Migrants and productivity and output growth

Regional and sectoral impacts - regression analysis

The Vienna Institute for International Economic Studies (wiiw)

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Introduction

- Descriptive econometric evidence
- Conditional correlations between migrant variables and
  - TFP growth
  - Labour productivity growth
  - Value added growth
- Levels of analysis
  - Sectoral (31 EU KLEMS sectors)
  - Regional: NUTS 2-digit
- Explanatory variables
  - Share of employed migrants in total employed persons ($shM$)
  - Share of employed high educated migrants in total employed high educated persons ($shM3$)
  - Share of high educated migrants in total migrants ($stM3$)
Related literature

• Peri (2009) on US
  • No evidence that migrants crowded out native employment
  • Robust evidence for increase in total factor productivity
  • Decrease in capital intensity and skill-bias of technical change
  • A 1% increase in employment leads to an increase in income per worker of 0.5%

• Kangasniemi et al. (2009) comparing Spain and US
  • Effects differ across countries
  • Growth accounting approach: negative effects on labour productivity in Spain; small negative effects in UK
  • Large sectoral differences
  • Production function approach: Spain negative effects; UK positive effects
  • Migration policy (selection); feature of the host nations ability to absorb foreign labour
Baseline specification

\[ \Delta X_{ict} = \alpha + \beta_1 shM_{ict} + \beta_2 shM3_{ict} + \beta_3 stM3_{ict} + \text{Dummies} + \varepsilon_{ict} \]

with \( X \) denoting TFP, LP or VA.

Various specifications:

- Pooled cross-section, panel estimation
- Various dummy sets (country, sectors)
- Subsets of variables

Potential problems not properly addressed:

- Endogeneity issues
- Causality issues
Results 1

- Pooled cross-section
  - Small positive effects; sometimes significant
  - No hint on negative effects
  - But neither on positive robust effect

- Country-specific results
  - Migration variables in some cases negative and significant
  - More likely pointing towards endogeneity problem
Results 2

- (Various) panel estimations (pooled)
  - No significant effects (particularly when including industry fixed effects)
  - Positive significant effects of $stM3$ on VA growth

- First differences of explanatory variables
  - Many cases with significantly positive effects (mostly on $shM$)
  - No effects of structure of migrants

- More likely an endogeneity issue
Results 2

- (Various) panel estimations (pooled)
  - No significant effects (particularly when including industry fixed effects)
  - Positive significant effects of $stM_3$ on VA growth

- First differences of explanatory variables
  - Many cases with significantly positive effects (mostly on $shM$)
  - No effects of structure of migrants

- More likely an endogeneity issue

- Panel estimation (country specific)
  - No consistent patterns across countries

- First differences of explanatory variables
  - Many cases with significantly positive effects (mostly on $shM$)
  - No effects of structure of migrants

- Lagged explanatory variables
  - Results differ across countries
Results 3

- Econometric results on subsectors: manufacturing and services
  - In some cases there are positive effects; but not robust
  - Skill structure of migrants in some cases positively significant

- Econometric results on subsectors: low vs. high educational intensive industries
  - Effects not consistent for low educational intensive sectors
  - In many cases positive and significant effects on high educational intensive sectors
  - Structure of migration (shM3 and stM3 is important)

- Results robust with respect to various panel specifications
### Labour market characteristics and migration policies

#### Migrant Integration Policy Index (MIPEX)

<table>
<thead>
<tr>
<th>Country</th>
<th>Labour market access (MIPEX 1)</th>
<th>Antidiscrimination (MIPEX 6)</th>
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<tr>
<td>UK</td>
<td>60</td>
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</tbody>
</table>

Source: [http://www.integrationindex.eu](http://www.integrationindex.eu)
Included in cross-section estimations

- MIPEX 6 positively significant in TFP and LP regressions
- Results for structure of migrants seems to improve
- Holds for manufacturing sectors, but not for service industries
Migrants and regional performance

- Only LP and VA growth considered
- Additional variables: Initial GDP per capita, share of high educated, investment share, capital city dummy
- No significant effect in productivity equation
- Significant effects in value added growth (endogeneity problem)
- Random effects model: migrant variables (share of high educated migrants) often significantly positive
Summary

• Results point more towards small positive effects if at all
• Large country differences
• Migration policies (antidiscrimination) matters

Scope for improving econometrics (proper instruments, specification issues)