

Please cite this paper as:

Dihel, N. and B. Kalinova (2004-10-07), "Services Barriers and their Economic Impact: Examples of Banking and Telecommunications Services in Selected Transition Economies", *OECD Trade Policy Papers*, No. 7, OECD Publishing, Paris.  
<http://dx.doi.org/10.1787/316888415611>

OECD Trade Policy Papers No. 7



# Services Barriers and their Economic Impact

**EXAMPLES OF BANKING AND  
TELECOMMUNICATIONS SERVICES IN  
SELECTED TRANSITION ECONOMIES**

Nora Dihel

Blanka Kalinova

**Unclassified**

**TD/TC/WP(2004)32/FINAL**



Organisation de Coopération et de Développement Economiques  
Organisation for Economic Co-operation and Development

**07-Oct-2004**

**English - Or. English**

**TRADE DIRECTORATE  
TRADE COMMITTEE**

**TD/TC/WP(2004)32/FINAL  
Unclassified**

**Working Party of the Trade Committee**

**SERVICES BARRIERS AND THEIR ECONOMIC IMPACT: EXAMPLES OF BANKING AND  
TELECOMMUNICATION SERVICES IN SELECTED TRANSITION ECONOMIES**

**OECD Trade Policy Working Paper No. 7**

**By Nora Dihel and Blanka Kalinova**

All Trade Working Papers are now available through the OECD's Internet Website at:  
<http://www.oecd.org/trade>

**JT00170958**

Document complet disponible sur OLIS dans son format d'origine  
Complete document available on OLIS in its original format

**English - Or. English**

## ABSTRACT

This paper applies the most advanced methodologies for measuring services barriers to calculate the restrictiveness and the impact of services barriers in selected transition economies, *i.e.* the Baltic States, and eight South Eastern European (SEE) countries (for telecommunications and banking) and Russia (for telecommunications). Among the selected countries, the Baltic countries record the highest liberalisation scores for both telecommunications and banking services making their situation comparable to that of most developed countries. By contrast, the SEE countries have more room to improve their performance and the price level of their telecommunication services, both in fixed and cellular services by eliminating general restrictions on competition and removing barriers to foreign equity participation. With respect to banking services, the results suggest that the SEE markets are fairly contestable; policy priorities would thus appear to be broad issues of macroeconomic stability and structural reform. The telecommunications estimates put Russia in an intermediate position between the results for the Baltic States and the SEE countries. The WTO accession should encourage Russia to stabilise and consolidate its legal and regulatory framework generating significant economic gains to the whole economy.

Quantitative estimates of services barriers, even if still imperfect, represent useful complements to extensive qualitative descriptions of services restrictions, as they facilitate the comparisons in time, across countries and potentially among different services sectors. In order to improve the reliability of these estimates, further work would need to address the limitations related to the data collection, the construction of indexes and the methods used for measuring the impact of services barriers restrictiveness on the performance and price levels.

Keywords: services, transition economies, telecommunications, banking, barriers, benefits, liberalisation, WTO

## ACKNOWLEDGEMENTS

This study has been prepared by Nora Dihel and Blanka Kalinova of the Trade Policy Dialogue Division in the Trade Directorate. The report benefited from significant contributions by Philippa Dee (Australian National University) and was supervised by Raed Safadi, Head of the Trade Policy Dialogue Division. It has been discussed in the Working Party of the Trade Committee which has agreed to make these findings more widely available through its declassification under the responsibility of the Secretary General. It is available on the OECD website in English and French at the following address: <http://www.oecd.org/trade>

**Copyright: OECD 2004**

**Applications for permission to reproduce or translate all, or part of, this material should be made to:  
Head of Publications Service, OECD, 2, rue André-Pascal, 75775 P**

## TABLE OF CONTENTS

Introduction and Executive Summary .....	4
1. Main Methods to Measure Services Trade Barriers.....	8
2. Measuring Services Barriers Restrictiveness in Telecommunications and their Impact on Sectoral Performance and Price Levels .....	9
2.1. The Restrictiveness of Telecommunication Services in the Selected Transition Economies.....	9
2.2. The Quantity and Price Impacts of Telecommunications Trade Barriers in Transition Economies.	13
3. Measuring Services Barriers Restrictiveness and their Economic Impact in the Banking Sector....	18
3.1. The Restrictiveness Index for the Banking Sector.....	18
3.2. The Effect of Sectoral Restrictions on Performance and Price of Banking Services in the Selected Transition Economies .....	21
4. Main Policy Recommendations, Assessment of Existing Methods to Measure Service Barriers and Proposals for their Improvement .....	23
4.1. Summary of Sectoral Policy Recommendations for Selected Transition Economies .....	23
4.2. Advantages and Limits of Quantitative Methods for Policy Makers.....	25
4.3. Proposals to Improve the Measures of Restrictiveness of Services Trade Barriers.....	25
4.4. Possible Future Work.....	27
References.....	28

### Tables

Table 1 Main Components of the Restrictiveness Index for Telecommunications .....	9
Table 2 Restrictiveness of Trade Barriers in Telecommunications in Selected Transition Economies.	11
Table 3 Quantity Impacts of Market Access and National Treatment Restrictions on Investment in Telecommunications in Transition Economies, % .....	14
Table 4 Tariff Equivalents of Market Access and National Treatment Restrictions on Investment in Telecommunications in Transition Economies, % .....	15
Table 5 Tariff Equivalents of Market Access and National Treatment Restrictions on Investment in Fixed and Mobile Telecommunications in Transition Economies,% .....	17
Table 6 Main Components of the Restrictiveness Index for Banking Sector .....	19
Table 7 Restrictiveness Indexes for Banking Services in Selected Transition Economies.....	20
Table 8 Tax Equivalents of Market Access and National Treatment Restrictions on Banking, % .....	22

### Figures

Figure 1 Global Restrictiveness Policy Index for Telecommunication: Selected Transition Economies	12
Figure 2 Global Trade Policy Index: International Comparison .....	12
Figure 3 Individual Policy Indexes for Transition Economies.....	13
Figure 4 Quantity Impact of Market Access and National Treatment Restrictions in Fixed and Mobile Telecommunications .....	14
Figure 5 Tariff Equivalents of Market Access and National Treatment Restrictions on Investment in Fixed and Mobile Telecommunications in Transition Economies .....	16
Figure 6 Foreign and Domestic Restrictiveness Index for Banking in Transition Economies .....	20

## Introduction and Executive Summary

1. The key role of services in economic development and the growing importance of services trade in international economic relations have encouraged research on new analytical instruments and techniques that would facilitate the measurement of services trade barriers and their impact on economic welfare. The main challenge has been to transform available, essentially regulatory measures characterising services into quantitative data, which would allow comparisons across time, countries and possibly across different service sectors.

2. This paper applies the most advanced methodologies for measuring services barriers to calculate the restrictiveness and the impact of services barriers in selected transition economies, *i.e.* the Baltic States, and eight South Eastern European (SEE) countries (for telecommunications and banking) and Russia (for telecommunications). The qualitative data on regulatory measures have been gathered within the framework of the projects on trade in services in these countries carried out by the Trade Directorate in 2002-2003. Therefore, the restrictiveness indexes and the impact of the barriers reflect the situation before 2003 (in the Baltic States and Russia) and at the end of 2002- beginning of 2003 in the SEE countries. The results would need to be updated regularly in order to reflect adequately the present situation in these countries. Nevertheless, the analysis permits a comparison of the progress of the twelve transition economies in liberalising two service sectors which are vital for their development and foreign trade. Based on these concrete examples, the paper also assesses the advantages and drawbacks of the applied methodologies and proposes possible ways to pursue further research in this area.

3. Section 1 summarises the main methodologies that have been used to measure the level of restrictions in services, focusing on the restrictiveness index for telecommunication and banking services. Next, the paper reviews the methods that are used to measure the effect of restrictions in services, in particular the conversion of the trade restrictiveness indexes into tariff equivalents that serve to evaluate the impact of restrictions on the performance and price levels in telecommunications and banking services.

4. Section 2 provides the results of the **restrictiveness index for telecommunications** (differentiating between fixed and mobile telecommunications) for the Baltic States, Russia and the SEE countries. These results are then used to estimate the **impact of existing telecommunication policies on the sector's performance and price levels** in the selected transition economies.

5. The restrictiveness indexes reveal considerably higher liberalisation in the Baltic States than in the SEE countries. The level of restrictiveness in Russia's telecommunication sector appears to be lower than in the SEE countries and comparable to that of the Baltic States. Econometric models that assess the impact of these barriers on telecommunication prices and penetration rates using the restrictiveness indexes confirm similar trends. Additionally, the models reveal potentially larger gains from further liberalisation in fixed line telecommunications, which remain subject to more restrictive policies, than in mobile phone services. It is of course possible to question the exact range of the estimated price differential between currently prevailing prices for telecommunications in individual countries and the expected prices in the liberalised environment as well as the potential of the telecommunication sector to increase its performance (*e.g.* in terms of access to telecommunication network) as calculated by these techniques. However, this quantitative approach permits an identification of the main policy priorities in different countries in a given sector. For example, in the case of telecommunications, enabling competition emerges as the most important policy step leading to better performance and substantial price reduction of telecommunication services for consumers.

6. Section 3 compares **the level and effects of banking services liberalisation** in the Baltic States and the SEE countries. According to the calculated restrictiveness index, trade regimes for banking

services are comparatively more liberal in Estonia, Lithuania and several SEE countries as compared to Romania, Serbia and Montenegro, Bosnia and Herzegovina and also Latvia. However, a number of studies show that despite liberal regimes related to market access and national treatment of firms, the SEE countries are characterised by slowly evolving privatisation and regulatory reforms, and the level of intermediation remains lower in comparison with other transition economies. This mismatch between the index and the banking sector's performance in individual countries can be attributed to a number of reasons. One reason could be the quality of the data used for the construction of the index, due for example to the modalities of their reporting (*e.g.* self-assessment questionnaires used for SEE countries). Another, more fundamental reason, relates to the construction of the index itself, especially its limited capacity to capture some critical regulatory and policy aspects shaping the developments in the banking sector. The restrictiveness index that adopts essentially the GATS perspective of market access and national treatment, and differentiates between commercial presence and market restrictions does not take sufficiently into account the interdependence between the banking sector and the general macroeconomic situation as well as its other roles, for example in capital account liberalisation. Another reason could be that in banking, perhaps more than in other sectors, the positive impacts of liberalisation measures and increased competition become noticeable only after a certain period.

7. Based on the concrete examples of the banking and telecommunication restrictiveness indexes calculated for the selected transition economies, Section 4 proposes some specific policy recommendations for individual countries and assesses advantages and limits of quantitative methods measuring services barriers. Within the examined economies, the Baltic countries clearly illustrate the advantages of a rapid and deep liberalisation process in the two key sectors, which have contributed to their economic dynamism and development. Their case also shows that such a process is greatly facilitated if pursued under strong regulatory guidance within the regional integration agreement such as the EU.

8. The SEE countries have more room to improve their performance and the price level of their telecommunication services, both in fixed and cellular services. The results suggest that the performance of fixed line telecommunications in SEE countries is being held back by regulations that restrict competition - all SEE countries except Albania - and more recently Romania - have an effective monopoly in fixed line services, and in Albania, competition is restricted to rural services. In all SEE countries considered, there is considerable scope to open up fixed line services to competition, including by foreign firms. Partly as a result of restrictions on fixed line services, cellular telecommunications are well-established in SEE countries. But here, too, barriers to commercial presence are inhibiting performance. The largest gains from removing these would accrue to Macedonia, Serbia and Montenegro, and Bosnia and Herzegovina, where prices could fall by up to 20%. With respect to banking services, regulations in SEE countries are already fairly liberal. Markets are generally contestable, and there are fewer discriminatory regulations against foreign entry than in many other countries. The key factors inhibiting banking sector performance are instead macroeconomic instability and the lack of structural reform, both of which have also been affected by civil strife. These factors appear to be restricting lending opportunities and contributing to a high proportion of non-performing loans. The policy priorities for the banking sectors in SEE countries would thus appear to be the broad issues of macroeconomic stability and structural reform. Significant progress on these issues would do much for the banking sector performance.

9. The results suggest that the two SEE countries that are not WTO members have quite restrictive policies in both sectors. The regimes in Serbia and Montenegro and Bosnia and Herzegovina are subject to numerous changes. Ensuring market access for domestic and foreign services providers and granting national treatment to foreign services providers constitute a policy priority for these two countries. In addition, implementing regulatory reforms that complement the liberalisation process constitutes the major priority in all SEE countries. In this area, the European Agenda and the Stabilisation and Association process are the main catalysts for introducing effective regulatory measures that address market failures and ensure social objectives.

10. Russia's case shows certain limits of the methodology used in this paper. Russia, which is not yet a WTO member, is not constrained by any international disciplines (or by any regional commitments) and therefore its current trade regime is not stable and continues to be subject to frequent changes and revisions. Given that the Russian banking sector has been particularly affected by the legal and implementation flux, which cannot be adequately captured by the banking restrictiveness index in its current form, this paper only provides the estimations of the restrictiveness index for the Russian telecommunication sector. According to these estimates, Russia is in an intermediate position as compared to the results for the Baltic and the SEE countries. However, this apparently favourable assessment requires important qualifications. For example, proposals to impose the limits to foreign ownership in telecommunications would considerably worsen the value of the restrictiveness index and Russia's ranking. The WTO accession and related binding disciplines will help Russia to clarify existing legislation and regulatory measures and therefore improve their transparency and predictability. More important, the WTO accession should be a means to encourage and consolidate further liberalisation in this sector, which - as shown by our estimates - is expected to bring important economic gains in telecommunications and the entire Russian economy.

11. Section 4 also examines the main advantage of quantitative estimates of the restrictiveness of service barriers over qualitative analyses. It states that unlike the extensive descriptions of the regulatory environment provided by qualitative analysis that do not usually allow cross-country comparisons, quantitative estimates, even if far from being perfect and exhaustive, make such international comparison possible. Such quantification and comparisons are useful not only for analytical purposes, but could also be helpful to policy makers to set up more clearly the priorities of their liberalisation and regulatory agendas. In addition, cross-country comparisons often permit the strengthening of support for liberalisation efforts against domestic protectionist forces.

12. However, as illustrated by the concrete examples of the calculated restrictiveness indexes presented in this paper, the quantification methods have their limits. While the GATS perspective, based on market access and national treatment restrictions, seems to capture adequately the trade regime in telecommunications, a similar approach applied in the context of banking appears to be less satisfactory as it leaves aside some essential macroeconomic and prudential aspects characterising this service sector. The restrictiveness index and the related calculations of the impact of trade liberalisation on the performance of banking services thus need to be supplemented with additional indicators measuring other functions of the banking sector. The methodology of the restrictiveness indexes is likely to have similar limits in the case of other services sectors characterised by regulatory complexity, for example professional services.

13. In this context, several options to improve the existing methods can be explored:

- Improving the data collection: the regulatory questionnaires on different sectors used for constructing the restrictiveness indexes should be established in more explicit and precise terms. A more systematic control of reported data would also be useful, especially in case of self-assessment questionnaires.
- Reconsidering the methodology of existing trade restrictiveness indexes: available indexes adopt essentially the GATS perspective, based on current scheduling modalities. For some sectors, such as telecommunications, which are subject to relatively detailed international commitments, the GATS approach provides a rather fair picture of the sectoral trade regime. Nevertheless, additional components related to the WTO Reference Paper on basic telecommunications could be added. For other sectors there is an acute need to broaden the number and scope of analysed indicators to take into account more adequately other regulatory aspects of specific services.

- Developing separate indexes for the various modes of services supply at a sectoral level in order to make the index useful for services negotiations. At this stage, only restrictions affecting mode 3 are considered separately in the sectoral indexes (as illustrated by both indexes presented in this paper) while the restrictions affecting the other three modes of supply are combined. Some recent studies have improved existing methodologies with respect to the calculation of FDI restrictiveness indexes. The construction of a similar index covering restrictions to the mobility of labour for services provisions could be envisaged.
- Evaluating the weighting of different components of the restrictiveness indexes.
- Reviewing the methods used for measuring the impact of services barriers restrictiveness on the performance and price levels in different sectors. At present, existing methods focus on the economic impact of protection without covering other sectoral key factors influencing performance and price levels in different sectors.

14. Taking into account some of these suggested data and methodological adjustments and as a follow-up to the present work, it is proposed to undertake the following analysis in several subsequent steps:

- Construct the banking and telecommunication restrictiveness indexes for China and some developing economies, such as the Middle East and North Africa (MENA) and South East Asian countries, seeking to increase the reliability of basic data used for the establishment of these indexes. Compare the results with available data for other countries.
- Based on available methodologies, develop the restrictiveness indexes for other sectors, in particular professional and distribution services for selected transition economies, China and some developing countries, and compare them with available results for other countries.
- Develop modal indexes and apply them across sectors.
- Propose possible improvements in the restrictiveness indexes for various services sectors, based on the experience from the database and the analysis of different services sectors in transition economies, China and selected developing countries.



## 1. Main Methods to Measure Services Trade Barriers

15. The measurement of services barriers is based upon research on the measurement of non-tariff barriers affecting goods trade. The methodologies seek to measure two main aspects, *i.e.* the **level** of restrictions in services and the **effect** of such restrictions.

16. There have been significant improvements concerning the methodologies for measuring the level of services restrictions since the pioneering work undertaken by Hoekman (1995) that was based exclusively on GATS Schedules and did not take into account the actual impact of different restrictions as it attributed the same weight to minor trade impediments and to almost complete denial of market access.

17. Several recent studies have tried to overcome these initial limitations. In general, these studies have relied on more comprehensive qualitative databases of measures affecting trade in services and developed sophisticated weighting methods to assess the restrictiveness of different measures (see for example McGuire and Schuele, 2000; McGuire *et al.*, 2000; Nguyen-Hong, 2000). The classification and assessment of weights take into account information on types of barriers and their likely relative economic impact. This information is derived from the GATS schedules and from various other qualitative studies. In order to minimise the subjective weighting of restrictions, sensitivity tests have been conducted to examine the extent of variation of the computed index in response to alternative weights (Hardin and Holmes, 1997). Additional efforts to improve the explanatory power of models and the analysis of the accuracy and plausibility of results have also been carried out (Warren, 2000a).

18. In parallel, the methods to measure the effects of services restrictions have also been improved. For example, within the research project conducted by the Australian Productivity Commission, the impact of services restrictions on price or quantity have been determined for banking services [Kalirajan *et al.* 2000], maritime services (Kang, 2000), telecommunication services (Warren, 2000b), distribution services (Kalirajan, 2000) and professional services (Nguyen-Hong, D., 2000). A more detailed analysis of these methods is provided in the OECD publication (OECD, 2003a).

19. Furthermore, research on the effect of regulatory regimes in services sectors has also been developed. The OECD undertook research to analyse the effects of domestic regulatory regimes in OECD member countries on productivity, prices and quality of services in telecommunications, international air passenger transport, electricity supply, and road freight and retail distribution (OECD, 2001). The findings generally confirm that regulatory reforms have a positive effect on sectoral performances. Extending OECD's research on regulatory regimes, the Australian Productivity Commission (Doove *et al.*, 2001) estimated the extent to which regulatory regimes in international air passenger transport, telecommunications and electricity supply have raised prices in a number of OECD and non-OECD economies. The results suggest a positive relationship between the restrictiveness of regulatory regimes and prices in these sectors.

20. In general, transition countries have not been covered by these different studies. Therefore, this paper employs some of the outlined methodologies to estimate the progress in liberalisation of banking and services sectors in selected transition economies, namely the Baltic States, the SEE countries and Russia. Such comparisons of services barriers and their effects in three geographical areas, which have adopted different routes to service trade liberalisation, can bring some insights into the assessment of various reform strategies and contribute to further research on relevant analytical instruments.

## 2. Measuring services barriers restrictiveness in telecommunications and their impact on sectoral performance and price levels

### 2.1. The restrictiveness of telecommunication services in the selected transition economies

#### a) Conceptual issues

21. The restrictiveness index for telecommunications mirrors the classification of trade barriers used by the General Agreement on Trade in Services (GATS). More specifically, it distinguishes between the barriers that affect services delivered via commercial presence (FDI) and those that affect ongoing operations or, in GATS terms, other modes of delivery (cross-border trade, consumption abroad and the movement of natural persons). Moreover, barriers impeding the market access (MA) of any new entrants, be they domestic or foreign, are distinguished from those that discriminate against foreigners, corresponding to restrictions on national treatment (NT). Table 1 describes in more detail the five components of the restrictiveness index for telecommunications and indicates their values and weighting.

**Table 1 Main Components of the Restrictiveness Index for Telecommunications**

Component	Summary Description	Scores and Weighting
MA/Trade	This component captures policies discriminating against both domestic and foreign entrants to the telecommunications market seeking to supply cross-border services. It is based on the actual policies towards (i) domestic and international leased line/networks, (ii) third party resale, and (iii) connections of leased lines/private networks to public switched telephone network (PSTN).	The index value ranges from 0 to 6. Scores: 0 is given for any reported restriction in one of the segments 1 is awarded if no restrictions are apparent
MA/Invest (fixed)	This component captures policies discriminating against all entrants (both domestic and foreign) seeking to supply fixed network services through investment. It is calculated as a weighted average of three components: a) the number of firms providing fixed telephony b) the degree of competition in the local, long distance, international, data and leased lines services c) the percentage of the incumbent privatised	a) The score limited at maximum of 3; Weighting: 3 b) 0: monopoly; 1: full competition; Weighting: 2 c) The percentage of the incumbent privatised; Weighting: 1
MA/Invest (mobile)	This component captures policies discriminating against all entrants (both domestic and foreign) seeking to supply cellular mobile network services through investment. It is calculated as a weighted average of 3 components: a) the number of firms providing mobile services b) the degree of competition in analogue and digital mobile phone services c) the percentage of the incumbent privatised	a) The score is constrained at the maximum of 3; Weighting: 3 b) 0: monopoly; 1: full competition; Weighting: 2 c) The percentage of the incumbent privatised; Weighting: 1
NT/Trade	This index captures the degree of discrimination against cross-border suppliers of telecommunication services.	0: call-back services not allowed 1: call-back services allowed.
NT/Invest	This index measures discrimination against foreign providers seeking access to domestic fixed and mobile markets through investment.	Value: the percentage of foreign ownership allowed in competitive carriers.
Total index	The higher the value of each the 5 components, the less restrictive (or more liberal) are the policies.  An aggregate policy index is formed by taking a simple average of the five components. The highest possible value of the policy average index is 100.	The weights given to each of the scores reflect a subjective assessment of their relative importance in terms of producing competitive outcomes in telecommunications.

Source: Warren (2000a)

22. It follows from the construction of the index that the higher the value of each of the five components, the less restrictive (or more liberal) are the policies. The weights given to each of the scores reflect a subjective assessment of their relative importance in terms of producing competitive outcomes in the market for telecommunication services. An aggregate policy index is formed by taking a simple average of the five components.

*b) Results for the selected transition economies*

23. Table 2 provides the results for the individual policy components as well as the unweighted average of these components for the selected transition countries in a cross-country comparative perspective that includes a number of developing and developed countries. Figures 1 and 2 representing graphically these results illustrate the differences among the analysed transition countries in the liberalisation of their telecommunication markets.

24. Among the selected transition economies, Estonia records the biggest progress in opening both its fixed and mobile telecommunication markets to competition. New entrants can provide leased lines and private networks, and can connect them to the public switched telephone network (PSTN). There are three operators in both fixed and mobile markets; all services in these markets are subject to full competition and call-back services are allowed. The incumbent is privately-owned by 73% and there are no restrictions on foreign participation in either fixed or mobile markets.

25. Given important liberalisation steps introduced recently in Latvia and Lithuania, two indexes were calculated for the period before 2003 and afterwards. Prior to 2003, Latvia and Lithuania had a monopoly in fixed line services, with relatively more liberal regulations of the mobile market. In both cases, the monopoly ended in 2003, although new entry has yet to occur. In Latvia, competition in data and broadband services is allowed, but continues to be constrained by the requirement to lease lines from the incumbent. There are only two operators in the mobile market, and repeated attempts to auction a third mobile licence have failed. The incumbent is 49% privatised, though no restrictions on foreign equity participation exist. In Lithuania, data services are competitive, but access to the incumbent's local loop is a big disadvantage. There are three mobile operators and the incumbent is 90% privatised.

26. According to the calculated index reflecting the situation in 2003, the level of liberalisation of telecommunications in Russia is rather high, reflecting mainly the fact that the current telecommunication law allows for 100% foreign ownership in this sector. However, several implicit restrictions continue to constrain the access and operations of telecommunication operators. Despite the fact that the connection of leased lines and private networks to the PSTN is allowed in principle, the interconnection rate charged by the incumbent have considerably increased after the introduction of the new telecommunications law, which has deterred foreign competitors from entering the market. There are more than three operators in the mobile market and local fixed line services, but the incumbent still has a de facto monopoly in long distance and international services. Although several operators hold licences for this type of service, they are required to route their calls through the incumbent's network. There is full competition for data services and leased lines, but competition in local services is hampered by the extremely low tariffs for local calls, which are determined by the Federal Anti-Monopoly Service. In the mobile market, competition is limited by the fact that operators are licensed on a regional basis. The incumbent is partially privatised, but the government intends to impose a 49% foreign ownership limit in the telecommunication sector.

27. The SEE countries' telecommunication market is more liberal with respect to mobile than fixed line services, which has certainly contributed to the increased demand for mobile services. Additional factors have boosted the demand for, and dependence on, cellular phone technology in these countries, in particular advances in mobile-phone technology (primarily digitisation) and the lack of competitiveness of

fixed line services (all countries, except Albania, and more recently Romania, have a monopoly supplier of fixed line services; in Albania, competition is restricted to rural services). With scores slightly over 40%, Romania and Bulgaria seem to have relatively liberal telecommunication markets in the region, while Macedonia appears to be the least advanced in implementing reform process in this sector (Figure 1). Compared to developing countries for which data are available, Macedonia, Bosnia and Herzegovina and Serbia and Montenegro have the least liberal telecommunication markets (Figure 2). The presented restrictiveness indexes should be however viewed as snapshots of the situation prevailing in 2002-2003 that require regular updating in light of new legal and regulatory developments in countries concerned. For example, in Romania, the first alternative fixed telephony operator launched its fixed telephony services at the beginning of 2004 ending the monopoly of the incumbent RomTelecom. The index would need to be updated in order to capture these new developments.

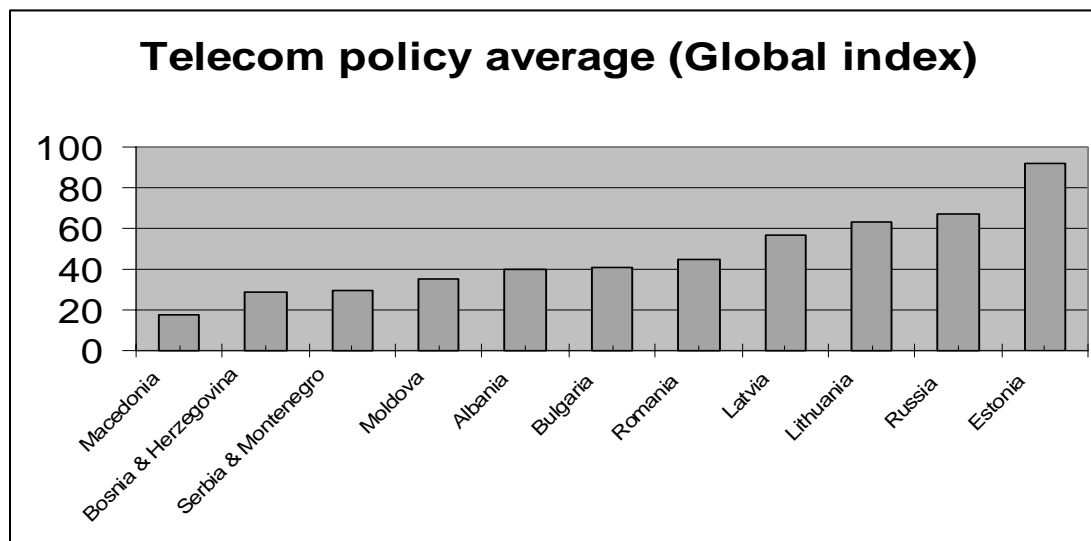
**Table 2 Restrictiveness of Trade Barriers in Telecommunications in Selected Transition Economies**

	<i>MA/Trade</i> <i>(0-6)</i>	<i>MA/FDI</i> <i>(fixed)</i> %	<i>MA/FDI</i> <i>(mobile)</i> %	<i>NT/Trade</i> <i>(0-1)</i>	<i>NT/FDI</i> <i>(0-1)</i>	<i>Policy</i> <i>average</i> %
Russia	2	62	92	1	0.49	67
Estonia	4	98	98	1	1	92
Latvia	1.5	32	75	0	1	46
(prior to 2003)						
Latvia	4	46	75	0	1	57
(post 2003)						
Lithuania	2	36	100	0	1	54
(prior to 2003)						
Lithuania	4	49	100	0	1	63
(post 2003)						
Albania	2	51	65	0	0.5	40
Bosnia and	2	31	58	0	0.25	29
Herzegovina						
Bulgaria	2	25	96	0	0.5	41
Macedonia	2	29	29	0	0	18
Moldova	2	25	66	0	0.5	35
Romania	4	32	75	0	0.5	45
Serbia and	2.5	28	57	0	0.25	30
Montenegro						
China	2	50	67	0	0.49	40
Indonesia	2	57	75	0	0.35	40
Malaysia	2	89	89	0	0.49	52
Philippines	6	100	100	0	0.4	68
Singapore	6	64	84	1	1	90
Thailand	2	50	80	0	0.2	37
Vietnam	2	70	50	0	0	31
		0	0			0
Korea, Rep of	6	70	100	0	0.49	64
China: HKG	6	100	100	1	1	100
		0	0			0
Australia	6	90	90	1	1	96
Canada	6	100	100	1	0.49	90
Japan	6	91	91	1	1	96
New Zealand	6	100	100	1	1	100
United States	6	100	100	1	1	100

Note: Data for Russia, the Baltic States and the SEE economies are for 2003. Data for all other countries are for 2002.

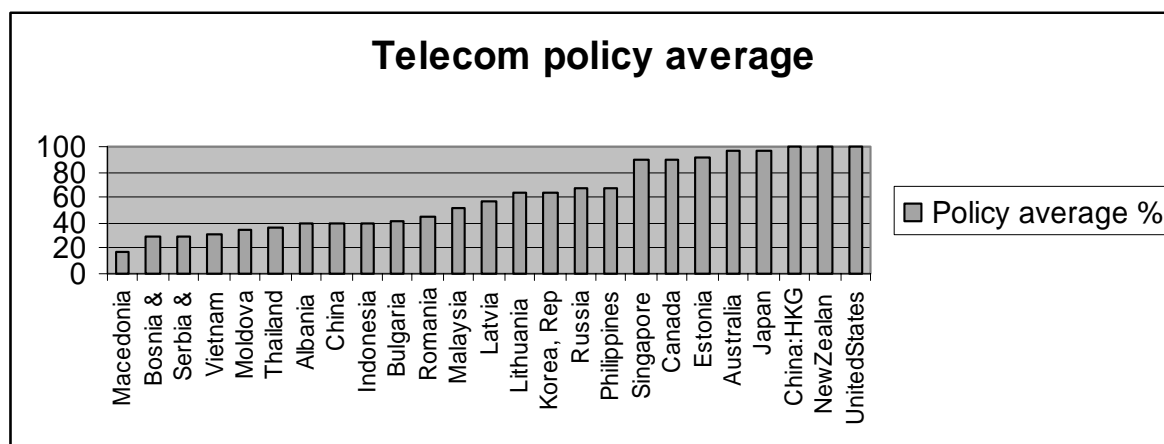
Source: Warren (2000a) and OECD survey data.

Figure1 Global Trade Policy Index for Telecommunications: Selected Transition Economies



Source: Table 2

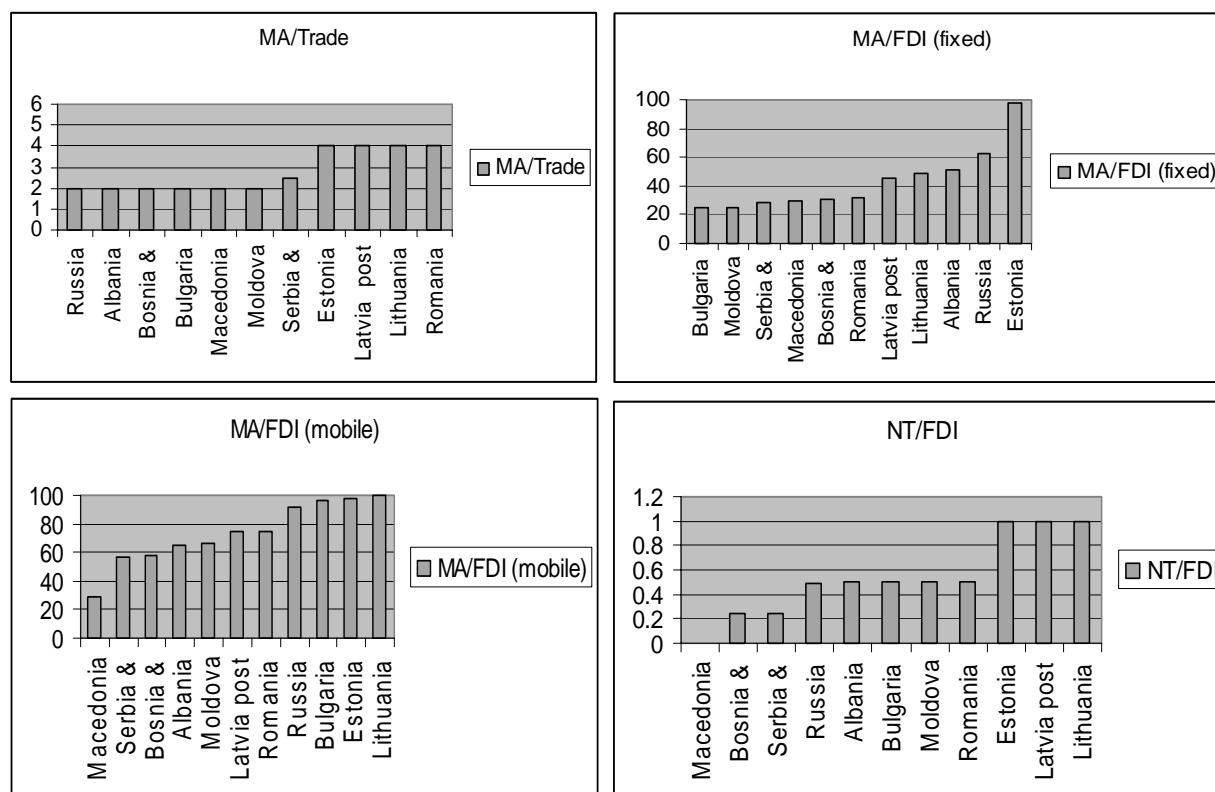
Figure 2 Global Trade Policy Index: International Comparison



Source: Table 2 and Findlay *et al.* (2002)

28. Figure 3 presents the values of individual components of the index, confirming in general the leading position of the Baltic countries with respect to all analysed policy variables. Russia's comparatively good liberalisation performance reflects its relatively liberal stance in commercial presence in fixed and mobile lines (MA/FDI-fixed and mobile), while its scores concerning liberalisation of market access through cross-border trade (MA/Trade) and national treatment rules for commercial presence (NT/FDI) remain amongst the lowest among transition economies. As for the SEE countries, their low degree of liberalisation in market access through cross-border trade (MA/Trade) is mainly due to the rules related to leased lines, which remain under the monopoly of the incumbent. Their stance regarding commercial presence in fixed lines (MA/FDI-fixed) is determined mainly by the percentage of the incumbent that has been privatised. As already noted, the comparatively high score for Albania in this segment is explained by the existence of several fixed-line operators in rural markets.

Figure 3 Individual Policy Indexes for Transition Economies



Source: Table 2

29. Several general trends observed in most other countries are also confirmed in the context of the selected transition economies. A higher mean for MA/FDI (mobile) than for MA/FDI (fixed) accords with the general trend of more liberalised mobile markets compared with more restricted markets for the provision of fixed network services. The significant correlation between scores on market access related to commercial presence in mobile services (MA/FDI-mobile) and scores on national treatment related to mode 3 (NT/FDI) reflects the reliance of most countries on foreign carriers to provide competition to the incumbent carrier in the newly competitive mobile markets.

## 2.2. The quantity and price impacts of telecommunications trade barriers in transition economies

### a) Conceptual issues

30. The methodology developed by Warren (2000b) employs the restrictiveness indexes in econometric models, which allow estimating the impact of trade policies in telecommunications on performance and price levels in this sector. The studies commissioned by the OECD (Dee, 2003, 2004) applied this methodology on selected transition economies.

31. To calculate the effects of telecommunications policy on performance, an econometric model has been developed separately for fixed lines and for mobile telecommunications, taking into account the following factors:

- Fixed lines: Mainlines per 100 inhabitants depend on GDP per capita, household density, percentage of mainlines connected to digital exchange, waiting lists as a percent of mainlines and the result of the restrictiveness index in fixed lines.

- Mobile services: Cellular phones per 100 inhabitants depend on GDP per capita, population density and the value of the restrictiveness index in mobile telecommunication.

b) *Results for the selected transition economies*

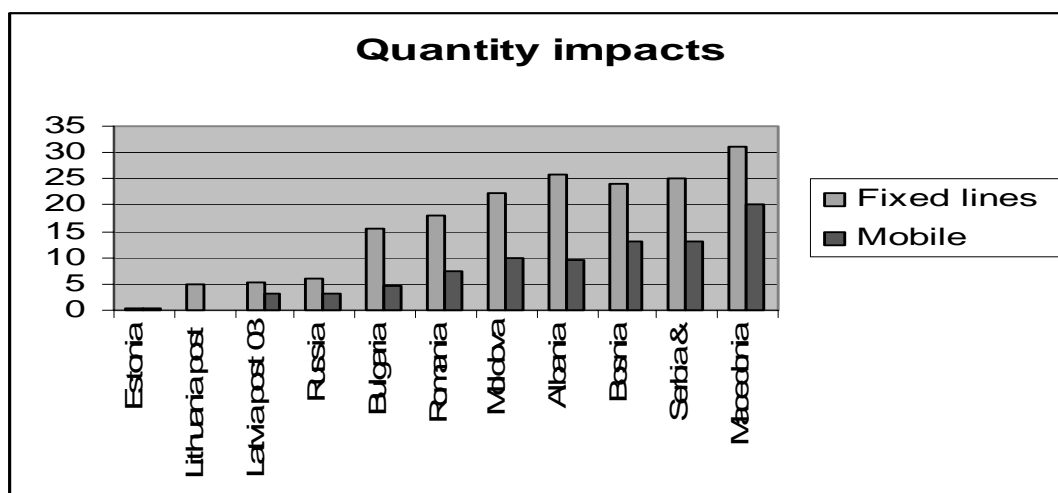
32. Based on these models, quantity impacts of telecommunications trade policies are calculated in individual transition countries by comparing the current values for fixed and mobile penetration rates under current policy settings with the predicted values corresponding to the situation when restrictions were removed. The results are presented in Table 3.

**Table 3 Quantity Impacts of Market Access and National Treatment Restrictions on Investment in Telecommunications in Transition Economies, %**

	<i>Fixed lines</i>			<i>Cellular phones</i>		
	<i>MA/FDI</i>	<i>NT/FDI</i>	<i>Total</i>	<i>MA/FDI</i>	<i>NT/FDI</i>	<i>Total</i>
Russia	2.2	3.7	5.9	0.7	2.6	3.3
Estonia	0.2	0.0	0.2	0.3	0.0	0.3
Latvia	6.7	0.0	6.7	3.1	0.0	3.1
• prior to 2003						
• post 2003	5.3	0.0	5.3	3.1	0.0	3.1
Lithuania	6.2	0.0	6.2	0.0	0.0	0.0
• prior to 2003						
• post 03	4.8	0.0	4.8	0.0	0.0	0.0
Albania	11.5	14.3	25.8	5.2	4.3	9.5
Bosnia & Herzeg.	10.4	13.9	24.2	6.4	6.6	13.0
Bulgaria	8.5	6.9	15.4	0.6	4.0	4.5
Macedonia	11.4	19.7	31.1	11.1	8.9	20.1
Moldova	12.3	10.0	22.2	5.4	4.5	10.0
Romania	9.5	8.5	18.0	3.5	4.0	7.6
Serbia & Mont.	11.0	14.0	25.0	6.6	6.6	13.2

Source: Dee (2003) and Dee (2004)

**Figure 4 Quantity Impact of Market Access and National Treatment Restrictions in Fixed and Mobile Telecommunications**



Source: Table 3

33. Figure 4 clearly shows that due to less liberal policies in fixed-line telecommunications in most countries, the quantity impact of trade liberalisation is generally more important in this segment than in mobile telecommunications. According to the computed results, fixed line penetration rates could increase by around 5% in Latvia and Lithuania and 2% in Russia if additional entry would occur (MA/FDI). In Russia, the proposed new restriction on foreign equity participation (NT/FDI) could restrict fixed line penetration rates by 4%. In the SEE economies, which apply generally more restrictive policies than the Baltic countries and Russia, liberalisation would bring even higher performance returns: fixed line penetration rates could increase by around 10% if general restrictions on entry would be eased (MA/FDI), and by a further 10 to 20% if the sector would be opened up to greater foreign equity participation (NT/FDI).

34. Less restrictive policies in mobile telecommunications imply that the performance in this segment would increase to a lesser extent than in fixed telecommunications. However, the potential for higher mobile penetration rates is not negligible in SEE countries: up to 10% if general restrictions on entry were eased and by a further 10% if the sector were opened up to greater foreign equity participation.

35. The next stage of the analysis consists in estimating the impact of existing policies on the price level of telecommunication services. The data in Table 4 are based on the conversion of the quantity impact analysed above into tariff equivalents, using an indicative price elasticity of 1.2 (Warren, 2000b).

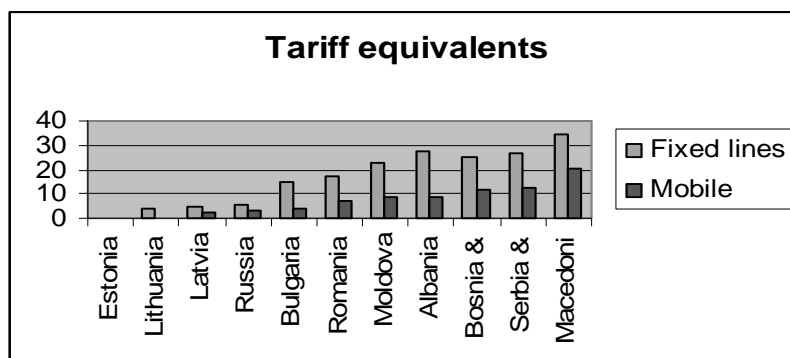
**Table 4 Tariff Equivalents of Market Access and National Treatment Restrictions on Investment in Telecommunications in Transition Economies, %**

	<i>Fixed lines</i>			<i>Cellular phones</i>		
	<i>MA/FDI</i>	<i>NT/FDI</i>	<i>Total</i>	<i>MA/FDI</i>	<i>NT/FDI</i>	<i>Total</i>
Russia	1.9	3.3	5.2	0.6	2.2	2.8
Estonia	0.2	0.0	0.2	0.2	0.0	0.2
Latvia	5.9	0.0	5.9	2.7	0.0	2.7
• prior to 2003						
• post 2003	4.6	0.0	4.6	2.7	0.0	2.7
Lithuania	5.4	0.0	5.4	0.0	0.0	0.0
• prior to 2003						
• post 2003	4.2	0.0	4.2	0.0	0.0	0.0
Albania	11.6	16.8	27.4	4.6	4.0	8.6
Bosnia & Herzeg.	9.4	15.9	25.3	5.6	6.5	12.1
Bulgaria	7.6	7.1	14.7	0.5	3.4	3.9
Macedonia	10.5	24.4	34.9	10.2	9.8	20.1
Moldova	11.4	11.4	22.8	4.8	4.3	9.0
Romania	8.6	9.0	17.6	3.0	3.7	6.7
Serbia & Mont.	10.1	16.3	26.4	5.8	6.5	12.4

Source: Dee (2003) and Dee (2004)



**Figure 5 Tariff Equivalents of Market Access and National Treatment Restrictions on Investment in Fixed and Mobile Telecommunications in Transition Economies**



Source: Table 4

36. These data show to what extent the domestic prices of telecommunications services in individual countries are inflated due to prevailing trade restrictions. According to the calculations, the prices of fixed line telecommunications services have been inflated by approximately 5% in Russia, Latvia and Lithuania due to the restrictions on entry and/or on competition. Russia's prices would be inflated by a further 3% if the country imposed restrictions on foreign equity participation. The price differential is lower in the case of cellular telecommunications services (3% in Russia and Latvia). In the SEE countries, the prices of fixed line telecommunications services appear to be inflated by up to 10% by general restrictions on competition and by a further 10 to 20% by restrictions on foreign equity participation. Existing restrictions have also a negative impact on the price levels in cellular telecommunications, especially in Macedonia due to general restrictions on competition and foreign equity participation.

37. These tariff equivalents, particularly significant in SEE countries, have an adverse effect not only on the performance of telecommunications, but also on the cost structure of other sectors in the economy. Liberalisation of entry, especially in fixed line services, would thus bring significant spillover benefits to the entire economy.

38. The comparison of indicators calculated for transition economies with those of selected developing and developed countries (see Table 5) shows that in terms of performance and price impact of the current trade regime in fixed and mobile telecommunications, the situations in the Baltic States and Russia are comparable to that observed in most developed countries and some developing countries. In contrast, the SEE countries have more room to improve the performance and the price level of their telecommunications services, both in fixed and cellular services.

39. The econometric results show that allowing foreign ownership of competitive carriers is the most important policy measure a country can make to promote fixed-line penetration. This could be illustrated by the fact that Russia's proposal to impose a 49% foreign ownership limit would induce an additional price increase of 3%. Another important measure is to eliminate a de facto monopoly position of the incumbent, by allowing new entrants access to the incumbent's local loop on reasonable terms and encourage them to compete by building their own network infrastructure elsewhere. A successful access regime also requires retail price rebalancing. Only when the incumbents can cover the cost of their local loop by reasonable subscriber access charges (in addition to use-based call charges), they will be willing to make it available to competitors at reasonable rates.

40. The performance of fixed line telecommunications in the SEE countries is being held back by regulations that restrict competition as well as by restrictions on foreign participation, given that all (except Albania, where the competition is limited to rural services, and Romania as of 2004), have a monopoly in

this segment. Liberalising on both fronts could reduce the prices of fixed-line telecommunications by up to 20% in Bulgaria and Romania and by 30% in Macedonia. However, these gains are unlikely to accrue if the SEE countries were to open their fixed line services to foreign equity participation without also removing restrictions on new entry. Such partial reform would risk shifting monopoly rents to foreign carriers with limited benefits for domestic consumers.

41. Similar to other countries, the trade regime in cellular telecommunications in transition economies is generally less restrictive than in fixed line services. However, barriers to commercial presence in this segment also inhibit performance and inflate the prices, in particular in the SEE countries where the removal of restrictions on competition and foreign equity participation would have the strongest impact in Macedonia, Serbia and Montenegro and Bosnia and Herzegovina.

**Table 5 Price and Quantity Impacts from Market Access Policies in Fixed and Mobile Telecommunications Markets: International Comparison, %**

	Quantity impact		Tariff equivalents	
	<i>Fixed lines MA/FDI</i>	<i>Mobile phones MA/FDI</i>	<i>Fixed lines MA/FDI</i>	<i>Mobile phones MA/FDI</i>
Russia	2.2	0.7	1.9	0.6
Estonia	0.2	0.3	0.2	0.2
Latvia (post 2003)	5.3	3.1	4.6	2.7
Lithuania (post 2003)	4.8	0	4.2	0
Albania	11.5	5.2	11.6	4.6
Bosnia and Herzegovina	10.4	6.4	9.4	5.6
Bulgaria	8.5	0.6	7.6	0.5
Macedonia	11.4	11.1	10.5	10.2
Moldova	12.3	5.4	11.4	4.8
Romania	9.5	3.5	8.6	3
Serbia and Montenegro	11	6.6	10.1	5.8
China	112.46	151.51	93.71	126.26
Indonesia	57.91	60.66	48.26	50.55
Malaysia	3.14	6.14	2.61	5.12
Philippines	0	0	0	0
Singapore	2.92	1.54	2.43	1.28
Thailand	24.53	19.74	20.44	16.45
China: Hong Kong	0	0	0	0
Korea, Rep of	4.08	0	3.4	0
Australia	1.15	1.73	0.96	1.45
Canada	0	0	0	0
Japan	0.79	1.08	0.66	0.9
New Zealand	0	0	0	0
United States	0	0	0	0

Source: Dee (2003) and Dee (2004)

### **3. Measuring services barriers restrictiveness and their economic impact in the banking sector**

#### ***3.1. The restrictiveness index for the banking sector***

##### *a) Conceptual issues*

42. Following the methodology established by the Australian Productivity Commission, the restrictiveness index for the banking sectors differentiates between the two main categories of restrictions along these lines:

- Restrictions affecting commercial presence, including restrictions concerning licensing, direct investment, joint venture arrangements and the permanent movement of persons.
- Other restrictions concerning raising and lending of funds, restrictions on providing other business (insurance and securities), expanding outlets and the temporary movement of persons.

43. Two indexes are calculated to quantify the restrictiveness of barriers affecting domestic and foreign services suppliers. The domestic index covers restrictions applied to all banks, while the foreign index concerns restrictions relevant to foreign banks. Various weights are assigned to different measures to reflect their degree of restrictiveness. The greater the restriction on banking services, the higher the score, ranging from 0 (least restrictive) to 1 (most restrictive). Table 6 provides the main components of the banking restrictiveness index with the corresponding set of scores and weights.

44. The index includes the main categories of restrictions that are considered in the context of scheduling commitments under the GATS. It is assumed that market access restrictions apply in a non-discriminatory way to incumbents in a particular market and to possible entrants (whether domestic or foreign). National treatment restrictions mean discrimination between domestic and foreign suppliers. Although these assumptions do not correspond entirely to the GATS categorisation, they facilitate the computation of trade barriers estimates in accordance with the category impediments addressed by the agreement. The index separates explicitly commercial presence from other modes of supply. However, it distinguishes less clearly between other modes of supply as well as between market access (MA) and national treatment (NT) restrictions. The index does not cover prudential requirements, such as capital or liquidity requirements, which are often similar in different countries and in principle do not aim at restricting trade.

45. As with all other services sectors, one of the main challenges of constructing a restrictiveness index is related to the transformation of qualitative information into quantitative data. The difficulties are even greater in the financial sector, given its close links with the overall economic situation and the high complexity of its regulatory framework, which would require including not only information on market access and national treatment components but also other variables that influence the performance of the sector.

46. In addition to the conceptual issues related to the construction of the restrictiveness index, there are also various problems with the availability and reliability of the data required to construct the index. For the purpose of this analysis, the information regarding the SEE was collected on the basis of sectoral questionnaires compiled by their national regulatory agencies and using their GATS schedules (for the WTO members). In the case of the Baltic States, data are based on their GATS schedules and the consultations of their national legislation. As already mentioned, the estimates of the banking restrictiveness index for Russia are not provided in this paper, given the absence of an official GATS schedule. Its still unsettled legal framework, often leaving the room for different interpretations and practices, including at the regional level, does not adequately reflect the actual situation in this sector. An additional problem, common to many countries, especially transition economies, is the generally rapidly evolving legal and regulatory environment in the banking sector. As with telecommunication services, the presented restrictiveness indexes should be viewed as snapshots of the situation prevailing in 2002-2003. They would require a regular updating in light of new legal and regulatory developments in the countries concerned.

**Table 6 Main Components of the Restrictiveness Index for Banking Sector**

Component	Summary description	Scores	Weighting	
			Foreign Index	Domestic Index
<i>Restrictions on commercial presence</i>				
Market entry restrictions	Allocation of banking licenses	<ul style="list-style-type: none"> <li>1.00: no new banking licences issued</li> <li>0.50: up to 6 new banking licences with only prudential requirements are issued</li> <li>0.00: new banking licenses are issued with only prudential requirements</li> </ul>	0.2	0.19
Direct Investment	Maximum equity participation permitted for a foreign investor in an existing domestic bank	<ul style="list-style-type: none"> <li>The score is inversely proportional to the maximum equity participation permitted, e.g. equity participation to a maximum of 75% of a bank receives a score of 0.25</li> </ul>	0.2	0.19
Joint venture arrangements	Is there a requirement for a foreign bank to enter through a joint venture with a domestic bank?	<ul style="list-style-type: none"> <li>1.00: No entry is allowed through a joint venture with a domestic bank</li> <li>0.50: Bank entry only through a joint venture with a domestic bank</li> <li>0.00: No requirement for a bank to enter through a joint venture with a domestic bank</li> </ul>	0.1	
Permanent movement of people	How long can executives, specialists and senior managers stay in a country?	<ul style="list-style-type: none"> <li>1.00: No entry of executives, senior managers and/or specialists</li> <li>0.40: these categories can stay up to 3 years</li> <li>0.00: These categories can stay a period of 5 years and more</li> </ul>	0.02	
<i>Other restrictions</i>				
Raising funds by banks	Can the banks raise funds from any source?	<ul style="list-style-type: none"> <li>1.00: Banks are not permitted to raise funds in the domestic market</li> <li>0.50: Banks are restricted in accepting deposits from public</li> <li>0.00: Banks can raise funds from any source with only prudential requirements</li> </ul>	0.1	0.143
Lending funds by banks	Are the banks allowed to lend to any source?	<ul style="list-style-type: none"> <li>1.00: Banks are not permitted to lend to domestic clients</li> <li>Banks are restricted in providing certain services (e.g. credit cards, leasing, consumer finance)</li> <li>0.00: Banks can lend to any source with only prudential restrictions</li> </ul>	0.1	0.143
Other business of banks	Services permitted to be provided domestically, such as insurance and securities services	<ul style="list-style-type: none"> <li>1.00: Banks can only provide banking services</li> <li>0.50: In addition to banking services, banks can provide one other line of business – insurance or securities services</li> <li>0.00: No restrictions on conducting other lines of business</li> </ul>	0.2	0.095
Expanding the number of banking outlets	Is the number of banking outlets limited?	<ul style="list-style-type: none"> <li>1.00: one banking outlet with no new banking outlets permitted</li> <li>0.00: No restrictions on banks expanding operations</li> </ul>	0.05	0.048
Temporary movement of people	Is temporary entry of executive, senior managers and/or specialists allowed?	<ul style="list-style-type: none"> <li>1.00: No temporary entry permitted</li> <li>0.50: Temporary entry up to 60 days permitted</li> <li>0.00: temporary entry over 90 days</li> </ul>	0.01	
<b>Highest possible score</b>			<b>0.933</b>	<b>0.809</b>

Source: McGuire and M. Schuele (2000)

*b) Results for the selected transition economies*

47. Table 7 and Figure 6 show the index measures of barriers to trade in banking services for the three Baltic States and the SEE countries. In line with the applied methodology, the countries with the highest

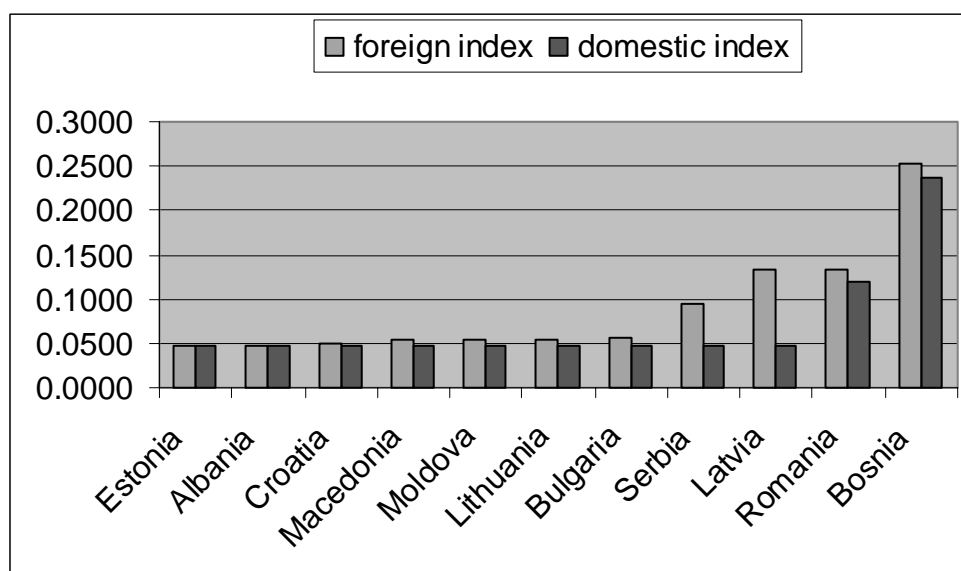
score of the restrictiveness index have the most restrictive trade regime for banking services. In our sample, this is the case of Bosnia and Herzegovina, followed by Serbia and Montenegro. By contrast, Estonia, followed by Albania and Croatia, record the lowest restrictiveness index among the analysed countries.

**Table 7 Restrictiveness Indexes for Banking Services in Selected Transition Economies**

	<i>Barriers to Foreign Entrants</i>	<i>Barriers to Domestic Entrants</i>
	Index (0-0.93)	Index (0-0.81)
Estonia	0.0475	0.0475
Latvia	0.1330	0.0475
Lithuania	0.0551	0.0475
Albania	0.0475	0.0475
Bulgaria	0.0575	0.0475
Bosnia and Herzegovina	0.2572	0.2375
Croatia	0.0499	0.0475
Macedonia	0.0537	0.0475
Moldova	0.0537	0.0475
Romania	0.1342	0.1190
Serbia and Montenegro	0.0950	0.0475
<b>Average</b> (24 countries)	0.1339	0.0534

Notes: Data for the Baltic States and the SEE countries are current. Data for remaining countries in sample are for 1997. Data for Albania, Bosnia and Herzegovina, Macedonia and Romania are excluded from calculation of the average  
Source: McGuire and Schuele (2000) and OECD survey data.

**Figure 6 Foreign and Domestic Restrictiveness Index for Banking in Transition Economies**



Source: Table 7

48. The analysis therefore confirms that among transition economies Estonia has been leading the process of liberalisation in banking services. The only remaining restriction among the reported barriers is the restriction preventing banks from undertaking insurance activities. Latvia and Lithuania apply the same restriction, but in addition, Lithuania allows the movement of executives, specialists and senior managers for periods of up to three years (compared with five years in Estonia). Latvia penalises foreign entry by

requiring foreign banks to have been operating for three years before entering the market. Latvia also requires foreign banks to invest at least one million EUR in assets within one year of entry and to maintain it throughout the entire time of operation.

49. For the SEE countries, the results show that the regimes for banking services are relatively liberal when considering traditional trade policy measures affecting market access and national treatment. As in other countries, the most common restriction affecting both domestic and foreign banks is on carrying out insurance activities. The operations of foreign operators are limited mainly by restrictions on the permanent movement of people. In most other cases, the SEE countries have no additional restrictions. There are no major differences between the majority of the SEE countries concerning the level of restrictiveness, except for Serbia and Montenegro, Romania and Bosnia and Herzegovina which (together with Latvia) have the most restrictive regime among the analysed transition economies. Compared to the previous results concerning telecommunications, the banking sector in SEE countries appears therefore more liberal.

50. As already mentioned, Russia's case illustrates the general difficulties in establishing and interpreting the restrictiveness index for the banking sector. In addition to Russia's specific problems with the data reliability referred to earlier, the restrictiveness index, which focuses on GATS-relevant aspects, does not take sufficiently into account other elements that are critical for the efficient functioning of the banking sector. In Russia, the facilitation of entry and operations of foreign banks and resulting increased competition remain essential to improve the efficiency of the country's banking sector. However, other important factors continue to undermine the progress in the financial sector's reform, in particular the predominance of state-owned banks, fragmentation of the private bank sector, the delays in introduction of the deposit insurance scheme and the problems with banking supervision and enforcement of prudential standards (OECD, 2004a).

### **3.2. *The effect of sectoral restrictions on performance and price of banking services in the selected transition economies***

#### *a) Conceptual issues*

51. To calculate the effects of existing barriers on the performance of the banking sector, measured by net interest margins, a two-stage method is applied:

- In the first stage, the price performance of banks is "corrected" for the influence of two key elements of prudential supervision, *i.e.* capital and liquidity requirements.
- In the second stage, the influence of the relevant trade restrictions (related to market access and national treatment) and other factors such as the excess capital ratios and excess liquidity ratios are examined on this "corrected" price measure.

#### *b) Results for the selected transition economies*

52. Following this method, the calculations have been effectuated for the selected transition economies (Dee, 2003). "Tax equivalents" of restrictions on banking activities in individual countries have been calculated by comparing the values of net interest margins under current policy settings with the predicted values under conditions of all restrictions having been removed. The figures in Table 8 indicate the percentage by which net interest margins are inflated as a result of the restrictions in selected transition economies as well as in some developed and developing countries (data for transition economies are from 2002-2003; for other countries, they are based on the situation in 1997).

**Table 8 Tax Equivalents of Market Access and National Treatment Restrictions on Banking, %**

	<i>Trade barriers – market access</i>	<i>Trade barriers – national treatment</i>	<i>Excess capital ratios</i>	<i>Excess liquidity ratios</i>	<i>Total</i>
Estonia	2.42	0.00	Na	Na	2.42
Latvia	2.42	4.51	Na	Na	6.93
Lithuania	2.42	0.40	Na	Na	2.82
Albania	2.42	0.00	3.81	1.88	8.12
Bulgaria	2.42	0.52			2.94
Croatia	2.42	0.12	7.39	0.96	10.89
Macedonia	2.42	0.32	7.27	2.09	12.10
Moldova	2.42	0.32	7.24	0.52	10.50
Serbia and Montenegro	2.42	2.48	10.81	0.88	16.59
Chile	15.45	3.16			18.61
Indonesia	3.66	24.30			27.96
Korea	10.05	11.67			21.72
Malaysia	14.76	21.26			36.02
Philippines	7.45	19.93			27.38
Singapore	5.53	13.28			18.81
Thailand	0.00	17.85			17.85
Australia	0.00	3.53			3.53
France	0.00	0.50			0.50
Japan	6.81	0.12			6.93
Sweden	0.00	0.50			0.50
United States	0.00	0.12			0.12

Notes: Data for the Baltic States and the South East European countries are for 2003. Data for the remaining countries are for 1997.

Source: Dee (2003) and Dee (2004)

53. The first two columns of Table 8 show the tax equivalents of the trade restrictions based on the restrictiveness index reported in Table 7. The tax equivalents of the non-discriminatory market access restrictions show the tax penalty imposed on domestic entrants. The tax equivalents of the national treatment restrictions show the additional penalty imposed on foreign entrants by discriminatory trade measures. The total tax equivalent affecting foreign entrants corresponds to the sum of the first two columns in Table 7. For the SEE countries, additional factors such as the impact of excess capital ratios and excess liquidity ratios have been included in the calculation of the total tax equivalent.

54. According to these results, the trade regime for banking services in the Baltic States are moderately restrictive, in general less liberal than in developed countries, but significantly more liberal than in some developing countries. The restrictions that apply on lines of business and raising funds (non-discriminatory) and on the permanent movement of people and investment requirements (discriminatory) are estimated to increase the prices of banking services by some 2% (Estonia and Lithuania) to almost 7% (in Latvia). Within this total, the non-discriminatory restrictions on lines of business add 2% to the prices of banking services (in Estonia, Latvia and Lithuania). In Latvia, discriminatory investment requirements imposed on foreign operators add almost 5% to the prices of banking services.

55. Reflecting a rather liberal trade regime of banking shown by the restrictiveness index, the results for the SEE countries reveal only a limited impact of the remaining restrictions on the prices of banking

services (see column 1 and 2 in Table 8). Markets are generally contestable and a few discriminatory regulations against foreign entry, lines of business (non-discriminatory) and the permanent movement of people (discriminatory) are estimated to add a total of 2 to 4% to the prices of banking services.

56. However, there are additional factors beyond the narrow definition of services trade barriers that influence the prices of banking services. These aspects (see columns 3 and 4 in Table 8) consider the effects of excess capital and liquidity ratios maintained by individual banks in the SEE countries on their banking prices. These high ratios are not justified by the stringency of prudential regulation but rather reflect the lack of macroeconomic instability and structural reform, and the existence of a high proportion of non-performing loans. For example, in Macedonia and Serbia and Montenegro, the percentage of non-performing loans amounts to 25%. Taking into account the excess capital and liquidity ratios, the prices of banking services are estimated to be inflated by additional 11% (in Serbia and Montenegro and Macedonia) and by more than 9% in Croatia.

57. The policy priorities for the banking sectors in SEE countries would thus appear to be the broad issues of macroeconomic stability and structural reform. Significant progress on these issues would do much for the banking sector performance. Limited additional gains could be obtained by removing remaining market access and national treatment restrictions in banking sectors that are already reasonably contestable. While macroeconomic stability and structural reform are policies that can help bank performance, so too can appropriate domestic prudential regulation. Not only could these measures indirectly reduce the prices of banking services, they would also have beneficial effects on overall bank performance and consequently on other sectors.

58. The results for all transition economies are in stark contrast to the results for some other developing countries, based on their policy stances in 1997. The tight restrictions, particularly on foreign entrants, were estimated to have raised the prices of banking services by 20% or more in ASEAN countries. However, it would be necessary to update the 1997 results and take into consideration recent developments in these countries as many of them have since loosened some of the restrictions in response to the Asian financial crisis.

#### **4. Main policy recommendations, assessment of existing methods to measure service barriers and proposals for their improvement**

##### ***4.1. Summary of sectoral policy recommendations for selected transition economies***

59. The quantitative analysis of services barriers and their economic impact in telecommunications and the banking sector carried out in this paper has highlighted significant differences among the examined countries. Based on these analyses, several specific policy recommendations for individual countries or group of countries are proposed.

60. Among the selected countries, the Baltic countries record the highest liberalisation scores for both telecommunications and banking services making their situation comparable to that of most developed countries. As a result, removing remaining restrictions is estimated to have only a limited impact in terms of higher penetration rates and price reductions for telecommunication services. In banking services, Estonia remains the leading country in liberalising the trade regime in this sector. Latvia and Lithuania still apply some restrictions, mainly concerning the movement of executives and senior managers. The largest gain (of approximately 6%) in terms of the reduction of existing prices for banking services would occur in Latvia, for the other two countries the gains would be even more modest. The example of the Baltic countries thus shows that rapid liberalisation strategies can bring significant outcomes in terms of increased efficiency of these two key sectors, which - due to their spillover effects - have contributed to economic dynamism in these countries. It is clear that the acceptance and implementation by the Baltic



countries of EU regulatory disciplines, particularly explicit in the two analysed sectors, have decisively influenced the rapid pace and considerable depth of services liberalisation in these countries (OECD 2004b).

61. Presented estimates concerning telecommunications put Russia in an intermediate position between the results for the Baltic and the SEE countries and, accordingly, the impact of removing the remaining restrictions on performance and prices is estimated to be lower in Russia than in most SEE countries. However, this apparently favourable assessment requires several important qualifications. Russia, which is not yet WTO member, is not restrained by any international disciplines (or by any regional commitments) and therefore its current regime is not stable and continues to be subject to frequent changes and adjustments. For example, proposals to impose the limits to foreign ownership in telecommunications would considerably worsen the present situation and the country's ranking. Therefore, Russia needs first to stabilise and consolidate its legal and regulatory framework to improve its transparency and predictability. Moreover, the WTO accession should encourage Russia to undertake further trade liberalisation, including in telecommunications, which is estimated to bring not negligible economic gains in this sector and to the whole economy.

62. The SEE countries have more room to improve their performance and the price level of their telecommunication services, both in fixed and cellular services. The results suggest that the performance of fixed line telecommunications in SEE countries is being held back by regulations that restrict competition - all SEE countries except Albania, and more recently Romania, have an effective monopoly in fixed line services, and in Albania, competition is restricted to rural services. In all SEE countries considered, there is considerable scope to open up fixed line services to competition, including by foreign firms. The prices of these services could decrease by up to 10% from eliminating general restrictions on competition and by a further 10 to 20% from removing restrictions on foreign equity participation. These gains are unlikely to accrue if SEE countries were to open up their fixed line services to foreign equity participation, without also removing the current restrictions on new entry. Such partial reform would risk passing monopoly rents to foreign carriers, with no offsetting domestic benefits. Partly as a result of restrictions on fixed line services, cellular telecommunications are well-established in SEE countries. But here, too, barriers to commercial presence are inhibiting performance. The largest gains from removing these restrictions would come in Macedonia, Serbia and Montenegro, and Bosnia and Herzegovina, where prices could fall by up to 20%.

63. With respect to banking services, regulations in SEE countries are already fairly liberal. Markets are generally contestable, and there are fewer discriminatory regulations against foreign entry than in many other countries. The key factors inhibiting banking sector performance are instead macroeconomic instability and the lack of structural reform, both of which have also been affected by civil strife. These factors appear to be restricting lending opportunities and contributing to a high proportion of non-performing loans. This in turn has meant that banks are holding larger measured capital and liquidity ratios than would necessarily be dictated by prudential regulation alone. Returning these ratios to more normal levels could allow the prices of banking services to fall by up to 10% in Macedonia and Serbia and Montenegro, with smaller gains in Moldova, Croatia and Albania. The policy priorities for the banking sectors in SEE countries would thus appear to be the broad issues of macroeconomic stability and structural reform. Significant progress on these issues would do much for the banking sector performance.

64. The results suggest that the two SEE countries that are not WTO members have comparatively restrictive policies in both sectors. The regimes in Serbia and Montenegro and Bosnia and Herzegovina are subject to numerous changes. Ensuring market access for domestic and foreign services providers and granting national treatment to foreign services providers constitute a policy priority for these two countries. In addition, implementing regulatory reform that complements the liberalisation process constitutes the major priority in all SEE countries. In this area, the European Agenda and the Stabilisation and Association

process are the main catalysts for introducing effective regulatory measures that address market failures and ensure social objectives.

#### ***4.2. Advantages and limits of quantitative methods for policy makers***

65. The quantitative estimates of services barriers, even if still imperfect, represent useful complements to extensive qualitative descriptions of services restrictions, in particular because they facilitate the comparisons in time, across countries and potentially among different services sectors. These efforts could also be useful for ongoing work on regulatory reform: by quantifying the potential impact of basic regulatory principles of non-discrimination, transparency and increased competition they can clearly demonstrate the impact of good regulatory practices on economic growth and efficiency. However, the challenge to transform qualitative information in numeric data remains significant and the coverage of all relevant components by the index is more difficult, especially for the sectors characterised by high regulatory complexity, such as financial or professional services.

66. Using the restrictiveness indexes to measure the costs of trade restrictions in terms of lower performance and increased price levels for businesses and consumers in various services sectors has undeniable advantages for policymakers and trade negotiators as it illustrates the possible benefits of removing restrictions and enhancing competition. Moreover, cross-sectoral comparisons could facilitate the identification of sectoral priorities. For example, on a sectoral basis, available studies measuring the restrictions and their effects often indicate that banking and telecommunications are more restrictive than other sectors (OECD, 2003b). Liberalising these sectors is thus likely to produce greater gains than other sectors also because they are essential inputs and produce substantial productivity gains for other sectors.

67. These measurements also represent essential inputs into empirical exercises concerning the economy-wide impact of removing these barriers and their impact on growth and productivity. Although the quantification of services barriers is still rudimentary, it provides rough indications of the costs of maintaining restrictions. By indicating an order of magnitude of the costs of services barriers and, at a further stage, the corresponding welfare gains from their removal, the quantification of services barriers can be a valuable tool for demonstrating what is at stake in the liberalisation of trade in services. Cross-country comparisons, though also still subject to caution as regards their precision, focus the attention to the countries which can draw the greatest benefits from liberalising services. Available estimates show that the effect of restrictions is significantly higher in developing economies than in developed countries. For example, in banking, the average price effect of existing restrictions is 33% for developing economies and 7% for developed countries. In telecommunications, the average price increase due to reported restrictions is 38% in developing economies compared to 2% in developed countries (McGuire, 2002). This suggests that developing countries are potentially the major winners from services liberalisation.

#### ***4.3. Proposals to improve the measures of restrictiveness of services trade barriers***

68. In the recent years, the estimates of services trade barriers have been considerably improved, due to a better quality of the data used and to greater sophistication of the available methodologies. Starting with the simple inventory of GATS commitments, the available techniques now allow measuring the level of restrictiveness of existing barriers and estimating their price and costs effects. Some attempts to determine the correlation between these effects and the individual underlying restrictions have also been developed.

69. However, important limitations still constrain the reliability of various estimates. Some of these limits are due to the availability and quality of the data on existing restrictions, whereas others reflect certain shortcomings in currently used methodologies.

70. As regards **the collection of the data**, the main sources are the GATS schedules (for WTO/GATS members), national legislation and/or the sectoral questionnaire on the regulatory framework in various service sectors, which were developed by the World Bank and the OECD. In the case of this project, the data on the Baltic States are based on their national legislation and GATS schedules. For Russia, only national legislation could be used. For the SEE countries, the data are from the regulatory questionnaire compiled by national regulatory agencies of these countries and available GATS schedules. As illustrated by Russia's case, frequent changes in national legislation and uncertainties in its interpretation do not allow analysing the actual implementation of different legal measures and their economic impact.

71. GATS schedules, given their different purpose and specific scheduling modalities, do not always respond to the requirements for regulatory data needed to construct the restrictiveness indexes. The information in the GATS schedules is limited by the positive listing approach. Consequently, the GATS schedules do not include all barriers which are in place. Therefore, in subsequent studies, the GATS schedules were supplemented with other sources of information on the relevant legislation covering services barriers. Sectoral regulatory questionnaires appear to be better adapted for collecting the required data. However, to improve their reliability, especially if the data are reported by countries' regulatory agencies, the questions should be formulated more precisely to avoid any ill-reporting. A more systematic control of reported data would be therefore useful, especially in case of self-assessment questionnaires.

72. The concrete examples of the calculated restrictiveness indexes presented in this paper showed some shortcomings in **the construction of the restrictiveness indexes**. The GATS perspective, based on market access and national treatment restrictions, seems to capture quite adequately the trade regime in telecommunications, where international commitments are rather detailed, especially if additional components referred to in the WTO Reference Paper on basic telecommunications were to be taken into account. However, a similar approach applied in the context of banking services appears to be less satisfactory as it leaves aside some essential macroeconomic and regulatory aspects characterising this service sector. The restrictiveness index and the related calculations of the impact of trade liberalisation on the performance of banking services thus need to be supplemented with additional indicators measuring other functions of the banking sector. The methodology of the restrictiveness indexes has likely similar limits in some other services sectors characterised by regulatory complexity and heterogeneity comparable to the financial sector, for example professional services. For these sectors there is probably a need to broaden the number and scope of analysed indicators to take into account more adequately their regulatory complexity and its impact on their trade regimes' restrictiveness (OECD, 2003c). In addition, it would also be useful to evaluate the weighting of various components of different restrictiveness indexes.

73. In order to make the index more suitable for services negotiations, it would be useful to develop separate indexes for the various modes of services supply at a sectoral level. As illustrated by both indexes presented in this paper, at this stage, only restrictions affecting mode 3 are considered separately in the construction of the sectoral indexes. Restrictions affecting the other three modes of supply are combined. Recent work undertaken by the OECD Economics Department (OECD, 2003c) improves the methodology developed by the Australian Productivity Commission in 1997 (Hardin and Homes, 1997) with respect to the calculation of FDI restrictiveness indexes and applies it to a sample of 28 OECD countries. The construction of a similar index covering restrictions to the mobility of labour for services provisions could be envisaged.

74. Finally, there is also probably a need to reconsider the **methods used for measuring the impact of services barriers restrictiveness on the performance and price levels** in different sectors. At present, existing methods focus on the economic impact of protection without covering other key factors influencing performance and price levels in different sectors. In particular, it would be useful to examine existing restrictions and their economic impact differentiating between their price increasing, rent-creating and/or dual effect.

#### **4.4. Possible future work**

75. Taking into account the suggested data and methodological adjustments and as a follow-up of the present work, it is proposed to undertake the following analysis in several subsequent steps:

- Construct the banking and telecommunication restrictiveness index for China and some developing economies, such as the Middle East and North Africa (MENA) and South East Asian countries, seeking to improve the reliability of basic data used for the establishment of these indexes. Compare the results with available data for transition economies and some developing countries.
- Develop the restrictiveness indexes for other sectors, in particular professional and distribution services for selected transition economies and China on the basis of available methodologies. Compare them with available data for developing countries.
- Develop modal indexes and apply them across sectors.
- Propose possible improvements in the restrictiveness indexes for various services sectors, based on the experience from the database and the analysis of different services sectors in transition economies, China and selected developing countries.

## REFERENCES

- DEE Ph. (2003), "Barriers to trade in services in the Baltic States and Russia", mimeo, OECD
- DEE Ph. (2004), "Barriers to trade in services in South Eastern European countries" – revised version, mimeo, OECD
- DOOVE, S., O. GABITAS, D. NGUYEN-HONG and J. OWEN (2001), "Price Effects of Regulation: Telecommunications, Air Passenger Transport and Electricity Supply", Productivity Commission Staff Research Paper, AusInfo, Canberra.
- FINDLAY, C. *et al.* (2002), "Telecommunications", Asia Pacific School of Economics and Management The Australian National University, Paper presented to the 28<sup>th</sup> Pacific Trade and Development Conference on "Competition Policy in the New Millennium", September 16-18, 2002, The Philippine Institute for Development Studies, Manila
- HARDIN, A. and L. HOLMES (1997), "Service Trade and Foreign Direct Investment", Australian Productivity Commission, available at:  
<http://www.pc.gov.au/ic/research/information/servtrade/index/html>
- HOEKMAN, B. (1995), "Assessing the General Agreement on Trade in Services", in Martin W. and L.A. Winters (eds.), *The Uruguay Round and the Developing Countries*, World Bank Discussion Paper 307
- KALIRAJAN K., G. McGUIRE, D. NGUYEN-HONG and M. SCHUELE (2000) "The price impact of restrictions on banking services", in FINDLAY, C. and WARREN, T. (eds) 2000, *Impediments to Trade in Services: Measurement and Policy Implications*, Routledge, London and New York.
- KANG, J. (2000), "Price impact of restrictions on maritime transport services", in FINDLAY, C. and WARREN, T. (eds) 2000, *Impediments to Trade in Services: Measurement and Policy Implications*, Routledge, London and New York.
- McGUIRE, G., M. SCHUELE and T. SMITH (2000), "Restrictiveness of international trade in maritime services", in FINDLAY, C. and WARREN, T. (eds) 2000, *Impediments to Trade in Services: Measurement and Policy Implications*, Routledge, London and New York.
- McGUIRE, G. and M. SCHUELE (2000), "Restrictiveness of International Trade in Banking Services", Australian Productivity Commission
- McGUIRE, G. (2002), "How Important are Restrictions on Trade in Services", paper presented at the UNCTAD Workshop on Market Access, New York, 8-9 January.
- McGUIRE, G. (2003), "Methodologies for Measuring Restrictions on Trade in Services", in *Quantifying the Benefits of Liberalising Trade in Services*
- NGUYEN-HONG, D. (2000), "Restrictions on Trade in Professional Services", Productivity Commission Staff Research Paper, Ausinfo, Canberra,  
<http://www.pc.gov.au/research/staffres/rotips/index.html>

- OECD (2001), *OECD Economic Studies No. 32*, Special Issue on Regulatory Reform, Paris.
- OECD (2003a), *Quantifying the Benefits of Liberalising Trade in Services*, Conference Proceedings, the Third OECD Services Experts Meeting, 4-5 March 2002, OECD, Paris.
- OECD (2003b), “Barriers To Trade In Services In South Eastern European (SEE) Countries – How Much Do They Matter?”, CCNM/TD/SEE(2003)4/FINAL
- OECD (2003c), “Measures of restrictions on inward foreign direct investment for OECD countries”, OECD Economic Department Working Paper No. 357 available at <http://www.oecd.org/eco>
- OECD (2004a), *OECD Economic Surveys - Russian Federation*, OECD, Paris
- OECD (2004b), *Promoting Trade in Services: Experience of the Baltic States*, OECD, Paris
- WARREN, T. (2000a), “The identification of impediments to trade and investment in telecommunications services”, in FINDLAY, C. and WARREN, T. (eds) 2000, *Impediments to Trade in Services: Measurement and Policy Implications*, Routledge, London and New York.
- WARREN, T. (2000b), “The impact on output of impediments to trade and investment in telecommunications services”, in FINDLAY, C. and WARREN, T. (eds) 2000, *Impediments to Trade in Services: Measurement and Policy Implications*, Routledge, London and New York.