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Liberalization of Services in Europe; Polish perspective on Economic Implications of the Services Directive[1]

(first draft)

Introduction:

The internal market has been defined as "*an area without frontiers in which the free movement of goods, persons, services and capital is ensured*." (Treaty Establishing EC (TEEC)[2]. The implementation of the internal market program for goods led to a gradual elimination of border controls. In order to achieve genuine free movement of goods, member states had to accept the mutual recognition principle (MRP) and a gradual harmonization of technical standards of products available on the single market.

Despite TEEC provisions free flow of services remained incomplete within the EU. There are several possible explanations why the progress in liberalization of trade in services has been much slower in comparison to goods.

The slow progress of liberalization stems from the intangible character of many services. Many of them cannot be produced and stored for postponed consumption. In such a case, there is a single act of production and consumption at the same time and place. Another obstacle, quoted by many opponents of liberalization, is related to the quality of services. In the majority of cases, their quality can be verified only *ex post*. Once the service is consumed, it cannot be returned to the provider (which is possible in the case of goods). Finally, the economic implications of services liberalization are far lass clear in comparison to trade in goods. The theory of trade in services is less elaborated and economists differ in opinion in describing barriers and implications of liberalization. In consequence, many politicians and lobbies or social groups do object to a deeper liberalization of trade in services.

There are already many classifications aiming at the identification of barriers in services trade. Detailed description of barriers limiting trade between the EU countries were elaborated on the basis of detailed questionnaires. For example authors of Copenhagen Economics (2005) present a description of restrictions which can appear at different stages of services' provision.[3] Their list consists of: requirements regarding local residence of management, special licenses, requirements for additional diplomas, local professional insurance, constraints on the use of home country inputs, the necessity to fully apply all local labor laws (even for temporary services), restrictions on marketing, inter-firm cooperation, or the juridical form of the company, not clear regulations, a multiplicity of regulatory agencies or simply a fuzzy implementation procedures.

[1] This paper is based on results of a research project financed by the Office of the Committee for European Integration (OCEI), in Warsaw. The opinions expressed by authors in the paper do not reflect neither positions of the OCEI nor of the National Bank of Poland.
[2] TEEC: Treaty Establishing the European Community (Treaty of Amsterdam), II, art. 14.2
[3] Copenhagen Economics (2005), Annex I, p. 3-6.

Given the wide scope of possible trade barriers in this sector it was not surprising that the Commission, in 2004, presented an important, horizontal proposal of services liberalization.

I. Commission Proposal (2004) and accepted Directive (2006)

The first proposal of a Services Directive was presented by the Commission in 2004, and is known as the "Bolkestein Proposal (Directive)"[4]. In the summary it was stated that "it is part of the process of economic reform … with a view to making the EU the most competitive and dynamic knowledge-based economy in the world by 2010. Achieving this goal means that the establishment of a genuine internal market in services is indispensable." The objective of the proposal "is to provide a legal framework that will eliminate the obstacles to the freedom of establishment for service providers and the free movement of services between the Member States, …"[5] Therefore, it was a "horizontal" proposal, which would establish a legal framework applicable in principle to all services.

The proposal identifies two specific types of situations where obstacles to trade in services are significant. First, "when a service provider from one EU country wishes *to establish himself* in another EU state in order to provide his services". Second, "when a service provider wishes to *provide a service from his* Member *State of origin* into another Member State, particularly by moving to the other Member State on a temporary basis." (for example, he may need to obtain a relevant authorization,…).[6]

There were three major categories of instruments proposed to achieve a genuine internal market for services. First, in order to promote *freedom of establishment* the proposal called for administrative simplification measures, particularly involving the establishment of "single points of contact".[7] Moreover, it laid down certain principles for the *authorisation schemes*, in particular relating to the procedures for granting authorizations. It included a mechanism for assessing the compatibility of certain other legal requirements, provided that the principles of non-discrimination, necessity and proportionality were respected. Complex, lengthy and costly authorization and licensing procedures were therefore expected to disappear mainly due to restrictions on the number of documents required and the introduction of electronic procedures.

Second, in order to eliminate the obstacles to the *free movement* of services, the proposal called for *country of origin* (*CoO*) principle. with certain derogations. According to this principle a service provider is subject only to the regulations of the country of origin (in which he is established) and other member states may not restrict services provision from this provider. In other words *CoO* principle implies that once a service provider is operating legally in one Member State of the EU, it can market its services in other Member States without having to comply with further rules in the host countries. This principle eliminates discriminatory requirements based on nationality or residence. The *CoO* principle became the most controversial issue for many EU members

Free movement of services should also mean that recipients should have the right to use services from other EU members without being hindered by restrictive measures imposed in

[4] European Commission (2004), p. 3.
[5] Ibidem.
[6] European Commission (2004), p. 5.
[7] At this point a service provider should be able to complete all administrative procedures by electronic means.

their country. The Proposal called also for setting the rules regarding the case of posting of workers by service provider[8].

Third, the Bolkestein Directive proposed some instruments aimed at increasing *consumer protection* by setting some rules increasing *mutual trust* between EU members. It proposed *inter alia* harmonization of legislation in order to guarantee equivalent consumer protection among member states[9].

The approach adopted by the proposal entailed fast removal of barriers which could have been dismantled quickly. For the others barriers, the proposal foresaw launching of a process of evaluation, consultation and complementary harmonization of national regulatory systems for service activities. The proposal called therefore for measures promoting the quality of services, such as voluntary certification of activities, or cooperation between the chambers of commerce. There was also a call for encouraging codes of conduct on certain questions, including in particular commercial communications by the regulated professions.

The Bolkestein proposal was a framework Directive, and did not aim at establishing detailed rules in all service sectors of the EU members. This was left to specific sectoral directives. Its scope was limited and some sectors were clearly excluded from the proposed regulations. Namely, financial, electronic communication and network services such as post, telecom, electricity distribution, rail, airports and broadcasting were not covered by the proposal. Yet, the scope of regulated (such as professional services, engineering, construction, retail trade) and non regulated services (such as tourism wholesale trade, data processing, logistics) covered by the proposal was very substantial. For details regarding the scope of directive see Figure 1.

The draft Bolkestein Directive has run into strong and widespread opposition. The proposal was subject of intense public debate, and has been taken up by the European Parliament. The Parliament discussed about 1600 amendments to the proposal and governments of several countries opposed some elements of the proposed directive. This debate has focused to a large extent on the "country of origin principle". In March 2005, EU Commissioner McCreevy in a speech to the European Parliament (EP) noted: "After my initial round of contacts I went to President Barroso and said that I believed the current proposal would never be adopted unless we were prepared to accept modifications". He added "We should address concerns about the operation of the country of origin principle: We need to maintain this if we want to promote the cross-frontier provision of services. To do so we will need to address key issues such as giving greater confidence and certainty to businesses and consumers on what law will apply to cross-border transactions. We also need to build the trust and confidence between Member States necessary for it to operate effectively"[10]. The other concerns expressed by McCreevy related to the idea that conditions and standards for workers will not be affected in any way and to the exclusion from the scope of the Directive of sectors such as health and publicly funded services of general interest.

[8] Articles 24 and 25 of the Proposal.

[9] It refers *inter alia* to the obligations concerning information, professional insurance, settlement of disputes, and exchange of information on the quality of the service provider.

[10] C. McCreevy , Statement to the European Parliament on Services Directive, European Parliament Plenary Session, Strasbourg, 8 March 2005

Formal concerns regarding *CoO* principle have been explained by Micossi (2006). The "proposed directive envisages a shift from the prevailing system of mutual recognition to general application of the *CoO* rules, with a list of derogations. This proposal has proven the most controversial, perhaps not without reason since it entails that services provided by residents of other member states would have direct access to all national markets of the Union without any scrutiny by national authorities; the responsibility of supervising service providers would belong to the member state of origin." [11]

In economic terms one can argue that the *CoO* principle favors the service provider. It could set up operations in the EU State with the most liberal social regulations and use this country as a base from which to operate in all other Member States while avoiding their more restrictive regulations[12]. To avoid relocations and an increase in unemployment, there is a risk that Member States will embark upon a race to establish the least strict regime and dismantle their existing systems for protecting consumers and workers. A feared implication, as expressed by some countries, is that service providers from member states with lax labor protection would be free to import their workers and labor laws in the host country, thus undermining the more 'cohesive' social protection systems.

Thus, not surprisingly the most vivid opposition to the proposed directive, and especially to *CoO* principle, came from countries like France, Germany, Belgium or Austria. The other countries, among them U.K., Ireland and majority of NMS supported main provisions of the Bolkestein proposal.

The final amendments to the Services Directive (2006), accepted in December of 2006, were very significant. The changes were done with respect to (i) modifications regarding the interpretation of free movement of services (in fact deleting the principle of "country of origin"), (ii) the scope of the Directive and (iii) rules concerning posted workers.

The "country of origin" principle has been dropped as going too far. Instead two other concepts have been introduced: (i) freedom of establishment for providers of services and (ii) free movement of services (respectively chapters III and IV of the Directive).

Freedom of establishment for providers means that the access to a service activity shall not be subject to an authorization scheme *unless*: (a) the authorization scheme does not discriminate against the provider in question;(b) the need for an authorization scheme is justified by an overriding reason relating to the public interest; (c) the objective pursued cannot be attained by means of a less restrictive measure, …. [13]

In the similar way, the free movement of services is interpreted as "the right of providers to provide services in a Member State other than that in which they are established". If access to provision of services is subject to compliance with any requirements it should respect the principles of (i) non-discrimination, (ii) necessity (the requirement must be justified for reasons of public policy, public security,….) and (iii) proportionality (the requirement must be

[11] Micossi (2006), p.5

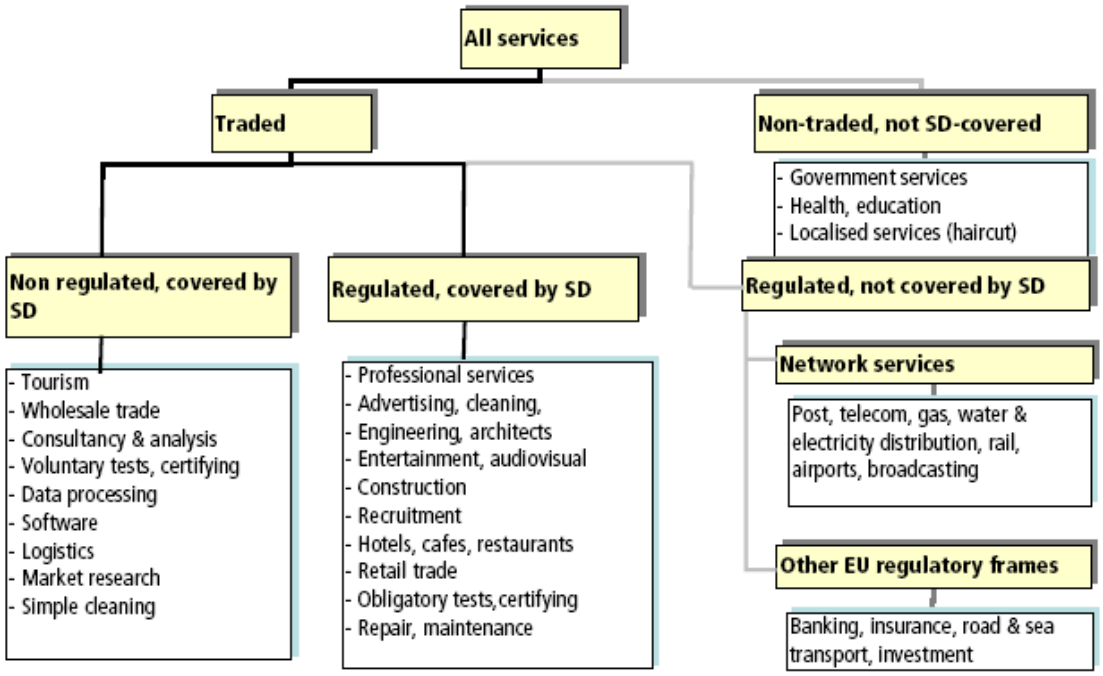
[12] For example, administrative simplification could undermine standards which ensure the correct operation of health care systems (such as requirements relating the minimum number of employees, mandatory prices, limits set on the basis of a minimum geographic distance). This could undermine health care cover system of some countries.

[13] Services Directive (2006P, chapter 4, Article 9.

suitable for attaining the objective pursued)[14]. Thus, services providers are subject to regulations and requirements of the country of destination and not of origin.

The Parliament amendments excluded the following services from the scope of the Directive: (i) electronic communication services (being covered by other directives), (ii) transport services, including urban transport, taxis and ambulances as well as port services, (iii) financial services (such as banking, credit, insurance and re-insurance, occupational or personal pensions, securities, investment funds), (iv) audiovisual services, (v) gambling activities (including lottery and betting transactions) (vi) social services in the areas of housing, childcare and support to families; (vii) taxation matters, those activities that are connected with the exercise of an official authority in a member state (including notaries) and (viii) public and private healthcare services provided by health professionals to patients, including pharmaceutical services. The sectoral scope of the Directive is shown in Figure 1.

Figure 1: Traded and Non-Traded Services in the EU



Source: Kox and Lejour (2006)

The provisions regarding rights of posted workers have also been dropped. In order to reassure that the new law does not undermine more 'cohesive' social protection systems in article 1.6 it is stated that clearly that "This Directive does not affect labor law, that is any legal or contractual provision concerning employment conditions, working conditions,…"

Thus, the new Directive has been more diluted in comparison to the Commission proposal. It takes a long term horizon. Directive should lead to gradual liberalization in provision of services. It should lead to a mix of measures involving targeted harmonization, administrative cooperation, and the encouragement for the development of codes of conduct on certain issues.

[14] Services Directive, chapter 4, Article 16.

Was the Bolkestein proposal so radical indeed? What are the likely economic implications of the Services Directive of 2006? Would major opponents be hurt by the early Proposal of the Commission?

Before we try to answer these questions we would like to analyze Poland's Revealed Comparative Advantage (*RCA*) in services and compare it to the position of some other major players in this sector.

II. RCA's in services of Poland and other European Countries

The simplest way to describe relative sectoral position of a given country is to analyze the Revealed Comparative Advantage (RCA) index. It is commonly used in the analysis of merchandise trade and can also be applied to trade in services. Poland, however, provides the relevant data only since 2005 and therefore, our analysis is limited only to that year.

Polish revealed comparative advantage (RCA) against the EU 25, can be expressed as the ratio of the share of a specific sector in the total exports of Poland to the share of this specific sector[15] in the total exports of the EU 25. Thus one can notice that Poland has a an aggregated revealed comparative advantage in transportation (RCA index: 1,52) and travel (RCA index: 1,56). The high RCA index in transportation is mainly due to road transport. However a comparative disadvantage is recorded in other services (RCA index: 0,53). The more disaggregated indexes of Poland's RCA's against all EU-27 members, and in comparison old EU-15 members and 10 NMS are shown in **Tab. 1**. The RCA indexes above one, indicating a comparative advantage, are marked in bold.

Poland reveals highest comparative advantage in comparison to all EU members in sectors related to transport and travel such as road transport (223), rail transport (219), pipeline transport (231), inland and waterway transport (227) as well as business and personal travel (236 and 240). Furthermore, in the sector of other services, high comparative advantages were recorded in construction services (249), agricultural mining and on-site processing (281) and advertising, market research and opinion polling (278).

Thus we conclude, that Poland reveals comparative advantage in sectors requiring large amounts of low skilled labour force and a weak position in sectors requiring substantial quantities of physical and human capital.

[15] Thus a RCA index bigger than 1 means that Poland has a revealed competitive advantage relative to the EU 27.

Tab. 1. RCA's indexes for Poland against EU-27, EU-15 and UE-10 in 2005

Service sector (according to BOP classification)				RCA of Poland against UE 27	RCA of Poland against EU-10	RCA of Poland against EU-15
207			Passenger transport on sea	0,52	0,30	0,56
208			Freight transport on sea	0,72	**1,49**	0,68
209			Supporting, auxiliary & other sea transport	0,92	0,62	0,95
211			Passenger transport by air	0,87	0,93	0,86
212			Freight transport by air	0,58	0,91	0,56
213			Supporting, auxiliary & other air transport	0,16	0,25	0,15
218			Space transport	0,00	0,00	0,00
219			Rail transport	**3,80**	**1,00**	**5,04**
223			Road transport	**3,91**	**1,60**	**4,48**
227			Inland waterway transport	**1,38**	0,89	**1,63**
231			Pipeline transport	**3,70**	0,86	**4,85**
232			Other supporting & auxiliary services	**1,39**	0,31	**1,84**
237		Business travel		**1,53**	**1,31**	**1,56**
238			Business expenditure by seasonal and order workers	**:**	0,31	**:**
239			Business: other business services	**:**	**1,47**	**:**
240		Personal travel		**1,14**	**1,03**	**1,15**
241			Personal health-related expenditure	**:**	0,89	**:**
242			Personal Education related expenditure	**:**	0,75	**:**
243			Personal Other personal travel	**:**	**1,04**	**:**
246			Postal and courier services	0,32	0,65	0,32
247			Telecommunication services	0,65	0,77	0,66
250			Construction abroad	**2,70**	**2,11**	**2,75**
251			Construction in the compiling economy	**8,41**	**1,84**	**12,61**
254			Life insurance and pension funding	0,06	0,24	0,05
255			Freight insurance	0,00	0,00	0,00
256			Other direct insurance	0,09	**1,66**	0,09
257			Reinsurance	0,28	**2,53**	0,26
258			Auxiliary services	**1,69**	**2,19**	**1,64**
260		Financial services		0,15	0,76	0,14
263			Computer services	0,28	0,54	0,27
264			Information services	0,22	**1,24**	0,21
266		Royalties and license fees		0,09	0,51	0,08
269			Operational leasing services	0,26	0,32	0,26
272			Merchanting and other trade-related services	0,18	0,39	0,17
273			Miscellaneous business, professional and technical services	0,92	**1,19**	0,90
288			Audio-visual and related services	0,38	0,18	0,41
289			Other personal, cultural and recreational services	0,89	0,78	0,90
291		Government services, n.i.e.		0,08	0,12	0,08
982	Services not allocated			0,00	0,00	0,00

Source: based on Eurostata statistics.

Finally, let us briefly compare relative position of Poland against major opponents of Bolekstein Directive. Poland reveals comparative advantage in the sectors in which RCA index is well above one, while other major countries have much lower level. The detailed RCA indexes of Poland and other EU countries are shown in Annex (**Tab. 14**). In case of Germany services liberalization can potentially adversely affect construction services in the compiling economy, road (freight) and rail transport (freight, supporting and auxiliary services).

In the case of Belgium the potential competition from Poland arises in rail services (freight) and inland waterway transportation (although there is no direct threat). Austria reveals comparative disadvantage against Poland in auxiliary construction services and auxiliary transport. Unfortunately, given the limited availability of French statistics it is impossible to identify sectors in which France reveals comparative disadvantage against Poland. The strongest opposition against liberalization in this country came from some narrow labor intensive sectors, as plumbers, taxi drivers or hair dressers, which are frequently not recorded in statistics, and in which movement of natural persons can potentially cause a competition for suppliers and be beneficial for consumers.

Can Poland benefit from services sectors in which country demonstrates high level of RCA? Will Poland be negatively affected by services liberalization in the sectors in which it has comparative disadvantage? It covers maritime and air transport and majority of "other services" (with exceptions of construction services, agricultural mining and on-site processing and advertising, market research and opinion polling). We will try to answer, at least partially, by CGE simulation of implications of Services Directive. Before that we will present approaches to estimations of tariff equivalents, which form the basis for all simulations and review the literature regarding economic implications of Services Directive.

III. Approaches to tariff equivalents estimations and simulations of Services Directive

III.1. Approaches to quantifications of tariff equivalents

Research into the measurement of services trade barriers is fairly recent. In many cases, approaches are similar to those that were previously developed to measure non tariff barriers (NTBs) to merchandise trade, and thus can be classified in similar terms to the NTB literature.[16] These classification refers to frequency measures, quantity-based measures and price-based measures.[17] All authors search proxies of tariff equivalents of existing barriers.

The main approaches to estimation of tariff equivalents are based on[18]:

1. Commitments undertaken by GATT/WTO members during the GATS negotiations (Hoekman, 1996). This is a frequency based analysis.
2. Analysis of detailed regulatory and other barriers in a given sector (Australian Productivity Commission)[19]. Similar approach was followed in previously mentioned Copenhagen Economics (2005) study.
3. Analysis of difference between real and potential services' flows which can treated as tariff equivalent, reflecting the restrictiveness of non tariff barriers (analysis basing on gravity model)[20]. This approach reflects price based methods and will create the background for our CGE simulations.

The most frequently quoted approach was developed by **Hoekman (1995)**, using the General Agreement on Trade in Services (GATS) schedules of commitments. The diversity of

[16] See e.g.: Deardorff and Stern (1998).
[17] Hoekman (2006) provides excellent overview of methods used and results of empirical studies.
[18] We decided to present comparison of different studies for this sector in Turkey because it is one of the rear sectors of MENA countries, which has been analyzed in many empirical studies.
[19] Kalirajan and others (2001). This a frequency and
[20] Francois (1999).

provision of services is reflected in the so called modes of supply contained in the schedules of commitments. There are four basic modes in which services can be supplied[21].

- *Cross-border supply*: when a service crosses a national frontier (for example, air or maritime transport across borders, purchase of software or insurance);
- *Consumption abroad:* It occurs when the consumer travels to the territory of service supplier, for example, purchase of tourism, education, health services;
- *Commercial presence:* It involves foreign direct investment, for example, when a foreign bank, telecommunications or electricity firm establishes a branch, subsidiary abroad;
- *Movement of natural persons:* when service providers or employees of a multi-national firm temporarily move to another country for business consulting or construction.

The core rule of GATS - like in the traditional GATT[22] - is the principle of nondiscrimination. In the GATS the coverage of national treatment is applied only to sectors listed in country's schedule of commitments, and only insofar as existing measures are nor exempted. In addition the GATS agreement and schedules of commitments introduce the concept of market access. A specific commitment is an undertaking to provide market access and national treatment for the service activity in question. Thus, a specific GATS commitment is a guarantee that the conditions of entry and operation in the market will not be changed for foreign suppliers.

Such commitments could have been made in 155 non-overlapping service sectors in the GATS classification list, and for each sector there are four possible modes of supply. Thus, a total of 620 possible measures of openness/binding factors exist for each member country. Of course, many countries made commitments only in a limited number of sectors and modes of supply (*unbound* option).

Finally, on the basis of specific sectoral commitments Hoekman constructs a measure which he considers to be a proxy for tariff equivalents. He classifies GATS commitments into three categories, and assigns a numerical score to each category:

1. If no restrictions are applied for a given mode of supply in a given sector, a value of 1 is assigned (*none* in scheduled of commitments).
2. If no policies are bound for a given mode of supply in a given sector, a value of 0 is assigned (*unbound).*
3. If restrictions are listed for a given mode of supply in a given sector, a value of 0.5 is assigned.

Hoekman calls these scores the *openness/binding factors*. He calculates "tariff equivalents" by constructing a list of benchmark guesstimates of what tariff equivalents of the most protectionist nation might be. Then the "tariff equivalent" of a given country is obtained by multiplying this guesstimate by (1 minus the Hoekman indices). The Hoekman indices have been used as basis in many empirical studies.[23] There are some clear advantages of Hoekman indices. They cover the largest group of countries, which made GATS commitments, and all sectors. This approach requires no specific country and sectoral field studies. Thus, Hoekman indices may be preferable for a broad analysis services liberalization covering large set of countries and industries, e.g. resulting from Doha negotiations.

[21] The four modes of supplying services were presented in the introduction to the report.

[22] GATT: General Agreement on Tariffs and Trade was signed in 1947 and established rules of international policy for merchandise trade. In 1995 the GATT was transformed in to WTO, which contained, among others, GATS agreement as well.

[23] Hoekman's estimates of tariff equivalents have been used by several studies that estimate the economic impact of service trade barriers. For example, see Brown et al. (1996) and Chadha (2000) or Walsh (2006).

However, there are some problems with these indices as well. Firstly, they are based on two elements only (market access and non discrimination) with some crude scores regarding the degree of liberalization. Secondly, the absolute level of indices depends very much on "benchmark guesstimates" of tariff equivalents of the most protectionist countries. They rather reflect relative restrictiveness among countries and not the absolute level of tariff equivalents.[24] Thirdly, the indices reflect the level of commitments which were made in 1993, and not necessarily the present real level of restrictions in a given sector. In several sectors like telecommunications or air transport the current level of liberalization is now exceeding that one undertaken in the schedules of WTO commitments. In addition, they reflect the uniform commitments of all EU countries. Therefore there are not very useful in the analysis of implications of Services Directive.

III.2 Implications of Services Directive: Review of literature

There have already been several studies aiming at evaluating economic implications of the Services Directive. Some of them were based on the second approach, i.e. on analysis of detailed regulatory and other barriers in a given sector. This approach was applied in already mentioned Copenhagen Economics (2005). The majority of them have been published after the Commission Proposal (January 2004), but before final the adoption of Services Directive (December 2006). Therefore, the assumptions are usually based on the proposal and not on approved Directive. We will briefly review only the most important ones.

The identification of restrictive barriers has been done through various methods. For example, PWC (2005) report was based on 38 case studies of UK firms which had recently established or provided services without establishment within one of six other EU countries. They aimed to identify the regulatory barriers that prevent or deter UK firms from expanding their business elsewhere in the EU, and the benefits and costs to these firms.

A more refined approach was adopted by De Bruijn, Kox and Lejour (2006). The authors measured regulatory heterogeneity among EU members. They took into consideration regulatory and administrative opacity, explicit barriers to trade and investment, administrative burdens on start-ups, barriers to competition, and state control. Their analysis demonstrates that the level of heterogeneity among markets of EU members is still very pronounced. The detailed differences among "old member" of the EU are shown in **Tab. 3**. Assuming that the Services Directive would reduce this regulatory heterogeneity, it was possible to estimate the implication of its adoption.

An even more detailed analysis was elaborated by Copenhagen Economics (2005).[25] They estimated, through very detailed questionnaires, the level of real discrimination of foreign services suppliers from other EU members, in relation to domestic ones. The study relied on a detailed dataset containing more than 275 000 firms in the EU. They have constructed a measure of tariff equivalents for four services sectors (accountancy, IT services, and distributive trade)[26]. The results of their research are shown in **Tab. 2**.

[24] The average level for life insurance services is 192% (close to 200% benchmark), while for other services 40,7%, i.e. close to 50% benchmark.
[25] For more details regarding the methodology of studies analyzing implications of services liberalization see part three of our report.
[26] The methods of calculating tariff equivalents are discussed in the third part of the report.

Tab. 2: Average tariff equivalents (before implementation of the Directive)

	Regulated professions (Accountancy)		Business services (IT-services)		Distributive trade (Retail and wholesale trade)	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Rent-creating barriers	5.5%	11.0%	0.2%	0.9%	2.4%	3.1%
Cost-creating barriers	9.3%	11.8%	1.3%	0.7%	0.9%	1.2%

Note: The table shows the weighted average tariff equivalents for the European Union. The estimates for cost creating barriers in business services (IT-services) are statistically insignificant for both domestic and foreign firms and tariff equivalents should be interpreted with care.
Source: Copenhagen Economics (2005), p. 18.

In all studies there were attempts to analyze sectoral implications of Directive proposal. According to PWC (2006) report approximately 40% of the barriers to establishment, cited by case study firms, would potentially be addressed by the proposed Directive. Most firms broadly supported the principles behind the Directive and believed that opening up the market in services would be beneficial to themselves and to the UK as whole.[27]

De Bruijn, Kox and Lejour (2006) and Copenhagen Economics (2005) have attempted to analyze production and welfare implications of the Service Directive according to the following logic: there are additional (compliance) costs for entering a particular foreign service market. These fixed costs are specific for a given national market and result from regulation heterogeneity. They restrict the realization of economies of scale in complying with regulations and increase costs for internationally operating services firms. The scope of existing heterogeneity and possible reductions, according to different scenarios, are shown in **Tab. 3**.

Tab. 3: Expected impacts of proposed EU measures – with and without the *CoOP* – on intra-EU policy heterogeneity, by sub-domain

	Full implementation of proposed Services Directive		Implementation of Services Directive without CoOP	
Components of heterogeneity indicator & covered policy domains	Reduction due to implementation of the EU directive	Remaining policy heterogeneity average all EU countries	Reduction due to implementation of the EU directive	Remaining policy heterogeneity average all EU countries
Regulatory and administrative opacity	66-77%	0,09-0,13	39-45%	0,21-0,23
Explicit barriers to trade	73-78%	0,05-0,06	41-45%	0,12-0,12
Administrative burdens on starts-ups	34-46%	0,30-0,36	34-45%	0,30-0,36
Barriers to competition	29-37%	0,20-0,23	19-25%	0,24-0,26
State control	3-6%	0,39-0,41	3-6%	0.39-0,41
Overall PMR heterogeneity indicator	31-38%	0,24-0,27	22-27%	0,28-0.30

Note: COOP: Country of Origin Principle

[27] PWC (2005), p.5-6.

Based on detailed item-wise consideration of the match between the EU directive and the 184 specific regulation items selected from the OECD data base, ENERPI, 2006, Table 2.3.
Source: De Bruijn et al. (2006)p. 17

Services Directive, by reducing barriers to service provision (i.e. tariff equivalents and heterogeneity of procedures), intensifies competition and forces firms to cut prices to the benefit of consumers, governments and businesses both within and outside the service sectors. As barriers create inefficiencies in the use of real resources, their reduction increase productivity and bring down costs of production. The economic effects thus stem from both stronger competition and a reduction of costs in the services sectors.

The Computable General Equilibrium (CGE) models are usually applied to evaluate welfare implications of liberalization scenarios. In the Copenhagen Economics (2005) authors use a model that was specifically designed for the analysis of the services sector[28] to simulate the economy-wide impact of the tariff equivalents reduction. Authors take into consideration two possible scenarios. Under the first one (direct policy impact) they analyze the direct impact of proposed directive on legal and administrative barriers faced by providers. Under the extended scenario, they assume that the introduction of Directive leads to a better harmonization of regulations among members states. The welfare results for both scenarios are summarized in **Tab. 4**.

Tab. 4: Economic effects of the Services Directive

	Direct policy impact scenario	Extended impact scenario
Economy-wide effects		
Welfare	0.6 %	0.7 %
Real wages	0.4 %	0.4 %
Employment	0.3 %	0.3 %
Services sectors		
Employment	0.5 %	0.5 %
Value added	1.1 %	1.1 %

Note: All results are reported as percentage changes from the benchmark. Welfare is measured as comprehensive consumption.
Source: CETM model - Copenhagen Economic (2005), p.32.

The estimated welfare effects of the proposed Directive are significant, although not impressive in relative terms. The employment should rise by 0.3 percent, and welfare by 0.6-0.7 per cent of EU GDP. In absolute terms net employment may increase by 600 000 jobs across the EU. Job creation is most intense in those sectors where barriers are reduced the most. The total welfare gain (measured as comprehensive consumption) for the EU is approximately €37 billion in monetary terms. Welfare will increase in all EU countries, furthermore increases, exceeding 1 percent of GDP, should be observed in U.K., Netherlands and Sweden.[29]

De Bruijn et al. (2006) applied the gravity estimation framework to bilateral services trade in the EU. It appears that regulatory heterogeneity in policy have a robustly negative trade impact. They had subsequently estimated to what extent the proposed Services Directive

[28] Copenhagen Economics 2005.
[29] Copenhagen Economics (2005), p. 13.

would affect bilateral policy heterogeneity. These results were used to simulate the effects of the Directive, using a large multi-sectoral CGE model. This study was prepared during the intense discussions, regarding the applicability of country-of-origin *(CoO)* principle. They demonstrate the impact of *CoO* principle on reduction of regulatory heterogeneity. The differences was shown in **Tab. 3**. The difference between proposed Directive with and without *CoO* is especially important in case of regulatory and administrative opacity and explicit barriers to trade.

Authors consider two sets of scenarios. They compare a situation where *CoO* principle is applied by member states to an alternative one without *CoO* principle. Both cases are analyzed using a range of previously obtained tariff equivalents providing the lower and upper bound for the possible policy outcome. The simulated liberalization of trade will have different sectoral implications for EU members. Increase in total exports are mainly due to the boost in trading of other commercial services. These exports increase by at least 14% and at most 30% with *CoO* principle. Exports in other sectors also increase slightly: their producer prices decrease slightly, because intermediate inputs of other commercial services become cheaper within the EU. Production increases across all sectors except for research and development. Employment in other commercial services is reduced due to the restructuring of that sector in response to increased market access.

All countries, according to De Bruijn et al. (2006), gain from liberalization in terms of real wages, consumption and GDP (with the exception of Ireland). The results shown in **Tab. 5** are based on the assumption that *CoO* principle is applied, which rather reflects the proposal, and not the accepted Services Directive.

Tab. 5: Macroeconomic effects of trade increase due to the proposed Services Directive proposal (% volume changes) with *CoO* principle

	Lower bound				Upper bound			
Country	GDP	Consump-tion	Real wages	Exports	GDP	Consump-tion	Real wages	Exports
EU	0.3	0.5	0.6	1.7	0.7	1.2	1.3	3.6
Austria	0.5	1.0	1.2	2.1	1.0	2.2	2.6	4.4
Belgium-Luxembourg	0.3	1.0	1.1	1.6	0.6	2.1	2.2	3.1
Czech Republic	2.1	1.5	1.1	4.8	4.9	3.5	2.5	10.9
Germany	0.4	0.6	0.6	1.2	0.9	1.3	1.4	2.6
Denmark	0.4	0.6	0.4	2.2	0.9	1.3	1.1	4.7
Spain	0.2	0.3	0.3	1.0	0.3	0.5	0.6	2.2
Finland	0.5	0.6	0.5	2.0	1.1	1.2	1.0	4.2
France	0.3	0.4	0.4	1.0	0.6	0.8	0.8	2.1
United Kingdom	0.0	0.3	0.4	0.7	0.1	0.7	0.8	1.6
Greece	0.2	0.4	0.4	1.8	0.4	0.9	0.9	4.0
Hungary	1.7	1.4	1.2	4.7	3.8	3.2	2.6	10.3
Ireland	-0.2	1.5	1.7	0.4	-0.5	3.1	3.5	0.7
Italy	0.3	0.4	0.5	1.2	0.6	0.9	1.0	2.6
Netherlands	0.4	0.8	1.6	1.5	0.7	1.6	2.2	3.2
Poland	0.6	0.6	1.3	2.8	1.4	1.5	1.7	6.6
Portugal	0.2	0.4	0.7	1.4	0.5	0.9	1.1	3.1
Slovakia	1.3	1.7	1.6	3.5	3.0	3.8	3.7	8.2
Slovenia	1.7	1.3	1.3	5.5	3.6	2.7	2.7	11.7
Sweden	0.3	0.7	0.7	1.6	0.6	1.4	1.4	3.5
Rest EU	1.2	1.4	1.5	4.9	2.7	3.4	3.6	11.2

So

Source: De Bruijn et al. (2006), Table 4.2, p. 22.

The overall macroeconomic implications might appear not very significant. This is due to the fact that trade in other commercial services makes up only about 13% of total EU trade.[30] Moreover, nearly half of other commercial services trade is directed to countries outside the EU. So, only about 7% of EU trade is directly affected by the Services Directive. Thus, the macroeconomic implications are significant but modest.

According to De Bruijn et al. (2006), the new member states (NMS), especially Czech Republic, Hungary and Slovenia, would benefit most from the proposed Services Directive. For these countries GDP increases for the upper bound scenario by 1 to 3 percents, whereas for the EU-15 GDP increases on average only by 0.4 percent for the upper bound scenario. The increase in GDP and consumption for the EU would be at least 50 percent higher if the *CoO* principle was brought into force.[31] In the case of non application of *CoO* principle also the NMS would benefit most.

This last result is different from the previous analysis. According to Copenhagen Economics (2005) analysis, the *CoO* principle contributes only about 10% to the total welfare effects of Service Directive implementation. Yet, both studies do reveal the significance of *CoO* principle. It explains partially why the public and parliamentary debate was so passionate. On the other hand it demonstrates that free movement of services and right of establishment is a very sensitive issue even among old EU member states.

Can the above quoted results confirmed? What are the specific results for Poland, Czech Republic, Hungary and the major old member states? Would major opponents of the Bolkestein Directive suffer from that initiative? Is there a significant difference between implementation of the Directive with and without Country of Origin Principle? We will try to asses these questions by running own simulations basing on GTAP model.

IV. Model and simulations

IV. 1 The GTAP model

In order to assess the potential effects of services trade liberalization we employ the commonly used GTAP model, a multi-sector, multi-country computable general equilibrium model. The model and the corresponding GTAP database used here is developed by the Global Trade Analysis Project at Purdue University.

The general structure of the model is relatively simple[32]. The demand side of the model relies on an assumption of the existence of the regional household that takes all the expenditure decisions within the economy. This entity is allocating expenditures to private consumption, government expenditures or savings.

This structure has very convenient characteristics. The utility function governing the division of expenditures is in fact a social utility function and can be used in the analysis of the changes in economic policy. It has its drawbacks however – the expenditure decisions on the

[30] (Kox et al., 2004)
[31] The results for simulation without *CoO* principle are not shown here (see Table 4.7 of De Bruijn et al. (2006), p. 29).
[32] For a complete description of the model consult Hertel, Tsigas (1997).

part of government are unrelated to the government budget constraints; the expenditures are allocated according to the total budget constraint of the household and not taking into account the government receipts.

The structure of preference of the regional household is based on the multiply nested utility function. In the top nest the household is decides on allocation of expenditures between the private consumption, government consumption and savings according to the Cobb-Douglas utility function. The government consumption is a Cobb-Douglas composite of goods coming from different sectors. Private consumption demand is governed by a Constant Difference of Elasticity preferences to account for the non-homothetic nature of consumption demand. Two levels of Armington CES aggregates are used to distinguish domestic from foreign goods and to differentiate the foreign goods by country of origin.

Firms produce using primary factors purchased from the regional household and intermediates. The sources of primary factors are purely domestic – it is assumed that the factors are strictly immobile internationally and mobile within a region (with exception of land and natural resources). The intermediate goods can be either domestically produced and imported.

The production function has a similar structure as the utility function. The demands derived from the production function allocate costs between value added (eg. land, capital, labour, natural resources) and intermediates. The top level Leontief function does not allow substitution between the two aggregates and between different types of intermediates. Value added is aggregated from primary factors using a CES function and so is the aggregate of each of the intermediate goods composed of domestic and foreign goods.

The GTAP database has information on 57 sectors in all of the regions. This data includes information on the production volume, sales both domestic and international, intermediate use and primary factor use. It also contains information about bilateral trade between countries in both goods and services. Version 6 of the database uses year 2001 as a reference year.

IV.2 Park (2002) tariff equivalents

The third method of estimating tariff equivalents of trade barriers is the analysis of differences between real and potential services' flows, reflecting the restrictiveness of non tariff barriers. This approach employs econometric methods, often based on gravity models of trade. It stems from the fact that they usually take a form of regulations imposing legal restrictions on the trade in services that influence the costs of service provision. Sometimes even the policy makers are not able to predict the impact of their regulations on the prices of services and the use of an econometric model allows to assess the impact of trade barriers while controlling for other trade-influencing variables.

The early econometric studies performed by Hoekman and Francois (1999) and Warren (2001) and a recent study presented by Walsh (2007). In our analysis we will use the results obtained by Park (2002) using a econometric model. His results are based on an assumption that the deviations of the actual size of trade flows from the potential trade flows (as predicted by the model) reflect the level of trade barriers.
The estimated model takes the form:

$$\ln(x_{ij}) = c + \beta_1 \ln y_i + \beta_2 \ln y_i + \beta_3 \ln d_{ij} - \beta_4 \ln P_j^{1-\sigma} - \beta_5 \ln \phi + \gamma_i \sum_i z_i + \epsilon_{ij},$$

where x_{ij}, imports of country *i* from country *j*, y_i and y_j – exporter and importer GDP, d_{ij} – distance, P_j - exporter price index, σ - elasticity of Armington substitution, z_i - other control variables.

Trade barriers are then calculated according to the following formula:

$$-\sigma \ln t_j = \ln X_j^a / X_j^p - \ln X_b^a / X_b^p,$$

where t_j is the estimated tariff equivalent, X_j – is the average import level from country *j*, X_b is the average level of imports of the benchmark country (the benchmark country is the country where the difference between the potential and actual level of trade is the lowest). Indices *p* and *a* reflect respectively the potential and actual level of trade. Park uses the elasticities of substitution found elsewhere in the literature.

IV.3 The simulations

We run three simulations reflecting, in our view, the potential effects of trade liberalization. The most optimistic scenario (100) assumes a complete, across the board liberalization. Less optimistic scenarios – (50 and 30) – assume respectively less pronounced liberalization of initial tariff equivalents. The 50 scenario is – in our view -- close to implications of Bolkestein Directive, whereas scenario 30 reflects the implications of accepted, narrowed down, Directive (2006). We assume that the only removed barriers are those between the EU member countries and thus we completely abstract from the ongoing Doha process.

The initial level of tariff equivalents is taken from Park (2002). In the case of the EU-15 aggregate, we use the GDP-weighted average of tariff equivalents. Estimates for Hungary were not available and we assumed them to be equal to those for the Czech Republic. Similarly, for the remaining New Member States aggregate we use a weighted average of the Polish and Czech tariff equivalent. The computed tariff equivalents are given in Tab. 6.

Tab. 6 The initial assumed level of services trade barriers tariff equivalents (percent)

	Poland	Austria	Belgium	Czech Republic	France	Netherlands	Germany	Sweden	UK	Hungary	Italy	rest of UE-15	rest of NMS
Construction	37.4	25.6	24.0	39.7	28.9	20.9	18.2	12.6	62.5	39.7	28.0	52.5	38.2
Trade	36.8	15.7	18.1	24.5	30.8	18.9	19.0	20.0	44.0	24.5	19.2	252.4	32.2
Road tranport	25.9	7.3	9.1	13.9	15.0	9.8	13.3	7.4	7.9	13.9	13.0	18.4	21.3
Sea transport	25.9	7.3	9.1	13.9	15.0	9.8	13.3	7.4	7.9	13.9	13.0	18.4	21.3
Air transport	25.9	7.3	9.1	13.9	15.0	9.8	13.3	7.4	7.9	13.9	13.0	18.4	21.3
Communication	15.9	4.4	6.7	14.2	22.4	8.3	7.5	1.6	8.6	14.2	14.0	25.0	15.3
Finance	15.8	7.8	5.0	14.9	24.7	18.7	22.7	29.8	33.0	14.9	11.0	27.7	15.5
Insurance	15.8	7.8	5.0	14.9	24.7	18.7	22.7	29.8	33.0	14.9	11.0	27.7	15.5
Business Svcs	44.9	18.5	23.0	26.0	35.7	23.1	31.3	34.3	38.6	26.0	33.0	33.0	37.8
Entertainment and nec. Services	33.8	5.6	10.6	14.9	17.6	5.8	12.7	13.6	8.1	14.9	20.8	20.4	26.7
Non-market Svcs	33.8	5.6	10.6	14.9	17.6	5.8	12.7	13.6	8.1	14.9	20.8	20.4	26.7

Source: own calculations using Park (2002)

Our simulation scenarios assume that iceberg transport costs go down as a result of the removal of trade barriers. This translates directly to a drop in import prices. For example, if the initial tariff equivalent was 30 percent and we assume complete liberalization, then the prices have to decrease accordingly. If the price before liberalization was P_0=1.3, then the price after liberalization will be equal to P_1=1. So the price has to go down by 0.3/1.3≈0.23, 23 percent. So: R = A*T/(1+T), where R – percent reduction of price, A – the assumed level of liberalization (100%, 50%, 30%), T – initial level of tariff equivalent. The assumed changes in import prices in Poland are given in Tab. 7. The shocks in the GTAP model are imposed on the *ams* parameter. "Shocks to ams(i,r,s) represent the negative of the rate of decay on imports of commodity or service *i* from region *r* imported by region s. When ams(i,r,s) is shocked by 20%, then 20% more of the product becomes available to domestic consumers -- given the same level of exports from the source country. In order to ensure that producers still receive the same revenue on their sales, effective import prices (pms) fall by 20%"[33].

Tab. 7 Assumed reduction of import prices (Poland)

Sector/Scenario	100	50	30
Construction	27.19	13.60	8.16
Trade	26.91	13.45	8.07
Road transport	20.55	10.28	6.17
Sea transport	20.55	10.28	6.17
Air transport	20.55	10.28	6.17
Communication	13.73	6.86	4.12
Finance	13.64	6.82	4.09
Insurance	13.64	6.82	4.09
Business Svcs	30.98	15.49	9.29
Entertainment and nec. Services	25.26	12.63	7.58
Non-market Svcs	25.26	12.63	7.58

Source: Own calculations based on Park (2002)

IV.4 Simulation results

The negative import price shocks imposed on the model of the world economy leads directly to an increase in the imports of services due to both an increase in consumer demand, but also to an increase in the use of imported intermediate services. In all EU countries we observe an increase in GDP due to both an increase of export demand and a decrease in the costs of production (cheaper intermediates). Obviously, all the remaining countries of the world loose due to being left out.

The simulated GDP changes of Poland are rather moderate. In the most optimistic scenario of full liberalization (100), the simulated change of GDP amounts to roughly 0.4%. In the case of the "50" and "30" scenario, these changes are proportionately lower and amount to 0.2 and 0.11% respectively. The highest GDP increases are expected for small open economies where both the initial share of services trade in total trade and overall share of services in GDP is much higher than in Poland. This countries include Austria (an increase of GDP from 0.5% to

[33] Source:GTAP Model Version 6.0, by Hertel, Thomas, Robert McDougall and Ken Itakura, https://www.gtap.agecon.purdue.edu/resources/res_display.asp?RecordID=576

1.7%), Belgium (0.4%-1.36%) and the Netherlands (0.32%-1.13%). The GDP change of the non-EU countries is not significant.

Tab. 8 Changes in real GDP

Country/Scenario	100	50	30
Poland	0.39	0.19	0.11
Austria	1.69	0.82	0.48
Belgium	1.36	0.67	0.39
Czech Republic	0.98	0.47	0.27
France	0.40	0.20	0.12
Netherlands	1.13	0.54	0.32
Germany	0.65	0.31	0.18
Sweden	1.03	0.50	0.30
UK	0.45	0.21	0.12
Hungary	1.05	0.51	0.30
Italy	0.47	0.22	0.13
rest of UE-15	0.72	0.35	0.21
rest of NMS	0.63	0.30	0.18
rest of Europe	-0.02	-0.01	0.00
Russia	0.02	0.01	0.01
USA	0.00	0.00	0.00
RoW	-0.01	0.00	0.00

Source: GTAP simulation. Percentage changes.

Due to the relatively low involvement of the Polish economy in services trade, even a significant increase in imports and exports does not influence the level of GDP significantly. The largest changes in exports are expected in construction (8% to 27.6%), business services (8.1%-27.4%), entertainment services (7.6%-27.3%) and trade (5.3%-15.4%). The changes in imports are slightly lower and they vary from 4.1% to 15.5% in the case of construction and do not exceed 10% in other services. Changes in exports and imports are given in Tab. 9. Moreover, detailed sectoral and geographical structure of the changes in the central "50" scenario is given in Tab. 16 and Tab. 17.

Tab. 9 Changes of Polish exports and imports

Variable	Export			Import		
Sector/Scenario	100	50	30	100	50	30
Agriculture	-0.52	-0.26	-0.16	0.19	0.09	0.06
Manufacturing and mining	-2.58	-1.28	-0.77	1.02	0.50	0.30
Construction	27.65	13.49	7.99	12.41	5.99	3.54
Trade	15.42	8.48	5.27	15.52	7.14	4.11
Road transport	9.49	4.53	2.67	5.27	2.56	1.52
Sea transport	0.82	0.40	0.24	-2.66	-1.33	-0.79
Air transport	12.46	6.03	3.56	0.67	0.33	0.20
Communication	10.72	5.35	3.20	5.22	2.56	1.52
Finance	9.49	4.92	2.99	6.05	2.97	1.77

Insurance	2.90	1.58	0.98	5.54	2.74	1.64
Business Svcs	27.43	13.61	8.11	9.78	4.77	2.83
Entertainment and nec. Services	27.30	12.97	7.60	7.42	3.61	2.14

Source: GTAP simulation. Percentage changes.

Given the model structure, low shares of services trade in the Polish total trade prevent the significant percentage changes of services trade to affect the total Polish trade significantly. These changes are given in Tab. 10. The total Polish exports go up by only 0.5% in the most optimistic scenario – however, an increase in imports of services causes a slight decrease in the trade of manufactures. Total imports go up by 1.5% due to the fact that both services and manufactures imports to Poland go up. A significant increase of total imports are expected for the UK, the Netherlands, Czech Republic and Austria (between 1 and 2% in the most optimistic scenario).

Tab. 10 Changes of total exports and imports

Export	Export			Import		
Country/Scenario	100	50	30	100	50	30
Poland	0.51	0.23	0.13	1.51	0.73	0.43
Austria	0.19	0.05	0.02	1.88	0.94	0.56
Belgium	-0.18	-0.13	-0.09	0.34	0.15	0.08
Czech Republic	0.58	0.26	0.15	1.29	0.62	0.37
France	0.82	0.39	0.23	1.30	0.63	0.37
Netherlands	0.48	0.23	0.14	1.84	0.91	0.54
Germany	0.52	0.24	0.14	0.98	0.48	0.29
Sweden	-0.27	-0.15	-0.09	0.96	0.47	0.28
UK	1.40	0.67	0.39	1.87	0.91	0.54
Hungary	-0.51	-0.29	-0.19	0.50	0.22	0.13
Italy	0.55	0.24	0.13	1.30	0.63	0.37
rest of UE-15	0.07	0.03	0.02	1.99	0.94	0.55
rest of NMS	0.49	0.22	0.12	1.64	0.80	0.47
rest of Europe	-0.02	-0.01	-0.01	-0.52	-0.27	-0.16
Russia	0.19	0.09	0.05	-0.20	-0.11	-0.07
USA	0.11	0.05	0.02	-0.64	-0.33	-0.20
RoW	0.19	0.09	0.05	-0.23	-0.12	-0.07

Source: GTAP simulation. Percentage changes.

Changes in real output shown in Tab. 11 demonstrate how diversified the reaction to trade in services liberalization in the EU is. The larges expected changes are in the air transport sector. The Polish output of this sector is expected to increase by 5.6 percent in the most optimistic scenario (2.7 and 1.6 in the remaining scenarios). Output of construction services (0.3-1.1%), road transport (0.4-1.6) and entertainment and other services (0.7-2.4%) is also expected to rise significantly.

Tab. 11 Changes of Polish real output

Sector/Scenario	100	50	30
Agriculture	-0.44	-0.22	-0.13
Manufacturing and mining	-0.98	-0.49	-0.29
Construction	1.10	0.54	0.32
Trade	0.47	0.26	0.16
Road transport	1.57	0.75	0.44
Sea transport	0.48	0.23	0.13
Air transport	5.64	2.72	1.60
Communication	-0.03	-0.01	0.00
Finance	-1.20	-0.58	-0.34
Insurance	-2.95	-1.42	-0.84
Business Svcs	0.25	0.14	0.09
Entertainment and nec. Services	2.39	1.14	0.67
Non-market Svcs	0.61	0.29	0.17

Source: GTAP simulation. Percentage changes.

The GTAP model can also be used to compute the welfare change resulting from a policy shock. These are expressed as an equivalent variation or, in other words, a monetary consumer valuation of the policy shock. Simulated welfare changes are given in Tab. 12. These are more or less correlated with the GDP changes shown before. For Poland, the welfare gains are of the order of 0.15 to 0.51%. Gains computed for Czech Republic and Hungary are almost twice as big as those in Poland. The highest gains are simulated for Austria, Belgium, the Netherlands and Hungary. The third countries encounter slight welfare losses.

Tab. 12 Welfare change in analyzed countries

Country/Scenario	100	50	30
Poland	0.51	0.25	0.15
Austria	1.72	0.85	0.51
Belgium	1.41	0.70	0.42
Czech Republic	1.05	0.51	0.30
France	0.45	0.22	0.13
Netherlands	1.19	0.58	0.34
Germany	0.65	0.32	0.19
Sweden	1.14	0.56	0.33
UK	0.55	0.27	0.16
Hungary	1.32	0.65	0.39
Italy	0.51	0.25	0.15
rest of UE-15	1.15	0.55	0.33
rest of NMS	0.87	0.42	0.25
rest of Europe	-0.13	-0.07	-0.04
Russia	0.00	0.00	0.00

USA	-0.04	-0.02	-0.01
RoW	-0.04	-0.02	-0.01

Source: GTAP simulation. Equivalent variation as percentage of GDP.

Trade liberalization changes the factor wages as well. Skilled and unskilled wages in Poland are expected to rise by 0.4%-1.3% and 0.3%-1% depending on a scenario. Producer prices in most sectors are expected to go up by roughly 0.6% in the most optimistic scenario (changes in wages and producer prices are given in (Tab. 13). Similar, but slightly lower increase in wages is expected in the UK and France. The increase in the producer prices is slightly lower in the UK than France and Poland.

Tab. 13 Changes of wages and producer prices

Country	Poland			UK			France		
Sector/Scenario	100	50	30	100	50	30	100	50	30
Land	-0.51	-0.26	-0.15	-0.75	-0.40	-0.25	-0.93	-0.53	-0.33
Unskilled labour	1.00	0.50	0.30	0.82	0.42	0.26	0.69	0.35	0.21
Skilled labour	1.31	0.65	0.38	1.05	0.54	0.33	0.84	0.43	0.26
Capital	1.15	0.58	0.35	0.74	0.38	0.23	0.71	0.36	0.21
Agriculture	0.50	0.25	0.15	0.51	0.26	0.16	0.38	0.20	0.12
Manufacturing and mining	0.65	0.33	0.20	0.55	0.29	0.17	0.39	0.20	0.12
Construction	0.74	0.38	0.23	0.62	0.32	0.20	0.33	0.18	0.11
Trade	0.69	0.35	0.21	0.67	0.35	0.21	0.48	0.25	0.15
Road transport	0.62	0.31	0.19	0.66	0.34	0.21	0.37	0.19	0.12
Sea transport	-0.14	-0.06	-0.04	-0.56	-0.26	-0.15	-0.34	-0.16	-0.09
Air transport	0.56	0.28	0.17	0.07	0.05	0.03	0.11	0.07	0.04
Communication	0.82	0.41	0.25	0.67	0.35	0.21	0.59	0.30	0.18
Finance	-0.02	0.00	0.01	0.55	0.29	0.18	-0.18	-0.07	-0.04
Insurance	0.40	0.21	0.13	0.26	0.15	0.09	0.14	0.08	0.05
Business Svcs	0.69	0.35	0.21	0.52	0.28	0.17	0.46	0.24	0.14
Entertainment and nec. Services	0.74	0.37	0.22	0.43	0.23	0.14	0.53	0.27	0.16
Non-market Svcs	0.97	0.48	0.29	0.78	0.41	0.25	0.48	0.25	0.15

Source: GTAP simulation. Percentage changes.

Some consumer prices are expected to go up slightly (but less than the increase in wages) in the case of some services, where the increase of exports was the most pronounced. The largest drops in consumer prices are expected in the case of sea and air transport (Tab. 15).

IV. Concluding remarks

Poland reveals comparative advantage in some transport sectors (mainly road and rail freight) and in construction services, which are unskilled-labour-intensive sectors. Our simulations show that Poland can strengthen these comparative advantages. On the other hand Poland's position may be weakened, due to liberalization, in some business services, and especially in

financial and insurance ones. However, the last conclusion should be treated with caution, since, financial services are sectoraly regulated and excluded from Services Directive.

Poland, like other EU members, will benefit adopting the Services Directive. But possible simulated gains, in terms of output, trade, and welfare (0.15% of GDP) are fairly limited in case of the Services Directive (2006), and visibly smaller in comparison to original Bolkestein proposal. In other, smaller and more open countries (Austria, Belgium, the Netherlands, Hungary or Czech Republic) the simulated gains are about double. But even in the case of Germany or France - major opponents of the Bolkestein proposal - the likely gains are of similar order to Poland's ones. According to our simulation, the adopted Directive may cause, some minor trade diversion of trade with non-European countries.

The causes of heated debate on the Bolkestein Directive can not be precisely explained in light of our simulations. The likely gains of major opponents (France and Germany) are of similar order to proponents (United Kingdom). The other opponents, i.e. Austria and Belgium would benefit much more in relative terms in comparison to Poland. And although in some sectors Poland has a relatively strong comparative position *vis a vis* Germany, Austria or France, the competition pressure should not be overestimated; Poland's share in EU trade in services is close to 2.15 percent. Furthermore, the country may loose in some human capital intensive sectors.

Therefore it seems that the countries' attitude towards Bolkestein Directive reflected rather a political stance and not real economic interests. In some cases, narrowly defined lobbies, like plumbers or taxi drivers in France, provoked an animated political discussions being not well grounded in economic terms. Probably, the Bolkestein Proposal, would be passed and accepted with no major political controversies, if there would be no Eastern enlargement of the EU at the same time.

Finally, one should take into account that liberalization of trade in services can be, in many cases, a substitute to large migration flows. The trade-off is visible, and services liberalization might decrease migration pressures form new members states. Of course, there may be some founded fears regarding the quality of services provided by foreign firms. But a similar problem, existing in merchandise trade, has been progressively solved by gradual harmonization of EU standards (Old and New Approach).

Annex:

Tab. 14 RCA's for Poland, Belgium, Germany France and Austria at UE-27 market in 2005

	Services sector	RCA of **Belgium** against EU-27	RCA of **Germany** against EU-27	RCA of **France** against EU-27	RCA of **Austria** against EU-27	RCA of **Poland** against EU-27
205	Transportation	**1,33**	**1,13**	0,88	**1,15**	**1,74**
206	Sea transport	**1,67**	**1,35**	0,63	0,11	0,75
207	Passenger transport on sea	0,04	0,83	**1,87**	0,01	0,52
208	Freight transport on sea	**1,44**	**1,56**	0,46	0,13	0,72
209	Supporting, auxiliary and other sea transport services	**2,96**	0,65	**1,04**	0,06	0,92
210	Air transport	0,60	**1,29**	0,98	**1,05**	0,63
211	Passenger transport by air	0,54	**1,34**	0,99	**1,25**	0,87
212	Freight transport by air	**1,81**	**1,35**	**1,23**	**1,49**	0,58
213	Supporting, auxiliary and other air transport services	0,33	**1,16**	0,89	0,49	0,16
214	Other transport (other than sea and air)	**1,65**	0,78	**1,04**	**2,23**	**3,71**
215	Passenger on other transport	:	:	:	:	:
216	Freight on other transport	:	:	:	:	:
217	Other of other transport	:	:	:	:	:
218	extended classification, Space transport	0,00	0,00	**11,01**	0,00	0,00
219	extended classification, Rail transport	0,40	0,94	**2,66**	**4,27**	**3,80**
220	Passenger on rail	0,22	**1,46**	**5,63**	:	0,72
221	Freight on rail	0,53	0,62	**1,65**	:	**4,62**
222	Supporting, auxiliary and other rail transport services	0,02	**1,70**	**2,49**	:	**5,40**
223	extended classification, Road transport	**1,79**	0,67	:	**1,96**	**3,91**
224	Passenger on Road	**2,60**	0,00	:	:	**4,19**
225	Freight on Road	**1,68**	0,76	:	:	**4,24**
226	Supporting, auxiliary and other road transport services	**2,55**	0,00	:	:	0,93
227	extended classification, Inland waterway transport	0,35	**1,13**	:	**2,20**	**1,38**
228	Passenger on inland waterway	0,00	**3,89**	:	:	0,36
229	Freight on inland waterway	0,00	0,85	:	:	0,75
230	Supporting, auxiliary and other inland waterway transport services	**3,12**	0,00	:	:	**6,79**
231	extended classification, Pipeline transport	**2,01**	**1,10**	:	**4,46**	**3,70**
232	extended classification, Other supporting and auxiliary transport services	**2,67**	**1,95**	:	0,22	**1,39**
236	Travel	0,66	0,79	**1,76**	**1,22**	**1,20**
237	Business travel	0,65	:	**1,15**	:	**1,53**
238	Business Expenditure by seasonal and border workers	:	:	:	:	:
239	Business Other business travel	:	:	:	:	:
240	Personal travel	0,66	:	**1,88**	:	**1,14**
241	Personal Health-related expenditure	:	:	:	:	:
242	Personal Education related expenditure	:	:	:	:	:
243	Personal Other personal travel	:	:	:	:	:
981	Other services	**1,09**	**1,09**	0,59	0,67	0,61
245	Communications services	**1,11**	0,85	**1,20**	0,78	0,59
246	Postal and courier services	**2,19**	0,59	:	**1,07**	0,32
958	Postal services	:	:	:	:	:
959	Courier services	:	:	:	:	:
247	Telecommunication services	0,88	0,91	:	0,73	0,65
249	Construction services	**2,11**	**1,98**	0,66	**1,09**	**3,46**
250	Construction abroad	:	**2,24**	:	**1,22**	**2,70**
251	Construction in the compiling economy	:	0,33	:	0,27	**8,41**
253	Insurance services	0,80	0,77	0,65	**1,70**	0,23
254	Life insurance and pension funding	**2,01**	0,05	:	:	0,06

255	Freight insurance	0,94	0,69	:	:	0,00
256	Other direct insurance	:	0,20	:	:	0,09
257	Reinsurance	0,47	**2,41**	0,52	:	0,28
258	Auxiliary services	:	0,00	:	:	**1,69**
260	Financial services	0,70	0,80	0,09	0,22	0,15
262	Computer and information services	0,87	0,84	0,25	0,34	0,27
263	Computer services	0,94	0,95	:	:	0,28
264	Information services	0,32	0,00	:	:	0,22
889	News agency services	:	:	:	:	:
890	Other information provision services	:	:	:	:	:
266	Royalties and license fees	0,76	0,88	**1,31**	0,22	0,09
268	Other business services	**1,15**	**1,20**	0,63	0,85	0,76
269	Merchanting and other trade-related services	**1,23**	**1,32**	0,00	**1,30**	0,26
270	Merchanting	**1,60**	**1,81**	0,00	:	0,00
271	Other trade-related services	0,93	0,91	0,54	:	0,54
272	Operational leasing services	0,53	**1,35**	0,61	0,83	0,18
273	Miscellaneous business, professional and technical services	**1,17**	**1,15**	0,88	0,74	0,92
274	Legal, accounting, management and public relations services	**1,23**	**1,62**	:	:	0,72
278	Advertising, market research and public opinion polling	0,82	**1,02**	0,86	:	**1,69**
279	Research and development services	**1,49**	**1,42**	:	:	0,50
280	Architectural, engineering and other technical consultancy	**1,18**	**2,10**	:	:	**1,04**
281	Agricultural, mining , and on-site processing	**2,00**	0,34	:	:	**3,06**
282	Waste treatment and depolution	:	:	:	:	:
283	Other agricultural, mining and on-site processing	:	:	:	:	:
284	Other miscellaneous business, professional and technical services	0,25	0,75	:	:	**1,22**
285	Services between affiliated enterprises, n.i.e.	**2,04**	0,58	0,74	:	0,40
287	Personal, cultural and recreational services	0,93	0,67	**1,50**	0,56	0,56
288	Audio-visual and related services	**1,25**	**1,05**	**1,46**	0,44	0,38
289	Other personal, cultural and recreational services	0,39	0,00	**1,57**	0,78	0,89
895	Other Education services	:	:	:	:	:
896	Other Health services	:	:	:	:	:
897	Other Rother	:	:	:	:	:
291	Government services, n.i.e.	**2,89**	**2,39**	0,60	0,23	0,08
982	Services not allocated	0,00	0,00	0,00	**17,86**	0,00

Source: based on Eurostat statistics.

Tab. 15 Changes of consumer prices

Country	Poland			UK			France		
Sector/Scenario	100	50	30	100	50	30	100	50	30
Agriculture	0.48	0.24	0.14	0.42	0.22	0.13	0.37	0.19	0.11
Manufacturing and mining	0.58	0.30	0.18	0.45	0.23	0.14	0.35	0.18	0.11
Construction	0.74	0.38	0.23	0.62	0.32	0.20	0.32	0.17	0.10
Trade	0.68	0.35	0.21	0.14	0.11	0.08	0.17	0.11	0.07
Road transport	0.48	0.24	0.15	0.03	0.03	0.02	0.04	0.03	0.02
Sea transport	-4.39	-2.17	-1.30	-2.14	-1.04	-0.61	-3.09	-1.51	-0.90
Air transport	-2.21	-1.08	-0.64	-2.75	-1.34	-0.79	-1.64	-0.79	-0.47
Communication	0.48	0.25	0.15	0.19	0.11	0.07	0.36	0.19	0.12
Finance	-0.34	-0.15	-0.09	0.02	0.04	0.03	-0.34	-0.14	-0.08
Insurance	-2.65	-1.28	-0.76	0.15	0.10	0.06	-0.10	-0.03	-0.01
Business Svcs	0.50	0.26	0.16	-0.14	-0.04	-0.02	-2.13	-1.02	-0.60

Entertainment and nec. Services	0.49	0.25	0.15	-0.10	-0.03	-0.01	0.42	0.22	0.13
Non-market Svcs	0.92	0.46	0.27	0.58	0.30	0.19	0.44	0.23	0.14

Source: GTAP simulation. Percentage changes.

Tab. 16 Exports (Poland), „50" scenario

Country/Sector	Construction	Trade	Road tranport	Sea transport	Air transport	Communication	Finance	Insurance	Business Svcs	Entertainment and nec. Services	Non-market Svcs
Austria	29.37	16.26	21.13	23.93	24.77	9.46	2.71	2.30	29.28	26.07	34.40
Belgium	29.27	19.22	22.04	20.68	21.00	13.47	4.44	6.34	20.67	29.93	34.08
Czech Republic	27.37	20.24	24.68	24.99	21.36	13.73	7.42	7.08	31.62	30.49	33.95
France	28.59	22.29	25.09	21.24	23.80	14.65	10.47	10.98	33.17	32.48	33.77
Netherlands	29.80	19.53	25.73	23.63	23.80	11.52	9.41	5.20	29.88	28.10	32.93
Germany	28.22	16.50	24.25	19.79	23.35	11.61	9.68	9.80	30.37	30.10	33.13
Sweden	28.61	16.98	22.11	19.85	21.73	9.38	10.42	9.62	26.05	29.35	33.95
UK	26.53	22.46	23.37	22.54	23.03	13.95	15.01	12.87	34.48	28.43	33.72
Hungary	29.46	22.81	22.70	19.58	21.92	9.95	4.18	3.39	28.93	27.36	33.66
Italy	28.63	23.67	25.30	19.45	20.64	11.74	12.06	5.33	32.01	30.08	33.81
rest of UE-15	30.73	31.54	27.79	24.95	24.36	15.38	11.44	9.54	30.36	31.49	36.55
rest of NMS	28.83	21.89	25.75	24.31	22.90	14.31	10.46	9.31	32.99	29.81	34.57
rest of Europe	-1.57	-1.31	-1.59	-0.59	-1.52	-1.66	-0.80	-1.33	-1.52	-1.68	-2.07
Russia	-1.48	-1.13	-1.18	-0.21	-1.36	-1.49	-0.45	-1.21	-1.35	-1.31	-1.83
USA	-1.72	-1.61	-1.39	-0.43	-1.63	-1.66	-0.66	-1.31	-1.45	-1.49	-1.95
RoW	-1.62	-1.62	-1.53	-0.53	-1.55	-1.72	-0.62	-1.22	-1.48	-1.60	-2.17

Source: GTAP simulation. Percentage changes.

Tab. 17 Imports (Poland), „50" scenario

Country/Sector	Construction	Trade	Road tranport	Sea transport	Air transport	Communication	Finance	Insurance	Business Svcs	Entertainment and nec. Services	Non-market Svcs
Austria	18.22	2.73	11.27	-2.10	4.22	-0.18	3.95	5.84	8.66	0.33	2.80
Belgium	16.12	3.73	6.44	4.50	9.20	1.11	1.16	0.06	12.69	5.87	9.23
Czech Republic	31.97	12.28	14.08	5.57	10.24	12.93	8.77	7.31	17.40	13.19	15.65
France	22.32	17.38	15.34	7.87	11.62	21.33	18.11	16.17	25.45	15.36	19.04
Netherlands	14.00	7.31	8.68	3.58	8.38	6.98	10.16	10.55	14.54	2.29	3.62
Germany	11.84	8.28	14.10	7.28	10.06	5.34	16.48	14.33	21.76	10.50	13.85
Sweden	5.12	7.13	7.71	-0.55	3.54	-2.64	21.29	19.73	23.96	10.17	12.96
UK	47.76	27.43	6.24	0.32	3.47	5.72	24.10	23.43	27.65	4.61	7.15
Hungary	30.01	10.52	12.93	5.80	11.22	11.43	8.18	9.37	16.53	12.87	14.46
Italy	20.50	6.26	12.29	7.67	11.45	11.89	1.64	0.60	21.97	18.20	21.39
rest of UE-15	38.41	97.57	16.61	10.96	14.86	21.47	17.41	17.24	20.92	16.41	19.21
rest of NMS	29.80	18.03	21.68	13.10	17.84	13.24	7.08	5.98	26.60	24.45	27.79
rest of Europe	-8.23	-12.85	-2.28	-9.85	-6.03	-3.54	-9.15	-10.10	-10.02	-4.30	-1.26
Russia	-8.49	-13.17	-2.59	-10.10	-6.19	-3.80	-9.37	-10.33	-10.42	-4.63	-1.66
USA	-7.92	-12.61	-1.98	-9.54	-5.59	-3.24	-8.84	-9.81	-9.77	-4.04	-1.03
RoW	-8.08	-12.76	-2.14	-9.74	-5.80	-3.40	-9.00	-9.97	-9.93	-4.21	-1.19

Source: GTAP simulation. Percentage changes.

Bibliography:

- Copenhagen Economics (2005) Economic Assessment of the Barriers to the Internal Market for Services; Final report, January 2005
- De Bruijn R., Kox H., Lejour A., (2006) *The Trade-Induced Effects Of The Services Directive And The Country-Of-Origin Principle,* European Network Of Economic Policy Research Institutes (ENERPI), Working Paper No. 44/April 2006.
- Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market.
- European Commission (2004): Proposal for a Directive of the European Parliament and of the Council on services in the internal market (Brussels, 5.3.2004 COM(2004) 2 final/3) (so called Blokestein Directive).
- Findlay, C. and T. Warren (eds.) (2000) Impediments to Trade in Services: Measurement and Policy Implications. Sydney: Routledge.
- Francois, J. (1999) "Estimates of Barriers to Trade in Services", unpublished.
- GATS offer of the EU: Doc.: S/SECRET/8 (11 June 2004) Notification from The European Communities and Its Member States Pursuant To Article V of the GATS.
- Hagemejer, J., McDougall, R.A. (2006). *Services Trade Data*. Rozdział 15E w: Dimaranan, B.V. (red.) Global Trade, Assistance, and Production: The GTAP 6 Data Base, Center for Global Trade Analysis, https://www.gtap.agecon.purdue.edu/resources/download/2865.pdf
- Hoekman, B. (1995) Assessing the General Agreement on Trade in Services, chapter in: Martin, W. and Winters, L. A. (eds), *The Uruguay Round and the Developing Economies*, World Bank Discussion Paper 307, Washington DC, pp. 327–364.
- Kox H. and Lejour A. (2006) *Dynamic effects of European services liberalisation: more to be gained*; Prime Minister's Office, Economic Council of Finland, September 2006,
- Micossi S., (2006) *Fixing the Services Directive*, Centre for European Policy Studies (CEPS) Policy Briefs no. 100/April 2006.
- Park, S. (2002) "Measuring Tariff Equivalents in Cross-Border Trade in Services", Korea Institute for International Economic Policy Working Paper 02-15.
- Price, Waterhouse, Coopers (PWC) (2005), *Impact of the proposed EU Directive on Services in the Internal Market: case studies of UK businesses,* Final report, Department of Trade & Industry
- Walsh, K. (2006) "Trade in Services: Does Gravity Hold? Gravity Model Approach to Estimating Barriers to Services Trade', Institute for International Integration Studies, Trinity College Dublin, Discussion paper no. 183.