



The Commitment to Development Index: 2018 Edition

Overview of Components, Subcomponents, and Indicators

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Aid

The aid component is composed of two subcomponents which assess the quantity of aid of each donor country and the quality of that aid.

Why is aid important for development?

Aid is likely the first policy that comes to mind when considering how rich countries help development beyond their borders. Aid remains an important source of development finance for many developing countries. The [OECD report on Fragile States](#) concludes that aid has been the largest and most reliable source of finance for the least developed fragile states over the past decade. In 1969, the Pearson Commission [proposed that rich countries should spend 0.7%](#) of their Gross National Income on foreign aid. Almost fifty years later, only a handful of countries are meeting this target.

Quantity is not the only aspect that matters in the provision of aid. How aid is provided can have a significant impact on achieving development results. This has been acknowledged by donors in a [series of High Level Meetings](#) on Aid Effectiveness, the last one taking place in Busan in 2011. These fora contributed to establishing key principles for improving the effectiveness of development assistance. Today, ownership, harmonization, managing for development results, and mutual accountability are standard criteria which donors and recipients use to implement development assistance interventions. Related CGD work: Aid effectiveness.

Aid Quantity

The Commitment to Development Index is intended to measure the effort of each country – that is, the contribution countries make relative to their size. In 1969, the [Pearson Commission](#) proposed that donors should spend 0.7% of Gross National Product on foreign aid, for which the definition of [official development assistance](#) (ODA) was provided by the Development Assistance Committee (DAC) of the OECD in the same year. This 0.7% target was enshrined in a UN resolution on October 24, 1970. In 1993, following the revision to the UN System of National Accounts, GNI replaced GNP as denominator for the target. Given that there is a widely (though not universally) accepted target for [ODA as a share of GNI](#), we use this ratio in the Commitment to Development Index as our measure of aid quantity.

The weight of this indicator in the aid component is 50%.

Aid quality

The quality of foreign aid is hard to define and therefore hard to measure – donors and recipients have distinct understandings of what comprises “good” aid, and researchers have struggled to find common ground amidst these competing definitions. There are several reasons why assessing the quality of aid is a challenging exercise, and you can read more about it in [our paper](#).

The CDI uses the Quality of Official Development Assistance (QuODA) as the main input for calculating an Aid Quality Score (AQS) to assess countries on the quality of their aid. The most recent edition of QuODA consists of 24 indicators measured across 27 bilateral donors (members of the OECD’s Development Assistance Committee which is the same selection for CDI countries) and 13 multilateral agencies. The indicators are grouped into four dimensions that reflect international best practices of aid effectiveness: maximizing efficiency, fostering institutions, reducing the burden on recipient countries, and transparency and learning.

Maximizing efficiency relates to how aid is disbursed across countries and sectors, and its availability for projects and programs in recipient countries. The indicators shed light on the strategic choices made over aid allocations and the extent to which donors implement an efficient division of labour. **Fostering institutions** is about building the institutional strength in recipient countries by using country systems,

priorities and approaches. The indicators point to donors' willingness to make long-term investments in strengthening partners' ability to develop and implement their own strategies. They point to the degree to which donors are genuinely prepared to put partners in the driver's seat, as so often promised. **Reducing the burden** on partner countries assesses problems of overlap, waste, and fragmentation among donors. It rewards those who explicitly concern themselves with coordination and collaboration with others. **Transparency and Learning** promotes the power of data and evaluation to generate evidence-based decisions that can improve aid effectiveness. The indicators shed light on whether donors themselves practice the kind of openness in their own activities that they often request of partners. For more information on QuODA, please see the [methodology paper](#).

The Aid Quality Score (AQS) for the aid component is a combination of how a country performs for its bilateral aid and multilateral aid, based on QuODA. In a simplified form, the score for Aid Quality is determined by:

$$AQS = (\text{bilat score} \cdot \% \text{ spend bilaterally}) + (\text{multilat score} \cdot \% \text{ spent multilaterally})$$

The weight of aid quality in the aid component is 50%.

Bilateral Aid Quality

The CDI uses the Quality of Official Development Assistance (QuODA) as the main input for calculating an Aid Quality Score (AQS) to assess countries on the quality of their aid. The most recent edition of QuODA consists of 24 indicators measured across 27 bilateral donors (members of the OECD's Development Assistance Committee which is the same selection for CDI countries) and 13 multilateral agencies. The indicators are grouped into four dimensions that reflect international best practices of aid effectiveness: maximizing efficiency, fostering institutions, reducing the burden on recipient countries, and transparency and learning. For more information on QuODA, please see the methodology paper.

The bilateral aid quality score takes the country's simple average across the 24 QuODA indicators (which have been normalized using z-scores). The bilateral aid quality score is multiplied by the share of total aid that each donor spends bilaterally (the share differs for every CDI country) in order to result in a weighted bilateral aid quality score.

The weighted bilateral aid quality score is summed with the weighted multilateral aid quality score to results in an overall aid quality score, which has a weight of 50% in the aid component.

Multilateral Aid Quality

The CDI uses the Quality of Official Development Assistance (QuODA) as the main input for calculating an Aid Quality Score (AQS) to assess countries on the quality of their aid. The most recent edition of QuODA consists of 24 indicators (22 for multilaterals) measured across 27 bilateral donors (members of the OECD's Development Assistance Committee which is the same selection for CDI countries) and 13 multilateral agencies. The indicators are grouped into four dimensions that reflect international best practices of aid effectiveness: maximizing efficiency, fostering institutions, reducing the burden on recipient countries, and transparency and learning. For more information on QuODA, please see the [methodology paper](#).

In order to calculate the multilateral aid quality score, we first calculate the average of how each multilateral agency performs across 22 QuODA indicators (which have been normalized using z-scores). We then take the multilateral institutions that a country contributes to and weight each of their scores by how much money a country contributed to each multilateral agency. This allows us to have an average multilateral aid quality score for each donor country. We then multiply the country's average multilateral aid quality scores by the share of total aid that the donor spends multilaterally. The multilateral aid quality score is multiplied by the share of total aid that each donor spends multilaterally (the share differs for every CDI country) in order to result in a weighted multilateral aid quality score.

The weighted multilateral aid quality score is summed with the weighted bilateral aid quality score to results in an overall aid quality score, which has a weight of 50% in the aid component.

Finance

The finance component is composed of two subcomponents which assess countries' transparency in the finance sector, and their efforts to support investment in the developing world. Both sub-components have an equal weight in the overall finance component. Each subcomponent includes a number of different indicators.

Why is financial transparency and support to investment important for development?

Foreign direct investment is the largest source of external financing for many developing countries. Rich countries' policies that either support or impede investment beyond their borders can have a substantive effect on the wellbeing of many developing country citizens. Foreign investment can contribute to the development of infrastructure, housing, transport, energy supply and many other areas. However, the quantity of investment is not the only important dimension of investment as a development tool. It is also important that measures are in place which ensure that the environment and the general welfare of those affected by the investment is properly safeguarded.

International financial flows can also be used to facilitate crime, corruption and tax evasion; with illicit financial flows from developing countries ending up as assets held in the financial institutions and property markets of rich countries. States now have legal duties to screen, trace, freeze, seize and return illicit wealth, and to detect, prevent and punish foreign bribery. This supports the integrity of investment, public accountability and revenue raising in developing countries. There is therefore a clear case for including an assessment of whether countries are making and meeting effective commitments on financial integrity and combating illicit financial flows as part of the CDI.

Related CGD work: [Finance and investment](#).

Investment

The investment subcomponent is based on three parts: policy inputs, as measured by international commitments; policy implementation, as measured by international investment agreements, and policy outcomes, as measured by other official flows.

International commitments

Policy inputs are measured by the international commitments a developed country takes on. This indicator asks if a CDI-country takes part in the [OECD anti-bribery convention](#), how a country deals with the [OECD Guidelines on Multinational Enterprises](#), (whether a [national contact point](#) has been set up), and whether [a National Action Plan on business and human rights](#) has been put in place. Furthermore, a country scores higher (points for the CDI shown in brackets) on this subcomponent if it is a member of EGPS (+3), EITI (+1), KPCS (+1), or ITTO (+1) – see details below.

The [Extractives Global Programmatic Support \(EGPS\)](#) Multi-Donor Trust Fund provides grants and technical assistance to developing countries to help improve governance of their natural resources. By so doing, the EGPS donor countries encourage resource-rich countries to use their resources sustainably and transparently for poverty reduction and long-term economic growth. The Fund is administered by the World Bank and supported by partner countries and institutions. The list of country donors is available [here](#).

The [Extractive Industries Transparency Initiative](#) (EITI) promotes transparency in the management of natural resources. If a country participates in EITI, its extractive companies (oil, gas, mining) are required to publish what they pay to the governments of countries they operate in, and governments that sign up to EITI are obliged to disclose what they receive from such companies. A multi stakeholder group monitors the process in each participating country. A list of participating countries and institutions can be found [here](#).

The [Kimberley Process Certification Scheme](#) (KPCS) is a joint initiative of governments, industry, and civil society that aims to eliminate the trade of conflict diamonds. Conflict diamonds are those whose sales contribute to funding armed conflicts. A full list of participating countries is available [here](#).

The [International Tropical Timber Organization](#) (ITTO) is an intergovernmental organization established in 1986 with the aim of promoting conservation and sustainable management, use, and trade of tropical forest resources. A full list of participating countries is available [here](#).

The weight of this indicator in the finance component is 20%.

International investment agreements

Policy implementation of investments is measured by the quality of International Investment Agreements (IIA) a CDI-country has signed. IIAs include measures designed to protect the investments made by investors of a state party in the territory of another state party under international law. To attract and facilitate foreign direct investments (FDI), IIAs therefore offer foreign investors legal security and protection against most of the risks that may occur. However, there are concerns that these agreements protect the interest of the investors as opposed to the general interests of the recipient countries such as human rights or the protection of the environment. Therefore, IIAs need to find an equilibrium between ensuring that countries retain their right to regulate for pursuing public policy interests (including sustainable development objectives) while contributing to a favourable investment climate and protecting foreign investors from unjustified discrimination measures by the host state.

Data on IIA was analysed by [CIECODE](#). The IIAs analysed are those in which the parties are, on one side, one of the CDI countries and, on the other, a developing country (according to the [OECD's list of ODA recipient countries](#)). For each of the 27 CDI countries, the analysis includes the latest three IIAs with a developing country. When analysing regional agreements, the score is extended to all the parties involved as though it were an international investment agreement.

For assessing the 'sustainable quality' of the IIA, the preamble, the Fair and Equitable Treatment (FET) clause and the investor-state dispute settlement system (ISDS) were analysed. Any other general clause in the Treaty that extends its application to these three clauses was also analysed. Each of the three dispositions analysed was given a score ranging from 0 to 2 depending on how much their content contributes to the capacity of the agreement to promote sustainable development and foreign investments. The analysis also assessed whether the IIA protects the State's right to regulate for pursuing legitimate sustainable development objectives.

The weight of this indicator in the finance component is 20%.

Other official flows

This indicator measures policy outputs through transactions from official sectors of CDI countries to countries on the OECD [list of Aid Recipients](#) which do not meet the conditions for eligibility as Official Development Assistance (ODA). This is either because they are not primarily aimed at development, or because they have a grant element of less than 25 percent. Therefore, these financial flows are reported as part of the investment subcomponent. Data derives from the [OECD Aid Statistics](#) and is expressed in percentage of GNI.

The weight of this indicator in the finance component is 10%.

Financial Secrecy

The Financial Secrecy subcomponent of the CDI is based on indicators drawn from the [Financial Secrecy Index](#) (FSI), and directly from OECD and [Financial Action Task Force \(FATF\)](#) peer reviews and mutual evaluations. The FSI is published biannually by Tax Justice Network. It scores jurisdictions based on information on their laws, regulations and cooperation with information exchange processes, and it is used to calculate a secrecy score for each country. The FSI was developed to provide a means to assess the extent to which jurisdictions provide harmful financial and legal secrecy to non-residents, providing a 'criminogenic environment, which enables illicit financial flows (including tax evasion). The current iteration of the FSI has expanded to include twenty indicators, but they do not all relate to secrecy and illicit activities.

In adapting the FSI indicators for the CDI we have considered whether each indicator relates to financial secrecy/ illicit financial flows, whether the criteria are well supported by international norms or argument that it measures good practice in relation to preventing illicit financial flows, and whether the data appear to be reliable. On this basis we have selected 8 indicators (including two which are modified from the FSI).

NB: While the FSI indicators are rated on a scale for 0 to 1, where 0 is low secrecy and 1 is high secrecy, this direction is reversed for the CDI so that a low score relates to high secrecy (i.e. poor policy effort on financial integrity) and a high score relates to low secrecy (i.e. high policy effort on financial integrity). The weight of the following 8 indicators together in the finance component is 50%.

Limiting banking secrecy

This indicator assesses whether a jurisdiction enables banking secrecy, where absence or inaccessibility of banking information is also considered a form of banking secrecy. For a country to obtain a full score on this indicator, the jurisdiction must ensure that banking data exists, and that competent authorities (i.e. the government authority designated as being competent to exchange information with other jurisdictions under double tax conventions or tax information exchange agreements) have effective access to this data. This means that tax authorities can obtain account information without the need for authorization from a separate institution, such as a court, for example, and that there are no undue notification requirements or appeal rights against obtaining or sharing such information. For further details on this indicator, please consult the [Financial Secrecy Index Methodology](#).

Public Statistics

This indicator measures the degree to which a jurisdiction makes publicly available ten relevant statistical data sets about the jurisdiction's economic and financial engagement with the wider world through trade, investment and tax. Crucially, bilateral disaggregation ensures that the data offers valuable insights to every partner jurisdiction.

For further details on this indicator, please consult the [Financial Secrecy Index Methodology](#).

Anti-money laundering

This indicator examines the extent to which the anti-money laundering regime of a country is considered effective by the [Financial Action Task Force \(FATF\)](#), the international body dedicated to tackle money laundering and evaluates countries' compliance with FATF recommendations. The assessment is based on peer-reviews evaluating the implementation of [FATF recommendations](#) concerning the laws, institutional structures, and policies deemed necessary to counter money laundering and terrorist financing. Peer reviews are carried out in five-year cycles. The third round of [mutual evaluations](#) was completed in 2012. Each recommendation taken from the FATF's [forty recommendations](#) concerning the laws, institutional structures, and policies considered necessary to address money laundering and terrorist financing is given an equal weight in this methodology, a 100% rating indicates full compliance, whereas a 0% rating indicates a country is deemed wholly non-compliant.

For further details on this indicator, please consult the [Financial Secrecy Index Methodology](#).

Automatic information exchange

The indicator assesses whether a country has signed the [Multilateral Competent Authority Agreement](#) (MCAA) which provides the legal framework to engage in automatic exchange of information. Under the MCAA jurisdictions agree to automatically provide information to the home jurisdiction, about the bank accounts (and other reportable account) held by foreign tax residents in their country. This includes details of the owner of the account, the account number, balance at the end of the year, and any income received. A score of 1 is given if a country has signed the MCAA and has committed to start exchanging information in 2017. A score of 0.5 is given if a country has signed the MCAA and committed to start exchanging information in 2018. A score of 0.25 is given if a country has not yet signed the MCAA but has committed to start exchanging information in 2017. A score of 0.10 is given if a country has not signed the MCAA but has committed to start exchanging information in 2018. No score is awarded if a country has neither signed the MCAA nor committed to start exchanging information.

For further details on this indicator, please consult the [Financial Secrecy Index Methodology](#).

Bilateral treaties

The indicator assesses the extent to which a jurisdiction has signed and ratified bilateral treaties conforming to the 'upon request' information exchange standard developed by the OECD and the Global Forum with 53 other countries, and/or whether the jurisdiction has signed and ratified the Amended Council of Europe / OECD Convention on Mutual Administrative Assistance in Tax Matters. This is important because tax authorities around the world face immense difficulties when trying to secure foreign country-based evidence relating to suspected domestic tax evasion or tax avoidance. Exchange of information provisions allow jurisdictions to obtain information from tax authorities in other countries. The 'upon request' provisions can either be [tax information exchange agreements](#) (TIEAs) or full [double taxation agreements](#) (DTAs) whose scope extends far beyond information exchange.

For further details on this indicator, please consult the [Financial Secrecy Index Methodology](#).

International legal cooperation

The indicator measures the degree to which a country engages in international judicial cooperation on money laundering and other criminal matters. The indicator assesses the level of country's compliance with the Financial Action Task Force recommendations. The [Financial Action Task Force](#) (FATF) is the international body dedicated to counter money laundering. In 2003, the FATF established its [Forty recommendations](#) concerning the laws, institutional structures, and policies considered necessary to address money laundering and terrorist financing.

For further details on this indicator, please consult the [Financial Secrecy Index Methodology](#).

Extractive country-by-country reporting

Another area where a modified indicator has been adopted is country-by-country reporting. Under the G20/OECD led [Base Erosion and Profit Shifting \(BEPS\) programme](#) large multinational companies are required to submit annual an annual country-by-country report ('CBCR') to their home tax authority, giving headline figures on revenues, profits, assets, employees and taxes paid in each jurisdiction. It is intended as a risk assessment tool for revenue authorities. The international agreement is for this information to be kept confidential, and shared between revenue authorities using exchange of information protocols. A number of campaigning organisations argue that companies should be required to publish these country-by-country reports. The Financial Secrecy Index (FSI) includes criteria that countries should require full annual public country-by-country reporting by corporations of all sectors. However, this has not been adopted by the CDI since it is not the basis of current international agreement or expert consensus, and it is not clear that this is relevant to illicit financial flows. The FSI does offer a partial score for countries that have these requirements for public country by country reporting in particular sectors. There is also specific justification for publication of country by country reports on extractive sector revenues, to enable public and parliamentary scrutiny of natural resource revenues

which are often linked to corruption. The CDI therefore adopts this part of the [relevant FSI indicator](#), and makes this into a full indicator.

For more information see the [methodology paper](#) for the CDI financial secrecy indicators.

Beneficial ownership

A key issue which is covered by several indicators in the FSI is the registration of beneficial owners (i.e. the natural person(s) who ultimately owns or controls a company, trust or partnership or on whose behalf a transaction is being conducted). This is a foundation for anti-money launder and anti-tax evasion efforts since anonymously owned shell companies can be used to launder illicit proceeds of corruption, tax evasion and crime. Legal and beneficial ownership information can assist law enforcement and other competent authorities by identifying those natural persons who may be responsible for the underlying activity of concern, or who may have relevant information to further an investigation. This allows the authorities to “follow the money” in financial investigations. Relevant international agreements on this are: [Financial Action Task Force \(FATF\) Recommendation 24](#) (or 33 in previous numbering) and [Global Forum on Transparency and Exchange of Information for Tax Purposes](#) Criteria: A.1. The FSI criteria on beneficial ownership go considerably beyond the FATF and Global Forum recommendations in terms of defining the threshold for beneficial ownership (down to the level of one share). It is not clear whether the ‘no threshold’ approach advocated by the FSI would be proportionate in administrative and enforceability terms. At the same time the criteria do not consider the reliability of the information (i.e. self-declared vs verified systems). The FSI’s measurement on this issue also allows fairly benign practices (such as the existence in theory of historical ‘bearer shares’) to deliver the highest secrecy score. The CDI therefore uses an indicator more directly based on compliance with internationally agreed standards. The schedule of peer reviews means that there is no single rating which can be used. The solution chosen for this addition of the CDI is to use the compliance rating most recent of the relevant recent FATF or Global Forum reviews for each jurisdiction. These are then converted into numerical scores.

For more information see the [methodology paper](#) for the CDI financial secrecy indicators.

Technology

The technology component is composed of two subcomponents which assess countries’ efforts on technology creation and knowledge sharing. Countries’ efforts in research and development are assigned two thirds of the weight, and their openness to share and give access to technology and innovation is assigned one third. Each subcomponent includes a different set of indicators.

Why is technology creation and access to it important for development?

Technology is an essential factor in economic and human development, and not just for the poor. Advances in medicines, information and communication technology, sustainable energy, for example, contribute to improving the lives of all of us. Rich countries have an important role to play in this - the internet, mobile phones, vaccines, and high-yielding grains were all invented by rich-country researchers and exported elsewhere, where they have improved—and saved—many lives. Accessing such knowledge is one way in which poor countries can catch up with the wealthy ones. Donor country governments can contribute to technological development and diffusion of knowledge and innovation by publicly funding research and development activities and incentivizing private research through tax incentives.

Although technology can help development, innovations and technologies that could help poorer countries to develop are often protected by intellectual property rights (IPR), which can restrict developing countries’ access to them. IPRs aim to incentivize research and innovation by granting

producers of new technologies a monopoly over that technology for a specified period of time. But a developmental IPR regime should balance this incentive with the need to sufficiently enable others to make use of technologies, to assist developing countries in accessing important technologies, and contribute to the advancement of human knowledge.

For more information on intellectual property rights, please consult CGD's [paper](#) on technology and knowledge transfer.

Related CDG work: [Technology and Development](#)

Government support to research and development

The two following indicators comprise the Government Support for R&D subcomponent, which accounts for two-thirds of the weight of the technology component.

Government R&D as share of GDP (weighted)

This indicator considers government expenditures on research and development. The following areas of development as [reported to the OECD](#) are included: Agriculture, Environment, Defence (discounted 50%), Exploration and Exploitation of Earth and Space, General Advancement of Knowledge, Industrial Production and Technology, Energy, Health, Education, Culture, Political and Social Systems. The indicators discount government R&D in defence by 50% because not all defence research and development has benefits for poorer countries. The R&D expenditures are expressed as a share of GDP and in PPP dollars.

The Government expenditure and Tax Incentives on R&D indicators are summed and given a combined weight of 67% (two thirds) of the Technology component.

Tax incentives for private R&D (weighted)

The indicator measures the level of government support for private research and development through tax incentives. This is expressed by the [B-index](#), published by the OECD. As explained by the OECD, the B-index is a measure of the level of pre-tax profit a “representative” company needs to generate to break-even on a marginal, unitary outlay on R&D, considering provisions in the tax system that allow for special treatment of R&D expenditures. The indicator takes business R&D expenditures expressed as share of GDP and multiplies this by the average level of tax subsidies for profitable small and large enterprises. The result is then discounted by 25%, on the premise that all private R&D is assumed to be commercially-related and not wholly contributing to development.

The Government expenditure and Tax Incentives on R&D indicators are summed and given a combined weight of 67% (two thirds) of the Technology component.

Intellectual property rights

Patent coverage

The indicator measures countries policies countries' policies on patenting plant and animal varieties and software. As explained by [Walter Park et al](#), patents give the manufacturer the power to charge higher prices than would otherwise exist under free competition. The patenting of plant and animal varieties can significantly affect people's access to goods such as medicines, and innovations in agriculture. Similarly, the patenting of software limits poor countries' access to and usage of new technologies. If a country's patent coverage policy enables others to access and make use of such knowledge, the country scores 0 points. If, on the other hand, a country enables such patenting, i.e. their policies are too restrictive, it receives 2 points. The evaluation is done by Walter Park et al and the two patent categories are weighted equally. The worst a country can get is a score of 1 for patents on plants and animals and a score of 1 for software.

The weight of this indicator in Intellectual Property Rights subcomponent is 20%.

'TRIPS+'

This indicator combines an assessment of rich countries IPRs provisions which are more stringent than those required by the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS): TRIPS+ policy, Anti circumvention rules, and Database protections. Firstly, as explained by [Walter Park et al.](#), developed countries often enter into agreements with developing country partners which go beyond TRIPS. These provisions sometimes result in the developing economies adopting an IPR system that is stronger than one that is appropriate for them at their stage of economic development and this can deter foreign direct investment and constrain local innovators. Secondly, anti-circumvention rules prohibit the circumvention of technological barriers for using a digital good in certain ways which the rightsholders do not wish to allow. While anti-circumvention rules against tampering with technology protection measures protect IPR owners against piracy, it is important that the rules and penalties not be so harsh that they excessively prevent all learning and imitation. Anti-circumvention rules can prevent reverse engineering and opportunities for learning by doing, for example. Thirdly, some developed economies have granted patent-like protection to compilers of databases, even if the data was already in the public domain or created with public funds. Strong database protections reduce the flow of useful, public knowledge to developing economies. If a country applies stringent policies in all 3 areas it receives 3 points, whereas if its policies facilitate knowledge sharing it scores 0.

The weight of the indicator in Intellectual Property Rights subcomponent is 50%.

Rights loss provisions

This indicator combines an assessment of rich countries IPRs provision which relate to compulsory licensing, patent revoking and opposition system, and exceptions for research or defence purposes. As explained by [Walter Park et al.](#): Compulsory licensing refers to the situation in which a government compels a patent or copyright holder to license the invention or work to a third party. This is a useful option for a government that wishes to respond to a lack of suppliers (or unwilling suppliers) for serving a specific market need, such as vaccines, or for responding to a public health crisis. Governments can also revoke a patent if the holder is not exploiting it or has never exploited it but is simply hoarding the right. A patent opposition system enables third parties to challenge the validity of a patent grant (within a given time limit) which helps to ensure that invalid patents are not issued, which could otherwise tie up the supply of a good or an innovation. Research exemptions allow firms to 'infringe' a patent for research and experimental purposes and help prevent patent rights from inhibiting follow-on innovations. If a country applies stringent policies in all 4 areas it receives 4 points, whereas if its policies facilitate knowledge sharing it scores 0.

The weight of this indicator in Intellectual Property Rights subcomponent is 30%.

Environment

The environment component is composed of three subcomponents which assess countries' environmental policies on global climate, sustainable fisheries, and biodiversity and ecosystems. Each category includes different indicators which are assigned distinct weights.

Why is protection of the environment important for development, and for all of us?

A healthy environment is a necessity for all, poor countries and rich. While wealthy countries bear the most responsibility for creating anthropogenic climate change, the impact on poor countries is much more damaging. Many of these countries are in regions where the most adverse effects of climate change manifest.

Many of the world's poor depend heavily on their surrounding environment and ecosystems to meet their daily needs. Healthy ecosystems are source of clean water and energy, they provide income opportunities and shelter, they are a source of treatment and protection, and biodiversity plays a central role in sustaining food security. Logging as well as increasing demand for arable land are among the main causes of deforestation.

Rapid depletion is a particular problem for global fish stocks, which are becoming increasingly overexploited, partly because demand for fish remains high in rich countries. Fishing subsidies provided by rich countries result in overfishing, which has a negative impact not only on ocean's decreasing biodiversity, but also on the livelihoods of communities dependent on these resources.

For more information on why rich countries policies matter for the environment, please see our [paper with the Ecologic institute](#).

Global climate

Fossil fuel production

The indicator considers that responsibility for greenhouse gas emissions lies not only with consumers, but also with producers. The indicator penalizes those countries which extract fossil fuels, namely oil, gas and coal. Volumes of production are [converted](#) to CO₂ emissions equivalent and are calculated per capita of each country. Data on production come from [BP Statistical Review of World Energy](#). The weight of this indicator in the environment component is 5%.

Greenhouse gas emissions

The indicator assesses the level of greenhouse gas emissions per capita of a country. Greenhouse gas Data come from [UNFCCC Greenhouse Gas Inventory Data](#), population data from the World Bank. The weight of this indicator in the environment component is 10%.

Change in greenhouse gas emissions

The indicator assesses the change in the level of intensity of greenhouse gas emissions per unit of GDP over ten years. Data come from [UNFCCC Greenhouse Gas Inventory Data](#), GDP data from the World Bank. The weight of this indicator in the environment component is 15%.

Gasoline taxes

The indicator assesses the level of tax burden on gas prices, specifically those on premium unleaded (RON 95). Data come from the OECD publication [Energy prices and Taxes](#). The weight of this indicator in the environment component is 15%.

Reduction of emissions of selected ozone-depleting substances

Two international agreements - the Vienna Convention (1985) and Montreal Protocol (1987) – aim to reduce the consumption of ozone depleting substances and both agreements have been universally ratified. This indicator looks at per capita consumption of ozone depleting substances. Data on ozone output come from [Ozone Secretariat's Data Center](#), population data from the World Bank. The weight of this indicator in the environment component is 10%.

Paris Agreement ratification

The Paris Agreement, which was adopted in December 2015, succeeds the Kyoto Protocol as the most ambitious climate change agreement to date. The agreement was negotiated within the [United Nations Framework Convention on Climate Change](#) (UNFCCC). The Paris Agreement is the first comprehensive climate agreement and its main aim is to hold the increase of the global temperature to 2°C relative to pre-industrial levels. The agreement entered into force in November 2016. A list of all countries which have ratified the agreement can be found [here](#). The weight of this indicator in the environment component is 5%.

An evaluation on the Paris agreement by CGD experts can be found [here](#).

Sustainable fisheries

Fishing subsidies

Fishing subsidies often result in overfishing, which leads to [depleting fishing stocks](#) and can have a [negative impact on the livelihoods of communities](#) dependent on these resources. Fishing subsidies are assessed using the OECD's [Fisheries Support Estimate](#) which calculates subsidies as a proportion of fisheries output (value of landings). The weight of this indicator in the environment component is 5%.

Ratification of Fish Stocks Agreement

The UN agreement for the Implementation of the Provisions of UNCLOS relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks ([UNFSA](#)) aims to establish principles for the conservation and management of these fish stocks through enhanced cooperation among countries while recognizing the special requirements those countries whose economic livelihoods to great extent depend on fisheries resources. A full list of ratifying countries is available [here](#). The weight of this indicator in the environment component is 5%.

Biodiversity and global ecosystems

Biodiversity treaties participation

The indicator evaluates how countries fulfil their monitoring and reporting requirements of key international biodiversity agreements. Four biodiversity agreements are considered:

1. [Convention on Biological Diversity](#) (CBD)
2. [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES)
3. [Ramsar Convention on Wetlands of International Importance](#)
4. [Convention on Migratory Species](#) (CMS)

CDI Countries' commitment to biodiversity is measured with the following scoring system (per agreement): A country receives 2 points if the required annual/biannual report is submitted without errors and on time, 1 point if it is late and/or with errors and no points if the country fails to submit a report or is not a member. The weight of this indicator in the environment component is 15%.

Tropical wood imports

[About one third of tropical timber imports](#) are illegally produced and this has serious environmental and social impacts: the total amount of carbon emitted due to tropical deforestation is [estimated to be 1.5 Gigatons per year - which is equivalent to about 20% of global anthropogenic emissions](#). Tropical timber imports per capita are an indicator of countries' indirect support to such logging. Data come from the [UN Comtrade](#) database. The weight of this indicator in the environment component is 15%.

Trade

The trade component is composed of four indicators which assess countries' policies facilitating international trade in goods by lowering tariffs, reducing agricultural subsidies to rich countries' farmers, enabling trade in services and minimizing red tape.

Why is trade important for development, and for all of us?

International trade and trading relationships are changing very rapidly. According to a 2015 [UNCTAD report](#), international trade grew by USD 20 trillion from 1990 to 2014 (from \$4 to \$24 tr.). Rich countries' policies have a significant impact on the trading prospects of developing countries. Trade provides important opportunities for countries to attract investment, create jobs, and reduce poverty. [One recent study](#), for instance, suggests that the African Growth and Opportunity Act, the US trade agreement with

Sub-Saharan African countries, has reduced infant mortality by about 9%. Rich-countries opening themselves to trade with developing country partners is critical for such development prospects. But despite a wide consensus on the positive effects of trade, many goods which poor countries are relatively better at producing—including agricultural goods—still face trade barriers in rich countries.

Rich countries also affect the development prospects of trading partners beyond their borders when they subsidize domestic agricultural production. This lowers production costs for rich-country farmers, which causes overproduction and the ‘dumping’ of the excess supply onto world markets. This in turn lowers the global prices of agricultural produce and thus hurts poor-country farmers. Also, trade in services is [becoming increasingly important](#) for development, but regulatory barriers remain.

Besides these direct measures, there are also high administrative costs to trading with many countries, which has the effect of disadvantaging especially poorer trading partners.

For more information on rich countries’ trade policies, please consult CGD’s [paper](#).

Related CGD work: [Trade](#).

Trade policies

Lower income weighted tariffs

This indicator assesses ad valorem equivalent of duties on imports from all trading partners. We use Global Trade Analysis Project data from ITC’s [Market Access Map \(MacMap\)](#) and weight tariffs according to the income level of the country they are levied against (GDP data from [World Development Indicators](#)). A high score on this indicator indicates low tariffs or that tariffs are lower against poorer countries.

The weight of the tariff protection indicator in the trade component equals 40%.

Agricultural subsidies

The indicator assesses the extent of agricultural subsidy expressed as a proportion of country’s agricultural output. The data for EU countries come from the [European Commission](#) and for non-EU countries from the [OECD](#).

The weight of the agricultural protection indicator in the trade component is 10%.

Services trade restrictions

The indicator assesses countries’ level of restrictiveness for trade in services. It is based on the [Services Trade Restrictiveness Index](#) published by the OECD. The indicator is the average of restrictiveness in all sectors.

The indicator has 25% weight in the trade component.

Reducing regulatory impediments to imports

The indicator assesses regulatory burden that countries face when trading across borders. Two indicators from the World Bank’s [Logistics Performance Index](#) (LPI), Customs and Infrastructure, are used to assess the administrative burden that imports to a country face.

The indicator has 25% weight in the trade component.

Security

The security component is composed of three subcomponents which assess countries' policy effort in facilitating peacekeeping and world security. These subcomponents measure contributions to peacekeeping, both financially and with personnel, arms exports to poor and / or undemocratic countries, and participation in security regimes. Each sub-component is composed of weighted indicators. Each category includes different indicators which are assigned distinct weights.

Why is security important for development?

Security and development are closely interlinked. War and political violence devastate government infrastructure and public resources and harm civilians and their homes and livelihoods. War decimates public capacities and political institutions and devastates citizens' lives. This causal link also works in reverse: poverty and institutional weakness make it easier for both challengers and incumbents to gain support for political violence and war. Conflicts also do not respect borders and it is therefore in the interest of all countries to support peace and international security beyond their borders.

Contributions to peacekeeping

The subcomponent includes two indicators: countries contributions to peacekeeping and humanitarian interventions and sea lanes protection. These indicators combined have a 55% weight.

Peacekeeping & humanitarian interventions

The indicator measures countries' contributions to peacekeeping. It includes financial contributions to the UN peacekeeping budget and both direct and indirect personnel contributions to UN operations' and non-UN but internationally approved operations, weighted by GDP. Direct personnel contributions are measured by the average monthly contributions of personnel to UN PKO. Indirect personnel contributions are weighted by the number of active military forces and annual defence expenditures of each country.

Data come from [UN Department of Peacekeeping Operations](#), [International Institute for Strategic Studies](#), the Stockholm Peace Research Institute ([SIPRI](#)) and the IMF [World Economic Outlook](#).

The indicators on peacekeeping and sea lanes protection are summed and given a weight of 55% in the Security component.

Sea lanes protection

The indicator assesses countries contribution to the protection of sea lanes based on the quantity of major ships in the navy, the naval budget and ships devoted to sea lanes protection. The data on naval budgets and maritime deployments is collected by Mark Stoker, an independent defence economist, using sources such as the United Nations and individual Ministries of Defence. The indicator is expressed as share of GDP.

The indicators on peacekeeping and sea lane protection are summed and given a weight of 55% in the Security component.

Arms exports / GDP

The rationale for the arms exports indicator is that countries also affect peace and security beyond their borders if they supply arms to other countries. This might be especially detrimental for development if the government of the recipient country does not govern according to democratic principles. This indicator therefore weights arms export by the recipient country's level of democracy (measured by the Voice and accountability dimension of governance by the [World Governance Indicators](#)) and its level of poverty (GDP per capita as measured by the World Bank's [World Development Indicators](#)). Because

annual levels of arms exports are volatile, multi-year discounted export averages are taken and are weighted by the exporter's GDP.

The data on arms exports is collected by Mark Stoker, an independent defence economist, using publicly available data from multiple sources including individual governments and bodies such as the EU. Countries are rewarded for making such data publicly available.

This indicator has a 15% weight in the Security component.

Participation in security regimes

The indicator assesses the level of countries' participation in important international security regimes. Countries receive one point for ratifying each of the following nine treaties. No points are awarded if the country signed but did not ratify the agreement. Countries also get a reduced score for not ratifying all additional protocols of the Convention on Certain Conventional Weapons.

Follow the links to access the list of signatories for each treaty. This subcomponent has a 30% weight in the Security component.

- [Treaty on the Non-proliferation of Nuclear Weapons](#)
- [Comprehensive Nuclear Test Ban Treaty](#)
- [Chemical Weapons Convention](#)
- [The Biological and Toxin Weapons Convention](#)
- [Mine Ban Treaty](#)
- [Convention on Certain Conventional Weapons](#)
- [Convention on Cluster Munitions](#)
- [Rome Statute of the International Criminal Court](#)
- [Arms Trade Treaty](#)

Migration

The migration component is composed of six indicators which assess countries' efforts in participating in international migration conventions, migration integration policies, and their receptiveness to asylum-seekers, refugees, foreign students, and migrants.

Why is migration important for development?

International mobility of workers is potentially the most powerful tool for poverty reduction and income redistribution. Migration policies of rich countries therefore greatly affect citizens of poor countries. When workers migrate from poor to rich countries they broaden their opportunities to earn higher incomes, access knowledge and gain valuable skills. Expatriate workers collectively send billions of dollars back to their countries each year, a flow of remittances that surpasses foreign aid several-fold. Emigrants returning to their home countries, especially students, bring their new knowledge and skills and often capital which they can employ by opening businesses, and enhance the knowledge base of the country. In contrast to the 'brain drain' argument, there is very [little evidence](#) that skilled migration hurts the sending countries. On the contrary, migrants can strengthen and build trade networks, transfer technologies, and provide investment resources for their home economies.

Related CGD work: [Migration, Displacement, and Humanitarian Policy](#)

International conventions

This indicator assesses the extent to which countries have ratified international conventions aiming to protect migrants. Three conventions are considered:

- [1949 Convention concerning Migration for Employment \(No. 97\)](#)
- [1975 Convention concerning Migrations in Abusive Conditions and the Promotion of Equality of Opportunity and Treatment of Migrant Workers \(No. 143\)](#)
- [2000 Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children](#)

Countries receive 10 points for ratifying each treaty and 5 points if the convention was ratified but with excluded provisions. The overall weight of this indicator within the migration component is 10%.

Integration policies

The indicator uses the data from the [Migrant Integration Policy Index](#) (MIPEX) which assesses how effective host country policies are helping to integrate migrants. MIPEX consists of eight categories, which together assess 167 policy indicators. MIPEX is the only comprehensive assessment tool for the integration of migrants in rich countries. The eight dimensions of MIPEX are the following:

1. Labour market mobility
2. Education
3. Health
4. Political participation
5. Family reunion
6. Antidiscrimination
7. Access to nationality
8. Permanent residence

A country's MIPEX score accounts for 25 percent of the migration component.

Share of asylum seekers

Applications / population

This indicator measures the total number of asylum-seekers as a share of the population of the recipient country for the latest available year. The data come from [UNHCR global trend reports](#). The weight of this indicator in the migration component is 5%.

An asylum seeker is someone who has applied for asylum and is waiting for a decision as to whether they will be given refugee status. The 1951 Refugee Convention defines a refugee as “someone who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.”

Positive decisions / total decisions

This indicator measures the acceptance rate of people seeking asylum by measuring the number of positive decisions on asylum applications out of the total number of decisions made, including appeals for the latest available year. The data come from [UNHCR global trend reports](#). The weight of this indicator in the migration component is 5%.

An asylum seeker is someone who has applied for asylum and is waiting for a decision as to whether or not they are a refugee, as defined above

Share of refugees

Refugees / GDP per capita PPP

This indicator reflects the ratio of total refugees to the recipient country's GDP. The data come from [UNHCR global trend reports](#). The weight of this indicator in the migration component is 3.33%.

The 1951 Refugee Convention defines a refugee as “someone who owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.”

Refugees / capita

This indicator reflects the ratio of total refugees to the recipient country's population. The data come from [UNHCR global trend reports](#). The weight of this indicator in the migration component is 3.33%.

Refugees / land area

This indicator reflects the ratio of total refugees to the recipient country's land area. The data come from [UNHCR global trend reports](#). The weight of this indicator in the migration component is 3.33%.

Foreign students

Students from ODA-receiving countries / total tertiary students

The indicator evaluates the number of students from countries eligible for ODA as a share of total tertiary students. Data come from the [OECD Education and Skills database](#) and the [DAC list](#) of ODA recipient countries.

The weight of this indicator in the migration component is 7.5%.

Students from ODA-receiving countries / total international students

The indicator evaluates the number of students from countries eligible for ODA as a share of total *international* tertiary students. Data come from the [OECD Education and Skills database](#) and the [DAC list](#) of ODA recipient countries.

The weight of this indicator in the migration component is 7.5%.

Immigrant inflow

The indicator looks at inflow of total migrants to CDI countries and is weighted by the income of the migrants' countries of origin, i.e. migrants' host countries are rewarded more for accepting migrants from poor countries rather than relatively rich countries (measured by GDP/capita). Data come from the [OECD International migration database](#) and the World Bank's [World Development Indicators](#) . The weight of this indicator in the migration component is 30%.