexplained part of the difference in mean outcome is usually attributed to discrimination, but it can also be due to the effect of unobserved variables. This term can be further broken down into the two subcomponents labeled "unexplained A" and "unexplained B" above. In the case where the reference coefficient vector is interpreted as non-discriminatory, these two sub-components measure the parts of the average difference in outcomes that are due to discrimination in favor of Group A and against Group B, respectively.

Again, decomposition can be estimated in detail and the based on all variables:

$$\underbrace{(\bar{X}_A - \bar{X}_B)'\hat{\beta}_R}_{Explained} = \underbrace{(\bar{X}_{1A} - \bar{X}_{1B})\hat{\beta}_{1R}}_{Variable 1} + \underbrace{(\bar{X}_{2A} - \bar{X}_{2B})\hat{\beta}_{2R}}_{Variable 2} + \dots \tag{4}$$

$$\underbrace{\bar{X}_A'(\hat{\beta}_A - \hat{\beta}_R)}_{Unexplained\ A} = \underbrace{\bar{X}_{1A}(\hat{\beta}_{1A} - \hat{\beta}_{1R})}_{Variable 1} + \underbrace{\bar{X}_{2A}(\hat{\beta}_{2A} - \hat{\beta}_{2R})}_{Variable 2} + \dots \tag{5}$$

$$\underbrace{\bar{X}_B'(\hat{\beta}_R - \hat{\beta}_B)}_{Unexplained\ B} = \underbrace{\bar{X}_{1B}(\hat{\beta}_{1R} - \hat{\beta}_{1B})}_{Variable 1} + \underbrace{\bar{X}_{2B}(\hat{\beta}_{2R} - \hat{\beta}_{2B})}_{Variable 2} + \dots \tag{6}$$

The choice of reference coefficients is usually up to the researcher. In the literature on labor market discrimination, it is often assumed that only one of two groups is discriminated against. For example, only women or members of ethnic minorities are discriminated against. In such cases, the reference coefficients will be the coefficients from a regression on observations in one of the groups: $\hat{\beta}_R = \hat{\beta}_A$ or $\hat{\beta}_R = \hat{\beta}_B$.

Some researchers have instead used the weighted average of $\hat{\beta}_A$ and $\hat{\beta}_B$ as a set of reference coefficients. For example, Reimers (1983) suggests giving equal weight to the coefficients from regressions on Group A and Group B observations:

$$\hat{\beta}_R = 0{,}5\hat{\beta}_A + 0{,}5\hat{\beta}_B \tag{7}$$

Cotton (1988) suggests weighting the coefficients by the proportion of observations in the relevant group:

$$\hat{\beta}_R = \frac{n_A}{n_A + n_B}\hat{\beta}_A + \frac{n_B}{n_A + n_B}\hat{\beta}_B \tag{8}$$

Others advocate estimating coefficients using regression with (Jann, 2008) or without (Neumark, 1988) the group indicator variable as an additional regressor, in addition to pooling observations from Groups A and B. The Oaxaca package estimates results for all of the above-mentioned $\hat{\beta}_R$ options and also allows users to specify their customized weightings for $\hat{\beta}_A$ and $\hat{\beta}_B$, so that they can generate a set of reference coefficients based on a weighted average.

3.3.2. Findings

The results obtained by the least squares method primarily for men and women from TURKSTAT, HLFS data are given in Appendix 1 and Appendix 2. In order to estimate the effect of gender on expected working hours and actual working hours, the least squares model is applied for men and women. Both methods are log-transformed to correct for positive skewness and the possibility of varying variance (Vassil, Eamets, ve Mõtsmees, 2014, p.10). The results of the Heckman procedure for sample selection for males and females can be found in Appendix 3 and Appendix 4. The coefficient of Mill's Lambda obtained in the Heckman model is significant for both men and women. Therefore, it is necessary to apply the sample selection procedure. When sample selection is not applied, biased results will be obtained.

In the Blinder-Oaxaca decomposition, the logarithm of the individual's average weekly working hours is used as the dependent variable. Table 3.2 shows the general results of the decomposition.

Table 2. Blinder-Oaxaca Decomposition Findings

	Coefficient	*Std. Error*	*z*	*P>|z|*
Male	3,802*	0,008	457,160	0,000
Female	3,520*	0,022	156,910	0,000
Difference	0,282*	0,024	11,810	0,000
Human Capital	0,033*	0,004	8,950	0,000
Discrimination	0,249*	0,027	9,400	0,000

Note: *, ** and *** indicate that the coefficients are statistically significant at 1%, 5% and 10% significance levels, respectively.

The total average working hours difference in Table 3.2 is equal to the sum of the average working hours difference due to human capital characteristics and the average working hours difference due to discrimination. According to these findings, there is a significant difference in working hours between men and women. While the average logarithmic working hours for men is 3,8 and for women is 3,5. The difference is approximately 0,3. While 12 % of the difference is explained by human capital differences, 88 % is found to be due to discrimination. This difference can be divided into various components, which can be seen in Table 4.2. The coefficient for human capital is 0,033. This coefficient shows the increase in the working hours of men if men have the same human capital characteristics as women. If men have the same human capital equipment such as experience, knowledge, and skills as women, their working hours will increase. Thus, they will be able to reach a higher level of working hours when they have similar human capital endowments. The variable called discrimination shows the change that may occur in working hours in case of discrimination against women and men in labor markets. This value is 0,25 and is approximately 8 times the difference arising from human capital. This situation can be seen as a result of the different treatment of men and women in the labor market. In this case, we can say that the difference in the working hours of men and women can be explained by discrimination rather than the difference in human capital.

Table 3.3 contains the detailed results of the decomposition. The bottom row of the table shows the sum of the coefficients in each column. These sums are also equal to the coefficients of the human capital and discrimination variables in Table 3.2. In other words, each column in Table 3.3 expresses the contents of human capital and discrimination, which are the components of the difference.

Since the variables related to age among the demographic factors in Table 3.3 are dummy variables, one variable is taken as a base. This variable is the 15-24 age group. Human capital coefficients for all age groups are significant at the 1% level. When men have similar human capital characteristics with women, we can say that in the 25-34 age group, 35-44 age group, and 55-64 age group, men are more likely to work for a longer period of time than those in the 15-24 age group. Women aged 45-54 and 65 and over are more likely to work for a longer period of time than those in the 15-24 age group. Discrimination effect is also observed in all other age categories except for the 25-34 age group. Discrimination is observed against men in the 35-44 age group, 45-54 age group, 55-64 age group, and 65+ age group. The age group with the highest discrimination is the 35-44 age group with approximately 2%. McKay (2016) and van Hassel, van der Velden, Bakker, and Batenburg (2017) mentioned the finding that age affects working time in their studies. In this respect, the study is similar.

Marital status is the variable with the highest contribution to the variation in working hours. In the study, being married is seen as one of the conditions that cause men to work for more time than women in similar situations. Among the reasons for this situation, it can be shown that while women give up working or work less after marriage due to childcare and housework, men in our country, which has a patriarchal structure, increase their working time with marriage, let alone decrease it, due to their basic mission of fulfilling the basic responsibilities of the family. It can be said that there is discrimination between men and women in the similar labor market in marital status. According to the discrimination finding, it is seen that discrimination is made in the labor market in favor of married women. Married women work for less time than men. The findings are in line with the findings of Beccue (1977), Benham (1971), Blau and Kahn (2007), Carasico et al. (2012) and, Karabıyık (2012).

Education level is the third variable that determines working hours and contributes the highest contribution to the differentiation in working hours. In the study, it was found that men with similar characteristics who graduated from university and above are likely to work for approximately 2 % more time than women. In addition, it is also seen that men with university and above graduates are discriminated against when compared to women. It can be said that men with university degrees and above work for longer periods of time due to discrimination in the labor market compared to women with similar characteristics. It can be said that men with similar income levels are likely to work for less time than women, albeit with a small but significant difference. On the discrimination side, it is observed that men with similar income levels work for more hours than women. The reason for this situation can be explained by wage discrimination between genders. Wage discrimination is also emphasized by Johanson et al. (2005), Neumark (2018), Wellington (1993), and McCall (2000).

Table 3. Two-Part Blinder-Oaxaca Decomposition Results

	Human Capital				Discrimination			
	Coefficient	S. E.	z	P>z	Coefficient	S. E.	z	P>z
Demographics								
Age 25-34	-0,00044*	0,000	-3,000	0,003	-0,00243	0,003	-0,800	0,424
Age 35-44	-0,00157*	0,000	-4,810	0,000	-0,01808*	0,004	-4,500	0,000
Age 45-54	0,00067*	0,000	3,300	0,001	-0,01005*	0,002	-5,640	0,000
Age 55-64	-0,00154*	0,000	-6,210	0,000	-0,00369*	0,001	-4,480	0,000
Age 65vs	0,00035*	0,000	3,420	0,001	-0,00095*	0,000	-3,410	0,001
Marital status	-0,00663*	0,001	-12,06	0,000	0,07907*	0,006	14,190	0,000
Above university	-0,01649*	0,002	-7,310	0,000	-0,03055*	0,004	-7,980	0,000
ln (income)	0,00104*	0,000	5,730	0,000	-0,03008*	0,006	-5,230	0,000

Job Status								
Registry	-0,00153*	0,000	-8,050	0,000	0,03559*	0,004	9,430	0,000
Mode of operation	0,04195*	0,001	28,00	0,000	0,06361*	0,005	11,570	0,000
Number of employees	-0,00043*	0,000	-4,190	0,000	0,00205	0,002	0,860	0,391
Profession								
Manager	0,00019	0,000	-1,02	0,307	0,00162*	0,001	-3,50	0,000
Professional	0,01133*	0,001	14,27	0,000	0,00151**	0,001	2,17	0,030
Technician	-0,00003	0,000	-1,02	0,307	-0,00205*	0,001	-3,93	0,000
Office	-0,00013	0,000	-0,49	0,623	-0,00322*	0,001	-6,65	0,000
Service	-0,00733*	0,000	-17,03	0,000	-0,00608*	0,001	-6,11	0,000
Agriculture	0,00053*	0,000	3,33	0,001	0,00008	0,000	0,30	0,767
Artisan	0,00039	0,001	0,40	0,687	0,00071	0,001	0,52	0,604
Operator	0,00248*	0,001	3,44	0,001	0,00182	0,001	-1,66	0,097
Industry								
Manufacturing	0,00198*	0,001	2,800	0,005	-0,00665*	0,003	-2,640	0,008
Construction	0,00242***	0,001	1,700	0,089	0,00123	0,002	0,730	0,467
Trade	0,00175	0,000	1,560	0,118	0,00456***	0,002	1,930	0,054
Information	0,00004	0,000	1,380	0,167	-0,00032**	0,000	-2,060	0,039
Finance	0,00016**	0,000	2,070	0,038	-0,00058*	0,000	-3,900	0,000
Real Estate	-0,00050*	0,000	-4,610	0,000	0,00082*	0,000	3,690	0,000
professional activity	0,00085*	0,000	4,840	0,000	-0,00020	0,001	-0,310	0,754
Service	0,00295***	0,002	1,860	0,063	-0,01963*	0,002	-9,190	0,000
Other services	0,00043*	0,000	8,620	0,000	0,00194*	0,000	5,390	0,000
constant					0,16103*	0,039	4,180	0,000

Note: *, ** and *** indicate that the coefficients are statistically significant at 1%, 5%, and 10% significance levels, respectively.

There is a slight increase in the working hours of men in formal employment compared to women in the same situation. Moreover, about 4 % of the difference between men and women in formal employment can be explained by discrimination. It is observed that registered working men have been working longer than registered working women. Although the effect of working time on the number of employees is significant, it is quite low. Karabıyık (2012) also obtained similar findings in his study. It was observed that full-time and part-time working, which is the working type, was the second variable with the highest contribution to the differentiation in working hours. Here, unlike the others, there is a decrease in the working hours of men working full-time and an increase in the working hours of women working full-time. The reasons for this can be shown as the increase in women's participation in the labor force with the increase in the level of education, the effect of the regulations for women in the labor law laws, and the loss of the understanding that women's place is at home in society.

Those working in unqualified jobs in different occupational groups are taken as the basis. Looking at Table 3.3, which shows how the occupational group affects the duration of employment between genders, it is seen that the probability of duration of employment is approximately 1 % higher for men working in the service sector than for those working in jobs that do not require qualifications. The difference in working hours of women and men in occupational groups can also be explained by discrimination. Similarly, Akçomak and Gürcihan (2013) and Firpo, Fortin, and Lemieux (2009) found that occupational groups affect working hours between genders.

In order not to fall into the dummy variable trap in different industries, the agricultural sector is taken as a basis. According to the findings, it is observed that men working in real estate increase their working hours at very small rates compared to those working in agriculture, but the coefficient is significant at a 1% significance level. In manufacturing, construction, finance, professional activity, and service industries, it is observed that men working in manufacturing, construction, finance, professional activity, and service industries work for less time than those working in agriculture. It is seen that the biggest impact of discrimination is realized in the service sector with approximately 2%.

4. CONCLUSION AND RECOMMENDATIONS

In this study, the determinants of the differentiation in working hours by gender in the Turkish labor market are examined. The results of the Blinder-Oaxaca decomposition analysis are analyzed. In the study, it is determined that the differences arising from human capital that can be explained such as age group, marital status, education level, registration, working type, income, number of employees, occupation, and industry, and unexplained variables such as discrimination cause differences in working hours between genders. The coefficient of discrimination arising from the different treatment of men and women in the labor market is found to be higher than the coefficient of discrimination arising from human capital. Decomposition analyses indicate that the unexplained part of the differences in wages, working hours, etc. between men and women arising from labor market returns is more important than what is seen. The variables with the highest contribution to the coefficient of discrimination are marital status, working type, and education level, respectively.

Marital status is the first variable that determines working hours and makes the highest contribution to the differentiation in working hours. It is determined that married men work longer than married women. Marital status is one of the reasons for the difference in working hours between men and women. According to traditional gender roles and stereotypes, the primary role of men is to provide for the family, while women are responsible for family care and housework. Therefore, it can be said that women and men attach different importance to their careers and labor force participation. These roles may lead men, who are responsible for providing for the family, to work for more time in the labor market, while women's family responsibilities will result in a reduction in working time in order to allocate more time for housework. This situation may sometimes be individuals' preferences and sometimes it may be due to necessity in order to fulfill the roles attributed to the sexes.

Working type is the second variable that determines working hours and makes the highest contribution to the differentiation in working hours. Here, unlike the others, there is a decrease in the working hours of full-time working men and an increase in the working hours of full-time working women. The reasons for this can be shown as the increase in women's participation in the labor force with the increase in the level of education, the effect of the regulations for women in the labor laws, and, the loss of the understanding that women's place is at home in the society.

The roles assigned to men and women in the labor market also affect the way they work. This situation is likely to result in women preferring to work part-time to spend more time on housework and family care, while men prefer to work full-time in order to provide for the family. Another reason why women work for less time than men is the discriminatory practices against women in the labor market. This situation can only be eliminated when women's education level increases, when they reach professional and expert status in the sectors they work in, or when their earnings in the labor market rise to a level that can compensate for the returns of their roles at home.

Education level is the third variable that determines the working hours and makes the highest contribution to the differentiation in working hours. In the study, it was found that men with similar characteristics who graduated from university and above are more likely to work longer than women. In addition, it is also observed that men with university and above graduates are discriminated against when

compared to women. It can be said that men with university and above graduates work for longer periods due to discrimination in the labor market compared to women with similar characteristics.

In the labor market, it is generally found that men's working hours are higher than women's working hours (Landivar, 2015). While similar findings were found in this study, this situation indicates that there is negative discrimination against men in working hours in the labor market. If this situation is approached from an objective perspective, it is possible that there may be reasons that push men to overwork as well as reasons that prevent women from working outside the home. As mentioned above, while men's acceptance of their role as the breadwinner of the home and the family may lead them to work longer hours, women's primary responsibility for childcare and housework may result in a reduction in working hours in order to better manage their responsibilities (Webber ve Williams, 2008).

Accordingly, there are differences in working hours between men and women in the labor market in Turkey. It is determined that these differences stem from the fact that men and women have different human resources and discriminatory practices that treat men and women differently in the labor market. In light of the results obtained from this study and the related literature, it is considered that it would be beneficial to take the following measures in order to eliminate the difference in working hours and gender discrimination between men and women.

Regarding working hours, the primary recommendation is to regulate the existing long working hours so that they do not exceed the legally regulated upper limit. As working time also has an impact on productivity, there is evidence that a shorter working week is linked not only to flexibility of working time but also to significant productivity gains. Working longer hours will reduce the productivity gains from work. In addition, in Turkey, the legal upper limit is set at 45 hours by Labour Law No. 4857. In the present study, men work on average 48 hours per week, which is much higher than this legal limit. Since working for more hours will cause occupational accidents, it is important to reduce these hours in terms of the work-life satisfaction of employees (Dolton, 2017).

Working irregular shifts and late hours is critical for health problems and occupational accidents. Therefore, along with the importance of working hours, the planning of working hours will also become important in terms of work-life balance and the health status of employees. In addition, it would be useful for economists to collaborate with ergonomists to determine the most appropriate working model or working hours and how these hours are related to work. The fact that the average working time of men is above the legal limit also shows that many employees work overtime. It is important to determine whether these employees are paid overtime wages.

Working hours are related to income and are an important component of the wage differential. Since it is usually men who work very long hours, limits on working hours can work by reducing the number of hours men can work. A reduction in men's working hours can be offset by an increase in women's working hours to compensate for household income. Bell and Freeman (2001) and Bowles and Park (2015) argue that the increase in wage inequality is actually due to higher average working hours. Since people tend to work more hours as wage inequality increases, another way to eliminate inequality in working hours is to eliminate wage inequality in society. In addition, since inequalities between genders in society trigger other types of inequality, it is necessary to get rid of all unequal and discriminatory practices.

Women's labor supply is more flexible than men's. Since there are assumptions that an increase in women's labor force participation will reduce men's working hours, women's labor force participation should be increased. The most important factor in the increase in women's labor force participation is the improvement in their level of education. As women with higher levels of education become more involved in the labor force, the difference in working hours between them and men will decrease.

Moreover, as women participate in income generation on an equal basis with men, there will be a change in the roles of women who are responsible for housework and family care. As women's increased participation in the labor force will bring an additional source of income to the household, it will also cause men to reduce their working hours. While men who partially reduce their working hours can help with housework, the difference in working hours between men and women will also be reduced.

Married men have longer working hours than married women. Among the reasons for this situation, married women may be obliged to work for less time in the labor market due to reasons such as housework obligations, and care of the family and children, if any. To prevent this situation, policymakers need to help women to work for more time. For example, in the case of young children in need of care, nursery and care services that can help care for them can be expanded at an accessible level. Suggestions can be developed to encourage married women to work. Thus, the difference in working hours between married women and married men will decrease.

Regulation of working hours in favor of workers becomes important in terms of determining decent working conditions and ensuring the health and safety of workers. However, working longer hours may also cause work-family conflict. Conflicts are more likely to occur in families working with long working hours (Goode, 1960). Therefore, in order to prevent work-family conflict, it would be right to reduce the working hours of men. Work-family harmony will be better in individuals who spend more time with their families.

Assuming that reducing working hours will enrich personal and social life, it is important to reduce working hours without loss of income (Cihanoğlu Gülen, 2020). Since the time left over from working time will be transferred to free time, it will also make the individual socially better.

Although average working hours have changed throughout history, it has always been important to keep track of these hours. How many hours we work also depends on benefits such as health insurance, paid holiday, and taxes. Perhaps most importantly, since working hours affect how much we will be paid or whether we will be paid overtime, tracking these hours will be important for both the employee and the employer. In addition, the high rate of unregistered employment in our country will make it difficult to determine how long individuals work. Therefore, the control of working hours should be done more strictly.

There is a dominant literature on the need to reduce working hours. This situation has brought the necessity of reorganizing working hours back to the agenda. Reducing working hours and increasing employment with flexicurity will also support the unemployment problem in the country and partially reduce unemployment. Reducing working hours is important as it strengthens employment policies to reduce the number of unemployed by sharing the available jobs between the employed and the unemployed.

All discriminatory practices against both men and women in the labor market should be abandoned. Since other forms of discrimination also lead to discrimination in working hours, all sexist practices must be ended.

Within the scope of the study, the impact of discriminatory practices that cause the difference in working hours between genders in the labor market and the importance of eliminating these practices and policy recommendations are put forward. To eliminate this problem, it is thought that labor market institutions and policymakers should sufficiently investigate the reasons for this situation and solution proposals to eliminate inequality in working hours, which will be beneficial in clarifying the changes in working hours based on gender.

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Ethical Statement

During the writing and publication of this study, the rules of Research and Publication Ethics were complied with, and no falsification was made in the data obtained for the study. Ethics committee approval is not required for the study.

Contribution Rate Statement

All the authors in the study contributed to all processes of writing and drafting the study and the final version of the study has been read and approved by them.

Conflict Statement

This study did not lead to any individual or institutional/organizational conflict of interest.

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APPENDICES

Appendix 1. Least Squares Results for Males

	Coefficient	S. E.	t	P>t
Demographics				
Age 2534	-0,021*	0,003	-8,27	0,00
Age 3544	-0,036*	0,003	-12,85	0,00
Age 4554	-0,046*	0,003	-15,63	0,00
Age 5564	-0,066*	0,004	-18,11	0,00
Age 65 +	-0,075*	0,008	-9,41	0,00
Marital status	0,005*	0,002	2,65	0,00
Above University	-0,032*	0,002	-14,74	0,00
ln(income)	0,009*	0,000	22,41	0,00
Job Status				
Registration	0,003	0,002	1,50	0,13
Working type	0,908*	0,004	244,89	0,00
Employee number	-0,025*	0,002	-14,20	0,00

Profession				
Manager	-0,045*	0,004	-11,00	0,00
Professional	-0,073*	0,004	-20,62	0,00
Technician	-0,036*	0,003	-10,72	0,00
Office	-0,039*	0,003	-11,95	0,00
Service	0,065*	0,003	25,48	0,00
Agriculture	0,068*	0,007	9,65	0,00
Artisan	0,006**	0,003	2,34	0,02
Operator	0,011*	0,003	4,21	0,00
Industry				
Manufacturing	-0,003	0,005	-0,62	0,53
Construction	0,034*	0,005	6,39	0,00
Trade	0,031*	0,005	5,92	0,00
Information	-0,015***	0,009	-1,62	0,10
Finance	-0,089*	0,009	-10,15	0,00
Real Estate	-0,02*	0,008	-2,52	0,01
Professional activity	-0,051*	0,006	-9,06	0,00
Service	-0,102*	0,005	-19,02	0,00
Other Services	-0,039*	0,006	-6,33	0,00
Constant	2,949*	0,007	416,97	0,00
Mean dependent var	3,860			
R-squared	0,538			
F-test	3088,443			

Note: *, ** and *** indicate that the coefficients are statistically significant at 1%, 5% and 10% significance levels, respectively.

Appendix 2. Least Squares Results for Females

	Coefficient	**S. E.**	**t**	**P>t**
Demographics				
Age 2534	-0,029*	0,004	-7,10	0,00
Age 3544	-0,033*	0,004	-7,66	0,00
Age 4554	-0,036*	0,005	-7,71	0,00
Age 5564	0,001	0,007	0,10	0,91
Age 65 +	0,071*	0,012	5,81	0,00
Marital status	-0,025*	0,003	-8,39	0,00
Above University	-0,044*	0,004	-11,42	0,00
ln(income)	0,013*	0,001	17,75	0,00
Job Status				
Registration	-0,045*	0,004	-10,90	0,00
Working type	0,844*	0,004	187,96	0,00
Employee number	-0,029*	0,003	-8,94	0,00
Profession				
Manager	-0,012	0,009	-1,34	0,18
Professional	-0,091*	0,006	-15,62	0,00
Technician	-0,011***	0,006	-1,74	0,08
Office	-0,001	0,005	-0,12	0,90
Service	0,096*	0,004	21,60	0,00
Agriculture	0,063*	0,019	3,34	0,00
Artisan	0,003	0,007	0,40	0,68

Operator	0,025*	0,007	3,47	0,00
Industry				
Manufacturing	0,02**	0,008	2,32	0,02
Construction	0,021	0,014	1,51	0,13
Trade	0,007	0,008	0,84	0,39
Information	0,023	0,017	1,34	0,18
Finance	-0,031*	0,013	-2,43	0,01
Real Estate	-0,095*	0,017	-5,50	0,00
Professional activity	-0,051*	0,009	-5,77	0,00
Service	-0,016**	0,008	-1,96	0,05
Other Services	-0,105*	0,009	-11,37	0,00
Constant	3,011*	0,012	251,49	0,00
Mean dependent var	3,763			
R-squared	0,599			
F-test	1714,178			

Note: *, ** and *** indicate that the coefficients are statistically significant at 1%, 5% and 10% significance levels, respectively.

Appendix 3. Heckman Analysis Results for Males

	Coefficient	**S. E.**	**z**	**P>z**
Age 2534	0,030*	0,008	3,87	0,00
Age 3544	0,014***	0,008	1,84	0,06
Age 4554	-0,023*	0,004	-5,22	0,00
Age 5564	-0,115*	0,008	-14,46	0,00
Age 65 +	-0,239*	0,025	-9,62	0,00
Marital status	0,043*	0,006	7,38	0,00
Above University	-0,012*	0,004	-3,40	0,00
Registration	0,005**	0,002	2,15	0,03
Working type	0,908*	0,004	249,82	0,00
ln(income)	0,009*	0,000	22,60	0,00
Manager	-0,045*	0,004	-10,92	0,00
Professional	-0,072*	0,004	-20,23	0,00
Technician	-0,035*	0,003	-10,44	0,00
Office	-0,038*	0,003	-11,78	0,00
Service	0,066*	0,003	25,78	0,00
Agriculture	0,068*	0,007	9,74	0,00
Artisan	0,006*	0,002	2,57	0,01
Operator	0,012*	0,003	4,45	0,00
Manufacturing	-0,003	0,005	-0,51	0,61
Construction	0,034*	0,005	6,45	0,00
Trade	0,031*	0,005	6,11	0,00
Information	-0,014	0,009	-1,48	0,14
Finance	-0,090*	0,009	-10,12	0,00
Real Estate	-0,019**	0,008	-2,39	0,02
Professional activity	-0,050*	0,006	-8,93	0,00
Service	-0,102*	0,005	-19,20	0,00
Other Services	-0,039*	0,006	-6,33	0,00
Employee number	-0,025*	0,002	-14,24	0,00
constant	2,829*	0,019	152,02	0,00
Above University	0,410*	0,011	37,26	0,00
Marital status	0,735*	0,012	60,41	0,00

Age 2534	0,751*	0,013	56,08	0,00
Age 3544	0,737*	0,015	47,70	0,00
Age 4554	0,146*	0,016	9,08	0,00
Age 5564	-0,904*	0,017	-51,86	0,00
Age 65 +	-2,181*	0,023	-94,84	0,00
household size	-0,028*	0,002	-12,27	0,00
Constant	-0,287*	0,013	-21,96	0,00
mills lambda	0,112*	0,016	6,95	0,00

Note: *, ** and *** indicate that the coefficients are statistically significant at 1%, 5% and 10% significance levels, respectively.

Appendix 4. Heckman Analysis Results for Females

	Coefficient	S. E.	z	P>z
Age 2534	0,039*	0,008	5,03	0,00
Age 3544	0,075*	0,011	6,80	0,00
Age 4554	0,028*	0,008	3,51	0,00
Age 5564	-0,061*	0,009	-6,64	0,00
Age 65 +	-0,126*	0,022	-5,83	0,00
Marital status	-0,067*	0,005	-13,07	0,00
Above University	0,110*	0,015	7,39	0,00
Registration	-0,038*	0,004	-9,59	0,00
Working type	0,842*	0,004	189,80	0,00
ln(income)	0,013*	0,001	17,80	0,00
Manager	-0,009	0,009	-1,02	0,31
Professional	-0,087*	0,006	-14,88	0,00
Technician	-0,007	0,006	-1,10	0,27
Office	0,003	0,005	0,49	0,62
Service	0,096*	0,004	22,29	0,00
Agriculture	0,062*	0,018	3,41	0,00
Artisan	0,003	0,007	0,40	0,68
Operator	0,024*	0,007	3,45	0,00
Manufacturing	0,023*	0,008	2,81	0,00
Construction	0,023***	0,014	1,70	0,09
Trade	0,013	0,008	1,57	0,12
Information	0,027	0,018	1,56	0,12
Finance	-0,028**	0,013	-2,16	0,03
Real Estate	-0,089*	0,017	-5,24	0,00
Professional activity	-0,047*	0,009	-5,49	0,00
Service	-0,015***	0,008	-1,86	0,06
Other Services	-0,098*	0,009	-10,97	0,00
Employee number	-0,028*	0,003	-8,75	0,00
constant	2,668*	0,034	79,01	0,00
Above University	1,035*	0,010	102,76	0,00
Marital status	-0,278*	0,010	-28,16	0,00
Age 2534	0,398*	0,014	29,49	0,00
Age 3544	0,664*	0,014	49,08	0,00
Age 4554	0,334*	0,015	22,95	0,00
Age 5564	-0,441*	0,018	-24,71	0,00
Age 65 +	-1,172*	0,023	-50,83	0,00
household size	-0,058*	0,002	-23,33	0,00

Constant	-0,837*	0,015	-56,71	0,00
Mills lambda	0,212*	0,019	10,88	0,00

Note: *, ** and *** indicate that the coefficients are statistically significant at 1%, 5% and 10% significance levels, respectively.

Extended Abstract

Determinants of Gender Discrimination in Working Hours: Blinder-Oaxaca Decomposition Method

The study aims to determine the change in the working hours of male and female household workers in Turkey and the reasons for this change. In addition, in light of the findings of the study, it is aimed to develop policy recommendations to eliminate the differences in working hours on the based on gender. A review of the relevant national and international literature reveals that there are significant gender differences in working hours across the world, including Turkey, and that although inequalities in economic and social development have decreased in some societies in parallel with the level of development, these problems have not completely disappeared in any country. One of the most prominent types of discrimination can be labeled as the inequalities in working hours by gender. The importance of both social norms and labor market institutions in determining working hours and reducing discrimination suggests that examining average working hours by gender may shed light on this problem. For these reasons, it is important to examine the working hours data of male and female employees in Turkey. For this purpose, within the scope of our study, the 2018 household labor force survey data set prepared by Turkish Statistical Institute (TURKSTAT) was analyzed to identify the existence and determinants of gender-based working hours inequality among household workers in Turkey.

For the average weekly working hours between genders, which is the subject of the study, the logarithm of the variable "hours worked in a week in the main job" in the Household Labour Force Survey (HLFS) is used. The vector X, which represents the variables associated with weekly working hours, includes variables such as age, marital status, education level, registration, working type (full time-part time), income, number of employees, occupation, and industry. Descriptive statistics of the 2018 HLFS data for the variables analyzed within the scope of the study, "Heckman Sample Selection" and "Blinder-Oaxaca Decomposition" methods were used. The Blinder-Oaxaca method is a methodology often used to examine labor market outcomes by group (gender, race, etc.). In its original form, the method decomposes differences in wages between men and women. In the literature, this is known as the Blinder-Oaxaca decomposition (Blinder, 1973; Oaxaca, 1973). This method investigates the effect of the differences that exist between individuals and the discrimination that individuals face due to some different characteristics. With the decomposition, a regression equation is created for two advantaged and disadvantaged groups and the averages and differences between these groups are separated and analyzed. The Blinder-Oaxaca decomposition method defines the wage gap as a model consisting of explained and unexplained parts. In this model, the human capital characteristics of the employee (age, education, seniority, experience, etc.) are included in the explained part, while discrimination is included in the unexplained part. In this study, working hours between men and women are analyzed based on the Blinder-Oaxaca decomposition method.

The findings of the study show that the coefficient of discrimination arising from the different treatment of women and men in the labor market is higher than the coefficient arising from human capital. It is found that the variables with the highest contribution to the coefficient of discrimination are marital status, working type, and education level, respectively. The findings show that there are differences and discrimination in working hours between women and men. Therefore, the importance of both social norms and labor market institutions in determining working hours is once again seen.

Within the scope of the findings obtained in the study, all kinds of discriminatory practices against men and women in the labor market should be stopped. All sexist practices must be stopped, as other forms of discrimination also lead to discrimination in working hours. Within the scope of the study, the impact of discriminatory practices that cause the difference in working hours between genders in the labor market and the importance of eliminating these practices and policy recommendations are put forward. To eliminate this problem, it is thought that labor market institutions and policymakers should sufficiently investigate the reasons for this situation and solution proposals to eliminate inequality in working hours, which will be beneficial in clarifying the changes in working hours based on gender.