

Online appendix to: Migration intentions in CESEE: sociodemographic profiles of prospective emigrants and their motives for moving

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I Migration intentions in the young working age population

Table: Share of individuals aged 25 - 39 with migration intentions

Country	Gender			Difference	Education			Difference
	All	Male	Female	Male-female	Low	Medium	High	Medium-high
Czech Republic	3.4%	2.4%	4.3%		0.0%	3.3%	3.9%	
Poland	7.8%	13.5%	2.4%	***	8.2%	8.1%	6.9%	
Romania	10.7%	18.8%	2.7%	***	0.0%	12.0%	8.8%	
Hungary	12.2%	13.3%	11.3%		0.0%	8.0%	23.1%	***
Bosnia and Herzegovina	13.1%	16.9%	9.4%	*	0.0%	11.9%	22.2%	**
CESEE-average	13.3%	16.6%	10.2%	***	15.0%	12.4%	14.7%	
Croatia	13.9%	19.0%	9.0%	**	12.3%	12.1%	18.9%	
Bulgaria	14.4%	18.6%	10.6%		17.5%	19.7%	4.7%	***
Albania	16.6%	19.1%	14.3%		0.0%	19.4%	15.7%	
Serbia	18.3%	19.6%	17.1%		31.6%	16.0%	20.4%	
FYR Macedonia	22.8%	25.0%	20.7%		28.8%	22.0%	20.0%	

Source: OeNB Euro Survey (2017).

Note: Column 5 indicates whether the mean is statistically different between men and women, column 9 indicates whether the mean is statistically different between medium and high skilled. Statistical significance is based on t-tests from robust OLS regressions of migration intentions on gender and education dummies, respectively. *(**)[***] indicate a 10%(5%)[1%] level of significance.

2 Number of observations used for the analysis

2.1 Descriptive statistics

In order to compute the descriptive statistics – migration intentions by country, age, gender and education – we used the full sample and eliminated all observations for which one of the relevant variables is not available (i.e. response was “don’t know” or “no answer” or missing).

The table below lists the total number of observations, the number of missing observations and the number of observations left to compute the descriptive statistics on migration intentions. The information is broken down by country.

¹ Oesterreichische Nationalbank, Foreign Research Division, anna.raggl@oenb.at. Opinions expressed by the authors of studies do not necessarily reflect the official viewpoint of the OeNB or of the Eurosystem. This online appendix provides additional background material to: Raggl, A. K. 2019. Migration intentions in CESEE: sociodemographic profiles of prospective emigrants and their motives for moving. In: OeNB. Focus on European Integration Q1/19.

Available observations for descriptive statistics:

	AL	BA	MK	BG	HR	PL	RO	RS	CZ	HU	Total
All observations	1,000	1,031	1,007	1,018	1,009	1,003	1,055	1,011	1,000	1,000	10,134
Missing info on age				3							
Missing info on education	2			4	4		3		3		16
Missing info on migration intentions	53	68	52	89	33	79	48	48	36	64	570
thereof "don't know"	50	50	49	86	32	65	46	46	35	64	523
thereof "no answer"	3	18	3	3	1	14	2	2	1	0	47
Observations left & used	945	963	955	924	973	924	1,005	963	961	936	9,549

Note: No observations are lost due to missing information on gender. Please consider also that in some cases the information of two variables might be missing. For that reason the final number of observation must not equal the initial number of observation minus the sum of missing data points.

Source: OeNB Euro Survey (2017).

2.2 Econometric estimations

The table below lists the number of observations per country that enter the most exhaustive empirical specification (column 6 in table 2 of the main paper). Most countries are well represented in the regression analysis, but Bosnia and Herzegovina constitutes an outlier when it comes to the number of observations. The variable that is responsible for the small number of observations in this country is the income variable, which is missing in many cases (564).

Available observations for most exhaustive specification of probit regression (Table 2, column 6)

	AL	BA	MK	BG	HR	PL	RO	RS	CZ	HU	Total
All observations (used above)	945	963	955	924	973	924	1,005	963	961	936	9,549
Not used in column 6, Table 2	90	616	350	344	150	300	297	352	118	349	2,966
Used in column 6, Table 2	855	347	605	580	823	624	708	611	843	587	6,583

Source: OeNB Euro Survey (2017).

3 Comparison: migration intentions in 2014 and 2017

Average migration intentions estimated based on the 2014 wave of the OeNB Euro Survey are highly correlated with the results based on the 2017 wave. It is important to note, however, that the data is not directly comparable, because the wording of the survey question changed. It was improved for the 2017 wave in the sense that it now elicits information on individual migration intentions, whereas in the 2014 wave the question addressed the respondent *and* other household members.

Precise wording of the questions in the two surveys:

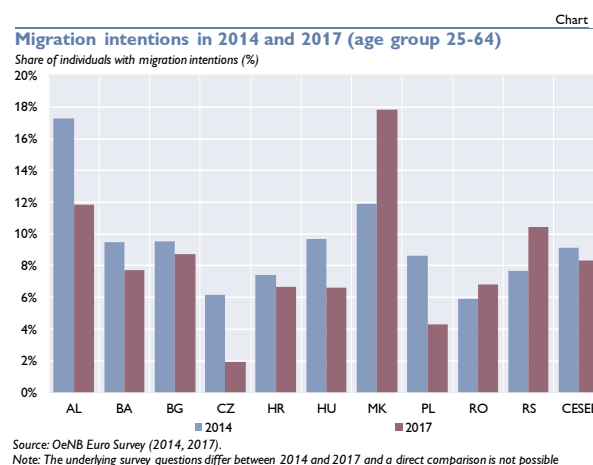
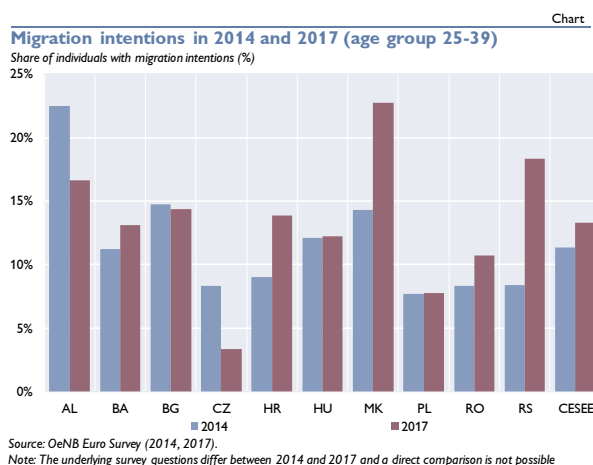
- 2014: *"I would like to ask your opinion about the housing situation in [your country]. Please tell me whether you agree or disagree with the following statements on a scale from 1 (strongly agree) to 6 (strongly disagree). I intend / a member of my household intends to move abroad within the next 12 months."*

Possible answers: *"strongly agree," "agree," "somewhat agree," "somewhat disagree," "disagree," "strongly disagree," "don't know" and "no answer"*

Individuals that answered “*strongly agree*” or “*agree*” are categorized as having the intention to emigrate.

- 2017: “*Do you intend to move abroad within the next 12 months?*”

Possible answers: “*yes,*” “*no,*” “*don’t know,*” and “*no answer*”



Correlation coefficient for 25- to 39-year-olds: 49.1%

Correlation coefficient for 25- to 64-year-olds: 60.8%

On average in CESEE, migration intentions were slightly more widespread in 2017 than in 2014 in the age group of 25- to 39-year-olds, whereas in the full working age population (25- to 64-year-olds), migration intentions were more common in 2014. Considerable differences between the 2014 and 2017 waves are plausible as in the 2014 wave, respondents were asked whether they *or a member of their household* intend to emigrate. Especially parents of children of working age – these parents on average can be expected to be older than 39 and belong to the older part of the working age population – might answer this question with yes if their children intend to emigrate. Thus, in the 2014 wave, migration intentions are likely to be overestimated, especially for individuals that belong to the older part of the working age population.

The 2018 wave of the OeNB Euro Survey again included the question, using the wording of the 2017 wave. As soon as these data become available, a comparison over time (2017 and 2018) will be legitimate.

4 (Polychoric) principal component analysis

The tables below describe the variables that are used in the (polychoric) principal component analyses (P)PCAs, the resulting components and the eigenvalues as well as the cumulative variation that is explained. Survey weights are considered in all (P)PCAs.

4.1 Sociodemographic factors – PPCA: large family

		Component 1	Component 2	Component 3
Children under 6				
	0	-0.14	-0.17	0.12
	1	0.64	0.79	-0.57
	2	1.01	1.24	-0.89
	3	1.36	1.68	-1.20
	4	1.46	1.80	-1.29
	5	1.51	1.87	-1.34
	8	1.66	2.05	-1.47
Children ages 6-15				
	0	-0.17	0.24	-0.05
	1	0.54	-0.79	0.18
	2	0.89	-1.30	0.29
	3	1.27	-1.85	0.42
	4	1.45	-2.12	0.48
	9	1.62	-2.37	0.53
Married				
	0	-0.49	-0.36	-0.82
	1	0.27	0.20	0.46
Size of household				
	1	-0.90	0.34	0.66
	2	-0.34	0.13	0.25
	3	0.03	-0.01	-0.02
	4	0.36	-0.13	-0.26
	5+	0.86	-0.33	-0.64
Eigenvalue		2.44	0.81	0.57
Cumulative variation explained		0.61	0.81	0.96
Description of component		"Large family"	not included	not included

Source: OeNB Euro Survey (2017).

4.2 Individual economic factors – PPCA: wealth

		Component 1	Component 2	Component 3
Owns car	0	-0.34161	0.406307	-0.900882
	1	0.179504	-0.213499	0.47338
Owns main residence	0	-0.547257	-1.179543	-0.480963
	1	0.101579	0.21894	0.089274
Owns 2nd residence	0	-0.104491	0.061023	0.045008
	1	0.822715	-0.480465	-0.354375
Owns other residence	0	-0.155572	0.095489	0.086934
	1	0.774366	-0.4753	-0.432716
Owns other land	0	-0.236589	-0.130686	0.115597
	1	0.630036	0.348017	-0.307833
Eigenvalue		2.438536	0.909762	0.847162
Cumulative variation explained		0.487707	0.669659	0.839092
Description of component		"Wealth"	not included	not included

Source: OeNB Euro Survey (2017).

4.3 Regional development – PCA: prosperous, developing, depressed regions

See box 2 in the main paper for the results of the PCA for variables related to regional economic development.

4.4 Network effects – (P)PCA: indirect networks, modern communication

PCA for indirect networks

	Component 1	Component 2
Share of remittance receivers in PSU	0.71	0.71
Share of remittance receivers in region	0.71	-0.71
Eigenvalue	1.56	0.44
Cumulative variation explained	0.78	1.00
Description of component	"Indirect networks"	Not included

Source: OeNB Euro Survey (2017).

PPCA for modern communication devices

		Component 1	Component 2	Component 3
Internet	0	-0.68	0.46	-0.81
	1	0.29	-0.20	0.35
PC	0	-0.68	0.43	0.82
	1	0.30	-0.19	-0.36
Mobile phone	0	-0.99	-1.52	-0.03
	1	0.10	0.15	0.00
Eigenvalue		2.68	0.29	0.03
Cumulative variation explained		0.89	0.99	1.00
Description of component		"Modern communication"	Not included	Not included

Source: OeNB Euro Survey (2017).

4.5 Trust in institutions – PCA: trust in national institutions, trust in EU

	Component 1	Component 2	Component 3	Component 4	Component 5
Trust in government	-0.43	0.17	-0.33	-0.63	0.26
Trust in police	-0.46	0.01	-0.19	0.48	-0.56
Trust in courts	-0.24	0.21	0.55	0.40	0.59
Trust in domestic banks	0.43	0.44	-0.22	0.18	-0.06
Trust in central bank	0.27	0.24	0.60	-0.40	-0.44
Trust in foreign banks	0.51	0.02	-0.36	0.14	0.25
Trust in EU	0.16	-0.82	0.12	-0.04	0.04
Eigenvalue	1.86	1.27	1.11	1.01	0.97
Cumulative variation explained	0.27	0.45	0.61	0.75	0.89
Description of component	"Trust in local institutions"	"Trust in the EU"	Not included	Not included	Not included

Note: Data are demeaned, i.e. individual average trust is subtracted. High values indicate distrust.

Source: OeNB Euro Survey (2017).

5 Descriptive statistics of variables by country

Table: Means of variables by country

	Share migration intentions	Age	Medium education	High education	Female	PPCA Family	log(size of town)	Log(equiv. Income)	Un-employed	PPCA Wealth	PCA Prosperous region	PCA Developing region	PCA Depressed region	Direct networks	PCA Indirect networks	PPCA Modern comm. devices
AL	0.12	43.77	0.58	0.32	0.52	0.6	10.09	5.2	0.06	0.19	-0.62	1.92	-0.52	0.33	2.59	-0.16
BA	0.07	50.99	0.4	0.12	0.5	-0.18	8.21	5.14	0.16	-0.37	-2.14	0.63	1.09	0.11	0.19	-0.6
BG	0.06	51.73	0.66	0.21	0.52	-0.27	10.09	5.73	0.05	0.38	-0.36	0	-0.59	0.07	-0.31	-0.04
CZ	0.02	48.27	0.81	0.13	0.51	-0.12	9.53	6.57	0.02	-0.21	1.79	-1.33	-0.8	0.04	-0.75	0.36
HR	0.07	48.23	0.74	0.17	0.5	-0.15	9.37	6.47	0.07	0.19	1.89	0.94	-0.78	0.1	-0.08	0.12
HU	0.05	49.76	0.66	0.18	0.54	-0.42	10.09	6.16	0.02	-0.39	0.83	-0.71	-0.9	0.06	-0.49	0.03
MK	0.15	46.52	0.52	0.15	0.51	0.33	9.89	5.13	0.22	0.19	-1.68	1.52	0.99	0.09	-0.06	0.12
PL	0.04	48.37	0.62	0.14	0.51	-0.13	9.64	6.16	0.03	-0.31	1.16	-1.61	-0.02	0.05	-0.74	0.07
RO	0.07	47.93	0.77	0.22	0.53	0.03	10.08	5.36	0.06	-0.27	-0.74	-1.49	0.44	0.1	-0.17	-0.04
RS	0.11	49.37	0.58	0.17	0.54	-0.08	9.78	5.35	0.12	0.18	-0.51	0.22	0.89	0.08	-0.38	-0.07
All	0.08	48.18	0.65	0.19	0.52	-0.01	9.74	5.78	0.07	-0.02	0.15	0.01	-0.13	0.11	0.04	0.01

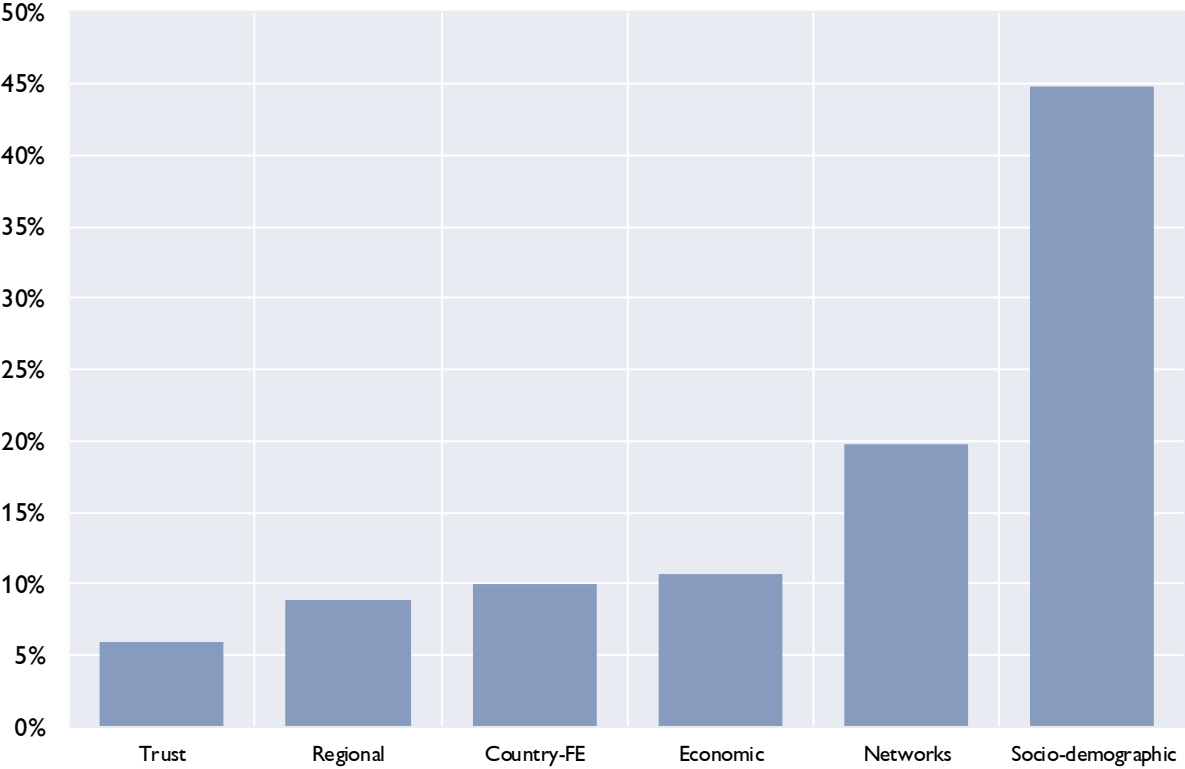
The numbers are averages of the respective variables by country under the application of survey weights and they are computed using the sample that underlies the most detailed specification of table 2 (column 2). Please note, that the levels of the means of the variables based on (P)PCAs are not informative, but they can be compared across countries.

Source: OeNB Euro Survey (2017).

6 Shorrocks-Shapley decomposition

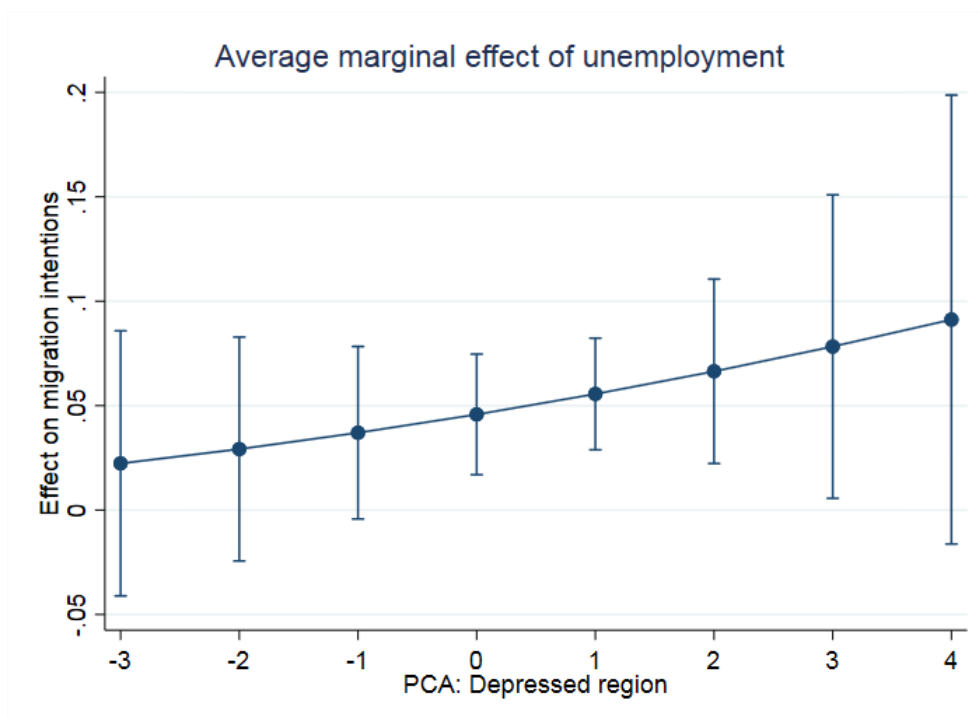
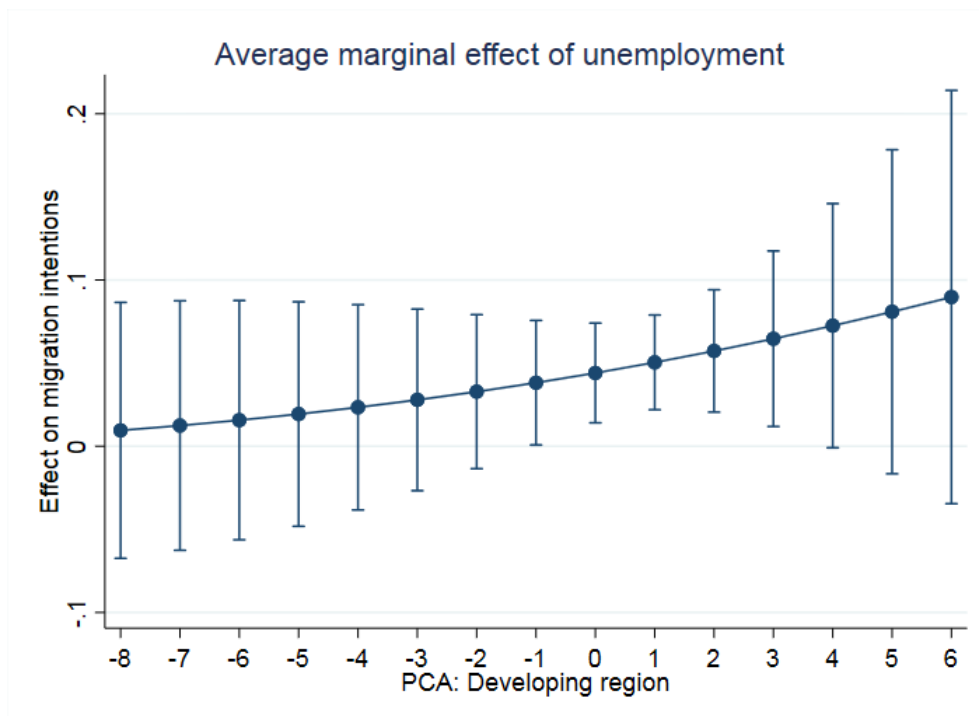
Shorrocks-Shapley decomposition

Contribution of variable groups to explained variation



Source: OeNB Euro Survey (2017).

7 Interaction effects of individual unemployment and regional economic development



Source: OeNB Euro Survey (2017).