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Improving the OECD Services Trade Restrictiveness Index

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EXECUTIVE SUMMARY

The OECD Services Trade Restrictiveness Index (STRI) is an attempt to quantify the qualitative nature of regulatory barriers affecting services trade. The regulatory barriers are classified within one of the five policy areas, namely, Restrictions on market entry conditions; Restrictions on the movement of people; Other discriminatory measures; Barriers to competition; and Regulatory transparency. The OECD has constructed the STRI across 22 sectors in 45 OECD and partner countries. Though OECD STRI is an important tool for understanding the restrictiveness in a particular services sector, there are a number of factual inconsistencies and conceptual and methodological issues that undermines its usefulness as a tool of measuring of services restrictiveness.

Against this backdrop, this study intends to bring out shortcomings in the present OECD methodology and introduces new regulatory measures to improve the STRI scores. The study constructs revised STRI scores by adding these new measures for Professional services (accounting, engineering, legal, architecture); Audio-visual services (motion picture, broadcasting, sound recording); Telecommunication services; Computer services; Commercial banking services; and Insurance services for five countries, namely, Australia, Canada, India, United Kingdom (UK) and United States of America (USA).

The study intends to improve the construction of the OECD STRI following the OECD methodology and improving it by introducing new regulatory measures which are not included in the OECD STRI but restrict trade in services. In order to improve STRI scores for India and selected countries, the study undertakes three-pronged approach. First, it identifies the factual inconsistencies in the available regulatory database for selected countries. Second, the study assesses and analyses the source of reference for various regulations given in the regulatory database for the construction of the STRI for the selected countries for their correctness. The analysis reveals that there are a number of issues pertaining to the scoring of measure and their source references. The third step consists of introducing new regulatory measures within these five policy areas to include those regulations which are at present not included in the OECD STRI but adversely affect the services trade. These new regulations are selected based on the Trade Policy Reviews of various countries, GATS and FTA commitments in selected sectors, and the USTR estimates of services restrictiveness in various countries.

The study reveals that the new STRI scores of the Australia, Canada, the UK and the USA are higher than the old (OECD) STRI scores for all the selected sectors for the study, thereby indicating higher restrictiveness in these sectors as compared to what is shown in the OECD STRI. On the contrary, the STRI scores for India have come down for all the selected sectors. This is because the OECD STRI does not take into account the restrictions which are present in the four developed countries. These restrictions are introduced in the new STRI calculations. As a result, though India is most restrictive among the selected five countries for some services (such as legal) but it is no more remains the most restrictive for some others (such as motion picture).

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1. INTRODUCTION

The services sector, also referred to as the 'tertiary sector' of the economy, has been steadily increasing its contribution not only in domestic output but in international trade and investment flows also. Increased production and consumption of services has contributed to enhanced opportunities for services trade and movement of factors associated with the production of services.

Services trade requires special attention due to two distinguishing features of services. The first is the manner in which trade in services occurs through four modes of delivery, as defined by the World Trade Organization (WTO). As per the WTO classification, international trade in services can occur via four modes: Mode 1 or cross-border trade (services flows from the territory of one Member into the territory of another Member), Mode 2 or consumption abroad (movement of a consumer from one country to another to obtain a service), Mode 3 or commercial presence (establishment of a service provider through investment, ownership, or lease of premises in another country to provide a service), and Mode 4 or movement of natural persons (temporary cross border movement of service providers from one country to another to supply a service).

The second distinguishing feature of services trade is that it is generally subject to domestic regulatory barriers as opposed to tariff and non-tariff barriers that are used to restrict goods trade. Several studies have highlighted the importance of regulatory measures such as licensing and qualification requirements; data protection legislation; standards; codes of conduct; and registration, approval, and authorization requirements in international trade in services. The barriers to services trade are mainly found behind the border and mostly qualitative in nature.

The Services Trade Restrictiveness Index (STRI) is an attempt to quantify the qualitative nature of regulatory barriers affecting services trade. The OECD has started developing a robust methodology for constructing the STRI in 2008 and still in the process of revising and reformulating its methodology. The OECD has constructed the STRI across 22 sectors in 46 countries that include all OECD members, Brazil, People's Republic of China, Colombia, Costa Rica, India, Indonesia, Malaysia, the Russian Federation, South Africa, and Thailand, representing over 80% of global services trade. The STRI is a measure of MFN restrictions and does not take into account any specific concessions such as, for example regional trade agreements or mutual recognition agreements. Though OECD STRI is an important tool for understanding the restrictiveness in a particular services sector, there are a number of factual inconsistencies and conceptual and methodological issues that undermines its usefulness as a tool of measuring of services restrictiveness.

Against this backdrop, this study intends to bring out shortcomings in the present OECD methodology and introduces new regulatory measures to improve the STRI scores. The study constructs revised STRI scores by adding these new measures for Professional services (accounting, engineering, legal, architecture); Audio-visual services (motion picture, broadcasting, sound recording); Telecommunication services; Computer services; Commercial banking services; and Insurance services for five countries, namely, Australia, Canada, India, United Kingdom (UK) and United States of America (USA).

2. OECD METHODOLOGY FOR CONSTRUCTING STRI

According to the OECD methodology note (2015)[1], there are five policy areas for creating a regulatory database for the purpose of constructing the STRI. Various regulatory barriers pertaining to trade in different services are classified within one of these five policy areas. However, these five policy areas do not contain an exhaustive list of regulatory barriers. There exist some regulations that are not included in any of these five policy areas. The five broad categories of policy areas used in the OECD STRI are discussed as below- Restrictions on market entry conditions; Restrictions on the movement of people; Other discriminatory measures; Barriers to competition; and Regulatory transparency.

[1] Geloso Grosso, M. et al. (2015), 'Services Trade Restrictiveness Index (STRI): Scoring and Weighting Methodology', OECD Trade Policy Papers, No. 177, OECD Publishing, Paris.

- **Restrictions on market entry** include limitations on foreign ownership and screening requirements in the foreign country, nationality and residency requirements for the board of directors, quotas regarding the number of firms permitted to practice and conditions regarding subsequent transfer of capital.
- **Restrictions on the movement of people** include measures affecting the movement of people, including in the form of quotas, labour market tests and duration of stay for different categories of service providers.
- **Other discriminatory measures** include measures related to national treatment, discrimination in taxes, subsidies and government procurement, and the lack of adoption of international standards in the foreign country.
- **Barriers to competition** contain first, discriminatory measures where foreign suppliers' rights under the competition law are inferior to that of local companies, and state-owned enterprise privileges that may put foreign entrants at a competitive disadvantage. The second category of measures relates to regulation of dominant firms with the objective to ensure market access on reasonable terms for new entrants, including foreign firms.
- **Regulatory transparency** include measures relating to regulatory efficiency, such as the timely publication of regulations, the availability of single contact points and of a period for comments on draft regulations, the time necessary to obtain a visa and the costs related to registering a company.

A closer look at these five categories of regulations reveals that the classification of regulations includes classification by GATS criteria (Market access and National treatment), by GATS modes of supply, by establishment of firms vs. ongoing operations and by discriminatory vs. non-discriminatory measures.

Within these five policy areas, there are various regulations which are called individual measures (regulations). The actual regulatory environment for these individual measures is being considered for constructing the STRI.

2.1 Scoring of Measures

The scoring process involves assigning a numerical value to the qualitative information on various regulations. The OECD methodology converts the regulatory barriers into binary numbers (0 and 1). This conversion into binary numbers is based on whether a regulation is restrictive (score 1) or non-restrictive (score 0). However, not all measures in the database are binary, and some measures are linked and some are clearly more important than others. For instance, foreign equity limits, duration of stay of intra-corporate transferees, time to get a

business visa and a number of other measures are continuous. These are reconciled with a binary scoring system by introducing brackets and thresholds such that, for example, the lower the foreign equity limit, the more one-scores are assigned to this set of measures.

Linkages between measures occur when one measure strengthens or weakens others, or renders others obsolete. If foreign equity is not allowed at all, for instance, then all measures related to the establishment of commercial presence through a subsidiary are affected. In order to capture such linkages, a hierarchy of measures is established, and the measure on top of the hierarchy determines the scoring of measures further down in the hierarchy.

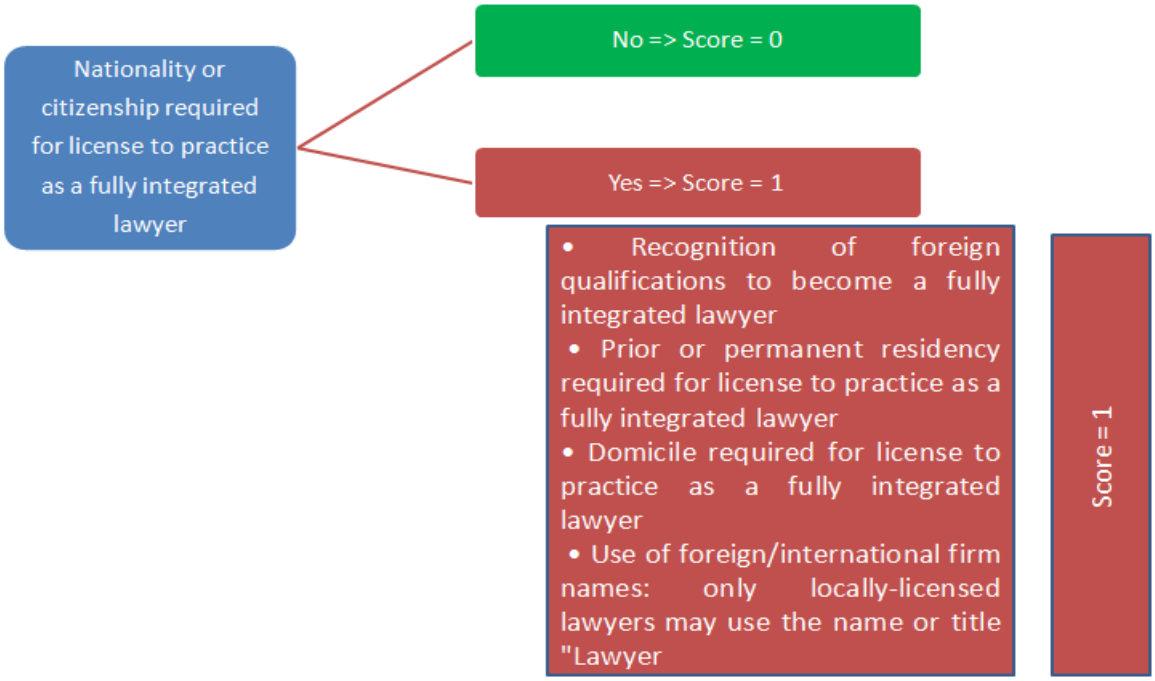
The scoring methodology also takes into account hierarchy and joint effect of regulations. The Joint effect refers to a phenomenon wherein some measures are linked to each other and when combined, they create stronger effect on restricting trade. The hierarchy effect refers to a situation wherein if a measure of a higher hierarchy is binding, related measures of lower hierarchy are also scored as restrictive. These are explained in the following Figures 1 and 2.

Figure 1: Joint Effect of Regulations

Source: Fanelli et al (2012)[2]

[2] Fanelli et al (2012), 'Services Trade Restrictiveness Index (STRI) Assessment For Professional Services In CEFTA 2006'.

Figure 2: Hierarchy Effect



Source: Fanelli et al (2012)

2.2 Weighting the Regulations

As per the OECD methodology, two sets of weights are required, one for individual measures and one for categories of measures. Under each of the five policy areas all measures are assigned the same weight. The five policy areas are weighted according to relative importance.

The weighting scheme used for the calculation of the STRI relies on expert judgment. A large number of experts were asked to allocate 100 points among the five policy areas. These are translated into computed weights by assigning the points experts allocated to the policy area to each measure that falls under it and correct for differences in the number of measures under the policy areas. Such differences are not arbitrary, but reflect the relative importance of the policy category for each sector. The formula for computed weight for measure j under category i is the following:

$$w_{ji} = score_j w_i / \Sigma_i \, n_i w_i$$

where n_i is the number of measures under category i and w_i is the share of the total number of points allocated to policy area i by the experts.

2.3 AGGREGATION METHOD

As a final step, the scores and weights are used to construct a final index using some aggregation method. The OECD has used linear aggregation method in its work on the STRI to minimize complication in calculations and the presentation of the final result. Linear aggregation of measures involves summation of scores after weighting. The scores are summed inside categories using a set of measure-specific weights for each category. They are then aggregated over categories using a second set of weights. Both sets sum up to the value of one. Final index values range from zero to one, independently of the number of measures treated.

3. SHORTCOMINGS IN OECD STRI METHODOLOGY

The OECD Services Trade Restrictiveness Index (STRI) was launched in 2014. The regulatory database and indices are updated annually in December, making the STRI a unique tool to provide up-to-date information on regulatory changes affecting services trade in 45 countries over time. The STRI is considered by economists, academicians and researchers as a useful tool in identifying economy-wide changes as well as sector specific reforms, while facilitating further understanding into trends both within a country as well as globally.

In spite of the perceived usefulness of the OECD STRI in understanding the services restrictiveness and the policy reforms required, the STRI methodology suffers from a number of conceptual, methodological and factual inconsistencies issues that not only affect the final value of STRI but also make these values less representative of the actual restrictiveness or liberalization in an economy. These shortcomings of the OECD STRI are discussed as follow-

3.1 CONCEPTUAL ISSUES:

The STRI does not include some of the important regulatory barriers affecting services trade. The regulatory barriers pertaining to trade in different services are classified within one of the five policy areas. However, these five policy areas do not contain an exhaustive list of regulatory barriers. There exist regulations that are not included in any of these five policy areas, such as, Visa fee for ICT and CSS, Social security contribution, Working of dependent members, etc.

Though STRI talks about measures affecting operations, restrictiveness of 'Behind the border' measures is not taken into consideration. For instance, question on 'Laws or regulations establish a process for recognizing qualifications gained abroad' but it does not capture the ease or restrictiveness of the recognition process in terms of its cumbersomeness and the cost of qualification recognition process.

The updating process of the STRI introduced mode 1 regulatory measures in 2017. However, these regulations were introduced in the first policy area pertaining to restrictions on market entry, which primarily consist of FDI and commercial presence related regulatory measures. This policy area has the highest number of regulatory measures among all five policy areas. Adding mode 1 regulations to this policy area further increases the asymmetry between the number of measures in this policy area and other policy areas. The resultant increase in the number of regulatory measures within this policy areas also affect the computed weight assigned to this policy area as the computed weight for any policy area gets increased with the increase in number of regulatory measures within that policy area. This issue will be discussed in detail in subsequent section.

3.2 METHODOLOGICAL ISSUES:

The OECD has adopted binary scoring method for various measures except a few one for which thresholds have been defined to make them a continuous variable. The binary scoring adopted in the OECD STRI may not capture the true essence of restrictiveness. For instance, question on 'acquisition of land and real estate by foreigners is subject to restrictions' will be scored 1 whether there are many restrictions or only a few. Thus, the intensity of restrictiveness is not captured by adopting binary scoring method for various measures.

Though STRI considers ICT, CSS and IP categories for service providers, visa processing time is considered for BV and not for these categories. Visa processing time is an important deterrent for service providers in CSS, ICT and IP categories.

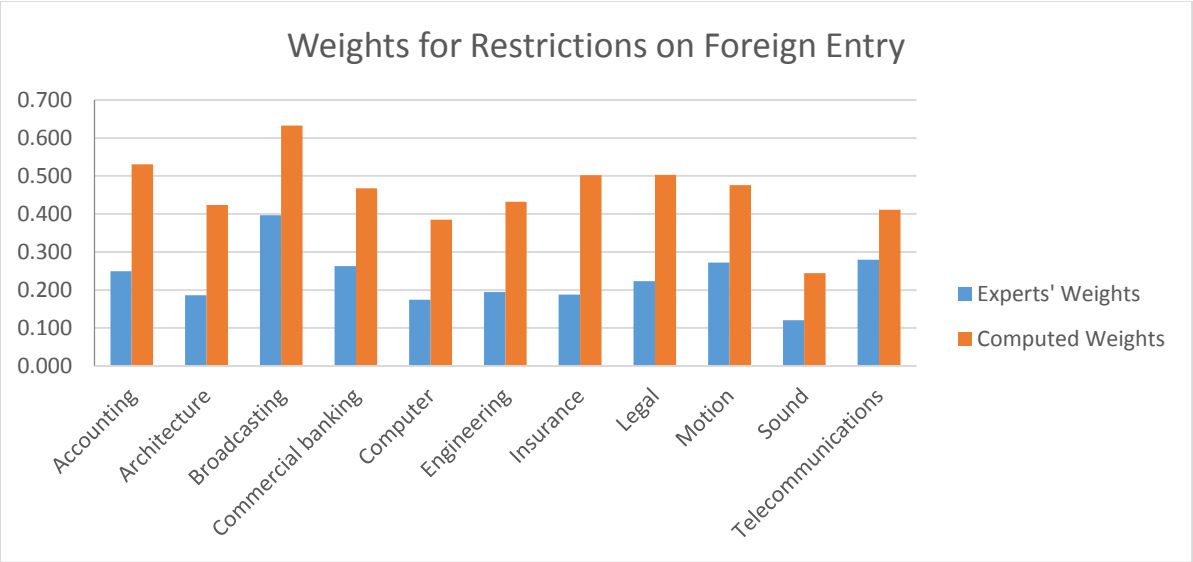
By design, FDI equity limits in the OECD STRI carry higher weights as compared to other measures within Policy Area 1, such as screening requirement, as well as measures in other four policy areas because of having more measures pertaining to FDI limits as compared to other measures.

In federal states, some of the regulations recorded by the measures included in the STRI database are under the jurisdiction of states, provinces or regions. Sub-federal level may have regulatory autonomy and regulation may therefore differ between states. In such cases, the OECD has selected one representative state for measuring the regulatory restrictiveness. However, one state may not be representative of entire country, particularly in country like US where sub-federal regulations are very important. This creates problem of over estimation of restrictiveness for some countries while under estimation for others depending upon the selection of the representative state.

3.3 Weight Distortion Issues

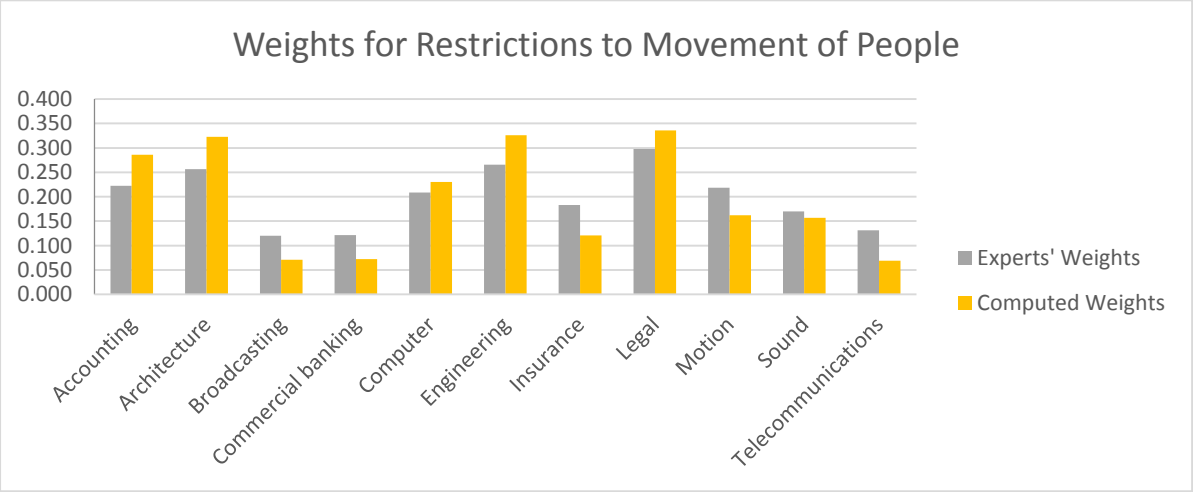
The OECD method of calculating computed weights using formula given in Section 2.2 significantly distort the original weights given by the experts. The distortion is so much for some services, such as sound recording, computer services, architectural services, etc., that though the experts had given Policy Area 2 (Restrictions to movement of people) higher weights than Policy Area 1 (Restrictions to foreign entry, the computed weights made Policy Area 1 more important than Policy Area 2. Thus, the computed weights may not reflect the actual relative importance of various regulations as given in the experts' judgement. Figure 3-7 highlights the distortions in computed weights for each of the five policy areas as compared to the original weights provided by the experts.

Figure 3: Weight Distortion in Policy Area 1 (Restrictions on Foreign Entry)



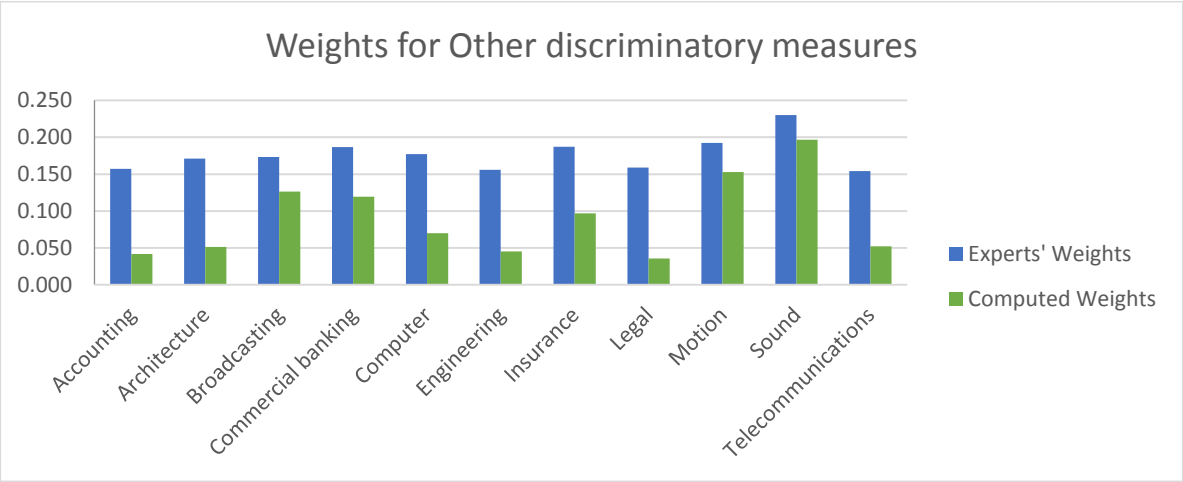
Source: Authors' construction

Figure 4: Weight Distortion in Policy Area 2 (Restrictions on Movement of People)



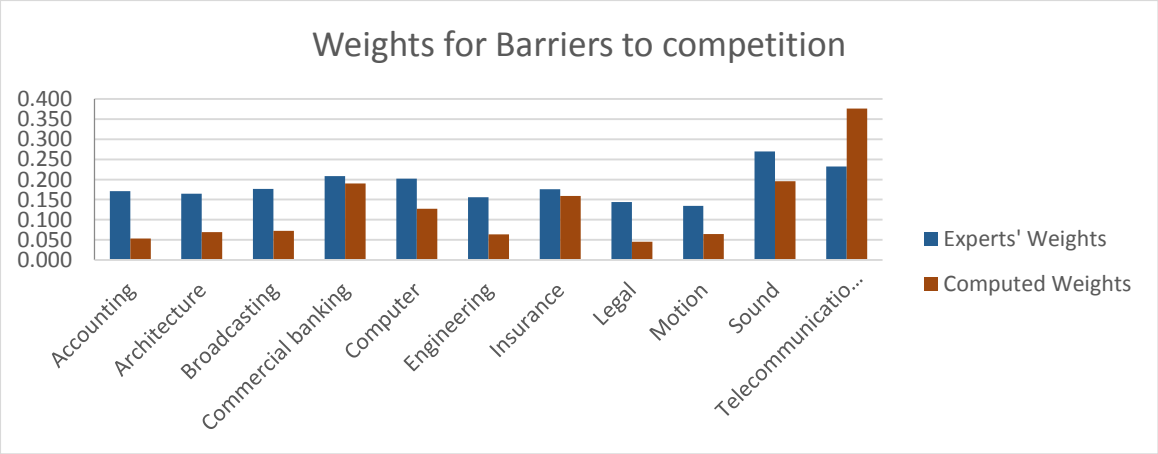
Source: Authors' construction

Figure 5: Weight Distortion in Policy Area 3 (Other discriminatory measures)



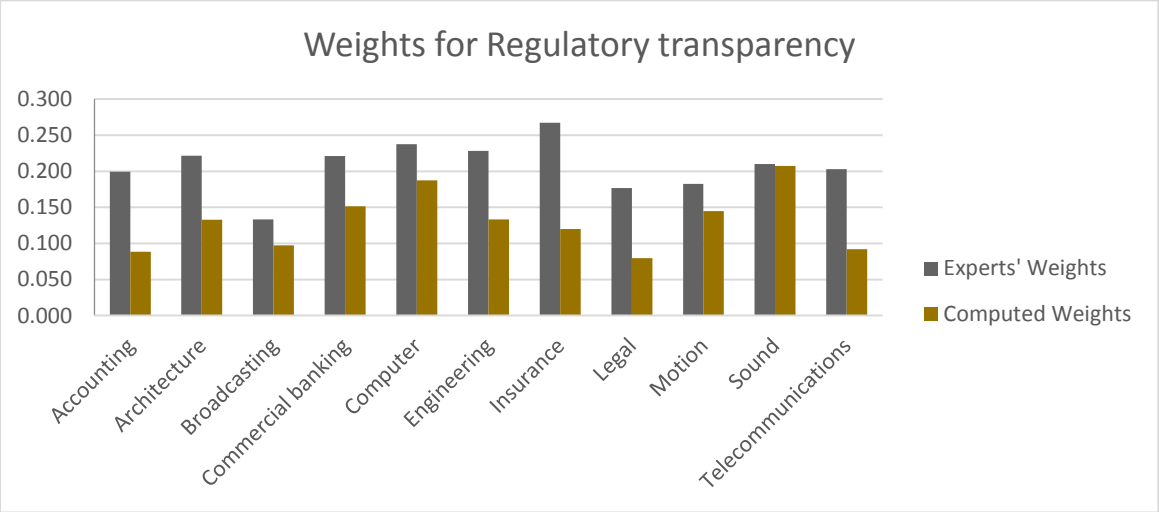
Source: Authors' construction

Figure 6: Weight Distortion in Policy Area 4 (Barriers to competition)



Source: Authors' construction

Figure 7: Weight Distortion in Policy Area 5 (Regulatory transparency)



Source: Authors' construction

3.4 FACTUAL INCONSISTENCIES:

Many of the sectors are very much open in India and hence STRI scores do not reflect their current openness. This is because of the reason that the OECD STRI does not capture the correct information for specific sectors. For instance, STRI for rail freight transport is 1 which means it is completely closed. However, rail freight infrastructure is open for foreign investment in India, which is not reflected in STRI.[3]

Some of the measures are not framed appropriately to measure the restrictiveness of these measures. This leads to assigning score for these measures which are different from their actual restrictiveness or liberalisation. For instance, for 'Public Procurement' under 'Other Discriminatory Measures', the question is framed as: 'Procurement regulation explicitly prohibits discrimination of foreign suppliers'. The answer to this question for India as mentioned in the explanatory notes is *"There is no legislative regulation on the procuring of goods and services by government. The Department of Finance however has released general financial rules which indicate their policy direction in procurement of goods and services*

[3] The sectoral note on rail freight transport mentioned that the STRI in the rail sector covers freight transport but excludes the passenger segment. Rail transport is provided over a dedicated network where the market structure may take different forms, the two most common ones being: i) vertically integrated rail services firms owning and managing both the infrastructure and the operation of freight services; and ii) vertically separation between the infrastructure management and the operations. However, it does not mention which market structure is considered for calculating STRI score. It also does not clarify that if the foreign investment is allowed in infra segment but not in the operation segment, how that is captured in STRI.

from outside. These rules do not prohibit foreign participation in the procurement process." Thus, India does not discriminate for government procurement in practice, but score is given as '1', i.e., restrictive. This is because the question is not framed appropriately.[4]

It is to be noted that feedback on the STRI had been provided to the OECD team in 2016 about these shortcomings. Based on the feedback for India STRI, the OECD has corrected for the factual inconsistencies for India STRI. However, there still exist some inconsistencies for India as well as other countries selected for the study.

4. IMPROVING STRI

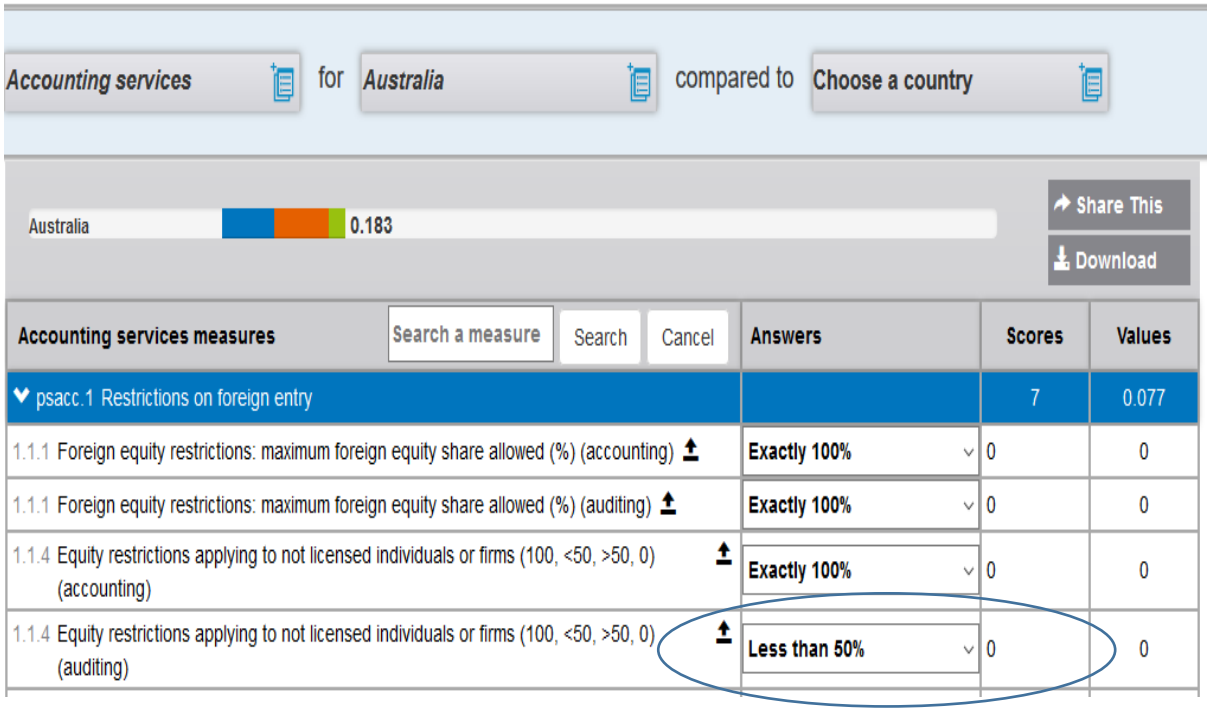
As highlighted in the previous section, the OECD STRI suffers from a number of conceptual, methodological and factual inconsistency issues. The study intends to improve the STRI on some of these shortcomings but not all. In order to improve STRI scores for India and selected countries, the study undertakes three-pronged approach.

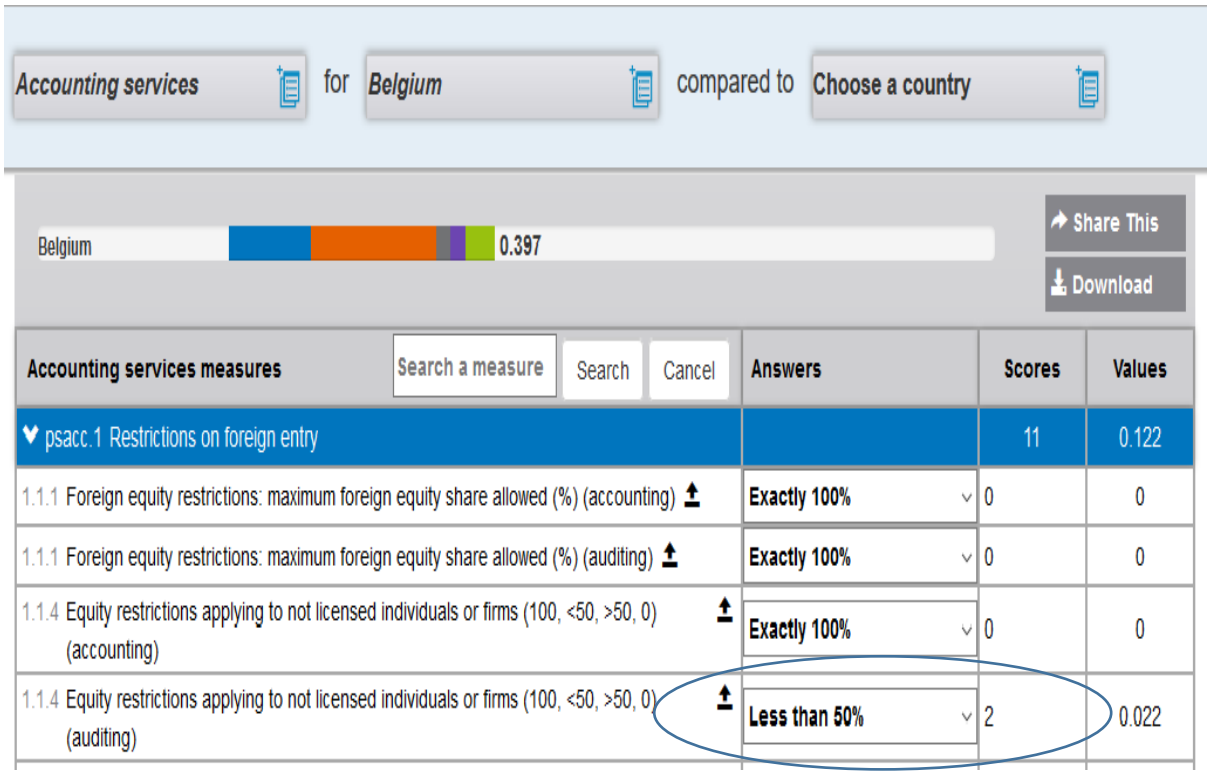
4.1 STEP 1: IDENTIFYING FACTUAL INCONSISTENCIES

First, it identifies the factual inconsistencies in the available regulatory database for selected countries. It may be noted that over the years, the OECD has itself corrected factual inconsistencies in its database during the annual updating process taking into account the feedback given to the OECD team from time to time. An example of factual error is highlighted in Figure 8, which shows that the same measure '1.1.4: Equity restrictions applying to non-licensed individuals or firms (auditing)' has been scored differently for same sector for two countries Australia and Belgium. Though the answer for both countries is mentioned as 'less than 50%', but the score is given 0 for Australia and 2 for Belgium.

[4] Instead of asking 'Procurement regulation explicitly prohibits discrimination of foreign suppliers', the question should be framed as 'Procurement regulation explicitly provide for discrimination of foreign suppliers'.

Figure 8: Example of factual error



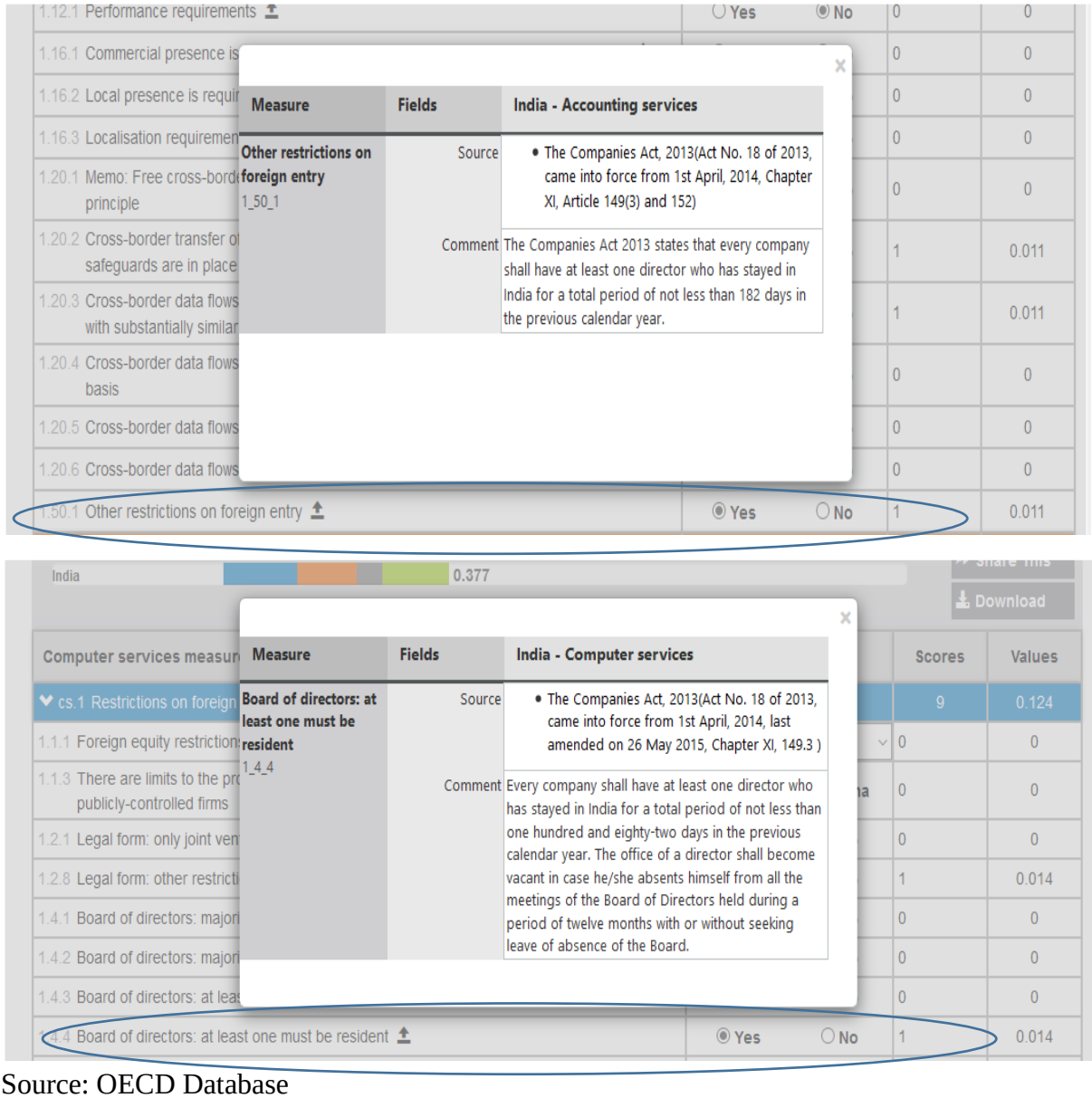


Source: OECD Database

4.2: Step 2: Assessing Source of References for Various Regulations for their Correctness

Second, the study assesses and analyses the source of reference for various regulations given in the regulatory database for the construction of the STRI for the selected countries for their correctness. The analysis reveals that there are a number of issues pertaining to the scoring of measure and their source references. These include non-availability of source references for some measures, source reference not having information about the concerned measure, incorrect interpretation of the source reference, to name a few. An example of Step 2 is given in Figure 9.

Figure 9: Example of error pertaining to sources of references



Source: OECD Database

Figure 9 shows that 'Other restrictions on foreign entry' is scored as 1 for India and the source reference is mentioned as The Companies Act, 2013 which requires that every company shall have at least one director who has stayed in India for a total period of not less than 182 days in the previous calendar year. However, analysis of scoring of other regulatory measures and their source references reveals that this regulation has already been captured in the measure 'Board of Directors: at least one must be resident', as shown in lower part of Figure 9. This results into same restriction counted twice and thereby inflating the restrictiveness score for India.

4.3: STEP 3: INTRODUCING NEW REGULATORY MEASURES

The third step consists of introducing new regulatory measures within these five policy areas to include those regulations which are at present not included in the OECD STRI but adversely affect the services trade. These new regulations are selected based on the Trade Policy Reviews of various countries, GATS and FTA commitments in selected sectors, and the USTR estimates of services restrictiveness in various countries. The answers of these new regulations are obtained for these countries based on secondary sources and government websites and other documents available online. The list of new regulatory measures is provided in Table 2.

Table 2: List of New Regulatory Measures

Policy Area	New Regulatory Measures
Policy Area 1: Restrictions on Foreign Entry	• Thresholds for screening projects • Screening explicitly considers national interests • Screening exists without exclusion of national interests
Policy Area 2: Restrictions to Movement of People	• Renewal of initial stay: intra-corporate transferees • Renewal of initial stay: contract service suppliers • Renewal of initial stay: independent professionals • Visa processing time: intra-corporate transferees • Visa processing time: contract service suppliers • Visa processing time: independent professionals • Visa processing fee: intra-corporate transferees • Visa processing fee: contract service suppliers • Visa processing fee: independent professionals • Multiple entry: intra-corporate transferees • Multiple entry: contract service suppliers • Multiple entry: independent professionals • Prior employment requirement/ minimum experience requirement: intra-corporate transferees

	• Prior employment requirement/minimum experience requirement: contract service suppliers • Prior employment requirement/minimum experience requirement: independent professionals • Prior employment requirement/ minimum experience requirement: business visitors • Laws or regulations establish a process for recognising experience gained abroad • Additional exam for recognition of qualification is conducted only in host country • Frequency of conducting additional exam in host country
Policy Area 3: Other Discriminatory Measures	• Entry of spouse is allowed or not • Entry of dependent members is allowed or not • Working of spouse is allowed or not • Working of dependent members is allowed or not • Temporary workers are required to contribute to social security • Social security contribution are refundable once temporary worker returns to home country • Requirement of minimum wages for ICT • Requirement of minimum wages for CSS • Requirement of minimum wages for IP • Conditions on Designation/Capacity of workers • Restrictions on changing employer • Restrictions on changing geographic location • Levies on Employer (Additional taxes/ contribution for training of local workers)
Policy Area 5: Regulatory Transparency (including Trade Facilitative Elements)	• Public availability of business information either printed or in electronic form • Publication of business information in one of the WTO languages • Visa on Arrival for Business Visitors • E-visa facility for Business Visitors

Source: Authors' compilation

5. WEIGHTS ADJUSTMENT FOR NEW REGULATORY MEASURES

As mentioned in the Section 2.2, the weights used in the OECD STRI are computed weights taking into account the number of measures within each policy area. Therefore, in order to adjust for the new regulatory measures introduced in this study, the computed based are recalculated taking into account the revised number of measures within each policy area. It is to be noted that the study does not address the flaw in the OECD computed weight methodology highlighted in Section 3.3.

6. RESULTS OF IMPROVING STRI

The STRI scores for selected services and countries are calculated based in improvements made in Section 4 of this report. The results are discussed as below.

6.1 NEW STRI SCORES: COUNTRY-WISE

6.1.1 Australia

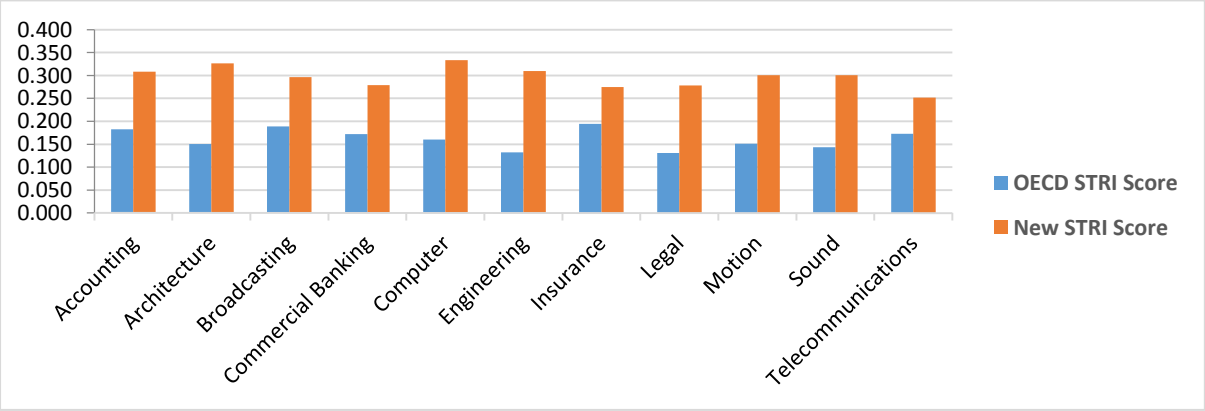
Table 3 and Figure 10 highlight the changes in the STRI scores for Australia. As can be seen, new STRI scores of Australia are higher than the old (OECD) STRI scores for all the selected sectors for the study, thereby indicating higher restrictiveness in these sectors as compared to what is shown in the OECD STRI. The maximum change in restrictiveness is for computer services and architectural services.

Table 3: Change in STRI Score for Australia

Sectors	OECD STRI Score	New STRI Score
Accounting	0.183	0.308
Architecture	0.150	0.327
Broadcasting	0.189	0.297
Commercial Banking	0.172	0.279
Computer	0.161	0.333
Engineering	0.132	0.310
Insurance	0.195	0.275
Legal	0.131	0.278
Motion	0.151	0.301
Sound	0.143	0.301
Telecommunications	0.173	0.251

Source: Authors' construction

Figure 10: Change in STRI Score for Australia



Source: Authors' construction

6.1.2 Canada

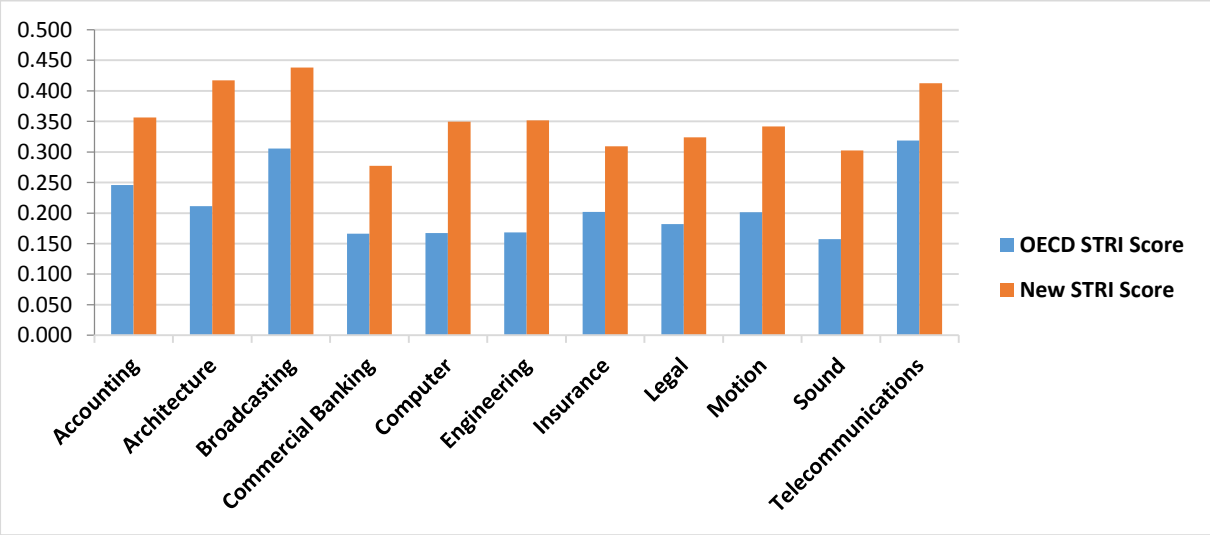
Table 4 and Figure 11 highlight the changes in the STRI scores for Canada. As can be seen, new STRI scores of Canada are also higher than the old (OECD) STRI scores for all the selected sectors for the study, thereby indicating higher restrictiveness in these sectors as compared to what is shown in the OECD STRI. The maximum change in restrictiveness is for computer services, architectural services and engineering services.

Table 4: Change in STRI Score for Canada

Sectors	OECD STRI Score	New STRI Score
Accounting	0.246	0.356
Architecture	0.211	0.417
Broadcasting	0.306	0.438
Commercial Banking	0.166	0.277
Computer	0.168	0.350
Engineering	0.168	0.352
Insurance	0.202	0.309
Legal	0.182	0.324
Motion	0.202	0.342
Sound	0.157	0.302
Telecommunications	0.319	0.412

Source: Authors' construction

Figure 11: Change in STRI Score for Canada



Source: Authors' construction

6.1.3 India

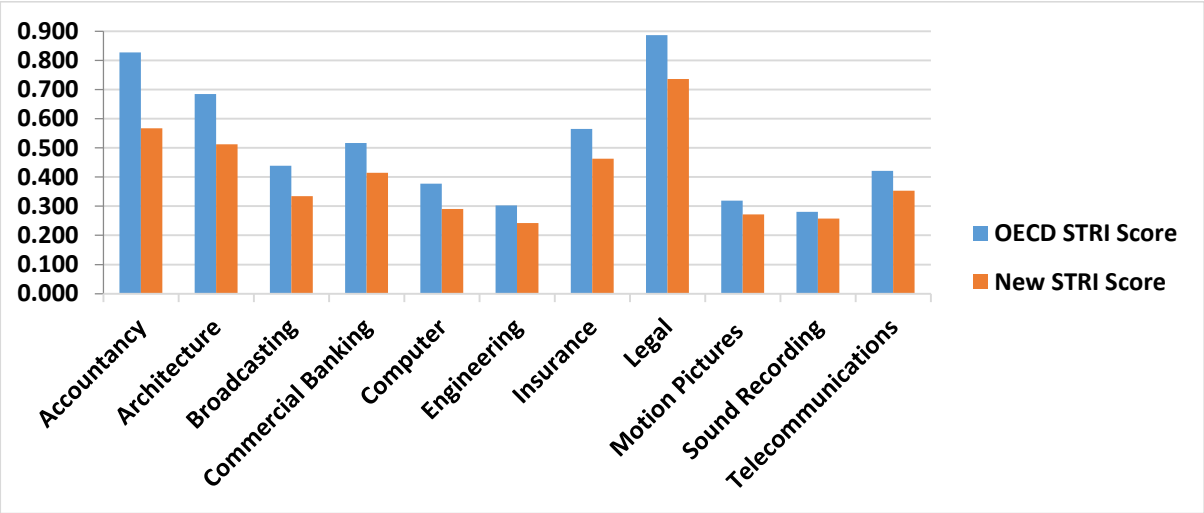
Table 5 and Figure 12 highlight the changes in the STRI scores for India. As can be seen, new STRI scores of India are also lower than the old (OECD) STRI scores for all the selected sectors for the study, thereby indicating lower restrictiveness in these sectors as compared to what is shown in the OECD STRI. The maximum change in restrictiveness is for computer services, architectural services and accounting services.

Table 5: Change in STRI Score for India

Sectors	OECD STRI Score	New STRI Score
Accounting	0.827	0.567
Architecture	0.684	0.512
Broadcasting	0.439	0.334
Commercial Banking	0.517	0.415
Computer	0.377	0.291
Engineering	0.303	0.242
Insurance	0.565	0.463
Legal	0.886	0.736
Motion	0.319	0.272
Sound	0.280	0.257
Telecommunications	0.421	0.353

Source: Authors' construction

Figure 12: Change in STRI Score for India



Source: Authors' construction

6.1.4 United Kingdom (UK)

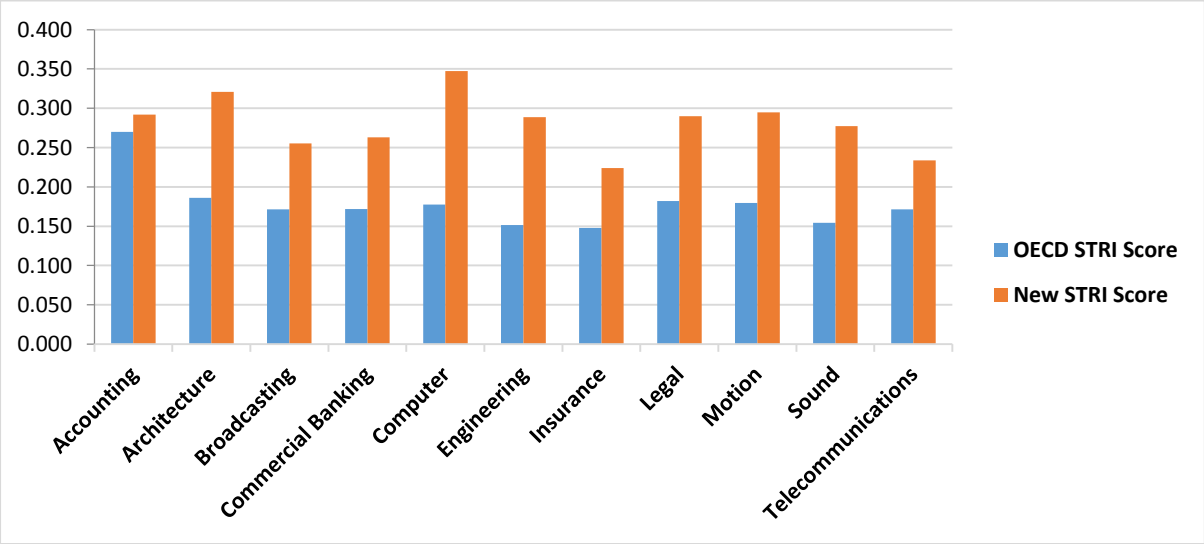
Table 6 and Figure 13 highlight the changes in the STRI scores for the UK. As can be seen, new STRI scores of the UK are also higher than the old (OECD) STRI scores for all the selected sectors for the study, thereby indicating higher restrictiveness in these sectors as compared to what is shown in the OECD STRI. The maximum change in restrictiveness is for computer services, architectural services and engineering services.

Table 6: Change in STRI Score for UK

Sectors	OECD STRI Score	New STRI Score
Accounting	0.270	0.292
Architecture	0.186	0.321
Broadcasting	0.171	0.255
Commercial Banking	0.172	0.263
Computer	0.178	0.347
Engineering	0.152	0.289
Insurance	0.148	0.224
Legal	0.182	0.290
Motion	0.179	0.295
Sound	0.155	0.277
Telecommunications	0.171	0.234

Source: Authors' construction

Figure 13: Change in STRI Score for UK



Source: Authors' construction

6.1.5 United States of America (USA)

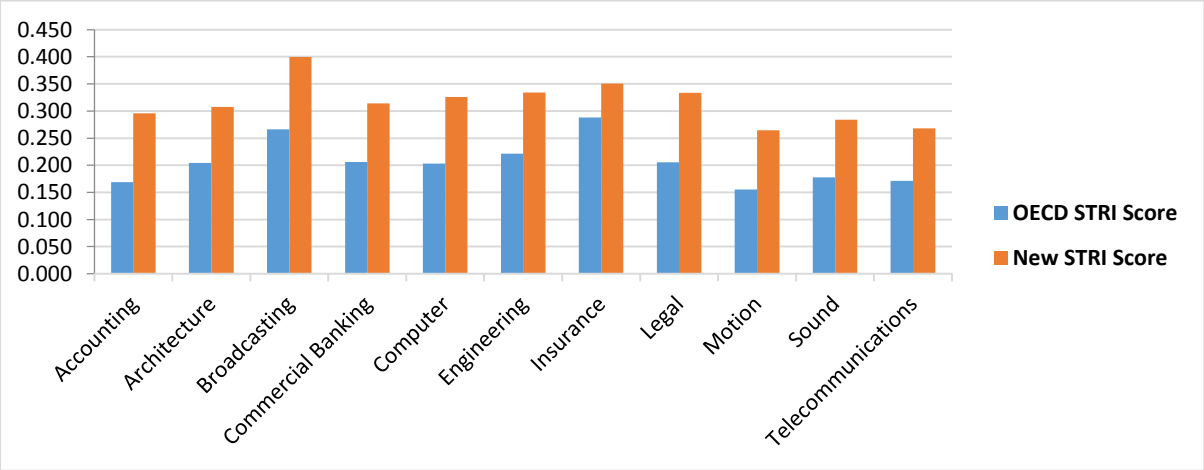
Table 7 and Figure 14 highlight the changes in the STRI scores for the USA. As can be seen, new STRI scores of the USA are also higher than the old (OECD) STRI scores for all the selected sectors for the study, thereby indicating higher restrictiveness in these sectors as compared to what is shown in the OECD STRI. The maximum change in restrictiveness is for computer services, accounting, motion pictures and sound recording services.

Table 7: Change in STRI Score for USA

Sectors	OECD STRI Score	New STRI Score
Accounting	0.169	0.296
Architecture	0.204	0.308
Broadcasting	0.266	0.399
Commercial Banking	0.206	0.314
Computer	0.203	0.326
Engineering	0.221	0.334
Insurance	0.288	0.350
Legal	0.206	0.333
Motion	0.155	0.264
Sound	0.178	0.284
Telecommunications	0.171	0.268

Source: Authors' construction

Figure 14: Change in STRI Score for USA



Source: Authors' construction

6.2 NEW STRI SCORES: SECTOR-WISE

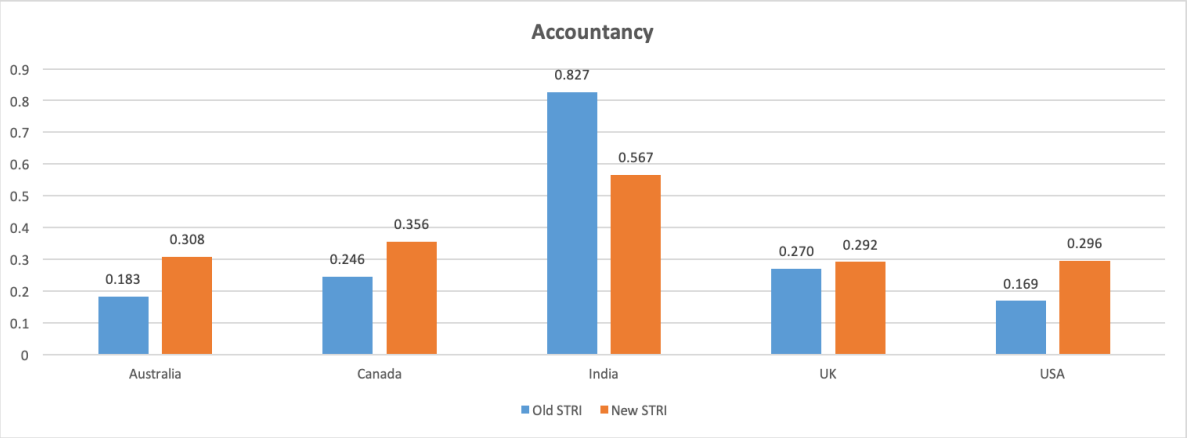
Table 8 and Figure 15-25 highlight the sector-wise changes in the STRI scores for the five countries selected for the study after the improvements taken in Section 4.1, 4.2 and 4.3. As can be seen, new STRI scores of the Australia, Canada, the UK and the USA are higher than the old (OECD) STRI scores for all the selected sectors for the study, thereby indicating higher restrictiveness in these sectors as compared to what is shown in the OECD STRI. On the contrary, the STRI scores for India have come down for all the selected sectors. This is because the OECD STRI does not take into account the restrictions which are present in the four developed countries. These restrictions are introduced in the new STRI calculations. As a result, though India is most restrictive among the selected five countries for some services (such as legal) but it is no more remains the most restrictive for some others (such as motion picture).

Table 8: Sector-wise changes in STRI Scores for Selected Countries

Sectors	Australia		Canada		India		UK		USA	
	OECD STRI Score	New STRI Score	OECD STRI Score	New STRI Score	OECD STRI Score	New STRI Score	OECD STRI Score	New STRI Score	OECD STRI Score	New STRI Score
Accounting	0.183	0.308	0.246	0.356	0.827	0.567	0.270	0.292	0.169	0.296
Architecture	0.150	0.327	0.211	0.417	0.684	0.512	0.186	0.321	0.204	0.308
Broadcasting	0.189	0.297	0.306	0.438	0.439	0.334	0.171	0.255	0.266	0.399
Commercial Banking	0.172	0.279	0.166	0.277	0.517	0.415	0.172	0.263	0.206	0.314
Computer	0.161	0.333	0.168	0.350	0.377	0.291	0.178	0.347	0.203	0.326
Engineering	0.132	0.310	0.168	0.352	0.303	0.242	0.152	0.289	0.221	0.334
Insurance	0.195	0.275	0.202	0.309	0.565	0.463	0.148	0.224	0.288	0.350
Legal	0.131	0.278	0.182	0.324	0.886	0.736	0.182	0.290	0.206	0.333
Motion	0.151	0.301	0.202	0.342	0.319	0.272	0.179	0.295	0.155	0.264
Sound	0.143	0.301	0.157	0.302	0.280	0.257	0.155	0.277	0.178	0.284
Telecommunications	0.173	0.251	0.319	0.412	0.421	0.353	0.171	0.234	0.171	0.268

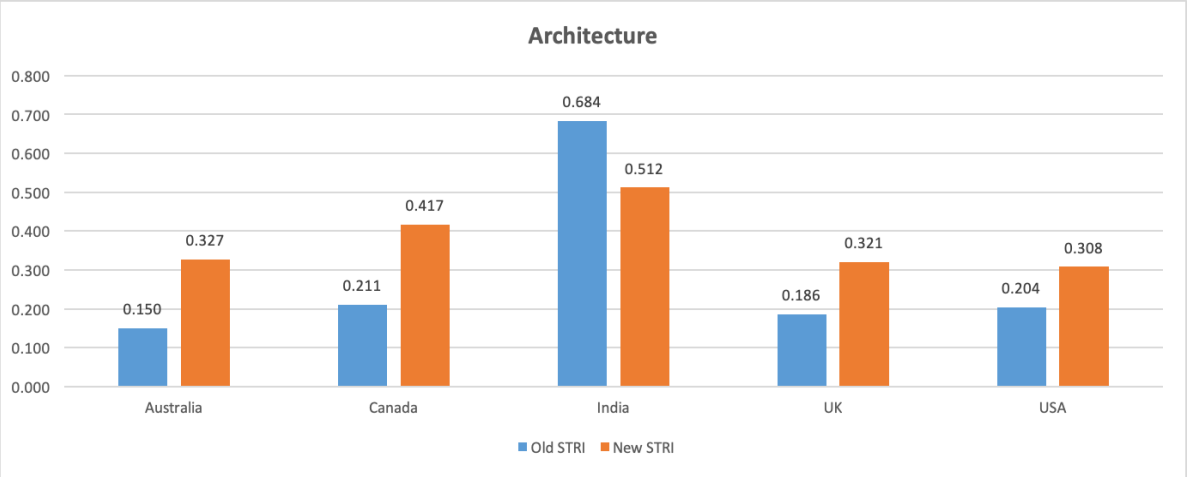
Source: Authors' construction

Figure 15: Change in STRI Scores for Selected Countries for Accountancy Services



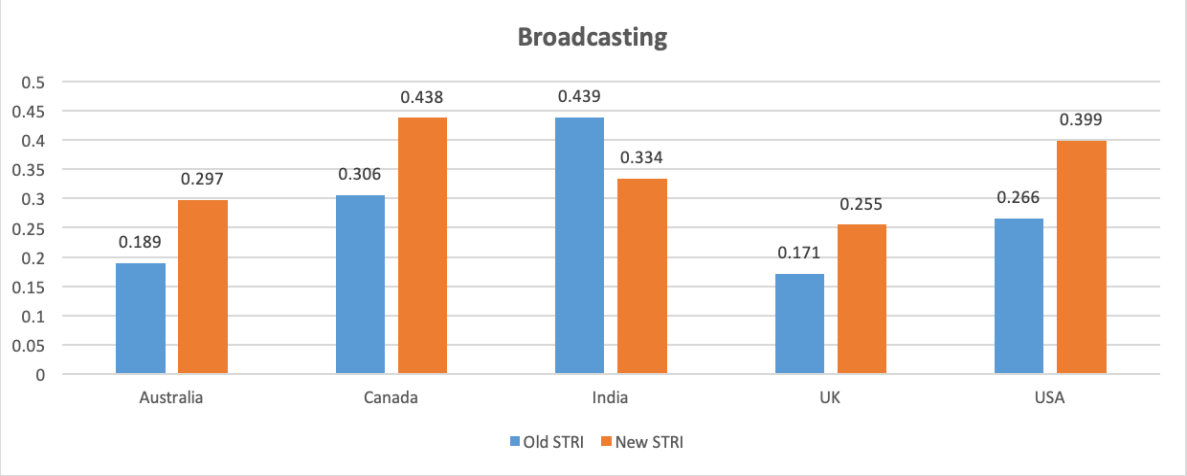
Source: Authors' construction

Figure 16: Change in STRI Scores for Selected Countries for Architecture Services



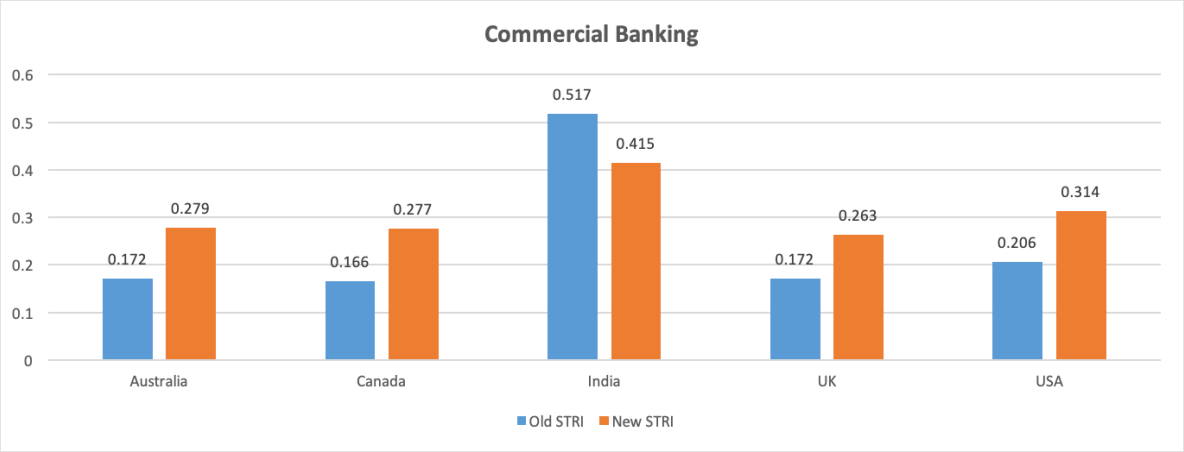
Source: Authors' construction

Figure 17: Change in STRI Scores for Selected Countries for Broadcasting Services



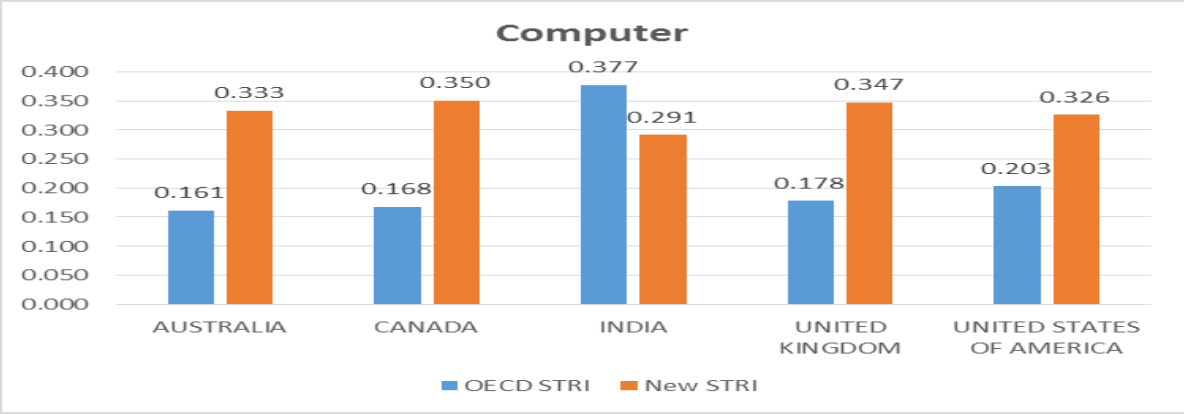
Source: Authors' construction

Figure 18: Change in STRI Scores for Selected Countries for Commercial Banking Services



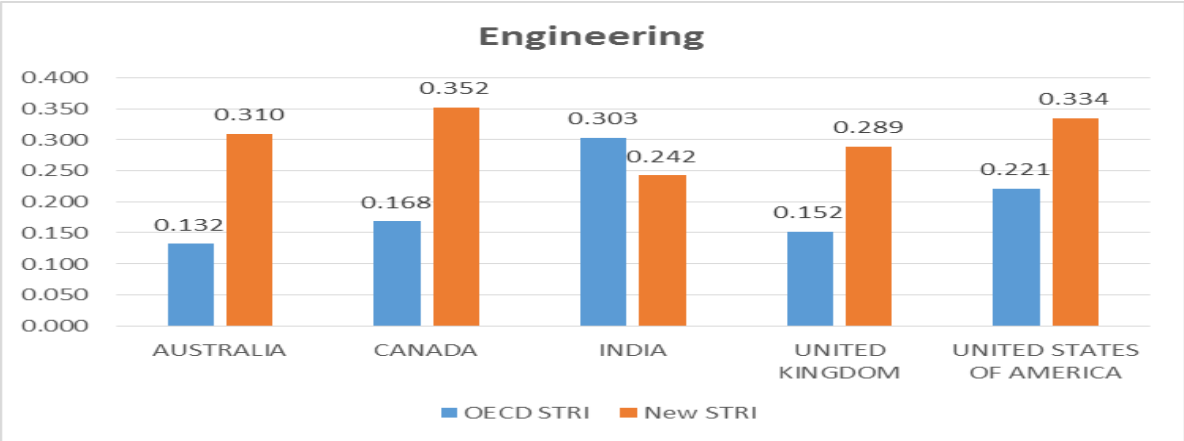
Source: Authors' construction

Figure 19: Change in STRI Scores for Selected Countries for Computer Services



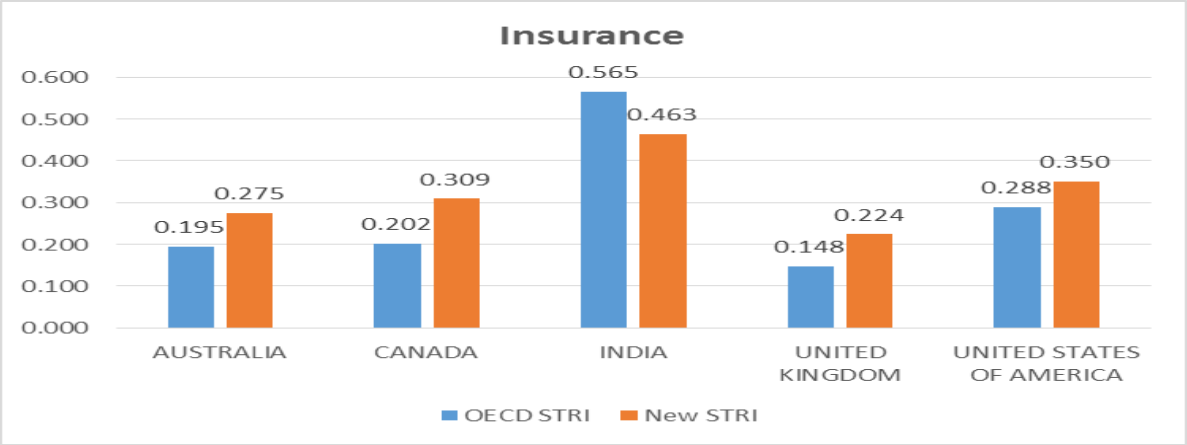
Source: Authors' construction

Figure 20: Change in STRI Scores for Selected Countries for Engineering Services



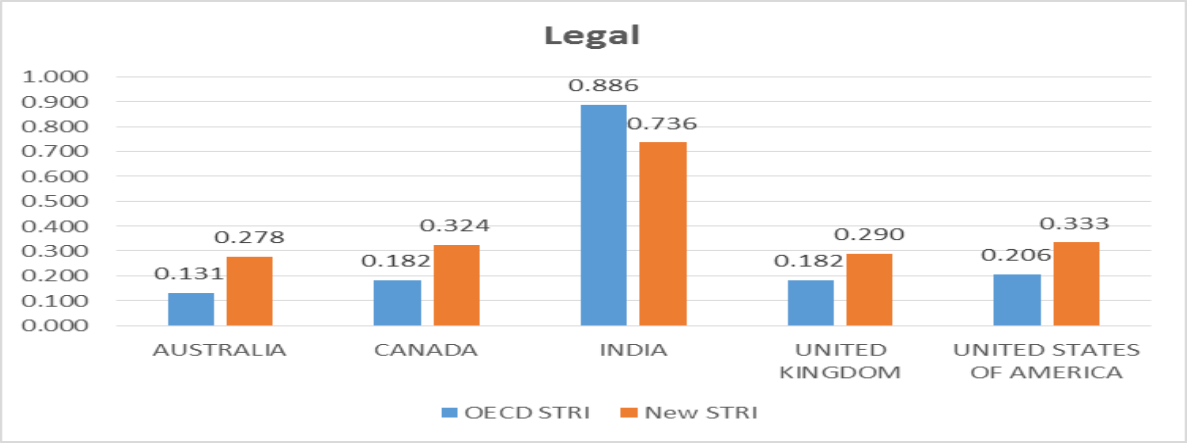
Source: Authors' construction

Figure 21: Change in STRI Scores for Selected Countries for Insurance Services



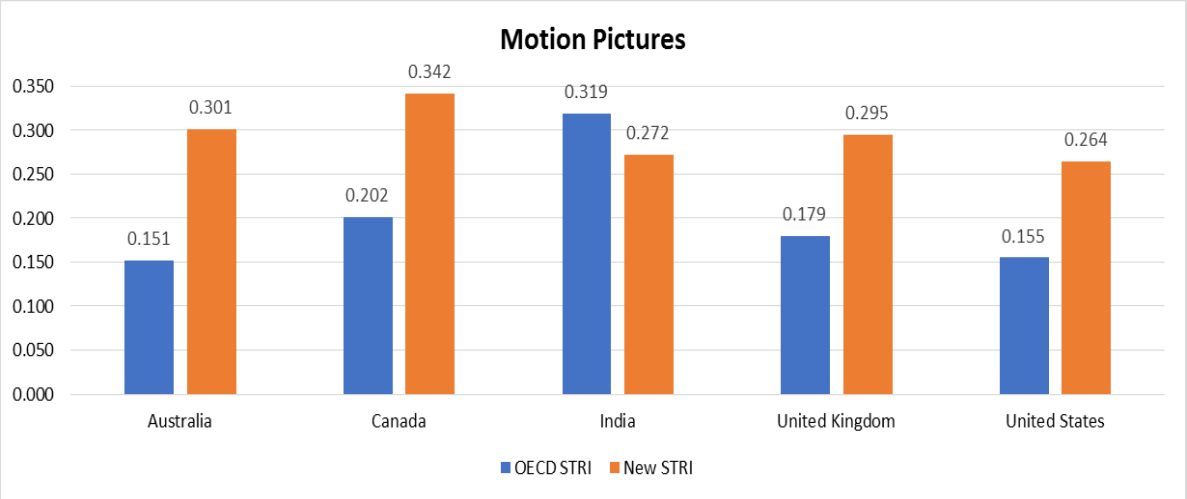
Source: Authors' construction

Figure 22: Change in STRI Scores for Selected Countries for Legal Services



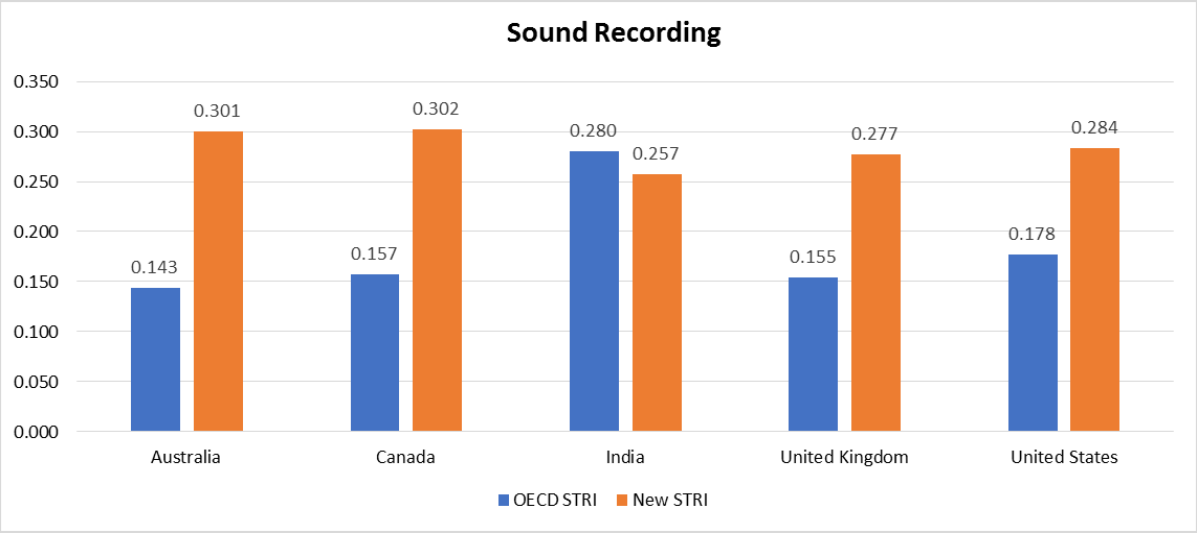
Source: Authors' construction

Figure 23: Change in STRI Scores for Selected Countries for Motion Picture Services



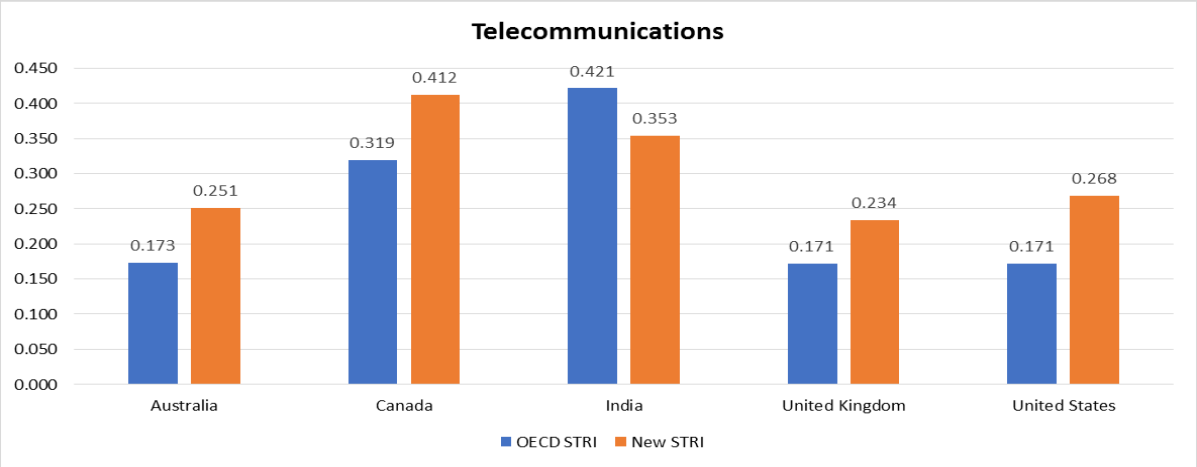
Source: Authors' construction

Figure 24: Change in STRI Scores for Selected Countries for Sound Recording Services



Source: Authors' construction

Figure 25: Change in STRI Scores for Selected Countries for Telecommunication Services



Source: Authors' construction

7. CONCLUDING REMARKS

The OECD Services Trade Restrictiveness Index (STRI) is an attempt to quantify the qualitative nature of regulatory barriers affecting services trade. In spite of updating of measures by the OECD over the years, STRI scores for India remain restrictive for various sectors as compared to other countries which are shown as significantly liberalized. This is in sharp contrast to the actual regime in various sectors in India, such as computer related services, that have been opened up significantly for foreign suppliers.

This study reveals that the OECD scores do not capture the actual restrictiveness of developed economies selected for this study as the OECD does not include a number of restrictions affecting trade in services in these countries. Therefore, any policy prescriptions based on the OECD STRI scores may not be correct as it overestimates the restrictiveness for India and underestimates for developed countries.

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