Application of the APEC Index to Measure the Regulatory Environment for Services Trade (APEC Services Index) in Regionally Relevant Use-Cases

APEC Group on Services

May 2025

Asia-Pacific
Economic Cooperation

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APEC Project: GOS 01 2024S

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APEC#225-CT-03.3

ACKNOWLEDGMENTS

This study was produced by the US-Support for Economic Growth in Asia (US-SEGA) program, which is funded by the U.S. government and implemented by Nathan, a Cadmus Company. The principal author of the toolkit is Hildegunn Kyvik Nordås of the Council on Economic Policies. Kanika Sahai provided contributions and review, and Scott Jackson provided operational support. US-SEGA was guided by the Office of the U.S. Trade Representative (USTR) and the Bureau of East Asian and Pacific Affairs (EAP/EP) at the U.S. Department of State, as well as the U.S. Agency for International Development (USAID).

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LIST OF ACRONYMS

AI	Artificial Intelligence
APEC	Asia-Pacific Economic Cooperation
ASCR	APEC Services Competitiveness Roadmap
BIM	Building information modeling
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
GATS	General Agreement on Trade in Services
IASB	International Accounting Standards Board
IMO	International Maritime Organization
OECD	Organization for Economic Co-operation and Development
PNG	Papua New Guinea
RCEP	Regional Comprehensive Economic Partnership
WTO	World Trade Organization

SECTION 1: BACKGROUND AND INTRODUCTION

The services sector has grown to be a key economic driver in the APEC region and globally; however, barriers to services trade persist across APEC economies and sectors, and new restrictions continue to be introduced. These barriers impose costs on services trade that impede the ability of economies to access services as competitiveness-enhancing inputs and to increase services exports.

In support of the APEC Services Competitiveness Roadmap (ASCR), and in close collaboration with the Organization for Economic Co-operation and Development (OECD), APEC economies have been developing the APEC Index to Measure the Regulatory Environment for Services Trade (APEC Index) as a tool to help identify, assess, and reform policies that impede regional services competitiveness. APEC economies have demonstrated their commitment to this initiative by gathering and verifying data on their domestic regulatory environments for services sectors.

Recognizing the unique contexts, interests, and challenges to services trade and competitiveness across the APEC region, this toolkit aims to equip APEC members with the skills to apply the APEC Index in an array of use cases, with an ultimate goal to increase understanding and use of the APEC Index.

INTRODUCTION TO THE APEC INDEX

The APEC Index covers 22 services sectors and 18 APEC economies.[1] It builds on existing indices, notably the OECD Services Trade Restrictiveness Index, while considering APEC-specific policies. This indexing approach to services trade policy has proven to be a valuable method for estimating the trade costs and benefits of changes to those policies.[2]

The APEC Index is constructed by scoring and weighting a pre-defined standardized set of trade-related policy measures. For each measure, the index includes an answer that states whether the measure exists in the selected economy.

The set of measures are organized into five policy areas:

1. Restrictions on foreign entry: This policy area mainly includes measures affecting participation in the market through cross-border trade (mode 1) and commercial presence (mode 3).
2. Restrictions to movement of people: This policy area contains measures affecting services trade through movement of natural persons (mode 4).
3. Other discriminatory measures: This policy area mainly consists of measures related to the discrimination of foreign suppliers with respect to taxation, subsidies, and public procurement.
4. Barriers to competition: This policy area refers to state ownership of firms and the application of competition policy.

---

[1] The sectors are accounting services, air transport, architecture, broadcasting, commercial banking, computer services, construction, courier services, distribution services, engineering services, insurance, legal services, four logistics services (cargo handling, customs brokerage, freight forwarding, storage and warehousing), maritime transport, motion pictures, rail freight services, road freight services, sound recording and telecommunications. See the **OECD methodology paper** for a full description of the measures, policy areas, scoring and weighting.
[2] See for instance **OECD (2017)** or **Benz and Jaax (2022)**

5. Regulatory transparency covers measures related to the transparency, timeliness, and cost of administrative procedures.

The set of measures is the same for all economies. Furthermore, a core set of measures applies to all sectors, while sector-specific measures are added for sectors that are frequently subject to sector-specific regulation.

Examples of horizontal measures that apply to all sectors are foreign equity limitations, quotas or economic needs tests for temporary movement of people, restrictions on senior management, and restrictions on cross-border data flows. The answer may, however, differ across sectors. For instance, an economy may have limitations on foreign ownership in air transport services and telecommunications, but not in other services sectors. Examples of sector-specific measures are pro-competitive regulation in telecommunications and rail transport, conditions for obtaining a license in professional services, commercial banking and insurance, and copyright management in audiovisual services.

Importantly, the index's database of APEC-economy policy measures includes a reference to each law, regulation, or decree in which the answer to the measure is found. The database is updated annually and thus reflects current, applied services trade policy.

To develop the index, the qualitative information collected from laws and regulations is scored using a binary scoring system (zeros and ones), where one denotes a restriction. Weights have been assigned to each policy area for each sector. Within the policy area, each measure has the same weight.

To facilitate policy analysis such as studying the impact of a planned reform, the APEC Index website includes a policy simulator.[3] It allows users to experiment with policy changes, compare and benchmark data to other economies, or benchmark towards one's own policy objectives.

[3] The APEC Index Policy Simulator is currently available at https://apecservicesindex.org/policysimulator/. A full screen version is currently available at https://sim.oecd.org/Default.ashx?lang=En&ds=STRI_APEC.

Figure 1. The APEC Index Policy Simulator

APEC Index Policy Simulator

The APEC Index Policy Simulator provides detailed information by economy and by sector for 2021. It can be used to explore the impact of a policy change or reform at a detailed level for each measure. Use the simulator embedded below or open the simulator in full screen.

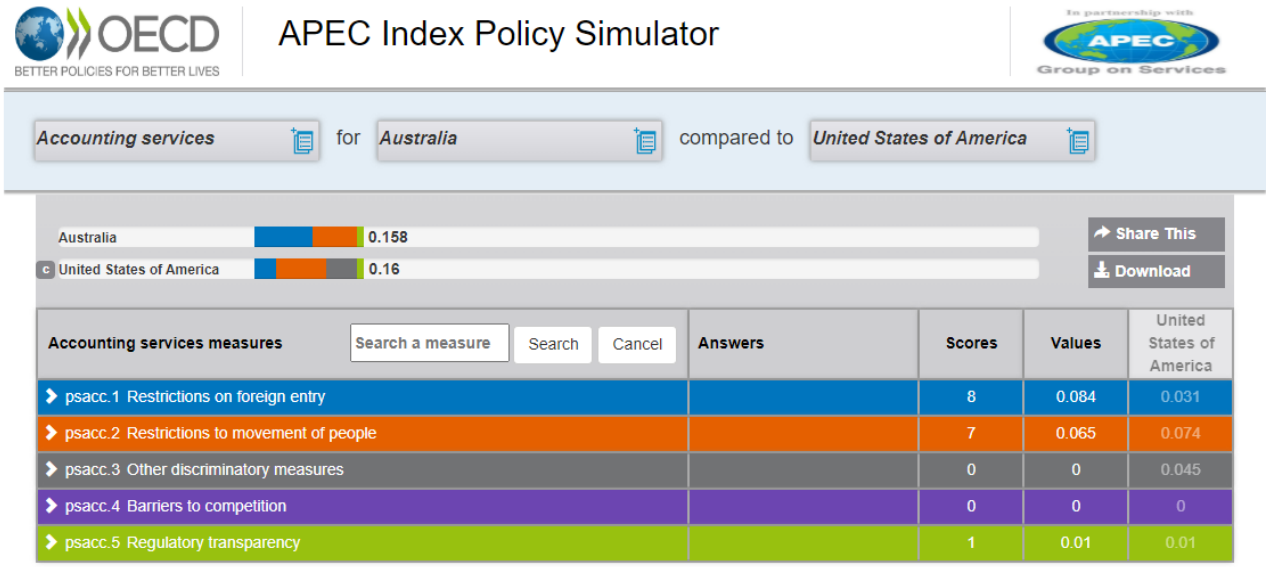

Figure 1 shows a screenshot of the policy simulator. From the description text, users are encouraged to select the option to *open the simulator in full screen,* which provides a more comprehensive view of the index's features and enables users to navigate the index easily.

Drop down lists of sectors, economies, and economies for comparison appear at the top. Below that, the overall index value is shown as a bar chart, broken down by the five policy areas depicted in different colors. Below that is a more detailed breakdown of the scoring. The scores column reports the number of measures that are scored with the number 1 for each policy area. The values column reports the contribution of the policy area to the overall index for the economy and sector in question (here Australia and accounting services). The contribution is calculated by multiplying each measure with its weight and then sum over all measures under the policy area.

Finally, the last column compares another economy's value for each policy area. In this case the United States is selected. The *compared to* option can be left blank if the user wants to focus only on one economy. Clicking on any of the policy areas will show the details of measures, scores and values under that policy area as indicated in Figure 2.

Figure 2. The APEC Index Policy Simulator: Restrictions on Movement of People

OECD BETTER POLICIES FOR BETTER LIVES

APEC Index Policy Simulator

In partnership with APEC Group on Services

Accounting services for Australia compared to Choose an economy

Australia 0.158

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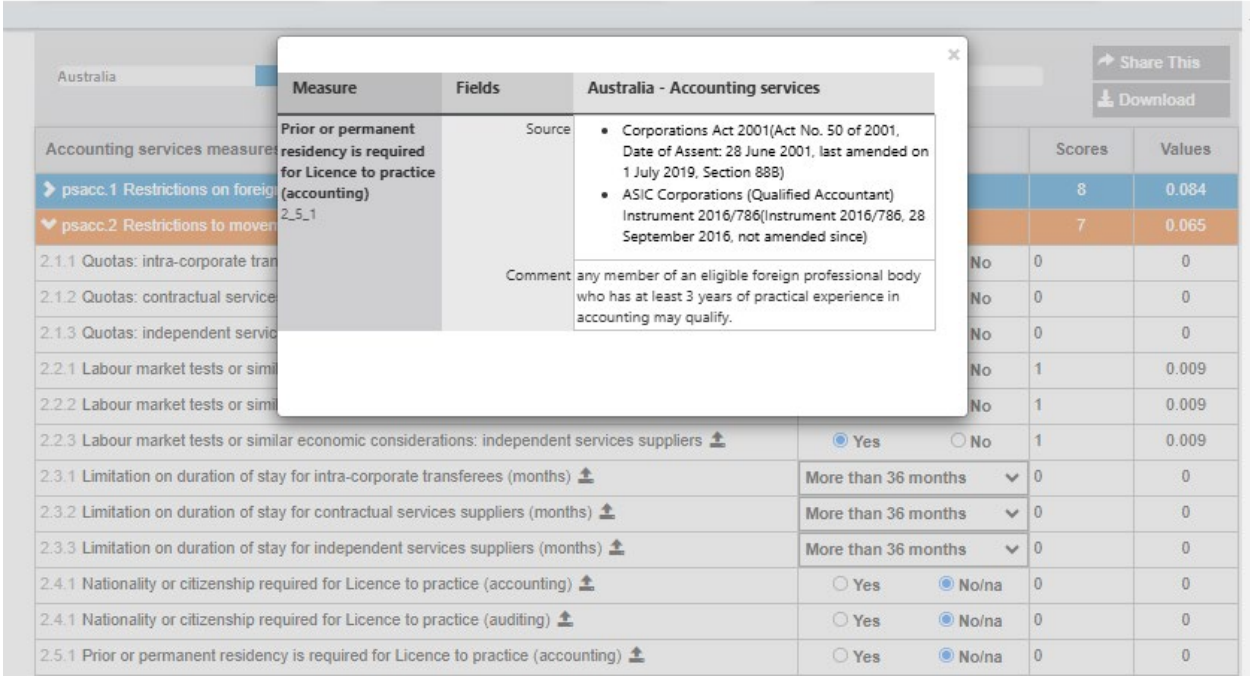
Accounting services measures	Search a measure / Search / Cancel	Answers	Scores	Values
psacc.1 Restrictions on foreign entry			8	0.084
psacc.2 Restrictions to movement of people			7	0.065
2.1.1 Quotas: intra-corporate transferees		○ Yes ◉ No	0	0
2.1.2 Quotas: contractual services suppliers		○ Yes ◉ No	0	0
2.1.3 Quotas: independent services suppliers		○ Yes ◉ No	0	0
2.2.1 Labour market tests or similar economic considerations: intra-corporate transferees		◉ Yes ○ No	1	0.009
2.2.2 Labour market tests or similar economic considerations: contractual services suppliers		◉ Yes ○ No	1	0.009
2.2.3 Labour market tests or similar economic considerations: independent services suppliers		◉ Yes ○ No	1	0.009
2.3.1 Limitation on duration of stay for intra-corporate transferees (months)		More than 36 months	0	0
2.3.2 Limitation on duration of stay for contractual services suppliers (months)		More than 36 months	0	0
2.3.3 Limitation on duration of stay for independent services suppliers (months)		More than 36 months	0	0
2.4.1 Nationality or citizenship required for Licence to practice (accounting)		○ Yes ◉ No/na	0	0
2.4.1 Nationality or citizenship required for Licence to practice (auditing)		○ Yes ◉ No/na	0	0
2.5.1 Prior or permanent residency is required for Licence to practice (accounting)		○ Yes ◉ No/na	0	0
2.5.1 Prior or permanent residency is required for Licence to practice (auditing)		◉ Yes ○ No/na	1	0.009
2.5.2 Domicile required for Licence to practice (accounting)		○ Yes ◉ No/na	0	0
2.5.2 Domicile required for Licence to practice (auditing)		○ Yes ◉ No/na	0	0
2.6.1 Laws or regulations establish a process for recognising qualifications gained abroad (accounting)		◉ Yes ○ No/na	0	0

Figure 2 depicts a screenshot of the policy simulator for the first measures under *Restrictions to movement of people* (policy area 2). It shows the answer, the score, and the value of each measure. Note that it is possible for the user to change the answers and explore how a different policy would affect the score, value, and overall index. The use cases and exercises below will do just that.

Finally, clicking on the small arrows displayed for each measure reveals documentation of the answer, with a link to the law or regulation from which it has been drawn. It also shows comments that clarify how the regulation has been interpreted for the purpose of filling in the regulatory database. Figure 3 shows the information behind the measure on residency requirements for accounting services in Australia, with the comment indicating the lack of a restriction.

Figure 3. The APEC Index Policy Simulator, Reference to Laws and Regulations



SECTION 2: THE APEC INDEX – USE CASES

The use cases and exercises in this toolkit are based on the 2024 issue of the APEC Index, which reflects regulations and legislation in force in 2023. The APEC Index Policy Simulator is a living instrument that changes when economies reform, liberalize or in other ways change policies affecting the scores on the APEC Index. The use cases take specific economies as examples. The purpose of this approach is not only to highlight interesting features of the APEC Index using real cases, but also to be able to provide an answer key to the guided questions, confirming understanding of the selected exercises.[4] Users are encouraged to experiment with their own and other economies.

Each use case starts with relatively simple exercises that explore the impact of specific policy measures and then progresses to more advanced analyses. The first use cases are applied to services sectors that are mainly subject to general horizontal trade-related policy measures, while the more complex sectors that are subject to sector-specific prudential or pro-competitive policies are introduced later. Thus, each use case starts with a simple policy change with specific user instructions and next moves to exercises that require a more comprehensive understanding of the APEC Index. These exercises are marked as Challenges. Solutions to selected exercises are provided in the Appendix**.**

USE CASE 1: THE EFFECT OF HORIZONTAL MEASURES IN DIFFERENT SECTORS: COMPARING REQUIREMENTS FOR THE MOVEMENT OF NATURAL PERSONS IN COMPUTER SERVICES AND DISTRIBUTION

INTRODUCTION

Computer services are at the forefront of the digital transformation of services, both in their own right and in providing inputs for the digital transformation of other sectors. Computer services providers sometimes need to deploy staff to foreign customers to set up and integrate software at the customers' premises, to support and train customers in new applications, and to help solve problems.

The APEC Index captures restrictions on the movement of people as defined by the World Trade Organization (WTO) General Agreement on Trade in Services (GATS) mode 4: presence of natural persons and distinguishes between three categories of natural persons in the APEC index:

- Intra-corporate transferees
- Contractual services suppliers
- Independent services suppliers

The imposition of labor market tests and allowed durations of stay are two of the measures evaluated in this policy area. Although labor market tests are always considered a barrier, the APEC Index database reveals that economies that impose such tests tend to allow entrants to stay longer than economies that do not have a test. Duration of stay and labor market tests are horizontal measures found in every services sector; this exercise will test different combinations for computer services.

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[4] Many of the exercises have several possible solutions and some solutions follow logically from other exercises. To encourage experimentation and learning, some exercises are left to the users to find solutions on their own or in group work.

EXERCISES

Please select computer services as the sector and Papua New Guinea (PNG) as the economy in the APEC Index Policy Simulator.[5] Locate PNG's current actual score for computer services. This numerical score aggregates the effects of all listed measures and can be found in the line labeled *Papua New Guinea*.

1. Change measure *2.2.1 Labour market tests or similar economic considerations: intra-corporate transferees* from *Yes* to *No*. Record PNG's new score for computer services in the APEC Index. The new score can be found in the line labeled *Papua New Guinea edited*.
2. Maintaining the change made in Exercise 1, change measure *2.3.1 Limitation on duration of stay for intra-corporate transferees (months)* from *between 12 and 36 months* to *more than 36 months*. Record the new score on the APEC Index.
3. Maintaining the changes made in the previous exercises, make the same changes to the two other categories of natural persons (*contractual services suppliers* and *independent services suppliers*). Record the new score on the APEC Index.
4. Create scenarios a) and b) described below and record the resulting new scores on the APEC Index:
    a. Labor market test + long duration:
        i. *Labor market tests or similar economic considerations*: *Yes* in all three categories of natural persons.
        ii. *Limitations on duration of stay* is *more than 36 months* in all three categories of natural persons.
    b. No labor market test + short duration
        i. *Labor market tests or similar economic considerations*: *No* in all three categories of natural persons.
        ii. *Limitations on duration of stay* is *less than 12 months* in all three categories of natural persons.
5. Which (scenario 4a or 4b) is more trade restrictive? How do the scenarios compare to the current actual index score?
6. Discuss possible trade-offs between restricting entry though labor market tests and restricting duration of stay.

CHALLENGES

7. Using the drop-down menu for sectors at the top of the screen, change the sector from computer services to distribution services. Repeat exercises 1-3 for distribution services. Record the new scores on the APEC Index. Explain why the index value changed less for distribution services.
8. Compare PNG to three APEC economies of your choice by using the *compared to* device in the policy simulator and clicking the check boxes for the three comparison economies. Select *see more* to view the scores for all comparison economies. How would PNG's score change in computer services if it implemented the reforms simulated in exercises 1-3 while the other

[5] The APEC Index Policy Simulator is currently available at https://apecservicesindex.org/policysimulator/. A full screen version is currently available at https://sim.oecd.org/Default.ashx?lang=En&ds=STRI_APEC.

economies do not change any policies? Consider the change in PNG's score itself as well as PNG's position relative to the three comparison economies.

9. Restrictions on mode 4 can be politically sensitive. Try to find a combination of policy changes that do not include a measure under *cs.2 Restrictions to movement of people* and that would reduce PNG's APEC Index score for computer services to about 0.215.
10. Repeat the exercises for your own economy.
11. Compare PNG to your own economy using the *compared to* device in the policy simulator. Create scenarios where your economy and PNG have the same overall score, benchmarking to the least restrictive of the two economies.

USE CASE 2: ADAPTING LOCAL AND COMMERCIAL PRESENCE REQUIREMENTS IN THE ERA OF DIGITALLY DELIVERABLE SERVICES

INTRODUCTION

With the digital transformation of services and the proliferation of high-speed internet and digital platforms, services can increasingly be delivered electronically across borders (mode 1). To facilitate such cross-border trade, many free trade agreements include an obligation that, subject to any scheduled reservations, commits economies to allow such trade without requiring the foreign suppliers to have a "local presence" such as a subsidiary or representative office.[6] Such local presence requirements tend to disproportionately affect small businesses that can't afford to establish offices around the world.

EXERCISES

Please select Korea as the economy in the APEC Index Policy Simulator.

1. Examining measures under *Restrictions on foreign entry* across different sectors, in which sectors does Korea have commercial presence requirements?
2. Examining measures under *Restrictions on foreign entry* across different sectors, in which sectors does Korea have local presence requirements?
3. What is the difference between commercial and local presence?
4. Change the commercial and local presence requirements to *No* in all sectors where such requirements are in place. Note the change in the score in each sector. Explain why the change in the APEC Index differs for the same measures across sectors.
5. Repeat the same exercise for your own economy.

CHALLENGES

6. In the accounting sector in Korea, measure *1.16.1 Commercial presence is required in order to provide cross-border services (auditing)* is answered *No,* but scored with the number 1. Which measure(s) overrides the absence of commercial presence requirement? Change that measure in such a way that the *No* answer on commercial presence is scored zero.

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[6] For example, see CPTPP Article 10.6, RCEP Article 8.11, and USMCA Article 15.6

7. Discuss possible reasons why commercial presence is required in some sectors but not in others. How does the digitization of services change the need for commercial presence requirement?

USE CASE 3: REFORMS AND LIBERALIZATION OF ENGINEERING SERVICES

INTRODUCTION

Engineering services are a professional, high-skilled technical sector. In many economies, including the Philippines, it is a regulated profession for which a license is required to provide the service. To obtain a license, a professional typically must have obtained an engineering degree at a university or technical college, completed practice under the supervision of a licensed engineer, and passed an examination. Licensed engineers have exclusive rights to offer a set of services that defines the engineering profession. The implementation of regulations is often delegated to professional bodies, which monitor conduct, organize aptitude tests and training courses to bring engineers up to speed with the latest technologies and developments in their field. The objective of such regulation is to ensure quality such that buildings and infrastructure are safe and thus to protect consumers.

This market structure was established decades and sometimes even centuries ago when professional services were rarely considered as tradeable. However, many engineering services can now be traded over digital networks and are no longer confined to the local market.

The opportunities to enter foreign markets and work in multidisciplinary, international teams to build infrastructure and buildings can be restricted by the requirements and heterogeneity of licensing systems. Although a licensure requirement per se is not considered a trade barrier in the APEC Index, certain requirements related to licensure are, such as a citizenship requirement or the requirement to be licensed in a specific jurisdiction in order to own shares in an engineering firm. In addition, the lack of a clear path to obtaining a license can itself impose substantial costs on engineering firms that provide services in several economies. This is why the list of measures in the APEC Index is much longer for engineering services than for computer services, where licensing is much less common.

EXERCISES

Please choose engineering services and the Philippines on the APEC Index Policy Simulator.

1. Change all the restrictions on public procurement (*3.2.1-3.2.8*) under the *Other discriminatory measures* policy area. Note the change in the index value.
2. Restore all measures to their original values.
3. Change *1.4.5 Managers must be national* from *Yes* to *No*. Why didn't the index score change?
4. Change *1.7.1 Acquisition and use of land and real estate by foreigners is restricted* from *Yes* to *No*. Why didn't the index score change?
5. Change *2.25.1 Memo: Licence or authorisation is required to practice* from *Yes* to *No*. Note how the APEC Index scores changed, and how many and which measures automatically changed from a score of one to a score of zero.
6. Change the licensing requirement from Exercise 5 back to *Yes*. Change *1.1.1 Foreign equity restrictions: maximum foreign equity share allowed (%)* from *zero* to *exactly 100*. How many

additional measures automatically changed from a score of 1 or more to a score of 0? Explain why.

7. Repeat the exercise for your own economy.
8. Experiment with reforms to the licensing and qualification requirements in your own economy.

CHALLENGES

9. Explore which measures need to be changed for the index score to go down to about 0.25 with the fewest possible number of changes.
10. Changing one single measure from *Yes* to *No* will completely close the Philippines engineering sector. Which measure? Explain why this single change closed the sector completely.
11. How would the full implementation of the APEC Engineer Framework[7] change the index score for intra-APEC trade?

USE CASE 4: BENCHMARKING TO IDENTIFY REFORM OPTIONS IN THE COURIER SERVICES SECTOR

INTRODUCTION

Monopolies represent the absence of competition. Although monopolies are less common than they once were, depending on their scope, they can exert a strong influence on a sector, and the APEC Index reflects this. One sector in which one still finds a number of monopolies is in postal services, which constitutes part of the courier services sector. Courier services are provided through commercial presence and across borders, often by air. Private courier services typically offer similar services as postal services, and the APEC Index captures measures related to the interface between these dynamics. The APEC Index can be used for benchmarking the effect of possible reforms across different policy areas.

This exercise compares the United States and Malaysia in courier services. Malaysia does not have a monopoly in any segment of postal or courier services, while the United States maintains a postal monopoly for letters.[8]

EXERCISES

Please choose the United States and the courier services sector. Choose Malaysia in the *compare to* device.

1. Note the difference in score between the United States and Malaysia on the total APEC Index and by policy area.
2. Identify the policy measures where the United States has a higher score than Malaysia.
3. Please go to *1.25.1 Memo: Market share under monopoly in the sector (value between 0 and 1, e.g., for 50% enter 0.5)*. What does it mean that the United States has a value of 0.233 in this memo?

---

[7] The APEC Engineering Framework is a system for recognition of professional engineers across the APEC region. Professional engineers that qualify in their home economy may register in the APEC Engineering Register, which allows them to provide engineering services in all participating economies.

[8] Private suppliers in the United States may deliver letters if they charge more than six times the cost of a first-class stamp or if the letter weighs more than 0.35 kg.

4. Change *1.25.1 Memo: Market share under monopoly in the sector (value between 0 and 1, e.g., for 50% enter 0.5)* to 0. Explain what happened to the index value.
5. Change *1.25.1 Memo: Market share under monopoly in the sector (value between 0 and 1, e.g., for 50% enter 0.5)* to 0.5. Explain what happened to the index value.
6. Return to *1.25.1 Memo: Market share under monopoly in the sector (value between 0 and 1, e.g., for 50% enter 0.5)* back to 0.233. Without changing *1.25.1* to 0, try to lower the United States' overall score to match Malaysia's score. How many restrictions did you have to remove, and what is the resulting difference between Malaysia's score and the adjusted U.S. score?
7. Repeat the exercises for an economy of your choice in which there is a postal monopoly.

CHALLENGES

8. Imagine that a European courier services company is looking for business opportunities in your economy. What would it need to do to establish an affiliate?
9. Which, if any, type of services would it be excluded from offering?

USE CASE 5: FACILITATING TRADE IN GOODS THROUGH REFORMS IN THE LOGISTICS CARGO HANDLING SECTOR

INTRODUCTION

Logistics provide essential services in any goods-centered value chain, and an open and competitive logistics sector is an important trade facilitating feature for any economy. The cost and timeliness of transport and delivery services, whether maritime, air, or land, depend crucially on cost-effective and timely logistics services. Logistics services are complex and often subject to a different set of regulations depending on the mode of transport they support. Nevertheless, as multimodal transport with seamless transfer across modes becomes state-of-the-art and an important factor determining the competitiveness of goods trade, it is crucial to ensure that trade-related measures do not intentionally or unintentionally lead to delays, unreliable delivery times, and higher trade costs. A robust competition regime helps achieve these goals, and the following exercises illustrate some avenues through which certain competition measures in the APEC Index work in relationship to others, using the cargo-handling sector for PNG as an example.

EXERCISES

Please choose logistics cargo-handling and Papua New Guinea on the APEC Index Policy Simulator.

1. Change the following measures under *Iscar.4 Barriers to competition*:
    a. *4.24.2 Contracts for service provision are awarded through competitive bidding (cargo-handling at airports)* from *No* to *Yes*.
    b. *4.24.2 Contracts for service provision are awarded through competitive bidding (cargo handling at ports)* from *No* to *Yes*.
    c. *4.5.1 Prices or fees are regulated (cargo-handling)* from *Yes* to *No*.
    d. *4.7.1 Restrictions on advertising (cargo-handling)* from *Yes* to *No*.
    e. *4.8.2 Separation of accounts is required (cargo-handling at airports)* from *No* to *Yes*.
    f. *4.8.2 Separation of accounts is required (cargo-handling at ports)* from *No* to *Yes*.
    g. *4.9.3 Cross-subsidisation is prohibited (cargo-handling at airports)* from *No* to *Yes*.
    h. *4.9.3 Cross-subsidisation is prohibited (cargo-handling at ports)* from *No* to *Yes*.

2. Restore all PNG cargo-handling measures to their original values. Imagine that the Government of PNG decides to privatize state-owned firms in the logistics cargo-handling sector. Change the measures needed to capture this policy reform and record the new index score.
3. Which measures changed automatically (after the changes made in Exercise 2)? Explain why.
4. Restore all PNG cargo-handling measures to their original values and choose *compared to* New Zealand. Change all the measures where PNG has a restriction where New Zealand does not. Why did this result in a lower score for PNG than New Zealand?

CHALLENGES

5. Use benchmarking to obtain an index score for your economy that is as close as possible to another economy of your choice. Start by selecting a comparison economy that has a lower score on the APEC Index relative to your economy. Create at least two different scenarios, without introducing any new barriers in your economy, or changing any measures in the comparison economy. Try to create the scenario with the fewest policy changes.
6. Does privatization of the state-owned enterprise in Exercise 2 have an impact on any other APEC Index sector in PNG? Please navigate to that sector in the policy simulator and make the necessary changes to affected measures.

USE CASE 6: LICENSING AND MODES OF SUPPLY IN ACCOUNTING SERVICES

INTRODUCTION

The APEC Index for the accounting services sector also includes auditing services. The sector, particularly auditing, is regulated through licensing in most economies. As a complement to the role of the regulatory authorities, professional bodies may lead activities such as developing ethical standards and aptitude tests, monitoring conduct, and organizing courses to keep auditors and accountants abreast with new developments in the profession, as well as changes in the legal framework affecting auditors and accountants. There are also international standard setting bodies, the largest being the International Accounting Standard Board (IASB). The best practice for an economy is to adopt international standards. This use case explores the crucial role of licensing for market access through all modes of supply.

EXERCISES

Please choose accounting services and Thailand on the simulator

1. Change measure *1.1.4 Equity restrictions applying to not licensed individuals or firms (100, <50, >50, 0) (accounting)* from *zero* to *exactly 100%*. Note the change in score and explain how this change opened the accounting sector to foreign suppliers.
2. Please change the measure from the prior exercise back to zero. Then, change *1.1.4 Equity restrictions applying to not licensed individuals or firms (100, <50, >50, 0) (auditing)* from *zero* to *exactly 100%*. Note the change in score and explain how this change opened the auditing sector to foreign suppliers. Why was the change in index score larger than the same change for accounting?
3. Please change the measure from the prior exercise back to zero. Then, change measure *1.1.4* from *zero* to *exactly 100%* for both accounting and auditing at the same time. How did the index change? How did market access change?

4. Restore all measures to their original values. Then, change *2.4.1 Nationality or citizenship required for Licence to practice (accounting)* from *Yes* to *No*. Note the change in score and explain in what way this change opened the accounting sector to foreign suppliers.
5. Please change the measure from the prior exercise back to *Yes*. Then, change *2.4.1 Nationality or citizenship required for Licence to practice (auditing)* from *Yes* to *No*. Note the change in score and explain in what way this change opened the auditing sector to foreign suppliers. Why was the change larger for auditing than for accounting?
6. Please change the measure from the prior exercise back to *Yes*. Then, change measure *2.4.1* from *Yes* to *No* for both accounting and auditing at the same time. How did the index change?
7. Compare the results from Exercise 6 and Exercise 3. Which mode of supply is most important for auditing and accounting services?

CHALLENGES

8. Using the *compared to* device, and by changing measures for Thailand, adjust Thailand's index score to be as close to Singapore's score as possible. Try to make as few changes as possible.
9. Imagine that you are a licensed accountant in Singapore, you work in a Singaporean accounting firm, and you have recently acquired a client in Thailand. After Thailand has implemented the reforms from Exercise 8, consider available modalities for Singaporean accountants to provide services in Thailand. What would you need to do to audit your Thai client in the circumstances outlined below?
    a. Through an affiliate in Thailand.
    b. Through an online accounting software combined with a visit to the client for about 2 weeks per year.
10. Now imagine that you are a licensed auditor in Thailand, you work in a Thai auditing firm, and you have recently acquired a client in Singapore. What would you need to do to audit your Singaporean client?
    a. Through an affiliate in Singapore.
    b. Through an online accounting software, combined with a visit to the client for about two weeks per year.

USE CASE 7: TELECOMMUNICATIONS AND PRO-COMPETITIVE REGULATION

INTRODUCTION

Telecommunications services are the backbone of the digital economy. It is subject to several market imperfections, including economies of scale and network effects. Network effects imply that the network is more attractive the more customers have already joined. This can be a considerable entry barrier to newcomers, including foreign suppliers. Therefore, best practice regulation includes an analysis of the market to determine if suppliers with significant market power (dominant suppliers) exist, and in which segments of the market they have market power (e.g. fixed wholesale, mobile retail). If such a supplier exists, it should be required to give competitors, including foreign ones, access to its network at non-discriminatory conditions.

EXERCISES

Please choose telecommunications and the Philippines on the APEC Index Policy Simulator.

The Philippine regulator has designated a dominant supplier in all market segments covered by the APEC Index (measures *4.25.17* through *4.25.23*)

1. Imagine in the next market analysis, the regulator finds that effective competition has been established in the fixed line retail market, the mobile origination market, and the fixed line origination market. Please change the answers from *Yes* to *No* on memo measures *4.25.20* (fixed origination), *4.25.21* (fixed, retail) and *4.25.22* (mobile origination). Which scores were affected and how did the APEC Index change?
2. When competition has been established, best practice regulation is to roll back asymmetric regulation. Which regulatory changes are needed to restore the APEC index to 0.291? Explain the rationale behind these changes.
3. Imagine a foreign mobile company that wants to establish in the Philippines. Would it be possible for it to acquire a local firm? If not, what are the options for the company to establish a commercial presence in the Philippines? Which conditions would it need to fulfill?
4. Is it possible for a mobile virtual network operator (MVNO) i.e., a mobile operator that does not own the network over which it provides its services, to provide cross-border mobile services in the Philippines? Please make the necessary changes in the APEC index to open for cross-border mobile services. How much would the index value change?
5. Repeat the exercises for your own economy.

CHALLENGES

6. Telecommunications companies often offer internet services and TV as one package to consumers. Could a foreign telecommunications supplier offer such a package of services in your economy? If so, what conditions would it need to meet? If not, what are the restrictions that prevent it from offering the package?
7. Repeat the exercise for a different economy of your choice.

USE CASE 8: MEASURES TO SUPPORT ADVANCEMENTS AND NEW TECHNOLOGIES IN CONSTRUCTION AND RELATED ENGINEERING SERVICES

INTRODUCTION

Building and infrastructure projects are prone to cost overruns, delays, and rework. Therefore, economies are increasingly interested in exploiting state-of-the-art construction management practices, including through the use of foreign firms. One aspect of state-of-the-art modern construction is the application of building information modeling (BIM) standards, an information sharing platform that has the potential to vastly reduce delays and rework, and therefore also substantially reduce costs, including for government-funded projects. When fully implemented, the builder, the regulatory authorities, the construction firm, and its subcontractors share information in real time. A critical condition for this to work is that all relevant building documents are machine readable in formats that are interoperable. It is also essential that data can flow freely between the participants and the platform.[9]

[9] A full implementation of the BIM standard package involves the use of five-dimensional modelling of a building project. 3-dimensional models of buildings and infrastructure ensure that e.g., pipes and electricity cables do not

This use case explores how the services trade policy framework could enhance further advances in the building industry through trade in construction and related engineering services in Malaysia and Japan.

EXERCISES

Please choose construction and Malaysia on the APEC Index Policy Simulator.

1. Change the following measures from Yes to No
    a. *1.16.2 Local presence is required for cross-border supply*
    b. *2.5.11 Residency is required to practice (engineering)*
    c. *2.6.21 Foreign construction engineers are required to take a local examination (engineering)*
    d. *3.2.1 Public procurement: Explicit preferences for local suppliers*
2. How did these changes affect the index? Explain why these measures would enhance the implementation of BIM standards.
3. Please go back to the actual score on the APEC index for Malaysia. Choose *compared to* Japan. Change the measures where Malaysia is more restrictive than Japan such that the two economies have the same score. Note since Japan has some restrictions where Malaysia does not, you can keep some restrictions. Discuss which ones you would like to keep and why.
4. Repeat the exercise for your own economy.

CHALLENGES

Imagine a foreign firm has the lowest bid for building a hospital in Malaysia. The bidder envisages advanced use of BIM standards with teamwork and information sharing between architects, engineers, construction managers, data analysts and many more.

5. What conditions would the supplier have to fulfill to secure the contract?
6. What would be the options for the architects involved in the project?
7. Repeat this challenge for your own economy.

USE CASE 9: RESTRICTIONS ON FOREIGN LAWYERS AND OPENING TO INTERNATIONAL LAW

INTRODUCTION

Legal services – like accounting, auditing, and engineering from previous exercises – is a regulated profession in most economies. Many economies make a distinction between domestic law and international law and have a more open trade policy regime for international law.

In the Philippines, legal services are completely closed to foreign suppliers. This exercise first opens up international law, then allows so-called fly-in-fly-out services by lifting the restriction on temporary licenses. It highlights the fact that since foreign lawyers could not enter in the first place, there are few explicit restrictions on foreign lawyers in the Philippines.

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collide, that windows and doors are in the right place before the construction starts. The fourth dimension is a timeline which is automatically plugged into the schedules of the construction firms and their subcontractors. The fifth dimension is the budget which is linked to the procurement process.

EXERCISES

Please choose legal services and the Philippines on the APEC Index Policy Simulator

1. Change *2.4.1 Nationality or citizenship required for Licence to practice (international law)* from *Yes* to *No* and *1.1.1 Foreign equity restrictions: maximum foreign equity share allowed (%) (international law)* from *zero* to *exactly 100%*
2. Which other measures changed automatically? Explain why.
3. Malaysia does not have "equity restrictions" or a "nationality requirement" (as defined in the APEC Index legal services measures) for practicing international law. Which of the measures that were automatically lifted in Exercise 1 for the Philippines are in place in Malaysia?
4. Restore the simulator to the original value. Then change *2.7.1 A temporary licensing system is in place* from *No* to *Yes*.
5. Which other measures changed automatically? Explain why.
6. Malaysia has temporary licensing in place. Which of the measures that were automatically lifted in Exercise 4 are in place in Malaysia?
7. Find at least two different scenarios to lower the Philippines' index score to about 0.35 without eliminating licenses for domestic law.

CHALLENGES

1. Consider a Chilean legal services firm seeking opportunities for providing legal services in your economy (or, if your economy is Chile, pick any other APEC economy).
2. Which, if any, legal services would it be allowed to deliver digitally from Chile? Under which conditions?
3. Which, if any, legal services would it be allowed to provide within your economy? Under which legal form?
4. If the Chilean law firm has a commercial presence in your economy, would it be possible for it to hire local lawyers?
5. What would be the requirements for the Indian law firm if it wants to bring management from India to its commercial presence in your economy?

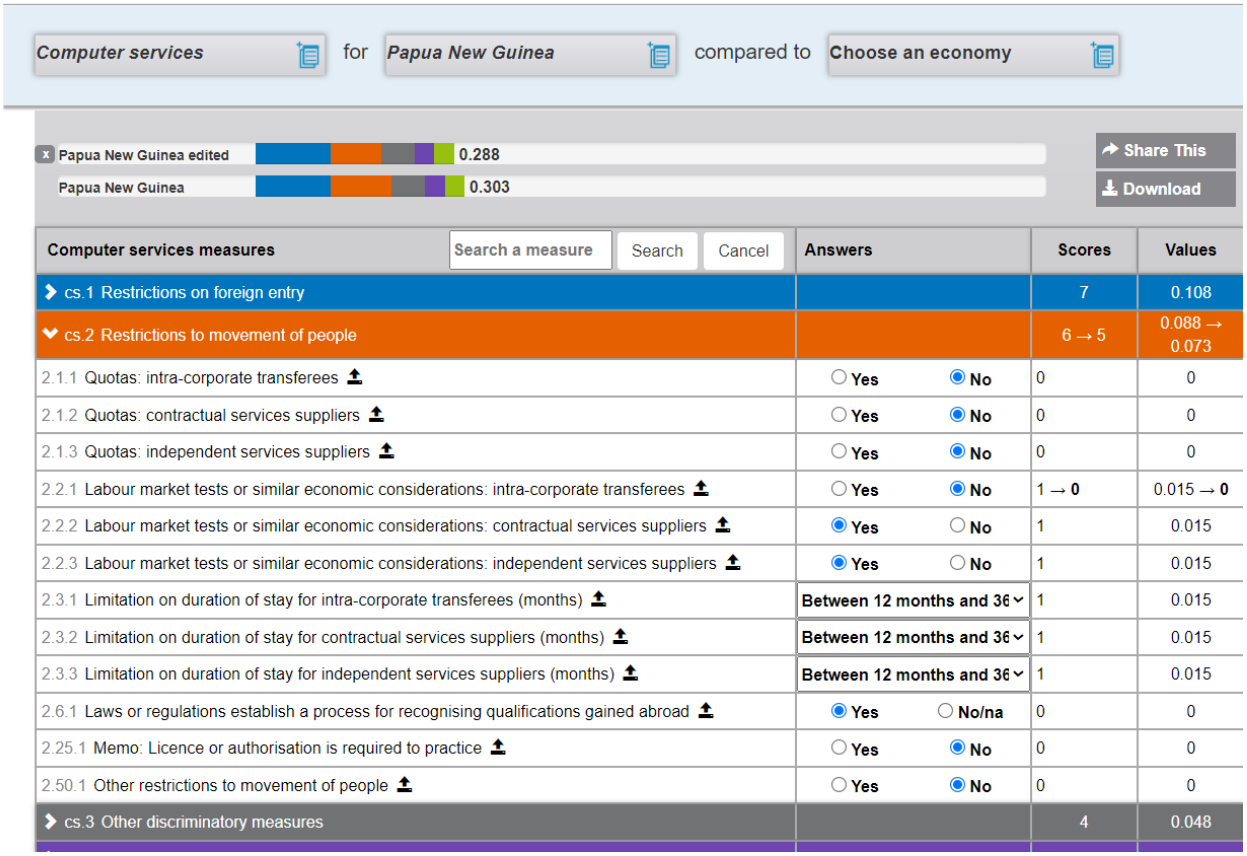
APPENDIX: SOLUTIONS TO SELECT EXERCISES

USE CASE 1: THE EFFECT OF HORIZONTAL MEASURES IN DIFFERENT SECTORS: COMPARING REQUIREMENTS FOR THE MOVEMENT OF NATURAL PERSONS IN COMPUTER SERVICES AND DISTRIBUTION

EXERCISE 1

The index value would change from 0.303 to 0.288 (or by 15 basis points[10]) (Figure A1).

Figure A1. Use case 1, exercise 1

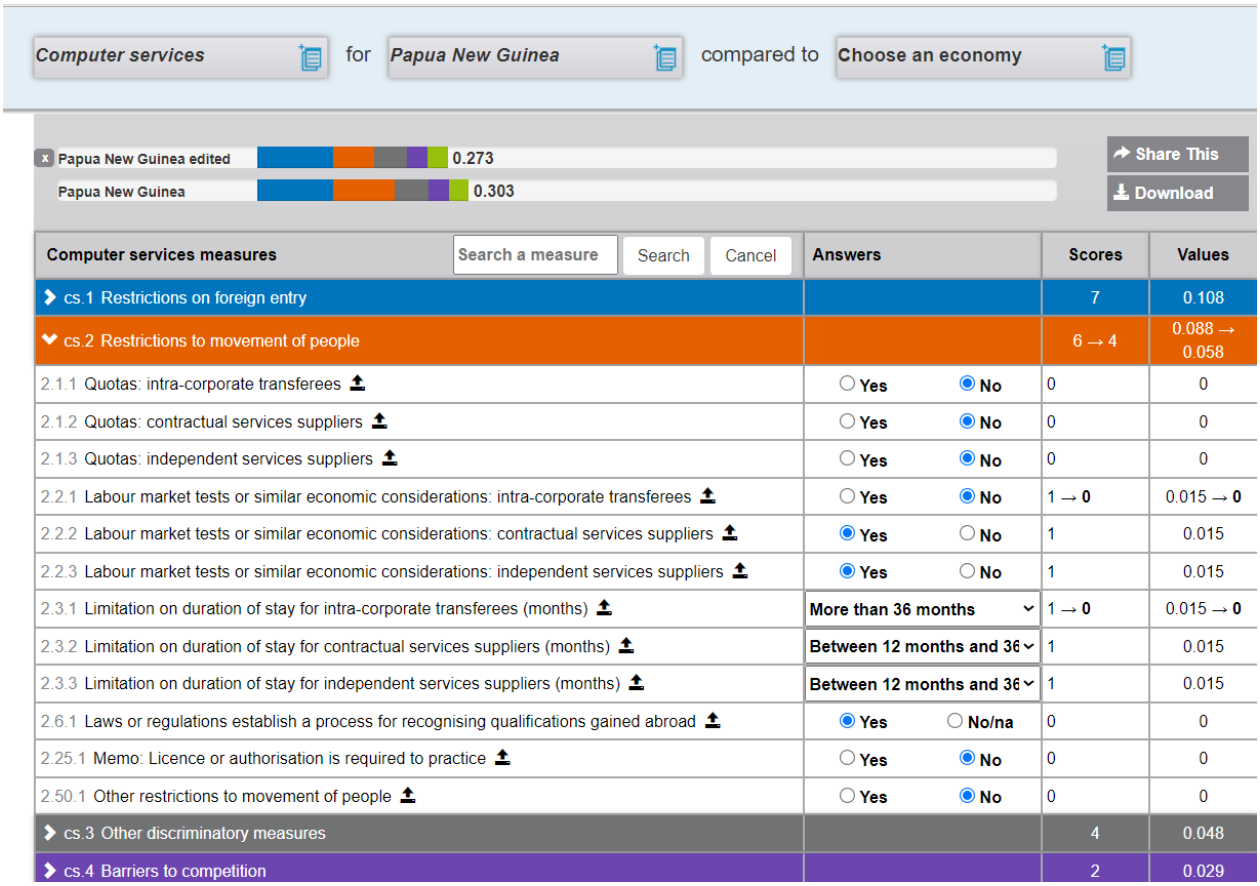


EXERCISE 2

The index value would change from 0.288 to 0.273 (additional 15 basis points) (Figure A2).

[10] A basis point corresponds to 0.001 and is a commonly used concept in the literature.

Figure A2. Use case 1, exercise 2



Computer services for Papua New Guinea compared to Choose an economy

Papua New Guinea edited 0.273
Papua New Guinea 0.303

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Computer services measures	Search a measure / Search / Cancel	Answers	Scores	Values
cs.1 Restrictions on foreign entry			7	0.108
cs.2 Restrictions to movement of people			6 → 4	0.088 → 0.058
2.1.1 Quotas: intra-corporate transferees		○ Yes ● No	0	0
2.1.2 Quotas: contractual services suppliers		○ Yes ● No	0	0
2.1.3 Quotas: independent services suppliers		○ Yes ● No	0	0
2.2.1 Labour market tests or similar economic considerations: intra-corporate transferees		○ Yes ● No	1 → **0**	0.015 → **0**
2.2.2 Labour market tests or similar economic considerations: contractual services suppliers		● Yes ○ No	1	0.015
2.2.3 Labour market tests or similar economic considerations: independent services suppliers		● Yes ○ No	1	0.015
2.3.1 Limitation on duration of stay for intra-corporate transferees (months)		More than 36 months	1 → **0**	0.015 → **0**
2.3.2 Limitation on duration of stay for contractual services suppliers (months)		Between 12 months and 36	1	0.015
2.3.3 Limitation on duration of stay for independent services suppliers (months)		Between 12 months and 36	1	0.015
2.6.1 Laws or regulations establish a process for recognising qualifications gained abroad		● Yes ○ No/na	0	0
2.25.1 Memo: Licence or authorisation is required to practice		○ Yes ● No	0	0
2.50.1 Other restrictions to movement of people		○ Yes ● No	0	0
cs.3 Other discriminatory measures			4	0.048
cs.4 Barriers to competition			2	0.029

EXERCISE 3

The new index value would be 0.215 (down 88 basis points). Note that the scores are rounded, which explains why the change is 88, not 90 basis points).

EXERCISE 4

The new index values would be: a) 0.259 and b) 0.303.

EXERCISE 5

Scenario b with no labor market tests and duration of stay limited to less than 12 months is the most trade restrictive. This is because duration of stay less than 12 months is scored two times one. Note that in scenario b, the index value is back to 0.303. The easing of labor market test would be exactly counterbalanced by shorter duration of stay.

EXERCISE 7

Repeating exercises 1-3 for distribution service changes the score from 0.301 to 0.265, e.g., by 36 basis points (Figure A3). The reason why the impact is smaller in distribution services than in computer services is that there are more measures in the former, such that the contribution of each measure

under restrictions on the movement of people is 0.006 in distribution, compared to 0.015 in computer services.

Figure A3. Use case 1, exercise 7

Papua New Guinea edited 0.265
Papua New Guinea 0.301
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Distribution services measures	Search a measure / Search / Cancel	Answers	Scores	Values
ds.1 Restrictions on foreign entry			9	0.114
ds.2 Restrictions to movement of people			6 → 0	0.036 → 0
2.1.1 Quotas: intra-corporate transferees		Yes / No	0	0
2.1.2 Quotas: contractual services suppliers		Yes / No	0	0
2.1.3 Quotas: independent services suppliers		Yes / No	0	0
2.2.1 Labour market tests or similar economic considerations: intra-corporate transferees		Yes / No	1 → 0	0.006 → 0
2.2.2 Labour market tests or similar economic considerations: contractual services suppliers		Yes / No	1 → 0	0.006 → 0
2.2.3 Labour market tests or similar economic considerations: independent services suppliers		Yes / No	1 → 0	0.006 → 0
2.3.1 Limitation on duration of stay for intra-corporate transferees (months)		More than 36 months	1 → 0	0.006 → 0
2.3.2 Limitation on duration of stay for contractual services suppliers (months)		More than 36 months	1 → 0	0.006 → 0
2.3.3 Limitation on duration of stay for independent services suppliers (months)		More than 36 months	1 → 0	0.006 → 0
2.50.1 Other restrictions to movement of people		Yes / No	0	0
ds.3 Other discriminatory measures			7	0.043
ds.4 Barriers to competition			8	0.077
ds.5 Regulatory transparency			4	0.031

EXERCISE 9

Example: these changes would bring the index down to 0.211:

- Introduce transparency obligations: change measures *5.1.1* and *5.1.2* from *No* to *Yes*.
- Change 1.4.4 *Board of directors: at least one must be resident* from *Yes* to *No*
- Change 1.20.2 *Cross-border transfer of personal data is possible through 'open safeguards* from *No* to *Yes*. Note that this automatically changes measure *1.20.3* as well.

USE CASE 2: ADAPTING LOCAL AND COMMERCIAL PRESENCE REQUIREMENTS IN THE ERA OF DIGITALLY DELIVERABLE SERVICES

EXERCISE 1

Korea has commercial presence requirements for cross-border supply in the following sectors: commercial banking, non-life insurance, construction, courier services, engineering, customs brokerage, and telecommunications.

EXERCISE 2

Korea has local presence requirements for cross border supply in all sectors.

EXERCISE 3

Commercial presence includes subsidiaries and affiliates, while local presence requires a local representative.

EXERCISE 4

Removing commercial presence requirement for cross-border supply in construction lowered the index by 12 basis points from 0.206 to 0.194. Removing the commercial presence requirement for non-life insurance reduced the index by 9 basis points. The technical reason is simply that the number of measures is larger for insurance than for construction such that each measure gets a lower weight in the index.

EXERCISE 6

Measure *1.16.1 Commercial presence is required in order to provide cross-border services (auditing)* is answered *No* but scored 1. If we change the answer on *2.7.1 A temporary licensing system is in place (auditing)* from *No* to *Yes*, the score changes from 1 to 0 on commercial presence and the index value goes down to 0.733.

USE CASE 3: REFORMS AND LIBERALIZATION OF ENGINEERING SERVICES

EXERCISE 1

The index value went down from 0.643 to 0.61

EXERCISE 3

The index value did not change when the *managers must be national* requirement was lifted because foreign firms are not allowed to enter the Philippines in the first place.

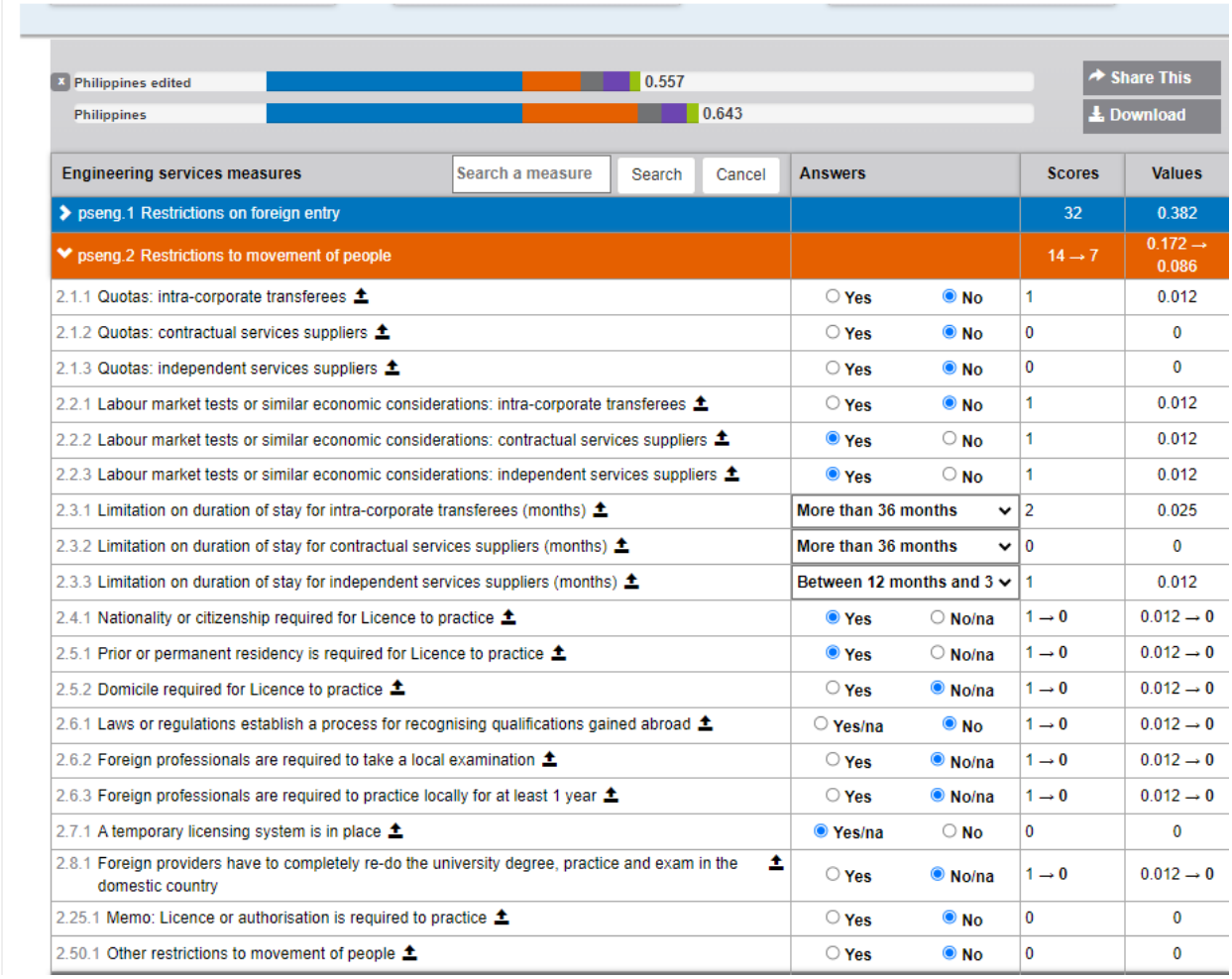
EXERCISE 4

The index did not change because establishing a commercial presence is not allowed in the first place, and acquisition of land is therefore not relevant.

EXERCISE 5

The index changed from 0.643 to 0.557 as every restriction related to discriminatory license requirements changed from 1 to zero (seven changes) (Figure A4). Note also that the measure that was changed, the licensing requirements, scores zero whether the answer is Yes or No. It is a memo linked to the questions about licensing procedures and requirements.

Figure A4. Use case 3, exercise 5



Philippines edited 0.557
Philippines 0.643
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Engineering services measures	Search a measure / Search / Cancel	Answers	Scores	Values
pseng.1 Restrictions on foreign entry			32	0.382
pseng.2 Restrictions to movement of people			14 → 7	0.172 → 0.086
2.1.1 Quotas: intra-corporate transferees		Yes / No	1	0.012
2.1.2 Quotas: contractual services suppliers		Yes / No	0	0
2.1.3 Quotas: independent services suppliers		Yes / No	0	0
2.2.1 Labour market tests or similar economic considerations: intra-corporate transferees		Yes / No	1	0.012
2.2.2 Labour market tests or similar economic considerations: contractual services suppliers		Yes / No	1	0.012
2.2.3 Labour market tests or similar economic considerations: independent services suppliers		Yes / No	1	0.012
2.3.1 Limitation on duration of stay for intra-corporate transferees (months)		More than 36 months	2	0.025
2.3.2 Limitation on duration of stay for contractual services suppliers (months)		More than 36 months	0	0
2.3.3 Limitation on duration of stay for independent services suppliers (months)		Between 12 months and 3	1	0.012
2.4.1 Nationality or citizenship required for Licence to practice		Yes / No/na	1 → 0	0.012 → 0
2.5.1 Prior or permanent residency is required for Licence to practice		Yes / No/na	1 → 0	0.012 → 0
2.5.2 Domicile required for Licence to practice		Yes / No/na	1 → 0	0.012 → 0
2.6.1 Laws or regulations establish a process for recognising qualifications gained abroad		Yes/na / No	1 → 0	0.012 → 0
2.6.2 Foreign professionals are required to take a local examination		Yes / No/na	1 → 0	0.012 → 0
2.6.3 Foreign professionals are required to practice locally for at least 1 year		Yes / No/na	1 → 0	0.012 → 0
2.7.1 A temporary licensing system is in place		Yes/na / No	0	0
2.8.1 Foreign providers have to completely re-do the university degree, practice and exam in the domestic country		Yes / No/na	1 → 0	0.012 → 0
2.25.1 Memo: Licence or authorisation is required to practice		Yes / No	0	0
2.50.1 Other restrictions to movement of people		Yes / No	0	0

EXERCISE 6

The index value went down to 0.443, and the score on eight additional measures changed from one to zero under *Restrictions on foreign entry*; two additional measures under *Restrictions to movement of people* went from one to zero and one went from two to zero; and one measure under *Barriers to competition* went from one to zero. This illustrates an important point. Having a liberal regime on mode 3 such as no joint venture requirements, no restrictions on legal form or no screening only matters if foreign individuals or enterprises are allowed to own firms in the Philippines in the first place.

EXERCISE 9

Change *1.1.1 Foreign equity restrictions: maximum foreign equity share allowed (%)* from *zero* to *exactly 100%*; and *2.25.1 Memo: Licence or authorisation is required to practice* from *Yes* to *No*. This brought the index down to 0.25.

EXERCISE 10

Change *2.7.1 A temporary licensing system is in place* from *Yes* to *No*. Before that change, foreign engineers might obtain a temporary license for working on a project in the Philippines. But only citizens of the Philippines can obtain a regular license, and only holders of a regular license may own shares in engineering companies, be partners of such enterprises or offer engineering services in the market.

EXERCISE 11

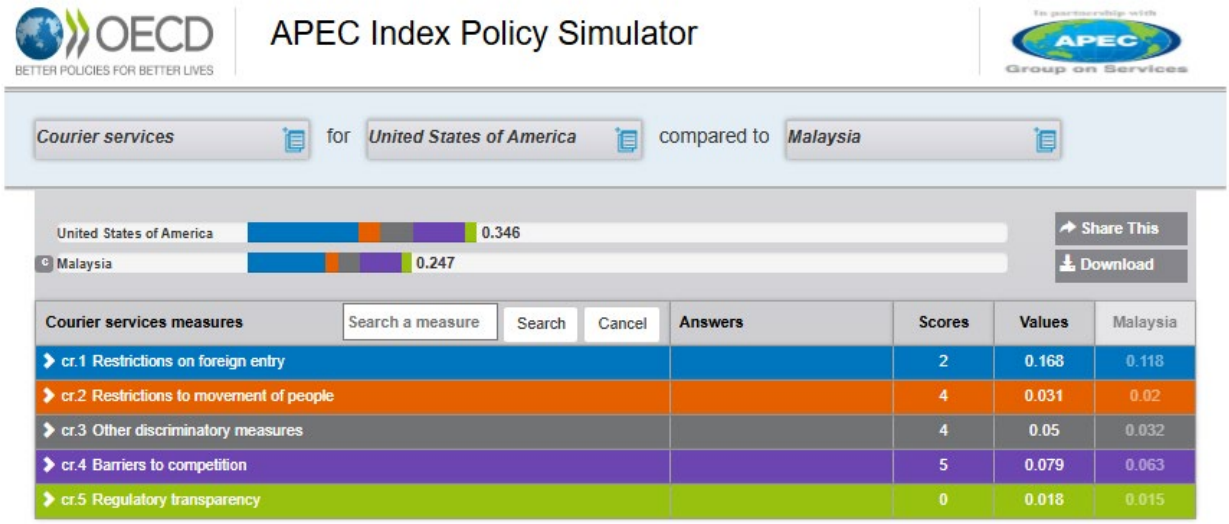
The full implementation of the APEC Engineering Framework would change *2.4.1 Nationality or citizenship required for Licence to practice* from *Yes* to *No*. This automatically changes all the measures related to recognition of foreign engineers. Since the Philippines has "nationality requirements" (as defined in the APEC Index engineering services measures) as a condition for obtaining an engineering license, other restrictions are obsolete. Removing that requirement alone would therefore ensure that qualifications and the licenses obtained in other APEC economies are recognized. The index goes down by 109 basis points to 0.534. Note that this change only affects intra-APEC trade (not on a Most Favored Nations basis).

USE CASE 4: BENCHMARKING TO IDENTIFY REFORM OPTIONS IN THE COURIER SERVICES SECTOR

EXERCISE 1

Before any changes, the United States' score is 0.346, which is 99 basis points above Malaysia's score of 0.247 (Figure A5). Within the policy areas, the greatest difference in absolute numbers is found in *cr.1 Restrictions on foreign entry*. The greatest difference in percentage terms is in *cr. 2 Restrictions to movement of people.*

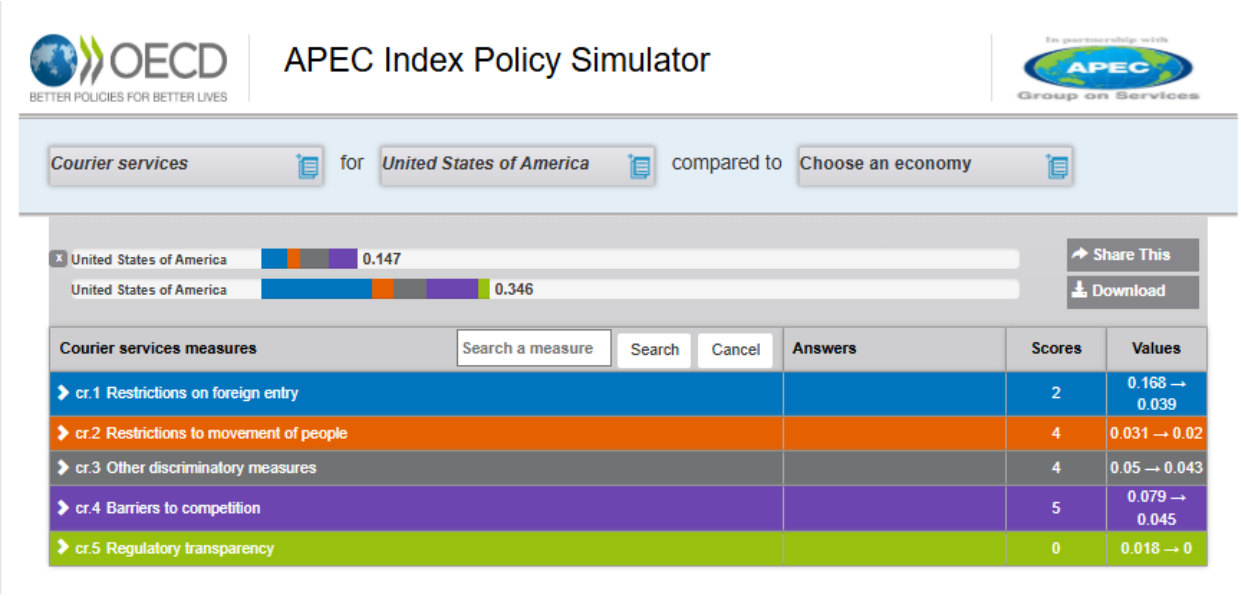
Figure A5. Use case 4, exercise 1



EXERCISE 3, 4, AND 5

In the United States, the postal services have a monopoly on 23% of the market. This is scored such that 23% of the market is closed to foreign suppliers, no matter what other measures exist. When lifting this monopoly by changing *1.25.1 Memo: Market share under monopoly in the sector (value between 0 and 1, e.g., for 50% enter 0.5)* to 0, the contribution to all other measures changes, resulting in a new index score of 0.147 (Figure A6). Conversely, if we raise the share of the market reserved for the monopoly to 50%, the APEC index increases to 0.573.

Figure A6. Use case 4, exercise 4



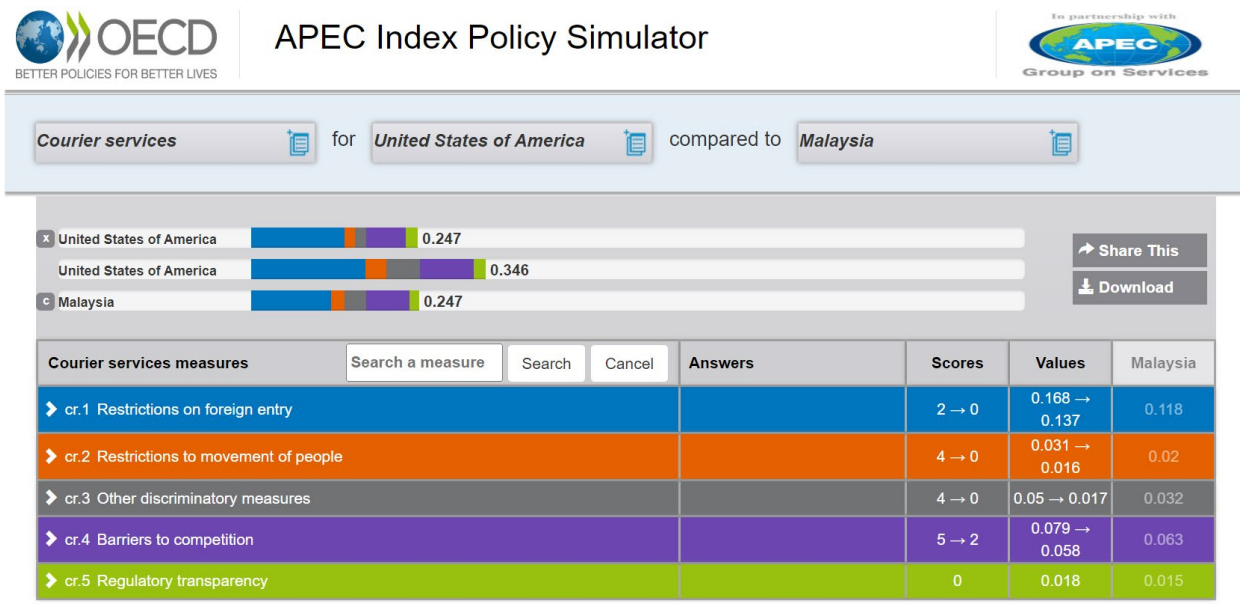
EXERCISE 6

Starting from *cr.1 Restrictions on foreign entry* and proceeding down the list of measures, without changing *1.25.1 Memo: Market share under monopoly in the sector (value between 0 and 1, e.g., for 50% enter 0.5)*, changes to the following measures results in a new U.S. index score of 0.247, equal to Malaysia's index score (Figure A7):

- *1.1.3 There are limits to the proportion of shares that can be acquired by foreign investors in publicly-controlled firms*
- *1.5.2 Screening exists without exclusion of economic interests*
- *2.1.2 Quotas: contractual services suppliers*
- *2.1.3 Quotas: independent services suppliers*
- *2.2.2 Labour market tests or similar economic considerations: contractual services suppliers*
- *2.2.3 Labour market tests or similar economic considerations: independent services suppliers*
- *3.1.1 Foreign suppliers are treated less favourably regarding taxes and eligibility to subsidies*
- *3.2.1 Public procurement: Explicit preferences for local suppliers* (Note: this update automatically changes *3.2.3 Public procurement: The procurement process affects the conditions of competition in favour of local firms* from a score of 1 to a score of 0)
- *3.2.2 Public procurement: Procurement regulation explicitly prohibits discrimination of foreign suppliers*

- *4.3.1 National, state or provincial government control at least one major firm in the sector* (Note: this update automatically changes *4.4.1 Publicly-controlled firms are exempted from the application of the general competition law* from a score of 1 to a score of 0)
- *4.8.5 1 The designated postal operator obtains preferential tax or subsidy treatment.*

Figure A7. Use case 4, exercise 4

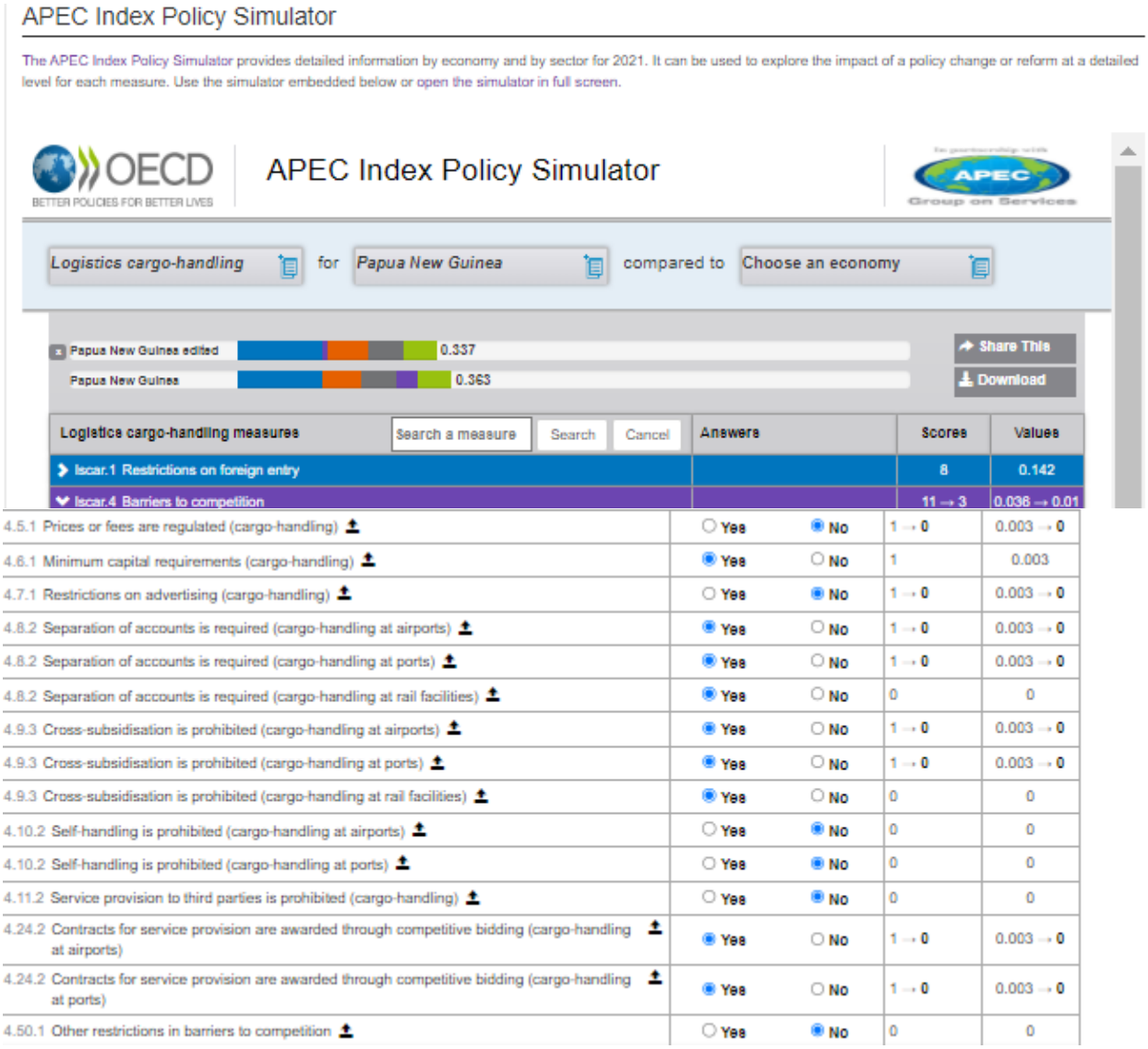


USE CASE 5: FACILITATING TRADE IN GOODS THROUGH REFORMS IN THE LOGISTICS CARGO HANDLING SECTOR

EXERCISE 1

The changes lowered the index by 26 basis points from 0.363 to 0.337 (Figure A8). These changes have introduced more competition since the managing body of airports, ports, or other facilities provides cargo-handling services. If the managing body subsidizes its cargo-handling activities, other cargo-handling suppliers are at disadvantage. The prohibition of cross-subsidization is one tool to prevent this problem. Accounting separation is a tool to monitor the enforcement.

Figure A8. Use case 5, exercise 1



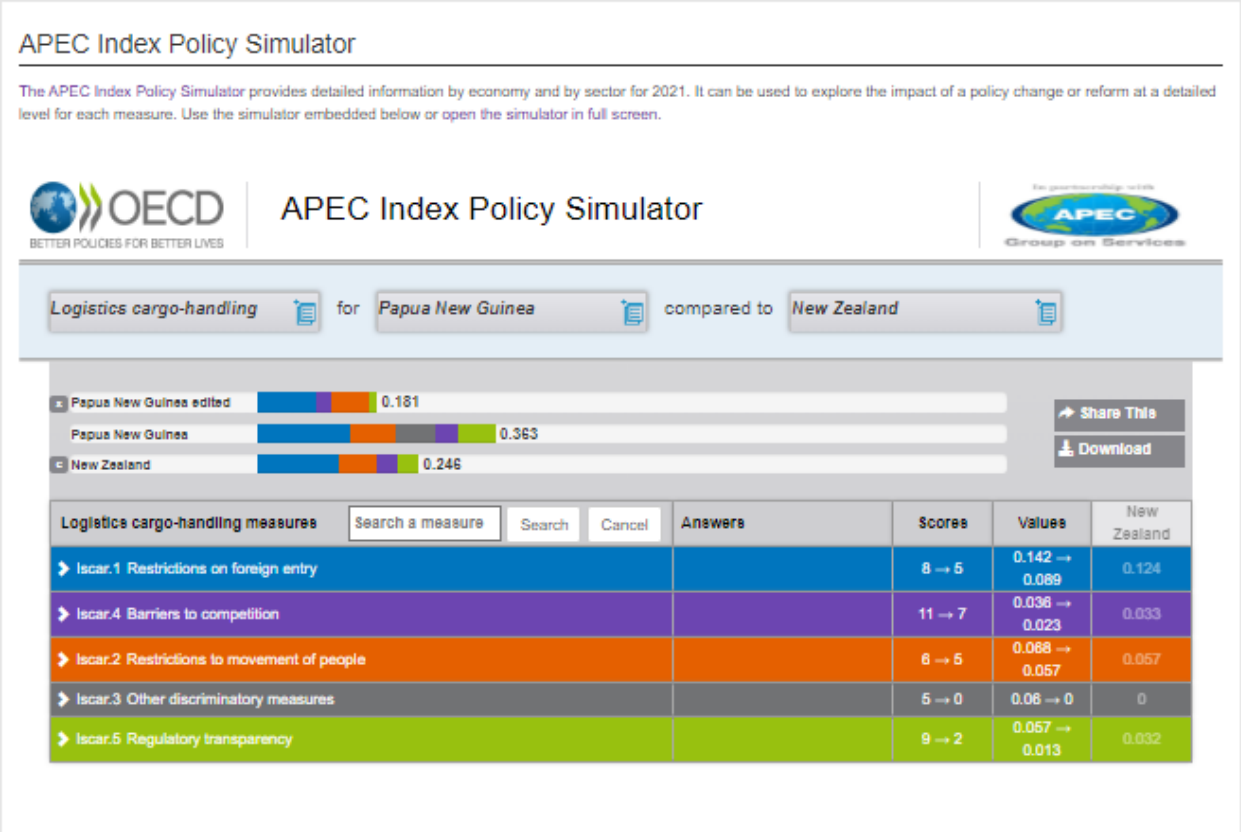
EXERCISES 2 AND 3

To reflect the policy reform, the user should change measure *4.3.1 National, state or provincial government control at least one major firm in the sector (cargo-handling at airports)* from *Yes* to *No*, and *4.3.1 National, state or provincial government control at least one major firm in the sector (cargo-handling at ports)* from *Yes* to *No*. Measures *1.1.3 There are limits to the proportion of shares that can be acquired by foreign investors in publicly-controlled firms (cargo-handling air)* and *1.1.3 There are limits to the proportion of shares that can be acquired by foreign investors in publicly-controlled firms (cargo-handling ports)* changed automatically from 1 to 0. The index score went down 42 basis points by these changes alone, from 0.363 to 0.321.

EXERCISE 4

Changing all the more restrictive measures would give PNG a lower score than New Zealand because New Zealand has some restrictions that PNG has not (Figure A9).

Figure A9. Use case 5, exercise 4



EXERCISE 6

The state-owned enterprises providing cargo handling services are Air Niugini and PNG Ports Corporation. The former also provides air transport services and storage and warehousing at airports. It therefore affects the APEC Index for air transport and logistics storage and warehousing as well. PNG Ports Corporation provides port services recorded under maritime transport services and storage and warehousing at ports.

USE CASE 6: LICENSING AND MODES OF SUPPLY IN ACCOUNTING SERVICES

EXERCISE 1

Allowing non-licensed accountants to own shares in accounting firms opens to mode 3 (commercial presence) and reduces the index to 0.661.

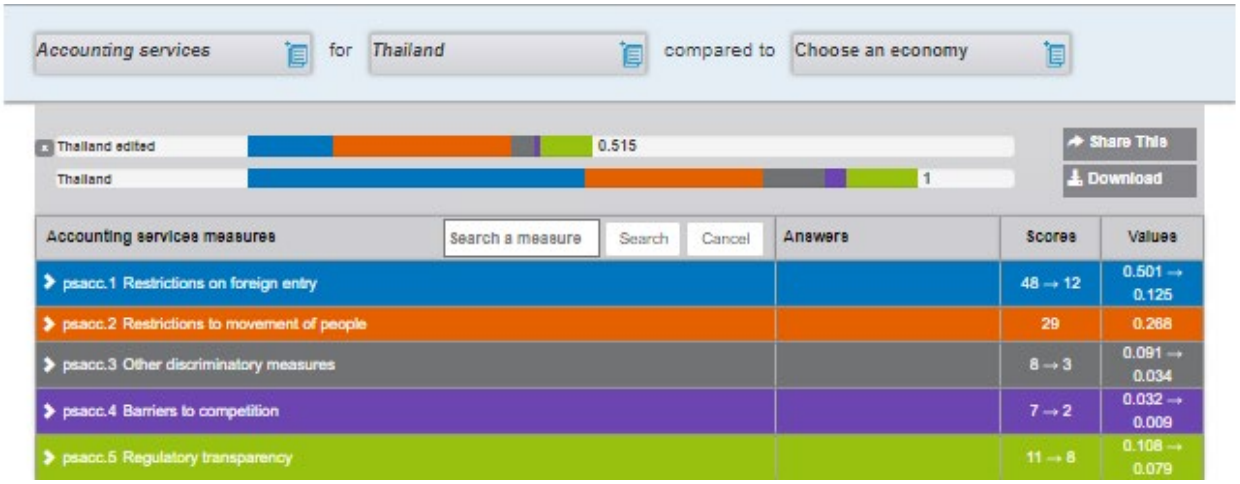
EXERCISE 2

Allowing non-licensed auditors to own shares in auditing firms opens to mode 3 (commercial presence) and reduces the index to 0.546.

EXERCISE 3

The index score went down to 0.515 (Figure A10). The distribution of changes across policy areas is shown in Figure A10. Recall that only two measures under *Restrictions on foreign entry* were changed. However, all non-restrictive measures are scored one when there is no way foreign suppliers may enter the market. Opening to mode 3 (commercial presence) switches off this conditional scoring.

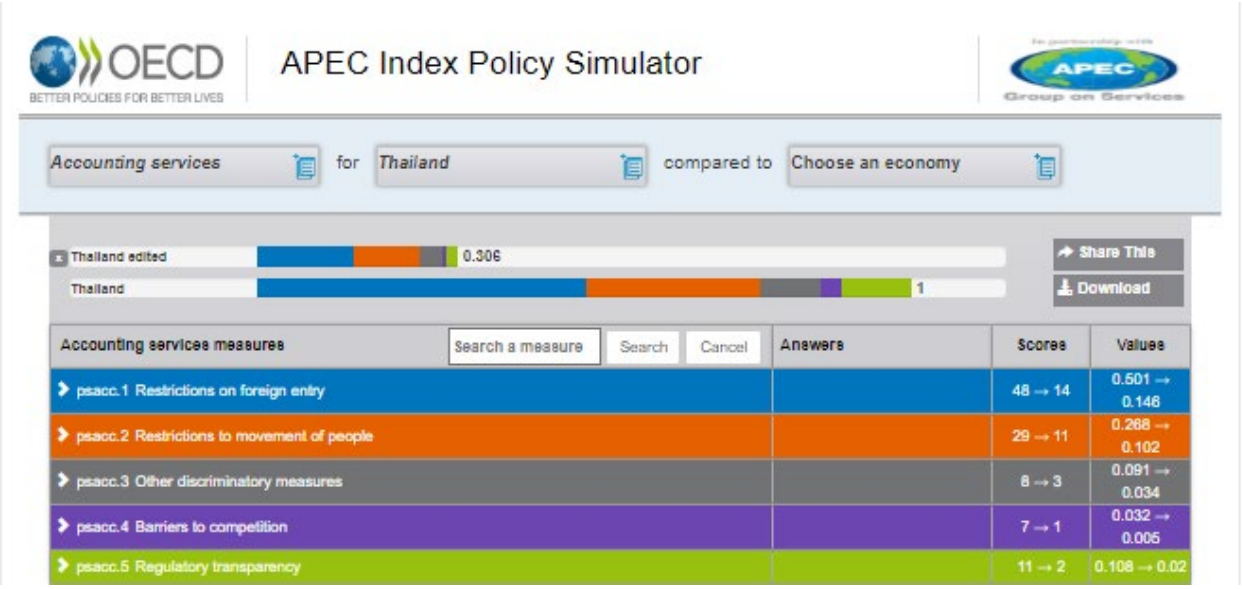
Figure A10. Use case 6, exercise 3



EXERCISE 4 TO 7

A change in *2.4.1 Nationality or citizenship required for Licence to practice (accounting)* from *Yes* to *No* lowered the index to 0.502, while the same change for auditing reduced the index to 0.387. Changing both requirements at the same time gave an index score of 0.306 (Figure A11). This change opens the sector to mode 4 while unblocking the automatic score on other modes that are not subject to explicit restrictions.

Figure A11. Use case 6, exercise 6



USE CASE 7: TELECOMMUNICATIONS AND PRO-COMPETITIVE REGULATION

EXERCISE 1

The index value rose to 0.349 following the change in market structure. The reason is that regulation is no longer needed and if retained stifles rather than helps competition.

EXERCISE 2

The regulation that needs to be rolled back to restore the score (0.291) are all price regulations, reference offer requirements and vertical separation requirements in the markets that are found to be competitive (measures *4.22.1, 4.22.2, 4.22.4, 4.22.5, 4.23.1* and *4.24.1*).

USE CASE 8: MEASURES TO SUPPORT ADVANCEMENTS AND NEW TECHNOLOGIES IN CONSTRUCTION AND RELATED ENGINEERING SERVICES

EXERCISE 1 AND 2

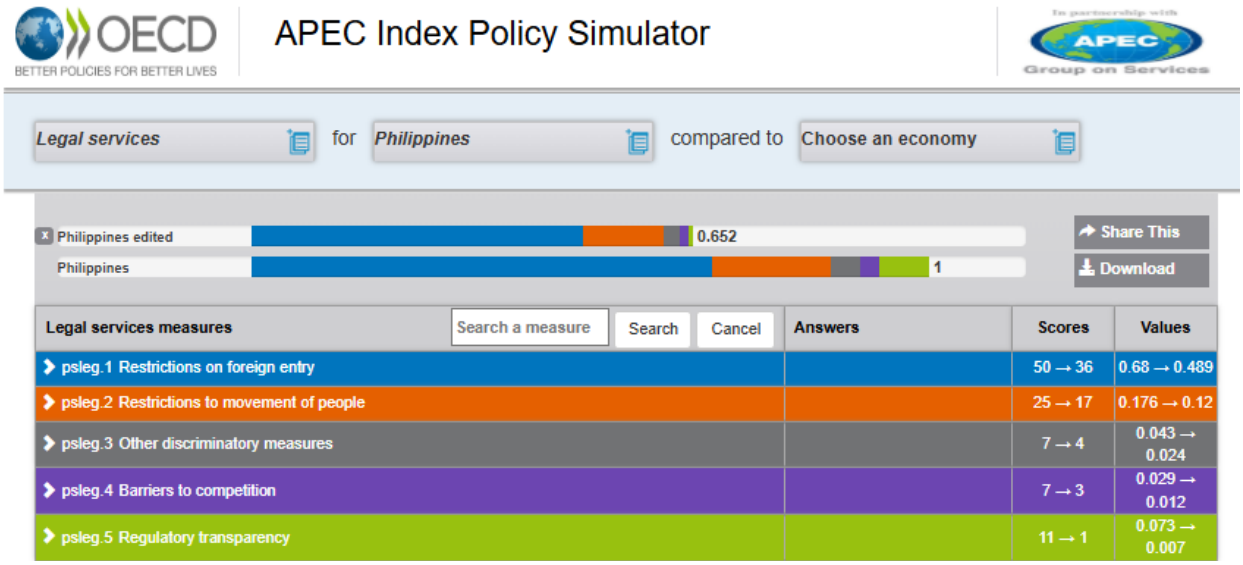
The index score would go down to 0.181 and would help implement BIM standards by liberalizing trade through modes 1 and 4 and increasing the mobility of construction engineers. Malaysia already has an open regime for cross-border data flows which is also necessary for applications of the Internet of Things for building projects.

USE CASE 9: RESTRICTIONS ON FOREIGN LAWYERS AND OPENING TO INTERNATIONAL LAW

EXERCISE 1 AND 2

Changing *2.4.1 Nationality or citizenship required for Licence to practice (international law)* from *Yes* to *No/na* opens the sub- sector to cross-border trade and trade through movement of people. The index value drops from 1 to 0.747 from this reform alone, changing the score on 30 measures from a score of 1 to a score of 0.
Changing *1.1.1 Foreign equity restrictions: maximum foreign equity share allowed (%) (international law)* from zero to exactly 100% further brings down the index to 0.652 and automatically changes the score for three additional measures under the *psleg 1 Restrictions on foreign entry* policy area. The answer did not change for any of the measures that automatically changed from a score of 1 to a score of 0. Rather, they were now scored based on the answer, not based on the fact that another measure rendered them obsolete.

Figure A12. Use case 9, exercise 1



EXERCISE 3

The measures that are in place in Malaysia and that are automatically scored zero in the Philippines following the reforms simulated in Exercise 1 and Exercise 2 are:

- *1.2.41 Commercial association is prohibited between lawyers and other professionals*
- *2.3.2 Limitation on duration of stay for contractual services suppliers (months)*
- *2.5.2 Domicile required for Licence to practice (international law)*
- *3.50.1 Other restrictions in other discriminatory measures*
- *4.5.12 Fee-setting: mandatory minimum and/or maximum fees*
- *4.5.2 Fee-setting: recommended minimum and/or maximum fees*
- *5.9.2 Applicants must be informed of the final decision, including the reasons for denial of licences*
- *5.9.3 There is a maximum time allowed to the regulator for decisions on applications.*