

School-to-Work Transition and Youth Unemployment in Turkey

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Outline

The determinants of school-to-work transition in Turkey

- Youth unemployment
- Turkey
- Data: Survey of Income and Living Conditions
- Model
- Estimation results
- Conclusion

Youth Unemployment

Unemployment in the early stages of labor market transition:

- 1 Productivity losses (Freeman, 1982)
- 2 Employees sort out & recruit based on prior employment history (Blanchard, 1994)
- 3 **Poor work habits** \Rightarrow weak labor force attachment and alienation (Ellwood, 1982)
- 4 A wage penalty (Arulampalam, 2001; Kletzer&Fairlie, 2003; Gregg&Tominey, 2005; Mroz&Savage, 2006; Gregg, 2008)

!! Cost and difficulty of reintegration increases with prolonged unemployment (Torres & Tobin, 2010)

School-to-work Agenda

Schooling, employment, and training \Rightarrow Institutional differences

- 1 Structure of the labor markets (Brauns et al., 1999; van der Velden & Wolbers, 2001; Garrouste & Massimo, 2011; Lange et. al., 2013)
 - employment protection of the existing labor force
 - availability of flexible employment opportunities
- 2 Education and training systems (Allmendinger, 1989; Muller, 1998; Brauns et al., 1999; van der Velden & Wolbers, 2001)

Youth Labor Market Outcomes in Turkey

Table : Overview of youth labor market outcomes, HLFS 2013

15-24 pop.	Total	Employed	Unemp.	Inactive	Part. Rate	Unemp. Rate
Total	11,534,134	3,696,899	832,090	7,005,145	39.3%	18.4%
Male	5,640,909	2,446,181	505,135	2,689,592	52.3%	17.1%
Female	5,893,225	1,250,718	326,955	4,315,552	26.8%	20.7%
in School(15-24)	Total	Employed	Unemp.	Inactive	Part. Rate	Unemp. Rate
Total	4,910,668	756,135	181,576	3,972,958	19.1%	19.4%
Male	2,591,443	489,346	92,064	2,010,033	22.4%	15.8%
Female	2,319,225	266,789	89,511	1,962,926	15.4%	25.1%
out of School(15-24)	Total	Employed	Unemp.	Inactive	Part. Rate	Unemp. Rate
Total	6,623,466	2,940,765	650,515	3,032,187	54.2%	18.1%
Male	3,049,466	1,956,835	413,071	679,560	77.7%	17.4%
Female	3,574,000	983,929	237,444	2,352,627	34.2%	19.4%
25+ pop.	Total	Employed	Unemp.	Inactive	Part. Rate	Unemp. Rate
Total	42,058,410	20,413,575	1,782,794	19,862,041	52.8%	8.0%
Male	20,678,943	14,691,125	1,224,417	4,763,400	77.0%	7.7%
Female	21,379,468	5,722,450	558,377	15,098,640	29.4%	8.9%

Youth Labor Market Outcomes in Turkey

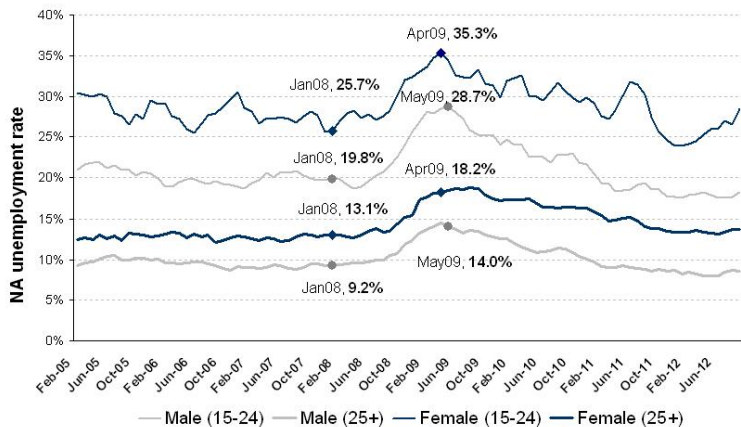


Figure : The evolution of non-agricultural unemployment rate

Youth Labor Market Outcomes in Turkey

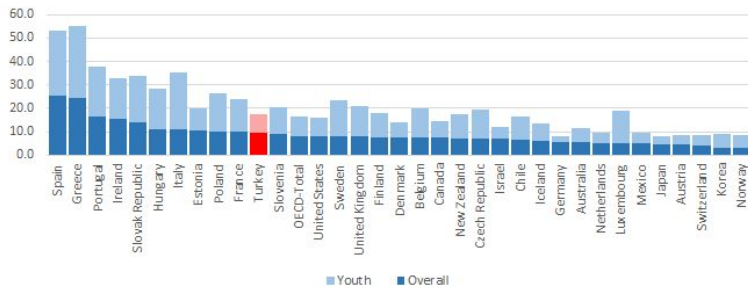


Figure : Youth unemployment rate in OECD countries, OECD 2012

Youth Labor Market Outcomes in Turkey

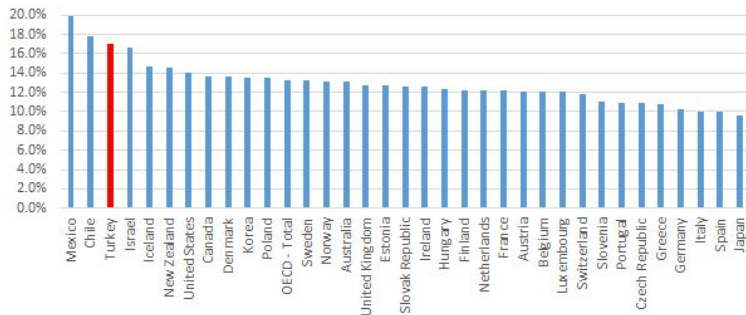


Figure : The share of people aged 15 to 24, OECD 2012

Youth Labor Market Outcomes in Turkey

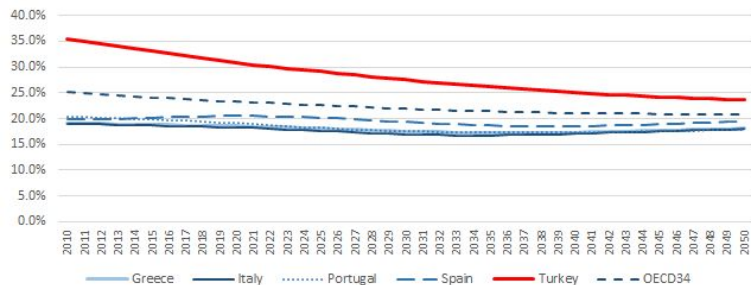


Figure : Population projections of the share of those aged under 20, OECD 2011

Youth Labor Market Outcomes in Turkey

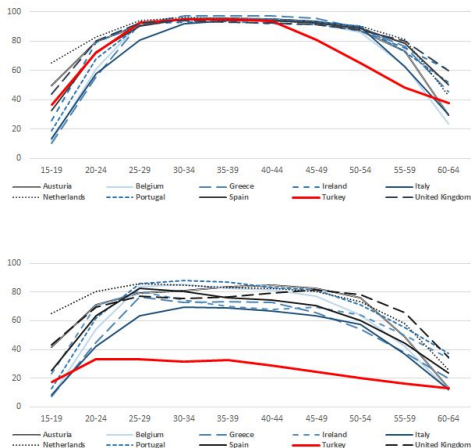


Figure : Activity rates by age, ILO 2008

Employment protection in the LM in Turkey

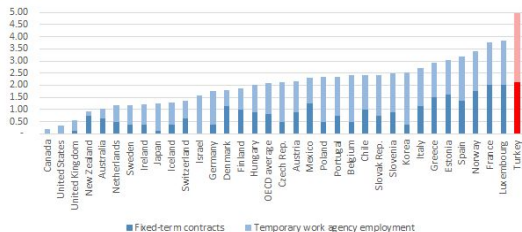
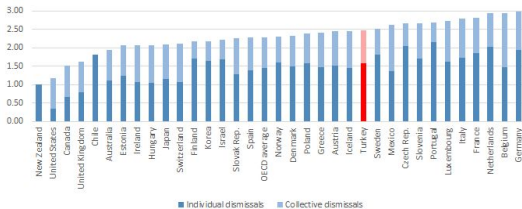


Figure : OECD 2013

Research on Youth Unemployment Duration in Turkey

- 1 Determinants of unemployment duration (Taşçı & Tansel, 2005)
 - Quarterly Household Labor Force Surveys of 2000 and 2001
 - Gender, education, rural-urban divide, region
- 2 Time till the first permanent job (İlhan & Tunalı, 2012)
 - Modular survey, Household Labor Force Survey 2009
 - Gender, education, mother's education

Data Source

Survey of Income and Living Conditions (SILC)

- Cross-sectional and longitudinal micro data on income, poverty, social exclusion and living conditions
- Rotating panel, for a maximum of four years
- Approximately 10 thousand households are surveyed annually

⇒ Retrospective questions on monthly labor market outcomes

Sample

- 2007-2010 SILC panel
- Aged 15 to 34
- Left school within the observation period
- Focuses on the very first transition from in-school to out-of-school
- Recent school leavers are treated as unemployed
- Those serving in the military are excluded
- Right censored; "exit" is not observed for all

⇒ 1987 observations

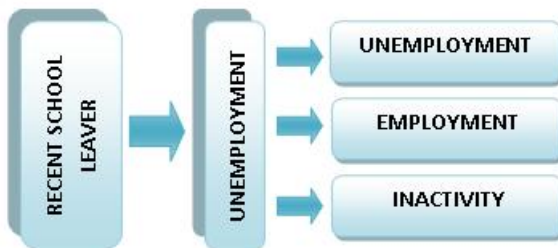
Descriptives

Table : Descriptive statistics, 2007-2010

	Frequency	Percentage	Av. Dur.
Gender			
Male	1,135	57.1%	2.19
Female	852	42.9%	1.67
Education			
Less than 8 year prim.	42	2.1%	2.19
Primary (8 years)	921	46.4%	1.73
High school	565	28.4%	1.61
Voc. High	208	10.5%	2.29
University	251	12.6%	3.35
Age Group			
Aged 15-17	623	31.4%	1.78
Aged 18-19	643	32.4%	2.00
Aged 20-24	582	29.3%	1.98
Aged 25-29	129	6.5%	2.47
Aged 30-34	10	0.5%	3.8
Total	1,987	100.0%	1.97

The model

Figure : Transition states of recent school-leavers



The model

Competing risks model

- destination-specific hazard rates

$$outcome, Y_{it} = \begin{cases} 0 & \text{remains unemployed; base outcome} \\ 1 & \text{into employment} \\ 2 & \text{into inactivity} \end{cases}$$

- multiple latent survival times for each possible destination state

$$T = \min\{T_0, T_1, T_2\}$$

⇒ Multinomial logit model with destination specific random intercepts

The model

⇒ Multinomial logit with random intercepts

$$P(Y_{it} = j | X_i, Z_{it}, W_{it}, \alpha_{ij}) = \frac{\exp(X_i \beta_j + Z_{it} \gamma_j + W_{it} \delta_j + \alpha_{ij})}{\sum_{n=0}^2 \exp(X_i \beta_n + Z_{it} \gamma_n + W_{it} \delta_n + \alpha_{in})}$$

- controls for individual characteristics
 - i) X_i , time-invariant: dummy set for *Education*
 - ii) Z_{it} , time-variant: *Age* and Age^2 , *Married*, quadratic baseline hazard: $\log T$ and $\log T^2$
- household level controls, W_{it} : share of housewives, *Poorest10*, *Richest10*, a dummy for whose mother is *illiterate* and *Non – wage earner dad*.
- Destination specific random intercepts: α_{ij}

The model

Individual likelihood contribution function

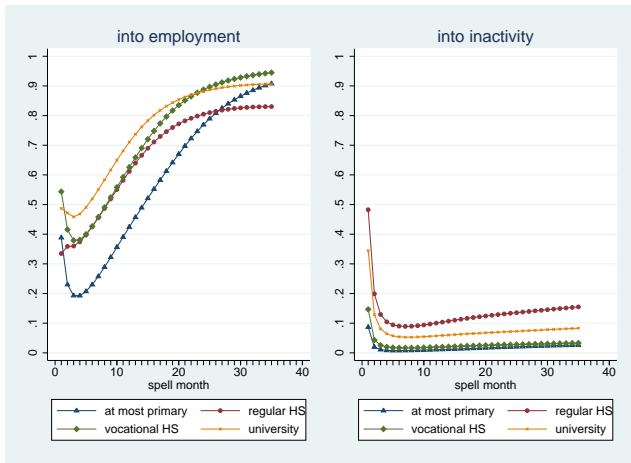
$$L_i = \int_{-\infty}^{+\infty} \prod_{t=1}^{T_i} \frac{\prod_{j=1}^2 \exp(X_i \beta_j + Z_{it} \gamma_j + W_{it} \delta_j + \alpha_j)^{s_{jt}}}{1 + \sum_{n=1}^2 \exp(X_i \beta_n + Z_{it} \gamma_n + W_{it} \delta_n + \alpha_n)} f(\alpha) d\alpha$$

no closed-form solution \Rightarrow numerical integration (β_j , γ_j and δ_j , adaptive quadrature)

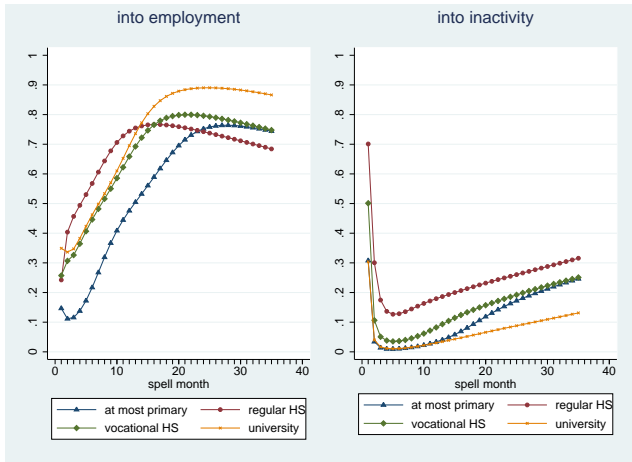
Regression Results

	Male		Female	
	Employment	Inactivity	Employment	Inactivity
<i>Age</i>	0.241*** (0.0438)	0.217*** (0.0533)	-0.0546 (0.103)	0.129** (0.0509)
<i>Age sq.</i>	-0.0129*** (0.00209)	-0.0162*** (0.00269)	-0.00386 (0.00340)	-0.0114*** (0.00282)
<i>Regular high school</i>	1.812*** (0.262)	3.675*** (0.367)	4.010*** (0.657)	4.829*** (0.984)
<i>Vocational high school</i>	1.463*** (0.260)	1.651*** (0.385)	2.193*** (0.518)	2.201*** (0.695)
<i>University graduates</i>	2.307*** (0.406)	3.459*** (0.565)	2.292*** (0.677)	0.661 (0.550)
<i>InT</i>	-2.935*** (0.284)	-4.505*** (0.549)	-2.481*** (0.669)	-7.322*** (0.997)
<i>InT sq.</i>	1.164*** (0.104)	1.444*** (0.205)	1.436*** (0.400)	2.450*** (0.359)
<i>Married</i>	1.603* (0.957)	1.582 (1.171)	1.224 (0.902)	4.372*** (1.137)
<i>Poorest10</i>	-1.194*** (0.417)	-0.798 (0.517)	-0.552 (0.961)	-0.741 (0.846)
<i>Richest10</i>	0.569** (0.287)	0.948*** (0.363)	-0.250 (0.636)	0.691 (0.612)
<i>Share of housewives</i>	-0.00874 (0.00636)	0.00849 (0.00777)	-0.0238* (0.0134)	0.0550*** (0.0190)
<i>Illiterate mother</i>	0.0667 (0.220)	0.0920 (0.273)	0.632 (0.579)	2.609*** (0.766)
<i>Non – wage earner dad</i>	1.114*** (0.265)	0.967*** (0.305)	1.767*** (0.519)	0.859** (0.366)

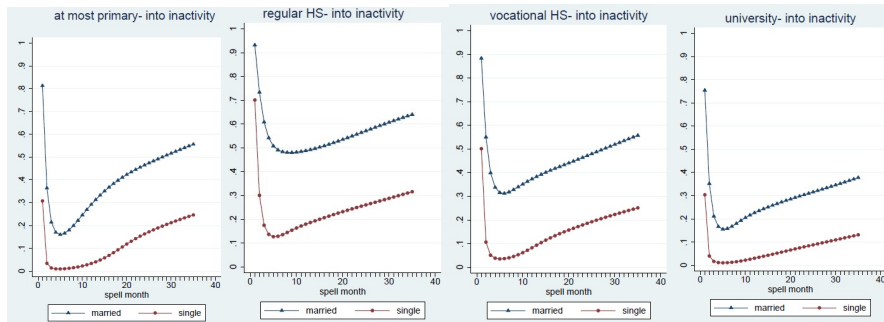
Education on LM Male Outcomes



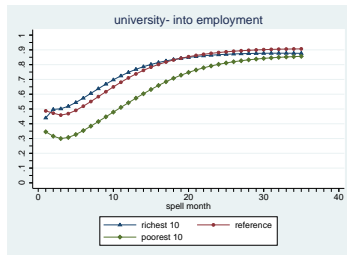
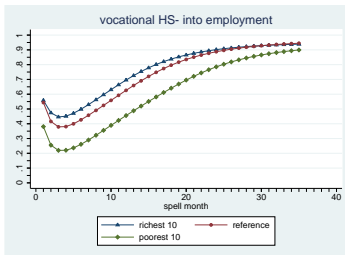
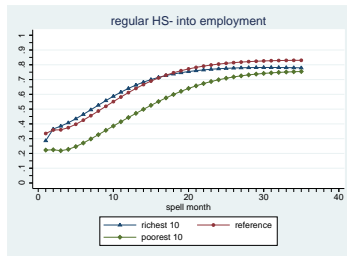
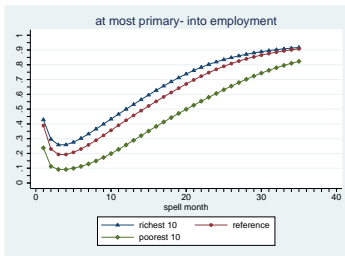
Education on LM Female Outcomes



Marital Status on Female LM Outcomes



Family Wealth on Male LM Outcomes



Summary of Findings

- Prominent gender differences in covariate effects
- Over time transition behavior differs significantly among men and women
- Individual characteristics
 - i)* education
 - ii)* marital status
- Household characteristics:
 - i)* intergenerational transmission of participation behaviours
 - ii)* household wealth

Policies to account for characteristics that increase vulnerability in labor market

Some modifications

- Restrict the age profile
- Exclude temporary distractions
- Additional controls: presence dependent children, being the eldest kid
- Gender interactions
- Better measure of household wealth

THANK YOU!