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 *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

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)

	Labour market access (MIPEX 1)	Antidiscrimination (MIPEX 6)
Austria	45	42
Belgium	75	75
Denmark	40	33
Spain	90	50
Finland	70	75
France	50	81
Ireland	50	58
Netherlands	70	81
Portugal	90	87
Sweden	100	94
UK	60	81

Source: 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)