The role of the quality of public services in shaping migration intentions in CESEE

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Anna Katharina Raggl
Foreign Research Division, Oesterreichische Nationalbank
www.oenb.at
Introduction

• CESEE countries have been characterized by considerable out-migration in past decades
• Together with unfavorable demographic developments this adds up to a large decline of the working age population (Atoyann et al., 2016; IMF, 2016; IMF, 2017)

• In this study we intend to
  • describe the socio-demographic profiles of the prospective emigrants from CESEE,  
  • learn about their motives to leave, and 
  • highlight in particular the role played by the contentment with public services.

• We use data from the OeNB Euro Survey collected in fall 2018
  • Descriptive analysis
  • OLS and IV estimations with inputs from (Polychoric) Principal Component Analysis
Literature

• Previous research (Raggl, 2019) shows that migration intentions in CESEE are
  • more common among young individuals and men
  • less prevalent among individuals that are part of large families
  • closely related to individual unemployment and regional development
  • significantly higher among individuals with direct and indirect networks

• What role does the contentment with public services play in shaping migration intentions?
  • Which public services play key roles – social security, education, etc.?
  • Are there heterogeneities?

• Dustmann and Okatenko (2014) and Manchin and Orazbayev (2018) work on the link
  between migration intentions and local amenities; the topic is also covered in the EBRD
  Transition report (2018)
Data – The OeNB Euro Survey

Individual-level survey commissioned by OeNB

- 6 EU countries: BG, HR, CZ, HU, PL, RO
- 4 non-EU countries: AL, BA, MK, RS

- Since 2007 (semi)annually
- 1,000 randomly selected individuals/country/wave

- Unique information about (euro) cash holdings, saving behavior and debt; respondents’ economic opinions, expectations and experiences
Fall-wave 2018:
• “Do you intend to move abroad within the next 12 months?”
  • “yes”, “no”, “don’t know”, “no answer”

• + information on socio-demographics, economic situation, region of residence,…
• + special module on public spending: **satisfaction with public services**
  • Social security, public infrastructure, education, health, public safety, econ. development
• + data on night light (VIIR), urban fabric (CORINE) and road density (GRIP)

**Limitations:**
• No distinction between temporary and permanent migration
• Intentions vs. actual behavior
9.0% of individuals aged 25 to 64 intend to move abroad within the next year.

Migration intentions...

- ... decline with age
  - 23.4% among 25-29 year-olds
  - 13.0% among 30-34 year-olds
  - < 10% among those aged 40+
- ... are higher among men
- ... do not differ greatly with education
The **population pyramid** shows the
- gender,
- age,
- education, and the
- migration intentions
of individuals.

**Hypothetical population pyramid:**
If all migration intentions were realized, immediately and contemporaneously, the pyramid would be more constrictive, and there would be less men, *ceteris paribus.*
Contentment with public services in CESEE

- Level of dissatisfaction considerable in CESEE, variation across countries
- Dissatisfaction higher among those with migration intentions (differences stat. sig. except for social security)

Empirical specification

\[ m_i = \alpha_r + \beta^D D_i + \sum_{j=1}^{J} X_j^S \beta_j^S + \sum_{k=1}^{K} X_k^E \beta_k^E + \sum_{l=1}^{L} X_l^R \beta_l^R + \sum_{m=1}^{M} X_m^N \beta_m^N + \sum_{p=1}^{P} X_p^T \beta_p^T + \epsilon_i \]

- \( m_i \) is a binary variable indicating migration intentions,
- \( D_i \) is a variable capturing an individual's **dissatisfaction with public services**, 
- \( X_j^S \) is a vector of \( J \) **socio-demographic** variables, 
- \( X_k^E \) is a vector of \( K \) **economic** factors, 
- \( X_l^R \) is a vector of \( L \) variables related to **regional economic development**, 
- \( X_m^N \) is a vector of \( M \) **network** variables, 
- \( X_p^T \) is a vector of \( P \) factors approximating **trust in institutions**, and 
- \( \alpha_r \) is a country- or PSU-specific constant and \( \epsilon_i \) the remaining error term
### Results: OLS estimation (1)

<table>
<thead>
<tr>
<th></th>
<th>(1) Socio-dem</th>
<th>(2) Economic</th>
<th>(3) Wealth</th>
<th>(4) Regional</th>
<th>(5) Networks</th>
<th>(6) Trust</th>
<th>(7) PSU-FE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPCA: Dissatisfaction w/ pub. ser.</td>
<td>0.00768***</td>
<td>0.00970***</td>
<td>0.00997***</td>
<td>0.00947***</td>
<td>0.00722***</td>
<td>0.00722***</td>
<td>0.00729***</td>
</tr>
<tr>
<td></td>
<td>(2.14)</td>
<td>(2.83)</td>
<td>(2.84)</td>
<td>(2.92)</td>
<td>(3.09)</td>
<td>(2.98)</td>
<td>(3.26)</td>
</tr>
<tr>
<td>Female</td>
<td>-0.0298***</td>
<td>-0.0304***</td>
<td>-0.0304***</td>
<td>-0.0294***</td>
<td>-0.0296***</td>
<td>-0.0262***</td>
<td>-0.0248***</td>
</tr>
<tr>
<td></td>
<td>(-4.71)</td>
<td>(-4.69)</td>
<td>(-4.60)</td>
<td>(-4.50)</td>
<td>(-4.42)</td>
<td>(-4.11)</td>
<td>(-3.80)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.00445***</td>
<td>-0.00418***</td>
<td>-0.00411***</td>
<td>-0.00407***</td>
<td>-0.00396***</td>
<td>-0.00390***</td>
<td>-0.00348***</td>
</tr>
<tr>
<td></td>
<td>(-10.12)</td>
<td>(-8.93)</td>
<td>(-8.84)</td>
<td>(-9.03)</td>
<td>(-9.52)</td>
<td>(-9.57)</td>
<td>(-8.92)</td>
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<td>Medium education</td>
<td>-0.00439</td>
<td>0.00212</td>
<td>0.00231</td>
<td>0.00607</td>
<td>0.0196**</td>
<td>0.0220**</td>
<td>0.0308**</td>
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<td>(-0.48)</td>
<td>(0.24)</td>
<td>(0.26)</td>
<td>(0.67)</td>
<td>(2.00)</td>
<td>(2.18)</td>
<td>(2.41)</td>
</tr>
<tr>
<td>High education</td>
<td>-0.0211</td>
<td>-0.0119</td>
<td>-0.0109</td>
<td>-0.00723</td>
<td>0.0156</td>
<td>0.0171</td>
<td>0.0203</td>
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<td></td>
<td>(-1.35)</td>
<td>(-0.81)</td>
<td>(-0.78)</td>
<td>(-0.55)</td>
<td>(1.38)</td>
<td>(1.50)</td>
<td>(1.42)</td>
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<tr>
<td>PPCA: Large family</td>
<td>-0.0207***</td>
<td>-0.0244***</td>
<td>-0.0236***</td>
<td>-0.0238***</td>
<td>-0.0223***</td>
<td>-0.0226***</td>
<td>-0.0162***</td>
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<tr>
<td></td>
<td>(-7.42)</td>
<td>(-7.66)</td>
<td>(-6.88)</td>
<td>(-6.84)</td>
<td>(-6.77)</td>
<td>(-6.31)</td>
<td>(-3.98)</td>
</tr>
<tr>
<td>Log(size of town)</td>
<td>0.00131</td>
<td>0.00400*</td>
<td>0.00384*</td>
<td>0.00461*</td>
<td>0.00190</td>
<td>0.00184</td>
<td>...</td>
</tr>
<tr>
<td></td>
<td>(0.65)</td>
<td>(1.91)</td>
<td>(1.83)</td>
<td>(1.78)</td>
<td>(0.77)</td>
<td>(0.74)</td>
<td>...</td>
</tr>
</tbody>
</table>

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Results: OLS estimation (2)

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Log(equiv. income)</td>
<td>-0.0251</td>
<td>-0.0246</td>
<td>-0.0174</td>
<td>-0.0291</td>
<td>-0.0357</td>
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<tr>
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<td>(-0.62)</td>
<td>(-0.60)</td>
<td>(-0.42)</td>
<td>(-0.78)</td>
<td>(-0.97)</td>
<td>(-1.20)</td>
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<tr>
<td>Log(equiv. income) sq.</td>
<td>0.000692</td>
<td>0.000668</td>
<td>0.000715</td>
<td>0.00104</td>
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<tr>
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<td>(0.31)</td>
<td>(0.30)</td>
<td>(0.32)</td>
<td>(0.51)</td>
<td>(0.65)</td>
<td>(0.96)</td>
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<tr>
<td>Unemployed</td>
<td>0.114***</td>
<td>0.111***</td>
<td>0.0995***</td>
<td>0.103***</td>
<td>0.0991***</td>
<td>0.0893***</td>
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<tr>
<td></td>
<td>(5.83)</td>
<td>(5.79)</td>
<td>(5.00)</td>
<td>(5.55)</td>
<td>(5.24)</td>
<td>(4.80)</td>
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<tr>
<td>PPCA: Wealth</td>
<td>-0.000967</td>
<td>-0.00205</td>
<td>-0.0128**</td>
<td>-0.00984*</td>
<td>-0.0101*</td>
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<tr>
<td></td>
<td>(-0.15)</td>
<td>(-0.34)</td>
<td>(-2.19)</td>
<td>(-1.73)</td>
<td>(-1.82)</td>
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<tr>
<td>PPCA: Direct networks</td>
<td>0.0524***</td>
<td>0.0512***</td>
<td>0.0489***</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>(7.03)</td>
<td>(6.58)</td>
<td>(5.79)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCA: Indirect networks</td>
<td>0.0222***</td>
<td>0.0224***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.97)</td>
<td>(3.90)</td>
<td></td>
<td></td>
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<tr>
<td>PCA: Trust in local inst.</td>
<td>0.000610</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.24)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCA: Trust in EU</td>
<td>0.00883***</td>
<td>0.00409</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>(3.01)</td>
<td>(1.10)</td>
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<tr>
<td>R^2</td>
<td>0.0897</td>
<td>0.107</td>
<td>0.105</td>
<td>0.108</td>
<td>0.150</td>
<td>0.152</td>
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<tr>
<td>N</td>
<td>9418</td>
<td>7114</td>
<td>7046</td>
<td>7017</td>
<td>6957</td>
<td>6557</td>
</tr>
</tbody>
</table>

*t statistics in parentheses. All specifications include three principal components representing the level of regional development based on night light, regional unemployment, income, and a constant. Specifications (1) to (6) include in addition a full set of country dummies, specification (7) includes PSU fixed effects.  
* p < 0.1, ** p < 0.05, *** p < 0.01
## Results: IV estimation

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PPCA: Dissatisfaction w/ public services</strong></td>
<td>0.00755***</td>
<td>0.126**</td>
<td>0.0854**</td>
<td>0.0153***</td>
<td>0.0168***</td>
<td>0.0166***</td>
</tr>
<tr>
<td>Observations</td>
<td>6604</td>
<td>6593</td>
<td>6593</td>
<td>6604</td>
<td>6593</td>
<td>6593</td>
</tr>
<tr>
<td>Kleibergen-Paap F-statistic</td>
<td>4.260</td>
<td>3.205</td>
<td>27.14</td>
<td>23.96</td>
<td>22.36</td>
<td></td>
</tr>
<tr>
<td>Hanson-J</td>
<td>1.661</td>
<td>7.326</td>
<td>24.73</td>
<td>31.93</td>
<td>36.27</td>
<td></td>
</tr>
<tr>
<td>Hanson-J p</td>
<td>0.646</td>
<td>0.198</td>
<td>0.364</td>
<td>0.235</td>
<td>0.166</td>
<td></td>
</tr>
</tbody>
</table>

**Instrumental variables:**
- PCA Road density (4 components): Yes
- PCA Urban fabric (2 components): No
- State spending inadequate: No

`t` statistics in parentheses. All specifications include the full set of covariates that are used in the most exhaustive OLS specification as well as country fixed effects.

* `p < 0.1`, ** `p < 0.05`, *** `p < 0.01`
Results: OLS estimation – distinguishing by type of public service

Impact of dissatisfaction with public services - OLS estimations

Estimated effect on migration intentions

Note: All specifications include the full set of covariates that are used in the most exhaustive OLS specification as well as country fixed effects.
* p < 0.1, ** p < 0.05, *** p < 0.01.
Conclusions

- 9% of the working-age population in CESEE intends to move abroad within the next year
- Actual emigration would not only change the size but also the demographic decomposition of the population in CESEE

- Factors closely related to individual migration intentions are
  - age and gender
  - family characteristics
  - unemployment
  - networks

- But also the **dissatisfaction with public services** plays a role in shaping migration intentions
Conclusions

Policy relevance:

• Effects of demographic and family characteristics as well as of networks leave little room for policy interventions
• Employment opportunities: currently tight labor markets might reduce migration intentions
• **Public services:** improved quality of public services can reduce emigration pressures and might incentivize re- and immigration

• Yet, emigration did and will challenge social security systems and public finances in the region:
  • **Risk of a vicious circle:** Dissatisfaction with public services → emigration → increased pressure on public finances → decrease in quality of public services → dissatisfaction → emigration…
  • But also opportunity to turn this into a **virtuous circle by adopting appropriate policies**
Danke für Ihre Aufmerksamkeit
Thank you for your attention

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