

Research Article

CHARACTERISTICS OF THE LONG-TERM UNEMPLOYMENT: EVIDENCE FROM TURKISH LABOR FORCE SURVEY

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ABSTRACT

This paper uses Turkish Household Labor Force Survey data, employing logistic regression modeling, to examine differential impacts of demographic profiles and unemployment-related nominators on long-term unemployment by genders. The results suggest that long-term unemployment is affected by a range of demographic profiles and unemployment-related nominators considered. Additionally, those who are old aged, single and located in Black Sea Region, new graduates for men, housewives for female, highly educated and look for a full-time job at high-ranked positions display higher likelihood of being out of work for a year and more. However, Istanbul and Marmara Regions offer more employment possibilities for women depending on regional development.

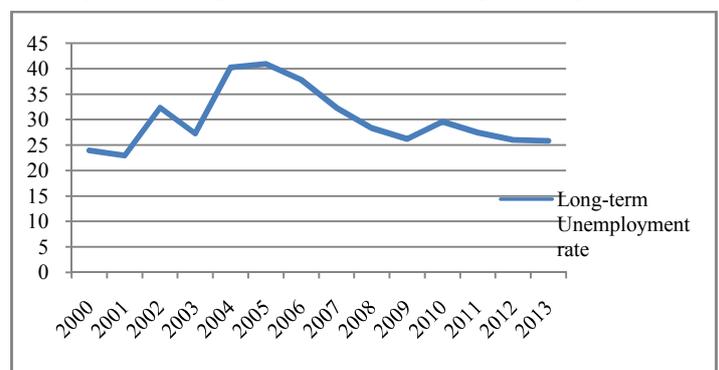
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INTRODUCTION

Since 1980, both many developed and developing countries have suffered from worrying increase in unemployment. Basically, the lack of labor demand, generous social welfare benefits, progresses in skill-oriented technology and globalization are stated as causative factors of unemployment by many authors (Mitani 2015). Unarguably, the best way for struggling with unemployment increases employment opportunities for unemployed people by creating new employment fields. Besides, employment opportunities can be mainly affected by a series of demographic and personally identifiable factors such as age, qualifications, sex, incapability and family responsibilities. Also, the long-term unemployment indicates a certain group of unemployed people that face greater obstacles to get a job than short-term unemployed people (Begum 2004; McQuaid and Lindsay 2002). In addition to these, undoubtedly, the personal characteristics such as old age, the gaps of basic skill and work experience, and poor qualification exacerbate this phenomenon (ILO 2015).

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The International Labour Organization (ILO), the Organization of Co-operation and Development (OECD), the Statistics Agency of the European Commission (EUROSTAT), World Bank and National Statistical Offices collect regularly statistical data on unemployment by duration. In the statistics used by the organizations, long-term unemployment refers to “people who have been unemployed and have been actively seeking employment for 12 months or more”. The proportion of the long-term unemployment to total unemployment presents the long-term unemployment rate. In this regard, long-term



Source: TSI Turkish Household LFS
*Share of long-term unemployed people to total unemployed, calculated by author

Figure 1. Long-term Unemployment Rate Trend in Turkey*, 2000-2013

unemployment emphasizes a specific interest area for policy makers, because increasing in the long-term unemployment rates displays that labor markets work inefficiently. Fundamentally, this research focuses on Turkey, which is a model with a high unemployment rate (11.7% in Octob.2016), low employment (46.3% in Octob.2016) and labor force participation rates (52.4% in Octob.2016) (TSI 2016). When considered Figure 1, after the long-term unemployment rate had peaked with 40% in 2004-2005, its trend kept falling down till 2008, and then it rose from 26% in 2009 to 30% in 2010 because of the impact of global economic crisis. The long-term unemployment rates tracked a fluctuating course in range of 23% and 40% along 2000 and 2013. In this period, the number of such job seekers has reached above 700,000, by rising almost twice (TSI, Turkish Household LFS). This fluctuation tends to rise in period of crisis and fall in period of post crisis.

The overall, specific groups looking for a job are significantly affected in various forms by unemployment that involves deeper dynamics in the labor market. In this line, long-term unemployment rates also vary considerably by demographic groups and unemployment-related nominators (Hornstein and Lubik 2010). For example, Aaronson et al. (2010) used the changes in gender, age, marital status, race, education, industry, and occupational compositions of the labor force to explain the characteristics of the long-term unemployment and the factors behind unprecedented rise in the long-term unemployment. Also, Mayer (2013), in his report, examined characteristics of the very long-term unemployment using gender, age, education, marital status, race and hispanic origin, citizenship, industry and occupational variables of the labor force. Although there is a considerable amount of empirical and theoretical research about the long-term unemployment for many countries, systematic and specific analysis on demographic profiles and unemployment-related nominators for the long-term unemployment are limited in Turkey. To fill the gap in the empirical literature, using data from Turkish Household Labour Force Survey, the paper presents a logistic regression analysis exploring the effects of demographic profiles and unemployment-related nominators considered on the long-term unemployment varying by genders. In this study, the predictors of the long-term unemployment are designed into five broader categories: demographic profile (age bands, marital status and regions), status before seeking a job, (new graduates to job loser), flexibility of work seeking, education and finally job seeking fields. Thus, the study tries to find out how demographic profiles and unemployment-related nominators affect the long-term unemployment and whether there are differences between genders or not, in terms of the socio-economic predictors.

The rest of the paper is organized as follows: Section 2 presents the literature review related to the long-term unemployment. Section 3 gives method, descriptive and logistic regression statistics and presents the statistical results. Finally, section 4 discusses about the results and concludes the paper.

Literature Review

According to a general unemployment theory, the longer time spent as unemployed, the more difficult to return to employment. As job-seeking process prolongs, jobseekers lose their prospects to find a job and their skills atrophy owing to

the gap of job vacancies (Krueger et al. 2014). That atrophy or "loss of human capital" progresses increasingly day by day. Likewise, the long term unemployment may lead to decrease jobseeker's network of business contacts owing to cease work contact and be stigmatized jobseekers in the eyes of employers (Nichols et al. 2013). In this regard, Jackman and Layard (1991) concluded that exit rates from unemployment reduced generally in The United Kingdom and the reasons for this as following: "a fall in the ratio of job vacancies to unemployed, and a higher proportion of the unemployed being long-term unemployed, and hence demoralized and stigmatized in the eyes of employers". Thus, getting a job becomes gradually more difficult for long-term unemployed people.

The length of time fallen out of work may often boost the need for additional income, while diminishing gradually household income (Fuchs and Weber 2015). It brings with poorer life conditions for unemployed people, their families and communities. Each day spent unemployed means more increasing poverty (Nichols et al. 2013). In this line, Godofsky, Van Horn and Zukin (2010) reported that long-term unemployed people had to ask for a loan of money from friends, run out of their savings, and failed to pay their mortgage or rent payments owing to poor financial circumstance. Additionally, the long-time unemployment has a direct effect on health, family and child outcomes due to loss of income. In this regard, it is known that extension of unemployment duration for jobseekers leads to increase the mental and physical stress on family dynamics and the well-being of those who are affected and their families (Nichols et al. 2013).

In an economy, an increasing in the long-term unemployment rate illustrates the structural problems and a worrying circumstance in the labor market. Especially, in periods of economic crisis, proportions of the long-term unemployment exhibit a sharp rise. Besides, by depending on demand deficiency, difficulties in matching labor supply and demand are more likely to exacerbate this socio-economic problem in labor market. Therefore, majority of strategies to reduce unemployment focuses on shortening of time spent unemployed. Income support along the period of unemployment for unemployed people may be a useful method to alleviate their hard economic circumstances, but unemployed people can benefit from income supports for only a certain period. Admittedly, unemployment insurance may be considered as a coherent passive employment policy to mitigate economic influences of the long-term unemployment on long-term unemployed people and their families, however most of time, it remains insufficient or not to be possible to cover all unemployed because of difficulties in fulfilling eligibility criteria's required to benefit from it (ILO 2015). Also, some authors, such as Mulligan 2010; Card and Levine 2000; Schmieder, Von Wachter, and Bender 2009, suggest that unemployment insurance has a negative effect on the job seeking effort and duration of unemployment of unemployment compensation recipients (Katz 2010).

To sum up, existing literature has considerable number of studies on the long-term unemployment exploring sociologic and microeconomic fundamentals of the problem. One of them suggests that as time spent out of work lengthens for unemployed people, they experience a degradation of their

human capital. Therefore, their employability reduces gradually (Mincer and Ofek 1982, Stratton 1995, Albrecht et al. 1999 and Gorlich and De Grip 2009, cited by Llaudes 2005). Pissarides (1992) and Ljungqvist and Sargent (1998), in their theoretical works, utilized the theory loss of human capital to clarify “*why some people become long-term unemployed after a temporary negative shock to unemployment*”. Likewise, other researchers, Devine and Kiefer (1991), and Schmitt and Wadsworth (1993), argued that lengthening of time spent unemployed made individuals downhearted, and reduced their job seeking intensity (Krueger and Mueller 2011) and their possibility of getting a job (Llaudes, 2005). Also, there are other literatures focusing on the impacts of employer’s behavior on the long-term unemployment. In this line, Lockwood (1991), Blanchard and Diamond (1994) and Acemoglu (1995) reported that employers tended to employ more recently job seekers rather than those who search a job for a longer time.

Lockwood (1991) argues that if workers are heterogeneous, unemployment duration is an informational externality and demonstrates a signal of worker productivity for firms which test imperfectly workers before hiring them. Fujita and Moscarini (2013) suggest that lower job finding rate can result from the heterogeneity of the unemployed people. For Fujita and Moscarini, long-term unemployed people start their job seeking process with poorer job-finding prospects (Cited by Abraham et al. 2015). Acemoglu (1995) reported that long-term unemployed people who suffer from discrimination faced a higher unemployment and lower welfare and then they became discouraged from the point of their job seeking intensity and employment possibility. In that circumstance, a limited form of positive discrimination by public sector such as subsidies, positive discrimination and retraining can be suggested as a proper politic action.

In a process called as “*ranking*” by Blanchard and Diamond (1994), candidates with the shortest unemployment duration is preferred by establishments receiving multiple job applications. Additionally, some studies argue that employer discrimination has a causative effect on proportion of getting a job for long-term unemployed people. On that basis, Eriksson and Rooth (2011) suggest that “*employers who recruit draw on information about past unemployment to sort workers, but they use contemporary unemployment to sort workers*”. For Kroft et al. (2013), “*employers use length of unemployment duration as a signal of unobserved productivity, and recognize that this signal is less informative in weak labour markets*”. Ghayad’s (2013), findings confirmed to be a sharp fall in the number of interview requests for those who remain unemployed for six months and more, thus they were trapped in the long-term unemployment, regardless of their past work experiences.

METHODS

Data

Data for the research is taken from Turkish Household Labour Force Survey (HLFS), which is regularly published a large household-based survey and performed by Turkish Statistical Institute (TSI). In this study analyses 2014 HLFS data, the latest survey ever. The HLFS is a study collecting data on the basis of the employment and unemployment, and is applied in

sample houses chosen around Turkey every month to achieve a probability sample of households and individuals in Turkey (TSI 2016). The form with 105 variables used in 2014 HLFS questionnaires were filled out by 393,822 respondents. Our dependent variable was taken from 2,162 male and 1,914 female long-term unemployed (out of 74,299 male and 148,851 women unemployed).

The methodology for the study fundamentally depends on analysis of Turkish HLFS, using binary logistic models. Our approach takes non-standardized definition of the long-term unemployment in HLFS and analyses that whether there are decompositions between men and women or not in terms of the effects of demographic factors and unemployment-related nominators considered.

Dependent Variable

In the HLFS, respondents are classified as unemployed if they actively looked for a work or made an effort to establish their own business in the last four weeks before survey. The dependent variable, the long-term unemployment, was derived from the question “How long have you been looking for a work?” (TSI 2014). The question refers to the length of time spent unemployed for respondents. In this regard, those who reply the question as 12 months and more are recoded into long-term unemployed, as it is compatible with the long-term unemployment definitions of ILO, Eurostat, OECD, World Bank and TSI.

Independent Variables

In broader terms, the models in this study that control the differences between male and female in terms of long-term unemployed previously emphasized five main categories: demographic profiles, status before seeking a job, flexibility of job seeking, education and job seeking positions.

Age bands, among the demographic variables, are measured by recoding working age population (from 15 to 64 years old) into four brackets: 15-24, 25-34, 35-49 and 50-64 (Blanden and Machin 2003). Those over 64 years old are executed because of small cell size. Other demographic variable, marital-status, refers to respondents who are widowed or divorced, single (never married) and married (TSI 2014). Regions, the last demographic variable, are collapsed into 8 main regions: Istanbul, West and East Marmara, Aegean, West and Middle Anatolia, Mediterranean, Black Sea, Middle-East and Northeast Anatolia, and Southeast Anatolia. Istanbul is separated from Marmara region, because it has different characteristics as the most populated city of Turkey and Europe.

Status before seeking a job refers to reasons for unemployment. The variable is collapsed into four main categories from new graduate to job loser. In this line, first time job seekers are divided into two groups as new graduates and housewives in order to control notably decompositions between genders. Those who have voluntarily left their jobs and been unpaid-family workers and pensioners are recoded into job leavers. Also, those who layoff because of temporary job or ending in business; or shutdown or bankruptcy of workplace; or

dismissed are recoded into job loser (Mahiroğulları and Korkmaz 2013; Alabaş 2007). Flexibility of job seeking, third main category, refers to employment type of seeking job: no matter part-time or full-time job, part-time and full-time. And it is drawn from respondents' self-reports in HLFS. It is put into analyze to control the impact of flexibility of job seeking on the long-term unemployment.

Education is obtained with five main categories from "degree and postgraduate" to "no qualification". Education refers to the highest qualification attained (Cam, 2014). Education levels are used to shed more light onto the impact of educational attainments on the long-term unemployment.

The job seeking positions, from managers and professionals to elementary positions, are compatible with their major level (single-digit) international classification (ISCO 08). Also, qualified agricultural, forestry and fishery workers are executed due to the small sample size. It is used to measure the impacts of job seeking positions on the long-term unemployment.

Analytical Technique

Logistic regression, which is widely employed when modeling binary outcomes and for predicting the probability of an event, is used by the analysis. The dependent dichotomous variable is unemployed people for 12 months and more. The binary response is yes/no. The logistic models predict separately the probability of being out of work for 12 months and more for both genders.

Separate and joint logistic regression models are specified for male and female in Table 2 in order to analyze differential effects of demographic profile, status before seeking a job, flexibility of job seeking, education and job seeking positions on the long-term unemployment. In logistic models, independent variables are successively added o logistic models in sequential blocks. In Table 2, these blocks are designed into five broader categories of independent variables: demographic profile (age bands, marital status and regions), status before seeking a job, (from new graduate to job loser), flexibility of job seeking, education and finally job seeking positions.

Neither the order of variables within the blocks nor that of blocks within the models makes a significant difference to the results. However, using demographic profiles for Model 1 and then including status before seeking a job in Model 2 proved to be better than other combinations for the goodness of fit.

RESEARCH RESULTS

Descriptive Analysis

Table 1 demonstrates proportions and chi-square results for the long-term unemployment variations between male and female. This section examines descriptive analysis of the long-term unemployment in Turkey in terms of demographic profile, status before seeking a job, flexibility of job seeking, education and job seeking positions.

Referring to demographic profile in Table 1, there are significant relationships between male and female in terms of age bands (except 50-64 age band), marital status and regions ($p < .001$). Generally, demographic variables display that women have far more disadvantaged than men in terms of long-term unemployment. Basically, in sense of age bands, the most salient gap between genders occurs in 35-49 age band. 36.6% of female in range of 35-49 age band are significantly more likely to be out of work for 12 months and more, as opposed to male (18.6%). Similarly, proportions of never married and married female (in turn 33.0% and 29.9%) demonstrate significantly higher than male (in turn 19.3% and 21.1%) in terms of long-term unemployment, while there is no significant difference between widowed or divorced men and women. In regards of regions, the most substantial gap between male and female long-term unemployed is observed among respondents who live in Southeast Anatolia region. 35.9 % of female long-term unemployed are significantly more likely to be located in Southeast Anatolia, compared to male (18.1%).

As for status before seeking a job, figures display that there are significant differences between genders in terms of housewives and job losers looking for a job for long-time. Proportion of the highest long-term unemployment among women occurs in housewives who have decided to work. The most salient gap between male and female is observed in job losers. 27.3% of job losers for female are significantly more likely to be long-term unemployed, compared to male job losers (16.3%). Surprisingly, there are no significant differences between men and women who are new graduated or job leaver, in terms of the long-term unemployment.

In point of flexibility of job seeking, circumstance of the long-term unemployment appears also in favor of male. The most salient gap between genders occurs among those who search a full-time job. Accordingly, 32.0% of female requesting a full-time job is significantly more likely to be long-term unemployed, compared to male (18.8%).

As for education, the table illustrates significant differences between male and female ($p < .001$) in terms of the long-term unemployment. The most remarkable inequality between genders occurs among those who graduated primary school. In this regard, proportion of female who held a primary educational attainment (32.4%) is significantly more likely to suffer from the long-term unemployment than male (19.7%).

Finally, when considered from job-seeking positions, some categories of the job seeking positions imply that there are significant relationships between male and female in terms of the long-term unemployment. From the point of job-seeking positions, the table for both genders does not exhibit a linear distribution between higher-ranked and lower-ranked positions. However, the highest proportions of the long-term unemployment for both genders are observed in office service positions (32.6% for male, 37.7% for female). The most substantial gap between male and female is seen in artisanship and art-related jobs. And job seeker women in artisanship and art-related positions (30.5%), for example, are significantly more likely to be long-term unemployed, as opposed to male (12.5%).

Table 1. Long-term unemployment

		Male		Female	
		N ^a	% ^b	N ^a	% ^{b,c}
Age bands	15-24	465	14.5	888	22.3***
	25-34	606	21.1	1,472	35.8***
	35-49	532	18.6	1,258	36.6***
	50-64	531	34.7	202	38.0
Marital-status	Widowed or divorced	92	31.4	364	33.6
	Single (never married)	1,019	21.1	1,626	29.9***
	Married	1,051	19.3	1,838	33.0***
Regions	Istanbul	251	20.4	432	25.8***
	West and East Marmara	261	22.0	522	27.8***
	Aegean	250	23.5	634	33.0***
	West and Middle Anatolia	330	21.0	688	32.6***
	Mediterranean	237	17.9	530	30.7***
	Black Sea	235	27.1	552	41.6***
	Middle-East and Northeast Anatolia	264	18.0	218	29.1***
	Southeast Anatolia	334	18.1	252	35.9***
Status before seeking a job	New graduate	222	26.6	470	28.3
	Housewife	0	0	1,328	43.4
	Job leaver	625	27.4	802	27.0
	Job loser	1,126	16.9	1,004	27.3***
Flexibility of job seeking	No matter part-time or full-time job	184	23.2	342	32.0***
	Part-time Job	16	14.2	72	21.2
	Full-time job	1,846	20.1	3,326	32.0***
Education	Degree and postgraduate	428	30.0	1,342	35.8***
	High school	482	22.3	1,024	31.0***
	Secondary school	493	16.8	492	25.9***
	Primary school	627	19.7	804	32.4***
	No qualification	132	15.4	166	25.4***
Job-seeking positions	Managers and professional positions	258	28.6	682	32.9*
	Assoc. professionals and technical	147	25.7	350	33.0**
	Office services	253	32.6	1,102	37.7**
	Sales and customer services	594	24.2	932	28.0***
	Artisanship and art-related jobs	272	12.5	134	30.5***
	Process, plant and machine operators	335	20.8	44	18.5
	Elementary positions	303	14.6	584	29.0***

Source: Author analysis from Turkish Household LFS, 2014

a Sample size is weighted and grossed out.

b Distributions as (column) % of all in each category.

c Chi-square results are for the gap between male and female in each line: *p< .05, **p< .01, ***p< .001

Overall, long-term unemployment for female (31.7%) displays significantly higher than male (20.5%). Also, this is observed in more unfavorable of female than male with a varying degree of influence across the demographic profiles and unemployment-related benchmarks used in Table 1.

Logistic Regression Models

Both separate and joint logistic regression models to examine the differential influences of demographic profile, status before seeking a job, flexibility of job seeking, education and job seeking positions on the long-term unemployment for men and women are given in Table 2. Reference categories are defined in the last category of bivariate analysis for each predictor variable.

Model 1 involves demographic profile containing age bands, marital status and regions. Model 1 displays that age bands, marital status and regions have significant influences on the long-term unemployment regardless of male or female ($p<0.001$). Range of 16-24 years old is a stronger factor and figures mean significantly lower likelihood of long-term unemployment for male ($OR=0.11$ $p<0.001$) and approximately three times lower that female respondents ($OR=0.34$ $p<0.001$), compared to range of 50-64 years old. The figures reveal that women in range of 16 and 24 years old

suffer far more from long-term unemployment than men. In respect of marital status, although widowed or divorced men demonstrate significantly a higher likelihood of looking for a job for a long time ($OR=1.86$, $p<0.001$), as opposed to married, Model 1 did not find any differences between widowed or divorced and married women in terms of exploring the likelihood of the long-term unemployment. Additionally, the likelihood of being out of work for a long time of singles is significantly more than three times higher for men ($OR=3.09$ $p<0.001$) than married men, while illustrating significantly almost one and half times higher for women ($OR=1.42$ $p<0.001$). As for regions, men who lives in Black Sea Region are significantly a higher likelihood of being job seekers for a long-time ($OR=1.43$, $p<0.001$), as opposed to men who live in Southeast Anatolia Region. However, women who reside in Istanbul ($OR=0.57$, $p<0.001$) and West and East Marmara Region ($OR=0.67$, $p<0.001$) illustrate significantly a lower likelihood of being long-term unemployed than women who search a job in Southeast Anatolia Region. Marmara Region, where Istanbul takes part in it, is the most developed region of Turkey in terms of economic, sociologic and cultural. Accordingly, figures reveal that there is a directly proportional relationship between regional development and female employment.

Table 2. Long-term Unemployment

	Odds Ratios for Male					Odds Ratios for Female				
	Model I	Model II	Model III	Model IV	Model V	Model I	Model II	Model III	Model IV	Model V
Demographic Profiles										
Age bands	***	***	***	***	***	***	***	***	***	***
16-24	0.11***	0.09***	0.10***	0.09***	0.09***	0,34***	0.32***	0.32***	0.29***	0.28***
25-34	0.25***	0.25***	0.25***	0.23***	0.24***	0,79	0.75*	0.74*	0.62**	0.60***
35-49	0.37***	0.40***	0.41***	0.40***	0.41***	0,92	0.90	0.90	0.83	0.83
50-64	I	I	I	I	I	I	I	I	I	I
Marital status	***	***	***	***	***	***	***	***	***	***
Widowed or divorced	1.86***	1.83***	1.72***	1.66***	1.55**	1,00	1.19	1.21	1.24*	1.22
Single (never married)	3.09***	2.72***	2.74***	2.43***	2.30***	1,42***	1.74***	1.73***	1.55***	1.52***
Married	I	I	I	I	I	I	I	I	I	I
Regions	***	***	***	***	***	***	***	***	***	***
Istanbul	0.83	0.73**	0.73**	0.70***	0.70***	0,57***	0.60***	0.60***	0.55***	0.54***
West and East Marmara	0.98	0.91	0.87	0.82	0.86	0,67**	0.63***	0.62***	0.56***	0.56***
Aegean	1.00	0.93	0.93	0.89	0.92	0,81	0.86	0.85	0.77	0.77
West and Middle Anatolia	0.97	0.87	0.89	0.83	0.84	0,82	0.76	0.75*	0.67**	.068**
Mediterranean	0.78*	0.76**	0.76**	0.72**	0.72**	0,73*	0.73*	0.72*	0.67**	0.67**
Black Sea	1.43***	1.33**	1.37**	1.33**	1.36**	1,29	1.19	1.17	1.09	1.10
Middle-East and Northeast Anatolia	0.97	1.01	1.00	0.98	1.01	0,74	0.69*	0.68*	0.65*	0.66*
Southeast Anatolia	I	I	I	I	I	I	I	I	I	I
Status before seeking a job		***	***	***	***		***	***	***	***
New graduates		2.57***	2.63***	2.20***	1.98***		1.32**	1.33**	1.12	1.10
Housewives		0.00	0.00	0.00	0.00		2.24***	2.27***	2.35***	2.31***
Job leavers		1.61***	1.68***	1.56***	1.43***		1.05	1.05	1.00	0.97
Job losers		I	I	I	I		I	I	I	I
Flexibility of job seeking					*			*		
No matter part-time or full-time job			1.15	1.17	1.17			0.94	1.02	1.05
Part-time Job			0.57	0.60	0.56			0.58**	0.62*	0.65*
Full-time job			I	I	I			I	I	I
Education				***					***	*
Degree and postgraduate				1.89***	1.37*				2.09***	1.63**
High school				1.49***	1.23				1.64***	1.33
Secondary school				1.33*	1.24				1.30	1.22
Primary school				1.04	1.03				1.18	1.16
No qualification				I	I				I	I
Job Seeking Positions					***					***
Managers and prof. positions					1.65***					1.19
Assoc. professional and technical					1.61***					1.34*
Office services					2.08***					1.63***
Sales and customer services					1.77***					1.01
Artisanship and art-related jobs					0.79*					1.19
Process, plant and machine oper.					1.31**					0.59*
Elementary positions					I					I
Δ df	8	8	8	8	8	7	8	8	8	8
-2 LLR	10073.7	9094.7	8629.6	8585.0	8471.6	7318.4	6770.4	6594.9	6547.1	6509.4
Δ -2 LLR		979	465.1	44.6	113.4		548	175.5	47.8	37.7
Significance of Δ -2 LLR		**		*	***		*	*	**	***

Source: Author analysis from Turkish Household LFS, 2014,
Significance of difference from the reference category: *p< .05, **p< .01, ***p< .001

Model 2 brings in status before seeking a job into analyze. It is a strong predictor for both genders ($p < 0.001$). Referring to Table 2, the likelihood of being long-term unemployed for new graduates is significantly two and half times higher for male ($OR = 2.57$, $p < 0.001$) than job loser. Unsurprisingly, housewives present significantly higher likelihood of being out of work for a long time for female ($OR = 2.24$, $p < 0.001$), compared to job losers. Also, job losers demonstrate significantly higher likelihood of the long-term unemployment for male ($OR = 1.61$, $p < 0.001$), as opposed to job losers. The results imply that policy proposals for the long-term unemployment should focus on mainly new graduates for men, housewives for women.

In model 2, reflection of status before seeking a job reduced the effects of men who are widowed or divorced and single, and look for a job in Black Sea region, whilst enhancing significance of men who search a job in Istanbul ($p < 0.01$). As for female, echo of status before seeking a job weakened slightly the impact of women who look for a job in Istanbul (see the change in log-likelihood ratio in Table 2).

Model 3 puts flexibility of job seeking into the analysis. Model 3 did not find significant differences among flexibility of work seeking covariates to explain the likelihood of the long-term unemployment for male. However, the likelihood of being long-term unemployed of those who search part-time job is a lower for female ($OR = 0.58$, $p < 0.01$), than those who look for a full-time job.

When adding flexibility of job seeking into the analysis, its effect increased noticeably the impacts of men who are widowed or divorced, live in Black Sea Region and are new graduates and job leaver before seeking a job, while decreasing slightly the effect of single men. As for female, the reflection of flexibility of job seeking strengthened the effects of new graduates and housewives as first-time jobseekers (see the change in log-likelihood ratio in Table 2).

Model 4 integrates educational attainments with the analysis. Educational attainments have significant effect on the long-term unemployment regardless of genders ($p < 0.001$). Referring to Table 2, increase of educational attainments for both genders raises the likelihood of long-term unemployment in a linear mod. In this respect, the likelihood of being long-term unemployed of those who held degree and postgraduate, for example, is significantly higher for men and women (in turn $OR = 1.89$, and $OR = 2.09$, $p < 0.001$), compared to no qualification. However, women who had degree and postgraduate and high school degree present a higher likelihood of suffering from the long-term unemployment, as opposed to men.

Incorporating educational attainments into the analysis, the reflection of education for men reduced the effects of those who are new graduated and job leavers and search a job in Istanbul, Mediterranean and Black Sea Regions. The effects of educational attainments for female weakened the influences of young people in 16-24 age band and those who seek for a job in Istanbul and West and East Marmara Regions, whilst strengthening the impacts of housewives (see the change in log-likelihood ratio in Table 2).

Model 5 aims to measure the effect of job-seeking positions on the analysis. Therefore, all independent variables fitting for the analysis have been put into Model 5. Model 5 proves that job-seeking positions are strong predictors regardless of genders ($p < 0.001$). Referring to Table 2, high-ranked positions such as managerial, professional and technical positions as well as office, sales and consumer services illustrate significantly greater likelihood of the long-term unemployment for male ($p < 0.001$), as opposed to elementary positions. Considering the figures, we can say that artisanship and art-related jobs demonstrate limitedly a lower likelihood of the long-term unemployment for men ($OR = 0.79$, $p < 0.05$), compared to elementary positions. As for female, at first view, it is no seen salient differences among women to explore the long-term unemployment in terms of job seeking positions. However, the likelihood of long-term unemployment at office service positions are significantly a higher for female ($OR = 1.63$, $p < 0.001$) than elementary positions. Also, process, plant and machine operator positions present limitedly a lower likelihood of the long-term unemployment for women ($OR = 0.59$, $p < 0.05$), as opposed to elementary positions. It is worth to mention that the number of women who search a job at plant and machine operator fields, where men are more intensively employed, is relatively lower than other job seeking fields (see in Table 1).

Joining job-seeking positions into the analysis, its reflection weakened the impacts of men who are widowed or divorced and single, new graduated and job leaver. In regards of female, its echo made weak the effects of single and housewives, while reducing both effect and significance of women who had degree and postgraduate ($p < 0.01$) (see the change in log-likelihood ratio in Table 2).

Conclusion

In this study, socio-economic predictors of the long-term unemployment are examined to contribute to the empirical researches in Turkey, basing on other national studies specifically on this issue. The analysis employing logistic regression models found important findings related to the gender nature of demographic profiles and unemployment-related nominators considered. This research reports that women suffer far more from the long-term unemployment than men in Turkey.

The long-term unemployment was significantly affected by a range of demographic factors. As age bands increase, the likelihood of long-term unemployment rises up in a linear mode. In this line, the analysis points out that long-term unemployment is more experienced by the oldest age band (50-64), compared younger age bands. Shortly, as the labor force has become older, the long-term unemployment durations have tended to become longer. This result may be linked to economic circumstances in Turkey. This is because majority of retirees try to find a job due to insufficient retirement pension-pay, but they often fail in their attempts (Alabaş 2007). From the empirical point of view, this result confirms that older workers suffer far more from long period of unemployment than younger workers (Abraham and Shimer, 2002; Aaronson et al. 2010; Mayer 2014) and the incidence of long-term unemployment was far higher among older workers in OECD countries (Hornstein and Lubik 2010). The models show that

the long-term unemployment for both genders is more widespread phenomena for single. The reason may be that single and youth are more selective about working-decision. However, this result challenged Mayer's (2014) findings which reported that married workers were more likely to be unemployed for two years or more than single workers (never married). From the regional point of view, long-term unemployment is more considerable problem in Black Sea Region. Also, in terms of the long-term unemployment, the most salient gap between men and women is observed as descriptive in Black Sea region. For this result, it is obvious that Black Sea Region is one of the emigrant regions in Turkey, because it has geographically limited agricultural fields and work opportunities in sufficient number cannot be created for notably young population due to internal dynamics of the region. Besides, Marmara where Istanbul contains in it is region where the long-term unemployment is seen lower rates among regions, because this region is the most developed regions of Turkey in terms of art, trade, finance and industry.

Logistic models in this study indicated that the long-term unemployment was significantly affected by status before seeking a job as well. The analysis implies that new graduates for men and housewives for women who look for a job as first-time job seeker are the most affected by long-term unemployment. Unemployment for new graduates is closely related to compatibility between formal education and skill-requirements demanded by labor force market. Also, the lack of job experience for new graduates make difficult their entrance to labor market. Admittedly, it is important for housewives to make a decision to join to labor market or stay in labor market, in spite of the negative effects of house works, care-works (child and elder care) and cultural factors on their decision (Alabaş 2007) however, they often fall into long-term unemployed status by facing the lack of job experiences and gender discrimination in labor market. Additionally, job leavers for men are significantly more likely to be out of work for a long-time, as opposed to job losers.

In terms of flexibility of work seeking, logistic models highlighted that those who seek for a part-time job are less likely to suffer from the long-term unemployment, compared to those who seek for a full-time job. This result suggests that widespread of flexible working models may be good policy proposal in struggling with the long-term unemployment. Also, priority of long-term unemployed people return to labor market as soon as possible to gain their old living-standard again, thus they are not selective on preferring full-time or part-time jobs. Occasionally, they have to accept even low-paid jobs to get more or less income.

Logistic analyses also pointed out to the impact of educational attainments on the long-term unemployment for both genders. As educational attainment rises, the likelihood of long-term unemployment increases in a linear mode. However, Mayer's (2014) findings for USA reported that "*unemployed workers with a high school degree only or with a bachelor's degree or better were equally likely to have been looking for work for two years or more*". The results display that the likelihood of long-term unemployment for highly educated people is higher than those who held lower educational attainment. It is more likely to result from incompatibilities between higher education and skill-requirements in Turkish labor market. Under these

circumstances, it may suggest to be increased the number and efficiency of programs providing collaboration between university and industry such as school-to-work transition programs.

Logistic models prove that the long-term unemployment is significantly affected by job seeking positions. Empirical evidence implies that the likelihood of being out of work for a long-period is lower for men who look for a job vacancy in artisanship and art-related jobs and for women who search a job vacancy in process, plant and machine operators. In particular, higher ranked-positions such as managerial, professional and technical positions as well as positions at office, sales and consumer services illustrate significantly higher likelihood of the long-term unemployment for male. In this line, this result confirms Mayer's (2014) findings which stated that "*workers who had worked in "office and administrative support" occupations were overrepresented among workers who had been unemployed for two years or more*".

This research originally found that those who are old aged (50-64), single and located in Black Sea Region for both genders are more likely to be affected by long-term unemployment, while Istanbul and West and East Marmara regions are presenting lower likelihood of long-term unemployment. Also, housewives for female and recent graduates for male illustrate more at risk in terms of likelihood of being out of work for a long period. On the one hand, the probability of the long-term unemployment among highly educated unemployed is seen higher for both genders, compared to lower educated, on the other hand, seeking a job vacancy at higher-ranked positions is more likely to increase the long-term unemployment risk for men, while searching a position in office services is creating more threat for women in terms of long-term unemployment.

All in all, reviewing the empirical literature above, in the Turkey case, the results confirm that females play a role as secondary workers in labor market to contribute their family income. Also, this is corroborated by lower employment and labor participation rates for female. Additionally, socio-economic predictors suggest that long-term unemployment creates more destructive effects on women than men.

When considered generally, undoubtedly first priority of an optimal policy should be decreasing the long-term unemployment rates. In this line, it suggests that proper labor market policy should be to encourage new jobs creation (Coles and Masters 2000) and provide some positive discrimination for long-term unemployed people by public sector (Acemoglu 1995) rather than subsidize retraining. However, if long-term job-seekers face a depreciation of human capital, and then training and retraining employment programs may considered better prospect to increase their employability (Nichols et al. 2013). Additionally, required-measures should be taken to increase employer's awareness against anti-discrimination by labor market institutions. On the other hand, unemployment benefits are paid for unemployed people to keep their living-standards. However, every unemployed is not eligible for unemployment compensation or unemployment compensation is paid for a limited duration in most instances. Therefore, other social aid mechanisms should be established to fulfill the

need for additional household income of unemployed who are ineligible for unemployment compensation.

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