

Tradability of Output and the Current Account in Europe

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in a Comparative Perspective

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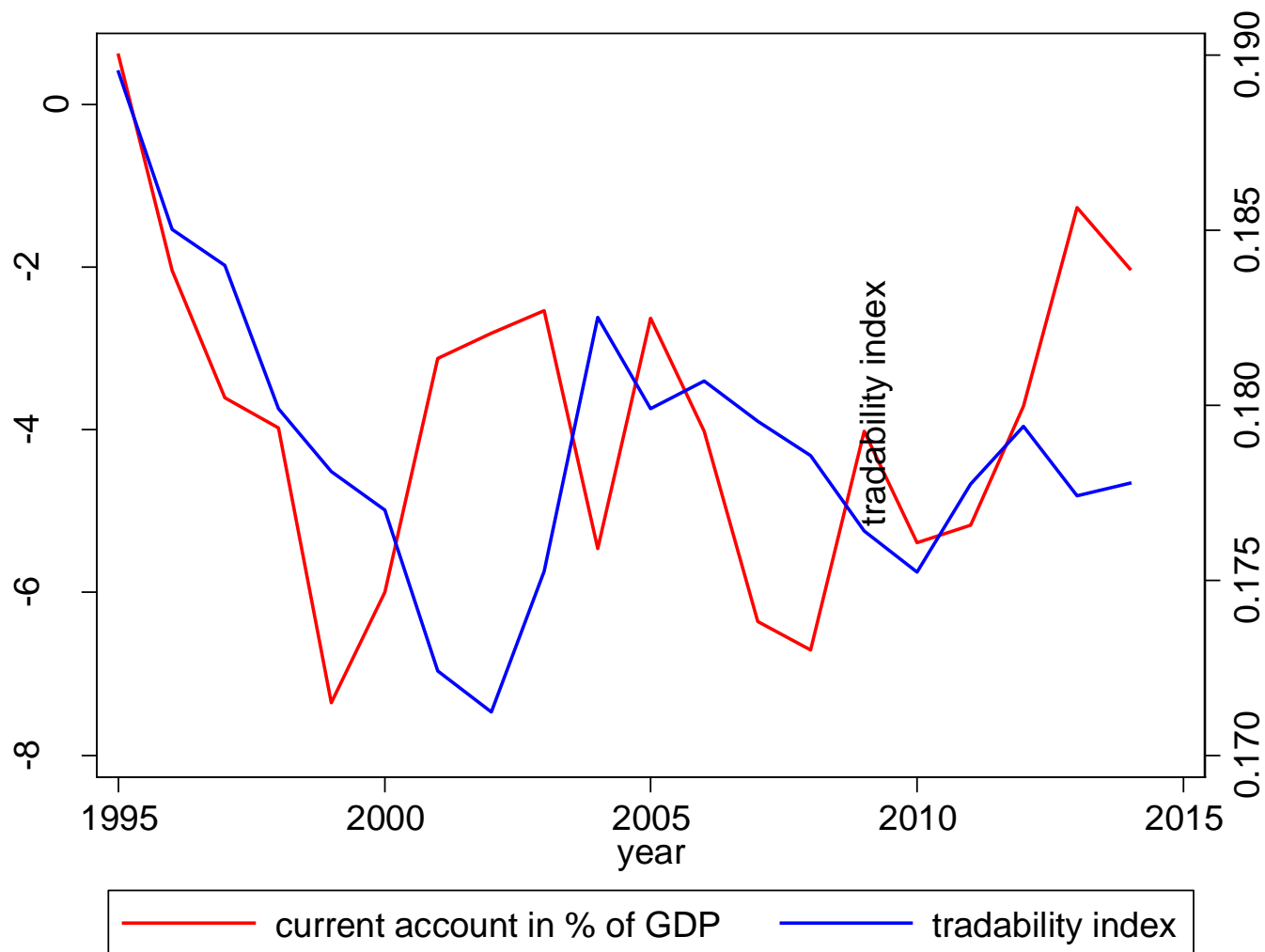
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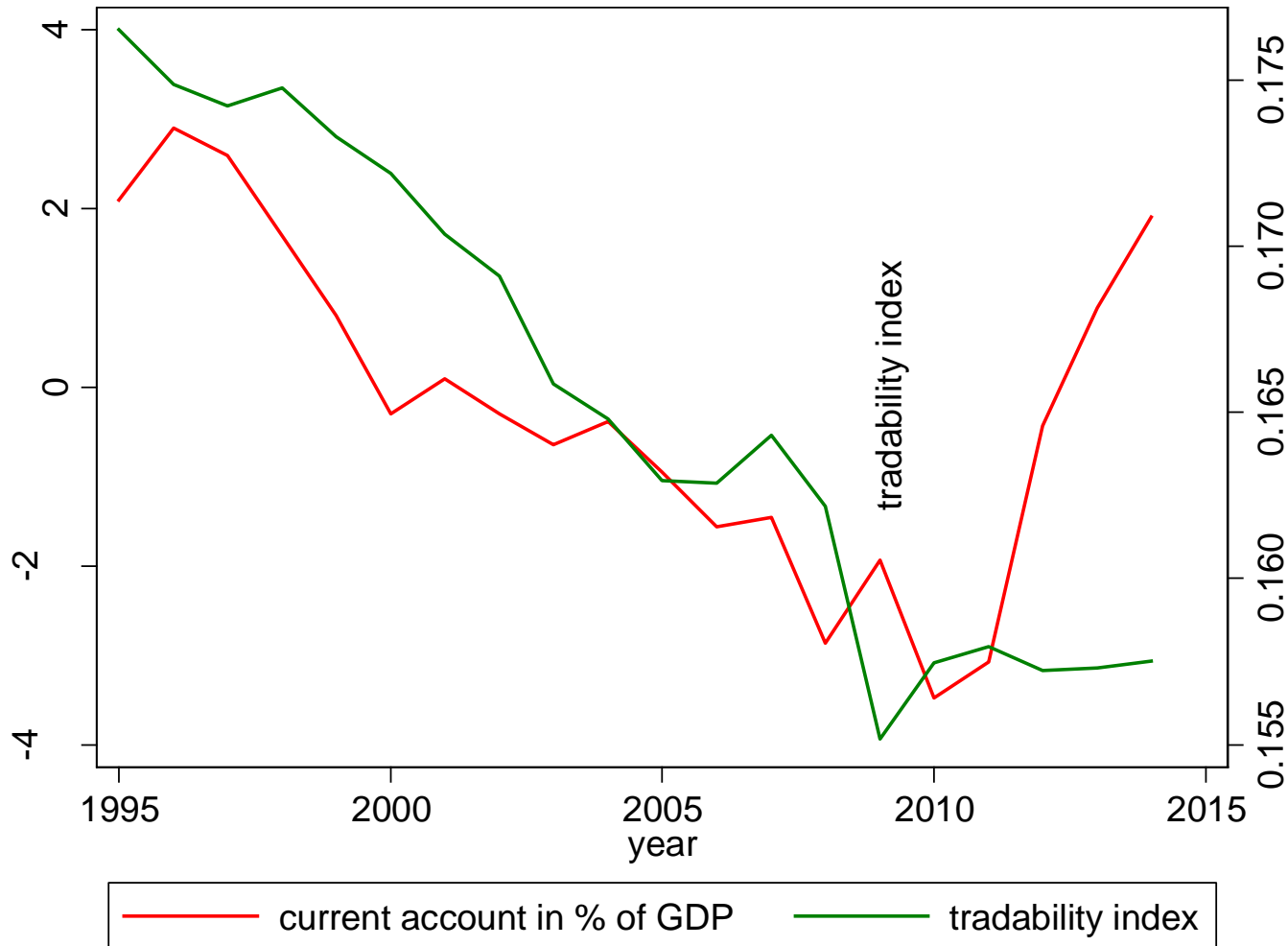
Motivation

- External equilibrium essential for macroeconomic stability
- De-industrialisation tendencies in Europe
- ‘Renaissance’ of industrial policy
- Shift the debate from manufacturing vs. services to a debate about tradables vs. non-tradables
- Need for a comprehensive indicator for the tradability of output

Tradability and the Current Account: Poland



Tradability and the Current Account: Italy



Contributions

- Derivation of the **tradability hypothesis** from a standard inter-temporal model of the current account
- Develop a **tradability index (TI)** that summarises the tradability of the output a country produces
- Econometric test of the **tradability hypothesis** (short term and long term relationship)
- Establish the tradability of output as a **determinant of the current account**

The Tradability Index

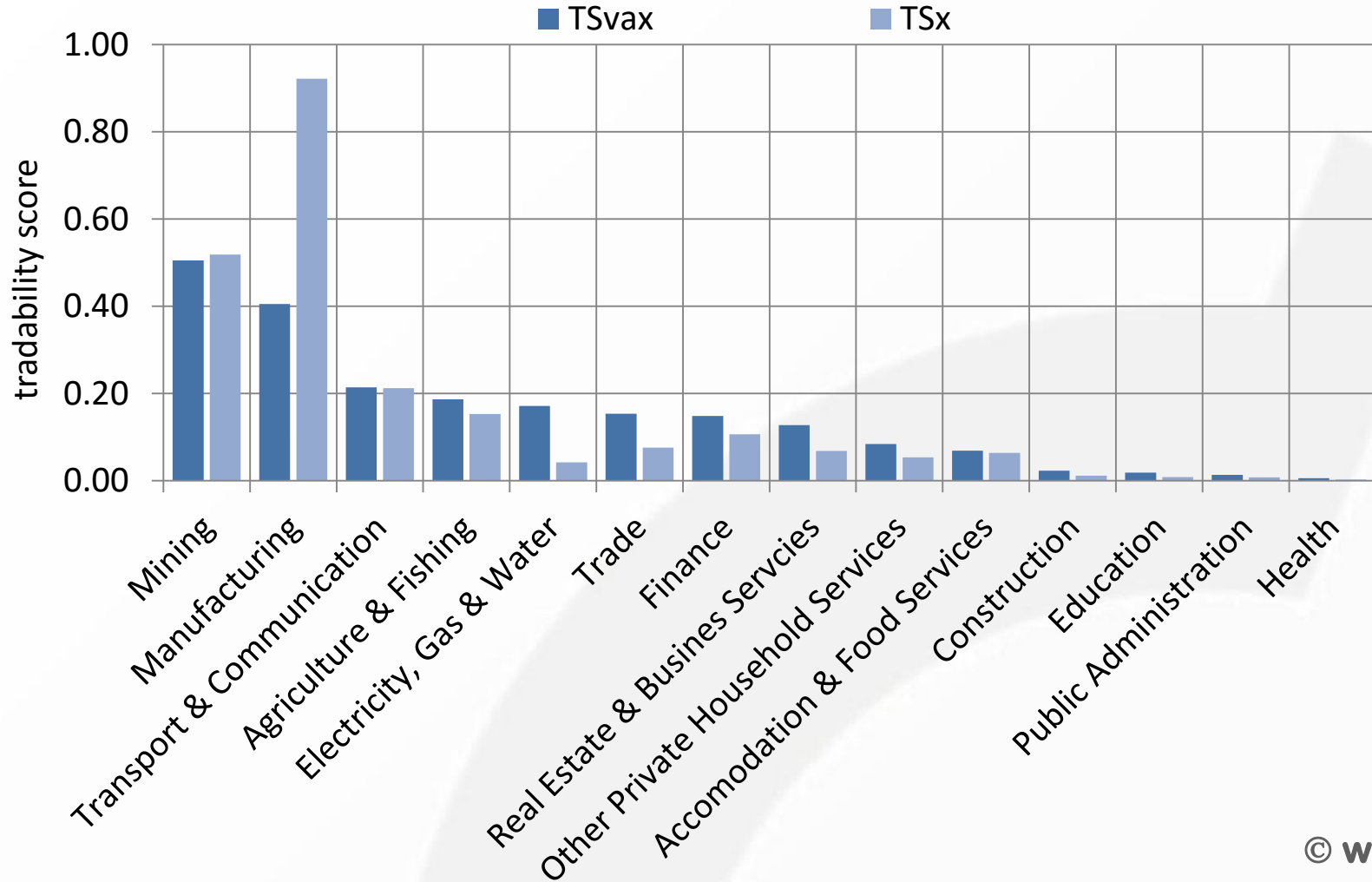
- The TI is calculated based on (i) the global tradability score of industries i and (ii) country j 's industry structure:

$$TI_t^j = \sum_i \frac{VAX_i^{global}}{VA_i^{global}} \cdot \frac{VA_{i,t}^j}{\sum_i VA_{i,t}^j}$$

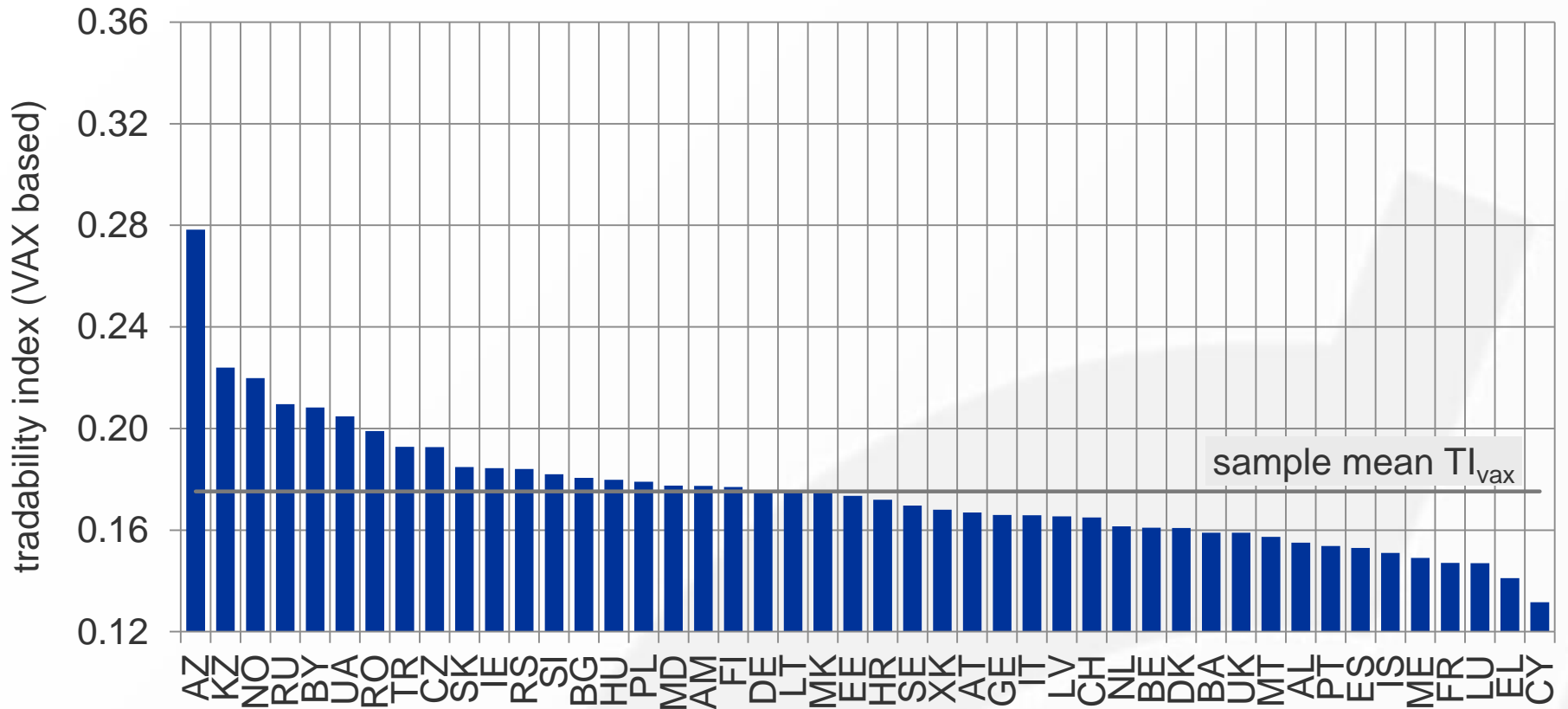
tradability score (TS) of industry i *value added shares of country j*

- The TI
 - is the expected openness of a country given its economic structure
 - is independent of country size
 - does not reflect a country's exports
 - is (to a large degree) independent of a country's trade policy

The Tradability Scores (TS) across Industries

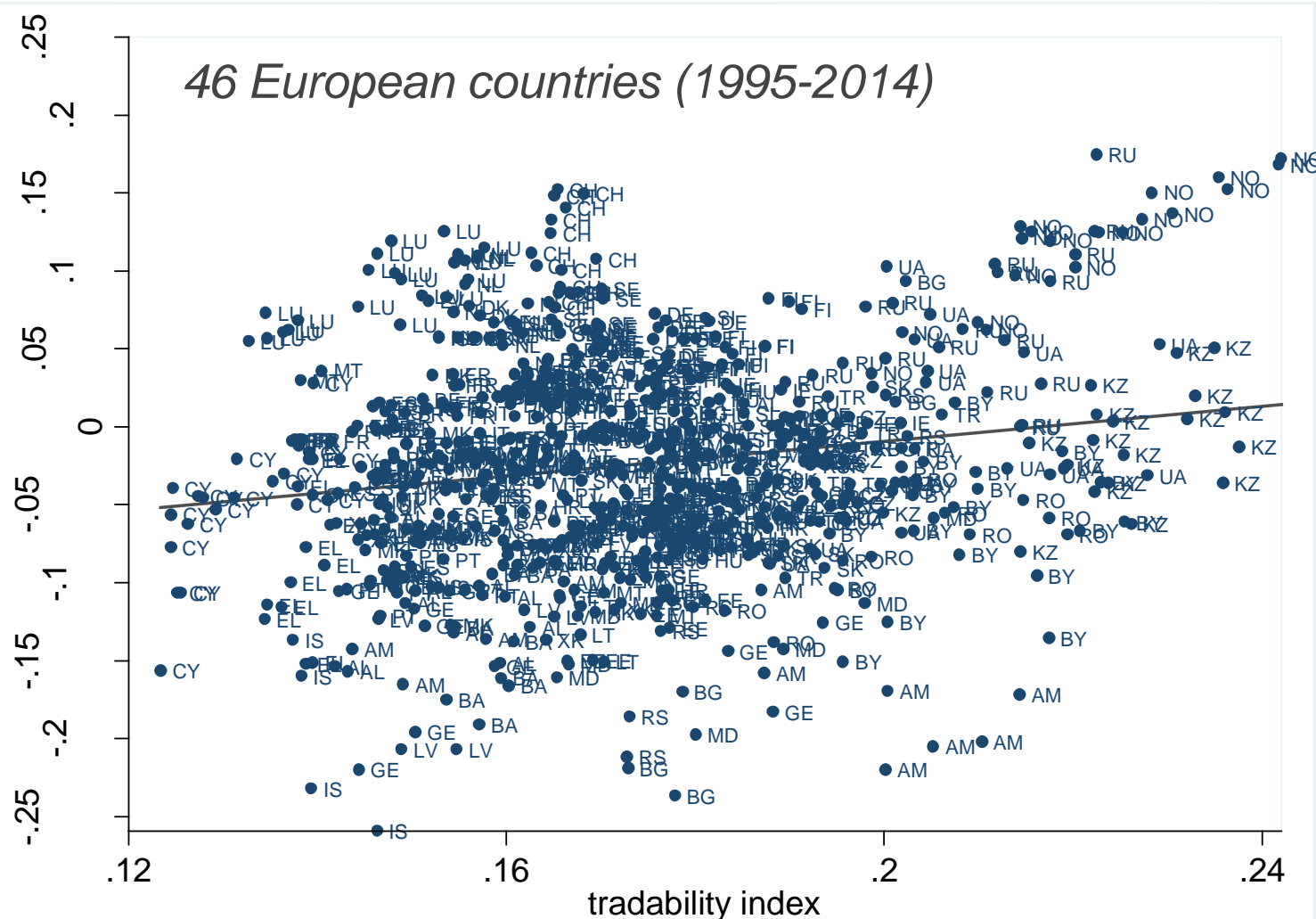


The Tradability Index – VAX based



- Commodity exporters have highest TI values
- Lower end of the distribution occupied by EU members (FR, LU, EL, CY)
- DE has an average TI index

The Current Account – Tradability Nexus



Note: Sample period 1995-2014; AZ and ME excluded. TI is VAX-based.

Econometric model

- CA (in % of GDP) & TI are I(1) as are most other explanatory variables
 - Estimate long run relationship using country averages

Cross-section model

(LR relationship)

$$ca_c = \alpha + \beta \cdot TI_c + \mathbf{X}_c \cdot \gamma + \varepsilon_c$$

- Estimate short run relationship with panel in 1st differences

Panel data model estimated in 1st differences

(SR relationship)

$$\Delta ca_{c,t} = \alpha + \beta \cdot \Delta TI_{c,t} + \Delta \mathbf{X}_{c,t} \cdot \gamma + \mu_c + \delta_t + \varepsilon_{c,t}$$

Results – Long term relationships (cross section)

Dependent variable: Current Account Position in % of GDP						
	(1)	(2)	(3)	(4)	(5)	(6)
Tlvox	0.6124*	1.4642***	0.9029***	0.7658***	0.6050***	0.5961***
gdp growth		-0.9815***	-0.9091***	-0.7083***	-0.7807***	-0.8178***
rel gdpcap		0.0648***	0.0498***	0.0453***	0.0455***	0.0491***
rel gdpcap sq.		0.0027				
gov bal			0.1578	0.2272*	0.1583	0.1087
nfa			0.0485***	0.0527***	0.0531***	0.0533***
dep ratio				-0.0134***	-0.0132***	-0.0127***
cap_int				-0.1972	-0.1607	-0.1430
dom cred				-0.0040	-0.0061	-0.0060
oil					0.0222	0.0240
EA MS						-0.0100
Observations	46	46	46	46	46	46
R-squared	0.0623	0.7592	0.8953	0.9175	0.9210	0.9223
R-squared adj.	0.041	0.736	0.882	0.900	0.901	0.900
F-test	3.44	42.15	67.99	55.58	44.60	39.59

The role of the exchange rate

Dependent variable:	Current Account Position in % of GDP				
	(1)	(2)	(3)	(4)	(5)
Tl _{vax}	0.6050***	0.6050***	0.6077***	0.5443***	0.6014***
gdp growth	-0.7807***	-0.7515***	-0.7595***	-0.6554***	-0.7787***
rel gdpcap	0.0455***	0.0389***	0.0464***	0.0460***	0.0454***
gov bal	0.1583	0.1311	0.1576	0.1633	0.1614
nfa	0.0531***	0.0533***	0.0529***	0.0538***	0.0531***
dep ratio	-0.0132***	-0.0132***	-0.0135***	-0.0155***	-0.0132***
cap_int	-0.1607	-0.1625	-0.1523	-0.1214	-0.1616
dom cred	-0.0061	-0.0093	-0.0065	-0.0102	-0.0059
oil	0.0222	0.0234	0.0226	0.0287	0.0222
pl_con		0.0175			
Δpl_con			-0.0086		
ΔREER_ulc				-0.0237*	
over_eval					-0.0012
Observations	46	46	46	46	46
R-squared	0.921	0.922	0.921	0.926	0.921
R-squared adj.	0.901	0.900	0.899	0.904	0.898
F-test	44.60	40.82	41.70	42.22	39.23

Further results

- Tradability hypothesis holds when controlling for relative prices (real exchange rate)
- Tradability hypothesis holds in the short term
- Tradability hypothesis holds for various sub-groups of countries
- Tradability hypothesis holds for the gross trade based TI measures and (to a lesser extent) for the share of manufacturing

Conclusions

- Tradability of output established as determinant of the current account
- Countries specialising in low tradability sectors tend to run current account deficits also in the longer run
- Tradability of output seems to matter for both developed and emerging Europe
- Specialisation patterns relevant for the external balance
- Relevance of industrial policies

**Thank you
for your Attention!**
