

Effects of Services Trade Liberalization in the EU

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- Model and data description
- Econometric estimation of trade costs of NTBs
- Liberalization scenarios
- Results
- Conclusions

- A multi-region general equilibrium model, based on GTAPv7 data, benchmarked to 2004
- Investment effects and imperfect competition
- 5 factors of production: land, natural resources, capital, skilled and unskilled labour
- Trade liberalization modeled as an efficiency-enhancing reform
- Own econometric estimates of implicit protection rates

- Austria, the UK, Germany, France, the Netherlands, Italy, the rest of the EU15 (REU15), the EU12 (the new EU members), Switzerland, Japan, Canada, the USA, and the rest of the world (ROW – 82 countries)
- We aggregate 12 sectors (out of 57 possible GTAP sectors)

	Abbrevia- tion used	GTAP code	IMF BOPS category	Trade substitution elasticities	Scale elasticities	Elasticity of substitution in value added	Sector type ¹⁾
Primary production	PRI	1-18		10.260	0.000	0.200	PC
Durables	DUR	30, 33-41		7.368	0.161	1.100	MC
		19-29, 31-					
Non-durables	NDU	32, 42		6.053	0.161	1.200	MC
Construction	CNS	46	249	3.800	0.161	1.400	MC
Trade	TRD	47	269	3.800	0.161	1.700	MC
Transportation	TSP	44, 48-50	205	3.832	0.161	1.700	MC
Communication	CMN	51	245	3.800	0.161	1.300	MC
Financial services nec	FIN	52	260	3.800	0.161	1.300	MC
Insurance	INS	53	253	3.800	0.161	1.300	MC
Business services nec	BUS	43, 45, 54	268, less 269	3.907	0.161	1.300	MC
Personal, cultural, recreational	PERS	55	287	3.800	0.161	1.300	MC
Other services	OSR	56-57	291	3.800	0.000	1.300	PC

1) PC = perfect competition, MC = monopolistic competition.

Sectoral structure of services export in 2005, %

Sector code	Sector	AUT	FRA	DEU	ITA	NLD	GBR	EU15	EU12
200	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
205	Transport	21.1	23.4	24.6	17.1	23.3	16.3	21.6	29.7
236	Travel	30.7	36.4	18.8	39.2	11.4	15.1	24.0	36.4
200- 205- 236		48.2	40.2	56.6	43.7	65.3	68.6	54.4	33.9
245	Communication	3.8	1.5	1.4	1.5	0.5	1.4	2.1	0.4
249	Construction	2.0	3.0	2.2	2.4	4.1	2.7	2.5	2.8
253	Insurance	2.0	3.1	4.9	2.4	3.0	0.5	2.1	2.9
260	Financial	3.2	1.2	4.1	1.4	1.2	20.8	8.4	2.2
262	Computer & Information	0.8	1.4	5.3	0.7	4.0	5.2	5.2	2.3
266	Royalties and license fees	0.4	5.1	4.4	1.2	11.1	6.5	4.2	1.5
268	Other business services	17.7	22.1	29.9	32.1	38.3	27.9	26.1	17.9
	Not allocated	18.4	2.7	4.6	2.0	3.0	3.5	3.7	3.9

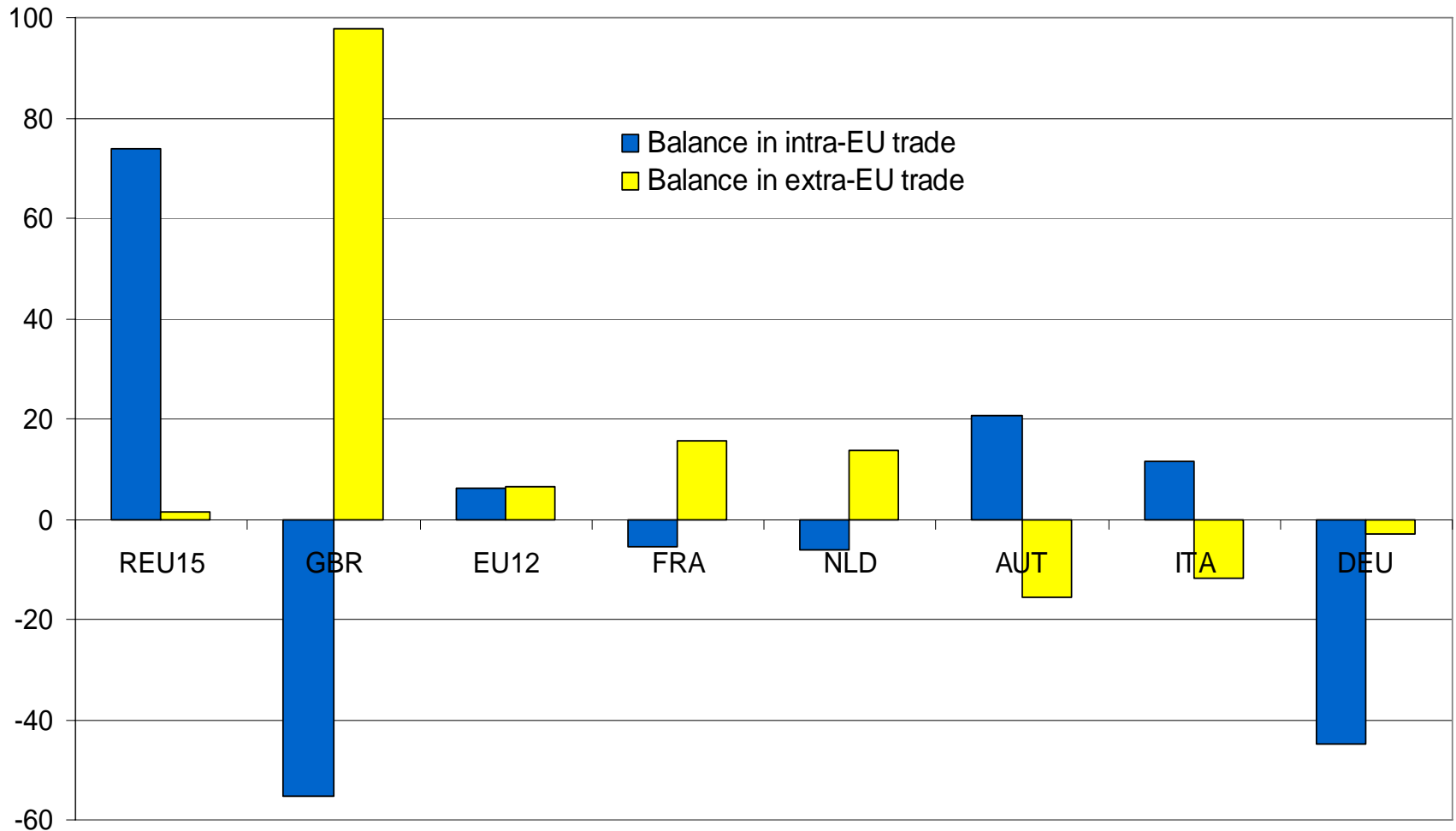
Source: OENB, TSD

Sectoral structure of services import in 2005, %

Sector code	Sector	AUT	FRA	DEU	ITA	NLD	GBR	EU15	EU12
200	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
205	Transport	16.1	27.0	21.5	24.1	17.7	22.9	22.2	25.8
236	Travel	24.4	29.4	35.8	24.7	19.1	37.2	27.4	27.1
200- 205- 236		59.5	43.6	42.7	51.2	63.2	39.9	50.4	47.1
245	Communication	4.6	2.7	2.4	2.1	1.0	1.0	2.5	2.3
249	Construction	1.4	2.0	2.4	3.4	3.8	3.0	2.7	3.2
253	Insurance	1.9	1.5	3.2	2.4	1.7	0.5	1.7	2.7
260	Financial	2.6	2.2	2.1	1.3	1.9	5.5	4.3	3.7
262	Computer & Information	1.2	1.7	4.2	1.7	4.4	2.4	2.9	3.3
266	Royalties and license fees	3.0	3.0	3.3	2.1	10.2	5.6	5.8	4.8
268	Other business services	14.7	26.6	22.9	34.8	38.2	18.1	26.5	22.4
	Not allocated	30.2	3.8	2.3	3.5	2.2	3.8	4.1	4.7

Source: OENB, TSD

Services trade balances in 2005, USD mln



- Large variation of results in the existing studies
- 2-stage residual approach:
 - 1) gravity model with reporter and partner fixed effects
 - 2) reporter fixed effects are regressed on the reporter's GDP, EU and NAFTA dummies and an OECD regulation index for the respective service sector
- Coefficient of the OECD index gives the elasticity of trade with respect to regulation



General barriers to cross-border services trade* (trade costs as a percentage of delivered price), %

	TSP 205	CMN 245	CNS 249	INS 262	FIN 260	TRD 269	BUS 268 less 269	PERS 287
AUT	11.8	5.4	5.4	11.8	2.9	5.4	11.8	5.4
DEU	1.4	8.4	1.8	8.8	2.9	1.8	1.4	1.8
FRA	4.8	5.4	1.8	10.0	3.8	1.8	4.8	1.8
GBR	1.1	1.4	1.4	6.6	2.8	1.4	1.1	1.4
ITA	1.4	5.4	1.8	7.0	5.5	1.8	1.4	1.8
NLD	0.7	0.9	0.9	4.6	1.4	0.9	0.7	0.9
REU15	9.2	8.9	2.9	7.7	4.0	2.9	9.2	2.9
EU12	6.3	7.2	4.7	7.2	4.7	4.3	6.3	4.3
USA	2.3	2.0	2.0	12.0	9.5	2.0	2.3	2.0
JPN	3.7	13.1	2.0	2.2	3.1	2.0	3.7	2.0
CHE	6.6	11.1	7.1	7.8	4.4	7.1	6.6	7.1
ROW	6.2	10.1	6.1	11.1	5.3	4.3	6.2	3.9

* For the EU the estimates are given for trade with the third countries.



Cross-border services trade liberalization scenarios

- 2 scenarios:
 - Effects of the liberalization in cross-border trade in services inside the EU, which has occurred so far
 - Effects of the complete removal of NTBs to services trade inside the EU



Liberalization of the intra-EU cross-border services trade (trade costs as a percentage of delivered price), %

	TSP 205	CMN 245	CNS 249	INS 262	FIN 260	TRD 269	BUS 268 less 269	PERS 287
AUT	-3.7	0.8	0.8	4.9	1.5	0.8	6.0	0.8
DEU	-2.4	1.4	0.3	3.4	1.5	0.3	0.6	0.3
FRA	-2.3	0.8	0.3	4.0	1.9	0.3	2.2	0.3
GBR	-3.6	0.2	0.2	2.5	1.4	0.2	0.5	0.2
ITA	-2.7	0.8	0.3	2.7	2.9	0.3	0.6	0.3
NLD	-4.2	0.1	0.1	1.7	0.7	0.1	0.3	0.1
REU15	-3.5	1.5	0.4	3.1	2.1	0.4	4.9	0.4
EU12	-3.4	1.3	0.7	3.0	2.5	0.6	3.0	0.6



The remaining services trade restrictions inside the EU (trade costs as a percentage of delivered price), %

	TSP 205	CMN 245	CNS 249	INS 262	FIN 260	TRD 269	BUS 268 less 269	PERS 287
AUT	15.5	4.6	4.6	6.9	1.4	4.6	5.8	4.6
DEU	3.8	7.0	1.5	5.4	1.4	1.5	0.8	1.5
FRA	7.1	4.6	1.5	6.0	1.9	1.5	2.6	1.5
GBR	4.7	1.2	1.2	4.1	1.4	1.2	0.6	1.2
ITA	4.1	4.6	1.5	4.3	2.6	1.5	0.8	1.5
NLD	4.9	0.8	0.8	2.9	0.7	0.8	0.4	0.8
REU15	9.8	5.7	4.2	4.1	2.7	3.9	1.4	3.9
EU12	9.6	8.8	5.4	8.1	2.8	3.7	3.2	3.2

Results: Changes in exports value, %

Scenarios	current-SR	current-LR	full-SR	full-LR
AUT	1.49	↓ 0.78	2.44	↓ 2.11
DEU	0.02	0.10	0.39	0.67
FRA	0.13	0.16	0.63	0.96
GBR	0.13	0.50	0.78	1.38
ITA	0.03	0.13	0.46	0.60
NLD	-0.05	-0.04	0.36	0.87
REU15	0.55	0.41	0.90	1.03
EU12	0.21	↓ -0.01	0.79	↓ 0.15
CHE	0.01	1.06	0.04	3.80
JPN	0.03	0.04	0.05	0.04
USA	0.01	0.05	0.00	0.05
ROW	0.00	0.08	-0.01	0.15

Note: "current" denotes a scenario of the currently achieved liberalization in services trade inside the EU, "full" denotes a scenario of complete removal of the remaining barriers to cross-border trade inside the EU ; SR denotes the short run, LR the long run.

Results: Changes in imports value, %

Scenarios	current-SR	current-LR	full-SR	full-LR
AUT	1.41	1.61	2.46	3.12
DEU	0.10	0.16	0.51	0.73
FRA	0.14	0.23	0.68	0.93
GBR	0.23	0.16	0.83	0.91
ITA	0.01	0.11	0.50	1.17
NLD	0.01	0.14	0.48	0.78
REU15	0.57	0.74	1.00	1.50
EU12	0.21	0.45	0.82	1.94
CHE	0.01	0.05	0.01	0.15
JPN	-0.04	-0.01	-0.10	0.03
USA	-0.03	0.00	-0.09	0.02
ROW	-0.01	-0.01	-0.06	-0.03

Note: "current" denotes a scenario of the currently achieved liberalization in services trade inside the EU, "full" denotes a scenario of complete removal of the remaining barriers to cross-border trade inside the EU ; SR denotes the short run, LR the long run.

Scenarios	current-SR	current-LR	full-SR	full-LR
AUT	88	-1203	-60	-1482
DEU	-586	-436	-625	156
FRA	-76	-400	-304	46
GBR	-704	1472	-1016	1367
ITA	48	65	-223	-2428
NLD	-132	-414	-212	360
REU15	-202	-3782	-1187	-5462
EU12	-80	-1728	-410	-6762
CHE	2	1668	45	6052
JPN	402	335	896	125
USA	511	570	1478	263
ROW	729	3853	1619	7765

Note: "current" denotes a scenario of the currently achieved liberalization in services trade inside the EU, "full" denotes a scenario of complete removal of the remaining barriers to cross-border trade inside the EU ; SR denotes the short run, LR the long run.



Results: Changes in welfare, USD mln

Scenarios	current-SR	current-LR	full-SR	full-LR
AUT	1339	879	2168	2827
DEU	268	1968	1791	5490
FRA	192	904	1355	4812
GBR	-111	3430	1621	7835
ITA	-37	1571	879	9769
NLD	-300	50	136	2246
REU15	2928	5063	5093	15686
EU12	281	939	1126	5764
CHE	-11	-225	-63	-831
JPN	-81	-111	-219	-299
USA	-112	-12	-419	-484
ROW	-69	349	-498	-1803

Note: "current" denotes a scenario of the currently achieved liberalization in services trade inside the EU, "full" denotes a scenario of complete removal of the remaining barriers to cross-border trade inside the EU ; SR denotes the short run, LR the long run.

Scenarios	current-SR	current-LR	full-SR	full-LR
AUT	0.44	0.27	0.68	1.02
DEU	0.00	0.07	0.05	0.32
FRA	-0.01	0.09	0.04	0.26
GBR	-0.01	0.13	0.08	0.78
ITA	-0.07	0.04	0.01	0.52
NLD	0.00	0.21	0.06	0.45
REU15	0.11	0.24	0.17	0.72
EU12	0.01	0.17	0.12	1.04
CHE	-0.01	-0.02	-0.03	-0.10
JPN	-0.01	0.00	-0.04	0.00
USA	-0.01	0.00	-0.04	-0.01
ROW	-0.01	0.00	-0.03	-0.02

Note: "current" denotes a scenario of the currently achieved liberalization in services trade inside the EU, "full" denotes a scenario of complete removal of the remaining barriers to cross-border trade inside the EU ; SR denotes the short run, LR the long run.



Results: Changes in trade balances in Full-LR scenario, USD mln

	AUT	DEU	FRA	GBR	ITA	NLD	REU15	EU12	CHE	JPN	USA	ROW
Primary production	-155	-202	-162	-85	-613	-26	-1073	-786	66	25	128	2719
Non-durables	290	145	-15	-359	-363	-418	275	308	-847	113	297	498
Durables	1820	456	699	-3696	-2797	-714	-4370	-5253	7456	56	233	5885
Construction	-63	111	75	18	1	62	-183	-74	1	17	8	28
Transportation	-93	-34	82	-215	915	555	1239	175	-94	-85	-441	-1538
Trade	-40	-59	43	89	251	56	-472	17	-61	25	32	119
Communications	22	-449	85	421	72	344	-226	-156	-32	-1	-20	-61
Financial services	-89	-163	-188	3142	-134	-25	-1085	-242	-301	-85	-387	-443
Insurance	-214	-154	-108	518	-4	-2	641	-144	-183	-13	-147	-191
Business services	-2758	653	-521	1561	370	554	432	-413	-41	16	74	73
Personal, cultural and recreational services	-102	-98	86	83	28	16	-285	-52	21	17	100	185
Other services	-101	-50	-29	-112	-155	-43	-355	-142	67	41	387	491

Note: "current" denotes a scenario of the currently achieved liberalization in services trade inside the EU, "full" denotes a scenario of complete removal of the remaining barriers to cross-border trade inside the EU ; SR denotes the short run, LR the long run.

- **Global trade creation**
- **Mostly deterioration of trade balances of liberalizing countries**
- **The EU is quite diverse in terms of trade performance**
 - Austria and EU12 specialize mostly in manufacturing
 - Germany and France have weak services orientation
 - The UK improves its position as a financial hub and supplier of other business services
- **Liberalizing countries have positive changes in welfare**
 - The deeper is liberalization, the larger are positive changes in welfare