Crisis-Proof Services: Why Trade in Services Did Not Suffer During the 2008-2009 Crisis

Andrea Ariu[1]

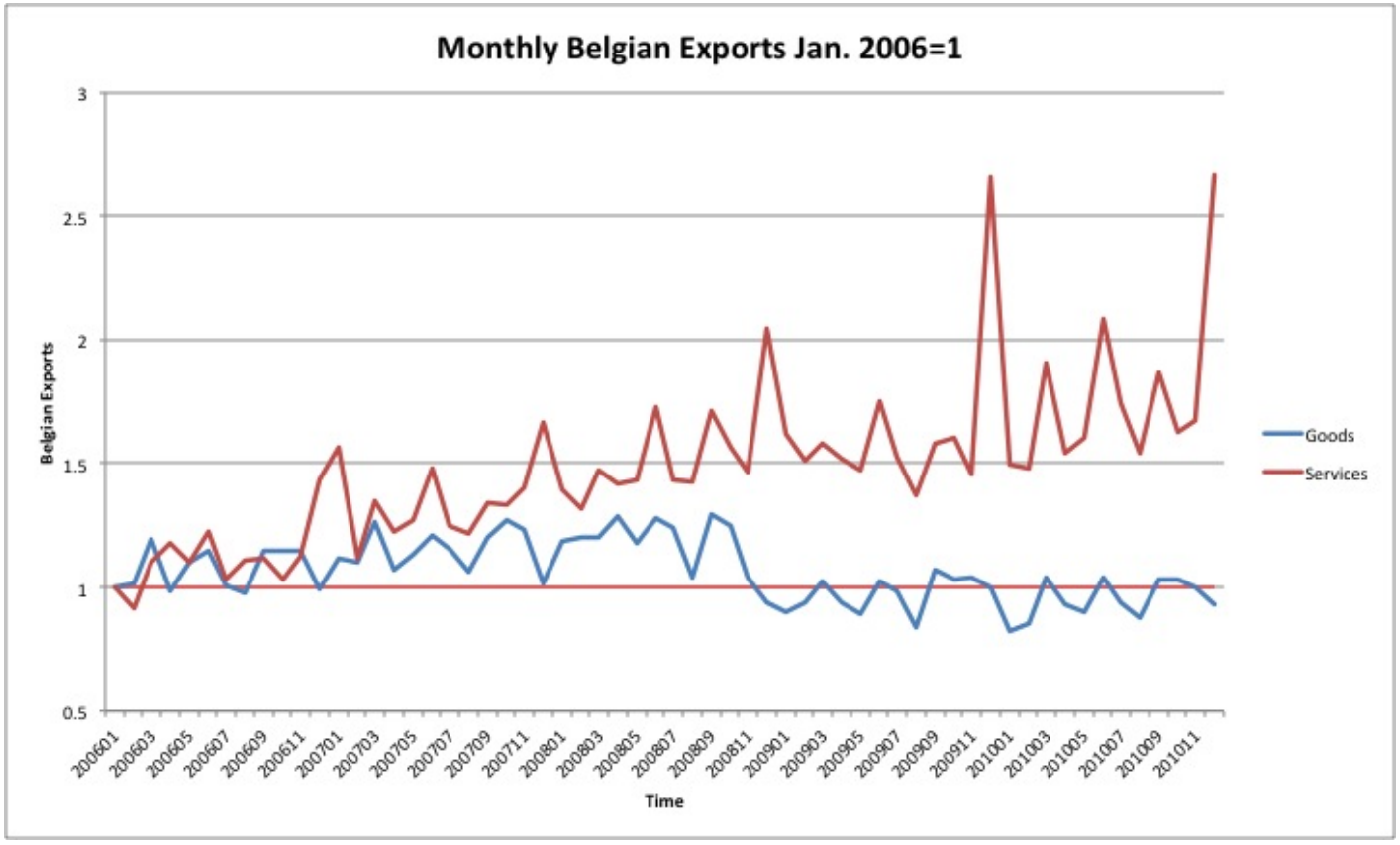
ECB

Frankfurt, June 2013

The views expressed in this paper are those of the author and do not necessarily reflect the views of the National Bank of Belgium. All errors are the author's responsibility.

[1]FNRS and IRES, UCLouvain, Belgium.

Motivation



Source: Belgostat

Motivation

2008-2009 Trade in Goods collapse:

- Fall of 30%, up to 10 times more the drop in GDP

Trade in Services reacted differently:

- Borchert and Mattoo (2009), Francois and Woerz (2009):
  - Service trade drop 1/10 that of goods
  - the drop was concentrated only in the transport sector
  - other services continued growing during the crisis
  - it was a worldwide phenomenon

Motivation

They should be the same:

- Breinlich and Criuscolo (2011), Kelle and Kleinert (2011), Gaulier et al. (2010), Federico and Tosti (2010) and Walter and Dell'Mour (2010)

Importance of Trade in Services:

- more than 70% of GDP
- between 20% and 30% of total trade
- fastest growing component of trade in the last 10 years

This paper:

- **analyze trade in services during the 2008-2009 collapse**
  - using Belgian firm-country-product exports
- **Goals:**
  - provide evidence on how firms responded to the crisis
  - understand why services and goods exports reacted differently

This paper:

- **analyze trade in services during the 2008-2009 collapse**
  - using Belgian firm-country-product exports
- **Goals:**
  - provide evidence on how firms responded to the crisis
  - understand why services and goods exports reacted differently
- **Results:**
  - Firms responded to the crisis only at the intensive margin
  - Services are not sensible to negative income shocks

Contribution:

- **Trade in services during the crisis**
  - Borchert and Mattoo (2009), Francois and Woerz (2009)
- **Trade Collapse**
  - Alessandria et al. (2010), Amiti and Weinstein (2011), Baldwin (2009), Behrens et al. (2012), Chor and Manova (2010), Eaton et al. (2011), Freund (2009) Iacovone and Zavacka (2009), Levchenko et al. (2010),Yi (2009), etc.
- **Trade in Services**
  - Breinlich and Criuscolo (2011), Kelle and Kleinert (2010), Gaulier et al. (2010), Federico and Tosti (2010) and Walter and Dell'Mour (2010) and Ariu (2012)

Outline:

Data

Descriptive Statistics

Empirical Strategy

Results

Conclusions

Data

NBB Trade Dataset

- monthly firm-level exports of goods from 1995 to 2011
  - the destination country
  - product type, CN8

NBB Trade in Services Dataset

- monthly/quarterly firm-level exports of services from 2006 to 2011
  - the destination country
  - Service type

NBB Balance-Sheet Data

- information on: Employment, Capital, Debts, Turnover, Value Added, Purchase of Intermediates and Industry

Data

Country Data

- GDP growth from IMF Word Economic Outlook
- Exchange Rates from ECB

Data Problems:

- High seasonality, low monthly frequency
- Services data are from survey: no way of analyzing entry and exit

Dissecting the Collapse

$$X_t = f_t * \bar{c}_t * \bar{p}_t * \bar{x}_t$$

Defining $\Delta X \equiv \frac{X_{t+1}}{X_t}$:

$$\Delta X = \Delta f * \Delta \bar{c} * \Delta \bar{p} * \Delta \bar{x}$$

Dissecting the Collapse

Table: Change in the margins of total Belgian exports (2008S1-2009S1) only continuing firms

Panel a: Exports						
	Services			Goods		
Period	S1 2008	S1 2009	(Δ-1)%	S1 2008	S1 2009	(Δ-1)%
Total	21,757	21,075	-3.13%	99,534	72,853	-26.81%
Extensive Margins:						
Firms	2,107	2,107	-	12,964	12,964	-
Countries	11.41	11.37	-0.33%	8.58	8.46	-1.41%
Products	1.52	1.55	2.00%	3.72	3.79	1.83%
Intensive Margin:						
Average Sales	0.60	0.57	-4.72%	0.24	0.18	-27.09%

Descriptive Evidence

Same qualitative reactions:

- no within-firm adjustments
- variation only at the intensive margin

But large qualitative differences:

- 3% versus almost 30%

Relevant variation:

- Firm, ▸ Firm1 ▸ Firm2
- Product ▸ Product
- Country ▸ Country

Empirical Strategy

- DD-type on continuing firm-country-product triplets:

$$\Delta X_{fcp}^{y,t} = \alpha + T^t + \beta_1' Z_{fcp}^{y,t} + \beta_2' Z_{fcp}^{y,t} * T^t + \epsilon_{fcp}^{y,t} \quad (1)$$

- where:
  - comparison between changes in exports during the crisis (T) and before the crisis (C)
  - $\Delta X_{fcs}^t = log\, X_{fcp}^{t+1} - log\, X_{fcp}^t$
  - T^t is a treatment time dummy
  - Z_{fcp}^t is a vector containing firm (F_f^t), country (C_c^t) and Product (P_p^t) characteristics and industry (I_i^t) dummies
  - ϵ_{fcp}^t is a residual term with the standard properties for the consistency of OLS
  - t=$\{$2007S1, 2008S1, 2009S1, 2010S1$\}$
  - all firm-level variables are for 2007
  - we use multi-level clustering (Cameron et al., 2011)

Empirical Strategy

Table: Firm-level variables

Heterogenety:	
D_{size}	Size (employment) of the firm
$D_{productivity}$	Value added per worker
FOR	Foreign firm dummy
MNE	Multinational firm dummy
Involvement in global value chains:	
$D_{intermediate\ share}$	Share of intermediates over turnover
$D_{share\ exp\ sales}$	Share of exports over turnover
$D_{share\ imp\ interm}$	Share of imports over intermediates
$D_{value\ added\ chain}$	Exports times imports over turnover
$D_{share\ stock}$	Ratio of stocks over turnover
Financial Structure:	
$D_{ext\ fin\ dep}$	Investments minus operating profits over investments
$D_{share\ debts\ over\ liab}$	Ratio of debts over total liabilities
$D_{share\ debts\ due\ after\ one\ year}$	Share of debts due after one year
$D_{share\ fin\ debt}$	Share of financial debt
Industry:	
I_i	NACE rev1.1 2-digit dummies

Empirical Strategy

Table: Country-level variables

OECD	Dummy for countries belonging to the oecd (in 2008) but not to the EU
NO OECD NO EU	Dummy for countries belonging neither to the oecd nor to the EU
Exchange rate change	% change in the nominal exchange rate with the Euro between the end of the first quarter of 2007 (2008) and the end of the first quarter of 2008 (2009)
GDPgrowth	Average annual growth rate of the destination country GDP between 2007 (2008) and 2008 (2009)

Table: Product-level variables

S_s	Service dummies (BoP Classification)
P_p	Product dummies (CN2 level)

Results

	Goods			Services		
	Before	During	After	Before	During	After
Heterogeneity	No	No	No	No	No	No
Involvement in global value chains	Some	Some	No	No	No	No
Financial Structure	Some	Some	Some	No	No	No
Country Characteristics	Yes	Yes	No	No	No	No
Product Dummies		Yes			Yes	
Industry Dummies		Yes			Yes	
Observations		650,570			23,249	
R^2		0.0147			0.0529	

▸ Complete Table 1 ▸ Complete Table 2

- 50% of the variation for the exports of goods is explained by the GDP growth

Evidence

- Strong difference in demand factors
  - Services are non-discretionary, non storable, essential components of production and not directly related to production size
- Some differences in supply factors
  - they rely less on external funding

Evidence

- Strong difference in demand factors
  - Services are non-discretionary, non storable, essential components of production and not directly related to production size
- Some differences in supply factors
  - they rely less on external funding

Which factors led to the differential response?
What's the magnitude of the difference?

Demand Side

- DDD approach on firms exporting both services and goods, so a "perfect matching" (both observables and unobservables)
- collapse the product dimension, so dep. var is ΔX_{fc}^{t}

$$\gamma_3'^{t} S_f * GDP_c^t * T^t$$

- where:
  - $\Delta X_{fc}^{t} = log\, X_{fc}^{t+1} - log\, X_{fc}^{t}$
  - T^t is a treatment time dummy, S_f identifies firms when selling services
  - GDP_c^t is the GDP growth between two consecutive periods
  - S_f is a dummy identifying services flows
  - t=$\{$2007S1, 2008S1, 2009S1, 2010S1$\}$
  - firm-year dummies
  - we cluster standard errors at the country level

Results

	Bi-Exporters
γ_3^{2009}, *GDP Growth*	-0.0549[b]
	(0.027)
γ_3^{2010}, *GDP Growth*	-0.0196
	(0.017)
Firm-Year Dummies	Yes
Observations	22,162
R^2	0.0763

Evidence

- Significant differential effect of GDP growth on exports of services with respect to trade in goods:
  - to a one percent decrease in GDP growth is associated an increase of services exports which is 0.05 of the decrease of exports of goods
  - if the 26 Billion Euros decrease in exports of goods was entirely driven by the income shock, we should have observed an increase of trade in services of 1.3 M Euros, which means 0.6% increase of services exports

Results

- Problem: Bi-Exporters are a particular category of firms
  - Solution: use Mono-Exporters and use propensity score matching

	Bi-Exporters	Mono-Exporters
$\gamma_3^{2009,\ GDP\ Growth}$	-0.0549^b	-0.0466^a
	(0.027)	(0.013)
$\gamma_3^{2010,\ GDP\ Growth}$	-0.0196	0.0097
	(0.017)	(0.011)
Firm-Year Dummies	Yes	Yes
Observations	22,162	40,272
R^2	0.0763	0.0717

- Almost same results, both qualitatively and quantitatively

Credit Constraints

	Bi-Exporters	Mono-Exporters
$\gamma_3^{2009,\ FIN}$	0.0682	-0.0934
	(0.154)	(0.101)
$\gamma_3^{2010,\ FIN}$	-0.2507^c	0.1091
	(0.132)	(0.103)
Firm-Year Dummies	Yes	Yes
Observations	20,702	38,577
R^2	0.0302	0.0265

- No evidence of differential effects of credit constraints

Conclusions

- Descriptive evidence:
  - same qualitative reaction to 2008-2009 shock
  - but very different quantitatively
- Econometric Evidence
  - different response to GDP growth
  - quantitatively important
  - no differential effect of credit constraints

Conclusions

- Descriptive evidence:
  - same qualitative reaction to 2008-2009 shock
  - but very different quantitatively
- Econometric Evidence
  - different response to GDP growth
  - quantitatively important
  - no differential effect of credit constraints
- Implications:
  - Country specialized in services exports are more immune to demand shocks
  - Services and goods exports are not the same! –> theory of IT should think about it!
- Future Work
  - Heterogeneous effects?
  - Build a model?

Thank you!

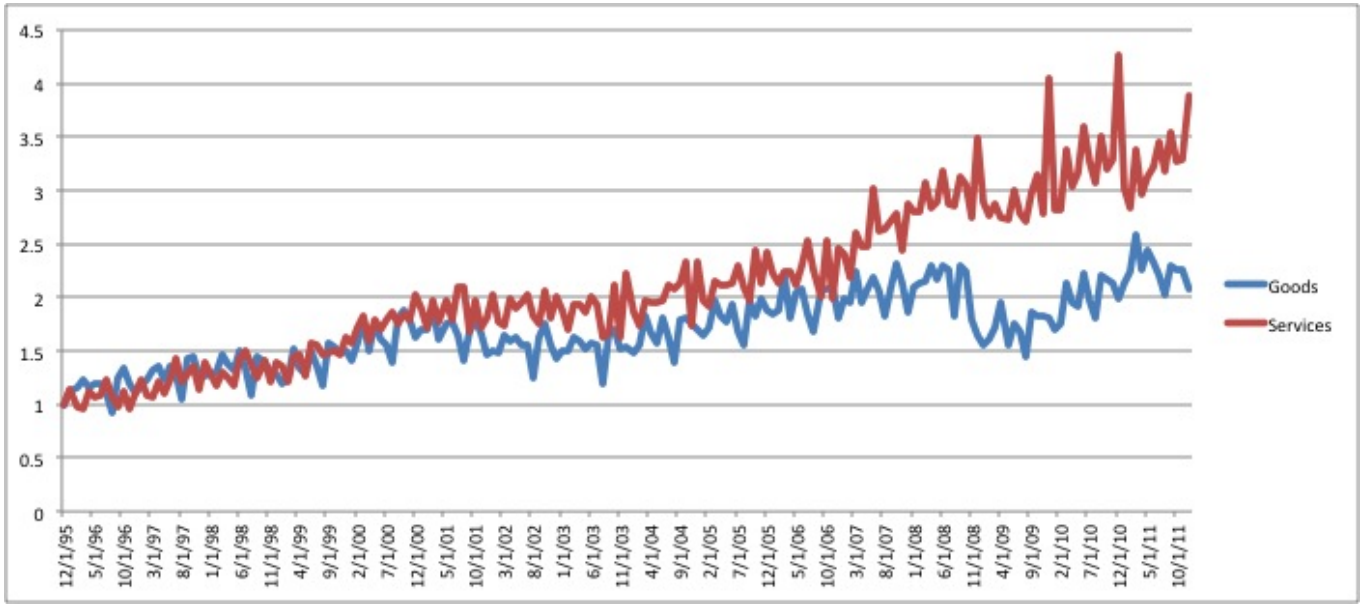
Why services did not suffer from the financial crisis?

Trade Collapse Causes:

1. **Demand Side:**
   - a disproportionate fall in the demand for tradable goods
   - inventory adjustments
2. **Supply Side:**
   - a dramatic trade credit crunch
   - disruption of global value chains
   - protectionism raising its ugly head again

Robustness

- Use the 2001 Crisis
  - Adv. all firms in Belgium
  - Disadv. not enough variation, GDP growth: -0.1% and small decrease of exports of goods



- Results: only partial confirmation

Robustness, 2001

	Goods			Services		
	β_1	β_2^{2009}	β_2^{2010}	β_1	β_2^{2009}	β_2^{2010}
Firm Characteristics						
D_{size}	0.0285	-0.0096	-0.0336	-0.0263	-0.0686	0.0651
	(0.020)	(0.026)	(0.023)	(0.046)	(0.094)	(0.058)
$D_{productivity}$	0.0252^{c}	-0.0179	0.0012	0.0377	-0.0273	0.0011
	(0.014)	(0.022)	(0.021)	(0.044)	(0.074)	(0.065)
$D_{intermediate\ share}$	0.0137	-0.0108	-0.0225	0.0022	-0.0691	-0.0212
	(0.016)	(0.021)	(0.023)	(0.049)	(0.089)	(0.068)
$D_{share\ exp\ sales}$	-0.0667^{a}	0.0166	0.0562^{a}	-0.2212^{a}	0.1609^{c}	0.1456^{c}
	(0.014)	(0.021)	(0.019)	(0.059)	(0.088)	(0.079)
$D_{share\ imp\ interm}$	0.0012	0.0462	0.0073	0.0961	-0.1647	-0.1997^{c}
	(0.019)	(0.038)	(0.024)	(0.109)	(0.176)	(0.118)
$D_{value\ added\ chain}$	-0.0130	-0.0140	-0.0016	-0.0448	-0.0904	0.0872
	(0.017)	(0.034)	(0.019)	(0.076)	(0.137)	(0.110)
$D_{ext\ fin\ dep}$	0.0117	0.0109	-0.0048	0.0487	-0.0296	-0.0062
	(0.013)	(0.020)	(0.020)	(0.039)	(0.062)	(0.065)
$D_{share\ debts\ over\ liab}$	0.0191	-0.0690^{a}	-0.0166	-0.0083	0.0235	0.0072
	(0.014)	(0.022)	(0.016)	(0.053)	(0.072)	(0.086)
$D_{share\ debts\ due\ after\ one\ year}$	0.0319^{b}	-0.0208	-0.0184	0.0733	-0.0570	-0.0281
	(0.015)	(0.026)	(0.020)	(0.077)	(0.111)	(0.129)
$D_{share\ fin\ debt}$	-0.0094	0.0321	0.0066	-0.0426	0.0191	0.0043
	(0.014)	(0.024)	(0.018)	(0.070)	(0.089)	(0.106)
$D_{share\ stock}$	0.0276^{c}	-0.0216	-0.0002	-0.0704	-0.0282	0.0732
	(0.016)	(0.021)	(0.027)	(0.117)	(0.195)	(0.168)
FOR	-0.0338	0.0479	0.0201	-0.0597	0.1555	0.0018
	(0.022)	(0.043)	(0.024)	(0.092)	(0.139)	(0.105)
MNE	0.0123	-0.0324	-0.0106	0.1451	-0.1350	0.0164
	(0.017)	(0.026)	(0.025)	(0.100)	(0.118)	(0.143)
Country Caracteristics:						
OECD Not EU	0.0189	0.0292	-0.0076	0.0346	-0.0691	-0.0174
	(0.021)	(0.043)	(0.021)	(0.082)	(0.131)	(0.113)
Not OECD Not EU	0.0504^{b}	-0.0001	-0.0766^{a}	0.1702	-0.2255	-0.3017^{b}
	(0.022)	(0.029)	(0.029)	(0.137)	(0.186)	(0.154)
Exchange rate change	-0.2495^{a}	0.0093	0.1251	-0.2860	0.1119	0.1986
	(0.055)	(0.113)	(0.111)	(0.259)	(0.280)	(0.478)
GDPgrowth	0.0136^{b}	0.0004	-0.0028	0.0148	-0.0091	0.0134
	(0.006)	(0.007)	(0.008)	(0.021)	(0.032)	(0.032)
Constant		-0.3054^{a}			-0.0958	
		(0.108)			(0.202)	
Service Dummies		Yes			Yes	
Industry Dummies		Yes			Yes	
Observations		574,221			19,415	
R^2		0.0052			0.0371	

Robustness, 2001

	Goods			Services		
	β_1	β_2^{2009}	β_2^{2010}	β_1	β_2^{2009}	β_2^{2010}
Firm Characteristics						
C_{size}	0.0188^a	-0.0157^c	-0.0253^a	0.0056	-0.0225	-0.0179
	(0.006)	(0.008)	(0.009)	(0.016)	(0.025)	(0.024)
$C_{productivity}$	0.0112	-0.0116	-0.0152	0.0080	-0.0360	-0.0512
	(0.014)	(0.020)	(0.016)	(0.030)	(0.048)	(0.040)
$C_{intermediate\ share}$	0.0839^c	-0.1105^b	-0.0874^c	-0.0149	-0.0054	0.0430
	(0.048)	(0.052)	(0.048)	(0.011)	(0.015)	(0.034)
$C_{share\ exp\ sales}$	-0.2442	0.2230	-0.0785	0.0014	-0.0192	0.0036
	(0.158)	(0.159)	(0.178)	(0.010)	(0.015)	(0.040)
$C_{share\ imp\ interm}$	-0.1475	-0.0249	0.1508	-0.0090	0.0106	0.0188
	(0.192)	(0.268)	(0.342)	(0.021)	(0.015)	(0.024)
$C_{value\ added\ chain}$	0.3121^c	-0.6935^b	-0.9035	-0.0017	0.0017^c	0.0008
	(0.166)	(0.334)	(0.740)	(0.001)	(0.001)	(0.002)
$C_{ext\ fin\ dep}$	0.0000	-0.0000	-0.0000	0.0000	-0.0000	-0.0000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$C_{share\ debts\ over\ liab}$	0.0377^c	-0.1443^a	-0.0378	0.1503^b	-0.0801	-0.2390^c
	(0.023)	(0.045)	(0.042)	(0.074)	(0.129)	(0.141)
$C_{share\ debts\ due\ after\ one\ year}$	0.0935^b	-0.0326	-0.0245	0.0496	-0.0461	0.1039
	(0.046)	(0.071)	(0.067)	(0.209)	(0.282)	(0.279)
$C_{share\ fin\ debt}$	-0.0689^b	0.1185^a	0.0838	-0.1570	0.1676	0.0867
	(0.030)	(0.043)	(0.056)	(0.121)	(0.170)	(0.160)
$C_{share\ stock}$	0.0395	-0.0359	-0.0387	-0.5067	-0.0980	0.5627
	(0.026)	(0.026)	(0.026)	(0.419)	(0.424)	(0.418)
FOR	-0.0499^b	0.0543	0.0423^c	-0.0152	0.0562	-0.0229
	(0.020)	(0.036)	(0.025)	(0.105)	(0.153)	(0.109)
MNE	0.0073	-0.0375	0.0030	0.1654	-0.1783	-0.0299
	(0.019)	(0.029)	(0.026)	(0.106)	(0.127)	(0.150)
Country Caracteristics:						
OECD Not EU	0.0179	0.0262	-0.0068	0.0119	-0.0655	0.0047
	(0.021)	(0.042)	(0.022)	(0.078)	(0.134)	(0.111)
Not OECD Not EU	0.0482^b	-0.0023	-0.0760^a	0.1840	-0.2492	-0.2979^c
	-0.022	(0.029)	(0.029)	(0.157)	(0.207)	(0.166)
Exchange rate change	-0.2587^a	0.0180	0.1402	-0.2612	0.0976	0.1709
	(0.056)	(0.113)	(0.111)	(0.254)	(0.282)	(0.473)
GDPgrowth	0.0131^b	0.0007	-0.0020	0.0108	-0.0053	0.0186
	(0.006)	(0.008)	(0.008)	(0.021)	(0.033)	(0.031)
Constant		-0.3640^a			-0.0427	
		(0.122)			(0.179)	
Service Dummies		Yes			Yes	
Industry Dummies		Yes			Yes	
Observations		574,221			19,415	
R^2		0.0051			0.0384	

Robustness, 2001

	Bi-Exporters	Mono-Exporters
$\gamma_3^{2009,\ GDP\ Growth}$	0.0141	0.0193
	(0.053)	(0.020)
$\gamma_3^{2010,\ GDP\ Growth}$	0.0412	-0.0347
	(0.032)	(0.021)
Firm-Year Dummies	Yes	Yes
Observations	6,330	47,473
R^2	0.1583	0.0795

Robustness, 2001

	Bi-Exporters	Mono-Exporters
$\gamma_3^{2009,\ FIN}$	-0.1330	-0.0521
	(0.317)	(0.080)
$\gamma_3^{2010,\ FIN}$	-0.2557	-0.1252^c
	(0.189)	(0.073)
Firm-Year Dummies	Yes	Yes
Observations	5,994	46,690
R^2	0.0395	0.0203

Descriptive Statistics by Service

Table: Change in the margins of total Belgian exports (2008S1-2009S1) by product

	Total	Extensive Margins		Intensive
	% Change	Countries	Services	Margin
Panel a: Services				
Goods Transport	-22.25	-3.77	-0.33	-18.94
People Transport	-1.98	1.94	1.80	-5.55
Auxiliary Services for Transport	-10.62	-4.21	1.99	-8.52
Service to non-Residents	-0.34	-0.14	1.29	-1.47
Telecommunication Services	11.66	5.13	-1.47	7.80
Construction Services	-0.79	-2.77	-0.82	2.87
Financial and Insurance Services	21.49	1.59	0.26	19.27
Business Services	4.90	-0.23	2.11	2.97
Panel b: Goods				
Intermediates	-31.24	-0.61	1.51	-31.85
Capital Goods	-23.64	-1.62	1.87	-23.81
Consumer Durables	-38.23	-4.21	1.99	-36.00
Consumer non Durables	-7.74	0.17	0.36	-8.22
Energy	-44.47	-3.94	0.04	-42.22
Other	-25.51	-1.84	0.28	-24.33

Back to Talk

Descriptive Statistics by Country

Table: Change in the margins of total Belgian exports by country type (2008S1-2009S1)

	Total	Extensive Margins		Intensive
	% Change	Countries	Services	Margin
Panel a: Services				
EU	-4.30	-1.08	1.94	-5.09
non-EU	-1.14	0.50	2.17	-3.73
OECD	-1.05	-0.84	1.74	-1.92
non-OECD	-14.85	-0.09	2.80	-17.09
Panel b: Goods				
EU	-26.73	-3.15	1.54	-25.50
non-EU	-27.27	-0.76	4.14	-29.63
OECD	-26.64	-1.92	2.09	-26.74
non-OECD	-27.75	-0.59	1.58	-28.45

Back to Talk

Descriptive Statistics by Firm Type

Table: Change in the margins of total Belgian exports (2008S1-2009S1) by firm type

	Total	Extensive Margins		Intensive
	% Change	Countries	Services	Margin
Panel a: Services				
MNE	7.38	0.63	2.36	4.24
non-MNE	-8.54	-0.60	1.80	-8.54
Foreign Owned	3.17	0.86	3.89	-1.53
Non-Foreign Owned	-8.64	-0.88	0.89	-8.64
Panel b: Goods				
MNE	-29.77	-1.28	2.44	-30.55
non-MNE	-25.04	-1.44	1.65	-25.19
Foreign Owned	-30.32	-2.04	4.53	-31.96
Non-Foreign Owned	-22.98	-1.27	0.99	-22.75

Back to Talk

Descriptive Statistics by Firm Type

Table: Change in the margins of total Belgian exports (2008S1-2009S1) by firm type

	Total	Extensive Margins		Intensive
	% Change	Countries	Services	Margin
Panel a: Services				
Big	-0.27	-0.38	2.60	-2.42
Small	-22.65	-1.13	-0.57	-21.32
Financially exposed	-1.32	0.25	0.97	-2.51
Financially non-exposed	-3.07	-0.74	3.20	-5.37
Panel b: Goods				
Big	-27.08	-1.85	2.85	-27.76
Small	-23.98	-0.48	1.28	-24.58
Financially exposed	-29.68	-1.94	1.84	-29.58
Financially non-exposed	-23.82	-0.90	3.36	-25.63

Back to Talk

Results

	Goods			Services		
	β_1	β_2^{2009}	β_2^{2010}	β_1	β_2^{2009}	β_2^{2010}
Firm Characteristics						
D_{size}	0.0395^{b}	-0.0287	0.0015	-0.0584	0.5499	0.2511
	(0.017)	(0.029)	(0.028)	(0.207)	(0.409)	(0.398)
$D_{productivity}$	0.0105	-0.0108	0.0722^{a}	0.0986	-0.0082	-0.0682
	(0.017)	(0.028)	(0.024)	(0.097)	(0.157)	(0.137)
$D_{intermediate\ share}$	0.0096	-0.0285	0.0122	-0.0197	0.0575	0.0660
	(0.016)	(0.025)	(0.033)	(0.125)	(0.186)	(0.166)
$D_{share\ exp\ sales}$	-0.0059	-0.0520^{c}	-0.0038	0.0481	0.0283	-0.3216^{b}
	(0.016)	(0.028)	(0.024)	(0.105)	(0.147)	(0.137)
$D_{share\ imp\ interm}$	-0.0356^{b}	0.0558^{b}	0.0377	-0.0998	0.2219	0.1949
	(0.015)	(0.026)	(0.028)	(0.108)	(0.162)	(0.162)
$D_{value\ added\ chain}$	-0.0005	-0.0295	-0.0177	0.0075	-0.0661	0.0167
	(0.016)	(0.028)	(0.036)	(0.136)	(0.208)	(0.226)
$D_{ext\ fin\ dep}$	-0.0477^{b}	0.0351	-0.0038	-0.0637	0.2205	0.0260
	(0.023)	(0.029)	(0.030)	(0.080)	(0.135)	(0.131)
$D_{share\ debts\ over\ liab}$	-0.0278	-0.0053	0.0764^{c}	-0.0876	0.0374	0.0897
	(0.019)	(0.029)	(0.043)	(0.097)	(0.157)	(0.143)
$D_{share\ debts\ due\ after\ one\ year}$	0.0197	0.0298	0.0233	-0.1467	0.2921^{b}	0.0515
	(0.020)	(0.024)	(0.034)	(0.091)	(0.140)	(0.142)
$D_{share\ fin\ debt}$	0.0114	-0.0509^{c}	-0.0140	-0.0273	0.0034	0.0533
	(0.021)	(0.027)	(0.035)	(0.103)	(0.189)	(0.175)
$D_{share\ stock}$	0.0098	0.0315	0.0281	-0.0892	0.2339	0.1630
	(0.021)	(0.029)	(0.038)	(0.095)	(0.150)	(0.138)
FOR	0.0033	-0.0212	0.0526	-0.0509	0.0589	-0.1045
	(0.025)	(0.043)	(0.060)	(0.126)	(0.172)	(0.180)
MNE	0.0160	-0.0383	0.0020	0.0381	-0.1199	0.0486
	(0.029)	(0.038)	(0.048)	(0.079)	(0.140)	(0.140)
Country Caracteristics:						
OECD Not EU	-0.1604^{a}	0.2848^{a}	0.2535^{a}	0.0486	-0.1359	-0.0644
	(0.030)	(0.056)	(0.045)	(0.087)	(0.155)	(0.116)
Not OECD Not EU	-0.0773^{b}	0.1088^{c}	0.1626^{a}	0.1760^{c}	-0.1961	-0.1783
	(0.034)	(0.060)	(0.054)	(0.095)	(0.138)	(0.139)
Exchange rate change	-0.2851^{a}	-0.1463	-0.1100	0.1552	-0.2725	-0.6093
	(0.085)	(0.134)	(0.201)	(0.369)	(0.526)	(0.655)
GDPgrowth	0.0101^{c}	0.0139^{c}	-0.0015	0.0142	-0.0075	-0.0131
	(0.005)	(0.008)	(0.009)	(0.017)	(0.027)	(0.021)
Constant		-0.1129			0.1076	
		(0.176)			(0.408)	
Product Dummies		Yes			Yes	
Industry Dummies		Yes			Yes	
Observations		650,570			23,249	
R^2		0.0147			0.0529	

Results

	Goods			Services		
	β_1	β_2^{2009}	β_2^{2010}	β_1	β_2^{2009}	β_2^{2010}
Firm Characteristics						
C_{size}	0.0260[a]	-0.0187[c]	-0.0128	-0.0000	-0.0000	0.0001
	(0.008)	(0.011)	(0.015)	(0.000)	(0.000)	(0.000)
$C_{productivity}$	0.0333[b]	-0.0422[b]	-0.0185	-0.0090	-0.0017	-0.0713
	(0.015)	(0.019)	(0.025)	(0.039)	(0.052)	(0.051)
$C_{intermediate\ share}$	0.0055	-0.0039	-0.0253	0.0171	-0.2233	-0.0477
	(0.005)	(0.006)	(0.023)	(0.187)	(0.289)	(0.246)
$C_{share\ exp\ sales}$	-0.3424	-0.5167	-0.1336	-0.2919	0.5367	0.0856
	(0.338)	(0.392)	(0.496)	(0.358)	(0.541)	(0.422)
$C_{share\ imp\ interm}$	-0.5168	-0.1397	0.3377	0.3992	-1.5467[b]	0.2211
	(0.365)	(0.583)	(0.479)	(0.376)	(0.717)	(0.522)
$C_{value\ added\ chain}$	0.0133	0.0011	-0.0039	-0.0035	0.0162[a]	-0.0039
	(0.009)	(0.014)	(0.011)	(0.002)	(0.004)	(0.003)
$C_{ext\ fin\ dep}$	0.0000	0.0001	-0.0001	0.0000	-0.0000	-0.0000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$C_{share\ debts\ over\ liab}$	-0.0195	-0.0429	0.0379	-0.2010	0.2775	0.3361
	(0.043)	(0.058)	(0.085)	(0.225)	(0.353)	(0.295)
$C_{share\ debts\ due\ after\ one\ year}$	0.0505	-0.0474	0.1114	0.1781	-0.1919	-0.4595
	(0.043)	(0.064)	(0.112)	(0.216)	(0.379)	(0.323)
$C_{share\ fin\ debt}$	-0.0236	-0.0029	0.0136	-0.2391	0.2993	0.3723
	(0.038)	(0.046)	(0.067)	(0.181)	(0.323)	(0.263)
$C_{share\ stock}$	0.0013	0.0336	0.0661	-0.0582	0.1566	0.4269
	(0.131)	(0.140)	(0.133)	(0.423)	(0.647)	(0.597)
FOR	-0.0286	-0.0085	0.0844	-0.0280	-0.0079	-0.0574
	(0.029)	(0.043)	(0.059)	(0.117)	(0.159)	(0.183)
MNE	-0.0146	-0.0116	0.0130	0.0496	-0.1949	0.0742
	(0.027)	(0.041)	(0.058)	(0.091)	(0.161)	(0.122)
Country Caracteristics:						
OECD Not EU	-0.1665[a]	0.2906[a]	0.2583[a]	0.0536	-0.1356	-0.0686
	(0.030)	(0.056)	(0.046)	(0.087)	(0.156)	(0.121)
Not OECD Not EU	-0.0824[b]	0.1124[c]	0.1713[a]	0.1864[b]	-0.2175	-0.1726
	(0.034)	(0.062)	(0.055)	(0.091)	(0.138)	(0.131)
Exchange rate change	-0.2907[a]	-0.1369	-0.1361	0.1650	-0.2568	-0.5746
	(0.089)	(0.141)	(0.209)	(0.369)	(0.534)	(0.656)
GDPgrowth	0.0095[c]	0.0141[c]	-0.0013	0.0152	-0.0098	-0.0128
	(0.005)	(0.008)	(0.010)	(0.017)	(0.026)	(0.021)
Constant		-0.0404			0.0655	
		(0.145)			(0.371)	
Product Dummies		Yes			Yes	
Industry Dummies		Yes			Yes	
Observations		650,570			23,249	
R^2		0.0143			0.0566	