

TÜRKİYE İŞGÜCÜ PİYASASINDA MESLEKİ CİNSİYET AYRIMCILIĞININ GELİR EŞİTSİZLİĞİ ÜZERİNDEKİ ETKİSİ

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Özet

İşgücü piyasasındaki cinsiyet ayrımcılığı benzer yeteneklere, eğitime ve tecrübeye sahip olan işçi gruplarının diğer cinsiyetle karşılaştırıldığında üretkenliklerine bakılmaksızın istihdamda, işe erişimde, terfide veya ücretlerinde ikinci sınıf muamele görmeleri olarak tanımlanmaktadır. Bu makale mesleki cinsiyet ayrımcılığının altında yatan beşeri sermaye donatısı, endüstriyel ve mesleki ayrımcılık gibi nedenleri saptamayı amaçladığı gibi özel sektör-kamu sektörü ayrımı firma boyutu ve sosyal güvenlik gibi kurumsal faktörleri de göz önünde bulundurmaktadır. Çalışmada teorik ve ampirik cinsiyet ayrımcılığı literatürü de incelenmiştir ve Türkiye gibi geleneksel, kültürel inançların ve normların hala dominant olduğu gelişmekte olan ülkelerde cinsiyet ayrımcılığının önemi değerlendirilmiştir. Bu makale kapsamında ayrımcılık endeksi hesaplanmıştır ayrıca cinsiyet tabanlı endüstriyel ve mesleki ayrımcılığın düzeyi elde edilen veri seti çerçevesinde araştırılmıştır. Yapılan araştırma bulgularına göre cinsiyetler arasındaki ücret farklılıkları büyük oranda cinsiyet bazlı mesleki ve endüstriyel ayrımcılıktan ayrıca özel sektör-kamu sektörü ayrımı gibi kurumsal farklılıklardan kaynaklanmaktadır. Bunun yanında bu çalışma ile tanımlanmamış cinsiyet ayrımcılığının üstesinden gelebilmek için emek piyasasındaki ayrımcı çalışma şartlarının da ortadan kalkması gerektiği anlaşılmaktadır.

Anahtar Kelimeler: Cinsiyet Ekonomisi, Emek Piyasası, Mesleki Cinsiyet Ayrımcılığı, ANCOVA

THE IMPACT OF OCCUPATIONAL GENDER SEGREGATION TO THE GENDER WAGE GAP IN TURKISH LABOUR MARKET

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Abstract

Labor market gender segregation can be defined as an occurring which takes place when group of workers with similar abilities, training, education and experience are faced with inferior treatment in hiring, occupational access, promotion or wage rates compared to the other gender with no relation to their productivity. The paper aims to find out the underlying causes of gender occupational segregation such as human capital endowments, industrial and occupational segregation as well as institutional factors like private/public sector, firm size and social security. The prevailing theoretical and observed literature of gender discrimination is also examined and significance of gender discrimination in Turkey, where traditional, cultural beliefs and norms are still dominant, has been assessed. The level of gender-based industry and occupational segregation within the confines of data set is also studied and the segregation index is computed. It is found that a large percentage of the gender wage gap is related to gender based occupational, industrial segregation and also differences in institutional factors that is public/private sector. It can also be determined that huge unexplained portion of the segregation prevails due to discriminatory workings of the labor market.

Key Words: Economics of Gender, Labor Markets, Occupational Gender Segregation, ANCOVA.

1. Introduction

Occupational segregation by sex is existent in most of the countries in the world (Anker 1998). The difference in occupational distribution of women and men in the labor market has been an outstanding problem. Women and men work in different areas and at different levels within fields. In the

past researches, the analyses indicate that a very high degree of segregation has been remained in the early 1970s up until 1990s. The 1990s are cross-road period for Turkey in occupational desegregation at least in some of the works even though it has not eliminated it at all. The progress of women's empowerment with the laws that prohibits gender discrimination both at social and economic life increase their enrollment in education and life learning process, encourage women to be in the labor market either by providing flexible works or subsidies to open their own work, last but not least is reducing the gender stereotypes in employment distribution. Consequently, women start to penetrate into male-dominated occupations after the reforms in 1990s. But what happened after 2000 and the pace of those changes are being slowed down?

Many explanations for occupational segregation have been stated in the literature (Anker 1998, Cotter et al, 1980, King, 1992) ranging from different types of human capital and primary role of women depending on social values to the reasons of discrimination among employees by employers. In general, occupational segregation is defined as workers in terms of sex are excluded from certain jobs for reasons such as race, ethnicity, gender, social norms or origin. From the beginning of 1960s, researchers have been focusing on the sources and consequences of occupational segregation in the labor market. It has been studied from two frameworks. The first one concentrates on workers characteristics such as education, experience and the ability for the jobs. The other one focuses on employers and work owners' characteristics and how they propagate a gender-segregated work in the labor market. But in order to overcome the gender inequality in the workforce, two frameworks have to be gathered to reproduce a gender-desegregation. Jobs in Turkey are highly segregated and female dominated jobs are worse than male dominated jobs since the wages, the authority, benefits and productivity are lower. If an example is given, in universities women choose different subjects than men since they know it would be difficult to find the same place in the field with them. Due to Blau and Kahn (2007), another reason of this segregation is the continuing gender wage gap. Cain (2006) states that the gender wage gap decreases but not disappeared at all even though the educational attainment of women have caught up to and even leave behind men.

In this study, differences in occupations have been analyzed. It is investigated empirically whether women and men are not only different in

career preferences but also different behaviors in competitive situations affect their choices. Since gender differences in occupations has a significant impact on economic outcomes by changing the wages paid, occupational expectations of young cohorts as well as their experience, level of education and socio-economic background are becoming watershed at this point to explain the future outcomes. This paper seeks to analyze gender-based occupational segregation by using ANCOVA. Although the economic and demographic trends in Turkey demonstrate a growing pattern, there has been a multifaceted and riveting question that could not give the accurate answer: why the obscurity in occupational segregation and wage gap inequality stills a matter? Along these lines, the major aim of this paper is to contribute the existing literature by providing the current patterns of the employment distribution within the occupations and identifying in which fields they have been changed over the years. Determining the effects of human capital and socio-economic factors on occupational preferences supports it.

2. Literature Review

Turkish experience has been different from that in Western European and North American countries, which encouraged equality in employment through legislative consents. There is a primitive feminism of equality in which women are represented in the public jobs while their subordination in the private jobs remain intact and unquestioned (Gündüz-Hosgör and Smits, 2008). Under development in Turkey was equated to the low status of women and their entry to public space marked modernization and strengthening of secularism (Gorman, 2005)

Kasnakoglu and Dayıoğlu (2000) use data from the Household Income and Expenditures Survey from 1987 and explore the extent of the wage gap by use of level of schooling, education, region, occupation and job status as major factors. They find the average female-to-male earnings differential to be 47.5%. The earning gap is then highest at primary level schooling for workers in the agricultural sector and in production related activities. This gap then decreases as the level of schooling goes up beyond primary level with employees and clerical workers experiencing the lowest gender pay differentials. The study continues to state that human capital endowment differences between women and men Using separate wage regressions for men and women, explains the gender wage gap of 36.2% and also the 63.8% differentials resulting from mechanisms used in the labor market which are discriminatory.

In the past two decades, a change has been experienced as the representation of women in managerial positions has increases to one half from the previous one third (Cotter& Vanneman, 2004). According to the study of Gunluk-Senesen and Ozar (2001), which examines sex-based occupational segregation in the banking sector, women constitute 46% of the total employees. The study found a vertical occupational segregation index of 25.6 using four hierarchical occupational categories on their sample. The index for the study ranged from 17 to 45.7 and when compared to the index of other industries such as textile (OSI =46) and tourism (OSI =42), a conclusion was made that in the banking sector occupational gender segregation was less severe (DGSPW, 2000). When the data was examined in terms of levels of schooling, it was found that women with high levels of education were employed in jobs requiring lower education levels and were availed with very few opportunities for promotion. This indicates that though the banking sector had lower levels of gender segregation, it is not an exact positive outcome as it is a supply of fully educated and qualified women put in low qualification banking jobs.

There are various theories on labor market discrimination, which can be used to help to understand the occupational sex segregation and inequality in Turkey. The most dominant theory is the neo classical theory. Human capital theory which states that workers seek out best paying jobs after considering their preferences while employers aim to maximize their profits and productivity minimize their costs. Therefore labor market payment differences result from the equilibrium forces of demand and supply (Becker, 1971). Hence it can be state that wage differences result from what both men and women have to offer to the labor market. Women are viewed to possess lower human capital in relation to what they offer the market by considering that they have less education, less relevant fields of study, have less experience than men resulting from the responsibilities they hold at home in care giving to their families hence low participation in the labor market (Altonji and Blank, 1999). Following this theory, difference in human capital occurs outside the labor market and the impact the supply. Women have a higher rate of absenteeism turnover because of biological or social factors, which impose childcare responsibilities to them. Additionally they may be rendered geographical inflexible as home locations are mostly based on male employment considerations. However in considering Turkish women, this approach may be insignificant considering that they have access to childcare sup-

port from the extend family. Therefore there is no reason for motherhood to interrupt Turkish women work (Ecevit, 1986).

Becker's theory of 'taste for discrimination' states that if an individual has a taste for discrimination, they pay something to avoid others but be associated with some people (Becker, 1971). Preferences and prejudice bring about the taste for discrimination. Employers are willing to sacrifice profit to avoid female employees; male workers are willing to forgo wages to avoid female employers, and consumer ready to pay increased prices to avoid female provision because of this dislike. The assumption in this theory is existence of perfect competition, which provides free entry and exit for employers while both men and women are equally productive. This theory states that there is a discriminatory reward for male workers because employer is willing to pay in preference to them. The main problem with Becker's theory is that it cannot clarify continued wage differences between men and women who are equally productive in the long run. In Turkey, there are male-controlled relations and gender based cultural responsibilities in family and society. Women's status is controlled by tradition, religion and culture. Employers consider women's key role as homemaker and men as wage earners, so this belief, which defines the roles of men and women, does not affect the incomes, promotion and employment of women. As a result of this viewpoint, which addresses men as the breadwinners of the family, women are paid lower wages (Colak, 1999). In the Turkish scenario, both men and women have social custom roles. Men are viewed as head of the family and they are responsible for taking care of their families. Women's main role is domestic duties while employment comes in a second responsibility. For this reason women's lower wages are not seen as problematic by society. In addition, the employment position of women in the labor market replicates the social and traditional theories in Turkey. According to data from past studies, 51.2 % of women were involved in agriculture as unpaid family workers. The number of women employees was very minimal although it has increased from 21.5 % to 38.4% (Colak and Kilic, 2001). Therefore the status of women employment confirms that women are still recognized as homemakers and mothers rather than head of houses. Only a very minimal number of women are able to govern and control their own economic lives while the majority of women remain to be economic minority hence economically depended on men.

Occupational sex segregation and inequality arise from the conditions of a monopsonist with a separated labor force and where the two groups have different substitute job opportunities (Madden, 1934). In the monopsony theory, workers' wages are less than their marginal outputs and the extent of difference between wages and marginal outputs is based on the wage elasticity of the labor supply of each group to the firm. Two conditions must be met for monopsonist discrimination. First, the labor supply must be in separate and identifiable groups and secondly these labor groups must have different income elasticity of labor supply. If the supply of women is inelastic than that of men then a profit maximizing monopsonist employer pays male workers higher incomes than female employees. According to Madden (1973), discriminatory monopsony power arises from the monopsonist employer power and the prevailing male power in society. The lower income elasticity of female labor supply emerges from the lower demand for women in alternative occupations and women's lower labor mobility in comparison to men. Women are relatively immobile in the labor market as household locations are dominated by male needs. Women may be confined to narrow range of jobs as compared to men as social forms and tradition determine their occupational distribution. Single parents in the contemporary world argued that mobility to a housewife role outside the labor market is of less significance. The female income elasticity of labor supply could be less in other professions and industries following the inhibited career choices for women. In the Turkish case, there exist some limitations, which emerge from the labor market such as the traditional employers' attitudes and beliefs about women employees, which limit women to certain jobs and hence influencing the elasticity of female labor supply.

Organizations play a role in maintaining gender segregation in the labor market. For instance, an employer may stop hiring women as a result of pressure from male dominated labor unions. In the Turkish case, it is doubtful if monopoly powers of male workers contribute to occupational segregation. In Turkey institutional issues are responsible for occupational segregation. Women are deemed physically weaker than men hence being allocated to 'light jobs' which have lower wages while men take up the 'heavy jobs' that are capital intensive and well paid (Ecevit, 1986). Ecevit continues to argue that women are crowded in certain occupations following the low cost of their labor, and the theory that they are naturally meant to undertake certain activities. She therefore claims that the belief of appropriate work for females plays a substantial role in continuing the occupational gender segregation.

gation in Turkey. These assumptions affect female education and on-the-job training as girls are made to choose certain jobs appropriate for them while employers on the other hand do not allow women into job training as they it as a waste of their money since women can leave their jobs at any time to get married or become mothers. As a result, government legislations and social traditional thoughts contribute to crowding women in certain jobs in Turkey.

Power (1975) states that, when jobs are gender-typed, equivalent job-related opportunities are not given to women because of employers' statistical discrimination and limited expectations on women's choices imposed resulting from family life. This model is important in demonstrating women's position in the labor market as a part of an entire social system where women are inferior. Cultural, social and ideological factors play an essential role on describing women's inferior position in the labor market in Turkey. Additionally, the stereotypes about women's and men's ambitions, expectations from work and attachment to work impacts employers' judgment on women, female workers consequently are not employed in male jobs which results to gender segregation.

3. Labor Market and Occupational Choices in Turkey

The main challenges Turkey has taken up in terms of employment policy are the low employment rate, the high level of unemployment, the size of the informal economy and the strong discrepancies between rural and urban area. Labor force participation in Turkey is low in comparison with international standards and it has been declining for a long time. According to the World Bank (2006), from 1980 to 2014, working age population (those aged from 15 to 64) increased by 23 million in Turkey, but only 6 million jobs were available. As a result, the employment rate in 2014, at 45.5%, is one of the lowest in the world. Most countries have employment rates exceeding 50%.

Table 1: *Distribution of labor force among occupations*

OCCUPATION	FEMALE	MALE
Scientific, Technical and Professional Workers	24,49	10,97
Managers and Proprietors	1,74	2,55
Clerical Workers	23,7	8,89
Sales Workers	3,4	4,2
Foremen, Craftsmen	9,24	22,06
Operatives	5,93	21,95
Service Workers	10,46	15,37
Laborers	7,93	9,68
Agricultural Workers	13,12	4,31

Source: TUIK, 2015.

Participation and employment rates significantly differ with respect to gender and location. Rural participation rate and employment rates are higher than urban while men's values are higher than women's. Overall male participation rate at 72.3 % is almost three times of female participation rate at 25.4 %. Women's labor force participation is exceptionally low in urban areas, at only 18.3 % compared to 70.8% for men. A significant part of the gap between employment rates in Turkey and the EU-15 results show the low level of employment for women. According to the World Bank (2013), the employment rate in 2004 in Turkey was 64.7 % for men, compared to the EU-15 that was 72.9. In comparison, the average for women, at 22.9 %, was less than half the EU-15 average of 57.1%. Therefore by 2014, less than one in four Turkish women aged 15-64 was employed. According to studies by the European Foundation for the Improvement of Living and Working Conditions, female participation rate has reduced to 20% from 1998 to 2014, in comparison to the increase of women's participation in the informal sector.

Participation and employment rates are higher in rural areas than in urban and men's are higher than women's.

Table 2: *Labor Force Participation and Employment, 2014*

	Population	La- bor force	Employment	Participation rate	Employment rate
Total	49,91	24,29	21,79	48,70	43,70
Female	25,15	6,39	5,77	25,40	22,90
Male	24,76	17,90	16,02	72.3	64.7
Urban	30,81	13,71	11,84	44.5	38.4

Female	15,45	2,83	2,33	36,70	15.0
Male	15,36	10,88	9,52	70.8	62.0
Rural	19,09	10,58	9,95	55.4	52.1
Female	9,70	3,56	3,44	36.7	35.5
Male	9,39	7,02	6,51	74.7	69.3

Source: TUIK, 2015.

The fast demographic change experienced by Turkey since the 1950s and the associated structural transformations of the country resulting in a shift out agriculture have been interpreted into a high ratio of rural-to-urban migration and a reduction in women's participation in labor force. When a woman who works in agricultural job moves to urban areas they do not find paid jobs in the labor force in the first place because they are less educated than men. In rural areas, where agriculture leads, labor-intensive technology is readily available and home and work environment correlate to a great extent, all family members are more likely to take part in productive activities. Moreover, most of the women and children work as voluntary family labor in agriculture. Urban households on the other hand are more specialized than rural; men earn an income while women are housewives. Lower female participation rates in the urban areas indicates two social customs in that married women are expected to dedicate themselves to domestic work and a greater access to education that reduces participation among the youngest. In the West of Turkey, the proportion of women that was working for pay was 40%; while in the East about 90% of women still had the status of unpaid family workers (Ilkcaracan, 2000).

Table 3: *Composition of the Labor Force*

Status	Wage Earners	Employers	Self-Employed	Unpaid Family workers	Unemployed	Total
Total	16,475 (46.2 %)	1,684 (4.7 %)	6,602 (18.5%)	7,295 (20.5%)	3,582 (10.1%)	35,652

Female	3,301 (32.1%)	61 (0.6%)	883 (8.6%)	4,901 (47.5%)	1,157 (11.2%)	10,31
Male	13,174 (52.0%)	1,623 (6.4%)	5,719 (22.6%)	2,394 (9.5%)	2,425 (9.6%)	25,342

Source: TUIK, 2015.

In table 3, active women are seen to be far less as wage earners, self-employed or employers in comparison with men. Focusing on the salaried population, the number of women reduces as they only account for 20% of the paid workers and whose representation of the working age population is at 23.6%. This percentage of 20% however falls further to 18.5% when the data is limited to the full time workers only. In urban areas, waged and salaried employees make the biggest fraction of the female and male working populations at 72.3% and 79.2% respectively. In comparison to rural areas 42.9% of men are working as self-employed and only 29.9% of them are wage employees. Women in rural areas are mostly in unpaid family membership employment that accounts for 80% while only 8.6% of the rural active women are wageworkers as to be seen in the study. According to table 4, women are more likely to be in risky jobs than men, even amongst salary workers. As compared to men, the proportion of salaried women who have long term contracts 76.2% while men 85.6%. Only 58.5% of women are registered in social security while 65.6% of men are guaranteed by social security. Considering the aspect of not being covered by any social insurance as a proxy of the belonging to the informal sector, women are therefore more concerned.

Table 4: *Type of Labor Contract*

	Wage-Earners	Longterm contract	Covered by social insurance	Full -time
Total	16,475	13,800 (83.8%)	10,574 (64.2%)	15,286 (92.8%)
Female	3,301	2,516 (76.2%)	1,930 (58.5%)	0,829 (85.7%)
Male	13,174	11,284 (85.6%)	8,644 (65.6%)	12,457 (94.6%)

Source: TUIK, 2015; Eurostat, 2015; ILO, 2015.

This is explained by the high concentration of women among unpaid family workers. By limiting to the salaried population only, it's easy to tell that men dominate all occupations. In regards to sectors, women dominate the agricultural sector where they are highly represented as unpaid family workers and the private household sectors with employed individuals, where domestic employees are mainly women registered. With an exception of the agriculture sector, the gender structure of sectors is almost similar to the working aged and the salaried population. Genders are distributed differently across sectors and occupations. The numbers of working women are agricultural workers, nearly 60% compared to men who are 20%. The spread of the female salaried population across various occupations is less concentrated given that more than half of the salaried women is consistently distributed across intermediate jobs that is 17% are professionals, 15% clerks 12% service or sale workers and a quarter is elementary workers. In our sample, one can clearly deduce that female salaried workers are more likely to be profes-

sionals, managers or employees compared to their male counterparts, although men are often more skilled or unskilled workers. According Meurs and Ponthieux (2005), as compared to Southern European countries that is Greece, Spain and Portugal we find that women hold more managerial position than men. The main reason of this is the low rate of employment for women in these countries.

If workingwomen are concentrated in agriculture sector then salaried women are found first in the manufacturing sector then the education sector and the rest in the trade sector. In other countries, private sectors seem to be favorable for female workers. However, in Turkey this is not the case as the public sector employs both men and women at the same proportion. Finally, regarding variances in geographical location according to the SIS survey, 36% of the female salaried workers are concentrated in the regions near Istanbul city. This is an indication that they are moving towards where employment opportunities are likely to be available. On the other hand the wage earners proportion is decreasing among women in the Eastern regions. There is a difference between these two areas in that the Eastern region is rural and less developed while the Western region is more developed and urban. In regards to the geographical distribution, the number of working population among women is seen to be higher in the Eastern region, which is the rural area. This can be explained by the fact that there are more unpaid family workers in rural area hence number of active women increase in there. Generally, women do not take part in the labor market, on the average women are less educated than men; women are more often in precarious occupations and women work for informal sector. Salaried women are actually lesser; the chances of shifting to the salaried jobs are lower for women as compared to men. Men are mainly located in urban areas, they are much more educated than the women's average level and they form the majority of the high educated wage earners. Men are more likely to take up high-status jobs as compared to women. These features may point out a high selectivity for women into salaried jobs with the selection process setting higher standards in terms of educational achievement for them. The data obtained so far disclose huge variance in the way women and men are distributed into employment, across sectors and occupations and a suspicion that the methods of selection into work and into salaried work are more likely to be gender specific in Turkey. Conceivably, this selection process generates occupational gender segregation. Those variances should have to be taken into account in the scrutiny of discrimination.

3.1 Observed Gender Wage Gaps in Turkey

According to Ikkaracan (1999), in the salaried population, the proportion of part-time workers is low at only 5.2% while share of women is higher at 10.5%. The difference in working time does not only come from a part-time work effect, but also from variances in hours worked in full-time employment. Meurs and Ponthieux (2005), note that the working time is massively constrained by occupational practices sectors and often workers have to adapt to the standards of their activity. The hourly wage rate is not suitable for studying wage inequalities, given that occupations and sectors are different in regards to the average working time. This is a particularly important point in the study of gender wage gaps as some jobs are dominated by women and others by men. Male and female salaried workers vary in their time of working and the nature of jobs they occupied. They also vary in their human capital features in education acquirement or skill. These objective discrepancies may then explain the discrepancy in monthly wages between women and men. However this may also result from a different assessment by the market of similar features, which is commonly referred to as discrimination.

While comparing public administration and the private sector, we identify that for men in public administration, they earn more than private sector workers in all levels of education and experience. However, the earnings at the university level are just about the same. Public administration workers entitled to pension after 20 years of work for women and 25 years of work for men (this law has been recently changed). Some public sector workers switch to the private sector after retirement (Tansel, 2001). It is also notable that in the public administration after twenty-five years, in the State Owned Enterprises (SOEs) after thirty years there lacks a substantial wage gains from working additional years while in the private sector there is a small decline after thirty years. At all levels of experience wages are higher in the public administration than in the private sector and their wages are also higher in the State Owned Enterprises than in the private sector. After twenty-five years of experience in the private sector, there is a decreasing tendency in wages. Public administration and SOE wages are higher than the private sector wages at different levels of education (Dustman, 1998).

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Table 5: *Expected wages by sector employment and gender in Turkey*

	Variables	Public Administration		State Owned Enterprises		Private Sector	
		Men	Women	Men	Women	Men	Women
	Average Individual	879.4	877.9	936	648.6	429.4	354.1
Experience	Five years	715.1	758.3	450.5	471.1	223.1	294.3
	Ten years	775.2	818.7	606.8	587.9	320.5	367.7
	Fifteen years	832.1	882.1	773	694.3	425.9	428.9
	Twenty years	884.5	948.6	931.5	776.1	523.5	466.9
	Twenty five years	930.9	1018.1	1061.7	820.9	595.2	474.6
	Thirty years	970.2	1090.6	1144.5	821.7	626	450.3
	Thirty five years	1001.2	1165.9	1166.9	778.4	609.1	398.8
Educational Attainment	Non graduate	601.5	388.2	741.4	531.4	312.2	241.7
	Primary school	-	-	807.2	548.8	352.3	269.1
	Middle school	620.6	539.3	899	517.7	425.2	290.8
	High	804.9	656.2	1158.	711.3	634	416.8

	school			9			
	Vocational High school	931.7	762	1365.7	581.3	691	540.9
	University	1354.1	1188.9	1632.4	902.5	1357.9	1012.8
	Sample Size	2,623	907	2,335	292	3,631	739

Source: TUIK, 2015; Eurostat, 2015; ILO, 2015.

For an average individual in public administration there is near range of difference between the wages of women and men. This is expected as in the public administration law regulate setting of wages irrespective of gender. However, women's wage appears equal to or higher than that of men's wages at different levels of experience and opposite is true at different education levels. In the private sector, there is a huge gender gap in wages for a normal worker. Men and women's wages are at par at the preliminary levels of experience. After twenty years of experience and at all levels of education however, there is a big gender gap in wages. This result therefore proposes that women may be facing with discrimination in private sector. Assaad (1997) also discovered in Spain that male-female wage differential is much bigger in private sector than in public sector. Although, both of the public administration and the private sector workers enjoy health and retirement benefits, public administration benefits are of better quality than that of private sector and State Owned Enterprises. In addition, there is job security in the public administration but the same cannot be said for the SOEs and private sector. Therefore, not only are private sector wages being lower than

that of the public administration but they are also characterized to be have lower quality non-wage benefits and job insecurity.

4. Methodology

4.1 Data Set

This study uses data from the Turkish Statistical Institute (TUIK; 2015). TUIK compiles and publishes statistics a wide range of areas, such as gross domestic product, employment, inflation, foreign trade, agriculture, environment, income, education, culture, health, and social protection. Data come from multiple domestic and international agencies (e.g., World Bank, OECD, and Eurostat). For the purposes of this study, only data from the Household Budget Survey was examined. This nation-wide survey was conducted in 2014 with a focus on income structure and expense related socio-economic characteristics of individuals and households. All kind of households in Turkey was included in the study (with addresses pulled from the National Address Database), while the institutionalized population (those in elderly homes, rest homes, correctional facilities, military barracks, and hospitals) was excluded.

4.2 Participants

Stratified two-stage cluster sampling was used; however, very little additional detail about the sampling procedures is available from TUIK. With a non-response rate of 22.8% of households, there were 13,248 participating households, of which 10,122 yielded valid data. The data used for this study was for individuals in the household, not the households overall. Data were available for 393,822 individuals, with a somewhat even representation of genders (48.4% male and 51.6% female) and age groups (20.1% from 15 to 24 years, 18.5% from 25 to 34 years, 18.7% from 35 to 44 years, 16.8% from 45 to 54 years, 12.7% from 55 to 64 years, and 13.2% from 65 or more years). The large majority of participants had education levels of high school or below (88.9%), with only a small group having attended university (10.2%) or graduate school (0.9%). Most of the participants were married (66.8%; 24.2% were single and 9.0% were widowed/divorced). With regards to employment, the majority of participants were not working (55.7%) and many were working full-time (37.7%). Only 6.6% were wor-

king part-time. Of those who were working, wages ranged from 0 to 50,000 per year ($M = 1429.40$, $SD = 1196.06$). Most worked in the private sector (85.6%), while others worked in the public (13.2%) or other (1.2%) sectors.

4.3 Measures

Participants completed a survey with 11 sections namely; (1) identity and questionnaire operational information, (2) household composition, (3) socio-economic status, (4) consumption habits and expenses, (5) consumption of durable goods and services, (6) consumption expenses, (7) non-consumption expenses, (8) employment status and income, (9) agricultural holdings, (10) income and expense balances, and (11) non-response questionnaire. Participating households also completed a diary of daily expenditures, and these data were used in this study.

Gender: Participants indicated whether they were male or female.

Age: Participants reported the range in which their age belonged from 15 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years or 65 or more years.

Marital Status: Participants reported if they were single, married, or widowed/divorced.

Education Level: Participants selected their highest level of education completed from the following options- High school and below, University (2-, 3-, or 4-year) and Graduate.

Employment Status: Participants indicated if they were not currently working, working part-time, or working full-time.

Labor Market Experience: Participants' experience in the labor market was reported as between 0 to 5 years of experience, between 5 to 10 years of experience, between 10 to 20 years of experience, or more than 20 years of experience.

Employment Sector: Participants' employment sector was classified as public, private or other.

Wage: Annual wages earned in the past 12 months were available for each individual as part of TUIK's computation for household income. Wage data were missing for 290,690 of the total sample; however data were only missing for 7,155 (4.1%) of participants who were currently working part or full-time.

5. Results

To test the hypothesis that the gender wage gap differs for public, private and other sectors, an ANCOVA was conducted with gender (male, female) and type of organization (public, private, other) and several covariates (age, education level, marital status, employment status, and labor market experience) predicting wage (see Table 6 for a summary of the results). The hypothesis that there is a gender gap in wages such that women earned less than men was not fully supported. There was a significant main effect for gender, $F(1,81978) = 390.403$, $p < .001$. Men ($M = 1598.80$, $SD = 15.63$) had significantly higher wages than did women ($M = 1232.39$, $SD = 10.08$; see Figure 1); however, the significance is likely due to the large sample size. Large sample sizes make tests of significance sensitive to very small, but not necessarily meaningful, differences. Partial eta squared values were examined to evaluate whether the differences had meaningful effect sizes. Although a statistically significant predictor, gender did not have a meaningful effect size. It only accounted for .5% of the variance in wage, controlling for the effects of the covariates. Thus, there is no strong evidence of a gender wage gap.

Table 6: Test results and effect sizes for predictors and covariates ($N = 81,989$).

Variables	<i>F</i>	Partial eta squared
Predictors		
Gender	390.403***	.005
Sector (Private, Public, Other)	2065.641***	.048

Variables	F	Partial eta squared
Gender * Sector Interaction	19.209***	.000
Covariates		
Age	517.843***	.006
Education	21449.632***	.207
Marital Status	638.358***	.008
Employment Status	2142.321***	.025
Labor Market Experience	.074	.000

$p < .05$, ** $p < .01$, *** $p < .001$

The hypothesis that wages differ for the public, private, and other sectors was supported. There was a significant main effect for sector, $F(1,81978) = 2065.641$, $p < .001$. The size of the effect of sector is more meaningful than evident for gender effect. Sector accounted for 4.8% of the variance in wage, controlling for the effects of the covariates. Wages in the public sector ($M = 1856.38$, $SD = 8.49$) were significantly higher than in the private ($M = 1224.35$, $SD = 4.44$) or other ($M = 1166.04$, $SD = 24.49$) sectors (see Figure 2).

Figure 1: Average wage by gender, controlling for the covariates.

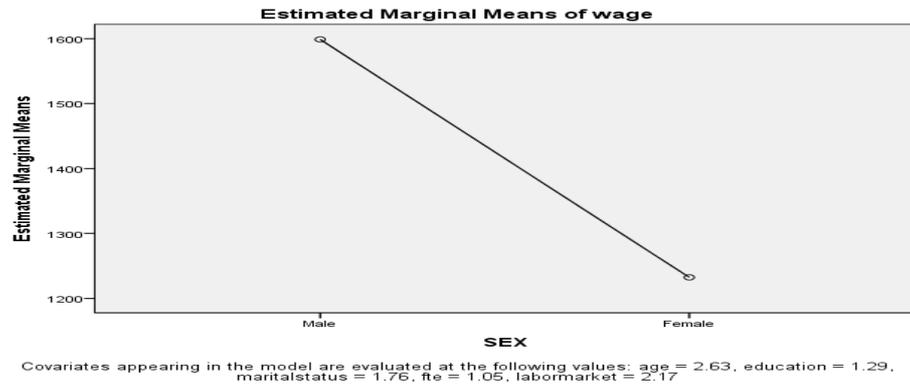


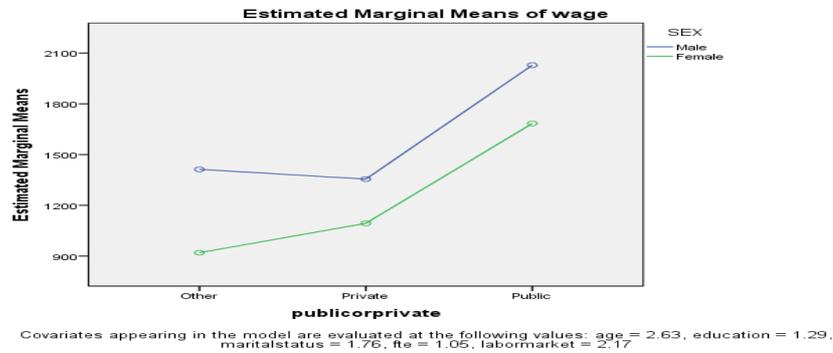
Figure 2: Average wage by sector, controlling for the covariates.



The hypothesis that differences in wage by gender are dependent upon sector was not fully supported. These main effects may be qualified by a significant interaction between gender and sector, $F(1,81978) = 19.209, p < .001$. As seen in Figure 3, it appears as though wage is higher in the public sector ($M = 2028.71, SD = 8.75$) and lower for private sector ($M = 1355.12, SD = 4.48$) and other sector ($M = 1412.56, SD = 45.89$) for men. For women, wages are highest in the public sector ($M = 1684.06, SD = 13.608$), lower for the private sector ($M = 1093.58, SD = 7.61$), and lowest for other sector (M

= 919.51, SD = 26.25). An examination of effect size reveals, however, that these differences in wage are not large enough to be considered meaningful. The effect size of the interaction is quite low, accounting for 0% of the variance in wage. Ultimately, the only meaningful factor in predicting wage is sector, after controlling for the covariates.

Figure 3: Average wage by gender and sector, controlling for the covariates.



6. Discussion

The findings from this study demonstrate that the gender wage gap persists in Turkey with men earning higher wages on average than women; however, the difference in wages are small (only 5% of differences in wages are explained by gender) after controlling for the effects of age, education, marital status, employment status, and labor market experience. Past research has found that the gender gap is larger when workers have low levels of education (DGSPW, 2000; Kasnakoglu & Dayioglu, 2000) and that women and men tend to work in different sectors and occupations (e.g., Tzannatos, 1989; Ecevit, 1986). The present study demonstrates that there is little difference in wages for men and women when they have similar educational, employment, and demographic backgrounds.

Previous research reveals the differences in wage by sector were replicated by the present study (like Dustman, 1998). The hypothesis that wages differed for the public, private, and other sectors was supported. Wages in the public sector were significantly higher than in the private or other sectors, when gender is controlled. The study findings do not strongly support the conclusion that the gender wage gap varies by sector. Past research found that the gender wage gap was larger in the private sector than in the public sector (Assad, 1997; TUIK, 2012). The interaction between gender and sector was significant in this study such that the pattern of wages for men and women were similar (with men earning slightly more than women) in both private and public sectors and a larger gender wage gap in other sectors. This effect, however, is extremely small (explaining 0% of variations in wage) and not meaningful despite statistical significance.

Overall, these findings suggest that wages do not substantially vary for men and women once differences in age, education, marital status, employment status and labor market experience. When individuals of similar backgrounds are in similar jobs, there is little difference in wage for men and women. These findings suggest that the theories of gender-based occupational segregation based on opportunities for women to obtain education levels and professional positions similar to those of men are theoretically supported. If women and men are not able to get jobs in the same industries or get similar positions, wage equality will not be achieved.

We find that a significant portion of the remaining gap is then related to the fact that women are concentrated generally in occupations and industries that are low paying and the institutional features of the jobs, which they hold onto, are of the type known to give lower returns. As an example, women are more likely than men to be working in occupations that are not covered under a collective labor bargain in the private sector and without social security. The steadily lower human capital endowments of women, as well as the regular distribution of women workers into types of jobs that are different from men's jobs are obviously already revealing of different forms of gender discrimination operational at both the labor supply and labor demand levels.

Both education level and experience have been shown to play a key role in determination of wage (as seen by the significant contributions of the variables as covariates). The fact that the human capital characteristics of women who working in the labor market lessen the gender wage gap can be

explained by the fact that women in the labor market are mainly those with higher human capital features, working in better positions while the ones with less human capital prefer not to work in the labor market. This analysis also stresses yet again the significance of attaining better education in favorable labor market outcomes. The findings of this study offer some significant understandings of the gender discriminatory aspects of the labor markets in Turkey a field of interest. Future research should focus more on examining the validity of theories of the gender wage differences based on discrimination and male domination in higher-paying industries.

One of the main results is that when controlled for seen features and selection samples, for male employees, public administration wages are higher than counterpart private sector wages. The SOE (State Owned Enterprises) earnings are higher than private sector wages. SOE payments may be due to a number of factors such as monopoly market power in some instances or just public sector, unionization. Unionization is known to be more rampant among the SOE staffs than among the private zone employees. For females, public administration earnings are also higher than the private sector incomes, but slightly lower than for males. This result proposes that females may be facing more extreme discrimination in sectors other than the private and public sectors. This somewhat contradicts past studies, where the discrimination is greater in the private sector for women.

We would benefit from further work using more comprehensive data covering all the industries, in particular the service industry where a substantial portion of the urban labor force is concentrated and entailing a complete set of wage determinant variables. Moreover, time series studies aimed at showing the more dynamic aspects such as the trends in the wage gap and segregation by gender would be useful; but to this end, the collection and accessibility of appropriate data is of utmost importance.

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