

Impact of price and cost competitiveness on intra- and extra-euro area trade

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Outline

- Motivation
- Data
- Estimation
- Results:
 - Exports of goods
 - Imports of goods
- Conclusions

Motivation

- Restoring competitiveness has been one of the main policy goals in several EA countries and the policy focus was on prices/costs
- A currency union is a special case, as the exchange rate is fixed and deficit countries should lower prices/costs or surplus countries should accept higher inflation
- As this effort might be painful, it is important to know how much gain in price/cost competitiveness is needed to boost trade
- Almost half of euro area trade is conducted inside the euro
- Effect of price competitiveness might be different in extra- vs. intra EA trade

Theoretical indications

It is not clear a priori which market (intra or extra euro area) is more sensitive to price differentials

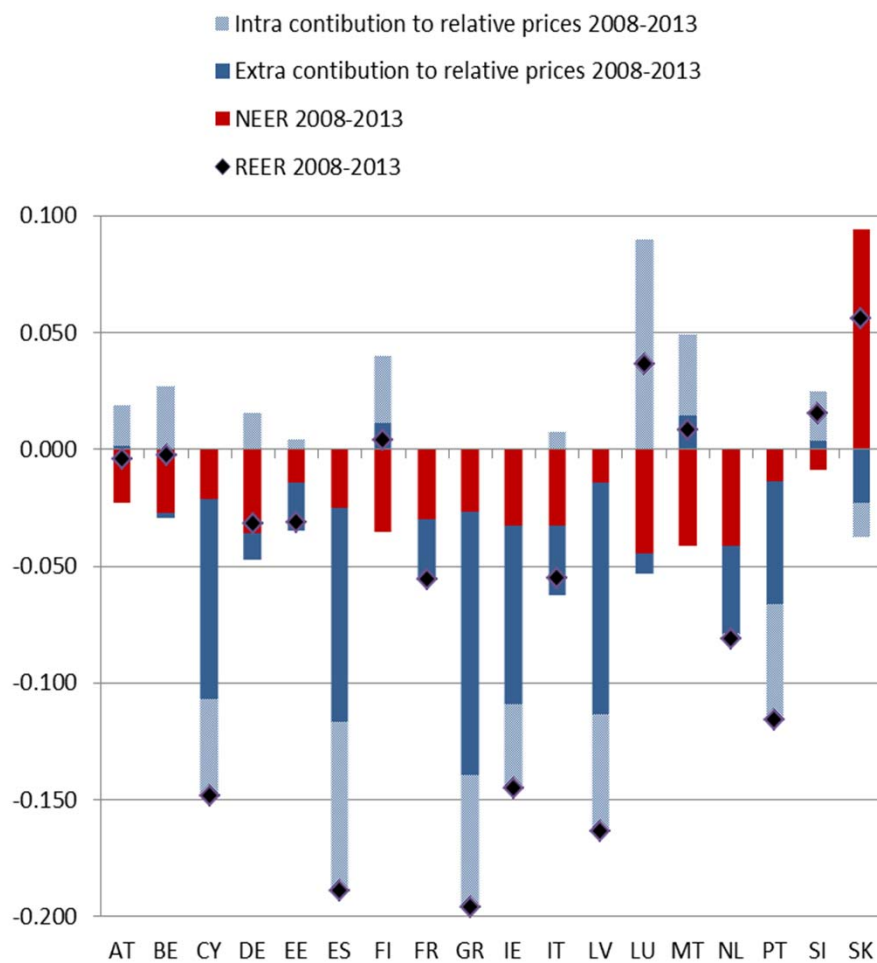
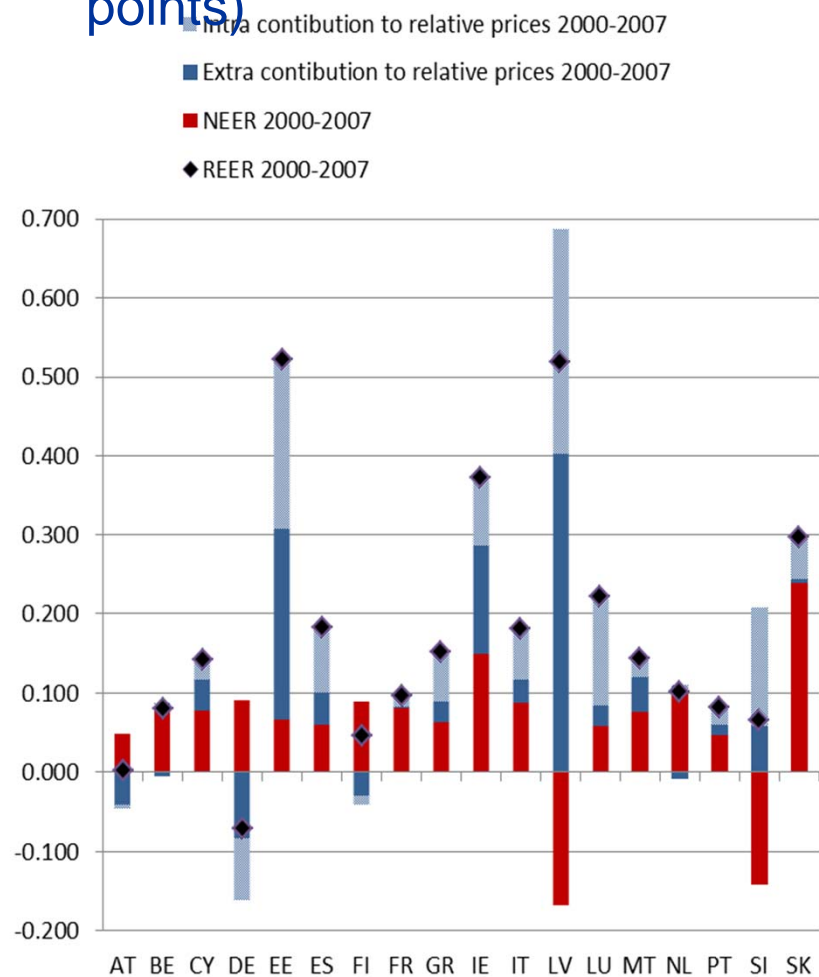
- A common currency leads to increased market integration → increased substitutability among products → greater role for price/cost competitiveness inside the EA (Blanchard and Giavazzi, 2002)
- Competition outside the euro area also increased due to the presence of emerging countries in the market → greater role for price/cost competitiveness outside the EA
- The answer can be provided only through empirical analysis

Literature: Cross country evidence scarce and inconclusive

- Intra EA elasticities are found to be larger than extra EA elasticities (Stirbock 2006, Stahn 2006, Pluyaud 2006, Bayoumi et al. 2011)
- Intra EA elasticities are found to be smaller than extra EA elasticities Estrada et. al. (2004)
- Ahearne et. al. (2007): RER appreciation affects more extra trade balances

Patterns in competitiveness

ULCT-based harmonized competitiveness indicators and their decomposition, (percentage changes and contributions in percentage points)



Data and variables

- Quarterly data from 1995:Q1 – 2013:Q3; 75 observations
- 18 EA countries
- Variables:
- **Export and import volumes**, goods (ESA1995), (both intra- and extra- euro area)
- **Foreign Demand**: geometric weighted average of imports to the euro area member state from main trading partners in the euro-area (intra- euro area) and 20 main trading partners of the euro area (extra-euro area trade)
- **Domestic demand**: Eurostat
- **Harmonised Competitiveness Indicators (HCIs)** : Real effective exchange rates of each EA member state against 17 main trading partners in the euro area (intra) and the 20 most important trading partners of the euro area (extra), based on relative measures of CPI, domestic sales PPI, ULCM, ULCT and GDP deflators

Empirical methodology

- Unit root tests show evidence that most variables are $I(1)$
- Test for cointegration (CI) with Engel-Granger and the Phillips Ouliaris procedure
 - Exports: Foreign demand, HCI
 - Imports: Domestic demand, Exports, HCI
- If CI found, an error correction model is estimated
- If not, a simple dynamic model in growth rates is estimated
- A general to specific approach was used (starting with 4 lags and automatically removing the insignificant ones)
- The resulting models satisfy the diagnostic tests
- Dummies were included to account for outliers

Effect of HCIs on intra exports of goods

	AT	BE	CY	DE	EE	ES	FI	FR	GR	IE(1)	MT	NL	PT	SI	IT	LU	SK	LV
CPI		-1.322**			-2.686***	3.731***						-1.347***						
GDP		-1.673**			-2.174***	1.740***						-1.534***						
PPI					-3.814***	4.213***						-1.939***						
ULCM					-0.629***	0.946***				-0.830***		-0.937***						
ULCT					-0.974***	1.289***				-1.387***		-1.501***						

(1) cointegration found only for ULCM and ULCT equations

Note: *, **, ***, denote significance at 10%, 5% and 1% level respectively.

Long run coefficients from cointegrating equations.

- Only in 5 countries (out of 11 where co-integration was identified) some or all HCIs are found to be negative and significant (BE, EE, ES, IE, NL).

Effect of HCIs on extra exports of goods

	AT	BE	DE	EE	ES	FI	FR	GR	IE	NL	PT	SI	IT	LV
CPI	-0.610***	-0.391***	-0.281***	-2.969***	-0.440***	-0.240*	-0.670***	-0.630***	-1.032***	-0.166***	-0.147*	-0.418***	-0.494***	-0.489***
GDP	-0.614***	-0.384***	-0.285***	-1.414**	-0.407***	-0.290**	-0.700***	-0.626***	-1.146***	-0.176***	-0.165**	-0.394**	-0.489***	-0.403***
PPI	-0.711***	-0.479***	-0.288***	-2.711***	-0.505***	-0.430***	-0.750***	-0.764***	-1.448***	-0.218***	-0.176*	-0.364**	-0.578***	-0.460***
ULCM	-0.452***	-0.355***	-0.270***	-0.521**	-0.354***	-0.248**	-0.600***	-0.492***	-0.553***	-0.129***	-0.157**	-0.223*	-0.391***	-0.179***
ULCT	-0.578***	-0.388***	-0.291***	-0.754***	-0.412***	-0.270**	-0.647***	-0.443***	-0.747***	-0.157***	-0.141*	-0.325**	-0.408***	-0.208***

Note: *, **,***, denote significance at 10%, 5% and 1% level respectively.
Long run coefficients from cointegrating equations.

- In 14 out of the 18 countries all HCIs seem to matter for exports volumes

Summary exports

- Across countries, HCIs appear to matter more (have a significant effect) mostly for extra euro area exports.
- In the 5 countries where both intra and extra import elasticities were estimated, the intra- euro area elasticities turn out to be larger across all the HCIs.

Effects of HCIs on intra imports of goods

	AT	BE	CY	DE	EE	ES	FI	FR	G R	IE	MT	NL	PT	SI	IT	LU	SK	LV
CPI							0.610*											
GDP							0.363*						1.421***			0.503*		
PPI			0.663** *															
ULCM	0.531**						0.374***			0.368***	0.895*		0.451*					
ULCT							0.421*			0.368***			0.350*			0.753**		

Note: *, **, ***, denote significance at 10%, 5% and 1% level respectively.
Long run coefficients from cointegrating equations.

- We established cointegrating relationships for less cases compared to exports: for 7 countries for intra- and 8 countries for extra- imports.
- HCIs have an insignificant impact for most countries.

Effects of HCIs on extra imports of goods

	AT	BE	CY	DE	EE	ES	FI	FR	GR	IE	MT	NL	PT	SI	IT	LU	SK	LV
CPI		0.302** *				0.179*	0.305***		1.064***		0.855*	0.192***					0.280** *	
GDP		0.300** *				0.171*	0.355***		0.842***		1.006***	0.195***					0.381** *	
PPI		0.313** *				0.182*	0.319***		1.109***		0.586*	0.215***					0.464** *	
ULCM		0.258** *	0.278 *				0.268***				0.793**	0.140***					0.165** *	
ULCT		0.320** *					0.233***				0.968***	0.192***					0.286** *	

Note: *, **,***, denote significance at 10%, 5% and 1% level respectively.
Long run coefficients from cointegrating equations.

- HCIs significant in more cases than for intra euro area imports.

Summary imports

- Across countries, HCIs appear to matter more (have a significant effect) mostly for extra euro area imports.
- In the 2 countries where both intra and extra import elasticities were estimated, the intra- euro area elasticities turn out to be larger across the HCIs.

Conclusions

- external adjustment was on the extra side to a large extent
- the role of price/cost competitiveness should not be overestimated, in particular for the intra-euro area trade
- for the countries where HCIs appeared to be significant in both extra-/intra exports and imports the coefficients are found to be larger in the case of intra-euro area exports and imports
- ongoing depreciation of the Euro is expected to contribute to improving trade balance vis-a-vis non-euro countries

Reserve Slides

Deterioration in the current countries in 2000 – 2007 somewhat intra driven; improvements in 2007 – 2013 were largely on the extra side

Change in CA balance and trade balances (percentage points)

Country	2007 vs 2000			2013 vs 2007		
	CA balance	intra-euro area trade balance	extra-euro area trade balance	CA balance	intra-euro area trade balance	extra-euro area trade balance
Austria	4.2	-1.0	3.6	-0.8	0.2	-2.3
Belgium	-2.1	-1.0	0.6	-3.5	-2.8	2.3
Cyprus	-6.4	-4.9	1.3	9.9	4.8	8.5
Germany	9.2	1.6	3.5	0.1	-2.8	2.1
Estonia	-10.6	-4.9	2.4	14.9	6.5	7.1
Spain	-6.0	-1.0	-1.4	10.8	4.7	3.4
Finland	-3.5	-4.1	-1.7	-5.3	-1.7	-2.9
France	-2.2	-1.5	-0.4	-0.3	-1.1	0.1
Greece	-6.9	0.5	-1.6	15.4	4.6	2.9
Ireland	-5.0	-8.2	-4.1	12.0	0.9	7.0
Italy	-1.1	-0.2	-0.6	2.3	0.2	2.4
Luxembourg	-3.1	6.7	-1.9	-4.9	-3.5	1.4
Latvia	-17.5	-3.3	-4.3	21.6	4.4	9.8
Malta	6.0	6.6	-0.3	7.6	-0.9	-6.0
Netherlands	4.7	1.5	2.1	3.7	6.2	-4.5
Portugal	0.2	-0.4	0.9	10.6	4.4	2.9
Slovenia	-1.5	-3.0	6.9	10.5	8.6	-4.0
Slovakia	-1.9	1.6	0.2	7.5	-1.6	9.0

Short run equation results: intra exports

	AT	BE	EE	ES	FI	FR	IE(*)	LU	SK
CPI		-1.065						-3.598	
GDP	-2.688	-0.959	-1.900			-1.759		-0.748	
PPI	-2.763		-3.271			-1.059			-0.461
ULCM	-0.719	-0.333		-0.323	-0.481		-0.366	-0.386	
ULCT	-2.236	-0.498	-1.631	-0.517			-0.755		

Short run equation results: extra exports

EXTRA-Exports	CY	EE	ES	FI	FR	GR	IE	MT	NL	IT	LV
HCI-CPI	-0.875	-1.833	-0.206		-0.575	-1.182			-0.309		-0.498
HCI-GDP	-0.712	-0.950	-0.197	-0.801	-0.566				-0.236		
HCI-PPI	-0.801	-1.310	-0.199	-0.615	-0.517	-0.896	-0.389		-0.253	-0.174	
HCI-ULCM	-0.634				-0.551	-0.552	-0.485		-0.316	-0.190	
HCI-ULCT	-0.949			-0.334	-0.606	-0.897		-1.238	-0.325	-0.250	

Short run equation results: exports

- *In the short-run equations, HCIs appear significant in almost half of the countries for both intra and extra exports.*
- *The HCIs based on broad price (GDP, CPI) and cost (ULCT) tend to have a larger estimated effect on exports in the majority of the countries for which this effect is significant.*
- *AT, BE, LU, SK : only intra euro area exports matter*
- *CY, GR, MT, NL, IT, LV: only extra euro area matter*
- *It is not clear cut whether extra or intra coefficients are higher.*

Short run equation results: intra imports

INTRA-Imports	AT	CY	DE	IE	NL	PT	SI	IT	LU	SK	LV
HCI-CPI								2.870		0.503	
HCI-GDP		1.975	1.182					0.559	0.700	0.847	
HCI-PPI						0.313				0.905	
HCI-ULCM	0.330		0.515	0.686		-1.031					
HCI-ULCT		0.882	1.077		0.803		0.623			0.881	0.675

Short run equation results: extra imports

EXTRA-Imports	BE	CY	DE	EE	ES	FI	FR	GR	SK
HCI-CPI	0.196	1.308	0.191		0.280	0.292	0.389		
HCI-GDP	0.163	0.885	0.187		0.290	0.266	0.398		0.256
HCI-PPI	0.258	2.036	0.180		0.360	0.327		0.668	
HCI-ULCM			0.321		0.275	0.315	0.304	0.284	
HCI-ULCT	0.202	0.957	0.228	0.455		0.214	0.425	0.360	0.208

Short run equation results: imports

- In the short-run equations, HCIs appear significant in almost half of the countries for both intra and extra exports.
- For intra exports:
 - The HCIs based on broad price (GDP, CPI) and cost (ULCT) tend to have a larger estimated effect on imports in the majority of the countries for which this effect is significant.
 - AT, IE, NL, PT, SI, IT, LU, LV: only intra euro area exports matter
- For extra exports:
 - There is no clear cut conclusion which HCI would have a higher import impact: PPI tends to have the largest effect
 - BE, EE, ES, FI, FR, GR, : only extra euro area matter
 - *for the three countries where coefficients are available, intra elasticities tend to be larger.*

Short run equations: intra exports

	AT	BE	EE	ES	FI	FR	IE(*)	LU	SK
HCI-CPI		-1.065* (t-2)						-3.598* (t-1)	
HCI-GDP	-3.156*** (t-4)	-0.959** (t)	-1.514** (t)			-1.441* (t-1)		-0.748* (t-4)	
HCI-PPI	-2.002*** (t), -0.761* (t-4)		-2.538*** (t)			-0.804* (t-3)			-0.461* (t-3)
HCI-ULCM	-0.542** (t-1)	-0.333*** (t-3)		-0.323** (t-3)	-0.481** (t)		-0.366*** (t)	-0.386*** (t-3)	
HCI-ULCT	-1.715*** (t-1)	-0.498* (t-2)	-1.321*** (t)	-0.517* (t-2)	x		-0.630** (t)		

Short run equations: extra exports

EXTRA-Exports	CY	EE	ES	FI	FR	GR	IE	MT	NL	IT	LV
HCI-CPI	-0.945** (t-2)	-1.283*** (t)	-0.261** (t-2)		-0.484*** (t)	-0.725*** (t), -0.654*** (t-2)			-0.309*** (t-2)		- 0.498* (t)
HCI-GDP	-0.780* (t-2)	-0.781** (t-2)	-0.249* (t-2)	-0.534*** (t-2)	-0.479*** (t)				-0.236*** (t-2)		
HCI-PPI	-0.872** (t-2)	-0.925** (t-2)	-0.252* (t-2)	-0.419* (t-2)	-0.444*** (t)	-0.706*** (t), -0.393* (t-2)	-0.389* (t)		- 0.253** * (t-2)	-0.222* (t-4)	
HCI-ULCM	-0.701** (t)				-0.472*** (t)	-0.290** (t-1), -0.379*** (t-2)	-0.292*** (t)		-0.161** (t-1), -0.155** (t-2)	-0.164* (t)	
HCI-ULCT	-1.020*** (t)			-0.301* (t-2)	-0.511*** (t)	-0.598*** (t), -0.475*** (t-2)		- 1.238* * (t-1)	- 0.200** * (t-2)	- 0.213* * (t)	

Short run equations: intra imports

	AT	CY	DE	IE	NL	PT	SI	IT	LU	SK	LV
HCI-CPI								2.348** (t-4)		0.503* (t)	
HCI-GDP		1.975* * (t-1)	1.444** (t)					0.572* (t-1)	0.700** * (t-4)	0.847*** (t)	
HCI-PPI						0.313* (t)				0.905*** (t)	
HCI-ULCM	0.259* (t-4)		0.515*** (t)	0.355*** (t), 0.191** (t-4)		- 0.873*** (t-2)					
HCI-ULCT		0.882* (t-1)	1.077*** (t)		0.723** (t-4)		0.623* (t-2)			0.881*** (t)	0.365** (t-3)

Short run equations: extra imports

EXTRA-Imports	BE	CY	DE	EE	ES	FI	FR	GR	SK
HCI-CPI	0.196** (t)	0.582*(t-2), 0.726**(t-4)	0.191** (t-2)		0.214* (t-1)	0.378** (t)	0.298*** (t-3)		
HCI-GDP	0.163* (t)	0.885*** (t-4)	0.187** (t-2)		0.243** (t-1)	0.351** (t)	0.303*** (t-3)		0.313** (t)
HCI-PPI	0.225** (t)	0.657** (t-2), 0.546* (t-4)	0.180** (t-2)		0.363*** (t-1)	0.429** (t)		0.800*** (t-4)	
HCI-ULCM			0.119* (t), 0.202*** (t-2)		0.225** (t-1)	0.258** * (t)	0.227** (t-3)	0.394*** (t-3)	
HCI-ULCT	0.202** (t)	0.486* (t-2), 0.471* (t-4)	0.228*** (t-2)	0.455* (t)		0.283** (t)	0.325*** (t-3)	0.474** (t-3)	0.251** (t)

Adjusted R squares for short run export equations

	AT	BE	CY	DE	EE	ES	FI	FR	GR	IE	MT	NL	PT	SI	IT	LU	SK	LV
INTRA																		
HCI-CPI		0.56	0.37													0.56		
HCI-GDP	0.47	0.55	0.37		0.50			0.73								0.49		
HCI-PPI	0.45		0.37		0.54			0.73		0.38							0.47	
HCI-ULCM	0.49	0.54	0.37			0.53	0.45			0.56						0.65		
HCI-ULCT	0.52	0.53	0.37		0.70	0.52												
EXTRA																		
HCI-CPI			0.66		0.52	0.56		0.61	0.52			0.76						0.51
HCI-GDP			0.65		0.60	0.57	0.76	0.61				0.68						
HCI-PPI			0.66		0.58	0.56	0.75	0.59	0.46	0.24		0.68			0.52			
HCI-ULCM			0.66					0.61	0.48	0.32		0.67			0.60			
HCI-ULCT			0.71				0.79	0.63	0.53		0.45	0.69			0.58			

Adjusted R squares for short run import equations

INTRA	AT	BE	CY	DE	EE	ES	FI	FR	GR	IE	MT	NL	PT	SI	IT	LU	SK	LV
HCI-CPI															0.87	0.6		
HCI-GDP			0.73	0.60									0.76		0.938	0.5	0.6	
HCI-PPI										0.42			0.79				0.7	
HCI-ULCM	0.77			0.61								0.58		0.85				
HCI-ULCT			0.72	0.56													0.68	0.95
EXTRA	AT	BE	CY	DE	EE	ES	FI	FR	GR	IE	MT	NL	PT	SI	IT	LU	SK	LV
HCI-CPI		0.78	0.63	0.72		0.57	0.58	0.68										
HCI-GDP		0.78	0.55	0.72		0.52	0.57	0.68									0.66	
HCI-PPI		0.78	0.67	0.72		0.63	0.58		0.65									
HCI-ULCM				0.74		0.53	0.74	0.67	0.53									
HCI-ULCT		0.78	0.62	0.73	0.58		0.57	0.71	0.69								0.67	

Estimation (I) **To be amended**

- Export Equations:

$$\Delta \log X_t = \alpha_0 + \beta_i \sum_{i=1}^p \Delta \log X_{t-i} + \gamma_i \sum_{i=0}^q \Delta \log FD_{t-i} + \delta_i \sum_{i=0}^r \Delta \log HCI_{t-i} + \varepsilon_t$$

$\Delta \log X_t$: growth rate of real exports in goods/services

$\Delta \log FD_t$: growth rate of foreign demand

$\Delta \log HCI_t$: growth rate of harmonized competitiveness indicator

- Import Equations:

$$\Delta \log M_t = \alpha_0 + \beta_i \sum_{i=1}^p \Delta \log M_{t-i} + \gamma_i \sum_{i=0}^q \Delta \log DD_{t-i} + \delta_i \sum_{i=0}^r \Delta \log HCI_{t-i} + \zeta_i \sum_{i=0}^s \Delta \log X_{t-i} + u_t$$

$\Delta \log M_t$: growth rate of real imports for goods/services

$\Delta \log DD_t$: growth rate of domestic demand

$\Delta \log X_t$: growth rate of real exports (import content of exports)

Estimation (II) **To be amended**

- Unit root tests show evidence that most variables are $I(1)$
- Test for cointegration with Engel-Granger procedure
- If found, do an error correction model of the form:

Complete equation here

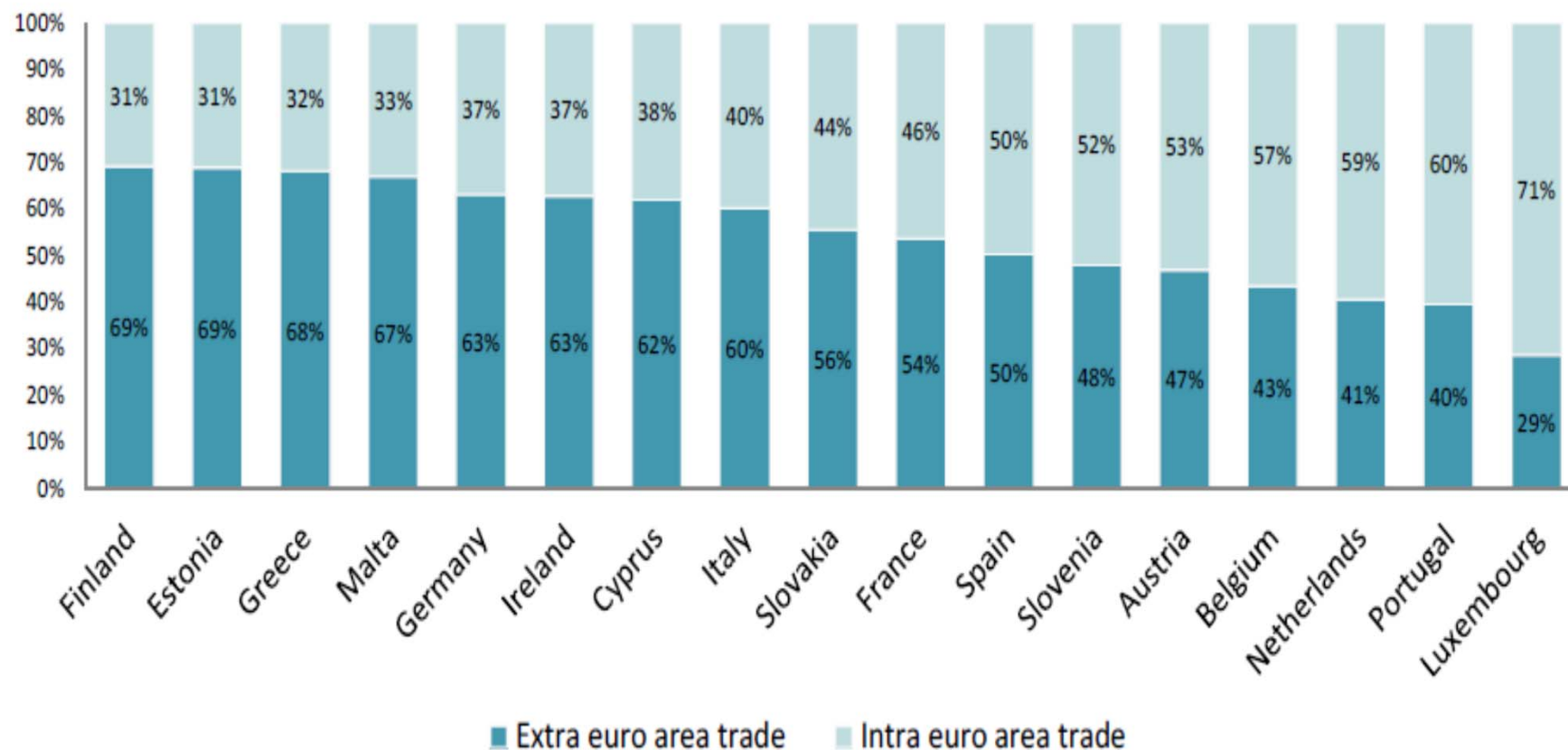
If not, do a simple dynamic model in growth rates:

Complete equation here

- The resulting models satisfy the diagnostic tests
- Dummies were included to account for

Intra vs extra trade (new working paper)

Chart 1. Intra vs. extra euro area trade (Jan. – Aug. 2013)



Source: Eurostat, trade here refers to exports

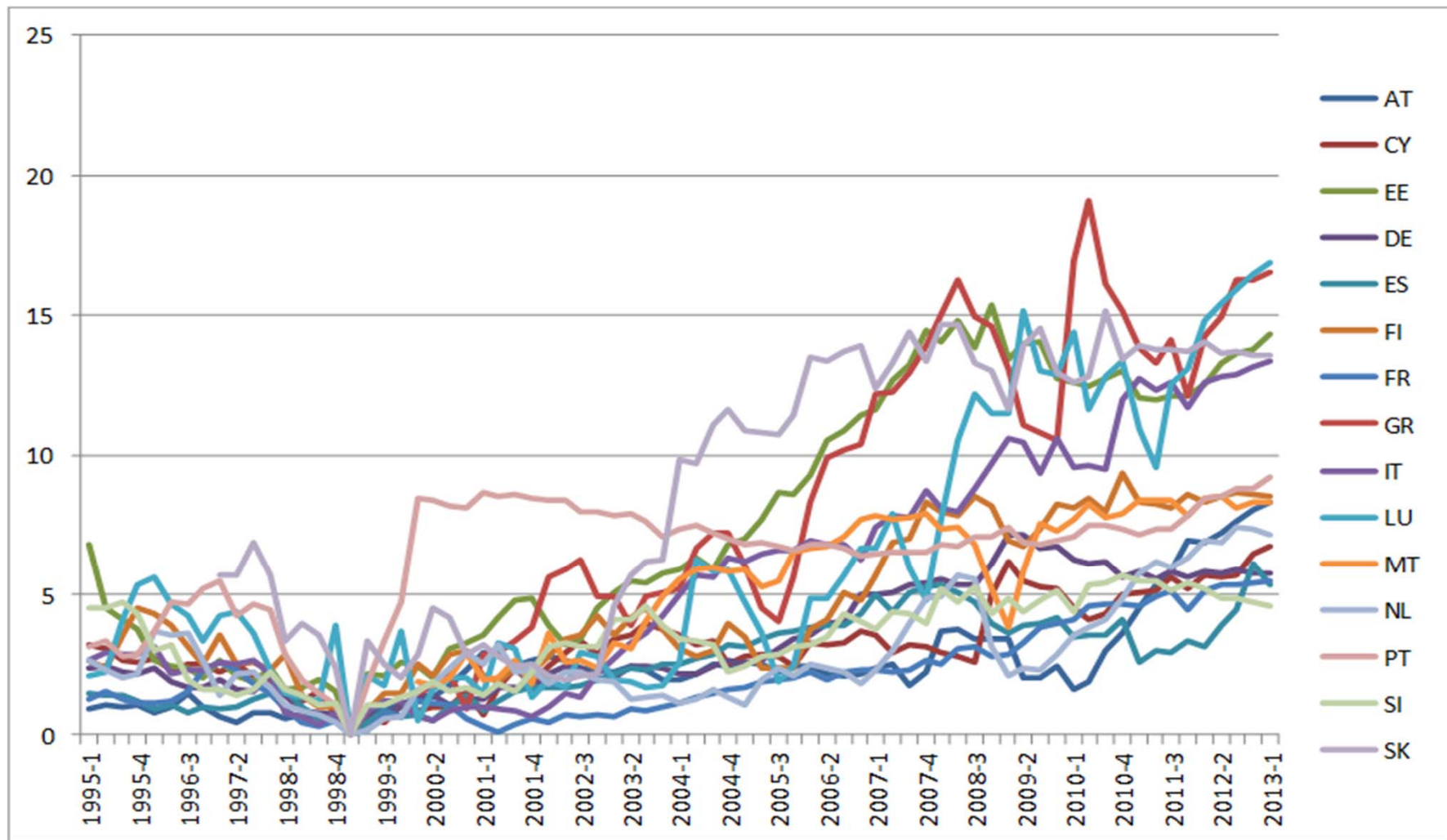
Literature

- M. Ca' Zorzi and B. Schnatz, ECB Working Paper No 833:
- analysis of exports performance for the EA based on different HCIs
- No HCI was found to outperform the others in forecasting EA exports.
- We extend the analysis for each of the 18 EA member states for both exports and imports of goods, intra and extra
- Include data for the crisis period up to 2013Q3

Literature (II)

- With the internationalisation of parts of production processes, exports have become important for imports and vice versa
- - Esteves and Rua (2012) highlight the role of low domestic demand, in motivating firms to find new customers in foreign markets.
- - Allard (2009) and Allard et al. (2005) include export growth in import equations to highlight that part of the manufacturing production of goods is conducted in low cost countries before being reshipped domestically, requiring imported inputs to feed the export production.
- We consider the importance of import content of exports in import equations

Motivation (1): Increasing dispersion of HCIs across all euro area countries



Source: ECB; standard deviation of indices in levels.

Motivation (1b): Increasing dispersion of HCIs across all euro area countries

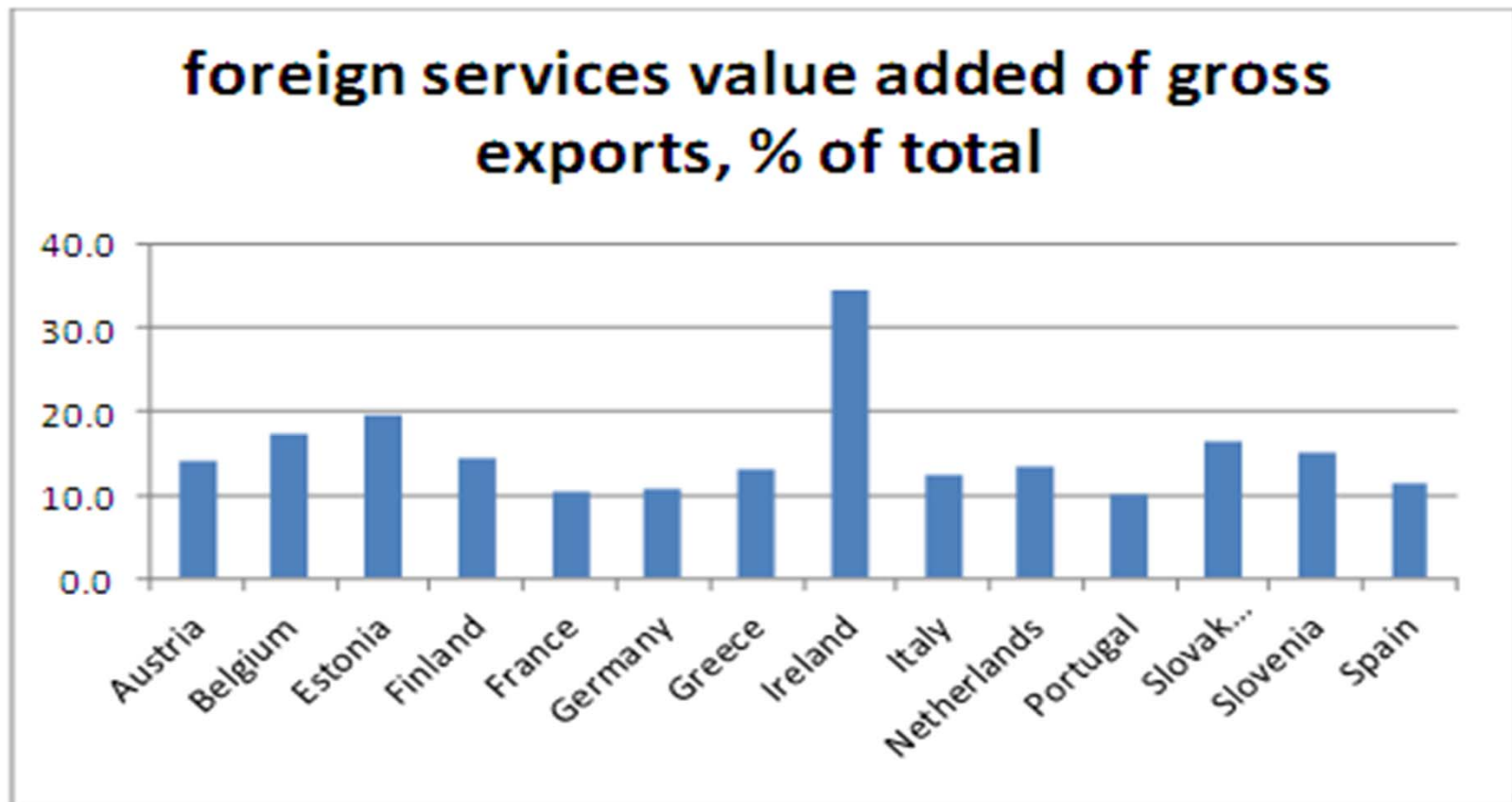
- Across the majority of euro area countries HCIs depreciated in the second half of the 1990s followed by appreciation in the first decade of the new millennium and depreciation thereafter (exceptions: EE, SK, PT, IT)
- Different HCIs move similarly (except for the ULCM-based HCIs in some cases: IE, GR, PT)
- **BUT: Dispersion of different HCIs has increased over time**

Example of contribution of services in GVC

- Activities and components that go into the production of the typical American car are the following (services in bold):
- **R&D for advanced technology (Japan – 17.5%)**
- **Design (3% (estimate))**
- Assembly (Korea – 30%)
- Assembly (US – 37%)
- Supply of minor parts (Taiwan – 4%)
- **Advertising and marketing (UK – 2.5%)**
- **Data processing (Ireland and Barbados – 2%)**
- **Transport and insurance (4% (estimate))**

Source: World Trade Organization, Annual Report 1998 (page 36), at:
http://www.wto.org/english/res_e/booksp_e/anrep_e/anre98_e.pdf

Foreign services value added



Source: WTO-OECD database

Importance of goods vs services in EA member states trade (taken from Schmitz 2012)

Table 4: Overview of different trade weights for euro area HCIs, 2007-09

	Services share	Manuf. share	Services		Manufacturing		Combined	
			Intra - EA	Extra - EA	Intra - EA	Extra - EA	Intra - EA	Extra - EA
Austria	34.3%	65.7%	63.3%	36.7%	64.0%	36.0%	63.8%	36.2%
Belgium	25.8%	74.2%	58.5%	41.5%	59.9%	40.1%	59.6%	40.4%
Cyprus	72.3%	27.7%	46.3%	53.7%	65.0%	35.0%	51.5%	48.5%
Estonia	38.2%	61.8%	51.2%	48.8%	49.4%	50.6%	50.1%	49.9%
Finland	38.8%	61.2%	41.1%	58.9%	47.1%	52.9%	44.8%	55.3%
France	30.6%	69.4%	47.8%	52.2%	59.6%	40.4%	56.0%	44.0%
Germany	27.0%	73.0%	43.3%	56.7%	47.1%	52.9%	46.1%	53.9%
Greece	57.5%	42.5%	37.3%	62.7%	61.4%	38.6%	47.5%	52.5%
Ireland	64.0%	36.0%	40.8%	59.2%	37.9%	62.1%	39.7%	60.3%
Italy	29.8%	70.2%	53.2%	46.8%	56.1%	43.9%	55.2%	44.8%
Luxembourg	77.0%	23.0%	59.0%	41.0%	62.6%	37.4%	59.9%	40.1%
Malta	60.1%	39.9%	44.5%	55.5%	53.0%	47.0%	47.9%	52.1%
Netherlands	31.1%	68.9%	46.4%	53.6%	51.0%	48.9%	49.6%	50.4%
Portugal	36.2%	63.8%	61.6%	38.4%	76.1%	23.9%	70.9%	29.1%
Slovakia	17.0%	83.0%	45.8%	54.2%	53.4%	46.6%	52.1%	47.9%
Slovenia	23.2%	76.8%	66.4%	33.6%	67.2%	32.8%	67.0%	33.0%
Spain	41.8%	58.2%	51.5%	48.5%	65.4%	34.6%	59.6%	40.4%
Average	41.5%	58.5%	50.5%	49.5%	57.4%	42.6%	54.2%	45.8%

Source: ECB and own calculations.

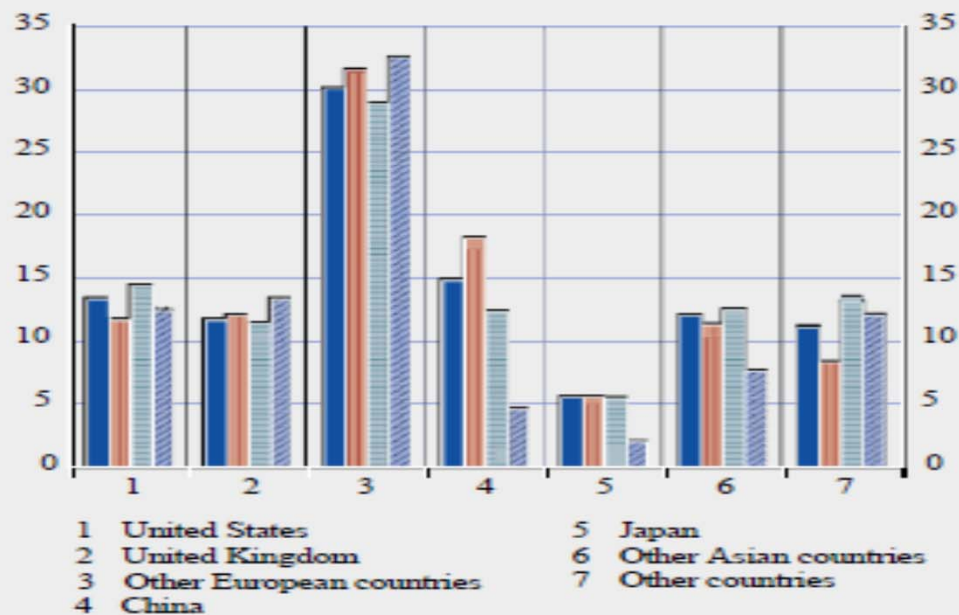
HCI weights based on manufacturing trade

Schmitz et al. (2012) “In the case of major advanced and other European economies, the simple export weight generally exceeds the import weight on account of the bilateral trade surpluses of the euro area with these countries. The opposite holds true for emerging Asian economies with which the euro area has an aggregate bilateral trade deficit, reflecting the strong export orientation of these economies.”

Chart 2 Comparison of trade weights for individual countries and country groups in the EER-40 basket

(percentages)

— total weight
— import weight
— double export weight
— export weight

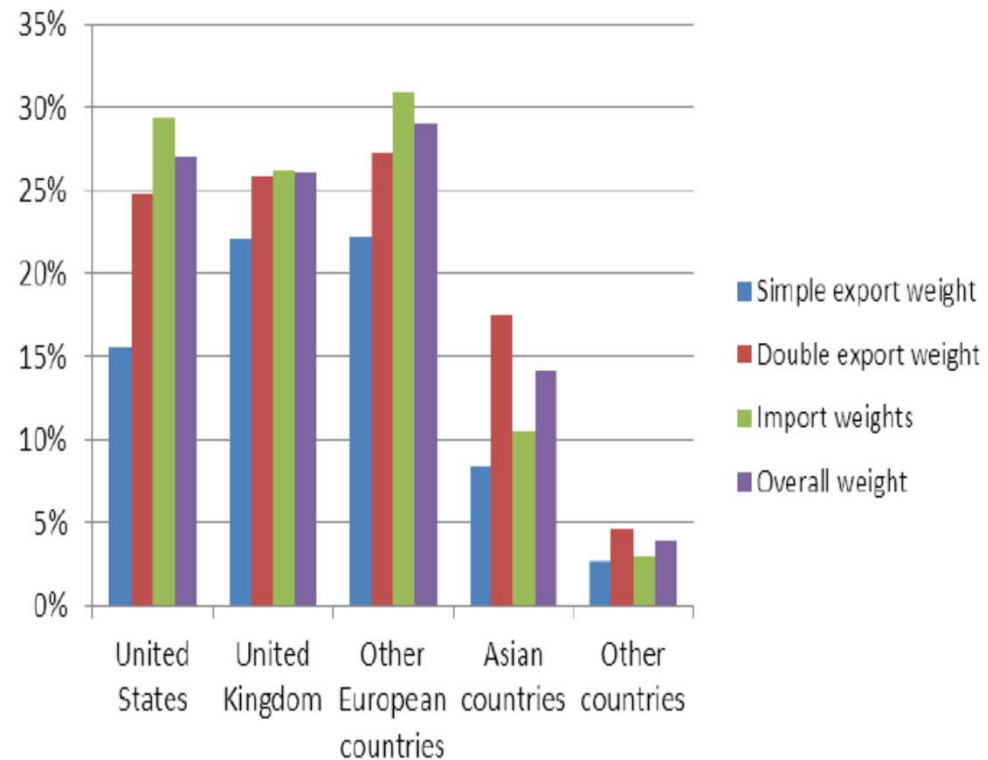


Source: ECB.

HCI weights based on services trade

Schmitz (2012): “For the United States, the United Kingdom and the other European economies, import weights exceed the simple and double export weights. In the case of the United States, the euro area has a trade deficit in terms of services”

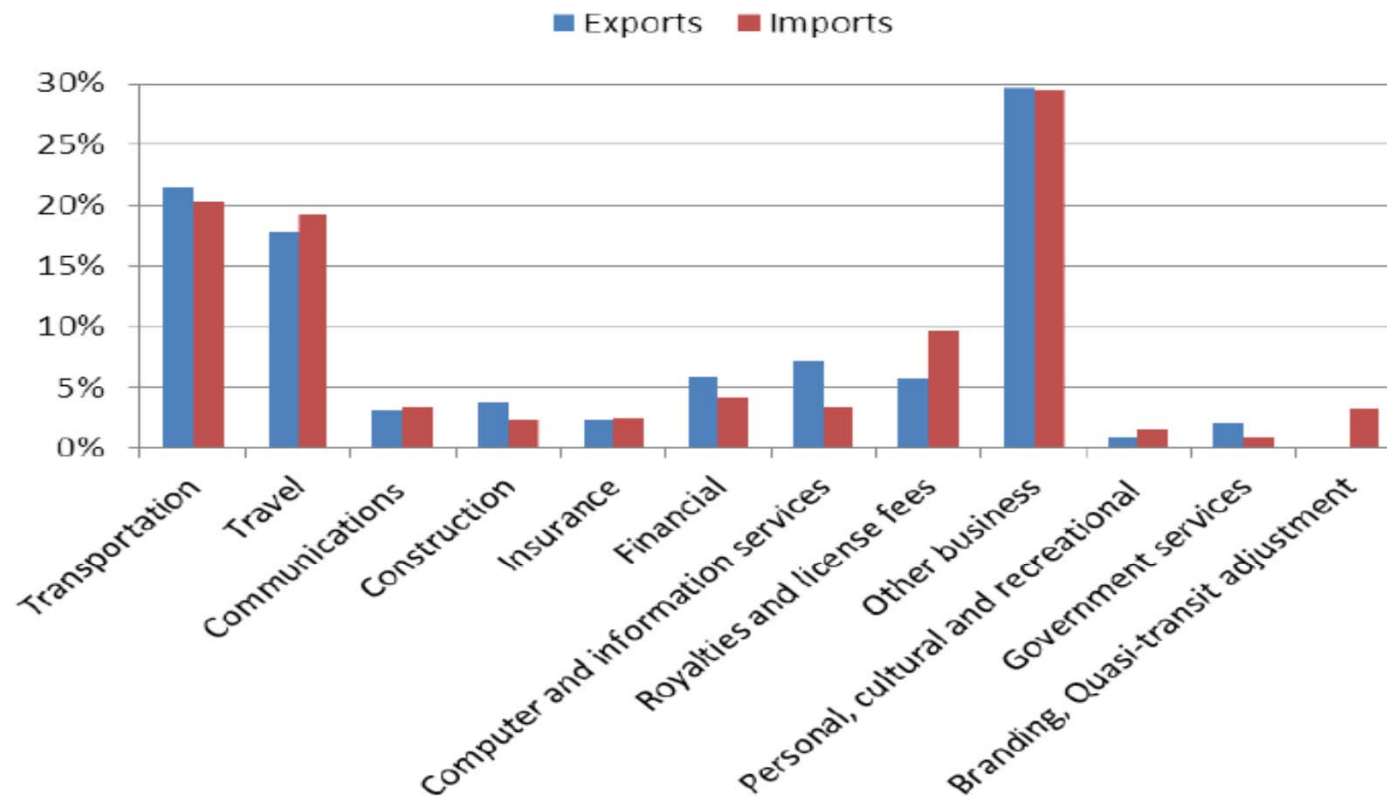
Chart 7: Comparison of services trade weights for individual countries and country groups in the EER-20 basket, 2007-09



Source: ECB and own calculations.

Sectoral decomposition of EA trade in services

Chart 4: A decomposition of euro area services exports and imports (2009)



Source: own calculations based on Eurostat data.

Source: Schmitz (2012)

Export shares in total exports of services

percentages; average over 1999-2011

	Transportation	Travel	Other services
BE	26.5	15.2	57.4
DE	23.4	17.8	58.8
EE	42.6	28.4	28.9
IE	5.4	8.8	85.8
EL	47.2	41.5	7.5
ES	16.4	49.5	34.0
FR	22.7	34.2	43.1
IT	15.4	42.3	42.2
CY	21.6	38.1	37.5
LU	6.2	8.7	85.1
MT	18.5	38.6	42.9
NL	26.9	12.0	61.0
AT	21.2	38.3	40.5
PT	21.6	49.6	21.9
SI	27.5	44.9	27.5
SK	36.2	29.6	32.0
FI	15.5	14.2	69.6

Source: Eurostat, Own calculations

Import shares in total imports of services

percentages; average over 1999-2011

	Transportation	Travel	Other services
BE	24.0	26.6	47.9
DE	21.7	34.1	44.2
EE	39.8	22.1	38.1
IE	4.0	8.3	87.6
EL	47.8	23.4	17.7
ES	26.6	19.4	54.0
FR	28.3	27.7	44.0
IT	22.7	25.5	51.8
CY	42.8	33.7	23.1
LU	5.4	11.4	83.1
MT	27.0	18.4	54.7
NL	20.7	20.4	58.9
AT	27.7	31.9	40.4
PT	30.2	28.6	31.9
SI	22.7	31.2	46.1
SK	26.2	23.1	47.9
FI	24.4	18.4	56.7

Source: Eurostat, Own calculations

Other services include professional and technical services, legal services, research and development services

HIGH
↑
Value Added
↓
LOW

General Business Activities

ITO
Information Technology Outsourcing

- Software R&D
- IT Consulting
- Software
 - ERP (Enterprise Resource Planning): manufacturing/operations, supply chain management, financials & project management
 - Applications Development
 - Applications Integration
 - Desktop management
- Infrastructure
 - Applications Management
 - Network Management
 - Infrastructure Management

KPO
Knowledge Process Outsourcing

- Business Consulting
Business Analytics
Market Intelligence
- Legal Services

BPO
Business Process Outsourcing

- ERM (Enterprise Resource Management)**
 - Finance & Accounting
 - Procurement, Logistics and Supply Chain Management
 - Content/ Document Management
- HRM (Human Resource Management)**
 - Training
 - Talent Management
 - Payroll
 - Recruiting
- CRM (Customer Relationship Management)**
 - Marketing & Sales
 - Contact Centers/Call Centers

Industry Specific Activities a-b

- Banking, Financial Services and Insurance (BFSI)**
Ex. Investment research, private equity research, and risk management analysis
- Manufacturing**
Ex. Industrial Engineering and sourcing and vendor management
- Telecommunications**
Ex. IP transformation, interoperability testing and DSP and multimedia
- Energy**
Ex. Energy Trading and Risk Management, and Digital oil field solutions
- Travel & Transportation**
Revenue management systems, customer loyalty solutions
- Health/Pharma**
Ex. R&D, clinical trials, medical transcript
- Retail**
eCommerce and Planning, merchandising and demand intelligence
- Others**

Source: Gary Gereffi (2010). Center on Globalization, Governance & Competitiveness at Duke University.
The study can be found at: http://www.cggc.duke.edu/pdfs/CGGC-CORFO_The_Offshore_Services_Global_Value_Chain_March_1_2010.pdf.