Quantifying Restrictions on Trade in Services:
The Finance and Telecommunication Sectors in the Andean Community and the Southern Cone

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The Finance and Telecommunication Sectors in the Andean Community and the Southern Cone[*]

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Abstract: We present selected results from a recent OECD study of the restrictiveness of services trade regimes in non-member economies. For the first time, we provide estimates of trade restrictiveness both overall and by GATS Mode of Supply. The inherent limitations related to the employed estimation techniques lead us to argue against a strict interpretation of the empirical results and in favor of a more flexible, qualitative interpretation, combined with rank ordering of countries for indicative purposes. Focusing on the finance (banking/insurance), and fixed/mobile telecommunications sectors, we show that there is considerable heterogeneity of experience across countries, sectors, and GATS Modes. While Southern Cone and Andean countries are generally more restrictive than the OECD average for banking and insurance services, telecommunications markets in around half of the countries studied are at least as liberal as the OECD average. The economic impacts of barriers to services trade can be substantial: tax equivalents for banking range up to nearly 20%, while the maximum is around 50% for insurance; however, impacts are smaller for telecommunications (up to 8%). Our results suggest that regional policymakers have enjoyed some success in liberalizing trade in these sectors, but that much still remains to be done.

Keywords: International trade; Trade in services; GATS; Trade policy; Sectoral regulations; Financial services; Telecommunications; Latin America.

JEL Codes: F13; F14; L80.

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1   Introduction

Quantifying the economic impacts of trade barriers across multiple countries is no easy business. In the goods sector, this task has kept trade economists busy for many decades developing appropriate models and collecting the enormous amount of data required to produce detailed and reliable results that can easily feed into the policymaking process. For trade in services, however, the corresponding effort is much more recent, having really only commenced during the lead up to the Uruguay Round (1986-1994), when services made their entry into the trade negotiating arena. And there is likely to be no shortage of work in this area over the coming years, since we still know relatively little as to the overall pattern of service sector protection around the world, and in particular in developing countries. (See Hoekman, 2006, for a comprehensive review of the issues.)

Quantification of barriers to services trade is difficult primarily because most such barriers are related to domestic regulations that determine the circumstances under which new actors can enter the market, and the set of rules they must comply with once they are there. There are few equivalents in services to the ad valorem tariff that is ubiquitous in goods sectors. This means that quantification efforts have to try and take account of a large number of often complex regulations, and that to do so they must first of all gather data on these regulations which can then be summarized into quantitative measures.

Why is it important to proceed with the quantification effort, despite the numerous practical difficulties it encounters? In our view, there are at least three main reasons. First, many countries around the world are interested in ensuring that their services sectors are regulated efficiently, including at the interface with world markets. But regulatory reform often requires a substantial investment of political capital. Policymakers therefore need to be able to prioritize reforms in terms of their expected economic payoffs, which allows them to make best use of their political capital. We would argue that such prioritization is difficult, if not impossible, in the absence of quantitative evidence as to the level of protection in different sectors.

Second, the advent of the General Agreement on Trade in Services (GATS) has meant that liberalization of services sectors no longer takes place in a single country environment. Rather, reforms in one country can be of interest to its trading partners both in terms of market access, and also as part of the broader ebb and flow of WTO negotiations. The recent rise in the number of regional agreements incorporating a services trade element tends to reinforce this dynamic.

Third, policymakers in both developing and developed countries increasingly rely on the results of global trade models in analyzing the costs and benefits for their countries of different negotiating scenarios at the WTO (or in regional fora). However, such models are only as good as the data that go into them. The lack of detailed cross-country data on barriers to services trade means that modelers have to try and fill in the blanks by extrapolation from the information they do have, normally centered on large, developed

economies. If developing countries are to get high quality, policy relevant information out of the next generation of models of international trade in services, then data collection and quantification will be key.

In this Chapter, we hope to contribute to that effort by presenting selected quantitative results from an OECD cross-country study of restrictions to services trade in non-OECD countries (Dihel and Shepherd, 2007). We focus on two sectors of particular interest to developing countries: finance (banking and insurance), and telecommunications (fixed and mobile). In regional terms, we present results for 9 countries in the Andean Community and the Southern Cone, namely: Argentina, Brazil, Uruguay, and Venezuela (members of Mercosur); Bolivia, Colombia, Ecuador, and Peru (members of the Andean Community and associate members of Mercosur); and Chile (associate member of Mercosur).

In a nutshell, our results enable us to provide a broad review of the overall restrictiveness of the trade policy environment in these sectors across Andean and Southern Cone countries. Based on data collected through detailed questionnaires, we produce summary indicators, known as Trade Restrictiveness Indices (TRIs), to enable cross-country comparisons to be made. In an important innovation with respect to previous work in this area, we construct TRIs covering both aggregate trade and all four GATS Modes of Supply taken individually.[1] We then use these TRIs with firm-level performance data to provide estimates of the ad valorem tariff equivalent implied by each country's level of trade restrictiveness.

This Chapter is set out as follows. In the following Section, we review our data collection methodology for the two sectors we are considering here, namely finance and telecommunications. We discuss in detail the questionnaires used, and the rationale behind the various questions posed. Section 3 then presents Trade Restrictiveness Indices (TRIs) for both sectors, covering all countries in the Andean Community and the Southern Cone. These results enable us to compare restrictiveness across countries, and relate individual country performance to the OECD average. In Section 4, we discuss calculation of ad valorem tariff equivalents based on our TRIs. Finally, Section 5 concludes and provides some suggestions for further research.

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[1] The four-part typology of international services transactions adopted in the GATS encompasses: (1) *Cross border supply* (Mode 1) of a service from one jurisdiction to another; (2) *Consumption abroad* (Mode 2) requires the presence of consumers in the supplier's country of residence; (3) *Commercial presence* (Mode 3), in which case a service supplier establishes a foreign based corporation, joint venture, partnership, or other establishment in the consumer's country of residence, to supply services to persons in the host country; and (4) *Presence of natural persons* (Mode 4), which involves an individual temporarily traveling to the consumer's country to deliver a service on his/her behalf or on the behalf or his employer. Individuals who are seeking access to the employment market of another country on a permanent basis or for citizenship or residency purposes are not included in this category.

2   Collecting Data on Services Trade Restrictiveness: An Overview of the OECD Approach

In this Section, we briefly summarize our approach to measuring and quantifying the economic impacts of restrictions to trade in services. For a more in-depth discussion, the reader is referred to Dihel and Shepherd (2007). As mentioned at the outset, the results presented in this Chapter are taken from a broader OECD Secretariat project aimed at quantifying the effects of barriers to trade in services across 30 non-OECD countries: ten in Latin America, four in Asia, eight transition economies, five in Africa and the Middle East, and three Baltic States. In terms of sectoral coverage, the full study analyzes trade restrictions affecting five sectors: banking, insurance, telecommunications (fixed and mobile), engineering, and distribution.

In essence, our methodology—which builds on original work by the Australian Productivity Commission—consists of three steps: data collection, construction of TRIs, and estimation of ad valorem tariff equivalents.[2] In broad terms, we take a large amount of qualitative data on restrictions to services trade and "translate" it into quantitative measures using a variety of statistical means. Once the "translation" is complete, we can perform standard econometric analysis using the data, in order to gauge the effect of trade restrictions on sectoral economic performance. We now discuss each of these procedures in more detail.

2.1   Data Collection

For trade in goods, it is now a relatively simple matter in many countries to look up in the national tariff schedule the level of tariff protection affecting a particular product. Of course, the tariff schedule only indicates one type of trade barrier, and does not consider the myriad of non-tariff measures that might also be in use. However, the point remains that it is still considerably easier to get a first, approximate idea of the prevailing level of protection in goods than in services. The reason is that in services trade, there are very few potential barriers that resemble tariffs. The analogy is much closer with non-tariff barriers, which take the form of particular regulatory practices, or restrictions on market entry or competition. To assess the level of protection, it is therefore first necessary to build up a detailed picture of sectoral regulations that might impact trade in services.

To do this, the OECD Secretariat collected data on potential regulatory impediments to services trade using a questionnaire-based methodology. The essence of this approach is for the researcher to design a series of questions to be answered by reference to official sources and individual regulators, and which catalogue the most important potential trade barriers in each sector. The answers to these questions are pre-coded onto a sliding numerical scale from 0 to 1, with a higher score indicating a more restrictive

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[2] For an overview of the Productivity Commission approach, see Dee (2005). Examples include the contributions in Findlay and Warren (2000), as well as the EC-sponsored study of the European internal market conducted by Copenhagen Economics (2005).

policy stance. In order to make these data more relevant to WTO negotiations—in which barriers are catalogued according to the four GATS modes of supply—it was decided to build up separate indicators on barriers affecting cross border supply (Mode 1), movement of the consumer (Mode 2), foreign establishment (Mode 3), and movement of the provider (Mode 4). Appendix Table 5 (banking and insurance) and Table 6 (telecommunications) show the questions used in this study, and the way in which answers are coded numerically.

We take a simple example to illustrate how the methodology works (see Table 5, column 1, first line). In the banking sector, cross-border trade (Mode 1) implies that banks are able to take deposits from, and give loans to, customers in other countries. In the case of lending transactions, we code the level of policy restrictiveness on an increasing scale from 0 to 1. If a country scores zero on this indicator, it means that its residents can borrow without restriction from foreign banks situated abroad. If it scores 0.33, then residents are allowed to borrow only if they obtain an appropriate license. A score of 0.66 means that cross-border borrowing is only permitted up to a certain ceiling amount. Finally, if a country scores 1 on this indicator, it means that its residents are prohibited from borrowing from a foreign bank not established locally.

By answering each of these questions across each mode and sector for each country, we can build up a detailed picture of the pattern of trade restrictions in our sample countries and sectors. However, answering these questions accurately is by no means a simple task, as it requires highly specialized knowledge of sectoral regulations across numerous different countries. The OECD Secretariat pursued a number of different tracks in dealing with this problem. It drew on recently completed projects on trade in services in a number of sample countries (transition economies and the Baltic States). It also used information from WTO Trade Policy Reviews, the World Bank Regulatory Database on Banking Services, US National Trade Estimate Reports, GATS schedules of commitments, and recent country and sector studies by national and international organizations. Finally, the Organization of American States administered questionnaires to appropriate regulators in Latin America, and coordinated treatment of the results. In all cases, the collected information reflects the situation as of 2004.

Although every effort has been made for this assessment to be comprehensive and objective, there is nonetheless considerable scope for opinions to differ as to the nature of a particular regulatory measure. It is therefore important to stress that our approach has been to cast the net widely in terms of identifying regulatory measures that could have a trade impact, and then to let the data provide us with an assessment of the extent of that impact. However, we recognize that characterizing particular regulations as potential trade restrictions is necessarily a controversial business, and that it is appropriate for future research to examine the scope for broadening or narrowing our definition.

2.2   *Construction of TRIs*

The above process gives us a great deal of information about sectoral regulations in each country. However, it is still relatively difficult to make broad-brush comparisons of restrictiveness across countries.

For this, we need a single indicator that effectively summarizes the information set we have. This is the role of the trade restrictiveness index (TRI). In what follows, we will present two types of indices: aggregate TRIs and modal TRIs. The first is based on all the information we have as to trade restrictions in a particular country, without distinction as to the GATS Mode that any given restriction might affect. This gives us an overall picture of restrictiveness in each country. The second group of TRIs presents a more detailed picture, by calculating indices separately for each GATS Mode. In other words, a Mode 1 TRI only uses information on restrictions that affect cross-border services trade via Mode 1. It does not consider restrictions that impact other Modes. For the first time, therefore, our analysis provides information both on aggregate trade policy restrictiveness, and on restrictiveness affecting each GATS Mode separately. It is worth noting that the aggregate and modal TRIs presented in this paper include only those measures that qualify as market access and/or national treatment restrictions in GATS terminology. Additional regulatory variables which fall largely outside the scope of the GATS but are important in analyzing the regulatory frameworks in these sectors are presented separately in the complete OECD study. Examples include the adoption of the Understanding on Commitments in Financial Services, or the existence of single or multiple supervisors in the case of financial services, and the existence of a universal service obligation, the independence of the regulator, the regulation of network interconnection and end user tariff, etc., in the case of telecommunication services.

There are many ways in which the individual indicators discussed in Part 2.1 can be aggregated into a TRI. Most previous work has used a simple average across a selection of indicators. However, we prefer an alternative methodology known as factor analysis.[3] This is a set of statistical techniques that enable us to produce a TRI that is a weighted average of the underlying sectoral regulation indicators, with the weights determined by statistical criteria rather than the analyst's prior judgment. In other words, it is the data that drive the weighting scheme, not the analyst. After rescaling, this approach produces TRIs that are higher for increasingly restrictive regimes. The lowest possible score of zero indicates that, according to our indicators, a given country applies an essentially liberal trade policy.

Full details of the way in which we apply factor analysis, including the weights given to each component of the various TRIs, can be found in Appendix 3 of Dihel and Shepherd (2007). We simply note here a few aspects of the output from this approach that should be kept in mind when interpreting the results. First, TRIs provide a measure of the restrictiveness of trade policy, but they do not directly map to economic impacts. (We discuss this point further in the next Section.) As a result, it is not legitimate to interpret a TRI score of 2 as being "twice as restrictive" as a TRI score of 1. Second, the aggregate TRI is constructed using the full information set that we have for each country, i.e. all sectoral policy indicators.

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[3] Other studies that use similar methodologies in this area include Boylaud and Nicoletti (2000), and Copenhagen Economics (2005). Despite criticism related to the fact that this approach selects components which explain most of the variation in the original data on regulatory restrictions based on little or no relationship with true economic importance of those factors, this methodology is becoming increasingly popular in the applied literature, primarily because it is data-driven.

However, each modal TRI is constructed using only a subset of that information, namely restrictions that relate to a particular GATS Mode. This means that the aggregate TRI is not, strictly speaking, the "sum" of the four Modal TRIs. Finally, the two preceding points taken together mean that it is not legitimate to compare scores directly across modal TRIs. Nor is it appropriate to compare scores on the same indicator across sectors. In both cases, what really counts for such comparisons is the economic impact of the trade policy measures captured by the various TRIs.

2.3   *Estimation of Tariff Equivalents*

In the third and final stage of this process, we use the TRIs in an econometric model of sectoral performance. In broad terms, we use statistical methods to estimate the impact that trade restrictions—as summarized in the TRIs—have on firm performance in each country. We also control for a number of other factors believed to impact firm performance, such as market concentration, other sectoral regulatory policies (such as prudential regulations), and sectoral development. We summarize the impact of trade restrictions in terms of a tariff equivalent, expressed as a percentage either on cost or on price. (For full details of these calculations, see Dihel and Shepherd, 2007.)

It is important to stress that the tariff equivalents that we present below are estimated using statistical means. As a result, they are subject to the usual uncertainty inherent in the use of such techniques. And in this case in particular, the data that we use to gauge economic impact—firm performance variables—are derived from accounting data, and include a great deal of "noise" which makes our estimates subject to considerable uncertainty. Moreover, data availability limitations mean that we need to assess economic impacts using a variable such as the price-cost margin, rather than prices or costs separately. We can therefore only gauge the net effect of trade restrictions, and cannot separately identify price and cost impacts. Improved identification of such impacts is an important area for future research, since the economic implications of each are quite different: price impacts are associated with creation of economic rents (profits), while cost impacts imply additional use of real resources within the economy. As a rule of thumb, reforms that eliminate cost-increasing trade restrictions are expected to result in larger net welfare gains than those which reduce economic rents, because the latter primarily represents a transfer from one group to another rather than a genuine resource saving.

3   TRIs for Banking, Insurance, and Telecommunication Services
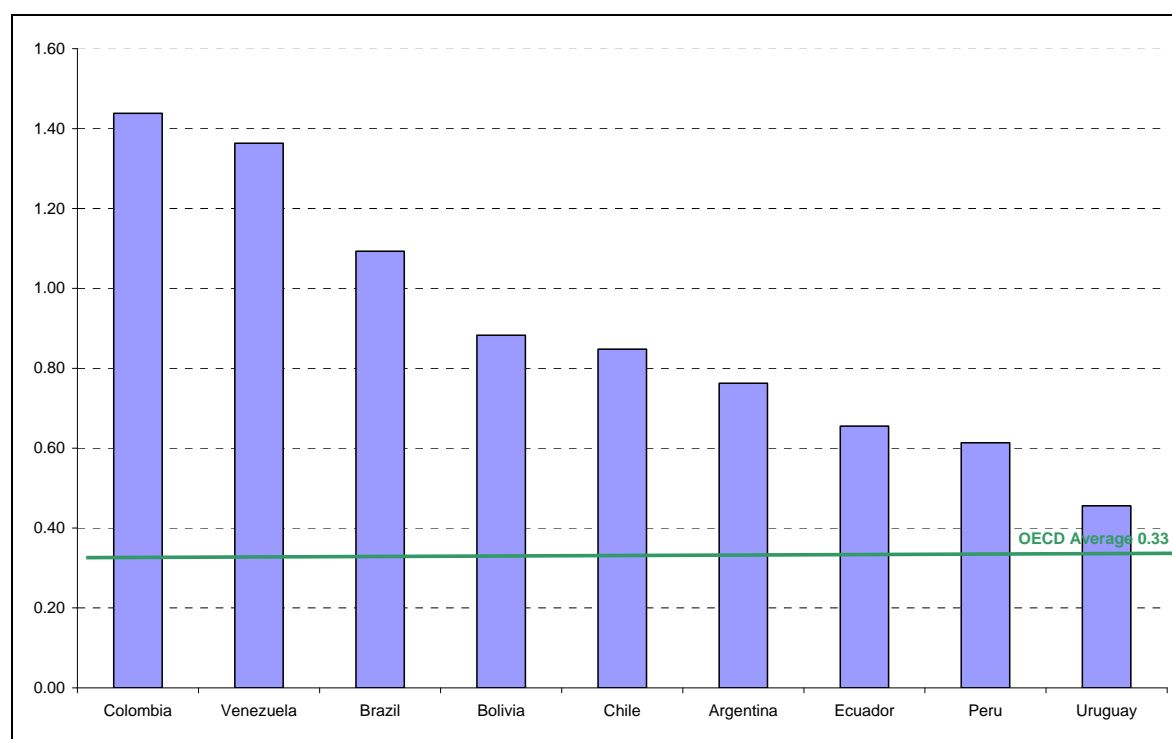
In this Section, we present TRIs for each sector, constructed following the methodology set out above. We again stress that although it is legitimate to compare TRIs from one country to another—and to conclude that a higher TRI indicates a higher level of trade restrictions—it is not appropriate to seek to transpose them directly into relative economic impacts. We would argue that they are best used in order to give an idea of the relative rankings of countries with respect to trade restrictiveness, and to make broad comparisons across countries and regions. Similarly, it would be potentially misleading to seek to

draw economic or policy conclusions based on very small TRI differences from one country to another: such differences may not reflect a substantial divergence in economic impact.

3.1   Banking

Figure 1 shows that the banking sector in Andean and Southern Cone countries is, on the whole, relatively restricted compared with average policy settings in OECD countries. Results from the full study indicate, however, that performance is broadly comparable to the other non-OECD regions in the sample, with the exception of the relatively liberal Baltic States and some transition economies. In the aggregate, Colombia, Venezuela, and Brazil have the highest level of restrictions, while Uruguay has a noticeably lower TRI score than do the other countries under consideration here.
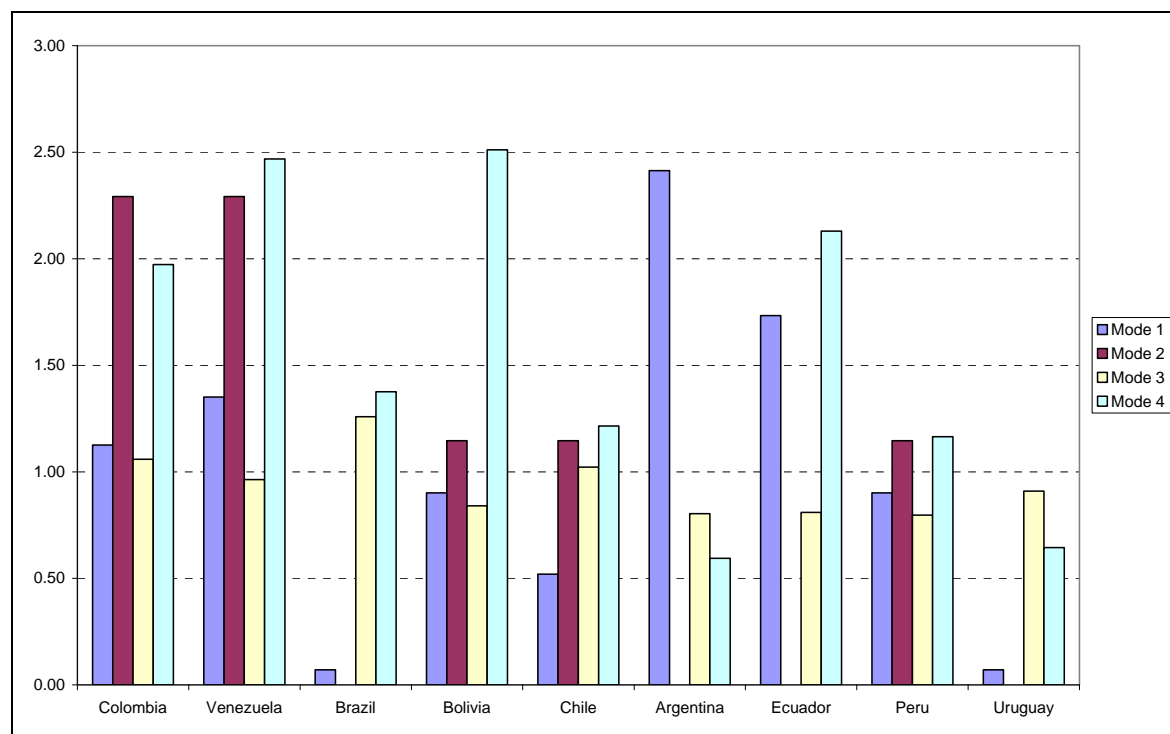
Figure 1: Banking sector aggregate TRIs. (Source: Dihel and Shepherd, 2007.)

On a modal level, however, the pattern of restrictiveness across Latin America is considerably more heterogeneous than would seem to be suggested by the aggregate TRI. For Mode 1, Brazil and Uruguay appear to have quite liberal regimes in place—they score well below the OECD average for this indicator (0.5). Chile's TRI is approximately at the same level as the OECD average. However, the other sample countries are considerably more restrictive, in particular Argentina and Ecuador. For Mode 2, a number of sample countries are again well below the OECD average (0.48): Brazil, Argentina, Ecuador, and Uruguay are all coded as "open" when it comes to trade in banking services via Mode 2. However, all other Mercosur and Andean Community countries are well above the OECD average, with policies being particularly restrictive in Colombia and Venezuela. Our sample countries have relatively similar levels of restrictiveness in terms of mode 3, with about half of them maintaining policy settings not too far above

the OECD average (0.73). Only Colombia, Venezuela, Brazil, and Chile maintain Mode 3 restrictions well in excess of the OECD level. Finally, there is very noticeable heterogeneity in terms of our Mode 4 TRI. Four countries (Chile, Argentina, Peru, and Uruguay) are less restrictive than the OECD average of 1.22. Indeed, Uruguay and Argentina are considerably below that TRI score. However, all remaining countries except Brazil score very highly on the Mode 4 TRI.
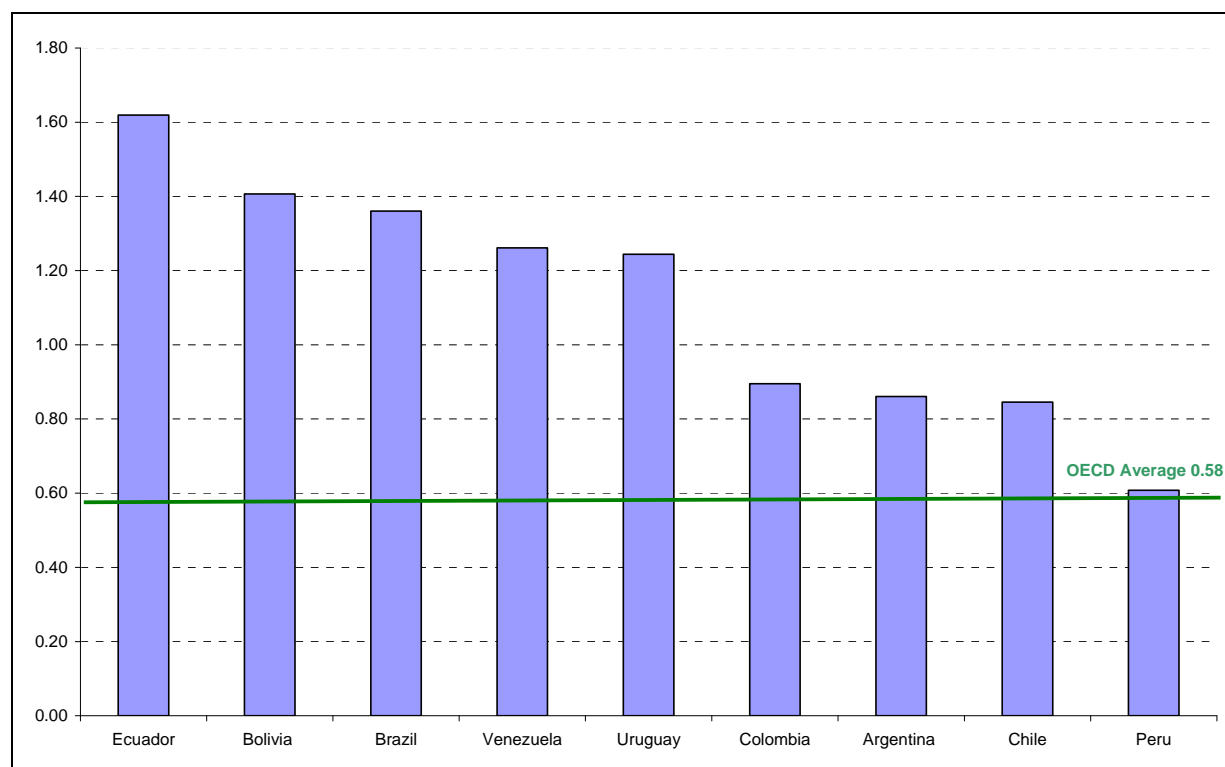
Figure 2: Banking sector modal TRIs. (Source: Dihel and Shepherd, 2007.)
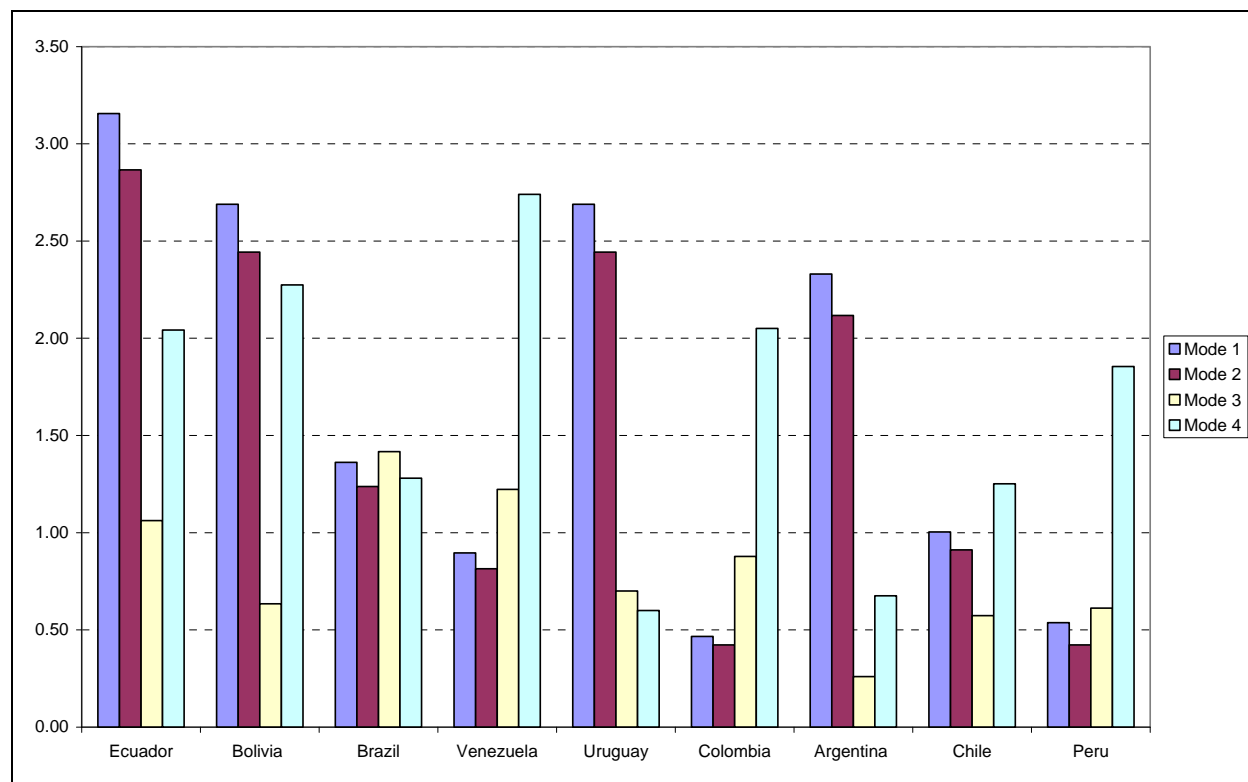

3.2 Insurance

Our results for the insurance sector aggregate TRI are presented in Figure 3. They show that, as was the case for banking, the insurance sector in the Andean countries and the Southern Cone is relatively restricted compared with OECD countries. However, the level of restrictiveness is broadly comparable to that of the other non-OECD regions included in the full study, and is, if anything, a little lower than in Asia. The performance of one country, however, stands out from the rest: Peru's TRI of 0.61 is very close to the OECD average of 0.58. We can distinguish two other groups of countries in terms of the aggregate TRI. The first one—Ecuador, Bolivia, Brazil, Venezuela, and Uruguay—is characterized by an overall level of restrictiveness well in excess of that observed on average in the OECD. TRIs for these countries range from 1.24 to 1.62. By contrast, the second group of countries—Colombia, Argentina, Chile, and Peru— exhibit TRIs that are not too dissimilar in magnitude to the OECD average, ranging from 0.61 to 0.90.

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Figure 3: Insurance sector aggregate TRIs. (Source: Dihel and Shepherd, 2007.)

Analyzing the restrictiveness of trade policy through the modal lens again produces evidence of greater within-region heterogeneity than might be expected from simply looking at the aggregate indices (see Figure 4). For Mode 1, we find that four countries—Venezuela, Colombia, Chile, and Peru—have a level of restrictiveness that is substantially lower than the OECD average (1.27). Brazil's TRI is at approximately the same level as the OECD average. However, Ecuador, Bolivia, Uruguay, and Argentina are considerably more restricted than other countries in the region on Mode 1 trade. The same four countries with relatively few Mode 1 restrictions also turn out to be relatively open in terms of Mode 2, with scores below the OECD average (0.82) or, in the case of Chile, just slightly above. The remaining countries have restrictiveness levels clearly in excess of the OECD average for Mode 2. This picture changes drastically for Mode 3, however: only Argentina has a TRI score at a similar level to the OECD average (0.25). All other countries are considerably more restricted, with Brazil and Venezuela returning particularly high scores. Finally, on Mode 4 we find that Brazil, Uruguay, Argentina, Chile, and Peru have restrictiveness scores that are less then, or approximately equal to, the OECD average for this indicator (1.69). Ecuador, Bolivia, Venezuela, and Colombia appear to be relatively more closed to Mode 4 trade in this sector.
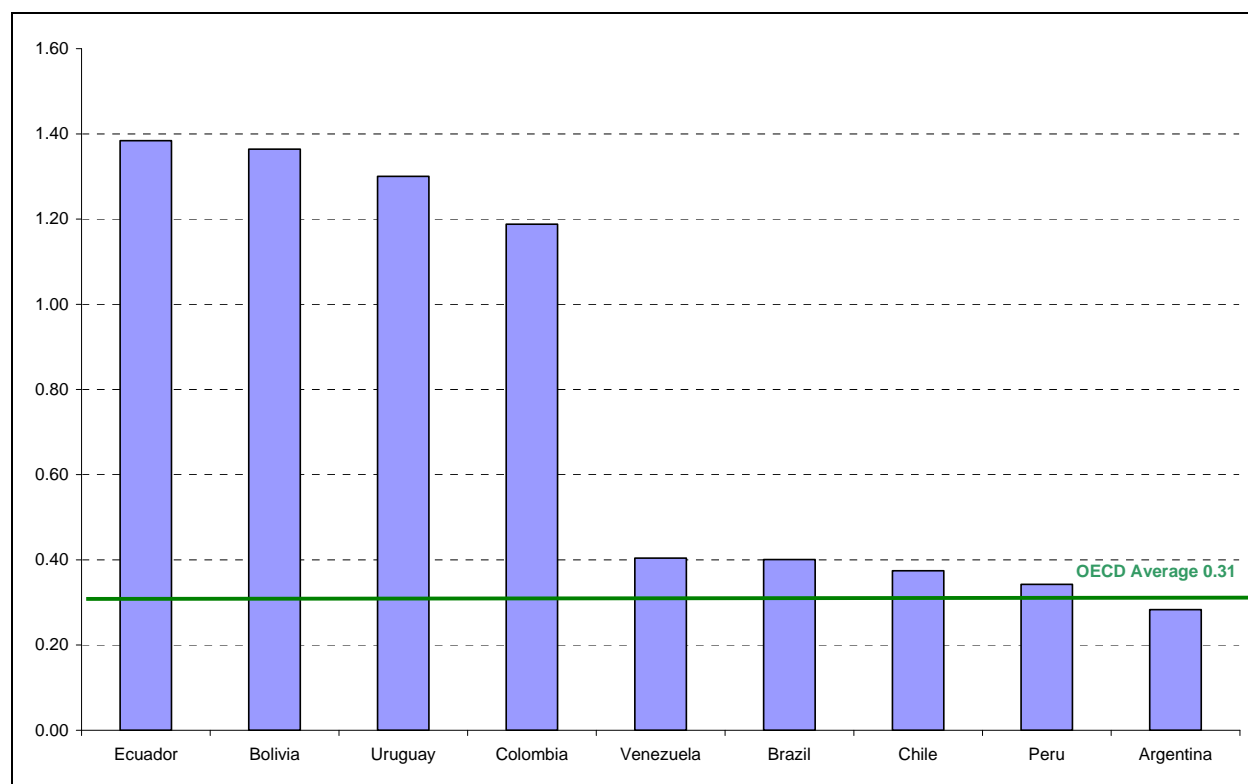
Figure 4: Insurance sector modal TRIs. (Source: Dihel and Shepherd, 2007.)

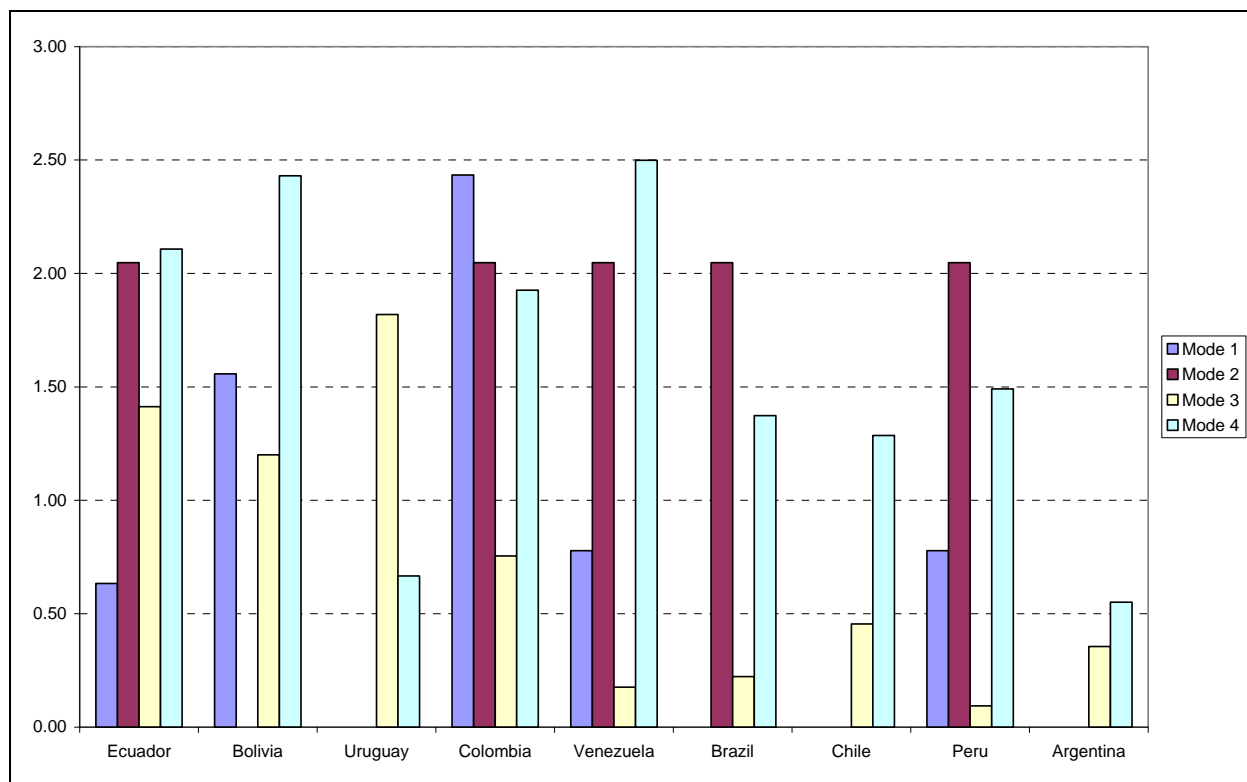
3.3   Fixed Telecommunications

Aggregate TRIs for the fixed telecommunications sector are presented in Figure 5. The countries we are analyzing split naturally into two groups. The first—Venezuela, Brazil, Chile, Peru, and Argentina—has a level of restrictiveness that is approximately the same as the average observed across OECD member countries. The second group, however, displays a much higher TRI score, indicating that these countries are noticeably more closed to trade in this sector than are the members of the first group. This second group of countries includes Ecuador, Bolivia, Uruguay, and Colombia. In the context of the wider study conducted by the OECD Secretariat, we find that the level of restrictiveness observed in this second group of countries is quite low by the standards of the other non-OECD regions considered. However, the performance of the more restricted Latin American countries is broadly comparable to the situation in Asia, but arguably less restricted than in Africa and the Middle East.

Figure 5: Fixed telecommunications sector aggregate TRIs. (Source: Dihel and Shepherd, 2007.)

The modal breakdown of restrictiveness discloses a number of interesting features in this sector. First, OECD countries are (on average) considered to be open in terms of Modes 1 and 2—i.e., the average TRI is zero. Uruguay, Argentina, and Chile match this performance, while Brazil has a zero TRI for Mode 1 only, and Bolivia has it for Mode 2 only. The remaining countries are considerably more restricted in terms of Mode 1 and 2 trade. The Mode 3 TRI also produces a number of interesting contrasts. Venezuela, Brazil, Chile, Peru, and Argentina are all approximately at or below the OECD average TRI (0.36). However, Ecuador, Bolivia, Uruguay, and Colombia have much higher TRIs, ranging from 0.75 to 1.82. For Mode 4, meanwhile, Uruguay and Argentina appear relatively unrestricted compared with the OECD average (1.31). Brazil and Chile display comparable levels of restrictiveness, while all other countries are considerably more restricted than the OECD average.

Figure 6: Fixed telecommunications sector modal TRIs. (Source: Dihel and Shepherd, 2007.)

3.4   Mobile Telecommunications

Aggregate TRI scores for the mobile telecommunications sector again see a division of the region into two country groups (Figure 7). On the one hand, Chile, Argentina, Peru, and Uruguay appear to be less restrictive than the OECD average. However, the opposite is true for Bolivia, Colombia, Ecuador, and Venezuela. On a cross-regional basis, both groups of countries are more liberal according to this measure than are developing countries in Asia, but only the more liberal of the two displays a noticeably lower level of restrictiveness than in Africa and the Middle East.

Figure 7: Mobile telecommunication sector aggregate TRIs. (Source: Dihel and Shepherd, 2007.)
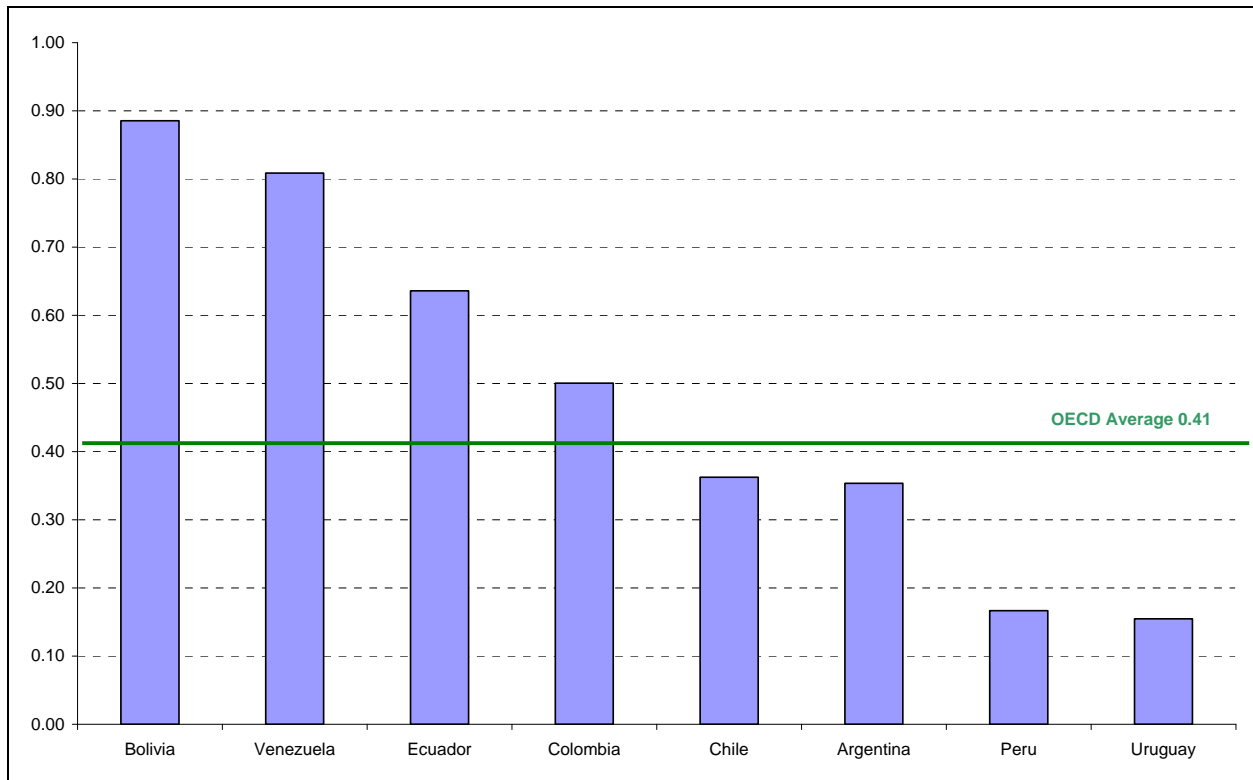

Figure 8 presents a modal breakdown of our restrictiveness scores for this sector. The most striking result is in terms of Mode 2: all countries except Venezuela are considered to be unrestricted, with TRI scores of zero (equal to the OECD average). A number of countries are also free of restrictions affecting Mode 1: Colombia, Chile, Argentina, Peru, and Uruguay (OECD average = 0.33). By contrast, all countries in our sample apply restrictions on trade in Modes 3-4. For Mode 3, only Brazil and Colombia appear to be noticeably more restrictive than the OECD average (0.37). However, such a conclusion can be drawn for a wider range of countries in respect of Mode 4: Bolivia, Venezuela, Ecuador, Colombia, and Peru.

Figure 8: Mobile telecommunication sector modal TRIs. (Source: Dihel and Shepherd, 2007.)

3.5 Consolidation: How Restrictive are Services Trade Policies in the Andean Community and the Southern Cone?

Our analysis shows that the Southern Cone and Andean regions display considerable heterogeneity across countries, sectors, and modes of supply. Any broad conclusions must, therefore, be somewhat impressionistic. Nonetheless, we believe it is useful to highlight at this stage the general, region-wide dimension of our results.

At the sectoral level, we find that banking and insurance are relatively restricted compared with the OECD, although in both cases there is one country—Uruguay for banking, Peru for insurance—in which restrictiveness is roughly comparable to the OECD average. This picture changes markedly, however, for the fixed and mobile telecommunications sectors. In each of these two sectors, we can identify two groups of countries: four or five which are relatively restricted compared with the OECD, and four or five which have a level of restrictiveness broadly comparable to, or lower than, the average level prevailing amongst OECD countries.

In terms of the modal breakdown of restrictiveness, we find that results vary considerably from one sector to another. It is difficult, therefore, to generalize. For instance, Mode 2 restrictions to trade in mobile telecommunications are almost entirely absent from the region. For fixed telecommunications, only about half the countries studied apply such measures. However, Mode 2 restrictions are far more prevalent in the banking and insurance sectors.

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4 Estimated Tariff Equivalents for Banking, Insurance, and Telecommunication Services

We now address briefly the estimated economic impacts of the trade restrictions we have identified in the previous Sections. As previously noted, this impact assessment depends on estimation of the price or cost impact of trade restrictions using a simple econometric model. In this Section, we present a brief review of those results, but do not discuss estimation issues. For a complete discussion, see Dihel and Shepherd (2007).

In interpreting the following results, it is important to keep in mind three important caveats. First, our estimated tariff equivalents are subject to significant uncertainty since they are derived using statistical techniques. In Dihel and Shepherd (2007), we provide further details as to the extent of this uncertainty, and it is advisable to make use of the estimated confidence intervals that we present when applying the following results in a policy context. Second, it follows from the first point that comparisons of country performance should not be overly concerned with small differences in tax equivalents. Such differences can be in part related to genuine performance differences, and in part related to data "noise" and estimation error. Third, the fact that some modal TRIs are associated with price impacts, while others are associated with cost impacts, means that the aggregate TRI tax equivalent is not simply the sum of the modal figures.

Table 1 shows that, in a general sense, the economic impacts of restrictions to trade in banking services are moderate to moderately high in the Southern Cone and Andean countries. The approximate range is 7% to 18% of price. Our results suggest that the net effect of trade restrictions in this sector is to create rents, rather than to increase real resource costs. Turning to the modal estimates, however, indicates greater complexity: restrictions on trade via Modes 1 and 2 are associated with increased real resource costs, while Mode 3-4 restrictions are associated with rent creation. In terms of economic impact, the largest effect in this case appears to come through the channel of Mode 3 restrictions.

Table 1: Tariff equivalents for the banking sector. (Source: Dihel and Shepherd, 2007.)

	Aggregate (% price)	Mode 1 (% cost)	Mode 2 (% cost)	Mode 3 (% price)	Mode 4 (% price)
Colombia	17.69	1.02	4.77	19.54	1.90
Venezuela	16.69	1.23	4.77	17.64	2.38
Brazil	13.17	0.06	0.00	23.64	1.32
Bolivia	10.51	0.82	2.36	15.22	2.42
Chile	10.08	0.47	2.36	18.80	1.16
Argentina	9.02	2.20	0.00	14.50	0.57
Ecuador	7.70	1.58	0.00	14.61	2.05
Peru	7.19	0.82	2.36	14.37	1.12

The sectoral economic impact of restrictions to trade in insurance services would appear to be considerably greater than is the case for banking, with country impacts ranging from moderately high (18%) to high (55%). Again, the net effect of restrictions is rent-creating, rather than cost-increasing. By contrast with the banking sector, the strongest impacts on a modal level are through Modes 1 and 4, and

to a lesser extent Mode 2. However, these channels impact differently on costs and prices, and therefore tend to cancel each other out to some extent in the aggregate results: Modes 1-2 appear to have cost-increasing effects, while Modes 3-4 are rent-creating.

Table 2: Tariff equivalents for the insurance sector. (Source: Dihel and Shepherd, 2007.)

	Aggregate (% price)	Mode 1 (% cost)	Mode 2 (% cost)	Mode 3 (% price)	Mode 4 (% price)
Ecuador	54.51	144.79	82.11	39.21	112.34
Bolivia	45.93	114.46	66.68	21.84	131.35
Brazil	44.14	47.19	29.54	55.42	60.36
Venezuela	40.35	28.96	18.57	46.31	174.59
Uruguay	39.69	114.46	66.68	24.35	24.74
Colombia	27.20	14.14	9.26	31.44	113.02
Argentina	26.01	93.72	55.70	8.43	28.26
Chile	25.51	32.96	21.01	19.55	58.66
Peru	17.74	16.49	9.26	20.99	98.17

In a general sense, we find that the sectoral economic impacts of restrictions affecting telecommunications are considerably lower than for the other sectors under consideration. For fixed telecommunications services (Table 3) the range is 1% to 6%, while for mobile (Table 4) it is 1% to 8%. Although these nominal protection rates are quite low, it is important to note that in both cases they represent cost-increasing impacts, not rent-creation. In terms of the modal breakdown, our results suggest that restrictions in Modes 2-4 play a significant role in relation to fixed telecommunications, while for mobile it is largely Modes 2 and 4 only.

Table 3: Tariff equivalents for the fixed telecommunications sector. (Source: Dihel and Shepherd, 2007.)

	Aggregate (% cost)	Mode 1 (% cost)	Mode 2 (% price)	Mode 3 (% price)	Mode 4 (% price)
Ecuador	5.56	6	36.11	55.95	66.23
Bolivia	5.48	15.41	0	45.87	79.7
Uruguay	5.22	0	0	77.18	17.43
Colombia	4.76	25.11	36.11	26.78	59.12
Venezuela	1.59	7.42	36.11	5.71	82.69
Brazil	1.58	0	36.11	7.26	39.25
Chile	1.48	0	0	15.38	36.35
Peru	1.35	7.42	36.11	3	43.27
Argentina	1.11	0	0	11.83	14.22

Table 4: Tariff equivalents for the mobile telecommunications sector. (Source: Dihel and Shepherd, 2007.)

	Aggregate (% cost)	Mode 1 (% cost)	Mode 2 (% price)	Mode 3 (% price)	Mode 4 (% price)
Brazil	8.3	13.43	0	4.03	38.14
Bolivia	7.77	28.66	0	0.56	77.16
Venezuela	7.07	28.66	42.41	0.31	80.03
Ecuador	5.52	13.43	0	1.87	64.19
Colombia	4.32	0	0	2.63	57.33
Chile	3.11	0	0	1.18	35.33
Argentina	3.03	0	0	1.46	13.85
Peru	1.42	0	0	0.76	42.02
Uruguay	1.32	0	0	0.28	16.97

5   Conclusion

In this Chapter, we have presented a brief overview of the restrictiveness of services trade policies in the Southern Cone and Andean countries, focusing on the banking, insurance, and telecommunications sectors (fixed and mobile). Our results are suggestive of considerable heterogeneity across countries, sectors, and GATS Modes of Supply. In general, we find that trade restrictions in the fixed and mobile telecommunications sectors are relatively low, while in the two financial services sectors they are moderate to moderately high. The net effect of trade restrictions in the former two sectors is to create rents, while barriers in telecommunications tend to increase real resource costs.

We stress once again that the results we have presented are part of an emerging body of research that can still be improved along various dimensions. Indeed, we believe there are a number of ways in which future work could extend and strengthen our results. First, our analysis has only considered sectoral economic impacts such as rent creation and cost increases. However, one of the defining features of basic services sectors such as finance and telecommunications is that they serve as inputs into most other productive sectors in the economy. Even in an economy with a largely agricultural base, access to finance and information can be important determinants of the ability of producers to interface with, and compete successfully in, world markets. As such, the "knock-on" effects from effective and efficient regulatory reform in basic services sectors can be substantial. It is therefore crucial for future analysis to identify these impacts with precision, and to accurately chart the mechanisms in question. Incorporation into a computable general equilibrium model of the type of tariff equivalents presented above is one way of developing these kinds of outputs for policymakers (cf. Greene et al., 2006).

Second, it is important for researchers to observe trade restrictiveness and economic outcomes in selected countries repeatedly over time. Development of such a panel dataset of services sector barriers would enable more precise identification of economic impacts by combining information from cross-country and temporal variation in barriers and outcome. Since data collection in this area is time consuming, complex, and relatively costly, this suggests that researchers would do well to identify a set of key restrictiveness indicators for which survey information can then be obtained in a consistent manner across countries and times. Data collection work could then focus on these indicators rather than, as at present, each new effort contributing its own distinct indicators that often cannot easily be compared across countries or time periods.

Third, cross-country analyses such as this one are necessarily limited in the amount of attention they can accord to individual country experiences. However, national policy reform trajectories can provide important information for policymakers concerned with designing regulatory systems that not only enhance economic efficiency, but which are also politically feasible and sustainable. We therefore expect that detailed single- or multi-country case studies can provide important complements to the results we have presented.

Finally, the increasing importance of services trade in regional integration frameworks deserves further, rigorous investigation. While our analysis here has attempted to control for the impact of regional agreements whenever possible (see Dihel and Shepherd, 2007), there is considerable scope for improving on this aspect of our research in future work. In particular, the potential for classical trade creation and trade diversion effects would seem to be worthy of further analysis, in particular for integration agreements in developing regions. One particular concern is that preferential agreements in such regions may move consumers away from inefficient domestic suppliers towards more efficient regional ones, but may still leave them far from the world efficiency frontier. As usual, the best guarantee that consumers are receiving services from the most efficient providers is to privilege non-discriminatory reforms.

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Appendix

Table 5: Indicators used to construct TRIs for the banking and insurance sectors. (Source: Dihel and Shepherd, 2007.)

Modal allocation of components	Summary description and first level coding	
	Banking	**Insurance**
Mode 1: **Cross-border trade**	**Are the following allowed to borrow cross-border from foreign banks?** *Banks, Corporation and Households* • 1.00 Banks, corporations and households (in the analyzed country) are not permitted to borrow cross-border from a foreign bank situated abroad • 0.66 Banks, corporations and households (in the analyzed country) are permitted to borrow cross-border from foreign banks situated abroad with a specific ceiling amount (specify the amount) • 0.33 Banks, corporations and households (in the analyzed country) are permitted to borrow cross-border from foreign banks situated abroad without a specific ceiling amount but with licenses subject to specific qualifications • 0.00 Banks, corporations and households (in the analyzed country) are permitted to borrow cross-border from a foreign bank situated abroad without restrictions **Are the following allowed to make cross-border deposits with foreign banks?** *Banks* • 1.00 Banks, corporations and households (in the analyzed country) are not permitted to make cross-border deposits with a foreign bank situated abroad • 0.66 Banks, corporations and households (in the analyzed country) are permitted to make cross-border deposits with foreign banks situated abroad with a specific ceiling amount (specify the amount) • 0.33 Banks, corporations and households (in the analyzed country) are permitted to make cross-border deposits with foreign banks situated abroad without a specific ceiling amount but with licenses subject to specific qualifications • 0.00 Banks, corporations and households (in the analyzed country) are permitted to make cross-border deposits with a foreign bank situated abroad without restrictions	*Cross-border insurance supply by insurance companies* • 1.00 Insurance companies are not permitted to provide residents with any type of cross-border insurance services • 0.66 Insurance companies are permitted to provide residents with certain types of cross-border insurance services • 0.33 Insurance companies are permitted to provide residents with any type of cross-border insurance services but with certain limitations (purchases are subject to limits, foreign insurance suppliers are not allowed to solicit business through advertising, etc.) • 0.00 Insurance companies are permitted to provide residents with any type of cross-border insurance services
Mode 2: Consumption abroad:	*Consumption abroad* • 1.00 Residents are not authorized to purchase financial services abroad • 0.66 Quotas related to the value of transaction, number of operations between banks in the country of destination and domestic consumers traveling abroad or number of nationals traveling abroad (visas) • 0.33 Taxes or registration/authorization requirements on consumers traveling abroad • 0.00 No restrictions	*Limitations on foreign suppliers (or consumers traveling abroad)* • 1.00 Residents are not authorized to purchase insurance services abroad • 0.66 Quotas related to the value of transaction, type of insurance service to be provided by the insurance company in the country of destination to the domestic consumers traveling abroad or number of nationals traveling abroad (visas) • 0.33 Taxes or registration/authorization requirements on consumers traveling abroad • 0.00 No restrictions

(Table 5 cntd.)

Modal allocation of components	Summary description and first level coding	
	Banking	**Insurance**
Mode 3: Commercial presence *Foreign Equity Limits*	• 1.00 Foreign ownership not permitted • 0.00 No restrictions on foreign ownership • The score is inversely proportional with the maximum foreign equity participation permitted in a domestic bank, with or without approval.	• 1.00 Foreign ownership not permitted • 0.00 No restrictions on foreign ownership The score is inversely proportional with the maximum foreign equity participation permitted in a domestic Insurance company, with or without approval.
Forms of Commercial Presence	• 1.00 No commercial presence permitted (effectively a notional case) • 0.66 Only representative offices permitted • 0.33 Some legal forms of establishment (subsidiaries and/or branches) are allowed in addition to representative offices • 0.00 All legal forms of establishment (subsidiaries, branches, representative offices) for foreign banks are allowed	• 1.00 No commercial presence permitted (effectively a notional case) • 0.66 Only representative offices permitted • 0.33 Some legal forms of establishment (subsidiaries and/or branches) are allowed in addition to representative offices • 0.00 All legal forms of establishment (subsidiaries, branches, representative offices) for foreign Insurance companies' are allowed
Joint Venture arrangements	• 1.00 Foreign bank entry is allowed only through joint ventures with domestic subsidiary banks • 0.00 No requirement for a foreign bank to enter through a joint venture with a domestic subsidiary bank	• 1.00 Foreign Insurance entry is allowed only through joint ventures with domestic insurance subsidiaries • 0.00 No requirement for a foreign Insurance company to enter through a joint venture with a domestic insurance subsidiary
Licensing – separate for domestic and foreign bank subsidiaries to determine the NT restrictions	• 1.00 Issues no new banking licenses • 0.75 Issues up to 4 new banking licenses to banks with only prudential restrictions/ Licenses are issued through complicated and costly procedures • 0.5/0.20 Issues up to 8 new banking licenses to banks with only prudential restrictions/ Licenses are issued with application fee and several requirements • 0.25/0.10 Issues up to 12 new banking licenses to banks with only prudential restrictions/ Licenses are generally issued with application fees • 0.00 Issues new banking licenses to banks with only prudential restrictions and Licenses are automatically issued upon application without any cost	• 1.00 Issues no new Insurance licenses • 0.75 Issues up to 4 new Insurance licenses to Insurance companies with only prudential restrictions / Licenses are issued through complicated and costly procedures • 0.5/0.20 Issues up to 8 new Insurance licenses to Insurance companies with only prudential restrictions / Licenses are issued with application fee and several requirements • 0.25/0.10 Issues up to 12 new Insurance licenses to Insurance companies with only prudential restrictions/ Licenses are generally issued with application fees • 0.00 Issues new Insurance licenses to Insurance companies with only prudential restrictions and Licenses are automatically issued upon application without any cost
Business scope	*Raising funds – separate for domestic and foreign bank subsidiaries to determine the NT restrictions* • 1.00 Banks are not permitted to raise funds from domestic sources • 0.75 Banks are restricted from raising funds from domestic capital markets • 0.50 Banks are restricted in accepting deposits from the public • 0.00 Banks can raise funds from any source with only prudential restrictions	*General scope of domestic and foreign Insurance companies - separate for domestic and foreign Insurance subsidiaries to determine the NT restrictions* • 1.00 Insurance companies can only provide one or two Insurance services • 0.50 Insurance companies can provide more than 3 insurance services • 0.00 Insurances have no restrictions on conducting any type of insurance services

(Table 5 cntd.)

Modal allocation of components	Summary description and first level coding	
	Lending - separate for domestic and foreign bank subsidiaries to determine the NT restrictions • 1.00 Banks are not permitted to lend to domestic clients • 0.75 Banks are restricted to a specified lending size and or lending to government projects • 0.50 Banks are restricted in providing certain lending services such as leasing, credit card services or consumer finance • 0.25 Banks are directed to lend to housing, small business, natural persons and or businesses in certain regions • 0.00 Banks can lend to any source with only prudential restrictions	
	Other business of domestic and foreign bank subsidiaries - insurance and securities services - separate for domestic and foreign bank subsidiaries to determine the NT restrictions • 1.00 Banks can only provide banking services • 0.50 Banks can provide banking services plus one other line of business - insurance or securities services • 0.00 Banks have no restrictions on conducting other lines of business	
	Expanding the number of banking outlets - separate for domestic and foreign bank subsidiaries to determine the NT restrictions • 1.00 One banking outlet with no new banking outlets is permitted • 0.75 Number of banking outlets is limited in number and location • 0.25 Expansion of banking outlets is subject to non-prudential regulatory approval • 0.00 No restrictions on banks expanding operations	*Expanding the number of Insurance outlets - separate for domestic and foreign Insurance subsidiaries to determine the NT restrictions* • 1.00 One Insurance outlet with no new Insurance outlets is permitted • 0.75 Number of Insurance outlets is limited in number and location • 0.25 Expansion of Insurance outlets is subject to non-prudential regulatory approval • 0.00 No restrictions on Insurances expanding operations
	Screening and approval - separate for domestic and foreign bank subsidiaries to determine the NT restrictions • 1.00 Investors must show economic benefits • 0.66 Approval unless contrary to national interest • 0.33 Notification (pre -or post) requirements • 0.00 No screening or approval requirements	*Screening and approval - separate for domestic and foreign Insurance subsidiaries to determine the NT restrictions* • 1.00 Investors must show economic benefits • 0.66 Approval unless contrary to national interest • 0.33 Notification (pre -or post) requirements • 0.00 No screening or approval requirements

(Table 5 cntd.)

Mode 4: Presence of natural persons *Temporary Movement of people - Shorter stay*	Banking service supplied by nationals of one country in the territory of another country • 1.00 No temporary entry of executives, senior managers or specialists • 0.75 Temporary entry of executives, senior managers or specialists up to 30 days • 0.50 Temporary entry of executives, senior managers or specialists up to 60 days • 0.25 Temporary entry of executives, senior managers or specialists up to 90 days • 0.00 Temporary entry of executives, senior managers or specialists over 120 days	• 1.00 No temporary entry of executives, senior managers or specialists • 0.75 Temporary entry of executives, senior managers or specialists up to 30 days • 0.50 Temporary entry of executives, senior managers or specialists up to 60 days • 0.25 Temporary entry of executives, senior managers or specialists up to 90 days • 0.00 Temporary entry of executives, senior managers or specialists over 120 days
Temporary Movement of people - Board of Directors	• 1.00 Board cannot comprise of foreigners • 0.66 Majority must be nationals • 0.33 At least 1 must be national, or they must be residents or locally licensed • 0.00 No restrictions on the composition of the board of directors	• 1.00 Board cannot comprise foreigners • 0.66 Majority must be nationals • 0.33 At least 1 must be national, or they must be residents or locally licensed • 0.00 No restrictions on the composition of the board of directors
Temporary Movement of people - Longer stay	• 1.00 No temporary entry of executives, senior managers or specialists • 0.80 Temporary entry of executives, senior managers or specialists up to 1 year • 0.60 Temporary entry of executives, senior managers or specialists between 1 and 2 years • 0.40 Temporary entry of executives, senior managers or specialists between 3 and 4 years • 0.20 Temporary entry of executives, senior managers or specialists between 4 and 5 years • 0.00 Temporary entry of executives, senior managers or specialists over 5 years	• 1.00 No temporary entry of executives, senior managers or specialists • 0.80 Temporary entry of executives, senior managers or specialists up to 1 year • 0.60 Temporary entry of executives, senior managers or specialists between 1 and 2 years • 0.40 Temporary entry of executives, senior managers or specialists between 3 and 4 years • 0.20 Temporary entry of executives, senior managers or specialists between 4 and 5 years • 0.00 Temporary entry of executives, senior managers or specialists over 5 years
Work permits - Issuing working permits or visas is subject to recognition or professional qualifications	• 1.00 No work permits • 0.75 Numerical limits subject to Economic Needs Tests (ENT) • 0.50 Numerical limits subject to recognition or professional qualifications • 0.25 Approval and/or pre-employment criteria + Limits on the lengths of work permits • 0.00 No restrictions	• 1.00 No work permits • 0.75 Numerical limits subject to Economic Needs Tests (ENT) • 0.50 Numerical limits subject to recognition or professional qualifications • 0.25 Approval and/or pre-employment criteria + Limits on the lengths of work permits • 0.00 No restrictions

Table 6: Indicators used to construct TRIs for the telecommunications sector. (Source: Dihel and Shepherd, 2007.)

Modal allocation of components	Summary description and first level coding	
	Fixed	**Mobile**
Mode 1: **Cross-border trade** *Lease line or provide network*	• 1.00 Not permitted • 0.00 Permitted	• 1.00 Not permitted • 0.00 Permitted
Connections of leased lines and private networks to the PSN	• 1.00 Not permitted • 0.00 Permitted	
ISR and IP telephony	• 1.00 Not permitted • 0.00 Permitted	
Mode 2: **Consumption abroad** *Call back services*	• 1.00 Not permitted • 0.00 Permitted	• 1.00 Not permitted • 0.00 Permitted
Mode 3: Commercial Presence *Foreign Equity Limits*	• 1.00 Foreign ownership not permitted • 0.00 No restrictions on foreign ownership The score is inversely proportional with the maximum foreign equity participation permitted in a domestic firm, with or without approval.	• 1.00 Foreign ownership not permitted • 0.00 No restrictions on foreign ownership The score is inversely proportional with the maximum foreign equity participation permitted in a domestic firm, with or without approval.
Level of competition	• 1.00 Monopoly • 0.50 Partial competition • 0.00 Full competition	• 1.00 Monopoly • 0.50 Partial competition • 0.00 Full competition
Joint venture arrangements	• 1.00 Foreign company entry is allowed only through joint ventures with domestic company • 0.00 No requirement for a foreign company to enter through a joint venture with a domestic company	• 1.00 Foreign company entry is allowed only through joint ventures with domestic company • 0.00 No requirement for a foreign company to enter through a joint venture with a domestic company
Licensing - separate for domestic and foreign subsidiaries to determine the NT restrictions	• 1.00 Issues no new licenses • 0.75 Licenses are issued through complicated and costly procedures • 0.5/0.20 Licenses are issued with application fee and several requirements • 0.25/0.10 Licenses are generally issued with application fees • 0.00 Licenses are automatically issued upon application without any cost	• 1.00 Issues no new licenses • 0.75 Licenses are issued through complicated and costly procedures • 0.5/0.20 Licenses are issued with application fee and several requirements • 0.25/0.10 Licenses are generally issued with application fees • 0.00 Licenses are automatically issued upon application without any cost
Restrictions on some types of services	• 1.00 Restrictions on providing some types of telephone services • 0.00 No restriction on providing any type of telephone services	
Screening and approval - separate for domestic and foreign companies to determine NT restrictions	• 1.00 Investors must show economic benefits • 0.66 Approval unless contrary to national interest • 0.33 Notification (pre -or post) requirements • 0.00 No screening or approval requirements	• 1.00 Investors must show economic benefits • 0.66 Approval unless contrary to national interest • 0.33 Notification (pre -or post) requirements • 0.00 No screening or approval requirements

(Table 6 cntd.)

	Fixed	**Mobile**
Mode 4: Presence of natural persons *Temporary Movement of people - Shorter stay*	• 1.00 No temporary entry of executives, senior managers or specialists • 0.75 Temporary entry of executives, senior managers or specialists up to 30 days • 0.50 Temporary entry of executives, senior managers or specialists up to 60 days • 0.25 Temporary entry of executives, senior managers or specialists up to 90 days • 0.00 Temporary entry of executives, senior managers or specialists over 120 days	• 1.00 No temporary entry of executives, senior managers or specialists • 0.75 Temporary entry of executives, senior managers or specialists up to 30 days • 0.50 Temporary entry of executives, senior managers or specialists up to 60 days • 0.25 Temporary entry of executives, senior managers or specialists up to 90 days • 0.00 Temporary entry of executives, senior managers or specialists over 120 days
Temporary Movement of people - Board of Directors	• 1.00 Board cannot comprise of foreigners • 0.66 Majority must be nationals • 0.33 At least 1 must be national, or they must be residents or locally licensed • 0.00 No restrictions on the composition of the board of directors The score is inversely proportional with the percentage of the board that can comprise foreigners	• 1.00 Board cannot comprise of foreigners • 0.66 Majority must be nationals • 0.33 At least 1 must be national, or they must be residents or locally licensed • 0.00 No restrictions on the composition of the board of directors The score is inversely proportional with the percentage of the board that can comprise foreigners
Temporary Movement of people - Longer stay	• 1.00 No temporary entry of executives, senior managers or specialists • 0.80 Temporary entry of executives, senior managers or specialists up to 1 year • 0.60 Temporary entry of executives, senior managers or specialists between 1 and 2 years • 0.40 Temporary entry of executives, senior managers or specialists between 3 and 4 years • 0.20 Temporary entry of executives, senior managers or specialists between 4 and 5 years • 0.00 Temporary entry of executives, senior managers or specialists over 5 years	• 1.00 No temporary entry of executives, senior managers or specialists • 0.80 Temporary entry of executives, senior managers or specialists up to 1 year • 0.60 Temporary entry of executives, senior managers or specialists between 1 and 2 years • 0.40 Temporary entry of executives, senior managers or specialists between 3 and 4 years • 0.20 Temporary entry of executives, senior managers or specialists between 4 and 5 years • 0.00 Temporary entry of executives, senior managers or specialists over 5 years
Work permits - Issuing working permits or visas is subject to recognition or professional qualifications	• 1.00 No work permits • 0.75 Numerical limits subject to Economic Needs Tests (ENT) • 0.50 Numerical limits subject to recognition or professional qualifications • 0.25 Approval and/or pre-employment criteria + Limits on the lengths of work permits • 0.00 No restrictions	• 1.00 No work permits • 0.75 Numerical limits subject to Economic Needs Tests (ENT) • 0.50 Numerical limits subject to recognition or professional qualifications • 0.25 Approval and/or pre-employment criteria + Limits on the lengths of work permits • 0.00 No restrictions