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DISCUSSION PAPER

Trade Effects of Services Trade Liberalization in the EU

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Trade Effects of Services Trade Liberalization in the EU[*]

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Vienna, August 30 2008

Abstract

This paper gives a quantitative assessment of possible trade and welfare effects resulting from different trade liberalization scenarios within the EU. First, we econometrically estimate the existing services trade barriers in the EU (inside the EU and with respect to the third countries). Then we run simulations to estimate effects of the currently achieved liberalization of cross-border trade in services inside the EU, and of the elimination of the remaining trade barriers. The simulations are based on the GTAP model, a computable general equilibrium model. We use the GTAP database V7 (pre-release, benchmarked to 2004) and own estimates of protection in the services sector. Our findings point towards larger gains from more comprehensive cuts in trade barriers. We further observe a reinforcement of specialization patterns, with the new members intensifying their position as Europe's manufacturing base and the old members specializing increasingly in services.

1. Introduction

Trade liberalization in the services sector is a topic which has been on the table for more than ten years now. With the inception of the WTO in 1995, trade liberalization in the services sector has formally become part of the multilateral liberalization agenda. The GATS (General Agreement on Trade in Services) is an integral part of the WTO treaty. Nevertheless, the literature on trade and trade policy in services is comparably small. This is also due to a lack of knowledge with respect to the definition and measurement of barriers to trade in services. Since services themselves are often intangible, also barriers to trade in services are difficult to define. The situation is further complicated by the far-reaching definition of trade in services under the GATS, which includes cross-border trade, movement of persons as well as sales through foreign affiliates.

A key methodological issue in measuring services barriers is to distinguish between services restrictions which are protective and those which are designed to meet legitimate economic or social objectives (Dee, 2005). Often the application of certain restrictions can be justified, for instance, when they are aimed to provide for safety (air passenger transport sector) or financial stability (banking sector). Different approaches can be applied here: (1) to decide *a priori* which measures can be justified and exclude them from analysis; (2) to treat regulation on a continuum by allowing for a non-linear relationship between regulation and performance, and then identify at which point the degree of regulation has the least adverse effect on economic performance; (3) to include all regulatory measures in the analysis and identify whether they have an adverse effect on some measures of economic performance (even when the measures have a legitimate objective, it is useful to know their impact on performance – in case it turns out to be too high, regulators could possibly consider less burdensome measures which would reach the same objective).

The restrictions to services supply can be classified in several dimensions:

- affecting *establishment* (the ability of services suppliers to establish physical outlets in an economy and supply services through those outlets) or *ongoing operations* (the operations of a services supplier after it has entered the market);
- *non-discriminatory* (restricting domestic and foreign services suppliers alike) or *discriminatory* (restricting only foreign services suppliers);
- affecting *prices of services* or *costs of services providers*.

The methodologies of estimating barriers to trade and investment in services can be divided into two broad categories:

- *Direct methodology.*[1] This methodology directly measures the effects of restrictions, as measured by a trade restrictiveness index, on economic

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[1] This methodological approach is often referred to as method of the Australian Productivity Commission.

performance indicators of services suppliers. An econometric model is used to estimate the determinants of economic performance in that services sector (typically price, cost, price-cost margin, quantity or productivity), services supply restrictions being one of the factors.

- *Indirect methodology.* This methodology determines a benchmark price for a service and attributes part or all of a price above the benchmark price to the effect of restrictions. While applying this methodology it is important to distinguish between restrictions and other factors which may move prices above the benchmark, such as market size, market structure etc.

Many studies confirm that the main positive effects of trade liberalization in services are to be expected through increased efficiency and competitiveness of the domestic economy rather than through increases in exports (Nielson and Taglioni, 2003). Also Mattoo et al. (2006) find a growth-enhancing effect from openness to trade in services in the long run. Robinson et al. (2002) also stress the indirect effects from services sector trade liberalization on the efficiency and output of other sectors in the economy working through inter-industry input-output relations induced by imports of high-quality services. The few papers that attempt to assess the overall welfare effects of the current WTO Round of trade liberalization (the so-called Doha Round) often ascribe the largest welfare gains to services trade liberalization. For instance, Dee and Hanslow (2001) estimate a total effect of USD 260 billion from full liberalization, with USD 130 billion estimated to come from liberalization in the services sector (USD 50 and 80 billion arise from liberalizing trade in agricultural goods and manufactured goods respectively). Also Francois et al. (2005) note that services trade liberalization is likely to augment the gains from the Doha Round.

In this paper we first derive econometric estimates of trade costs of NTBs in services as well as estimates of the degree of trade liberalization achieved inside the EU as compared to the third countries following the approach developed in Francois (2008). Second, we use these estimates as an input for general equilibrium modelling of the effects of up-to-date achieved and possible future services trade liberalization in the EU. The analysis of the trade-creating and trade-diverting effects within Europe provides an interesting picture of underlying re-allocations of production as a consequence of the dismantling of barriers in the internal market for services. In addition to trade effects we also analyze the welfare implications of services trade liberalization within Europe.

2. Model and data description

2.1. GTAP model

We use a multi-region general equilibrium model to estimate possible trade effects of different scenarios of cross-border services trade liberalization within the EU. The model is similar in structure to the one used by Francois et al. (2005). The data structure of the

model follows the basic social accounting structure of GTAP (based on GTAPv7 data, benchmarked to 2004), while the theoretical structure has been modified to include investment effects and imperfect competition (Francois and McDonald, 1996; Francois 1998). It is formulated and solved using GEMPACK, a software package designed for solving non-linear general equilibrium models.

The model distinguishes five factors of production: land, natural resources, capital, skilled and unskilled labour, with the three latter factors considered to be perfectly mobile across sectors. Labour is immobile across international borders. While the net capital account balance in any general equilibrium model depends, in aggregate, on the macroeconomic features of the model, gross re-allocations of capital through FDI inflows and outflows are possible (though not explicitly tracked). In other words, the model is consistent with gross changes in FDI inflows and outflows linked proportionally to changes in cross-border trade,[2] even while it imposes a macro balance constraint on total net capital inflows. This net balance constraint is driven by macroeconomic and financial aspects of the model and not the by the sector results in services. Re-allocations of labour across sectors can be accounted for through changes in wages. The model further allows selecting whether a sector is characterized by monopolistic or perfect competition (Francois, 1998).

Trade liberalization is implemented in the model as an efficiency-enhancing reform, i.e. it has the same effect as technological progress in the respective sector. Thus, it reduces the costs of delivering a service. Short-run (SR) effects differ from the long-run (LR) ones in the following way: The former report only static effects, while in the long run prospective savings (and capital accumulation) become endogenous, which yields induced dynamic gains in addition to the purely static ones (see Francois and McDonald, 1996). Besides, in the long-run we let capital move globally.

2.2. Regions and sectors

We distinguish the following regions in our model: Austria, the UK, Germany, France, the Netherlands, Italy (these five EU members are the largest services traders in the EU); the rest of the EU15 (REU15); the EU12 (the new EU members); Switzerland, Japan, Canada and the USA (these four countries have significant shares in the world services trade – see Figure 1); and the rest of the world (ROW – 82 countries).

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[2]   Thus, we are implicitly assuming here a complementary relationship between different modes of services supply, i.e. across borders and indirectly through foreign affiliates. This is consistent with recent empirical findings for the services sector, for instance by Fillat et al. (2008), Buch and Lipponer (2007), Moshirian et al. (2005) and Bos and van de Laar (2004).

Figure 1

Geographic structure of global services exports in 2005
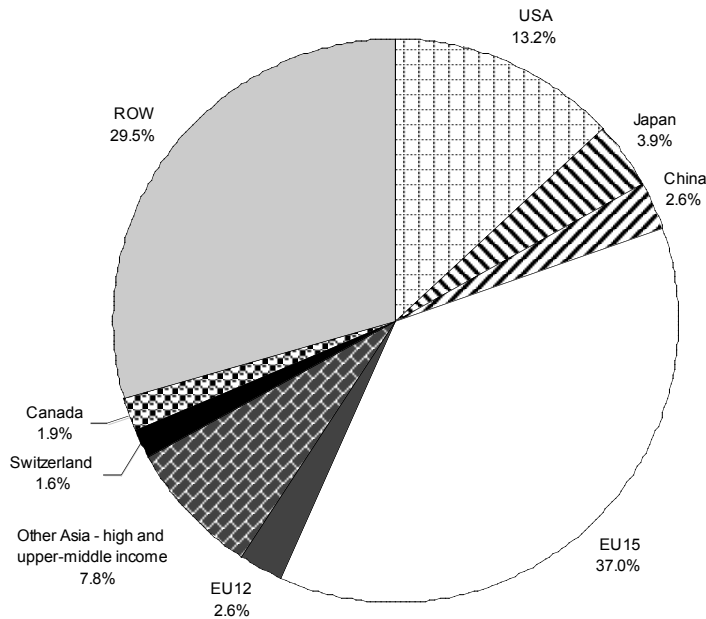
Source data: TSD3

We aggregate 12 sectors (out of 57 possible GTAP sectors). Apart from primary production, utilities, and other services (comprising among others mainly personal and public services) we consider all sectors to be subject to monopolistic competition (for the sector description see Table 1).

Table 1

Description of the sectors modelled

	Abbreviation 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
Non-durables	NDU	19-29, 31-32, 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.

2.2. Data

As mentioned above, we mainly use the GTAP V7 (candidate version 1) database which is benchmarked to 2004. Since trade barriers for the service sector are not yet included in the GTAP database, we are using our own econometric estimates of implicit protection rates which are explained below. Thus, we combine different data sources as well as reported data and econometrically derived estimates. This allows us to get a comprehensive picture of the service sector. For our purpose we need reliable information not only on the service sector itself, but also on domestic linkages with all other sectors in the economy as well as information on rates of protection against foreign trade in the sector. Trade protection within the service sector cannot be directly measured, since barriers to trade in services often take hidden and implicit forms. Therefore, we have to rely on estimates rather than reported data for this part.

2. Econometric estimation of trade costs of NTBs in services trade

Up to date, no official estimates of barriers to trade in services for a large range of countries and sectors are available. Also, existing studies show rather large variations with respect to the methodology used, in their sector, country and time coverage and consequently in their results. Most studies focus on a limited number of sectors or countries. As inputs into our estimations we needed a comprehensive treatment of many sectors and countries in order

to obtain comparable results across all sectors and countries. We therefore employed a 2-stage econometric approach to arrive at such a homogenous set of barrier estimates.

Our residual approach involves estimating a gravity model in the first stage with reporter and partner fixed effects. The reporter fixed effects are then regressed in a second stage on the reporter's GDP, EU and NAFTA dummies and a recent OECD regulation index for the respective service sector. The estimated coefficient on this latter variable gives the elasticity of trade with respect to regulation. In combination with the level of regulation we can derive from this an estimate of protection and express it as a trade cost equivalent in percent of delivered prices. For details of the exact estimation see Francois (2008).

Table 2

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.

According to these estimates, Austria has the highest trade barriers inside the EU in all the services sectors apart from communications and financial services, where the rest of the EU15 and Italy have the highest barriers respectively. The Netherlands and the UK have the lowest barriers to services trade among the "old" EU members. The insurance sector is the most protected service sector in the EU and in the world in general. The sectors with the lowest trade barriers are trade, construction, and personal, cultural and recreational services. This ranking has to be interpreted with care, since the sectors with the lowest estimated barriers to cross-border trade are mostly traded through other modes for technical reasons (such as trade and repair). Hence, it seems intuitive to expect low trade barriers on cross-border trade since the bulk of trade in these sectors will occur through either foreign affiliates or temporary movement of persons. All estimates of barriers to cross-border services trade are presented in Table 2.

4. Cross-border services trade liberalization scenarios

In this chapter we run two scenarios of liberalization in cross-border trade in services inside the EU. First, we model the trade and welfare effects of the liberalization which has occurred in the EU so far. Second, we estimate the effects which the complete removal of NTBs to services trade inside the EU would bring.

Estimates of the current level of services trade liberalization inside the EU can be found in Table 3. The figures have to be interpreted as the percent change in trade costs of undoing the EU (i.e. a removal of all previous integration steps) The most striking result of these estimates reflecting the degree of current services trade liberalization inside the EU is that cross-border trade in transportation services is less liberalized in the EU as compared with the third countries. Relatively speaking, the highest barriers to trade in transportation services emerge in the Netherlands and Italy, where trade costs are as much as 6, 3 and 2 times higher compared to their expected level in the absence of the EU. These rather elevated transportation costs within the EU can be attributed to the concentrated air and railway traffic, which to date is often characterised by state monopolies.

In all other services sectors trade was actually liberalized, with the biggest relative progress having been made in modern, producer relevant service industries such as finance (49%-53% cut in current trade costs as reported in Table 2), other business services (42%-53% cut in trade costs), and insurance (37%-42% cut in trade costs). In other sectors trade costs declined on average by about 15%. The degree of liberalization was approximately the same across countries.

Table 3

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 intra-EU restrictions to services trade are presented in Table 4. The highest barriers remaining after liberalization are in transportation, insurance and communications sectors. Austria has the highest trade barriers among the EU members in transportation, trade, other business services, and personal, cultural and recreational services. The new member states exhibit the highest barriers in financial and insurance services trade, while Germany displays the largest restrictions in cross-border trade in communication services.

Table 4

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

5. Results

The simulation results of these different shock scenarios are presented in Tables 6 to 11. As a word of caution, we wish to stress that the results are comparative-static, showing only the trade impact on the economy of the defined scenario of trade liberalization in services. Since our simulations do not take into account changes in any other factors but trade liberalization, our results must not be seen as forecasts of the actual state after trade liberalization has taken place in Europe, but as the *ceteris paribus* outcome of the decrease in services sector protection. In presenting our results, we distinguish between short-run effects (SR), which include only static gains and losses from trade liberalization, and long-run effects (LR), which include the dynamic effects arising from savings and capital accumulation.

As may be expected, services trade liberalization in the EU first of all results in trade creation, the scope of it however is quite small. The highest increase in trade occurs in Austria and REU15, where services sectors were initially most strongly protected through NTBs. Limited liberalization in the Current-SR scenario – i.e. analysing the effects of intra-EU liberalisation so far - brings about negative growth of Dutch service exports, which were subject to the lowest trade costs in transportation services initially. In the long-run exports

increase faster than in the short-run in all the liberalizing countries apart from Austria and the EU12, which is possibly due to the fact that these countries are the smallest markets in our aggregation, thus able to go through adjustment faster than larger economies. The new member states experience the smallest changes in exports in the long-run among all the EU members due to apparent lack of strong comparative advantages in services.

Table 6

Changes in exports value resulting from 2 shock scenarios, %

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 liberlaization 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.

Table 7

Changes in imports value resulting from 2 shock scenarios, %

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 liberlaization 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; SR denotes the short run, LR the long run.

The EU trading partners – who do not liberalize – also experience increase in their exports, with the highest increase happening in Switzerland (3.8% in the Full-LR scenario). Surprisingly, the country manages to increase its exports of durables which compensate for the loss of its competitiveness in insurance and financial services (export of which declines and import of which grows).

Exports grow at a slower pace than imports in most liberalizing countries. As a consequence, trade balances deteriorate for many of them. It points towards a pronounced structural shift within Europe, which is revealed only by the general equilibrium framework and could not have been identified in a partial equilibrium model. We will look in more detail on sectoral changes in services trade in the analysis of the Full-LR scenario results below.

In the long run, in some of the EU members trade balances' turn back into positive again, as their export growth speeds up. An absolute improvement in the aggregate trade balance in the Full-LR scenario takes place in France, Germany, the Netherlands and the UK. In other countries, however, negative trade balance tends to deteriorate with time as they lose competitiveness in certain services as well as durables production.

Table 8

Changes in trade balances resulting from 2 shock scenarios, USD million

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; SR denotes the short run, LR the long run.

However, these mostly negative net trade effects are only one aspect of trade liberalization. Welfare effects turn out to be quite different, since the trade effects calculated here do not take full account of all effects arising from trade in services. As is often mentioned in the literature (Nielson and Taglioni, 2003; Robinson et al., 2002), backward and forward linkages imply an important positive role for services imports as efficiency-enhancing inputs in other sectors. Further, consumer prices may fall as a result of services trade liberalisation, thus improving welfare directly.

As Table 9 shows, all the liberalizing countries have positive changes in welfare (apart from the Netherlands, Italy and the UK in the Current-SR scenario – obviously due to effects of de-liberalization of cross-border trade in transportation services, where these countries had the lowest trade restrictions). The deeper the liberalization the larger are positive changes in welfare; in the long-run the increase in welfare turns out to be much higher than in the short-run, the difference reaching as much as 16 times in case of the Netherlands (the Full-LR scenario).

Table 9

Changes in welfare resulting from 2 shock scenarios, USD million

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 liberlaization 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; SR denotes the short run, LR the long run.

Finally, we compare the long-run results for countries across sectors in the Full-LR scenario (see Tables 12 to 14). We selected this scenario because deeper and more protracted trade liberalization is more likely to reveal the sectors in which individual countries tend to specialize.

We observe a clear differentiation in specialization patterns between different EU members. The EU12 and Austria tend to increase export of non-durables the most among all the EU members; Austria also has the highest growth of durables export among the EU members. Austria experiences a decline in exports and the same time strong growth of imports of financial, insurance and business services. The EU12 undergo the strongest import growth in all the services sectors apart from transportation and business services where they are surpassed by Austria.

The UK and the Netherlands turn out to have very strong comparative advantages in financial services and communication respectively; exports of these services increase by about 10%, while imports experience a decline.

Table 12

Changes in exports value resulting from full-LR scenario, %

	AUT	DEU	FRA	GBR	ITA	NLD	REU15	EU12	CHE	JPN	USA	ROW
Primary production	-1.0	0.6	0.3	0.2	-0.7	0.3	-0.3	-0.6	1.0	0.4	0.3	0.4
Non-durables	1.7	0.3	0.2	0.1	0.1	-0.2	0.5	1.1	-5.6	0.1	0.1	0.1
Durables	2.6	0.3	0.4	-0.6	-0.3	-0.2	-0.1	-1.1	7.1	0.1	0.1	0.2
Construction	2.7	3.9	3.9	3.9	3.9	4.2	3.7	4.0	-0.2	0.2	0.2	0.2
Transportation	4.4	2.8	4.2	3.6	6.1	3.1	4.9	3.8	-1.9	-0.1	-0.6	-0.4
Trade	4.1	3.8	3.6	3.5	4.2	3.9	3.4	3.9	-1.2	0.1	0.1	0.1
Communications	7.7	5.3	7.1	8.9	6.9	9.8	6.7	7.0	-1.5	-0.3	-0.4	-0.4
Financial services	-0.1	2.4	1.8	10.6	1.5	2.4	2.1	2.0	-4.1	-1.1	-1.1	-0.9
Insurance	-0.3	2.8	3.4	4.9	3.1	4.6	5.1	3.2	-3.5	-0.5	-0.8	-0.7
Business services	-1.5	3.0	2.0	3.0	2.8	2.8	2.5	3.3	-0.5	0.0	0.0	0.0
Personal, cultural and recreational services	2.1	3.0	3.2	3.5	2.6	3.5	2.8	3.2	0.0	0.2	0.3	0.3
Other services	-1.3	0.0	0.1	-0.2	-1.1	-0.3	-0.6	-1.0	0.3	0.4	0.6	0.5

Table 13

Changes in imports value resulting from full-LR scenario, %

	AUT	DEU	FRA	GBR	ITA	NLD	REU15	EU12	CHE	JPN	USA	ROW
Primary production	2.4	0.4	0.5	0.4	1.2	0.2	1.0	2.3	-0.9	0.0	0.0	0.1
Non-durables	0.1	0.1	0.2	0.4	0.6	0.7	0.4	0.4	0.2	-0.1	-0.1	0.0
Durables	0.2	0.3	0.2	0.8	1.0	0.6	0.6	1.3	0.3	0.1	0.0	-0.1
Construction	8.2	2.1	2.5	2.2	2.8	1.5	7.3	9.3	-2.8	0.0	0.0	0.0
Transportation	13.3	3.3	7.2	5.0	3.6	3.9	9.2	10.2	-0.1	0.0	0.0	0.1
Trade	6.2	1.7	1.9	1.3	1.2	1.3	4.9	4.8	0.3	-0.1	-0.1	-0.1
Communications	6.4	10.3	6.6	1.4	3.2	-0.3	8.6	13.8	0.8	-0.1	-0.1	-0.1
Financial services	5.9	3.6	4.8	-4.3	6.0	2.5	4.8	7.0	2.6	1.0	1.5	1.0
Insurance	12.3	7.8	9.4	3.8	3.7	4.6	3.1	13.6	1.8	0.2	0.3	0.2
Business services	10.6	1.3	4.4	0.9	0.9	0.7	2.3	5.7	-0.1	0.0	-0.1	0.0
Personal, cultural and recreational services	6.5	1.7	2.0	1.8	2.4	1.4	5.4	4.9	-1.7	-0.2	-0.2	-0.3
Other services	3.5	0.4	0.6	0.7	2.3	0.9	1.9	3.6	-3.4	-0.3	-0.2	-0.4

Table 14

Changes in trade balances resulting from full-LR scenario, USD million

	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

Overall the EU is quite diverse in terms of trade performance. The new members and Austria are standing out as primarily specializing in manufacturing, while the EU15 has more relative advantages in services. But even within the EU15 and when we exclude Austria the picture is far from being uniform: for example, Germany and France slightly increase their exports of durables in contrast to other countries which experience a decline in this sector export. This underlines the role of Germany as well as France as mostly manufacturing based economies with a very strong competitive position in manufactures and a to date relatively weak service orientation. At the other extreme we find the UK which would clearly improve its position as global hub for financial service, but also British business service providers more generally will gain from further liberalization. The UK is probably the most service oriented economy within the EU at the moment and this international specialization would clearly increase further in case of a far reaching liberalization.

6. Conclusions

In this paper we simulate possible trade effects of services sector trade liberalization within the EU. Despite the fact that services trade liberalization has been on the agenda for multilateral trade negotiations for over ten years, the number of studies on the subject is still limited. This is related to underlying difficulties in defining and measuring barriers to trade in services. We are using here a computable general equilibrium model (GTAP model in the version by Francois and McDonald, 1996) augmented by econometrically derived estimates of barriers to services trade from Francois et al. (2007). We assume that the EU liberalizes

trade in services, while no liberalization in the rest of the world takes place. More specifically we simulate two scenarios: a cut in services trade restrictions which has already taken place inside the EU, and removal of the remaining trade restrictions inside the region.

In general, our results point towards global trade creation. Savings and capital reallocations reinforce the short-run effects, yielding somewhat larger trade creation effects. However, we mostly see a clear deterioration of overall trade balances (for 23 EU members out of 27). The reasons for this negative net trade effect differ between different EU members. The largest services traders among the old EU members specialize increasingly in services, experiencing a decline in net manufacturing exports with consequent negative effects on the total trade balance. The EU12 and Austria improve their trade balances in the non-durables sector (Austria improves its trade balance in durables as well).

All the liberalizing countries have positive changes in welfare (apart from the Netherlands, Italy and the UK in the scenario looking at achieved liberalisation in the short run - Current-SR scenario – obviously due to a potential de-liberalization of cross-border trade in transportation services, where these countries had the lowest initial trade restrictions). The deeper is liberalization, the larger are positive changes in welfare. In the long-run welfare increases turn out to be substantially higher than in the short-run.

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