The Investment Facilitation Index (IFI): Quantifying domestic investment facilitation frameworks

By Axel Berger, Ali Dadkhah, Florian Gitt, Zoryana Olekseyuk and Jakob Schwab

DRAFT – please do not cite or circulate without permission

Abstract

This paper introduces a new and unique data set for measuring the adoption of investment facilitation measures at country level. The Investment Facilitation Index (IFI) covers 101 individual investment facilitation measures, clustered in six policy areas, and maps their adoption for 142 economies. This paper presents the conceptual and methodological background of the IFI, provides a first analysis of the current level of adoption of investment facilitation measures across economies and illustrates the robustness of the index. The data suggests that economies with lower levels of adoption typically belong to the low-income and lower-middle-income country groups and are often located in Sub-Saharan Africa, Latin American and the Caribbean. The data constitutes a benchmark against which the design and impact of international agreements such as the Investment Facilitation for Development (IFD) Agreement, concluded by World Trade Organization (WTO) Members, can be assessed and can support implementation through guiding domestic-level assessments of needs in terms of technical assistance and capacity development.

Keywords: World Trade Organisation (WTO), Investment Facilitation for Development (IFD) Agreement, Foreign Direct Investment (FDI), Data

JEL codes F13, F21, F15, F23, F42, G28.

Acknowledgements

For their useful comments on the previous versions of the paper and on improvement of the IFI, we would like to thank Marc Bacchetta, Eddy Bekkers, Clara Brandi, Bernhard Hoekman, Juan Marchetti, Frederik Stender, Armin von Schiller and Heather Lynne Taylor-Strauss. The authors are grateful to the colleagues at the WTO Secretariat for support and collaboration in the update and extension of the IFI. Also, the authors appreciate all the comments and suggestions of the participants of the Experts Meeting on Investment Facilitation as well as of the respondents of a survey that enabled the creation of expert weights of investment facilitation measures.

1. Introduction

In 2017, groups of the World Trade Organization (WTO) Members launched several so-called Joint Statement Initiatives (JSIs) on a plurilateral basis. Such plurilateral negotiations, conducted by a subset of WTO Members in a specific issues area, represent an important option for reviving the negotiating function of the WTO and adapting its rulebook in the light of current and future global challenges, although there is criticism against plurilaterals, in particular from some developing countries.[1] Plurilateral negotiations are conducted in the areas of e-commerce, investment facilitation for development, micro-, small- and medium-sized enterprises (WTO, 2017), as well as on domestic regulation disciplines for trade in services (WTO, n.d.). The Investment Facilitation for Development (IFD) Agreement, which text-based negotiations were concluded in July 2023, is particularly interesting as it is the most inclusive of the four JSIs – involving around two thirds of the WTO Membership – driven mainly by developing-country Members and covering a subject matter that is new to the WTO.[2]

In the area of investment facilitation, WTO Members are entering uncharted territory. So far, the WTO rulebook covers investment to a lesser extent, mainly in the Agreement on Trade-Related Investment Measures (TRIMs) and the General Agreement on Trade in Services (GATS). As with trade facilitation, the IFD Agreement involve a turning away from the establishment of rigid rules in the form of investment protection or liberalisation enshrined in a dense network of more than 2,600 international investment agreements (IIAs) currently in force (UNCTAD, 2020). The focus of investment facilitation is on improving regulatory processes and domestic institutions and frameworks, defining good policy practices for the attraction and retention of foreign direct investment (FDI), and on establishing cooperative frameworks among governments as well as investors, in particular between developing countries (Hoekman, 2021). Beyond economic fundamentals such as market size, infrastructure and labour endowment, important enabling factors for FDI attraction in developing countries include the predictability, transparency and ease of regulatory environments (Kusek & Silva, 2017). Proponents of investment facilitation believe that binding multilateral commitments to investment facilitation can help to promote investment flows and enhance cooperation, with the ultimate goal of contributing to development (Hees & Cavalcante, 2017).

Despite the dynamic policy processes and the high hopes attached to multilateral rules on investment facilitation, a number of important questions remain unanswered. A key question relates to the scope of the concept. Often, it is defined in a negative way by distinguishing it from investment protection, liberalisation and investor-state dispute settlement (ISDS). What, however, are the elements that should be considered as a part of the investment facilitation concept? The shape of the recently concluded text of the IFD Agreement at the WTO provides one blueprint for a set of international investment facilitation measures. However, this negotiated outcome with all the compromises that were necessary along the way certainly only provides a sub-set of possible investment facilitation provisions. What elements does a comprehensive conception of

---

1 India and South Africa put forward a communication to the WTO's General Council arguing that plurilateral agreements are not consistent with WTO rules if they are not agreed consensually (WTO, 2021). In addition to this opposition in principle, other developing country Members fear that plurilateral agreements may restrict their policy space or undermine their development strategies.

2 A key feature of the WTO negotiations on investment facilitation is that they are driven by a group of predominantly middle-income developing countries, the "Friends of Investment Facilitation for Development" (including e.g. Argentina, Brazil, China, Kazakhstan, Russia) as well as the MIKTA grouping (Mexico, Indonesia, Korea, Turkey and Australia) (Berger et al., 2019). The traditional trade powers have played a rather passive role. The EU and Japan have recently engaged more actively in the negotiations at the WTO, while the USA has not been participating in the negotiations.

investment facilitation entail? And what do we know about their adoption across countries? While various investment facilitation reform initiatives are under way at the national, bilateral and regional level, often supported by international organisations (Calamita, 2020), we do not know the actual level of adoption at country level. How many investment facilitation measures have countries actually adopted and how large is the reform gap to the IFD Agreement or similar agreements being negotiated on the bilateral or regional level? And, finally, what is the potential economic impact of an IFD Agreement, or different scenarios thereof? Which countries are benefiting the most from the IFD Agreement? Empirical research on all these questions is scarce. One of the key impediments for empirical research on these questions has been the lack of data on the scope and adoption of investment facilitation measures.

This article introduces the updated Investment Facilitation Index (IFI), a new and unique data set that comprehensively measures the adoption of investment facilitation at country level for the year 2021.[3] We built upon a first version of the index (Berger et al., 2021), which has been conceptually revised and updated in collaboration with the WTO Secretariat. The updated IFI conceptualises investment facilitation along 101 measures, clustered in six policy areas, and documents their current adoption for 142 economies. The scope of the index thereby goes beyond the coverage of the IFD Agreement and beyond its signatories, representing economies of different income levels, geographical regions, and levels of development.

In addition to the contribution of the IFI for research on the scope, substance and impact of international investment facilitation disciplines, the index is a valuable tool for investors and investment promotion agencies to navigate and compare the investment regimes of a variety of countries. Furthermore, it allows governments and stakeholders to identify reform gaps in light of the negotiations of the IFD Agreement and it can be used to tailor technical assistance and capacity-development initiatives in developing countries, which form an integral part of the IFD Agreement. The IFI also provides the basis for analyses of the economic impacts of international agreements with investment facilitation provisions and the costs associated with their implementation.

The remainder of the paper is structured as follows: Section 2 introduces the conceptual and methodological underpinning of the IFI as well as the results of an expert survey that informs our weighting strategy. Section 3 uses the IFI data to analyse the adoption of investment facilitation measures across countries. Section 4 provides an overview of the six policy areas as well as key investment facilitation measures. A number of sensitivity analyses to the IFI are presented in Section 5. Section 6 concludes with implications for policy-making and research.

2. Methodology

2.1 Conceptualising investment facilitation

Investment facilitation covers the whole investment life cycle, from the pre-establishment phase during the entry process of foreign investments, including the streamlining and speeding-up of procedures, to the post-establishment phase, where the focus shifts to retaining and expanding investments, for example by mechanisms to prevent disputes and establish linkages between foreign investors and local companies. It is important to note that the proposals submitted for investment facilitation during the WTO negotiations do not contain a clear definition of investment facilitation. Also international organisations use different concepts to define investment facilitation (Polanco, forthcoming). While we concur with the approach of WTO Members during the negotiation of the IFD Agreement to exclude measures that deal with market access, investment

---

[3] The IFI data set can be obtained from Berger et al. (2023) available at https://doi.org/10.5281/zenodo.7755521.

protection or ISDS, we suggest the following positive definition: Investment facilitation involves a set of measures, mechanisms and actions that contribute to a more favourable national investment environment, with a strong emphasis on procedural or functional aspects and commitments to enhance cooperation and dialogue. More specifically, investment facilitation can be understood as a set of practical measures concerned with improving the transparency & predictability of investment frameworks, streamlining procedures related to foreign investors, and enhancing coordination and cooperation between stakeholders, such as the host- and home-country governments, foreign investors, domestic corporations, and societal actors (Berger & Gsell, 2019).

The construction of the updated IFI follows the framework of the WTO IFD Agreement[4] but at the same time goes beyond it by also drawing on other sources, such as international non-binding conventions and guidelines, in order to develop a broad conceptualisation of investment facilitation. Generally, investment facilitation builds on trade facilitation, which first became a topic at the WTO's 1996 Ministerial Conference in Singapore and led to the conclusion of the Trade Facilitation Agreement (TFA) in 2013 (WTO, 2013). While the concept of trade facilitation is relatively clearly defined, referring to streamlining and simplifying of international customs procedures *at the border*, investment facilitation is conceptually broader, referring to various measures and frameworks *behind the border* that aim to promote, facilitate and retain investment (Novik & de Crombrugghe, 2018). This becomes apparent when comparing the IFI to the Trade Facilitation Index (TFI) (OECD, 2018). While there are many conceptual overlaps – for example measures on the availability of information, use of focal points, disciplines on fees and charges, the streamlining of procedures and the promotion of cooperation – the TFI is primarily focused on border procedures and the role of border or customs agencies. Investment facilitation touches upon a broader range of regulations and agencies (see Berger et al., 2022a). Another key difference is that trade facilitation focuses mainly on reducing times and costs of trade. While streamlining of procedures is certainly a key goal of investment facilitation, its main focus is on having more transparent, predictable and cooperative investment frameworks.

In view of the particular focus on investment facilitation, as discussed above, the IFI differs from other indices in terms of its conceptualisation (Berger et al., 2021). Existing indices on investment or business activity mostly focus on measures of restrictiveness rather than on facilitation. For example, Golub (2003) examined the restrictiveness of FDI for Organisation for Economic Co-operation and Development (OECD) countries in 1998/2000 by examining rules on foreign equity, screening and approval procedure, and other restrictions including those on boards of directors, movement of people, and input and operational restrictions. On this basis the OECD developed the FDI Restrictiveness Index in 2003, which could be used on a stand-alone basis to assess the restrictiveness of FDI policies (see OECD Data, n.d.). The OECD updated the FDI Restrictiveness Index in 2010 by expanding the sectors covered and revising the way FDI measures are scored and weighted (Kalinova et al., 2010). In addition, the OECD has also developed a Services Trade Restrictiveness Index (STRI) which also focuses on restrictiveness and provides information on behind-the-border regulations affecting trade in services for 48 countries (see Grosso et al., 2015, and OECD, n.d.).

Another widely cited index in this context is the discontinued Doing Business index that has been published annually by the World Bank until 2021 (World Bank, 2020). The Doing Business index measured regulations affecting businesses in a broad range of countries. To some extent it conceptually overlapped with the IFI, in particular with regard to the procedures and times of regulations affecting business. It is, however, different to the IFI in that it also covers issues such as the paying of taxes or the protection of property rights. Most importantly, the Doing Business index followed the logic that less regulation is better for businesses; this is

---

[4] For an overview of the elements of the Agreement under negotiation at the WTO see Bernasconi-Osterwalder et al.(2020) and Jose (2023).

different from the focus of the IFI on enhancing transparency, predictability and cooperation, which requires not less but often *better* regulatory processes.

2.2 Construction of the index

Our conceptualisation of investment facilitation follows the first six text proposals that were submitted by WTO Members ahead of, or shortly after, the 11th WTO Ministerial Conference in 2017, which led to the adoption of the Joint Ministerial Statement on Investment Facilitation for Development (WTO, 2017a).[5] Moreover, following the WTO negotiations that started in September 2020[6] as well as various discussions in other fora,[7] the IFI concept of investment facilitation was updated and extended with, e.g., responsible business conduct and anti-corruption measures.[8]

The index is composed by six distinct policy areas: (A) Regulatory transparency & predictability, (B) Electronic governance, (C) Focal point & review, (D) Application process, (E) Cooperation, and (F) Responsible business conduct and anti-corruption. The IFI includes fine-grained data about the adoption of 101 investment facilitation measures, aggregated around these six policy areas considering their similarities, underlying shared components and fields where further distinctions are warranted.

Annex 1 illustrates all IFI measures, grouped by the six policy areas, and their mapping to the recent IFD Agreement text. Given our broad concept of investment facilitation for development, slightly more than 61% of all measures in the updated IFI can be mapped, while the rest goes beyond the coverage of the Agreement text. In particular, we additionally include detailed e-governance provisions important to investors, such as online business and tax registration, electronic signature, fully functioning single window mechanisms with the opportunity to pay all mandatory fees online, track the status of an application and receive online certificates for registration procedures. Moreover, we also include additional functions of the focal point, such as provision of alternative forms of dispute resolution and dispute prevention in close collaboration with government agencies, including frequent meetings with investors to mitigate conflicts and facilitate their resolutions, tracking the implementation of suggested solutions for foreign investment complaints; operation of the single window and user-friendly search/help function of the website; provision of corrective recommendations and expression of opinions regarding illegal and unfair administrative measures. In contrast to the IFD Agreement, where all provisions with regard to movement of business persons have been excluded during the final rounds of text negotiations, the updated IFI covers seven measures concerning this matter, e.g. online visa application, availability of information on current requirements for temporary entry of business visitors, possibility of multiple entry and renewal/extension, visa processing time, number of documents needed as well as business visa fees. In the field of cooperation, the IFI also goes beyond the IFD provisions

[5] Proposals were submitted by Russia on 30 March 2017 (WTO, 2017b), by Mexico, Indonesia, Korea, Turkey and Australia on 4 April 2017 (WTO, 2017c), by China on 21 April 2017 (WTO, 2017d), by the Friends of Investment Facilitation for Development on 21 April 2017 (WTO, 2017e), by Argentina and Brazil on 24 April 2017 (WTO, 2017f) and by Brazil on 31 January 2018 (WTO, 2018).

[6] Around 25 proposals on different elements of the WTO investment facilitation negotiations have been submitted so far, most of them not available to the public. A key exception has been the comprehensive proposals submitted by the EU on 25 February 2020 (WTO, 2020).

[7] For example, the IDOS/ITC capacity building project, see https://intracen.org/our-work/projects/investment-facilitation-for-development and https://www.idos-research.de/en/research/description//investment-facilitation-for-sustainable-development/ for details.

[8] See Berger et al. (2023) for more details regarding conceptual changes and methodological overview of the updated IFI.

by including, e.g., alignment and harmonisation of procedures and data requirements with neighbouring countries, mechanisms to support inter-agency coordination, regular dialog with investors and organisation of business-government networking events.

Most of the original proposals to the WTO focus on host-country measures. However, Sauvant and Hamdani (2015) indicate that, from the investors' perspective, transparency is not only important as far as host countries are concerned, but also in terms of the support offered to outward investors by their home countries. Home countries could facilitate outgoing FDI through various measures. Some of these include transparency measures, early support services or operational support (see Knoerich et al., 2022). The development of the IFI therefore takes a wider perspective to include not only host-country measures, but also core home-country measures.[9] China's proposal, for example, contains a provision for the facilitation of outward investment in the form of investment insurance and guarantees as well as political-risk coverage.

2.3 Coding scheme

To document the domestic adoption of each of the 101 investment facilitation measures in the IFI for 142 economies in 2021, a manual in-depth analysis of the current investment regimes was conducted. Data are drawn from publicly available sources, for example from government websites or those promoting investment, or from official publications such as investment acts and guides. In order to verify some of these data, a comparison has been made with the OECD TFI and STRI.[10] Although the scope of these two indices is different from the IFI, some of the measures in the IFI are similar to those in the TFI and STRI – usually horizontal measures that cover the entire regulatory system, including investment.[11]

After selecting the measures to enter each policy area and studying their characteristics, we need to normalise them in order to provide comparability, given that the available raw data varies in nature and scale. We have selected a scoring strategy that is as simple and transparent as possible and that matches the characteristics of the measures and the objective of the index. As pointed out by Nordås (2010a; 2010b), the crucial factor for preserving variation among countries from the underlying data is the scoring. Considering the different nature and scale of our data, the number of binaries (yes/no) and the need to keep as much variation as possible from the raw data, we adopt a multiple binary strategy with scores 0, 1 and 2. This is a simple and transparent method, and the loss of information when transforming continuous data to multiple binary data is limited (OECD, 2009). Also, this approach seeks to reflect not only the regulatory framework in the concerned countries but also the different stages of adoption of various investment facilitation measures.

However, the construction of binaries raises several challenges, depending on the nature of data (continuous or not), calling for the use of a threshold strategy in cases where no natural thresholds can be identified. Non-binary measures are broken down to multiple thresholds in order to reconcile the complexity of investment facilitation policies. For measures that are numerical in nature, the score can be determined by percentile rank (e.g., below the 30th percentile of the economies sample, between the 30th and 70th percentiles, on or above the

---

9 These include A.17 for insurance and guarantees and E.88 for cooperation in exchange of information with respect to investment opportunities and information on domestic investors.

10 For detailed description of the coding and validation process see data documentation (Berger at al., 2023).

11 For instance, both the TFI and IFI have a measure dealing with judicial independence. This is a horizontal measure that is applicable to the entire regulatory system.

70th percentile of the economies sample).[12] Among the 101 measures of the IFI, 68% are coded according to a 0, 2 scale, 26% according to a 0, 1, 2 scale and 7% according to thresholds. Most of the threshold measures (four out of seven) are implemented in the policy area application process.

2.4 Weighting scheme

The next challenge is the aggregation of individual measures into the overall IFI. In this step, we assign weights to the policy areas. To that end, a number of weighting schemes were considered following OECD, European Union & Joint Research Centre - European Commission (2008) and Grosso et al. (2015). Equal weights are the most common weighting scheme applied for constructing composite indicators. It is a transparent way of creating an index in the absence of any clear alternative. Equal weights as a scheme are not, however, free of judgement. The relative importance of each measure depends on how many measures are included and how individual measures are organised into sub-indicators, leaving rather a lot to subjective judgement or arbitrariness. Asking experts directly or indirectly involved in foreign investment is an alternative option for weighting investment facilitation measures. Such expert judgement has the advantage that relative importance can be captured in a more realistic and meaningful way. One objection to using expert judgement is subjectivity, which also applies to other methodologies and can be solved, for instance, by asking a large and diverse group of experts.

The weighting scheme used for the calculation of the IFI relies on expert judgment. A group of experts was asked to allocate 100 points among the six policy areas of the IFI depending on the importance of each area for attracting and retaining FDI. These are translated into weights by assigning the average points experts allocated to the policy area. Within each policy area, each measure contributes equally.[13] A total of 94 experts from international organisations, academia, private sector and governments participated in our survey.[14] Under the expert weights scheme, measures related to regulatory transparency & predictability and electronic governance contribute to more than two-fifth of the weight of the IFI (42%), which reflects the fundamental role of these two policy areas in investment facilitation. The weights for all areas, along with a more detailed description of their contents, are reported in Table 1.[15]

Tab. 1 Composition of the IFI

Policy area	Description	Expert weight, %
A. Regulatory transparency & predictability	Provide a full, clear and up-to-date picture of the investment regime, including advance notice of proposed changes. Promote legislative simplification including plain language drafting.	23.02

[12] For instance, measure C.40 under policy area Focal Point & Review deals with the efficiency of the legal framework in challenging regulations. The source of this measure is the World Economic Forum Global Competitiveness Report (WEF, 2019). The answers and the thresholds to this measure are defined as: "(0) "Answer" is set below 3.1 (30th percentile of the country sample); (1) "Answer" is set between 3.1 and 4.5; (2) "Answer" is set equal to or above 4.5 (70th percentile)".

[13] The weight for measure j under policy area i is calculated as following: $w_{ji} = w_i / n_i$, where n_i is the number of measures under policy area *i* and w_i is the share of the total number of points allocated to policy area i by the experts. Hereby, we assume similar weights for all measures within one policy area and the maximal overall score equals to $\sum_i w_{ij} \cdot score_{ji} \cdot n_i = 2$, with $score_{ji} = 2$ as the maximal score for every single measure under the multiple binary scheme.

[14] The responses of experts from international organisations, academia, private sector and government were relatively evenly distributed with 17%, 24%, 26% and 31% respectively.

[15] A sensitivity analysis with respect to the weighting scheme is undertaken in Section 5.

B. Electronic governance	Establish a single window and use information and communication technology. Apply new technology to improve information, application and approval processes.	18.69
C. Focal point & review	Provide mechanisms to improve relations or facilitate contacts between host governments and relevant stakeholders. Receive complaints from investors and/or help them to solve difficulties or to carry out policy advocacy. Encourage the development of effective mechanisms at reasonable cost for resolving disputes, including private arbitration services. Provide a framework to identify and address problems encountered by investors.	18.04
D. Application process	Establish clear criteria and transparent procedures for administrative decisions, including investment approval mechanisms. Reduce the number and complexity of fees and charges.	17.56
E. Cooperation	Make use of international and regional initiatives aimed at building investment expertise, including information sharing. Provide an institutionalised mechanism to support domestic inter-agency coordination.	10.50
F. Responsible business conduct and anti-corruption	Ratify international conventions on labour and human rights. Promote measures related to fighting corruption and combating bribery of foreign public officials in international business transactions.	12.18
Source: Authors		

2.5 Limitations

The innovative and very detailed IFI data set is a useful tool for researchers, policy-makers and investors since it allows to assess the level of adoption of a large number of investment facilitation measures in a broad range of economies worldwide. However, it is important to point to some limitations.

First, the data set reflects a snapshot of current practice for the year 2021. Since regulatory frameworks may change in the covered countries, or sources used to document the adoption of certain investment facilitation measures (e.g., links to specific websites) might become unavailable, regular checks or updates are necessary to keep the database relevant. Moreover, only a panel data set over time would allow to causally link the IFI scores to levels and effects of FDI in host countries by the use of econometric methods.

Second, the data set does not incorporate any bilateral commitments encapsulated in various trade and investment agreements. This is done on purpose since investment facilitation commitments are horizontal in nature and apply to all partner countries.

Third, we have focused on the *de jure* adoption of investment facilitation measures and not on their *de facto* implementation.[16] In other words, while we are able to observe adoption of an investment facilitation measure, we are not able to check whether the multitude of measures in a large number of countries are actually operating in such a way that actors comply with them. Furthermore, the reliability of publicly available official data might be also questioned. Thus, given these limitations, we first present results of the aggregate IFI, before discussing the six policy areas individually.

[16] For a more detailed explanation of the difference between *de facto* and *de jure* implementation, see Berger et al. (2023) and Berger et al. (2022a).

3. Adoption of investment facilitation measures across economies

The IFI provides fine-grained data for 142 WTO Members, most of which have signed the two Joint Ministerial Statements on Investment Facilitation for Development in 2017 and 2019. It also includes important Members not participating in the IFD Agreement at the WTO (e.g. India and the USA), while 21 WTO Members are not included in the data set because publicly available information for these countries was too scarce.[17] According to World Bank classification for 2024, the IFI covers 54 high-income countries, 72 upper- and lower-middle-income countries and 16 low-income countries, accounting for 98.2% of the global inward FDI stock and 97.6% of the global inward FDI flows in 2019.[18] Moreover, all OECD members, all EU members and over 90% of participants of the IFD Agreement are covered. The full list of countries with their IFI scores is provided in Annex 2.

Figure 1 illustrates that the current level of adoption of investment facilitation measures differs widely across the 142 economies (different grey bars according to the income level). IFI scores range between 0.22 for the Central African Republic and 1.76 for Republic of Korea (closely followed by United Kingdom with a score of 1.74), with a median score of 1.04. The overall level of adoption of the 101 IFI measures across all examined countries equals to 49%, however this occurs with a wide variation. In particular, high-income countries have adopted over 62% of all included measures while low-income countries have adopted only 29%.[19] Moreover, low-income countries in the sample achieve only 29% of the cumulated maximal score, while the upper-middle and high-income countries reach 49% and 63% of the possible maximum, respectively.[20] Thus, the level of adoption of investment facilitation measures is strongly associated to the country's stage of economic development. Generally, distribution of IFI scores by countries' income level (Annex 3) suggests that low-income countries have the lowest average and median score (0.55 and 0.59, respectively), while high-income countries have the highest values, with an average score of 1.26 and a median of 1.29. Middle-income countries are in between, with averages of 0.77 (lower-middle-income) and 0.98 (upper-middle-income). At the same time, the spread indicates that some low-income countries, such as Uganda (score: 1.12), have a higher score than the median upper-middle-income country (Argentina, 0.99) and the lowest scoring high-income countries e.g. Guyana (0.40), Antigua and Barbuda (0.54), Barbados (0.61), Panama (0.75) or Brunei Darussalam (0.82).

---

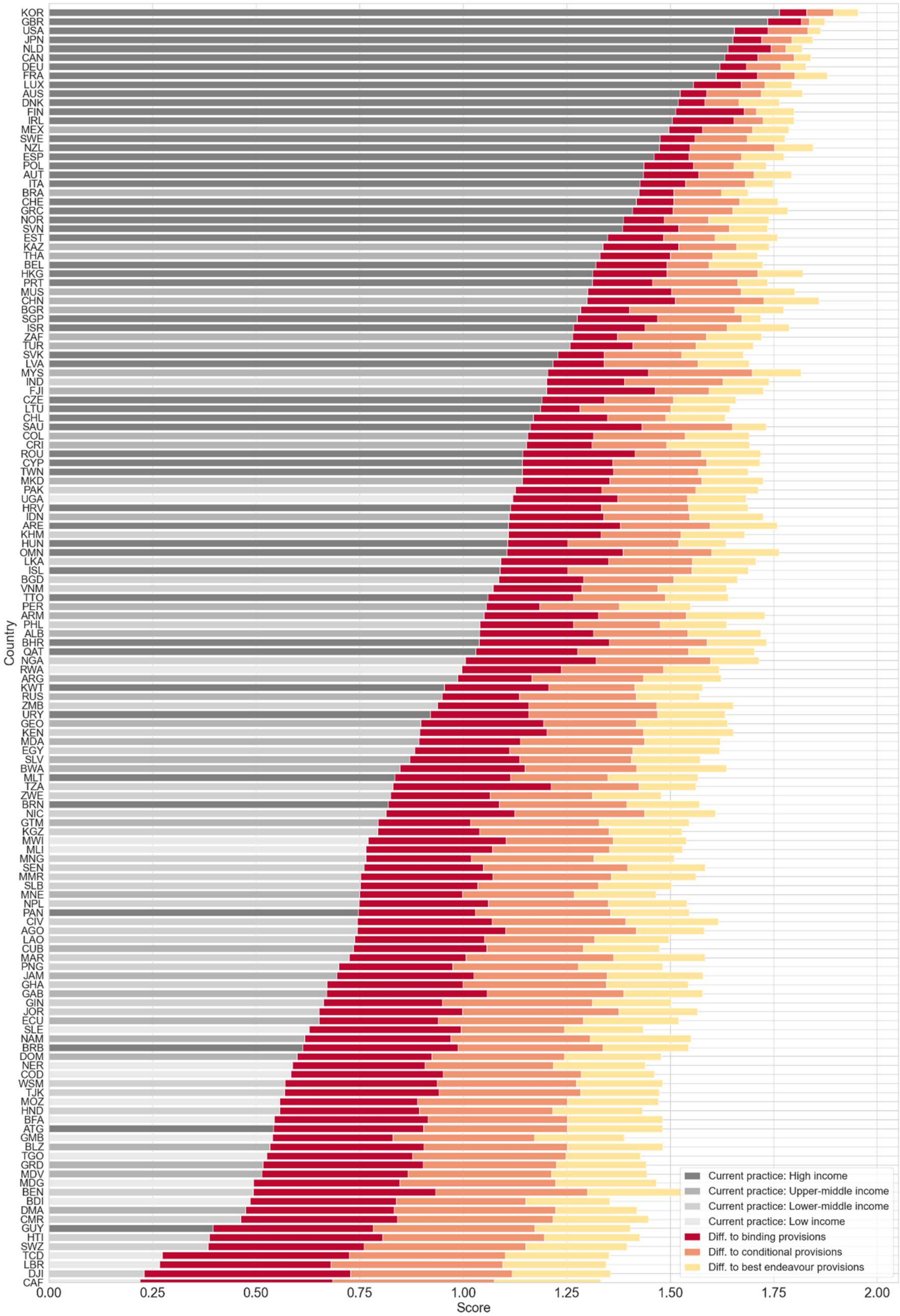
[17] The European Union as an independent member of the WTO has been excluded from the IFI for the purpose of methodological consistency, i.e., including sovereign states. Remaining WTO Members not covered: Afghanistan, Bolivia, Cabo Verde, Congo, Guinea-Bissau, Lesotho, Liechtenstein, Macao (China), Mauritania, Paraguay, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Seychelles, Suriname, Tonga, Tunisia, Ukraine, Vanuatu, Venezuela, and Yemen.

[18] Following pre-pandemic UNCTAD FDI data, available at https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=96740.

[19] The level of adoption is calculated as a share of all fully or partially adopted measures (answers 2 or 1) in the total number of measures for the respective country group (e.g. 142 x 101 = 14342 for the whole sample).

[20] The cumulated maximal score is the sum of maximal score of 2 for all countries in the respective income group. For example, the cumulated maximal score for low-income countries amounts to 32 (for 16 countries covered in the sample).

Fig. 1 **IFI score per economy and reform gaps relative to the IFD Agreement**



Source: Authors for IFI score, Annex 2 for country codes, World Bank for income level (https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups).

The flipside of the current adoption level is the reform gap with respect to the IFD Agreement, which is illustrated by coloured bars in Figure 1 and based on the mapping provided in Annex 1. We observe that reform gaps are the highest for the countries with low levels of adoption and lower income (lighter grey bars) on the bottom of the Figure 1 (e.g. Djibouti, Central African Republic, Chad, Liberia, Benin, Haiti, Eswatini). In contrast, reform gaps are lower in high-income countries with higher adoption levels (dark grey bars) at the top of Figure 1. The lowest reform gaps exist for high-income countries such as United Kingdom, Netherlands, Republic of Korea, Japan and the USA. Furthermore, we divide the overall reform gap into three parts to reflect the legal language of the IFD text. In particular, red bars illustrate the reform gaps connected to binding or "shall" provisions and orange bars reflect conditional binding provisions with the wording "shall, to the extent practicable", "shall encourage", "shall endeavour". Yellow bars point to reform gaps for the best endeavour or non-binding provisions with the wording "should", "should, to the extent practicable", "may", "encouraged". Therefore, the figure indicates that there is room, even in case of high-income countries, to improve investment facilitation frameworks by implementing the different categories of provisions of the IFD Agreement – and even beyond the Agreement by including additional measures – to reach the possible maximum IFI score of 2.

The distribution of IFI scores according to World Bank geographical regions[21] also provides interesting insights.[22] The lowest values occur for Sub-Saharan Africa (SSA) and for Latin American and the Caribbean countries, with median scores of 0.67 and 0.75, respectively. Countries in the Middle East and North African (MENA) region perform somewhat better, with a median of 0.99. The six countries from South Asia included in our sample have a median score of 1.09 while the region of East Asia and the Pacific features a median value of 1.13. European and Central Asian countries perform even better with a median of 1.31. Only for North America we find quite high values (average and median of 1.64), which is not surprising since the two countries of the region, Canada and the USA, are amongst the top six highest scores. A similar picture arises if we compare the shares achieved by the regions according to the maximal regional score.[23] While North America reaches 82%, SSA and Latin America and the Caribbean achieve only slightly more than 34% and 40% of the possible maximum.

The described distribution of the IFI score by geographical regions hides lots of sub-regional disparities. For instance, for the Asia and Pacific region the average IFI score of 1.12 is driven up by the seven high-income countries (Australia with IFI score of 1.52, Hong Kong with 1.31, Japan with 1.65, Republic of Korea with 1.76, New Zealand with 1.47, Singapore with 1.28 and Taiwan with 1.14) out of 22 in our sample. Moreover, even for the EU, with its high level of economic integration and the existence of a single market, we observe quite a high variation in the total scores, ranging from 0.83 for Malta to 1.64 for the Netherlands. Thus, our results point to significant differences in the regulatory regimes of the 27 EU members and point to adoption gaps, which arise especially for focal point & review (seven measures are not adopted in at least 22 EU countries, altogether the 27 countries reach only 50% of the possible maximum score in this policy area) and for application process (seven measures are not adopted in at least 19 EU countries, altogether the 27 countries achieve almost 56% of the potential maximum score in this policy area).

[21] The IFI covers 41 countries from Europe and Central Asia, 34 countries from Sub-Saharan Africa, 25 countries from Latin America and the Caribbean, 22 countries from East Asia and the Pacific, 12 countries from Middle East and North Africa, six from South Asia and two from North America. The World Bank classification is available at https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups.

[22] See Annex 4 for statistics. A detailed description of regional and income distributions of IFI scores is also available in Berger et al. (forthcoming).

[23] Hereby, we calculate a share of achieved cumulated score (sum of IFI scores for all countries of the region) in the maximal regional score (sum of maximal score of 2 for all countries of the region).

4. Overview of the policy areas and underlying measures

In this section we present the six policy areas that make up the IFI, including their individual measures. Under each policy area we present examples of measures and their level of adoption at country level. Furthermore, we present the most adopted and unadopted measures in our data set and analyse the distribution of policy area scores across economies.

4.1 Description of the six policy areas

Regulatory transparency & predictability represents the most important policy area according to the results of our expert survey with a total weight of 23%. This policy area incorporates 23 individual measures, and economies achieve between 7% (Central African Republic) and 93% (Korea and the USA) of the possible maximum score of 0.46 in this area.

The concept of investment facilitation focuses strongly on improving transparency and better involvement of stakeholders. For example, regulatory transparency can be achieved through online publication of all investment relevant information (e.g. on laws, regulations, judicial decisions, administrative rulings, incentives or tax breaks, procedures for appeal and review, international agreements); setting up of special enquiry points to support investors; as well as provision of advance notice about proposed changes to laws, regulations, fees and charges. Moreover, regarding involvement of interested parties, including the business community and investment stakeholders, the concept envisages an opportunity to comment on drafts of investment regulations and acts prior to their implementation. It is worth noting that a similar provision was negotiated under the TFA.[24] Thus, this policy area covers information availability and accessibility, involvement of the investor community and notification requirements. According to our results, over 96% of all included economies provide online information on applicable legislation, regulations and procedures (measure A.4), while over 92% make this information available in one of the WTO's official languages (A.6). Also, most economies (95%, A.1) exhibit an enquiry point (which often coincides with a website for investment promotion) and publish information on competent authorities (92%, A.11). Fewer economies make information available on the purpose and rationale of laws and regulations (57%, A.14), or publish the timeframes required to process applications (46%, A.12) and only 8% of all analysed economies publish judicial decisions on investment related matters (A.7).

Electronic governance entails 14 measures related to the use of information and communications technology (ICT) and to single-window mechanisms. According to the results of the expert survey, this policy area is the second most important policy area in the IFI with a weight of 18.7% and a possible maximum of 0.37. While Djibouti and Central African Republic do not adopt any measure in this policy area, there are eleven economies reaching the maximum score, namely USA, Chinese Taipei, Finland, India, Israel, Luxembourg, Mauritius, Mexico, Oman, Sri Lanka and Thailand.

Our results suggest that over 96% of all economies in the sample have a national investment website for information purpose (B.24), but only 74% provide a minimal set of relevant information (including e.g. licensing requirement, fees, charges, screening and approval) within this website. Other positive findings are that competent authorities of 94% of economies use email or other electronic tools to exchange information

[24] Article 2 of the TFA: Opportunity to Comment and Information before Entry into Force "1.1 Each Member shall, to the extent practicable and in a manner consistent with its domestic law and legal system, provide opportunities and an appropriate time period to traders and other interested parties to comment on the proposed introduction or amendment of laws and regulations of general application related to the movement, release, and clearance of goods, including goods in transit…" (WTO, 2013).

with investors (B.28), 86% allow for electronic signature as legally valid (B.29) and over 73% accept authenticated copies of documents (B.27). However, ICT based single-window or one-stop shop related measures are less adopted among the economies in our sample, although this is key to reduce the time and efforts required in obtaining regulatory clearances and licences from governmental agencies. In particular, 44% of economies have a single entry point that accepts submissions of investment related applications, but only 27% provide a proper single window service with processing of application in electronic format (B.32), Furthermore, 60% provide phone or online contacts for complaints related to mandatory registrations through the single window (B.37), 58% allow to receive the business registration certificates online (B.35), and only 38% ensure a regular update of information on the single window portal (B.36). A simultaneous submission of mandatory registrations (e.g., business registry, tax identification number, social security and pension schemes) is generally possible for 36% of economies in the sample, but only 28% offer this opportunity through an online platform (B.33). Finally, only 36% of analysed economies allow to pay all fees corresponding to mandatory registration through the single window (B.34).

The policy area ***focal point & review*** covers 23 measures related to alternative dispute resolution, appeal procedures, cooperation and information-sharing mechanisms, as well as ombudsperson-type mechanisms. The area has an expert weight of 18% and a possible maximum score of 0.36. Analysed economies achieve between zero (Chad) and 89% (Republic of Korea) of the possible maximum score in this area.

Our data highlights that especially measures related to judicial review and appeal are highly adopted among economies. In particular, 95% of all analysed economies provide independent or higher level administrative and/or judicial appeal procedures (C.38), 90% allow investors to support or defend their position in judicial review (C.41), while the decision of such a review is based on submitted evidence and arguments in 89% of covered economies (C.42). Moreover, almost 72% have specified periods for providing appeal or review decisions (C.60) and 70% ensure adequate time to study a contested decision and prepare an appeal (C.59). In contrast, dispute-prevention mechanisms (C.43) are scarce and available only in 11 economies (8% of our sample). Also, most WTO Members lack a fully functioning focal point or ombudsperson-type mechanism to support investors. Only 28% of the economies in our data set established a focal point to provide guidance concerning investment related legislation, agencies and processes (C.46), 24% allow focal point to coordinate and handle investment complaints (C.45) and 30% enable feedback to focal point via online means (C.50). Around 22% of analysed economies have a focal point in place that assists investors in obtaining information from governmental agencies (C.49) and responds to enquiries of governments, investors and other interested parties (C.48). The least adopted functions of a focal point include suggestion of corrective recommendations regarding illegal and unfair administrative measures (C.57, 6%), arrangement of frequent meetings with foreign-invested companies and relevant government officials to mitigate conflicts and facilitate their resolution (C.56, 4%), operation of a single window (C.51, 4%) as well as pushing for and inspecting the implementation of solutions for investment complaints (C.58, 3%, adopted only in Brazil, China, Ireland and Republic of Korea).

The policy area of ***application process*** deals with formalities (documents, automation and procedures) as well as fees and charges. It includes 25 measures and has an expert weight of 17.6%. Economies in our sample achieve between 12% (Central African Republic, Guyana and Niger) and 92% (Republic of Korea) of the possible maximum of 0.35.

According to our data, none of the analysed economies has a time period between the publication of new or amended fees and charges and their entry into force of over 20 days (D.75), thus this is the least adopted measure not only in this policy area, but in the whole data set.[25] Moreover, a "silent yes" approach for administrative approvals, which considers an application as approved when no response from the competent authorities has been received within a specified timeframe (D.72), is adopted by only 5 out of 142 countries, namely Albania, Austria, Denmark, Mexico and Myanmar. The adoption of such an approach requires well-developed administrative capacity of agencies responsible for the application of investment projects and it is thus no surprise that it is rarely implemented. A provision on a "silent yes" approach has been proposed during the negotiations and is now suggested in the final IFD Agreement text as a best endeavour opportunity for the Member countries. Other measures from the policy area of application processes perform much better results. In particular, 88% of all economies request no charges for answering enquiries or providing forms and documents (D.76), 51% provide a comprehensive picture of all fees and charges that they apply (D.74), 43% limit their fees to the approximate cost of rendered services (D.73) and 38% conduct a periodic review of applied fees with only 25% adapting them to changed circumstances (D.77). Furthermore, 80% of governments do inform the applicant about their decision concerning an application (D.65) and 73% accept applications at any time throughout the year (D.71). However, only 25% of WTO Members grant applicants an opportunity to submit additional information required to complete their application (D.69) and only 20% allow to resubmit a previously rejected application (D.70).

Another set of highly adopted measures focuses on facilitation of entry and sojourn of investment personnel. The data suggests that 91% of economies publish their requirements for temporary entry of business visitors (D.81) and 88% issue visas with multiple entries (D.80). Our results also illustrate that on average it takes 10 days, requires eight documents, and costs $97 to obtain a business visa among the economies in the sample.[26] Moreover, 51% of covered WTO Members accept and process visa applications in electronic format (D.82) and 48% allow for visa renewal or extension (D.83). Although such provisions on movement of business persons were proposed during the WTO negotiations, they are not part of the final IFD text due to the lack of consensus among Members.

The next policy area is ***cooperation.*** It encompasses 11 measures related to cooperation between different investment-related authorities at both national and international level. According to the expert survey, contribution of this policy area to the overall IFI score is 10.5%. While the EU countries have rather similar scores[27] due to already harmonised internal and external coordination and cooperation procedures, the rest of countries score between zero (Djibouti, Sierra Leone and Solomon Islands) and 95% (United Kingdom) of the possible maximum of 0.21.

In our sample, 91% of all economies cooperate with neighbouring and third countries through multilateral or regional agreements containing investment promotion and facilitation provisions (E.91). Among such agreements one can find the USA–Mexico–Canada Agreement (USMCA), the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) or the Regional Comprehensive Economic

---

25 Measure D.75 is listed as a most unadopted measure in Table 2 (Section 4.2) since for 121 countries there is either no information on the existence of an interval between the publication of new or amended fees and their entry into force, or the average time is below 20 days. For another 21 countries we could not provide any answer due to scarce information.

26 The averages are based on available information for D.79, D.84 and D.85. The information entailed in measure D.79 is the number of days it takes on average to process a visa application for business visitors. The number of days may depend on the country of the applicant. In line with the OECD STRI approach, India has been chosen as the applicant country, since most countries in the OECD require a visa for Indian business travellers.

27 The scores of the EU countries range between 0.14 and 0.19 with the two exceptions for Malta and Belgium (0.12).

Partnership (RCEP). Moreover, coordination of investment facilitating activities is also quite widespread with neighbouring countries, as e.g. in the case of ASEAN countries following the ASEAN Comprehensive Investment Agreement (ACIA). Over 70% of analysed economies also organise business-government networking events with partner countries on regular basis (E.96) and 58% support cooperation and coordination of investment agencies aiming at facilitating FDI (E.86). However, only 13% of economies have a specific inter-agency coordination body (E.95) and only 19% exchange information about domestic investors or investment opportunities with other countries (E.88), while 21% establish programmes for best practice sharing (E.90). Another important measure in terms of the IFD Agreement and its potential development impact is the establishment of a domestic supplier database (E.89). Unfortunately, only 20% of all economies provide a proper domestic supplier database with all possible features, such as online availability in one of the WTO languages, ability to search by sector, product, location and other criteria, illustration of local production capacity, related CSR information and others.

The last policy area is ***responsible business conduct and anti-corruption***. It contains only five measures based on the fundamental international conventions in the field and has an expert weight of 12.2%. On average this area features the highest adoption level of 60% with economies ranging between 20% (Brunei, Chinese Taipei and Tanzania) and 100% (22 economies in our sample) of potential maximum score of 0.24.

According to our results, 11% of analysed economies have ratified at least three and another 87% at least seven of the eight fundamental International Labour Organisation (ILO) conventions concerning freedom of association, forced labour, discrimination and child labour (F.98). The only countries with not more than two ratified conventions out of eight are Brunei and the USA.[28] Moreover, 98% of economies adopt measures in accordance to the United Nations Convention Against Corruption (F.100), while only 31% have measures in place to prevent and fight corruption in accordance to combating bribery of foreign public officials in international business transactions (F.101). Around 58% of considered WTO Members adopt double taxation measures similar to the OECD multilateral convention to implement tax treaty related measures to prevent base erosion and profit shifting (F.99) and only 21% have a specific national action plan to implement the UN guiding principles on business and human rights (F97).

4.2 Illustration of most and least adopted measures

Observing the adoption of individual measures, Table 2 illustrates the most or the least adopted measures in the data set across all examined economies. Among the top unadopted measures, we find examples from all policy areas except for electronic governance and responsible business conduct. However, the main adoption gaps evolve around the establishment of a focal point and its functions (8 measures among 13 most unadopted), which is one of the key instruments to improve the processes between investors and governments. The different functions of a focal point may include a clarification of doubts on investment legislation and other regulatory issues, addressing investment complaints, assisting investors in resolving government-related difficulties, taking timely action to prevent, manage and resolve disputes. As described above, most WTO Members lack such a focal point. Besides the functions of focal points, two important unadopted measures belong to the policy area of application process, namely the existence of a time period between the publication of new or amended fees and their entry into force as well as the adoption of a "silent yes" approach for administrative approvals.

In contrast, the only measures adopted by 98% of all countries in the sample belong to the policy area of responsible business conduct and anti-corruption and refer to ratification of the fundamental ILO conventions as well as the UN Convention Against Corruption. Four out of twelve listed most adopted measures belong to

[28] In addition, for Chinese Taipei no information was available on the ILO website.

the regulatory transparency & predictability policy area and relate to the publication of information relevant for investors or to the establishment of enquiry points. These measures are already part of the IFD Agreement and the high adoption rates in this policy area underpin its highest expert weight of over 23%. Moreover, among the top adopted measures we find examples from the electronic governance policy area such as the establishment of a national investment website or the use of electronic tools to exchange information with investors. Two other measures with high adoption rates refer to judicial review and appeal. The negotiated IFD Agreement reflects this convergence among Members and includes provisions that require an establishment and maintenance of impartial and independent mechanisms to promptly review and, if necessary, remedy administrative decisions affecting foreign investors, with an opportunity for investors to defend their position.

Tab. 2 The most frequently unadopted and adopted measures

Measure		Policy area	Country count	Share of the sample
Top unadopted measures				
D.75	Time period between the publication of new or amended fees and charges and their entry into force	Application process	0	0%
C.58	Focal point: Focal point urges and/or inspects the implementation of the solutions for foreign investment complaints	Focal point & review	4	3%
D.72	Adopting a silent 'yes' approach for administrative approvals	Application process	5	4%
C.51	Focal point: Operation of the single window	Focal point & review	6	4%
C.56	Focal point: Focal point holds frequent meetings with foreign-invested companies and relevant government officials to mitigate conflicts and facilitate their resolutions	Focal point & review	6	4%
C.57	Focal point: Focal point makes corrective recommendations and expression of opinions regarding illegal and unfair administrative measures	Focal point & review	9	6%
C.43	Dispute prevention mechanism in place	Focal point & review	11	8%
A.7	Publication of judicial decision on investment matters	Regulatory transparency & predictability	12	8%
C.54	Focal point: Focal point recommends to the competent authorities measures to improve the investment environment (policy advocacy)	Focal point & review	12	8%
C.53	Focal point: Focal point assists investors by seeking to resolve investment-related difficulties, in collaboration with government agencies	Focal point & review	15	11%
A.21	Notification to the WTO of enquiry/focal/contact points	Regulatory transparency & predictability	16	11%
E.95	Mechanism to support inter-agency coordination	Cooperation	19	13%
C.52	Focal point: Focal point provides parties with alternative forms of dispute resolution	Focal point & review	22	15%
Top adopted measures				
F.98	ILO ratification of fundamental conventions concerning freedom of association, forced labour, discrimination and child labour	Responsible business conduct and anti-corruption	139	98%

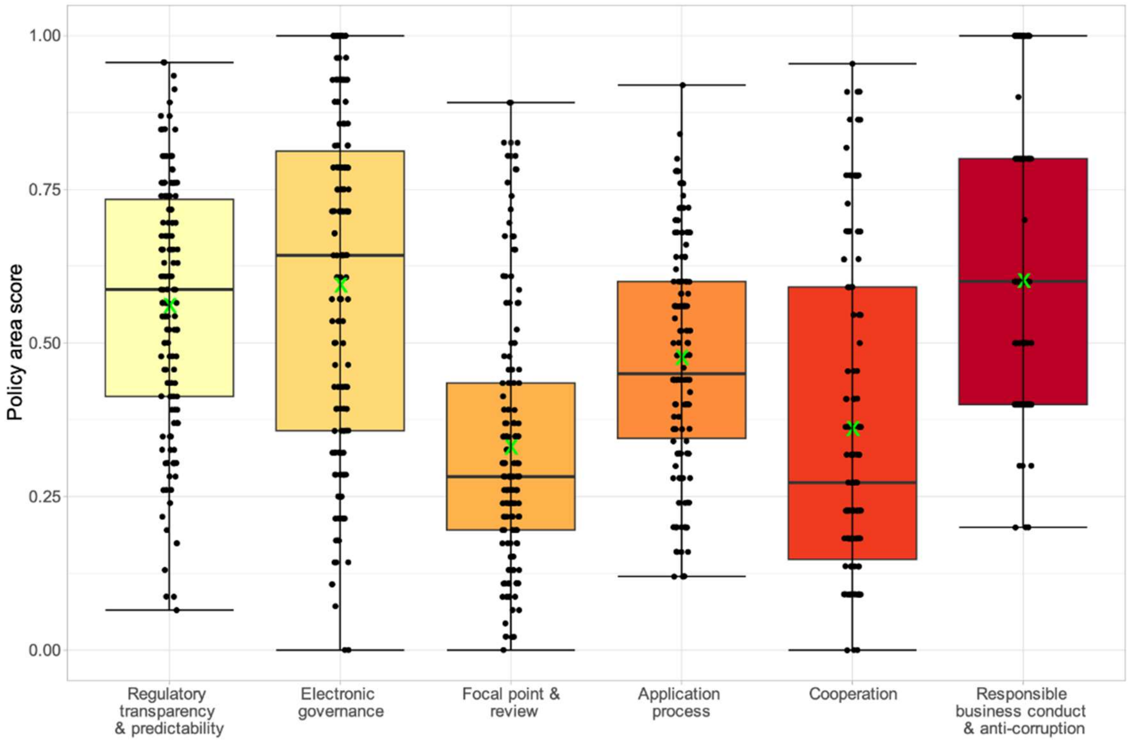
F.100	United Nations Convention Against Corruption	Responsible business conduct and anti-corruption	139	98%
A.4	Publication of information and procedures on laws, regulations and procedures affecting investment	Regulatory transparency & predictability	137	96%
B.24	Establishment of a national investment website for information purpose	Electronic governance	137	96%
A.1	Establishment of enquiry points	Regulatory transparency & predictability	135	95%
C.38	Independent or higher level administrative and/or judicial appeal procedures available	Focal point & review	135	95%
B.28	Use of electronic tools (including email or social media applications) by the competent authorities for exchanging information with investors	Electronic governance	133	93%
A.6	Laws and regulations are available in one of the WTO official languages	Regulatory transparency & predictability	131	92%
A.11	Publication of the information on competent authorities including contact details	Regulatory transparency & predictability	131	92%
D.81	Movement of business persons: Publication of information on current requirements for temporary entry of business visitors	Application process	129	91%
E.91	Accession to multilateral and/or regional investment promotion and facilitation conventions	Cooperation	129	91%
C.41	Opportunity to support or defend respective positions in judicial review	Focal point & review	128	90%
Source: Authors based on IFI data				

4.3 Adoption of investment facilitation measures at the policy area level

Given the high variation of IFI scores among different regions and income groups (see Section 3), it is interesting to observe the adoption of investment facilitation measures at the level of policy areas. Figure 2 illustrates the distribution of scores for each area among all analysed economies. We observe that three policy areas demonstrate quite high adoption levels, namely responsible business conduct and anti-corruption, electronic governance as well as regulatory transparency & predictability. On average the economies in our data set reach 60%, 59% and 56% of the possible maximum score in these policy areas, respectively. The other three policy areas display much lower averages with 48% for application process, 36% for cooperation and 33% for focal point & review, while the median values are even lower. Thus, there is much room for improvement in all policy areas, but the highest adoption gaps exist for focal point & cooperation, where 103 and 93 economies, respectively, out of 142 achieve less than 40% of the possible maximum score.

The wide spreads for each policy area in Figure 2 indicate that the levels of adoption for policy areas also differ depending on income levels. Intuitively, high-income countries perform best with average achieved scores (as percentage from policy area maximum) ranging between 46% for focal point & review and 75% for responsible business conduct and anti-corruption. In comparison, low-income countries achieve average scores only between 14% for cooperation and 42% for responsible business conduct and anti-corruption. Especially for the cooperation policy area we observe the highest gap between high-income countries and all other country groups: While high-income representatives reach almost 60% of possible maximum, the averages for low, lower-middle and upper-middle-income countries amount to 14%, 20% and 27%, respectively. These values are actually the lowest ones for the three country groups among all policy areas. A similar divergence between high-income countries and the rest arises for the area of focal point, but the gap is smaller since this is the area with the lowest adoption level for high-income group (46% compared to 16%, 23% and 31% for low, lower-middle and upper-middle-income countries).

Fig. 1	**Distribution of IFI scores by policy area**



Note: Whiskers illustrate the min/max values, boxes show first to third quartile, horizontal bar represents the median, while x the average for respective group. The policy area score on the *y* axis is normalized to 1 to allow for comparison of different areas.
Source: Authors for the IFI data, income groups according to World Bank (https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups).

5. Robustness of the methodological approach

In order to assess the methodological soundness of the composition of our six policy areas as well as the robustness of country scores to alternative weights for the respective areas when calculating a given economy's total score, this chapter undertakes a factor, principal component and uncertainty analysis. This aims to answer two key questions on the quality of our composite index: (i) does the correlation of measures support the allocation of individual measures into policy areas?; and (ii) does the use of our specific set of weights (described in Section 2.4) lead to a specific (potentially biased) picture of economies' performance, that changes considerably when employing alternative sets of weights?

5.1 Factor analysis

The individual measures were assigned to and grouped into the different policy areas by interpreting what their respective common scopes are. As a test for whether the groups of measures that form the policy areas indeed capture underlying factors, data driven methods can be used to identify whether the correlation of measures supports these groupings. To that end, we conduct a factor analysis on all individual measures. The results of the factor analysis suggest that the 101 measures are driven by five underlying factors, based on the

Scree-Test (Cattell, 1966).[29] The Scree-Plot is shown in Annex 4. The resulting data driven groupings are very similar to the intuitive groupings into policy areas. They can be interpreted as (i) Institutional quality (ii) Electronic governance, (iii) Focal point & review, (iv) Application process, and (v) Exchange between authorities and investors. Out of these five factors, three (ii-iv) are clearly associated with measures from the initial intuitively grouped policy areas, namely those of electronic governance, focal point & review, and application process, respectively. Measures of regulatory transparency & predictability and cooperation are associated with one factor that can be broadly interpreted as institutional quality (i), showing that the measures of these two policy areas exhibit relatively great covariance in the data and thus appear to be driven by a common factor. For the policy area of responsible business conduct & anti-corruption, there are too few measures in comparison to the other policy areas to be substantively identified as an own factor. If anything, it additionally measures load on the aforementioned factor combining measures of the two policy areas of regulatory transparency & predictability and cooperation. A fifth factor captures individual measures from all intuitive groupings and can be best described as capturing a factor regarding the openness of communication and exchange between authorities and (potential) investors across all policy areas.

In general, the conducted factor analysis confirms the intuitive groupings into the six policy areas of the IFI. Despite the joint latent factor that the analysis identifies for measures of three policy areas together, it still appears to be informative to separate these measures of regulatory transparency & predictability, cooperation, and responsible business conduct & anti-corruption, which is why the final index is based on the more fine-grained intuitive grouping of measures. Indeed, an index that is constructed as the average of the five factors identified by the factor analysis would show a correlation of 0.95 with the IFI, so that the choice of approach to grouping measures into policy areas (data-driven or intuitive) does not affect the final ranking of the IFI.

5.2 Correlations of policy areas and principal components

Given that there are several, quite diverse policy areas that are included in the IFI, the suitability of the data to create a composite index might be in question. However, the scores of the policy areas are relatively strongly correlated. Countries that score relatively high (low) in one policy area typically also score high (low) in other policy areas. Annex 5 shows the correlations between the policy areas, most exceeding 0.5. The average interim correlation between the policy areas is 0.62, and Cronbach's Alpha amounts to 0.91. A Principal Component Analysis (Greenacre et al., 2022) can furthermore show how much of the overall variation of the individual policy area scores can be explained by their common variation. It reveals that the first component (the greatest common variation of the six policy areas) explains 68% of their overall variation (only 32% of the individual policy area scores are not explained by common variation). Together with the additional information from the common variation of the policy areas that explains the second largest part of their overall variation (the second principal component), 82% of it is explained. All these numbers suggest that it is appropriate to capture the concept of investment facilitation in a composite index. However, the correlations between the policy areas are not perfect, implying that distinguishing between different policy areas in a more detailed analysis still provides additional information.

5.3 Uncertainty analysis

To assess the robustness of the overall IFI scores regarding the chosen weighting scheme, we conduct an uncertainty analysis (Saisana et al., 2005). Such analysis investigates how uncertainty in the selection of input factors affects the values of a composite index. We define as uncertain input factors the weights attributed to each policy area when calculating the IFI. The analysis is performed by repeatedly evaluating $s \in \{1, \dots S\}$

[29] We use an oblique rotation to allow factors to be correlated.

Monte Carlo simulations of the index score with different assumptions for weights. Thus, we first independently sample for each simulation s a set of weights for the policy areas. Hereby, we follow a quasi-random sampling scheme (Sobol, 1967), where policy area weights are sampled independently from each other and based on a discrete uniform distribution from the 94 responses of our expert survey. This provides a set of weights for one simulation and is repeated 14366 times, which is the total number S of conducted Monte Carlo simulations.[30] After sampling, these weights are normalised to a unit sum and employed to evaluate the propagated uncertainty using two interrelated output variables illustrated by equations (1) and (2):

$$Y_c = \sum_{q=1}^{Q} PA_{q,c} \, w_q \tag{1}$$

The first output variable, Y_c, represents the total score of a given economy $c \in \{1, \ldots, M\}$. It is calculated as a sum over the product of each policy area score $PA_{q,c}$ and the respective weight w_q, where $q \in \{1, \ldots, Q = 6\}$ indicates the respective policy area.

Figure 3 summarises the results of all 14366 simulated total scores calculated according to equation (1) by displaying for each economy the distribution of the resulting ranks, $rank(Y_{c,s})$, with the fifth and 95th percentiles as bounds. The black bars indicate the median rank of each economy, while the red bars indicate the rank of each economy resulting from its original IFI score, $rank_{ref}(Y_c)$, employing the expert weights as described in Section 2.4. We clearly see that for all economies the original IFI ranking is very close or even equal to the median value from the simulations. This implies that the original expert weighting provides a picture of the economies' investment facilitation framework that is not generally biased. The greatest difference between the original rank and the median resulting from the simulations is 3 for Cuba and the Lao PDR. The broadest range between the fifth and 95th percentiles is found for Lithuania and Taiwan, where the difference in rank order amounts to 44 and 42, respectively, which indicates that those economies' IFI scores are most sensitive to the choice of policy area weights.

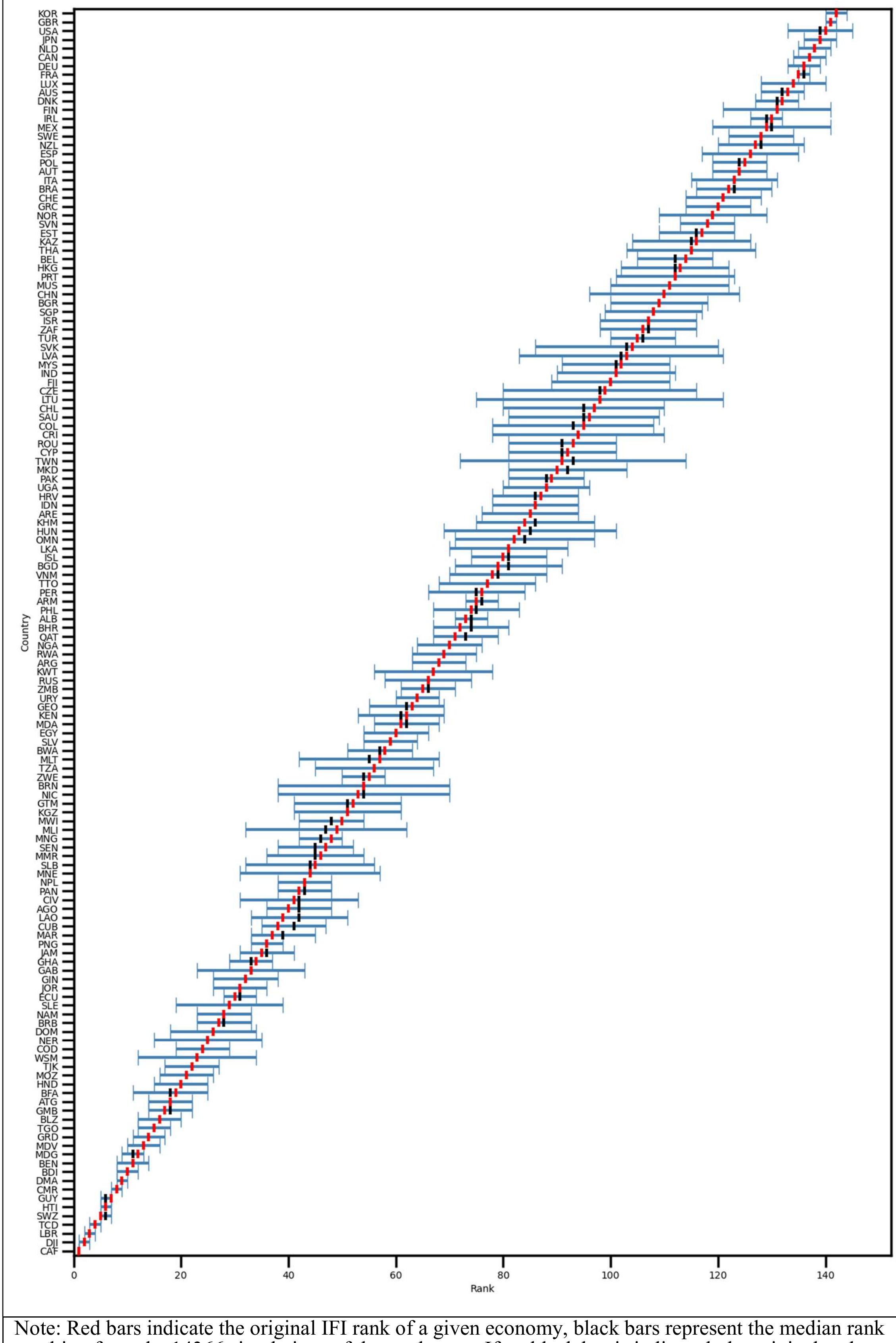
For the second output variable we define the average shift in economies' ranks within the index as a function of Y_c:

$$\overline{R_s} = \frac{1}{M} \sum_{c=1}^{M} \left| rank_{ref}(Y_c) - rank(Y_{c,s}) \right| \tag{2}$$

The statistic $\overline{R_s}$ captures in a single number the relative shift in the position of the entire index for the simulation sequence s under investigation. It can be quantified as an average over *M=142* economies of the absolute difference between economies' reference rank based on presented IFI, $rank_{ref}(Y_c)$, and the ranking obtained by an economy during a simulation s, $rank(Y_{c,s})$. Therefore, we obtain an average rank shift across economies for every simulation, which enables us to describe the empirical probability density function resulting from all 14366 values obtained.

[30] The total number of Monte Carlo simulations can be chosen arbitrarily but we follow Saisana et al. (2005) who suggest performing $2n(k+1)$ simulations, where n is the base sample size of the Sobol sampling, and k is the number of input factors we vary. We therefore have $2 \times 1024 \times (6+1) = 14366$ simulations, where the base sample size of $n = 1024$ was arbitrarily chosen in order to have a large enough number of simulations.

Fig. 3 Distribution of simulated ranks per economy



Note: Red bars indicate the original IFI rank of a given economy, black bars represent the median rank resulting from the 14366 simulations of the total score. If no black bar is indicated, the original and median value are equal. Country codes are listed in Annex 2.
Source: Authors

The median average rank shift $\overline{R_s}$ resulting from equation (2) over all simulations equals to 3.37, implying that in 50% of the simulations the average absolute rank shift is 3.37 or less (see the histogram in Annex 6). Analogously, one can also examine the median average shift in total index score itself over all simulations, which amounts to only 0.04 points. The country that shifts in absolute terms on average most across all simulations is Hungary (median of 9 rank shifts), while Korea shifts the least with a median rank shift of zero. Refraining from absolute terms and looking into which country shifts on average most upwards or downwards, we find that Mali shifts on average 3.1 ranks upwards, while Cuba 3.5 ranks downwards.

Overall, we conclude that our initial choice of weights provides a robust picture of economies' IFI performance. As Figure 3 indicates, economies with either very high or very low scores display the lowest sensitivity towards the selection of policy area weights, as in those cases the scores in all policy areas are either quite high or quite low. Countries displaying the highest sensitivity towards the selection of weights are thereby those economies which perform relatively well in some areas while performing poorly in others, which amplifies the resulting shifts in ranks when varying the weights.

6. Conclusions

In this working paper we present a comprehensive assessment of the adoption level of investment facilitation measures for 142 WTO Members at different stages of economic development. This assessment is based on an original data set comprising 101 investment facilitation measures, clustered in six policy areas, the adoption of which is examined by a detailed mapping of domestic investment regimes. In this paper we update the conceptualisation and methodological background of the earlier version of the Investment Facilitation Index (Berger et al., 2021), including a weighting scheme that is informed by a survey of 94 experts from international organisations, academia, private sector and governments. The survey reveals that the measures clustered in the regulatory transparency & predictability policy area have the highest importance for attracting and retaining FDI, followed by measures on electronic governance and focal point & review. The measures on application processes are of mid-level importance, while the policy areas of cooperation as well as responsible business conduct and anti-corruption are of lesser importance for attraction of FDI. While the IFI is based on this specific grouping of policy areas and the informed weighting scheme, neither the index itself nor its cross-country variation are critically dependent on it. Instead, it is robust to different approaches for grouping the measures and aggregating them to a composite index.

The analysis of the IFI data illustrates that the adoption of investment facilitation measures differs strongly across economies in our sample with scores ranging between 0.22 for the Central African Republic and 1.76 for the Republic of Korea. We find that countries with lower levels of adoption belong to the low-income and lower-middle-income country groups and are often located in Sub-Saharan Africa, Latin American and the Caribbean. In contrast, upper-middle-income or high-income countries, in particular those from Asia-Pacific, Europe and North America have already adopted many of the measures included in our index. The general assessment, however, hides certain variations as there are some low-income countries that have higher levels of adoption than some high-income countries. There are also significant variations within the regions in terms of adoption of investment facilitation measures.

The developed index has direct relevance for current policy discussions on investment facilitation. For domestic-level policy-making, our IFI can be used as a benchmarking tool to assess the current level of individual measures' adoption in comparison to a comprehensive set of possible investment facilitation reforms. It can be used to diagnose the areas in a country's practice that need improvement, and the changes to their rules and regulations that are needed. For international policy-making, investment facilitation has become an important part of trade and investment agreements negotiated at the regional or multilateral level. The RCEP, which includes a whole section on investment facilitation (Schacherer, 2021), or the CPTPP and the USMCA are examples of the growing inclusion of investment facilitation provisions in regional trade agreements. Moreover, countries like Brazil and the EU are negotiating dedicated investment facilitation agreements on a bilateral basis (e.g. Investment Cooperation and Facilitation Treaty (ICFT) between Brazil and India or Sustainable Investment Facilitation Agreement (SIFA) between the EU and Angola). The key reference, however, is the IFD Agreement text adopted among a group of two thirds of the WTO Membership. For the implementation of the Agreement, it is of high importance that policy reforms are undertaken on the basis of empirically grounded economic assessments of the benefits and challenges of such investment facilitation reforms. The IFI introduced in this working paper provides the basis for a future research agenda, but also the analysis of the data set itself already suggests some important policy conclusions.

First, discussions about the added value of an IFD Agreement often argue that investment facilitation reforms can be undertaken unilaterally, without the need to comply with binding internationally agreed commitments, often supported by policy guidance and technical assistance from donors and international organisations (Calamita, 2020). Our data shows that this argument is valid only for certain countries, in particular for the high-income and upper-middle-income country groups or those economies in Asia-Pacific, Europe and North America. For many developing countries, in particular those in Africa, the low level of adoption of investment facilitation measures and high reform gaps with respect to the IFD show that unilateral reforms alone do not lead to an improvement in the domestic investment facilitation framework for all countries. In these cases, the implementation of the IFD Agreement, supported by technical assistance and capacity development activities, can lead to more successful policy reforms compared to purely unilateral initiatives.

Second, our IFI clearly shows that the reform pressure from the IFD Agreement will be higher for economies with currently low levels of adoption. However, reform pressure alone will not be sufficient to overcome existing hurdles. Many developing countries will need additional technical assistance and capacity development support to adopt and implement investment facilitation measures (Berger et al., 2022b). Such a technical assistance framework can be modelled in a similar way to the TFA, which makes the implementation of certain trade facilitation measures by developing countries conditional on external support. Commitments to technical assistance and capacity development support are an integral part of the IFD Agreement and should be backed up by sufficient funding from high-income and upper-middle-income countries. Also, a closer cooperation between the WTO and other international organisations is envisaged for the implementation of the IFD Agreement. Hereby, the IFI can play a valuable role in helping to identify reform gaps and prioritise technical assistance and capacity development needs.

Third, the illustrated high variation of domestic adoption levels and the particular nature of investment facilitation measures point to challenges for the implementation of the IFD Agreement. The political economy of investment facilitation reforms implies that most developing (host) countries benefit from the policy reforms they undertake at home and not necessarily from the reforms of other countries. The principle of reciprocity (e.g. linked to the exchange of market access for trade in goods or services) is therefore less relevant in the context of regulatory reforms such as in the case of investment facilitation. Furthermore, high-income and upper-middle-income countries have already adopted a large number of provisions and the marginal effect of the IFD Agreement on attraction of additional inward FDI could be small. Thus, high- and upper-middle-income countries, as home countries of foreign investors, benefit mainly from the policy reforms undertaken in low- and lower-middle-income countries, which would potentially help to facilitate high- and upper-middle-income countries' outward FDI.

In view of the ongoing discussions and negotiations on investment facilitation, there is a need to ramp up empirical research. Such a future research agenda can be informed and enabled by the IFI data. For example, the level of adoption of investment facilitation measures allows the identification and quantification of changes to the investment regulatory regimes of different economies as a result of different scenarios, as illustrated for the case of the IFD Agreement. The IFI also enables estimations of cost reductions from potential investment facilitation reforms, which can be used as an input in computable general equilibrium models to evaluate the economic effects of potential agreements. Moreover, simulating different scenarios of potential agreements may help to identify the most beneficial framework for all the partners as well as the spillover effects for outsiders (Balistreri and Olekseyuk, forthcoming). And the last but not least, the IFI gives a clear picture of where economies have adoption gaps, and thus provides the basis for the planned IFD Agreement related needs assessments at country level, which are essential to create targeted technical assistance and capacity development support.

References

Balistreri, E. & Olekseyuk, Z. (forthcoming). Economic impacts of investment facilitation. In A. Berger & M. Chi (Eds.), *The Making of an International Investment Facilitation Framework: Legal, Political and Economics Perspectives*. Cambridge: Cambridge University Press.

Berger, A., Bolmer, A. M., & Olekseyuk, Z. (2022a). *Implementing an Investment Facilitation for Development Agreement: How to self-assess implementation gaps and technical assistance needs.* International Trade Centre, Geneva, Switzerland. Retrieved from https://intracen.org/file/ifdneedsassessment15novpdf

Berger, A., Dadkhah, A. & Olekseyuk, Z. (2021). *Quantifying investment facilitation at country level: introducing a new index* (Discussion Paper 23/2021). Bonn: German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE).

Berger, A., Dadkhah, A., Gitt, F., & Olekseyuk, Z. (2023). *The updated Investment Facilitation Index* [Data set]. Zenodo. https://doi.org/10.5281/zenodo.7755521

Berger, A., & Gsell, S. (2019). *How can an international framework for investment facilitation contribute to sustainable development?* (Briefing Paper 15/2019). Bonn: German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE).

Berger, A., Gitt, F., & Dadkhah, A. (forthcoming). Domestic investment facilitation frameworks: Measuring their extent and variation. In A. Berger & M. Chi (Eds.), *The Making of an International Investment Facilitation Framework: Legal, Political and Economics Perspectives*. Cambridge: Cambridge University Press.

Berger, A., Gsell, S., & Olekseyuk, Z. (2019). *Investment facilitation for development: A new route to global investment governance* (Briefing Paper 5/2019). Bonn: German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE).

Berger, A., Kagan, Y. & Sauvant, K.P. (2022b). *Investment Facilitation for Development: A toolkit for policymakers, Second Edition.* Geneva: International Trade Centre. Retrieved from https://intracen.org/file/iftoolkitasofmay19rev2pdf

Bernasconi-Osterwalder, N., Leal, S., & van der Ven, C. (2020). *The proposed multilateral framework on investment facilitation: An analysis of its relationship to international trade and investment agreements.* Geneva: IISD and CUTS International, European University Institute.

Calamita, J. (2020). Multilateralizing investment facilitation at the WTO: Looking for the added value. *Journal of International Economic Law, 23*, 1-16.

Cattell, R. B. (1966). The meaning and strategic use of factor analysis. In *Handbook of multivariate experimental psychology* (pp. 131-203). Boston, MA: Springer US.

Golub, S. (2003). *Measures of restrictions on inward foreign direct investment for OECD countries* (OECD Economics Department Working Papers, 357). Paris: OECD Publishing. Retrieved from https://doi.org/10.1787/335043060125

Greenacre, M., Groenen, P. J., Hastie, T., d'Enza, A. I., Markos, A., & Tuzhilina, E. (2022). Principal component analysis. *Nature Reviews Methods Primers*, *2*(1), 100.

Grosso, M.G., Gonzales, F., Miroudot, S., Nordås, H.K., Rouzet, D., & Ueno, A. (2015). *Services Trade Restrictiveness Index (STRI): Scoring and weighting methodology* (OECD Trade Policy Papers, 177). Paris: OECD Publishing. Retrieved from https://doi.org/10.1787/5js7n8wbtk9r-en

Hees, F., & Cavalcante, P. (2017). *Focusing on investment facilitation – Is it that difficult?* (Columbia FDI Perspective, 202). New York: Columbia Center on Sustainable Investment.

Hoekman B. (2021). From trade to investment facilitation: Parallels and differences. In A. Berger & K.P. Sauvant (Eds.), *Investment facilitation for development: A toolkit for policymakers* (pp. 28-42). Geneva: International Trade Centre.

Jose R. (2023). The Investment Facilitation for Development Agreement: Where do negotiations stand ahead of the July 2023 deadline? International Institute for Sustainable Development. Retrieved from https://www.iisd.org/articles/deep-dive/investment-facilitation-development-agreement

Kalinova, B., Palerm, A., & Thomsen, S. (2010). *OECD's FDI Restrictiveness Index: 2010 update* (OECD Working Papers on International Investment, 2010/03). Paris: OECD Publishing. Retrieved from https://doi.org/10.1787/5km91p02zj7g-en

Knoerich, J., Stephenson, M., & Taylor-Strauss, H. (2022). *Outward foreign direct investment policy toolkit for sustainable development:Insight report.* Bangkok and Geneva: UNESCAP and World Economic Forum. Retrived from https://www3.weforum.org/docs/WEF_Outward_FDI_Insight_Report_2022.pdf

Kusek, P., & Silva, A. (2017). What matters to investors in developing countries: Findings from the Global Investment Competitiveness Survey. In World Bank, *2017/2018 Global Investment Competitiveness Report: Foreign investor perspectives and policy implications* (pp. 19-50). Washington, DC: Author.

Nordås, H.K. (2010a). *STRI: A guide to the regulatory database: Measures, explanatory notes and examples.* Tech. Rep. TAD/TC/WP(2010)7, OECD, Working Party of the Trade Committee, 30-31 March 2010.

Nordås, H.K. (2010b). *STRI: A note on weighting schemes*. Tech. Rep. TAD/TC/WP(2010)10, OECD, Working Party of the Trade Committee.

Novik, A., & de Crombrugghe, A. (2018). *Towards an international framework for investment facilitation*. OECD, Investment Insights.

OECD (Organisation for Economic Co-operation and Development). (2009). *Methodology for deriving the STRI.* Tech. rep., OECD, OECD Expert meeting on the Services Trade Restrictiveness Index (STRI) Paris, 2-3 July 2009.

OECD (2018). *Trade facilitation and the global economy*. Paris: Author. Retrieved from http://dx.doi.org/10.1787/9789264277571-en

OECD (n.d.). *Services Trade Restrictiveness Simulator*. Retrieved from https://sim.oecd.org/

OECD Data (n.d.). *FDI restrictiveness*. Retrieved from https://data.oecd.org/fdi/fdi-restrictiveness.htm

OECD, European Union & Joint Research Centre - European Commission (2008). *Handbook on constructing composite indicators: Methodology and user guide.* OECD Publishing, Paris. Retrieved from https://doi.org/10.1787/9789264043466-en.

Polanco, R. (2018). *Facilitation 2.0: Investment and trade in the digital age*. RTA Exchange, 1-24.

Polanco, R. (forthcoming). Investment facilitation provisions in international investment agreements and the multilateral framework on investment facilitation for development. In A. Berger & M. Chi (Eds.), *The Making of an International Investment Facilitation Framework: Legal, Political and Economics Perspectives*. Cambridge: Cambridge University Press.

Saisana, M., Saltelli, A., & Tarantola, S. (2005). Uncertainty and sensitivity analysis techniques as tools for the quality assessment of composite indicators. Journal of the Royal Statistical Society: Series A (Statistics in Society), 168(2), 307-323.

Sauvant, K.P., & Hamdani, K. (2015). *An international support programme for sustainable investment facilitation*. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2015. Retrieved from www.e15initiative.org/

Schacherer, S. (2021). *Facilitating investment through IIAs: The case of the Regional Comprehensive Economic Partnership Agreement* (Columbia FDI Perspective No. 295). New York: Columbia Center on Sustainable Investment.

Sobol', I. M. (1967). On the distribution of points in a cube and the approximate evaluation of integrals. *Zhurnal Vychislitel'noi Matematiki i Matematicheskoi Fiziki*, 7(4), 784-802.

UNCTAD (United Nations Conference on Trade and Development). (2020). *World Investment Report 2020. International production beyond the pandemic*. Geneva: Author.

WEF (World Economic Forum). (2019). *The global competitiveness report 2019*. Geneva. Retrieved from WEF_TheGlobalCompetitivenessReport2019.pdf (weforum.org)

World Bank. (2020). *Doing business 2020. Comparing business regulation in 190 economies*. Washington, D.C.: Author. Retrieved from https://openknowledge.worldbank.org/bitstream/handle/10986/32436/9781464814402.pdf

WTO (World Trade Organization). (2021). *The legal status of "Joint Statement Initiatives" and their negotiated outcomes (WT/GC/W/819)*. Retrieved from https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/GC/W819.pdf&Open=True

WTO (2020). *WTO structured discussions on investment facilitation for development*. Retrieved from https://trade.ec.europa.eu/doclib/docs/2020/march/tradoc_158673.pdf

WTO (2018). *JOB/GC/169. Structured discussions on investment facilitation. Communication from Brazil*. Retrieved from https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=241891&Current

WTO (2017). *New initiatives on electronic commerce, investment facilitation and MSMEs*. 11 December 2017. Retrieved from https://www.wto.org/english/news_e/news17_e/minis_13dec17_e.htm

WTO (2017a). *WT/MIN(17)/59. Joint Ministerial Statement on Investment Facilitation for Development*. Retrieved from https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=240870

WTO (2017b). *JOB/GC/120. Communication from the Russian Federation. Investment Policy Discussion Group*. Retrieved from https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=236414,236189,236149,235996,235960,235961,235962,235526,235438&CurrentCatalogueIdIndex=8&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True

WTO (2017c). *JOB/GC/121. MIKTA Investment Workshop Reflections. Communication from Mexico, Indonesia, Korea, Turkey and Australia*. Retrieved from https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=236414,236189,236149,235996,235960,235961,235962,235526,235438&CurrentCatalogueIdIndex=7&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True

WTO (2017d). *JOB/GC/123. Possible elements of investment facilitation. Communication from China*. Retrieved from https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=236954,236782,236668,236429,236189,236149,235960,235961,235962,235526&CurrentCatalogueIdIndex=7&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True

WTO (2017e). *JOB/GC/122. Proposal for a WTO informal dialogue on investment facilitation for development. Joint Communication from the Friends of Investment Facilitation for Development*. Retrieved from https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=236954,236782,236668,236429,236189,236149,235960,235961,235962,235526&CurrentCatalogueIdIndex=6

WTO (2017f). *JOB/GC/124. Possible elements of a WTO instrument on investment facilitation. Communication from Argentina and Brazil*. Retrieved from https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=236414,236189,236149,235996,235960,235961,235962,235526,235438&CurrentCatalogueIdIndex=6&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True

WTO (2013). *Agreement on Trade Facilitation. Ministerial decision of 7 December 2013*. Retrieved from https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/MIN13/36.pdf&Open=True

WTO (n.d.). *WTO negotiations on domestic regulation disciplines*. Retrieved from https://www.wto.org/english/tratop_e/serv_e/dom_reg_negs_e.htm

Annex 1: IFI measures and their mapping to the IFD text		
Measure	Description	IFD provision
	A. Regulatory transparency & predictability	
A.1	Establishment of enquiry points	22.1.
A.2	Average time between publication of new or amended investment related laws and regulations and entry into force	6.2.
A.3	Publication of information on procedural rules for appeal and review	7.1. (g)
A.4	Publication of information and procedures on laws, regulations and procedures affecting investment	6.4.(a,c), 6.1. & 7.1.
A.5	Publication of information on investment incentives, subsidies or tax breaks	6.4. (c)
A.6	Laws and regulations are available in one of the WTO official languages	7.2., 8.4. & 24.2. (c)
A.7	Publication of judicial decision on investment matters	6.1. & 3.1. (b)
A.8	Publication of international agreements pertaining to foreign direct investment	6.1.
A.9	Information published on fees and charges	7.1. (e)
A.10	Publication of investment guidebook	6.4. & 7.1.
A.11	Publication of the information on competent authorities including contact details	6.4. (d), 7.1. (i) & 8.3.
A.12	Publication of timeframe required to process an application associated to any specific investment decision	7.1. (d)
A.13	An adequate time period granted between the publication of new or amended fees and charges and their entry into force	17.2.
A.14	Information available on the purpose and rationale of the law or regulation	6.3.
A.15	Regulations or administrative measures in place for the protection of personal information (confidential information)	40.1.
A.16	The legal framework for protection of personal information takes into account principles and guidelines of relevant international bodies such as the OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data	Not mapped
A.17	Insurance and guarantees: Home country provides investment insurance and guarantees	6.5.
A.18	Drafts of investment regulations and acts are published prior to entry into force	10.1. & 10.2.
A.19	Notification to the WTO of laws, regulations, and administrative procedures of general application	11.1. (a)
A.20	Notification to the WTO of the Uniform Resource Locators (URL) of the website where relevant information concerning investment is made publicly available	11.1. (c)
A.21	Notification to the WTO of enquiry/focal/contact points	11.1. (d)
A.22	Notification to the WTO of other relevant information (e.g. competent authorities)	11.1. (d)
A.23	Publication of lists or catalogues indicating which sectors are allowed, restricted or prohibited for foreign investment	6.4. (b)
	B. Electronic governance	
B.24	Establishment of a national investment website for information purpose	8.1.

B.25	Electronic payment system for the investor to pay all fees, charges and taxes associated to the admission, establishment, maintenance, acquisition and expansion of investments	18.2.
B.26	Availability of online business registration system	Not mapped
B.27	Copies of documents accepted	15.1. (b) & (c)
B.28	Use of electronic tools (including email or social media applications) by the competent authorities for exchanging information with investors	Not mapped
B.29	Laws or regulations provide electronic signature with the equivalent legal validity with hand-written signature	Not mapped
B.30	The ability to track the status of an application online	Not mapped
B.31	Online tax registration and declaration is available to non-resident foreign investors	Not mapped
B.32	Single window: Availability of a national investment portal (or single window) for the submission and/or processing of applications online	16.1.
B.33	Single window: Is it possible to submit all documents necessary for investment applications simultaneously (e.g. business registry, national and/or state/municipal tax identification number, social security, pension schemes)?	18.1.
B.34	Single window: Is it possible to pay all fees corresponding to the mandatory registrations?	Not mapped
B.35	Single window: Is it possible to receive the business registration certificates online (e.g. QR code, certificate number, PDF, etc.)?	Not mapped
B.36	Single window: Updating information	8.2.
B.37	Single window: Does the website give phones or online contacts for complaints, for each mandatory registration?	8.1. & 6.4. (d)
	C. Focal point & review	
C.38	Independent or higher level administrative and/or judicial appeal procedures available	20.1.
C.39	Existence of time limit for deciding judicial appeals	Not mapped
C.40	World Economic Forum Global Competitiveness Report: Judicial independence	Not mapped
C.41	Opportunity to support or defend respective positions in judicial review	20.3. (a)
C.42	Judicial review decision based on the evidence and arguments	20.3. (b)
C.43	Dispute prevention mechanism in place	22.3.
C.44	Domestic institutional arrangements to enhance communication and coordination among relevant authorities at different levels of government	Not mapped
C.45	Focal point: Establishment of a mechanism for coordination and handling of foreign investment complaints (focal point/ombudsman)	22.3.
C.46	Focal point: Focal point provides guidance concerning related legislation, institutions, process, and responsible agencies	22.1.
C.47	Focal point: Focal point accepts and/or forwards foreign investment complaints	22.3.
C.48	Focal point: Focal point responses to enquiries of governments, investors and other interested parties	22.1. (a)
C.49	Focal point: Focal point assists investors in obtaining information from government agencies relevant to their investments	22.1. (b)
C.50	Focal point: Possibility to provide feedback to focal point	Not mapped

C.51	Focal point: Operation of the single window	Not mapped
C.52	Focal point: Focal point provides parties with alternative forms of dispute resolution	Not mapped
C.53	Focal point: Focal point assists investors by seeking to resolve investment-related difficulties, in collaboration with government agencies	Not mapped
C.54	Focal point: Focal point recommends to the competent authorities measures to improve the investment environment (policy advocacy)	22.3.
C.55	Focal point: Quality/User friendliness of the research/help function of the focal point website	Not mapped
C.56	Focal point: Focal point holds frequent meetings with foreign-invested companies and relevant government officials to mitigate conflicts and facilitate their resolutions	Not mapped
C.57	Focal point: Focal point makes corrective recommendations and expression of opinions regarding illegal and unfair administrative measures	Not mapped
C.58	Focal point: Focal point urges and/or inspects the implementation of the solutions for foreign investment complaints	Not mapped
C.59	Timeliness of the appeal mechanism - time available for lodging and appeal	Not mapped
C.60	Timeliness of the appeal decision - avoidance of undue delays	Not mapped
D. Application process		
D.61	Periodic review of investment regulations and documentation requirements	21.1.
D.62	Availability of an online checklist to assist applicants to complete applications	Not mapped
D.63	Availability of a set of guidelines on application requirements	Not mapped
D.64	Publication of timeframes to process an application	15.1. (d)
D.65	Inform the applicant of the decision concerning an application	15.1. (g) (ii)
D.66	Availability of information concerning the status of the application	15.1. (e)
D.67	Inform the applicant that the application is incomplete	15.1. (h) (i)
D.68	Provide the applicant with an explanation of why the application is considered incomplete	15.1. (h) (ii)
D.69	Provide the applicant with the opportunity to submit the information required to complete the application	15.1. (h) (iii)
D.70	Provide the applicant with the opportunity to resubmit an application that was previously rejected	15.1. (i)
D.71	Competent authorities accept submission of an application at any time throughout the year	15.1. (a)
D.72	Adopting a silent 'yes' approach for administrative approvals	15.1. (g) (ii) Footnote
D.73	Evaluation of fees and charges	17.1.
D.74	Information on fees and charges all-inclusive	Not mapped
D.75	Time period between the publication of new or amended fees and charges and their entry into force	17.2.
D.76	Fees for answering enquiries and providing required forms and documents	22.2.
D.77	Fees and charges periodically reviewed to ensure they are still appropriate and relevant	21.2.

D.78	Investment policies are supported by a risk management system allowing risks to be assessed through appropriate selectivity criteria	Not mapped
D.79	Movement of business persons: Range of visa processing time for investors (days)	Not mapped
D.80	Movement of business persons: Multiple entry visa for business visitors	Not mapped
D.81	Movement of business persons: Publication of information on current requirements for temporary entry of business visitors	Not mapped
D.82	Movement of business persons: Accept and process visa applications in electronic format	Not mapped
D.83	Movement of business persons: Renewal or extension of authorisation for temporary stay	Not mapped
D.84	Movement of business persons: Number of documents needed to obtain a business visa	Not mapped
D.85	Movement of business persons: Cost to obtain a business visa (USD)	Not mapped
	E. Cooperation	
E.86	Cooperation and co-ordination of the activities of agencies involved in the management of investment, with a view to improving and facilitating investment	23.3.
E.87	Exchange of staff and training programmes at the international level (technical assistance)	35.2.
E.88	Cooperation in exchange of information with respect to investment opportunities and information on domestic investors	26.2.
E.89	Establishment of a domestic supplier database	24.1.
E.90	Sharing of best practices and information on the facilitation of foreign direct investments	26.2.
E.91	Accession to multilateral and/or regional investment promotion and facilitation conventions	Not mapped
E.92	Alignment of procedures and formalities for acceptance of investment applications with neighbouring countries where applicable	Not mapped
E.93	Harmonisation of data requirements and documentary controls	Not mapped
E.94	Regular consultation and effective dialogue with investors	Not mapped
E.95	Mechanism to support inter-agency coordination	Not mapped
E.96	Organization of business-government networking events	Not mapped
	F. Responsible business conduct and anti-corruption	
F.97	UN Guiding Principles on Business and Human Rights	37.1.
F.98	ILO Ratification of fundamental Conventions concerning Freedom of Association, Forced Labour, Discrimination and Child Labour	37.1.
F.99	United Nations Model Double Taxation Convention between Developed and Developing Countries	Not mapped
F.100	United Nations Convention Against Corruption	38.1.
F.101	Combating Bribery of Foreign Public Officials in International Business Transactions	38.1.

Source: Authors

Annex 2: List of countries and corresponding IFI scores				
Economy	ISO Code	Income level (fiscal year 2024)	Region	IFI score
Albania	ALB	Upper-middle income	Europe & Central Asia	1.039
Angola	AGO	Lower-middle income	Sub-Saharan Africa	0.744
Antigua and Barbuda	ATG	High income	Latin America & Caribbean	0.543
Argentina	ARG	Upper-middle income	Latin America & Caribbean	0.987
Armenia	ARM	Upper-middle income	Europe & Central Asia	1.051
Australia	AUS	High income	East Asia & Pacific	1.524
Austria	AUT	High income	Europe & Central Asia	1.435
Bahrain, Kingdom of	BHR	High income	Middle East & North Africa	1.038
Bangladesh	BGD	Lower-middle income	South Asia	1.087
Barbados	BRB	High income	Latin America & Caribbean	0.613
Belgium	BEL	High income	Europe & Central Asia	1.321
Belize	BLZ	Upper-middle income	Latin America & Caribbean	0.533
Benin	BEN	Lower-middle income	Sub-Saharan Africa	0.493
Botswana	BWA	Upper-middle income	Sub-Saharan Africa	0.848
Brazil	BRA	Upper-middle income	Latin America & Caribbean	1.425
Brunei	BRN	High income	East Asia & Pacific	0.819
Bulgaria	BGR	Upper-middle income	Europe & Central Asia	1.284
Burkina Faso	BFA	Low income	Sub-Saharan Africa	0.544
Burundi	BDI	Low income	Sub-Saharan Africa	0.486
Cambodia	KHM	Lower-middle income	East Asia & Pacific	1.109
Cameroon	CMR	Lower-middle income	Sub-Saharan Africa	0.463
Canada	CAN	High income	North America	1.632
Central African Republic	CAF	Low income	Sub-Saharan Africa	0.220
Chad	TCD	Low income	Sub-Saharan Africa	0.274
Chile	CHL	High income	Latin America & Caribbean	1.170
China	CHN	Upper-middle income	East Asia & Pacific	1.300
Chinese Taipei	TWN	High income	East Asia & Pacific	1.143
Colombia	COL	Upper-middle income	Latin America & Caribbean	1.156
Congo, Dem. Rep.	COD	Low income	Sub-Saharan Africa	0.584
Costa Rica	CRI	Upper-middle income	Latin America & Caribbean	1.153
Côte d'Ivoire	CIV	Lower-middle income	Sub-Saharan Africa	0.744
Croatia	HRV	High income	Europe & Central Asia	1.114
Cuba	CUB	Upper-middle income	Latin America & Caribbean	0.735
Cyprus	CYP	High income	Europe & Central Asia	1.143
Czechia	CZE	High income	Europe & Central Asia	1.191
Denmark	DNK	High income	Europe & Central Asia	1.519
Djibouti	DJI	Lower-middle income	Middle East & North Africa	0.230
Dominica	DMA	Upper-middle income	Latin America & Caribbean	0.474
Dominican Republic	DOM	Upper-middle income	Latin America & Caribbean	0.600
Ecuador	ECU	Upper-middle income	Latin America & Caribbean	0.652

Annex 2: List of countries and corresponding IFI scores				
Egypt	EGY	Lower-middle income	Middle East & North Africa	0.884
El Salvador	SLV	Upper-middle income	Latin America & Caribbean	0.871
Estonia	EST	High income	Europe & Central Asia	1.349
Eswatini	SWZ	Lower-middle income	Sub-Saharan Africa	0.384
Fiji	FJI	Upper-middle income	East Asia & Pacific	1.202
Finland	FIN	High income	Europe & Central Asia	1.514
France	FRA	High income	Europe & Central Asia	1.611
Gabon	GAB	Upper-middle income	Sub-Saharan Africa	0.671
Georgia	GEO	Upper-middle income	Europe & Central Asia	0.898
Germany	DEU	High income	Europe & Central Asia	1.620
Ghana	GHA	Lower-middle income	Sub-Saharan Africa	0.671
Greece	GRC	High income	Europe & Central Asia	1.409
Grenada	GRD	Upper-middle income	Latin America & Caribbean	0.517
Guatemala	GTM	Upper-middle income	Latin America & Caribbean	0.795
Guinea	GIN	Lower-middle income	Sub-Saharan Africa	0.663
Guyana	GUY	High income	Latin America & Caribbean	0.396
Haiti	HTI	Lower-middle income	Latin America & Caribbean	0.387
Honduras	HND	Lower-middle income	Latin America & Caribbean	0.557
Hong Kong	HKG	High income	East Asia & Pacific	1.313
Hungary	HUN	High income	Europe & Central Asia	1.108
Iceland	ISL	High income	Europe & Central Asia	1.089
India	IND	Lower-middle income	South Asia	1.202
Indonesia	IDN	Upper-middle income	East Asia & Pacific	1.111
Ireland	IRL	High income	Europe & Central Asia	1.505
Israel	ISR	High income	Middle East & North Africa	1.266
Italy	ITA	High income	Europe & Central Asia	1.427
Jamaica	JAM	Upper-middle income	Latin America & Caribbean	0.695
Japan	JPN	High income	East Asia & Pacific	1.651
Jordan	JOR	Lower-middle income	Middle East & North Africa	0.652
Kazakhstan	KAZ	Upper-middle income	Europe & Central Asia	1.337
Kenya	KEN	Lower-middle income	Sub-Saharan Africa	0.896
Korea	KOR	High income	East Asia & Pacific	1.764
Kuwait	KWT	High income	Middle East & North Africa	0.955
Kyrgyz Republic	KGZ	Lower-middle income	Europe & Central Asia	0.794
Laos	LAO	Lower-middle income	East Asia & Pacific	0.738
Latvia	LVA	High income	Europe & Central Asia	1.217
Liberia	LBR	Low income	Sub-Saharan Africa	0.268
Lithuania	LTU	High income	Europe & Central Asia	1.187
Luxembourg	LUX	High income	Europe & Central Asia	1.556
Madagascar	MDG	Low income	Sub-Saharan Africa	0.494
Malawi	MWI	Low income	Sub-Saharan Africa	0.771

Annex 2: List of countries and corresponding IFI scores

Malaysia	MYS	Upper-middle income	East Asia & Pacific	1.204
Maldives	MDV	Upper-middle income	South Asia	0.514
Mali	MLI	Low income	Sub-Saharan Africa	0.766
Malta	MLT	High income	Middle East & North Africa	0.835
Mauritius	MUS	Upper-middle income	Sub-Saharan Africa	1.301
Mexico	MEX	Upper-middle income	Latin America & Caribbean	1.497
Moldova	MDA	Upper-middle income	Europe & Central Asia	0.893
Mongolia	MNG	Lower-middle income	East Asia & Pacific	0.765
Montenegro	MNE	Upper-middle income	Europe & Central Asia	0.750
Morocco	MAR	Lower-middle income	Middle East & North Africa	0.725
Mozambique	MOZ	Low income	Sub-Saharan Africa	0.557
Myanmar	MMR	Lower-middle income	East Asia & Pacific	0.753
Namibia	NAM	Upper-middle income	Sub-Saharan Africa	0.618
Nepal	NPL	Lower-middle income	South Asia	0.749
Netherlands	NLD	High income	Europe & Central Asia	1.639
New Zealand	NZL	High income	East Asia & Pacific	1.474
Nicaragua	NIC	Lower-middle income	Latin America & Caribbean	0.814
Niger	NER	Low income	Sub-Saharan Africa	0.588
Nigeria	NGA	Lower-middle income	Sub-Saharan Africa	1.005
North Macedonia	MKD	Upper-middle income	Europe & Central Asia	1.143
Norway	NOR	High income	Europe & Central Asia	1.387
Oman	OMN	High income	Middle East & North Africa	1.106
Pakistan	PAK	Lower-middle income	South Asia	1.126
Panama	PAN	High income	Latin America & Caribbean	0.748
Papua New Guinea	PNG	Lower-middle income	East Asia & Pacific	0.700
Peru	PER	Upper-middle income	Latin America & Caribbean	1.056
Philippines	PHL	Lower-middle income	East Asia & Pacific	1.041
Poland	POL	High income	Europe & Central Asia	1.437
Portugal	PRT	High income	Europe & Central Asia	1.312
Qatar	QAT	High income	Middle East & North Africa	1.031
Romania	ROU	High income	Europe & Central Asia	1.144
Russia	ROU	Upper-middle income	Europe & Central Asia	0.949
Rwanda	RWA	Low income	Sub-Saharan Africa	0.997
Samoa	WSM	Lower-middle income	East Asia & Pacific	0.570
Saudi Arabia	SAU	High income	Middle East & North Africa	1.162
Senegal	SEN	Lower-middle income	Sub-Saharan Africa	0.761
Sierra Leone	SLE	Low income	Sub-Saharan Africa	0.628
Singapore	SGP	High income	East Asia & Pacific	1.275
Slovakia	SVK	High income	Europe & Central Asia	1.229
Slovenia	SVN	High income	Europe & Central Asia	1.385
Solomon Islands	SLB	Lower-middle income	East Asia & Pacific	0.752

Annex 2: List of countries and corresponding IFI scores

South Africa	ZAF	Upper-middle income	Sub-Saharan Africa	1.264
Spain	ESP	High income	Europe & Central Asia	1.461
Sri Lanka	LKA	Lower-middle income	South Asia	1.091
Sweden	SWE	High income	Europe & Central Asia	1.476
Switzerland	CHE	High income	Europe & Central Asia	1.419
Tajikistan	TJK	Lower-middle income	Europe & Central Asia	0.569
Tanzania	TZA	Lower-middle income	Sub-Saharan Africa	0.831
Thailand	THA	Upper-middle income	East Asia & Pacific	1.330
The Gambia	GMB	Low income	Sub-Saharan Africa	0.540
Togo	TGO	Low income	Sub-Saharan Africa	0.526
Trinidad and Tobago	TTO	High income	Latin America & Caribbean	1.059
Türkiye	TUR	Upper-middle income	Europe & Central Asia	1.258
Uganda	UGA	Low income	Sub-Saharan Africa	1.120
United Arab Emirates	ARE	High income	Middle East & North Africa	1.110
United Kingdom	GBR	High income	Europe & Central Asia	1.736
Uruguay	URY	High income	Latin America & Caribbean	0.921
USA	USA	High income	North America	1.655
Vietnam	VNM	Lower-middle income	East Asia & Pacific	1.072
Zambia	ZMB	Lower-middle income	Sub-Saharan Africa	0.938
Zimbabwe	ZWE	Lower-middle income	Sub-Saharan Africa	0.825

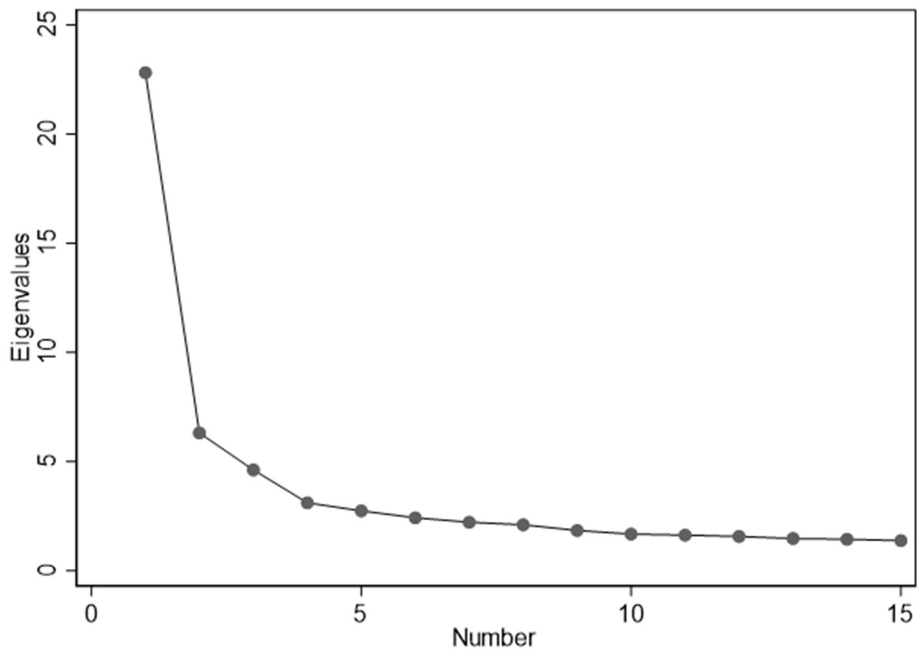
Source: Authors for the IFI data, World Bank for country classification (https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups), Statistics Division of the UN for ISO codes (https://unstats.un.org/unsd/methodology/m49/ for ISO codes).

Annex 3: Statistical properties of IFI data by income and region

Country group/region	Number of countries	Mean	Standard deviation	Minimum	50%	Maximum
High-income	54	1.26	0.30	0.40	1.29	1.76
Low-income	16	0.59	0.24	0.22	0.55	1.12
Lower-middle-income	36	0.77	0.23	0.23	0.75	1.20
Upper-middle-income	36	0.98	0.29	0.47	1.01	1.50
East Asia & Pacific	22	1.12	0.33	0.57	1.13	1.76
Europe & Central Asia	41	1.27	0.26	0.57	1.31	1.74
Latin America & Caribbean	25	0.81	0.31	0.39	0.75	1.50
Middle East & North Africa	12	0.92	0.28	0.23	0.99	1.27
North America	2	1.64	0.02	1.63	1.64	1.66
South Asia	6	0.96	0.27	0.51	1.09	1.20
Sub-Saharan Africa	34	0.69	0.26	0.22	0.67	1.30

Source: Authors for IFI data, World Bank for country classification (https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups).

Annex 4: Scree plot for all individual IFI measures



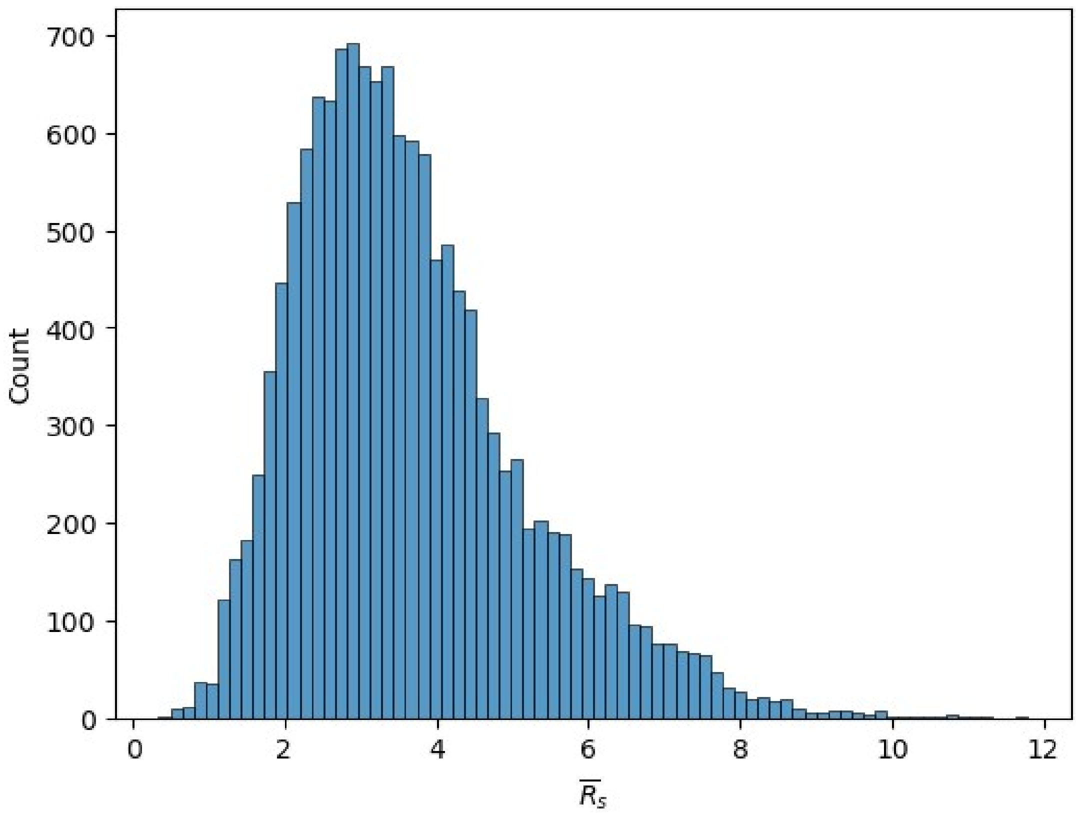
Note: This figure shows the eigenvalues of the first 15 factors of a factor analysis with oblique rotation on all individual measures of the IFI.
Source: Authors

Annex 5: Correlations between policy areas

	Regulatory transparency & predictability	Electronic governance	Focal point & review	Application process	Cooperation	Responsible business conduct and anti-corruption
Regulatory transparency & predictability	1					
Electronic governance	0.6641	1				
Focal point & review	0.7136	0.5345	1			
Application process	0.681	0.6881	0.6319	1		
Cooperation	0.7475	0.5084	0.7243	0.5444	1	
Responsible business conduct and anti-corruption	0.6763	0.3285	0.6035	0.4357	0.7447	1

Source: Authors

Annex 6: Histogram indicating empirical probability density function of average absolute rank shift $\overline{R_s}$



Note: This histogram displays the frequencies of average absolute rank shifts for all 14366 simulations of the IFI with different assumptions for weights. Median average rank shift is 3.37.
Source: Authors