

# The impact of Immigration on Polish Export Trade after Membership in the European Union

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# AGENDA

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# Background

# 1. Geek



## 2. Poland's accession to the EU



### 3. Poland's significant economic growth

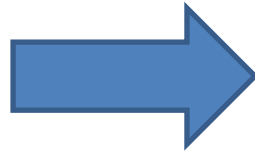
**10%**

# Previous Studies

# Endreas Hatzigeorgiou [2010]



1 emigrant



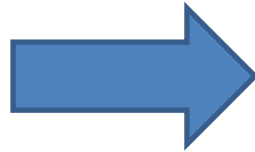
SEK 600,000 (JPY 8,000,000)



# Murat Genc, Masood Gheasi, Peter Nijkamp and Jaques Poot [2010]



10% immigrants



1-2 percent of trade volume

# **Hypothesis and Methodology**

$$\begin{aligned} \ln[\textit{Exports}]_{ijkt} = & \alpha + \\ & \beta_1 \ln[\textit{Per Capita Income}]_{it} + \\ & \beta_2 \ln[\textit{Population}]_{it} + \\ & \beta_3 \ln[\textit{PI Per Capita Income}]_{jt} + \\ & \beta_4 \ln[\textit{PI Population}]_{jt} + \beta_5 \ln[\textit{Distance}]_{ij} + \\ & \beta_6 [\textit{Relative Income}]_{ijt} + \beta_7 [\textit{Relative Price}]_{ijt} + \\ & \beta_8 [\textit{Migrant Stock}]_{it} + \beta_9 [\textit{Year}]_t + \varepsilon_{ijkt} \end{aligned}$$

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- **Exports**
- **Per Capita Income**
- **Population**
- **PI Per Capita Income**
- **PI Population**
- **Distance**
- **Relative Income**
- **Relative Price**
- **Migrant Stock**
- **Year**

# Summary of Results

○ · · · POSITIVE	OVERALL		GRAINS		VEGETABLES		ELECTRONICS		VEHICLES	
X · · · NEGATIVE	WESTERN	CENTRAL	WESTERN	CENTRAL	WESTERN	CENTRAL	WESTERN	CENTRAL	WESTERN	CENTRAL
per capita income	X				X		X	X		○
PL per capita income	○	○					○	○	○	X
population		X							○	X
PL population										
distance	X				X		X		X	
Relative Income						○				
Relative Price	○						○	X		○
Migrant Stock	○	○	○	○	○	○	○	○	X	○
Year				○				X		○

# Concluding Remarks

Poland's government should take some actions, especially **employment creation, to control the acceleration of outflow of emigrants** who expected to have job and better wages, which was associated with Poland's EU accession.

# Appendix

## Data description:

- [*Exports*] $ijkt$  is the value of exports of commodity  $k$  from country  $j$  (Poland) to country  $i$  in year  $t$ . It is available in OECD StatExtracts. For export amounts by commodity groups, we use the data of commodity groups listed on Harmonised System 1988 of OECD ITCS statistics. (Data are in current U.S. dollars.)
- [*Migrant Stock*] $it$  is the number of stock of emigrants from Poland residing in country  $i$  in year  $t$ . These data are available in OECD StatExtracts. Some countries' latest data was not available, so the same number as in previous year. (Unit of measure used; Thousands)
- [*PI Population*] $jt$  is the amount of population in country  $j$  (Poland) in year  $t$ , which is available for all years in OECD StatExtracts. Data are presented in thousands of persons. (Unit of measure used; Thousands)
- [*Population*] $it$  is the amount of population in country  $i$  in year  $t$ , which is available for most nationalities in OECD StatExtracts. For Spanish latest population, the number of previous year is used. Data are presented in thousands of persons. (Unit of measure used; Thousands)

- [*Per Capita Income*] $it$  is the ratio of real gross domestic product to population in country  $i$  in year  $t$ . It is measured in thousands of dollars per person. It is available for covered years and countries in World Development Indicators, World Bank. (Data are in current U.S. dollars.)
- [*Distance*] $ij$  is measured in kilometers between the capital city of the host country  $i$  and the capital city of country  $j$  (Poland), Warsaw.
- [*Relative Income*] $ijt$  is the percentage difference of relative per capita income between country  $j$  (Poland) and country  $i$  in year  $t$ . It is the absolute value of the difference between Poland per capita income and the per capita income of country  $i$  relative to the per capita income of  $i$ .
- [*Relative Price*] $ijt$  is the relative delivered price of exports in year  $t$ . It is the absolute value of the host country's import value index for aggregate imports relative to host country's consumer price index. Data for import value index and consumer price index come from the website of World Bank, "Import value index (2000=100)" and "Consumer price index (2010=100)".
- [*Year*] $t$  is a trend variable that ranges from zero to eight, corresponding to the years 2005, 2006, ... , through 2013.



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