

# Croatia's Lost Generation? Youth unemployment, education and training in Croatia since the crisis\*

# Iva Tomić The Institute of Economics, Zagreb

#### Visiting Speaker Programme

LSEE Research on SEE, European Institute, LSE 12 October 2016

\*in collaboration with Vassilis Monastiriotis, European Institute, LSE













- Motivation
- Related literature
- Data
- Model
- Results
- Policy initiatives





#### **Motivation**

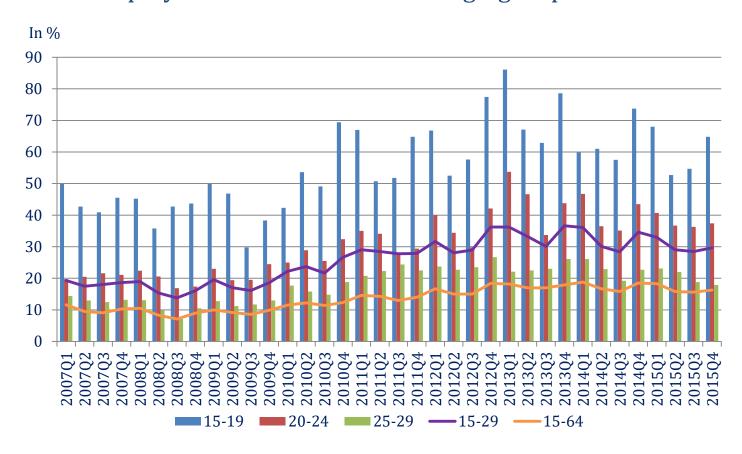
- 2014 ended as a sixth consecutive year with negative real GDP growth in Croatia, with a cumulative drop of 13% as of 2009.
- The unemployment rate almost doubled in the period between 2008 and 2014.
- Youth unemployment rate is growing much more rapidly than the overall rate:
  - for conventional youth population (15-24) it increased by 25 pp between 2009 and 2013 (from 25% to 50%),
    - more than double the total unemployment rate,
    - considerably higher than the average rate of youth unemployment in the EU;
  - for the population aged 15-29 it increased by more than 15 pp in the same period.
  - the NEET rate for youths aged 15-29 was 21.8% in 2014; more than 6 pp higher than in the EU-28 (15.4%), with an increase of almost 9 pp between 2008 and 2014.







#### Unemployment rates for different age-groups in Croatia



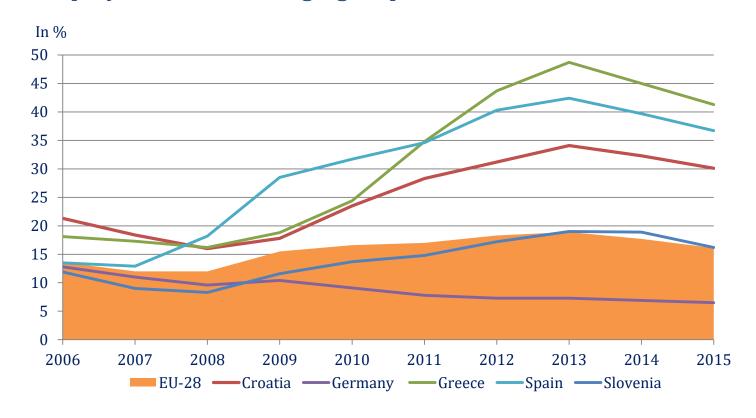
Source: Eurostat.







#### Unemployment rates for age-group 15-29 in selected EU countries



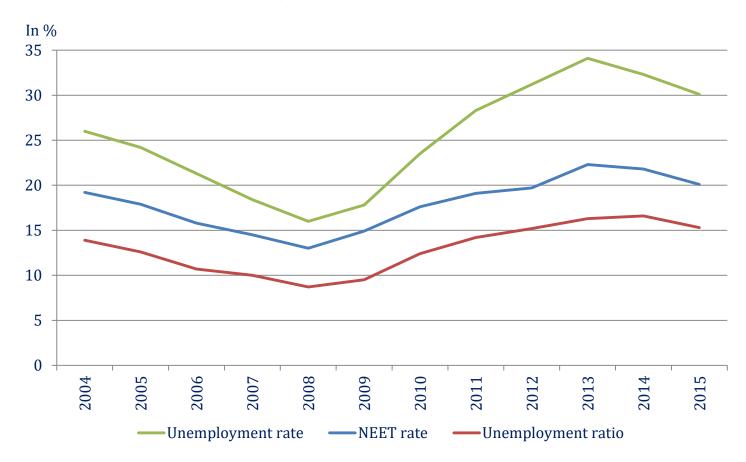
Source: Eurostat.







#### Different indicators of youth (15-29) unemployment in Croatia



Source: Eurostat.





#### **Motivation**

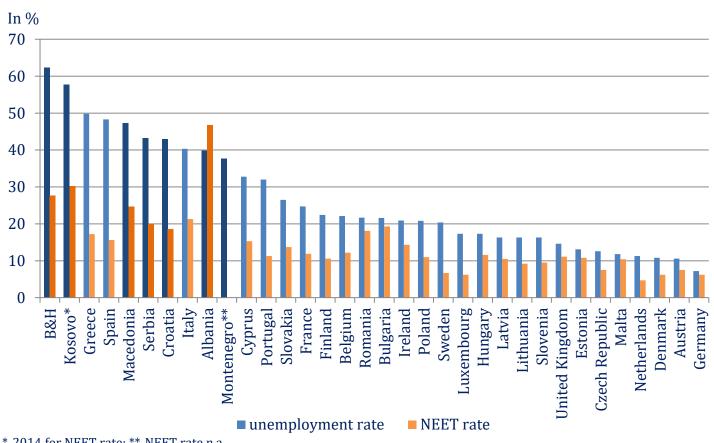
- The issue of labour market exclusion has been more pressing over a longer period of time in countries of the European periphery, including Croatia.
  - o In the (Western) Balkans in particular, levels of inactivity/non-participation are abysmally high compared to EU standards not only for the youth but for much larger segments of the working-age population.
    - Average youth unemployment and NEET rates, for example, are more than twice as high in these countries as those in the EU.
  - The literature suggests that the poor situation on the labour market in these countries has structural roots, including delayed transition, high share of informal sector, poor investment climate, skill mismatches, as well as significant dependence on remittances (Gligorov et. al., 2008; Kolev and Saget, 2005; Kovtun et al., 2014).







#### Youth (15-24) unemployment and NEET rates in 'extended' Europe - 2015



\*-2014 for NEET rate; \*\*-NEET rate n.a.

Source: ILO, ILOSTAT database.





#### **Motivation**

- Despite the policy and social importance of the issue, studies examining empirically the individual and environmental factors contributing to nonparticipation of youth in the labour market or training (NEET) are rather limited and in the case of the countries in the European periphery virtually non-existent.
  - High and increasing youth unemployment in Croatia has received a lot of attention from both the public and the policy makers; however, academic contribution, especially empirical economics, is still missing.
- ► <u>Goal</u>: to partially fill the literature gap by examining closely the determinants of youth unemployment and non-participation in 'employment, education or training' (NEET) for the newest EU-member state Croatia.





#### Related literature

- The literature suggests that females, less educated, and those coming from deprivileged backgrounds, including immigrants, are more exposed to being unemployed at a younger age.
- Unlike in Croatia, there are some empirical studies on the youth exclusion from the labour market in different (south) European countries:
  - ➤ Bell and Blanchflower (2015) analyse various dimensions of historically high level of youth unemployment in Greece.
  - ➤ **Dolado et al. (2013)** examine youth labour market performance in Spain from the microperspective.
  - ➤ Marelli and Vakulenko (2014) estimate the unemployment risk of young people for Italy and Russia.
  - ➤ Kelly and McGuinness (2015) examine the impact of the recent recession on youth unemployment and youth NEET rate in Ireland.





#### Related literature

- Several comparative studies focusing more specifically on the NEET population:
  - ➤ Bruno et al. (2014) study the impact of the recent crisis on the NEET rate and the youth unemployment rate in different EU regions.
  - ➤ Carcillo et al. (2015) review a situation for the NEET population since the onset of the financial crisis in the OECD countries.
  - ➤ Eichhorst and Neder (2014) examine youth unemployment situation in Mediterranean Countries, precisely in France, Greece, Italy, Portugal, and Spain.
  - **Eurofound (2012)** analyses characteristics, costs and policy responses in Europe of young NEET population.
  - ➤ Mauro and Mitra (2015) focus on the NEET youth in the Europe and Central Asia region.





#### Data

- Individual Labour Force Survey (LFS) microdata obtained from the Croatian Bureau of Statistics (CBS) in the period 2007-2014
- Youth population between 15 and 29 years with respect to the labour market status: excluded (NEETs) vs employed and excluded vs in education (mutually exclusive statuses)
  - Demographic characteristics
    - those usually exogenous to the individual (age, gender, ethnicity) &
    - more marketable characteristics, i.e. education or experience
      - years of education of the household head in this case (+ control variable if a youth person is actually a head of the household)
  - Household characteristics (socio-economic background)
    - marriage, household composition and household size
  - Area characteristics
    - urbanization and regional affiliation







#### Structure of the Croatian youth (15-29) population by their labour market status

	2008			2013				
	work	train	NEET	total	work	train	NEET	total
Age: 15-19	6%	61%	21%	30%	3%	59%	17%	32%
Age: 20-24	34%	33%	38%	34%	27%	32%	41%	33%
Age: 25-29	61%	7%	41%	36%	70%	8%	43%	36%
Female	41%	54%	60%	49%	45%	52%	48%	49%
Married/cohabiting	26%	1%	31%	16%	21%	1%	21%	12%
Foreign-born	7%	6%	8%	7%	7%	3%	10%	6%
Low education	6%	51%	19%	27%	4%	51%	13%	27%
Medium education	78%	47%	70%	64%	71%	43%	71%	58%
High education	16%	1%	11%	9%	26%	6%	17%	15%
Household size	4.2	4.5	4.9	4.4	4.1	4.4	4.3	4.3
Youth head of the household	7%	1%	3%	4%	9%	2%	4%	4%
Years of education of the household head	10.8	11.8	10.1	11.1	11.2	11.9	10.8	11.5
Urban area of living	49%	58%	44%	52%	56%	62%	51%	58%
Northwest Croatia	41%	40%	27%	39%	43%	39%	32%	38%
Central & Eastern Croatia	27%	27%	46%	29%	25%	28%	37%	29%
Adriatic Croatia	32%	34%	27%	32%	32%	33%	31%	32%
No. of observations	3317	3526	902	7745	1823	3072	1362	6257

Source: Labor Force Survey (LFS) data obtained from the Croatian Bureau of Statistics.





#### Data

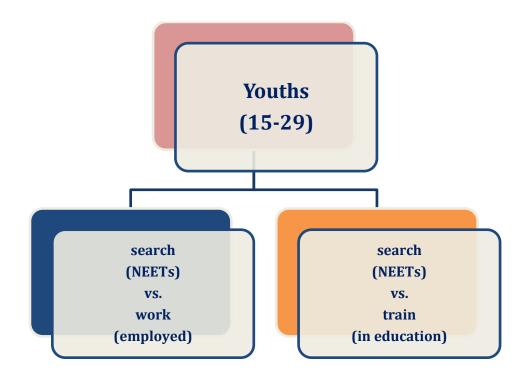
- Employed youths are older than both NEET and those in education (70% of 25+ year-olds in 2013).
- Male workers experienced stronger unemployment growth in the crisis (female share among NEETs decreased by more than 10 pp).
- Share of married youth decreased in all groups in the observed period.
- More 'foreigners' among NEETs than within other two groups, especially in 2013.
- Visible increase of those with finished higher education (Bologna process?).
- NEETs generally come from larger households, but this has almost ceased in the crisis.
- Lowest levels of education of the household head for NEET youths and highest for those in education.
- Increased share of urban population during the crisis in all groups.
- Disproportionately high share of youth NEETs in Central and Eastern Croatia; during the crisis Northwestern Croatia has gained a lot of youth unemployed/NEETs.







- The risk of youth unemployment (non-participation)
  - What is the alternative to unemployment/NEET status:
    - employment or
    - education?







#### Model

- **Probit model** is used for estimating the contribution of different characteristics to the individual risk of unemployment (labour market exclusion) over the observed period:
  - set of yearly probit regressions for youths defined as NEETs vis-à-vis both the employed youths and those who are in education and training,
  - the probability of observing a specific NEET outcome with respect to both the employed and the group formally in education for each individual on the basis of a series of individual and household characteristics (*X*):

$$P_{r}(Y_{i} = 1) = \Phi(Y_{i}^{*})$$

$$Y_{i}^{*} = \beta X_{i} + \varepsilon_{i \text{ with }} Y_{i} = \begin{cases} 1 & \text{if } Y_{i}^{*} > 0 \\ 0 & \text{otherwise} \end{cases}$$

$$P_{r}(Y_{i} = 1 \mid X) = \Phi(X' \beta)$$

 To facilitate interpretation, we convert the derived coefficients into marginal effects, evaluating the impact of each variable at average pooled sample (2007-2014) values for all the regression predictors.







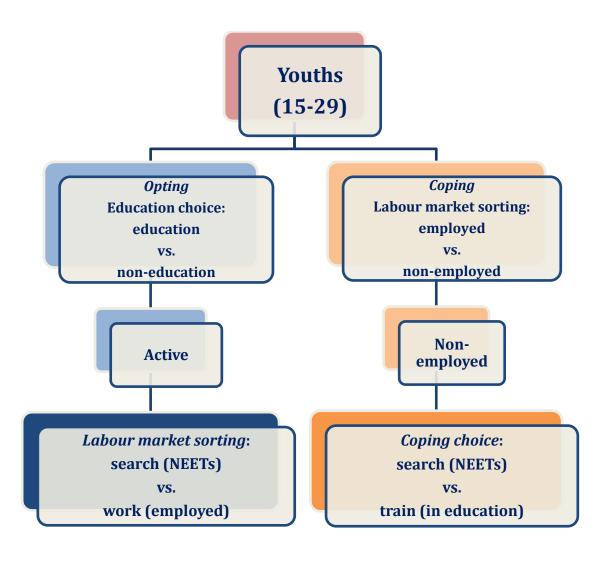
#### How do young people enter a status of labour market exclusion?

- o 2 'competing' paths, each entailing a two-stage '(self-)selection' into non-participation:
  - 1. The first 'path' (opting) starts with a 'self-selection' step whereby individuals 'select' themselves into education (or training) and those who are not '(self-)selected' into education subsequently compete in the labour market, with some of them being 'sorted' into employment and others becoming NEET.
  - **2.** The second 'path' (coping) concerns a process whereby young people are first 'sorted' away from employment (i.e., employers cream off the most employable) and subsequently those not selected into employment 'self-select' into education or non-participation (NEET status) depending on their characteristics.













#### Model

- In order to address the problem of non-random selection of young people into active population (or in non-employed population), in the first step probit models are corrected using the **Heckman correction** for selection.
  - The 'choice' between employment and unemployment is conditional on an individual's participation in the labour force (non-participation in education), while the 'choice' between unemployment and education is 'conditioned' on not being employed:

First stage:

$$P_r(D=1|Z) = \Phi(Z'\gamma)$$

Second-stage:

$$P_r(Y=1|X,D=1|Z) = \Phi(X'b + \rho\sigma_u\lambda Z\gamma)$$





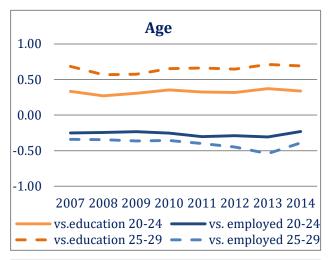


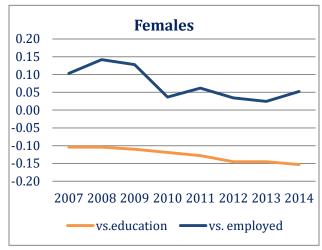
- 2 alternative first-stage choices
  - D1: education vs labour market participation
  - o D2: employment vs non-employment
    - ▶ enable estimates not only for the role that different individual characteristics play for each of the 'choices'/selections (NEET vs education and NEET vs employment) but also of the mode in which the prediction about the risk of unemployment (NEET status) changes when allowed for each of the two types of first-stage selection.
- Various alternatives as the identifying vector **Z**, including the household variables such as the number of under-aged children in the household, as well as variable controlling for (regional) macroeconomic conditions, i.e., average regional (county) unemployment rate.

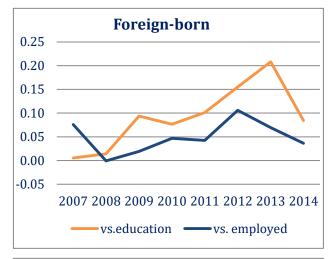


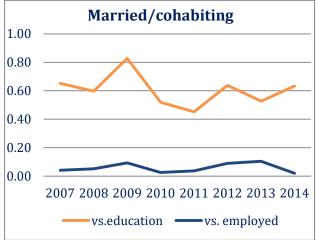


### Marginal effects after probit (dep. variable NEET=1)

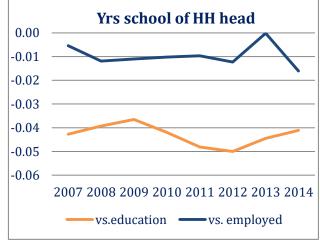








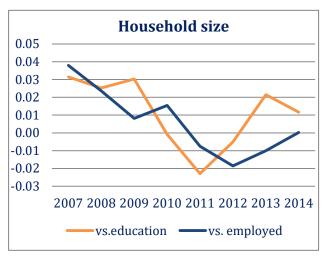


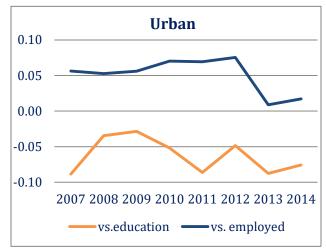


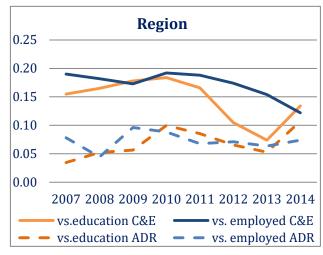




## Marginal effects after probit (dep. variable NEET=1)







Source: Authors' calculations based on Labor Force Survey (LFS) data obtained from the Croatian Bureau of Statistics.





- The probability of an individual being 'selected away' from NEET and into employment increases with age while the probability of being non-NEET and in education declines with age, without substantial changes during the observed period;
  - the age-differences are much more pronounced in the case of education than in the case of employment;
  - o late teens (15-19) are facing the risk of unemployment when they are not in education, while those in their late twenties (25-29) face it when not employed.
- Females have a higher probability, compared to males, of being NEET than in employment but a lower probability of being NEET than in education.
  - o gender differences in the NEET-vs-employment comparison declined fast with the advent of the crisis (after 2009) and have remained very low (and statistically insignificant) since;
  - gender differences in the NEET-vs-education dimension have intensified and became statistically more significant;
    - clear difference in the ranking of outcomes between genders.
- Married individuals are more likely to be NEET, especially in comparison to those in education (i.e., non-employed group).





- An increase in sorting into NEET over time for those foreign-born, which only starts declining in recent years (as total unemployment started subsiding).
  - higher vulnerability of being NEET if not in employment (vs education) than of being NEET if not in education (vs employment).
- Higher education of the household head, as expected, decreases the probability for an individual to become NEET,
  - o especially in relation to those in education.
- Household size increased the probability of unemployment (NEET status) for Croatian youths before the crisis, after which it becomes negative and mainly insignificant, while recently higher number of household members seems to (insignificantly) decrease the probability of NEET status for youths in Croatia again.
- Urban area of residence increases the risk of NEET status wrt employment for youths in Croatia, while it decreases it wrt education.
  - o Possible migration to urban areas due to job search.
- Living in Central and Eastern or Adriatic Croatia as opposed to Northwest Croatia, increases the risk of NEET status, which is especially true for the former.





1st path		2007-2008			2009-2010	
NEET vs work	probit	second-stage	first-stage	probit	second-stage	first-stage
Age: 20-24	-0.749***	-0.816***	1.294***	-0.672***	-0.589***	1.318***
	(0.058)	(0.113)	(0.034)	(0.066)	(0.142)	(0.037)
A === 20, 24	-1.036***	-1.132***	2.426***	-0.997***	-0.883***	2.283***
Age: 20-24	(0.060)	(0.155)	(0.044)	(0.067)	(0.186)	(0.045)
Females	0.369***	0.379***	-0.418***	0.230***	0.218***	-0.356***
remaies	(0.037)	(0.041)	(0.030)	(0.038)	(0.042)	(0.032)
Mayried /achabiting	0.143***	0.118*	1.345***	0.176***	0.206***	1.414***
Married/cohabiting	(0.047)	(0.061)	(0.111)	(0.048)	(0.065)	(0.101)
Equaign hown	0.123*	0.125*	-0.097	0.095	0.100	0.192***
Foreign-born	(0.067)	(0.068)	(0.064)	(0.069)	(0.069)	(0.066)
Youth hh head	-0.094	-0.099	0.435***	-0.390***	-0.385***	0.356***
routh iii neau	(0.093)	(0.094)	(0.119)	(0.085)	(0.085)	(0.101)
HH size	0.095***	0.095***	0.021*	0.032**	0.032**	0.026**
nn size	(0.012)	(0.012)	(0.011)	(0.014)	(0.014)	(0.012)
Hakon	0.164***	0.174***	-0.312***	0.170***	0.162***	-0.217***
Urban	(0.039)	(0.042)	(0.034)	(0.041)	(0.042)	(0.034)
Control and Fraterin Constitu	0.567***	0.564***	0.156**	0.504***	0.509***	0.043
Central and Eastern Croatia	(0.043)	(0.043)	(0.078)	(0.042)	(0.042)	(0.080)
Adriatic Croatia	0.190***	0.190***	0.021	0.257***	0.259***	-0.002
	(0.046)	(0.046)	(0.044)	(0.047)	(0.047)	(0.045)
Yrs school of HH head	-0.025***	-0.022**	-0.121***	-0.0295***	-0.0331***	-0.107***
118 school of fin fleau	(0.007)	(0.009)	(0.006)	(0.00703)	(0.00847)	(0.00644)
Dog un voto			-0.455			0.731
Reg. un. rate			(0.464)			(0.456)
Year = 2008	-0.094***	-0.093**	-0.038			
rear = 2006	(0.036)	(0.036)	(0.030)			
Voor = 2010				0.200***	0.199***	-0.037
Year = 2010				(0.037)	(0.037)	(0.034)
Constant	-0.605***	-0.532***	0.593***	-0.223*	-0.316*	0.133
Constant	(0.112)	(0.153)	(0.107)	(0.122)	(0.189)	(0.110)
No. of observations	8,466	15,574	15,574	7,841	14,391	14,391
'rho'		-0.082			0.095	





1st path		2011-2012			2013-2014	
NEET vs work	probit	second-stage	first-stage	probit	second-stage	first-stage
Age: 20-24	-0.751***	-0.803***	1.204***	-0.662***	-0.516***	1.170***
	(0.066)	(0.136)	(0.036)	(0.067)	(0.158)	(0.037)
A 20 24	-1.075***	-1.156***	2.264***	-1.155***	-0.933***	2.325***
Age: 20-24	(0.066)	(0.195)	(0.045)	(0.066)	(0.228)	(0.048)
Eamalog	0.122***	0.131***	-0.354***	0.094**	0.070	-0.351***
Females	(0.038)	(0.043)	(0.031)	(0.038)	(0.044)	(0.033)
Married (ashabiting	0.164***	0.142*	1.215***	0.152***	0.200***	1.275***
Married/cohabiting	(0.052)	(0.074)	(0.097)	(0.052)	(0.066)	(0.096)
Fausian ham	0.186***	0.178**	0.291***	0.134*	0.153**	0.343***
Foreign-born	(0.071)	(0.074)	(0.074)	(0.070)	(0.071)	(0.076)
Vouth bh bood	-0.367***	-0.370***	0.311***	-0.430***	-0.419***	0.337***
Youth hh head	(0.088)	(0.088)	(0.086)	(0.090)	(0.090)	(0.117)
IIII aina	-0.034**	-0.033**	-0.022*	-0.013	-0.011	0.041***
HH size	(0.014)	(0.014)	(0.013)	(0.014)	(0.014)	(0.013)
Halan	0.181***	0.188***	-0.287***	0.034	0.018	-0.241***
Urban	(0.040)	(0.043)	(0.034)	(0.040)	(0.042)	(0.035)
Central and Eastern Croatia	0.461***	0.459***	0.054	0.344***	0.348***	0.035
Central and Eastern Croatia	(0.043)	(0.044)	(0.074)	(0.045)	(0.045)	(0.074)
Advictic Cucatio	0.179***	0.176***	0.069	0.171***	0.178***	0.099**
Adriatic Croatia	(0.047)	(0.047)	(0.042)	(0.045)	(0.045)	(0.043)
Vrs sahaal of UU haad	-0.028***	-0.025**	-0.119***	-0.020***	-0.026***	-0.108***
Yrs school of HH head	(0.007)	(0.010)	(0.006)	(0.007)	(0.010)	(0.006)
Dog vy wate			0.304			0.490
Reg. un. rate			(0.404)			(0.377)
Year = 2012	0.084**	0.085**	-0.043			
rear = 2012	(0.037)	(0.037)	(0.030)			
Year = 2014				-0.089**	-0.081**	0.115***
Year = 2014				(0.037)	(0.037)	(0.032)
Constant	0.524***	0.577***	0.521***	0.713***	0.524**	0.056
Constant	(0.123)	(0.172)	(0.117)	(0.126)	(0.220)	(0.125)
No. of observations	6,763	13,172	13,172	6,514	12,349	12,349
'rho'		-0.067			0.173	





2nd path		2007-2008			2009-2010	
NEET vs train	probit	second-stage	first-stage	probit	second-stage	first-stage
20-24	0.816***	1.257***	-1.305***	0.862***	0.595***	-1.297***
20-24	(0.047)	(0.044)	(0.036)	(0.048)	(0.114)	(0.043)
25-29	1.693***	2.342***	-2.088***	1.609***	1.056***	-2.012***
	(0.065)	(0.047)	(0.040)	(0.058)	(0.266)	(0.045)
Eamalas	-0.282***	-0.441***	0.439***	-0.300***	-0.207***	0.329***
Females	(0.042)	(0.033)	(0.028)	(0.040)	(0.059)	(0.030)
Mannied on achabiting	1.680***	1.339***	-0.256***	1.724***	1.505***	-0.244***
Married or cohabiting	(0.128)	(0.135)	(0.043)	(0.117)	(0.208)	(0.046)
Equaign have	0.025	-0.062	0.114**	0.214***	0.192**	-0.00644
Foreign-born	(0.084)	(0.068)	(0.054)	(0.076)	(0.076)	(0.060)
Youth hh head	0.087	0.275*	-0.257***	-0.079	-0.178	-0.407***
roum nn neau	(0.202)	(0.159)	(0.080)	(0.134)	(0.131)	(0.075)
UU aiga	0.077***	0.021	0.058***	0.034**	0.035**	0.003
HH size	(0.015)	(0.019)	(0.010)	(0.016)	(0.015)	(0.012)
Urban	-0.164***	-0.270***	0.324***	-0.112**	-0.051	0.240***
orban	(0.048)	(0.038)	(0.029)	(0.043)	(0.050)	(0.033)
Central and Eastern Croatia	0.432***	0.129	-0.090	0.474***	0.502***	0.188**
Central and Eastern Croatia	(0.050)	(0.085)	(0.064)	(0.047)	(0.045)	(0.079)
A duintin Countin	0.120**	-0.002	-0.080**	0.204***	0.220***	0.092**
Adriatic Croatia	(0.051)	(0.045)	(0.038)	(0.051)	(0.049)	(0.041)
Yrs school of HH head	-0.111***	-0.108***	0.056***	-0.101***	-0.0858***	0.0460***
118 School of HH Head	(0.008)	(0.010)	(0.005)	(0.009)	(0.013)	(0.005)
Dog un voto			2.670***			0.448
Reg. un. rate			(0.374)			(0.463)
Year = 2008	-0.068	-0.028	0.012			
1eai - 2000	(0.042)	(0.033)	(0.028)			
Year = 2010				0.112***	0.133***	0.103***
rear = 2010				(0.040)	(0.039)	(0.032)
Constant	-0.511***	0.328**	-0.215**	-0.498***	-0.792***	0.503***
Constant	(0.120)	(0.132)	(0.099)	(0.134)	(0.192)	(0.108)
No. of observations	9,026	15,574	15,574	8,780	14,391	14,391
'rho'		-0.900***			0.500*	





2nd path		2011-2012			2013-2014	
NEET vs train	probit	second-stage	first-stage	probit	second-stage	first-stage
20-24	0.828***	0.599***	-1.258***	0.895***	1.146***	-1.164***
20-24	(0.042)	(0.059)	(0.046)	(0.042)	(0.040)	(0.047)
25-29	1.686***	1.147***	-2.020***	1.760***	2.240***	-2.034***
	(0.056)	(0.135)	(0.048)	(0.056)	(0.052)	(0.048)
Eamalag	-0.353***	-0.280***	0.277***	-0.374***	-0.402***	0.226***
Females	(0.038)	(0.040)	(0.030)	(0.038)	(0.034)	(0.031)
Mannied on cohobiting	1.405***	1.215***	-0.208***	1.442***	1.252***	-0.148***
Married or cohabiting	(0.105)	(0.125)	(0.050)	(0.104)	(0.100)	(0.051)
Equaign have	0.322***	0.301***	-0.004	0.397***	0.326***	-0.008
Foreign-born	(0.073)	(0.072)	(0.069)	(0.083)	(0.079)	(0.066)
Youth hh head	0.169	0.077	-0.363***	0.182	0.366***	-0.449***
routh in neau	(0.113)	(0.111)	(0.074)	(0.157)	(0.131)	(0.081)
IIII cine	-0.037**	-0.036**	-0.004	0.043***	0.043***	-0.027**
HH size	(0.016)	(0.015)	(0.012)	(0.0163)	(0.0146)	(0.0123)
Urban	-0.174***	-0.104**	0.306***	-0.206***	-0.223***	0.191***
Ulbali	(0.040)	(0.042)	(0.033)	(0.0400)	(0.0354)	(0.0337)
Central and Eastern Croatia	0.348***	0.389***	0.225***	0.262***	0.127***	-0.109*
Central and Eastern Croatia	(0.044)	(0.042)	(0.069)	(0.0460)	(0.0485)	(0.0619)
Adriatic Croatia	0.194***	0.196***	0.048	0.199***	0.130***	-0.054
Auriauc Croatia	(0.048)	(0.046)	(0.041)	(0.046)	(0.043)	(0.040)
Yrs school of HH head	-0.126***	-0.109***	0.042***	-0.108***	-0.102***	0.035***
113 School of Hill head	(0.008)	(0.009)	(0.006)	(0.007)	(0.007)	(0.006)
Dog un rato			0.484			1.914***
Reg. un. rate			(0.374)			(0.298)
Year = 2012	0.001	0.018	0.072**			
1ea1 - 2012	(0.037)	(0.036)	(0.030)			
Year = 2014				0.072*	0.102***	-0.126***
16a1 – 2014				(0.037)	(0.033)	(0.031)
Constant	0.313**	0.018	0.766***	-0.090	0.062	0.924***
Constant	(0.124)	(0.139)	(0.112)	(0.127)	(0.112)	(0.117)
No. of observations	8,894	13,172	13,172	8,586	12,349	12,349
ʻrho'		0.531***			-0.797***	





- 1st path (NEET vs employed, after selection away from education)
  - o Selection ('rho') not significant
    - pre-crisis (2007-2008) & crisis (2011-2012) 'rho' has a negative sign:
      - non-education type of youths are more likely to get jobs (a market for low-skills?) and/or that education-prone youth don't get job when they go to the labour market (because of 'market failure' or 'wait unemployment' behaviour).
    - crisis (2009-2010) & start of recovery (2013-2014) 'rho' has a positive sign:
      - NEET is stronger for youth who are not the 'education' type and/or youth 'suitable' for education (but who opt-out from education) end-up with jobs (a compositional issue, i.e., high-education graduates opt-out from education and then get jobs?).
- 2<sup>nd</sup> path (NEET vs education, after selection away from employment)
  - Selection ('rho') <u>significant</u>
    - pre-crisis (2007-2008) & start of recovery (2013-2014) 'rho' has a negative sign:
      - non-employable youths 'choose' to invest in education and/or employable youth who don't get a job keep on searching (rather than going into education).
    - crisis (2009-2010 & 2011-2012) 'rho' has a positive sign:
      - youth become NEET due to non-employability and/or those who are employable but don't get a job, 'choose' education.





- Examining the relative importance of the alternative 'paths' offers useful insights not only about the individual 'preferences' but also the wider processes that lead to youth exclusion from the labour market and it is highly informative for policy.
  - o Individual selection into education ("opting") is of limited relevance for explaining the subsequent 'sorting' into non-participation, both prior to and during/after the crisis.
  - Labour market sorting appears highly significant in determining the subsequent choices between non-participation and education ("coping"), with the implication that (unobserved) employability remains a significant factor determining whether nonemployed youth 'invest' in education (or training).
  - These results are consistent with some views that see education in the Western Balkans as being of limited relevance for subsequent employment outcomes
    - 'opting' does not affect subsequent 'sorting',
  - while it also does not target those more in need of skilldevelopment/acquisition (the least employable)
    - 'sorting' appears to have a positive impact on subsequent 'coping' away from NEET.





#### **Policy initiatives**

- According to the *National Youth Programme 2014-2017* (Ministry of Social Policy and Youth, 2014), key issues faced by young people when entering the labour market in Croatia are <u>lack of previous work experience</u> and <u>mismatch</u> between their qualifications and the <u>skill</u> demand.
  - These problems are in particular evident in cases of individuals with lower educational attainment, young mothers and Roma population. Long-term unemployment and large differences in regional youth unemployment rates are also recognized.
    - About 17% of all registered youth unemployed are without prior working experience.
    - About 34% of long-term unemployed young people have no high school education, 28% have a three-year course of vocational education, and only 13% are highly educated.
- Upon joining the EU on 1 July 2013, Croatia became part of the *European Youth Guarantee*.
  - Mainly a continuation of the measures already in place.
  - o Targeted at those registered at the Croatian Employment Service (CES).





#### **Policy initiatives**

- Special measure intended for young people *vocational training without commencing employment* was introduced (amended) by the *Law on the Promotion of Employment* in 2012.
  - 448 participants or 0.5% of the total youth (15-29) population registered at CES in 2010; this increased to 9,583 participants (8.9% share) in 2012, whereas in 2014 28,039 or 38.4% young (15-29) persons participated in this ALPM measure.
  - According to recent evaluation the success of the measures for youth is limited; participation in *vocational training without commencing employment* increased the likelihood of employment by about 1/3 12 months after exiting the measure.
- In 2013 a number of Centres for life-long career guidance (LLCG or CISOK) within the Croatian Employment Service (CES) have been opened throughout the country where individuals can get free information on lifelong guidance and career development, but with the specificity that they are intended for all citizens, not only the registered unemployed, thus possibly covering inactive NEETs as well.





#### Thank you for your attention.

itomic@eizg.hr

The paper is part of the project ZAMAH - The Impact of the Recession on the Structure and Flow of Youth Unemployment in Croatia (HR.3.2.01-0136) that has been funded with the support of the European Social Fund (ESF) which is a part of the European Union (EU) Structural Funds. The paper reflects the views only of the author(s) and none of the institutions cited above can be held responsible for any use which may be made of the information contained therein.

The research has been mainly conducted during Ms Tomić's visiting fellowship at the *LSEE*\*Research on SEE, European Institute, LSE.











#### References

- Bell, D. N. F. and Blanchflower, D. G. (2015). "Youth unemployment in Greece: measuring the challenge", *IZA Journal of European Labor Studies*, 4(1), 1-25.
- Bruno, G. S. F., Marelli, E. and Signorelli, M. (2014). "The Rise of NEET and Youth Unemployment in EU Regions after the Crisis", *Comparative Economic Studies*, 56(4), 592-615.
- Carcillo, S., Fernández, R., Königs, S., Minea, A., (2013). "NEET Youth in the Aftermath of the Crisis: Challenges and Policies", OECD Social, Employment and Migration Working Papers, No. 164, OECD Publishing.
- Dolado, J. J., Jansen, M., Felgueroso, F., Fuentes, A., and Wölfl, A. (2013). "Youth Labour Market Performance in Spain and its Determinants: A Micro-Level Perspective", OECD Economics Department Working Papers, No. 1039, OECD Publishing.
- Eichhorst, W. and Neder, F. (2014). "Youth Unemployment in Mediterranean Countries", IZA Policy Paper, No. 80.
- Eurofound (2012). "NEETs Young people not in employment, education or training: Characteristics, costs and policy responses in Europe", Publications Office of the European Union, Luxembourg.
- Gligorov, V., Iara, A., Landesmann, M., Stehrer, R and Vidovic, H. (2008). "Western Balkan countries: adjustment capacity to external shocks, with a focus on labour markets", wiiw Research Reports, No. 352, wiiw.
- Kelly, E. and McGuinness, S. (2015). "Impact of the Great Recession on unemployed and NEET individuals' labour market transitions in Ireland", *Economic Systems*, 39(1), 59–71.
- Kolev, A. and Saget, C. (2005). "Understanding youth labour market disadvantage: Evidence from south-east Europe", *International Labour Review*, 144(2), 161-187.
- Kovtun, D., Mayer Cirkel, A., Murgasova, Z., Smith, D. and Tambunlertchai, S. (2014). "Boosting Job Growth in the Western Balkans", *IMF Working Papers*, No. 14/16, International Monetary Fund.
- Marelli, E. and Vakulenko, E. (2014). "Youth Unemployment in Italy and Russia: Aggregate Trends and the Role of Individual Determinants", Higher School of Economics Research Paper No. WP BRP 74/EC/2014.
- Mauro, J. and Mitra, S. (2015). "Understanding Out-of-Work and Out-of-School Youth in Europe and Central Asia", World Bank Other Operational Studies 22806, The World Bank.
- Ministry of Social Policy and Youth (2014). *National Youth Programme 2014-2017*. <a href="http://www.mspm.hr/istaknute-teme/mladi-1683/nacionalni-program-za-mlade/1848">http://www.mspm.hr/istaknute-teme/mladi-1683/nacionalni-program-za-mlade/1848</a>

