Discouragement in the Turkish Labor Market

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Unemployment

- Unemployment rate is the most commonly used indicator of labor market performance, though it gives only partial information.

- Unemployed comprise only those persons
  - who are not working
  - immediately available for work
  - **who are looking for a job.**

Marginally Attached Workers

- Many jobless persons, who are counted as out of labor force, are in fact at the boundary of activity and inactivity.

- These persons are "Marginally Attached to Labor Force" and they are:

➢ not working

➢ available for work

➢ willing to work

➢ but not actively seeking a job

Discouraged Workers and Other Marginally Attached Workers

- These persons can be divided into two broad subgroups:
- ➤ **Discouraged workers**: refrain from job search as a result of poor chances in the labor market. Two potential sources of discouragement can be:
  - ➤ lack of individual qualifications
  - ➤ poor labor market conditions.
- ➤ **Others**: not seeking a job because of other reasons such as being seasonal workers, busy with household chores, students, retired or disabled, but available to start a job

- No unique and internationally accepted definition of discouraged worker.

- Conventional definition (discouraged worker - DW)
  - Non-employed
  - Ready-to-work
  - Not searching because no job available

- Broader definition (marginally attached - MA)
  - Non-employed
  - Ready-to-work
  - Not searching whatever the reason (incl. DW)

Table 1: Reason for not searching among individuals ready to work

Two conditions to be met to be MA i) Who are ready to work ii) To be counted as non-participant by TURKSTAT
Question : What was the reason that you have not been seeking a job during the last 3 months ending with the reference week?

	2005	2006	2007	2008		2009	2010
1- İş buldu başlamak için bekliyor	2,724	1,596	2,361	2,590	1- İş buldu başlamak için bekliyor	0	0
2- Eski işine geri çağrılmayı bekliyor	32,232	31,310	34,357	43,667	2- Eski işine geri çağrılmayı bekliyor/mevsimlik çalışıyor	191,467	127,940
3- Mevsimlik çalışıyor	201,559	225,391	169,964	157,141	3- Daha önce çok aradı ancak bulamadı*	331,898	282,976
4- Bölgede iş olmadığına inanıyor*	483,902	621,871	609,367	609,456	4- Kendi vasıflarına uygun bir iş bulabileceğine inanmıyor*	421,683	429,866
5- Eğitim/öğretimine devam ediyor	74,648	90,807	95,876	104,276	5- Eğitim/öğretimine devam ediyor	117,560	165,192
6- Ev işleri ile meşgul	327,045	383,060	384,158	432,677	6- Ev işleri ile meşgul	441,092	430,101
7- Emekli	96,430	124,308	103,116	127,456	7- Emekli	151,518	157,051
8- Ailedeki çocuklara bakıyor	93,937	109,527	83,682	93,496	8- Ailedeki çocuklara bakıyor	118,842	113,191
9- Ailedeki bakıma muhtaç yetişkinlere bakıyor	6,232	8,032	5,753	10,819	9- Ailedeki bakıma muhtaç yetişkinlere bakıyor	10,324	11,636
10- Ailedeki çocuklara ve bakıma muhtaç yetişkinlere bakıyor	3,833	2,425	2,838	2,292	10- Hem ailedeki çocuklara hem de bakıma muhtaç yetişkinlere bakıyor	9,134	7,513
11- Diğer ailevi ve kişisel nedenler	72,011	97,342	93,219	94,841	11- Diğer ailevi ve kişisel nedenler	129,419	125,742
12- Özürlü veya hasta	38,926	53,982	52,051	62,406	12- Özürlü veya hasta	65,022	71,977
13- Yaşlı (60 ve daha yukarı yaş)	5,544	6,585	6,503	6,802	13- Yaşlı (65 ve daha yukarı yaş)	4,173	5,311
14- Çalışmak istemiyor	15,959	17,905	13,210	12,803	14- Diğer	60,613	76,014
15- Diğer	103,919	129,259	81,348	84,757	*Definition of Discouraged Worker (ILO, BLS, Turkstat)		

	2005	2006	2007	2008		2009	2010
Total MA	1,558,901	1,903,400	1,737,803	1,845,479	Total MA	2,052,745	2,004,510
Total Non-Participants	25,803,071	26,323,731	26,781,681	26,870,407	Total Non-participants	26,836,356	26,798,743
Total Unemployed	2,379,810	2,320,398	2,368,962	2,603,320	Total Unemployed	3458927	3036031

- Compared with OECD countries Turkey simultaneously experiences:
  - A high rate of discouragement
  - A high men to women ratio of discouragement

Table 2: Incidence of discouraged workers - Share of labor force

	2005	2006	2007	2008	2009	2010
Austria	0.19	0.2	0.19	0.14	0.1	0.13
Canada	0.18	0.13	0.1	0.12	0.2	0.19
Denmark	0.18	0.12	0.1	0.11	0.1	0.07
Estonia	2.56	1.06	1.06	0.72	0.92	0.98
France	0.18	0.28	0.17	0.17	0.2	0.14
Germany	1.7	0.35	0.29	0.41	0.55	0.52
Greece	0.23	0.17	0.24	0.27	0.24	0.26
Ireland	0.03	0.02	..	0.01	0.48	0.45
Italy	**4.63**	**4.42**	**5.11**	**4.97**	**5.02**	**4.93**
Japan	**4.26**	**3.8**	**3.69**	**3.59**	**4.11**	**4.21**
Luxembourg	0.04	0.03	0.04	0.23	0.52	0.32
Mexico	..	..	..	..	..	..
Netherlands	1.11	1.02	0.82	0.63	0.6	0.74
Portugal	0.23	0.3	0.29	0.25	0.21	0.26
Slovak Republic	..	..	..	..	0.45	..
Slovenia	0.82	0.76	0.62	0.54	1.13	0.94
Spain	**1.38**	**1.21**	**0.79**	**0.86**	**1.2**	**1.58**
Sweden	**2.12**	**1.97**	**2.1**	**2.01**	**2.69**	**..**
Switzerland	0.66	0.52	0.45	0.59	1.02	..
Turkey	**2.16**	**2.74**	**2.64**	**2.57**	**3.06**	**2.8**
United Kingdom	0.12	..	..	0.09	0.11	0.15
United States	0.29	0.26	0.24	0.3	0.51	0.84
G7 countries	**1.46**	**1.19**	**1.19**	**1.2**	**1.4**	**1.55**
OECD countries	**1.18**	**0.98**	**0.96**	**0.96**	**1.07**	**1.14**

Source: OECD, LFS

Table 3: Discouraged men/ discouraged women

	2005	2006	2007	2008	2009	2010
Austria	0.40	1.00	0.60	0.50	0.33	0.67
Canada	**1.00**	**1.30**	**1.57**	**1.33**	**1.06**	**1.33**
Denmark	0.67	0.50	0.50	0.50	0.50	1.00
France	0.61	0.58	0.44	0.53	0.60	0.52
Germany	0.62	0.26	0.27	0.21	0.47	0.50
Greece	0.38	0.14	0.10	0.18	0.20	0.18
Ireland					**1.75**	**1.25**
Italy	0.24	0.15	0.31	0.25	0.26	0.15
Japan	0.43	0.43	0.39	0.41	0.42	0.45
Luxembourg					0.00	0.00
Mexico						
Netherlands	0.58	0.40	0.27	0.22	0.15	0.35
Portugal	0.63	0.13	0.14	0.08	0.09	0.17
Slovak Republic					1.00	
Slovenia	0.33	0.33	0.50	0.50	0.50	0.43
Spain	0.16	0.05	0.05	0.02	0.02	0.08
Sweden	1.02	0.96	0.89	1.00	0.97	
Switzerland	0.17	0.20	0.25	0.17	0.10	
Turkey	**1.49**	**1.40**	**1.68**	**1.55**	**1.44**	**1.38**
United Kingdom	1.12			0.75	0.50	0.84
United States	**1.47**	**1.51**	**1.59**	**1.58**	**1.66**	**1.32**
Estonia	1.43	0.75	0.75	0.67	0.75	0.50
G7 countries	0.46	0.40	0.42	0.42	0.48	0.50
OECD countries	0.48	0.41	0.44	0.43	0.45	0.46

Source: OECD, LFS

Table 4: Detailed Labor Market Status (Total) (000s)

	Employed	Workers declaring that they are ready to Work in 15 days, if any job is offered			Neither looking for a job Nor having declared as being ready to work
		Looking for a Job	NOT Looking for a Job		
			Marginally Attached People (Reasons for NOT engaging active job search)		
	Workers	Unemployed	Other MA People	Discouraged (No available jobs in the region)	Non-participants
Year 2005	20,067	2,388	1,077	486	25,905
Year 2006	20,423	2,328	1,285	624	26,423
Year 2007	20,738	2,376	1,130	612	26,879
Year 2008	21,194	2,611	1,238	612	26,966
Year 2009	21,277	3,471	1,304	757	26,938
Year 2010	22,594	3,046	1,297	716	26,901

Table 5: Detailed Labor Market Status (Men) (000s)

	Employed	Workers declaring that they are ready to Work in 15 days, if any job is offered			Neither looking for a job Nor having declared as being ready to work
		Looking for a Job	NOT Looking for a Job		
			Marginally Attached People (Reasons for NOT engaging active job search)		
	Workers	Unemployed	Other MA People	Discouraged (No available jobs in the region)	Non-participants
Year 2005	14,959	1,746	426	292	6,969
Year 2006	15,165	1,671	527	364	7,258
Year 2007	15,382	1,716	424	383	7,415
Year 2008	15,598	1,877	460	371	7,441
Year 2009	17,898	15,406	451	447	7,471
Year 2010	16,170	2,088	462	416	7,544

Table 6: Detailed Labor Market Status (Women) (000s)

	Employed	Workers declaring that they are ready to Work in 15 days, if any job is offered			Neither looking for a job Nor having declared as being ready to work
		Looking for a Job	NOT Looking for a Job		
			Marginally Attached People (Reasons for NOT engaging active job search)		
	Workers	Unemployed	Other MA People	Discouraged (No available jobs in the region)	Non-participants
Year 2005	5,108	642	651	194	18,936
Year 2006	5,258	658	758	261	19,165
Year 2007	5,356	660	706	229	19,464
Year 2008	5,595	734	778	241	19,526
Year 2009	5,871	979	854	310	19,466
Year 2010	6,425	959	835	300	19,357

Literature

- One strand of literature evaluates whether the distinction between different labor market states, namely unemployed, nonparticipant and marginally attached (discouraged) are meaningful or not. (Flinn and Heckman (1983) Jones and Riddell (1999,2006)).

- Another approach looks for the impact of cyclical downturns on the household labor supply decisions. These studies mainly tests whether added worker effect or discouraged worker effect dominates (Baslevent and Onaran (2003), Gong (2010), Bremmer and Kesselring (2011)) or directly measures its impact on discouraged workers (Benati (2001)).

- Finally, closest to our work, some studies analyze the factors, (individual and economic) that have an impact on discouragement (Finegan (1981), van Ham et all. (2001), and van Ham and Bushel (2004))

Motivation

- High and persistent level of discouraged workers indicates that the problem is rather structural, not cyclical.

- Given the high men/women ratio among discouraged, it is hard to explain the problem merely on the basis of allocation of labor supply within the household.

- Significant regional disparities in the incidence of the problem implies that local labor market conditions matter.

Objective

- Our aim is to investigate individual and household characteristics, and local labor market conditions that have an impact on the decision to **give up searching.**

- Our specific question: Among **non-employed** individuals who declared that they were **unemployed** (no job but searching) **one year ago**, some are still **ready to work** but **gave up searching**. **Why**?

Theoretical Background

- The basic job search model, when it is linked to basic labor supply model, can shed some light on the choice among nonparticipation, unemployment and work, as well as on discouragement.

- Imperfect information prevails in the labor market: A person looking for a job does not know what wage each job pays. So, by looking, she can expect to improve her prospects of income.

- Job seeker knows only the cumulative distribution of the possible wages. Each job offer is an independent draw from this distribution.

- The optimal strategy of a job seeker consists of accepting any wage offer higher than her reservation wage.

- Reservation wage depends on the set of parameters affecting the labor market, and implicitly on the individual and the household characteristics as well.

- Overall characteristics of the labor market is designated by $\Omega = \Omega\ (H,z,q,\lambda,r)$ and the reservation wage by $x=x(\Omega)$ where:

  - $H(.)$: cumulative distribution of the wages (w)
  - z : net income associated with job search
  - q : job destruction rate
  - λ : arrival rate of job offers
  - r : interest (discount) rate

- Expected utility of an employed, a job-seeker and a nonparticipant are represented by *Ve(w)*, *Vu* and *Vn* respectively, and they are defined by the following equations:

- $rVe = w + q(Vu - Ve),$

optimal search $\Rightarrow x = rVu$ (*x*: reservation wage)

- $rVu = z + \lambda \int_x^{+\infty} [Ve(w) - Vu] dH(w)$

- $rVn = Rn$

where *Rn* is the constant payoff of a nonparticipant at each date

One can obtain the reservation wage by:

$$x = z + \frac{\lambda}{r + q} \int_{x}^{+\infty} (w - x) dH(w)$$

Comparative Statics

	z	λ	r	q
x	+	+	-	-

Decision to participate or not

- $x(\Omega) \geq Rn \implies$ participant
- $x(\Omega) \leq Rn \implies$ nonparticipant

When a participant receives a wage offer

- $w > x(\Omega) \implies$ employed
- $w \leq x(\Omega) \implies$ unemployed

Average of possible wages

$$Ew = \int_0^{+\infty} w\,dH(w)$$

We can define the discouraged workers as the individuals for whom:

$$x(\Omega) \leq Rn \leq Ew$$

Any change that reduces the reservation wage will therefore increase the number of discouraged workers.

We will not estimate a reservation wage equation and test the relation between the reservation wage and discouragement

We will rather look at whether the factors that affect discouragement in Turkey are

Emprical Methodology

$$\Pr(MA_{i,e,r,t} = 1) = \varphi\left(\beta_0 + \beta_j X_{i,e,r,t} + \beta_k L_{e,r,t} + \gamma_e + \delta_r + \mu_t\right)$$

Where $MA_{i,e,r,t} = 1$ if previously unemployed worker i belonging to education group e, living in region r, at year t **no longer searches** for a job for the specific reason *that there is no available job around*.

$MA_{i,e,r,t} = 0$ if previously unemployed worker keeps **searching** for a job

X is a set of individual and household characteristics

L is a set labor market indicators specific to education group e in each region r (education by region by year- 3 x 26 x 6 = 468)

γ_e, δ_r and μ_t are controls for education, region and year fixed effects.

$\varphi(.)$ is the standard normal distribution function

Data

- 2005-2010 HLFS, cross-section, regional
- Restricted the sample on DW and MA: unemployed one year ago (active search in t-1, no active search in t)
  - control for attachment (BLS) – also minimizes the deruralization effect where transition from employment to unemployment is rare
- Our restricted sample represents:
  - 12% of all MA workers, and 42% of all DW
  - For men, 26% of all MA, 62% of all DW
  - For women 4% of all MA, 13% of all DW

- seperately considers:
  - DW vs MA
  - Men vs women
  - Having past work experience vs no restriction on past work experience

Table 7: Whole Sample

T-1 (Previous period)	Workers who were looking for a job one year ago					
T (Current period)	**Employed**	Workers declaring that they are ready to Work in 15 days, if any job is offered			**Neither looking for a job Nor having declared as being ready to work**	**Total**
		Looking for a Job	**NOT Looking for a Job**			
			MA People (Reasons for NOT engaging active job search)			
	Workers	Unemployed	Other MA People	Discouraged (No available jobs in the region)	Non-participants	
Year 2005	1,064,804	1,209,371	145,118	173,718	157,341	2,750,352
Year 2006	997,518	1,135,783	185,759	246,756	161,102	2,726,918
Year 2007	1,018,906	1,118,238	144,463	299,221	178,096	2,758,924
Year 2008	1,068,627	1,146,468	151,213	270,493	185,219	2,822,020
Year 2009	1,291,775	1,545,963	132,923	311,014	156,608	3,438,283
Year 2010	1,574,821	1,461,216	118,544	298,760	168,617	3,621,958

Table 8: Male Sample

T-1 (Previous period)	Workers who were looking for a job one year ago					
	Employed	Workers declaring that they are ready to Work in 15 days, if any job is offered			Neither looking for a job Nor having declared as being ready to work	Total
		Looking for a Job	NOT Looking for a Job			
T (Current period)	Workers	Unemployed	MA People (Reasons for NOT engaging active job search)		Non-participants	
			Other MA People	Discouraged (No available jobs in the region)		
Year 2005	894,559	968,820	119,515	146,481	123,962	2,253,337
Year 2006	830,754	902,898	154,878	213,790	130,632	2,232,952
Year 2007	849,619	891,836	116,279	265,105	143,379	2,266,218
Year 2008	880,754	916,234	123,896	242,390	145,916	2,309,190
Year 2009	1,048,451	1,204,894	109,884	274,666	114,076	2,751,971
Year 2010	1,288,361	1,101,496	93,425	260,536	122,421	2,866,239

Table 9: Female Sample

T-1 (Previous period)	Workers who were looking for a job one year ago					
T (Current period)	**Employed**	**Workers declaring that they are ready to Work in 15 days, if any job is offered**			**Neither looking for a job Nor having declared as being ready to work**	**Total**
		Looking for a Job	**NOT Looking for a Job**			
			MA People (Reasons for NOT engaging active job search)			
	Workers	Unemployed	Other MA People	Discouraged (No available jobs in the region)	Non-participants	
Year 2005	170,245	240,551	25,603	27,237	33,379	497,015
Year 2006	166,764	232,885	30,881	32,966	30,470	493,966
Year 2007	169,287	226,402	28,184	34,116	34,717	492,706
Year 2008	187,873	230,234	27,317	28,103	39,303	512,830
Year 2009	243,324	341,069	23,039	36,348	42,532	686,312
Year 2010	286,460	359,720	25,119	38,224	46,196	755,719

Estimation Results

- We represent our estimation results:
- first for the sample without past experience restriction
- second for the sample where we only consider workers with past work experience

Table 10: Pooled probit estimation with cluster robust standard errors

Unemployed one year ago
No past experience condition

The reference group is married,having less than secondary education graduation level, residing at Istanbul in year 2005.
*** p<0.001, ** p<0.01, * p<0.05

		Discouraged			Marginally attached		
		Total	Men	Women	Total	Men	Women
Individual characteristics	Gender Female=1	-0.005			0.105***		
		(0.032)			(0.029)		
	Age	-0.028***	-0.031***	0.004	-0.035***	-0.036***	-0.014
		(0.005)	(0.005)	(0.013)	(0.004)	(0.005)	(0.010)
	Urban=1	-0.248***	-0.263***	-0.149**	-0.302***	-0.325***	-0.163***
		(0.021)	(0.022)	(0.051)	(0.021)	(0.022)	(0.043)
	Never married	0.191***	0.143***	0.275***	0.087***	0.072**	0.023
		(0.026)	(0.029)	(0.056)	(0.019)	(0.023)	(0.043)
	Divorced	0.170**	0.240***	0.096	-0.048	0.066	-0.264***
		(0.052)	(0.070)	(0.099)	(0.045)	(0.062)	(0.077)
	Spouse died	0.039	0.181	-0.039	0.016	0.095	-0.113
		(0.100)	(0.135)	(0.167)	(0.083)	(0.120)	(0.117)
	Previous Work Experience yes=1	-0.709***	-0.840***	-0.303***	-0.472***	-0.603***	-0.118**
		(0.047)	(0.054)	(0.043)	(0.045)	(0.055)	(0.037)
	Secondary	-0.250***	-0.193*	-0.140	-0.145**	-0.082	-0.061
		(0.068)	(0.081)	(0.118)	(0.053)	(0.060)	(0.094)
	Tertiary	-0.764***	-0.731***	-0.359	-0.432***	-0.337**	-0.100
		(0.128)	(0.158)	(0.210)	(0.112)	(0.129)	(0.174)
Household characteristics	Household Employment Rate	0.000	0.000	0.000	0.000	0.000	-0.000
		(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
	% change in Household Employment Rate (t_1-t)/h_no	0.000	-0.000	0.002*	0.000	-0.000	0.002**
		(0.000)	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)
	Household Children (inc. aged<15)	0.012*	0.014**	0.001	0.019***	0.020***	0.029
		(0.005)	(0.005)	(0.020)	(0.005)	(0.005)	(0.017)

	Table 10 continued	Discouraged			Marginally attached		
		Total	Men	Women	Total	Men	Women
Local labor market conditions	Regional log EMP SIZE (private only)	-0.172**	-0.167*	-0.059	-0.097*	-0.106	0.077
		(0.058)	(0.071)	(0.110)	(0.049)	(0.058)	(0.083)
	Regional level of log TENURE Years (by education level)	0.032***	0.038***	0.020	0.031***	0.035***	0.019
		(0.008)	(0.010)	(0.013)	(0.007)	(0.008)	(0.011)
	Regional share of PUBLIC employees (by education level)	0.552	0.431	0.383	0.361	0.136	0.358
		(0.313)	(0.385)	(0.529)	(0.240)	(0.282)	(0.430)
	Regional share of JOBLESS relative to labor force (by education level)	3.622***	3.688***	3.614***	2.918***	3.021***	2.697***
		(0.654)	(0.727)	(0.867)	(0.570)	(0.650)	(0.749)
	Regional share of ON THE JOBSEARCH on (by education level)	1.031*	1.100*	0.854	0.528	0.784	-0.157
		(0.439)	(0.470)	(0.665)	(0.382)	(0.417)	(0.536)
	(%)change in Real Wage (mean wage- education by region)	-0.001	-0.000	-0.005	0.000	0.001	-0.001
		(0.002)	(0.003)	(0.004)	(0.002)	(0.002)	(0.003)
	Regional share of NEW JOB CREATION (by education level)	-1.105**	-0.932*	-1.682**	-1.244***	-1.097**	-1.521***
		(0.401)	(0.446)	(0.537)	(0.338)	(0.387)	(0.438)

	Table 10 continued	Discouraged			Marginally attached		
		Total	Men	Women	Total	Men	Women
Regions	**TR21 Tekirdağ, Edirne, Kırklareli**	-0.141	-0.178	0.308	0.040	-0.031	0.650**
		(0.212)	(0.242)	(0.305)	(0.186)	(0.211)	(0.251)
	TR22 Balıkesir, Çanakkale	0.062	-0.073	0.838*	0.412*	0.270	1.258***
		(0.218)	(0.238)	(0.341)	(0.188)	(0.202)	(0.291)
	TR31 İzmir	-0.436**	-0.400**	-0.294	-0.130	-0.130	0.157
		(0.135)	(0.153)	(0.190)	(0.097)	(0.110)	(0.141)
	TR32 Aydın, Denizli, Muğla	-0.311	-0.361*	0.196	0.114	0.066	0.623**
		(0.161)	(0.173)	(0.286)	(0.146)	(0.153)	(0.230)
	TR33 Manisa, Afyon, Kütahya, Uşak	-0.377*	-0.429**	-0.083	0.207	0.147	0.617**
		(0.149)	(0.165)	(0.258)	(0.134)	(0.147)	(0.221)
	TR41 Bursa, Eskişehir, Bilecik	-0.280	-0.298	-0.002	-0.016	-0.099	0.467**
		(0.168)	(0.181)	(0.224)	(0.129)	(0.146)	(0.161)
	TR42 Kocaeli, Sakarya, Düzce, Bolu, Yalova	-0.333*	-0.420**	0.229	-0.051	-0.127	0.493*
		(0.151)	(0.154)	(0.255)	(0.134)	(0.137)	(0.202)
	TR51 Ankara	-0.357*	-0.365*	-0.015	0.020	-0.011	0.410**
		(0.142)	(0.152)	(0.183)	(0.101)	(0.107)	(0.146)
	TR52 Konya, Karaman	-0.357	-0.452	0.294	0.097	-0.018	0.838**
		(0.213)	(0.231)	(0.321)	(0.188)	(0.203)	(0.272)
	TR61 Antalya, Isparta, Burdur	-0.321	-0.384*	0.141	0.214	0.120	0.826***
		(0.164)	(0.183)	(0.267)	(0.137)	(0.149)	(0.220)
	TR62 Adana, Mersin	-0.387*	-0.517**	0.310	-0.057	-0.240	0.738***
		(0.162)	(0.176)	(0.244)	(0.146)	(0.160)	(0.208)
	TR63 Hatay, Kahramanmaraş, Osmaniye	-0.050	-0.173	0.764**	0.225	0.065	1.202***
		(0.187)	(0.203)	(0.295)	(0.175)	(0.187)	(0.262)
	TR71 Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	-0.359	-0.433	0.347	0.090	-0.006	0.898**
		(0.201)	(0.226)	(0.347)	(0.180)	(0.201)	(0.309)
	TR72 Kayseri, Sivas, Yozgat	-0.280	-0.355	0.345	0.213	0.155	0.783**
		(0.195)	(0.212)	(0.317)	(0.167)	(0.179)	(0.274)
	TR81 Zonguldak, Karabük, Bartın	-0.860***	-0.958***	-0.114	-0.319	-0.442*	0.601*
		(0.238)	(0.284)	(0.402)	(0.182)	(0.201)	(0.285)
	TR82 Kastamonu, Çankırı,Sinop	-0.682**	-0.815**	0.292	-0.178	-0.324	0.950**
		(0.251)	(0.286)	(0.414)	(0.233)	(0.262)	(0.356)
	TR83 Samsun, Tokat, Çorum, Amasya	-0.005	-0.086	0.554	0.300	0.212	0.948***
		(0.191)	(0.216)	(0.295)	(0.168)	(0.180)	(0.272)
	TR90 Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	-0.270	-0.365	0.374	0.163	0.045	0.965***
		(0.179)	(0.204)	(0.295)	(0.169)	(0.189)	(0.258)
	TRA1 Erzurum, Erzincan, Bayburt	-0.313	-0.439	0.615	0.251	0.083	1.526***
		(0.264)	(0.293)	(0.419)	(0.228)	(0.256)	(0.339)
	TRA2 Ağrı, Kars, Iğdır, Ardahan	-0.048	-0.160	0.858	0.365	0.222	1.533***
		(0.306)	(0.354)	(0.494)	(0.275)	(0.312)	(0.412)
	TRB1 Malatya, Elazığ, Bingöl, Tunceli	-0.523*	-0.742**	0.676	-0.077	-0.311	1.271***
		(0.224)	(0.246)	(0.376)	(0.208)	(0.223)	(0.329)
	TRB2 Van, Muş, Bitlis, Hakkari	-0.035	-0.164	1.052**	0.303	0.136	1.604***
		(0.253)	(0.280)	(0.402)	(0.229)	(0.252)	(0.356)
	TRC1 Gaziantep, Adıyaman, Kilis	-0.219	-0.295	0.368	0.263	0.142	1.241***
		(0.209)	(0.222)	(0.328)	(0.154)	(0.169)	(0.303)
	TRC2 Şanlıurfa, Diyarbakır	0.721**	0.598*	1.872***	0.945***	0.803***	2.167***
		(0.224)	(0.244)	(0.409)	(0.205)	(0.223)	(0.335)
	TRC3 Mardin, Batman, Şırnak, Siirt	0.088	-0.020	0.960*	0.431*	0.294	1.470***
		(0.234)	(0.262)	(0.400)	(0.213)	(0.235)	(0.341)

Table 10 continued	Discouraged			Marginally attached		
	Total	Men	Women	Total	Men	Women
2006	0.108	0.118	0.019	0.134**	0.141**	0.062
	(0.060)	(0.066)	(0.079)	(0.050)	(0.054)	(0.069)
2007	0.186**	0.205**	0.018	0.101	0.114	-0.029
	(0.068)	(0.076)	(0.082)	(0.054)	(0.059)	(0.071)
2008	0.143*	0.168*	-0.082	0.095	0.110*	-0.053
	(0.061)	(0.066)	(0.079)	(0.051)	(0.055)	(0.072)
2009	0.208**	0.233**	0.016	0.036	0.068	-0.192*
	(0.070)	(0.075)	(0.086)	(0.061)	(0.065)	(0.076)
2010	0.367***	0.401***	0.141	0.150*	0.186**	-0.079
	(0.065)	(0.069)	(0.087)	(0.059)	(0.061)	(0.079)
Constant	1.376	1.494	-1.215	0.701	0.972	-2.340
	(0.863)	(1.035)	(1.631)	(0.701)	(0.824)	(1.195)
Number of observations	61,569	49,704	11,865	67,871	54,848	13,023
Adjusted R2	0.228	0.228	0.229	0.162	0.163	0.167

Years

Table 11: Pooled probit estimation with cluster robust standard errors

Unemployed one year ago
Past experience condition met
The reference group is married, having less than secondary education graduation level, previously regular .and causal employee (occupation) and service workers and shop and market sales workers (employment status), residing at Istanbul in year 2005.
*** p<0.001, ** p<0.01, * p<0.05

		Discouraged			Marginally attached		
		Total	Men	Women	Total	Men	Women
Individual Characteristics	Gender Female=1	0.061			0.202***		
		(0.038)			(0.033)		
	Age	-0.024***	-0.024***	-0.014	-0.031***	-0.029***	-0.030*
		(0.006)	(0.006)	(0.015)	(0.005)	(0.005)	(0.012)
	Urban=1	-0.226***	-0.235***	-0.131*	-0.275***	-0.287***	-0.160**
		(0.022)	(0.024)	(0.060)	(0.021)	(0.022)	(0.052)
	Never Married	0.149***	0.117***	0.268***	0.061**	0.064**	-0.015
		(0.028)	(0.031)	(0.074)	(0.021)	(0.025)	(0.052)
	Divorced	0.083	0.157*	0.071	-0.117**	-0.002	-0.300***
		(0.050)	(0.074)	(0.103)	(0.043)	(0.066)	(0.081)
	Spouse Died	-0.124	0.062	-0.280	-0.093	0.020	-0.253
		(0.119)	(0.156)	(0.229)	(0.092)	(0.132)	(0.133)
	Secondary	-0.244**	-0.245*	-0.037	-0.114	-0.115	0.079
		(0.079)	(0.099)	(0.126)	(0.062)	(0.070)	(0.112)
	Tertiary	-0.702***	-0.743***	-0.177	-0.355**	-0.355*	0.150
		(0.145)	(0.182)	(0.273)	(0.133)	(0.150)	(0.216)
	Employer	0.163*	0.184*	-0.468	0.103	0.109	-0.281
		(0.082)	(0.084)	(0.359)	(0.069)	(0.068)	(0.271)
	Self employed	0.440***	0.458***	-0.102	0.304***	0.313***	0.008
		(0.036)	(0.037)	(0.182)	(0.034)	(0.034)	(0.118)
	Unpaid Family Worker	0.211***	0.243***	0.076	0.263***	0.288***	0.182
		(0.052)	(0.053)	(0.163)	(0.051)	(0.052)	(0.122)
	years passed since latest job	0.049***	0.052***	0.036***	0.022***	0.026***	0.003
		(0.005)	(0.005)	(0.008)	(0.004)	(0.005)	(0.007)
	Legislators, senior, officials and managers	-0.011	-0.034	0.293	0.042	0.020	0.198
		(0.055)	(0.056)	(0.163)	(0.045)	(0.048)	(0.139)
	Professionals	0.039	0.006	0.008	0.100*	0.074	0.092
		(0.059)	(0.079)	(0.093)	(0.047)	(0.067)	(0.069)
	Technicians and associate professional	-0.027	-0.037	-0.030	0.015	0.021	0.003
		(0.056)	(0.067)	(0.102)	(0.043)	(0.050)	(0.080)
	Clerks	-0.007	0.054	-0.080	-0.040	0.030	-0.065
		(0.048)	(0.068)	(0.073)	(0.040)	(0.055)	(0.057)
	Skilled agricultural, and fishery work	0.301***	0.309***	0.062	0.353***	0.368***	-0.049
		(0.044)	(0.042)	(0.199)	(0.043)	(0.041)	(0.154)
	Craft and related trades workers	-0.006	-0.010	0.091	0.076**	0.071*	0.119
		(0.029)	(0.032)	(0.092)	(0.026)	(0.029)	(0.074)
	Plant and machine operators and assembly workers	-0.075*	-0.078*	0.025	-0.025	-0.040	0.122
		(0.035)	(0.038)	(0.127)	(0.032)	(0.036)	(0.086)
	Elemantary occupations	0.077*	0.076*	0.099	0.177***	0.166***	0.214***
		(0.032)	(0.037)	(0.077)	(0.028)	(0.031)	(0.058)

	Table 11 Continued	Discouraged			Marginally attached		
		Total	Men	Women	Total	Men	Women
Household characteristics	Household Employment Rate	-0.000	-0.000	0.001	-0.000	-0.000	0.000
		(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
	% change in Household Employment Rate (t_1-t)/h_no	0.001	0.000	0.001	0.000	-0.000	0.002**
		(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
	Household Children (inc. aged<15)	0.009	0.010*	0.007	0.016**	0.016**	0.030
		(0.005)	(0.005)	(0.023)	(0.005)	(0.005)	(0.019)
Local labor market conditions	Regional log EMP SIZE (private only)	-0.177*	-0.196*	-0.016	-0.117	-0.136*	0.066
		(0.071)	(0.084)	(0.116)	(0.061)	(0.067)	(0.097)
	Regional level of log TENURE Years (by education level)	0.029**	0.031**	0.021	0.027***	0.027**	0.022
		(0.009)	(0.011)	(0.015)	(0.007)	(0.008)	(0.014)
	Regional share of PUBLIC employees (by education level)	0.843*	0.763	0.598	0.479	0.384	0.195
		(0.343)	(0.406)	(0.616)	(0.285)	(0.313)	(0.504)
	Regional share of JOBLESS relative to labor force (by education level)	4.146***	4.235***	3.798***	3.248***	3.322***	3.026***
		(0.763)	(0.814)	(1.101)	(0.645)	(0.712)	(0.822)
	Regional share of ON THE JOBSEARCH on (by education level)	0.867	0.936	0.729	0.289	0.592	-0.778
		(0.514)	(0.524)	(0.922)	(0.434)	(0.456)	(0.713)
	(%)change in Real Wage (mean wage- education by region)	-0.001	0.001	-0.006	0.000	0.001	-0.001
		(0.003)	(0.003)	(0.004)	(0.002)	(0.003)	(0.003)
	Regional share of NEW JOB CREATION (by education level)	-1.039*	-1.005	-1.281	-1.175**	-1.146*	-1.042*
		(0.476)	(0.516)	(0.705)	(0.412)	(0.462)	(0.502)

	Table 11 Continued	Discouraged			Marginally attached		
		Total	Men	Women	Total	Men	Women
Regions	TR21 Tekirdağ, Edirne, Kırklareli	-0.160	-0.177	0.257	-0.007	-0.045	0.560**
		(0.245)	(0.275)	(0.319)	(0.210)	(0.236)	(0.278)
	TR22 Balıkesir, Çanakkale	-0.010	-0.144	0.867*	0.341*	0.214	1.215***
		(0.254)	(0.275)	(0.364)	(0.215)	(0.229)	(0.328)
	TR31 İzmir	-0.415**	-0.377**	-0.421	-0.138	-0.149	0.154
		(0.147)	(0.163)	(0.206)	(0.109)	(0.120)	(0.158)
	TR32 Aydın, Denizli, Muğla	-0.304	-0.347*	0.140	0.112	0.078	0.549**
		(0.188)	(0.201)	(0.304)	(0.166)	(0.175)	(0.251)
	TR33 Manisa, Afyon, Kütahya, Uşak	-0.345*	-0.390**	-0.114	0.260	0.210	0.657**
		(0.177)	(0.195)	(0.282)	(0.153)	(0.168)	(0.252)
	TR41 Bursa, Eskişehir, Bilecik	-0.279	-0.247	-0.332	-0.028	-0.082	0.359**
		(0.178)	(0.195)	(0.215)	(0.136)	(0.155)	(0.170)
	TR42 Kocaeli, Sakarya, Düzce, Bolu, Yalova	-0.356*	-0.422**	0.121	-0.074	-0.137	0.431*
		(0.162)	(0.172)	(0.258)	(0.142)	(0.148)	(0.218)
	TR51 Ankara	-0.315*	-0.341*	-0.028	0.031	-0.005	0.392**
		(0.161)	(0.174)	(0.193)	(0.116)	(0.126)	(0.168)
	TR52 Konya, Karaman	-0.403	-0.512	0.297	0.045	-0.061	0.751**
		(0.235)	(0.252)	(0.337)	(0.204)	(0.218)	(0.305)
	TR61 Antalya, Isparta, Burdur	-0.331	-0.377*	0.040	0.206	0.134	0.753***
		(0.186)	(0.205)	(0.282)	(0.157)	(0.169)	(0.248)
	TR62 Adana, Mersin	-0.383*	-0.489**	0.246	-0.089	-0.252	0.684***
		(0.182)	(0.194)	(0.260)	(0.160)	(0.173)	(0.232)
	TR63 Hatay, Kahramanmaraş, Osmaniye	-0.075	-0.185	0.721**	0.179	0.043	1.126***
		(0.213)	(0.226)	(0.315)	(0.193)	(0.205)	(0.293)
	TR71 Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	-0.301	-0.392	0.349	0.115	0.011	0.909**
		(0.243)	(0.268)	(0.388)	(0.214)	(0.233)	(0.349)
	TR72 Kayseri, Sivas, Yozgat	-0.302	-0.407	0.480	0.228	0.158	0.829**
		(0.242)	(0.258)	(0.370)	(0.194)	(0.206)	(0.330)
	TR81 Zonguldak, Karabük, Bartın	-0.772***	-0.879***	-0.076	-0.270	-0.383*	0.615*
		(0.269)	(0.306)	(0.390)	(0.209)	(0.228)	(0.335)
	TR82 Kastamonu, Çankırı, Sinop	-0.643**	-0.750**	0.260	-0.147	-0.224	0.759**
		(0.309)	(0.341)	(0.466)	(0.276)	(0.301)	(0.425)
	TR83 Samsun, Tokat, Çorum, Amasya	-0.030	-0.089	0.462	0.268	0.208	0.836***
		(0.217)	(0.240)	(0.314)	(0.186)	(0.199)	(0.306)
	TR90 Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	-0.287	-0.372	0.348	0.131	0.035	0.928***
		(0.220)	(0.247)	(0.329)	(0.200)	(0.221)	(0.300)
	TRA1 Erzurum, Erzincan, Bayburt	-0.435	-0.566	0.543	0.177	0.027	1.514***
		(0.301)	(0.334)	(0.475)	(0.258)	(0.285)	(0.386)
	TRA2 Ağrı, Kars, Iğdır, Ardahan	-0.140	-0.278	1.020	0.266	0.131	1.560***
		(0.350)	(0.391)	(0.521)	(0.307)	(0.338)	(0.463)
	TRB1 Malatya, Elazığ, Bingöl, Tunceli	-0.698*	-0.872**	0.487	-0.174	-0.354	1.141***
		(0.258)	(0.283)	(0.403)	(0.231)	(0.249)	(0.368)
	TRB2 Van, Muş, Bitlis, Hakkari	-0.085	-0.210	0.937**	0.219	0.081	1.396***
		(0.294)	(0.317)	(0.432)	(0.262)	(0.283)	(0.400)
	TRC1 Gaziantep, Adıyaman, Kilis	-0.216	-0.291	0.353	0.242	0.134	1.148***
		(0.227)	(0.241)	(0.350)	(0.172)	(0.185)	(0.321)
	TRC2 Şanlıurfa, Diyarbakır	0.543**	0.420*	1.772***	0.737***	0.620***	1.887***
		(0.257)	(0.273)	(0.416)	(0.232)	(0.250)	(0.353)
	TRC3 Mardin, Batman, Şırnak, Siirt	-0.132	-0.256	0.974*	0.225*	0.096	1.399***
		(0.270)	(0.293)	(0.428)	(0.245)	(0.265)	(0.385)

	Table 11 continued	Discouraged			Marginally attached		
		Total	Men	Women	Total	Men	Women
Years	2006	0.075	0.083	0.019	0.106**	0.117**	0.033
		(0.065)	(0.070)	(0.092)	(0.057)	(0.059)	(0.081)
	2007	0.132**	0.157**	-0.088	0.045	0.062	-0.097
		(0.073)	(0.079)	(0.091)	(0.062)	(0.065)	(0.084)
	2008	0.132*	0.169*	-0.141	0.066	0.088*	-0.091
		(0.064)	(0.067)	(0.097)	(0.058)	(0.060)	(0.086)
	2009	0.168**	0.193**	0.005	-0.032	0.000	-0.260*
		(0.078)	(0.081)	(0.100)	(0.067)	(0.071)	(0.086)
	2010	0.332***	0.374***	0.079	0.079*	0.118**	-0.154
		(0.065)	(0.069)	(0.099)	(0.059)	(0.061)	(0.087)
	Constant	0.601	0.888	-1.938	0.330	0.577	-2.148
		(1.055)	(1.229)	(1.710)	(0.875)	(0.970)	(1.406)
	Number of observations	51,345	42,789	8,556	57,031	47,553	9,478
	Adjusted R2	0.199	0.194	0.223	0.148	0.145	0.172

Interpretation of results

- Our results are quite consistent with the predictions of job search theory.

- Reservation wage is equivalent to discounted expected utility of being unemployed. Accordingly, a fall in the reservation wage means being unemployed worth less and more workers will give up searching a job.

- Lack of qualifications (human capital) increases the probability of discouragement. For les qualified workers wage offers are drawn from a less favorable H(.), implying a lower reservation wage.
- Poor labor market conditions increase the incidence of discouragement. Congestion effects (high joblessness), or low turnover (static labor markets), or both reduce the chance of getting job offers and hence lowers reservation wages.
- Household characteristics seems less important on the decision to give up searching. This may imply that instantaneous costs of searching a job (for instance foregone domestic production) are less important than lower prospects for employment on the decision to stop searching.