Working paper 548

Understanding donor motivations

Developing the Principled Aid Index

Nilima Gulrajani and Rachael Calleja

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Abstract

Amid a rising tide of political populism in Europe and beyond, the idea that official development assistance should serve the national interest is gaining currency. Yet there is little explicit recognition that aid oriented towards securing domestic interests is not always the most efficient, nor the most effective, way to maximise global development ambitions. Conversely, we forget that aid focused on delivering global development can itself service the national interest. A world that is safer and more equal, ecologically resilient and prosperous is one that serves the aid donor, just as much as it benefits the aid recipient.

ODI's Principled Aid Index (PA Index) visualises data measuring the 29 bilateral donors' motivations for providing official development assistance. The Index ranks donors according to whether their foreign aid allocations support a principled or parochial national interest. This working paper outlines the conceptual framework that informed the Index's development, how we selected our indicators and scored and ranked countries. This paper should be read alongside our briefing note reviewing the PA Index results, available online at **odi.org/principled-aid-index**.

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Acronyms

ACD	Armed Conflict Database (of the UCDP/PRIO)
CDI	Commitment to Development Index
CGD	Center for Global Development
CPA	country programmable aid
CRS	Creditor Reporting System
DAC	Organisation for Economic Co-operation and Development's Development Assistance Committee
EU	European Union
GAVI	Global Alliance for Vaccines and Immunization
GII	Gender Inequality Index
GNI	gross national income
GPGs	global public goods
IPoA	Istanbul Programme of Action
LDC	least developed country
ODA	official development assistance
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
PA Index	Principled Aid Index
PCA	principal component analysis
PRIO	Peace Research Institute Oslo
SDGs	Sustainable Development Goals
SIPRI	Stockholm International Peace Research Institute
UCDP	Uppsala Conflict Data Program
UN	United Nations
UNDP	United Nations Development Programme

Executive summary

The populist turn in politics around the world has granted greater imperative to servicing the national interest through aid spending. Foreign aid that earns a domestic return through 'mutual gains' or 'win-wins' is now a common goal for political leaders seeking to justify expenditures on non-citizens overseas to a sceptical public; wanting to remain competitive with other states taking mercantile approaches in their aid spending; or simply looking to make the most efficient use of aid monies by fulfilling multiple policy objectives.

However, the more donors seek to achieve narrow short-term interests through their aid, the greater the risk of detracting attention, resources and efforts away from the primary objective of global sustainable development. Donors need reminding that a safer, more sustainable and more prosperous world services the national interest, just as much as it benefits the aid recipient. If aid is allocated in a principled manner, nation states are winners both individually and collectively with long-run mutual interests truly served.

The Overseas Development Institute's (ODI's) Principled Aid (PA) Index visualises data measuring the contemporary motivations for providing official development assistance (ODA) of 29 bilateral donors. The Index goes beyond official discourses and declarations: it ranks donors according to whether their foreign aid allocations support their long-term national interest in a prosperous, stable and secure world – that is, whether their aid-giving is *principled*.

Analytically distinguishing a *principled* national interest from a *parochial* one acknowledges that aid can serve the national interest without sacrificing global development ambitions. We suggest that a principled approach to the national interest is comprised of three dimensions or 'principles':

- **Need.** The extent to which aid is allocated to countries that address critical development needs and vulnerabilities.
- **Global cooperation.** The extent to which aid is allocated to channels and activities that facilitate and support global cooperation.
- **Public spiritedness.** The extent to which aid is allocated to maximise every opportunity to achieve development impact rather than a short-sighted domestic return.

We created the PA Index to ensure donors remain steadfast in their commitment to a principled national interest in their aid allocation. It is a first attempt to pin down analytically and measure a particular kind of donor motivation, one that is oriented towards achieving both global and domestic good. Measuring 'principledness' allows the public to hold donors accountable for the kind of national interest they are advancing by assessing their actual allocation decisions as opposed to their political discourses. Looking at such revealed preferences, the PA Index can also observe trends across the community of Development Assistance Committee (DAC) bilateral donors, identify the scope for shared values and partnerships, as well as foster greater dialogue and discussion on the role of the national interest in foreign aid.

This working paper sets out the conceptual framework that informed the development of the PA Index, the approach we used in choosing our indicators and our aggregation method for scoring and ranking donor countries. As well as identifying the indicators that we chose to proxy our variables of interest, we also briefly outline indicators that we considered and rejected and present the various data tests applied. The PA Index itself is available online at **odi.org**, where users can explore the rankings and data in detail.

1 Conceptual framework

1.1 Introduction

> 'I am committing that our development spending will not only combat extreme poverty, but at the same time tackle global challenges and support **our own national interest**'
> – Theresa May, UK Prime Minister, 2018

> 'We will examine what is working, what is not working and whether the countries who receive our dollars and our protection also has **our interests** at heart'
> – Donald Trump, US President, 2018

> 'We will contribute $1.3 billion in aid to the Pacific – our highest ever contribution. This demonstrates yet again that Australia's aid program reflects **our interests**'
> – Julie Bishop, former Australian Minister for Foreign Affairs, 2018

Politicians expect foreign aid to serve their country's national interests. And while this desire to achieve a domestic return from development assistance is not new, what is different is the widespread public acceptance and political expectations of net benefits accruing from overseas giving. But will the desire for mutual benefits deliver these positive 'win-wins' as claimed by some? Or does the desire for a net return to the donor detract from the effectiveness and impact of global development spending?

There is no easy equation or universal approach to answering such questions. The response will depend on the intricacies of the country, sector and context targeted, as well as donor preferences for various options and the political trade-offs involved. Nonetheless, it is clear there is little evidence to support political declarations that aid can always deliver mutual benefits everywhere. Academic literature is certainly sceptical: selfish motives are found to result in suboptimal allocations, as aid is inefficiently assigned to states and sectors for reasons other than development (Girod, 2008; Steele, 2011). Aid to advance geopolitical interests has also been shown to be less effective (Kilby and Dreher, 2010; Stone, 2010; Dreher et al., 2016). Conversely, where donors are shown to have little *strategic* interest in countries, the scope for development impact is higher (Girod, 2012).

There is, however, reason to believe that national interest aligns with global development objectives to the extent that all states benefit from a safer and more prosperous world. Global interdependencies and interconnections have amplified the impact of development challenges that were once confined to state boundaries. Carbon emissions, infectious diseases, cross-border migration, inequality and global terrorism are just some examples of global challenges that, if resolved, would be in the national interest of most, if not all, states (Kaul, 2017; Blodgett Bermeo, 2018). The speed and strength of global linkages and transmission mechanisms mean that all nations benefit from a healthier, more equal and less vulnerable planet. The allocation of aid resources to advance this form of 'national interest' is both 'ethical' and in the 'real long-term interests of rich countries' (Pratt, 1989, in Black, 2016: 18). Unlike a narrow *parochial* national interest that colonises the purpose, modalities and structure of development policy, domestic benefits from a *principled* national interest are indirect and accrue slowly over time. As one former Canadian foreign minister once said: 'If the primary purpose of our aid is to help ourselves, rather than to help others, we shall probably receive in return what we deserve, and a good deal less than we expect' (Sharp, 1961, in Black, 2016: 22). A principled national interest is what all aid donors should be striving to achieve.

1.2 Reviewing the literature on donor motivations

Adopting a principled approach to aid-giving requires understanding what motivates donors to provide foreign aid in the first place. Literature on foreign aid has long proposed two motivations for aid-giving, which reflect the differences between realist and idealist theories of international relations. At one end of the spectrum, aid is provided as donors display 'mercantile' self-serving motives, at the other, donors exhibit the moral values and humane principles of a 'clergyman' (van Dam and van Dis, 2014).

There is little doubt that foreign aid enables the pursuit, promotion and defence of the national interests of the donor nation and has done for some time (Morgenthau, 1962; see also McKinley and Little, 1977; 1978a; 1978b; 1979). No country would provide aid if it did not serve, or was at least benign to, its own concerns and priorities (Packenhan, 1966). At the same time, donors are clearly capable of generosity towards and solidarity with international causes and crises – perhaps most visible in the case of natural disasters and humanitarian assistance (Lumsdaine, 1993; Pratt, 2000; Lumsdaine and Schopf, 2007). This suggests some amount of ebb and flow to donor motivations, with the possibility of movement and mixtures of actions chosen because they are predominantly morally right and those that are chosen because they are domestically desirable.

Historically, both these broad motivations for giving foreign aid – to selflessly assist the cause of global development and to promote the realist interests of the donor – have been presented as polar opposite rationales. At one level, there is sense in this depiction of donor motivations as either parochial populism or principled poverty reduction, pulling in different directions. They illustrate the extremes from which all donors must ultimately choose their place. Yet, pure altruism and total self-interest represent two extreme ends of a spectrum of motivations; they are admittedly more ideal-types than true depictions of any real case. In reality, both motivations are likely to be present in most aid allocation decisions and it is to be expected that the balance between the two will vary across different donor countries as well as over time (Maizels and Nissanke, 1984; Schraeder et al., 1998; Lancaster, 2007; Hoeffler and Outram, 2011). The purposes of aid are always mixed and will always be.

If donor motivation varies, this begs the question: what are the causal pathways for its evolution and transformation? Research suggests it is the confluence of international and domestic forces that influences donor behaviour. Domestic political economy variables, including the political party in power, the role of the media and the structure of government, are all potential influences (Lancaster, 2007; Lundsgaarde, 2012; Fuchs et al., 2014; Dietrich, 2016). A supportive domestic constituency also matters (Lancaster, 2007; Yanguas, 2018).

At the same time, global norms – common-sense standards of appropriate behaviour within international society – also influence donor motivations (Finnemore and Sikkink, 2001; Fukuda-Parr and Shiga, 2016; Gulrajani and Swiss, 2017). Understandings of what is good, desirable and appropriate in international development cooperation exert pressures on development actors and establish expectations that they will accept, comply and participate according to these rules. Scripts and structures in the international system thus interact with discourses in domestic political life to influence the likelihood of principled or parochial development engagements (Lumsdaine, 1993).

Ultimately, idealistic and pragmatic donor motivations are not mutually exclusive but positioned along a continuum with their relative emphasis in constant evolution. But while donors can be simultaneously altruistic and nationalistic, more often it is one of these motivations that dominates at any given moment in time. Donor motivation can thus be seen as a continuous variable comprised of shifting ratios of a 'clergyman's idealism' and a 'merchant's pragmatism' (van Dam and van Dis, 2014). If these motivations are the inseparable and contradictory 'yin and yang' of development cooperation, knowledge of where the balance sits in the current contemporary policy space and what the full range of motivations is across the universe of donors becomes analytically valuable.

1.3 A rising tide of aid nationalism

Nowhere is this mixed motivational basis for aid more obvious than in current development discourse. The idea of an 'enlightened' self-interest where 'win-wins' and 'mutual benefits' are possible is now a powerful political rationale for providing development assistance (Keijzer and Lundsgaarde, 2017; 2018; Kharas and Rogerson, 2017).

Yet, from the post-Cold War period to the Millennium Development Goals, a strong emphasis on global need provided the main orientation for foreign aid (Collier, 2016; Mawdsley et al., 2017). Explanations for the shift away from more altruistic motivations include domestic political factors like pressure on foreign aid budgets and the need to justify overseas spending; questions about the impact and effectiveness of aid spending; and the rise of populist sentiments that elevate domestic interests above international causes and challenges (Gulrajani, 2017). Global norms in aid also contributed as a shifting geography of power in emerging markets means opportunities for trade and investment are growing and charitable motivations are viewed with suspicion. The approaches of non-DAC providers who display strong support for securing mutual benefits through aid spending is also an important pressure exerted on Northern donors (Gulrajani and Swiss, forthcoming).

Such trends are transforming donor motivations as advancing the national interest becomes a new discursive and normative framework for many bilateral donors (Carter, 2016; Gulrajani, 2017; Rabinowitz and Greenhill, 2018). Survey data suggests framing the rationale for aid provision as servicing mutual interests is a qualified source of increased public support for aid (Bond, 2016; van Heerde-Hudson et al., 2018; Wood and Hoy, 2018). Conveniently, this framing also aligns well with the rapid transmission of information, goods and people that now means underdevelopment in remote parts of the world can and does have real consequences closer to home (Blodgett Bermeo, 2018). At a time when conflicts, health pandemics, financial capital and emissions travel indiscriminately across national borders, there are long-run economic, environmental and security benefits that accrue to the aid-providing nation when development is achieved. In a globalised world, there are greater domestic benefits if development progress is achieved – particularly in targeted geographic areas where spillover effects are large and directly affect the donor country (ibid.). This is clearly different to the national interests motivating Western aid during the Cold War, where containment of Communism was a primary objective and little concern was paid to how aid resources may or may not have contributed to development. Now, the Sustainable Development Goals (SDGs) also recognise that sustainable development is a universally shared mission, the achievement of which lies in the mutual interests of all countries (Keijzer and Lundsgaarde, 2017). While servicing the national interest should not be a necessary condition for everything an aid donor does (Carter, 2016), there are real pressures and forces that justify aid-giving by highlighting these domestic returns.

A principled approach to the national interest is embodied in the maxim of 'doing well by doing good'. It is embedded in Tocqueville's ideal of 'enlightened self-interest', whereby working for the collective good is viewed as a way of serving individual interests, allowing for greater compatibility between mercantile and moral motivations. At the same time, slippery use of the term 'national interest' also means it can refer to activities that advance short-term direct benefits to the donor states – for example, more commercial contracts for domestic firms, greater opportunities to export or more resources that never actually get sent to recipient countries. Distinguishing a principled from a parochial national interest is a way for citizens to hold donors to account for the kind of national interest they are advancing through their aid allocation.

1.4 Our approach: three principles

The Principled Aid (PA) Index gauges the degree to which the aid allocation of DAC donors supports their long-term interest in a prosperous, stable and secure world. In our model, a principled approach to aid in the national interest is underpinned by three dimensions or 'principles': need, global cooperation and public spiritedness.

A principled national interest targets aid to countries where **needs and vulnerabilities** are the greatest. While the obligations to citizens of poor societies are not equivalent to those that states have towards their own citizens, there is a 'duty to rescue from catastrophes' – including life-threatening hunger, disaster and disease – as well as a duty to rescue from 'mass despair' in an absence of credible hope for a better life for the average citizen (Collier, 2016). Donors that assume these duties are serving their long-run interests, making the planet safer (by reducing the scope for political conflict and social tension), wealthier (by increasing the productivity of human capital and generating more trade and investment opportunities) and furthering overall development prospects. A principled approach involves chasing down needs where global development contributions, not short-term domestic gain, is the greatest (Rabinowitz and Greenhill, 2018). Our indicators therefore value donor prioritisation on least developed countries with high levels of extreme poverty, gender inequality or that bear high migration burdens or levels of conflict.

Second, a principled approach will allocate aid to advance global cooperation like investing in **global public goods (GPGs) and a functioning international architecture.** A principled approach recognises that GPGs benefit both the global North and South, such as clean air, peace and security or the eradication of communicable diseases. Such goods that offer benefits that extend beyond a single nation are nonrival and nonexcludable,[1] and are critical for poverty alleviation and sustainable development (e.g. helping all countries participate in the global economic system, reducing the effects of climate change or the spread of global pandemics). While some would prefer spending on GPGs be additional to ODA spending (Kaul, 2017), we believe that this is an ideal of additionality that most donors do not meet.[2] Our indicators also value core financial support for multilateral institutions as a way to support global cooperation and generate transformational systemic-level change in North–South relations. Unlike earmarked finance to international institutions, core sources of finance do not divert institutional priorities or erode the neutrality of multilateral institutions. Instead, they allow for greater predictability in funding flows and can improve planning processes and organisational effectiveness (Gulrajani, 2016).

Finally, a principled national interest will be **public spirited** – that is, it will maximise every opportunity to achieve development impact rather than a short-sighted domestic return. Donors that exploit their position to obtain economic or geostrategic advantages over recipients would not be considered to have a high degree of public spiritedness. For example, a public-spirited donor will not fully or partially tie their aid, nor bias its allocation to support its political or commercial objectives and will aim to channel its funding so the maximum reaches people on the ground. Aid that seeks to actively cultivate domestic benefits can divert prioritisation on development objectives and incentivise donor moral hazard as attention and resources shift towards securing vested donor interests (Collier, 2016). Cultivating these direct domestic benefits are Pareto suboptimal[3] as their narrow pursuit reduces the amount of effort to secure real development results.

1.5 Why develop an index?

The PA Index benchmarks donor performance against three dimensions of 'principledness' – need, global cooperation and public spiritedness. This benchmarking exercise is valuable for several reasons.

First, it offers an opportunity to empirically define 'national interest' and analytically distinguish its principled and unprincipled

1 Nonrival goods are goods whose consumption by one person does not reduce the amount available for others. Non-excludable goods are goods from which people cannot be excluded from using.

2 The only exception here is perhaps Luxembourg, where new international climate finance is not counted as ODA (see UNEP, 2018: 18). See also climate finance indicator in Chapter 2.4.

3 Pareto optimality is a state of allocation of resources from which it is impossible to reallocate so as to make any one individual or preference criterion better off without making at least one individual or preference criterion worse off.

forms. A principled approach to the national interest requires much more than a rhetorical commitment to 'win wins'; it is about how such funds are allocated to support the *achievement* of global development objectives that are in the interests of all states.

Second, this exercise creates a measurable benchmark for donor rationales for aid-giving at a time where there is growing political pressure to secure domestic interests through its provision. Such a benchmark can foster greater transparency and accountability for donors' actual policy choices and aid allocations. We hope it can become a reference metric for those seeking a standardised measure against which to assess and compare donor motivations for aid provision in the national interest. It also allows for an examination of the relationship between donors' political discourses and their actual aid allocations, allowing users to investigate whether decisions are changing in line with political rhetoric.

The PA Index aims to shape the formulation and implementation of aid policy, encouraging donors to pivot towards more principled approaches. It also reveals donor preferences that might otherwise be unknown, fostering donor self-awareness and understanding of peer positioning. It can highlight where like-mindedness exists among bilateral donors, pointing to possible allies and partnership opportunities based on shared values, while at the same time pinpointing differences and highlighting where a principled approach may not come as easily. Ultimately, we believe a principled approach to aid-giving is a smart policy narrative well-suited to our times.

2 Dimensions of interest and indicator selection

2.1 Overview

We know that donor motivations are important determinants of policy goals and choices that define their interests and trajectories (Maurits van der Veen, 2011). At the same time, motivations are also made visible by actual policy choices and activities. In the PA Index, we aim to reveal donor motivations by looking at their underlying allocation of ODA more closely. A significant body of literature supports this approach to understanding donor motivations (McKinley and Little, 1977; Maizels and Nissanke, 1984; Schraeder et al., 1998; Alesina and Dollar, 2000; Hoeffler and Outram, 2011; Maurits van der Veen, 2011). This allows us to look beyond policy rhetoric, and instead explores actual donor decisions that reveal their motivation for providing aid. In this regard, the PA Index is a supply-side exercise that does not examine the impact of aid delivered in the national interest or recipient preferences for the aid that is provided.

We identify 12 indicators that act as proxies for three equally weighted dimensions of a principled approach to the national interest:

Table 1 Summary of dimensions and indicators

Principle	Indicator
Needs	**A. Targeting poverty:** share of ODA/gross national income (GNI) targeted to least developed countries (LDCs)
	B. Supporting displaced populations: share of bilateral ODA to developing countries that cumulatively host 70% of cross-border forcibly displaced populations
	C. Assisting conflict-affected states: share of humanitarian ODA to countries with active violent conflicts
	D. Targeting gender inequality: share of bilateral ODA to countries with the highest levels of gender inequality
Global cooperation	**A. Enhancing global trade prospects:** share of bilateral ODA to reduce trade-related constraints and build the capacity and infrastructure required to benefit from opening to trade
	B. Providing core support for multilateral institutions: share of ODA as core multilateral funding (minus core funding to European Union (EU) institutions)
	C. Tackling the effects of climate change: share of total ODA (bilateral and imputed multilateral) for climate mitigation and adaptation
	D. Constraining infectious diseases: share of total ODA (bilateral and imputed multilateral) allocated to slow the spread of infectious diseases
Public spiritedness	**A. Minimising tied aid:** average share of formally and informally tied aid
	B. Reducing alignment between aid spending and United Nations (UN) voting: correlation between UN voting agreement across donors and recipients, and bilateral ODA disbursements to recipients
	C. Delinking aid spending and arms exports: correlation between donor arms exports to recipients, and bilateral ODA disbursements to recipients
	D. Localising aid: share of bilateral ODA spent as country programmable aid (CPA), humanitarian and food aid

the principles of need, global cooperation and public spiritedness. Moreover, we limit ourselves to how a principled approach can be maximised using the levers of ODA disbursements. We do not focus on the full spectrum of beyond-aid activities that may also support a principled approach to advancing the national interest. Our approach is to identify where donors sit on the spectrum between principled and parochial, based on best available aid-based proxies across the DAC. Table 1 provides a summary of the indicators chosen to proxy the principles of needs, global cooperation and public spiritedness. We discuss these indicators in more detail in the following sections of this paper.

2.2 Criteria for indicator selection

Indicators were selected to proxy our three dimensions if they met the following criteria:

- **Conceptual clarity.** We could articulate a close conceptual relationship between the information captured by the indicator and the overall concept of the dimension it represents. Where possible, we drew or built from existing literatures.
- **Accurate data availability.** Publicly available, high-quality and sufficiently detailed data was available across most DAC countries to construct the indicator. The data must also be available for the years 2013 to 2017, with a reasonable prospect that it will be updated regularly in the future to allow for annual updates.
- **Correlation.** Indicators within each dimension are positively correlated – in other words, they tell a similar story about the donors' motivation – but are not 100% correlated or provide duplicative information. A few of the indicators we tested in earlier versions of the Index were negatively correlated and were subsequently replaced (see more on data tests in Chapter 3).

2.3 Indicators to proxy the Needs principle

Indicator 1A Targeting poverty: the share of ODA/GNI targeted to LDCs

Data source
Bilateral ODA data is sourced from the Organisation for Economic Co-operation and Development's (OECD's) Creditor Reporting System (CRS); ODA/GNI figures from the OECD's DAC1 dataset.

Justification
This indicator captures donor commitment to allocating aid to LDCs in alignment with the global target outlined at the Istanbul Programme of Action for the Least Developed Countries for the Decade 2011–2020 (IPoA). The IPoA established that DAC donors should provide between 0.15% and 0.20% of their GNI as ODA to LDCs to support the development and welfare of the poorest countries between 2011 and 2020 (UN, 2011). Based on the understanding that LDCs are currently not on track to reach the SDGs and will likely fall short of the goals without urgent action (UN DESA, 2018), examining donor progress towards meeting the Istanbul target highlights the degree to which donors support LDCs in reducing poverty and meeting the SDG agenda.

Approach and caveats
This indicator is measured as the share of ODA allocated to LDCs divided by GNI. This indicator assumes that countries with low income per capita, rather than high levels of poverty as defined by international classifications, are countries most in need of foreign aid. This relationship cannot be assumed, though in some cases it obviously applies (e.g. in many fragile states; see Kharas and Rogerson, 2017). And yet, the share of ODA to LDCs has often been used as a proxy for the developmental focus of aid allocation and is therefore consistent with the bulk of existing literature (see Alesina and Dollar, 2000; Berthelemy and Tichit, 2004; Berthelemy, 2006; Hoeffler and Outram, 2011). ODA/GNI is also a common measure used to assess the prioritisation of global needs by donors.

Indicator 1B Irregular migration: share of bilateral ODA to developing countries that cumulatively host 70% of cross-border forcibly displaced populations

Data source

Bilateral ODA data is sourced from the OECD's CRS database; data on cross-border forcibly displaced populations is taken from the United Nations High Commissioner for Refugees' (UNHCR's) 'Time series' dataset.

Justification

This indicator captures the degree to which donors focus ODA on the developing countries that host the largest share of the global refugee burden. There are currently 68.5 million people, including more than 25 million refugees, who have been forcibly displaced (Ash and Huang, 2018). Countries neighbouring crises often bear the burden of forced migration due to proximity of conflict. These are often low- and middle-income countries with significant development challenges themselves hosting the vast majority of the world's refugees.[4] Donors interested in supporting those forcibly displaced should spend aid in countries of first asylum rather than directly in countries of origin (Dreher et al., 2018). More principled donors will support countries of first asylum to ensure refugees' immediate needs and long-term safety, as well as develop the infrastructure and services necessary to accommodate vulnerable populations, including education and employment opportunities.

Approach and caveats

We assume a principled donor will invest in refugee-hosting nations rather than in countries of origin for two main reasons. First, donors providing aid to countries of refugee origin are often motivated by the desire to prevent migration by reducing emigration pressures and inducing voluntary repatriation (Czaika and Mayer, 2011). Moreover, aid that is meant to tackle the 'root causes' of migration is rarely successful and even counterproductive, as growth can be associated with increases rather than reductions in emigration (Clemens and Postel, 2017; 2018; Dreher et al., 2018).

Our sample considers cross-border forcibly displaced populations to include people categorised as 'asylum-seekers', 'refugees (including refugee-like situation)', and 'others of concern' according to UNHCR definitions.[5] We exclude internally displaced persons because countries with high numbers of internally displaced persons face internal strife, which could be linked to government sanctioned action. In these cases, allocating developmental aid to countries with large internally displaced populations could 'reward' governments for bad behaviour – consider Myanmar's action against the Rohingya population, for instance.

We derived the list of countries hosting the largest share of the refugee burden by summing the absolute number of cross-border forcibly displaced populations residing in developing countries as a share of total cross-border forcibly displaced populations reported.[6] In the absence of a strong theoretical rationale for selecting a particular level of asylum burden, we selected the 70% cut-off for statistical reasons as it correlates better with other values within the subcomponent than alternative levels.

4 As Ash and Huang (2018) highlight, 10 countries, with 2.5% of global gross domestic product (GDP), host half of the world's refugees.

5 We exclude 'stateless people' on the basis that stateless people can also be refugees (UNHCR, 2014); when this is the case, stateless populations appear to be included in the refugee and asylum-seeker data included in our measure. As a result, including stateless populations in addition to the categories already included could create a high risk of double counting. Moreover, while stateless people can be refugees, the UNHCR (n.d.) notes that the 'majority of statelessness people were born in the countries in which they have lived their entire lives', suggesting that many may not be considered cross-border forcibly displaced populations under our current variable.

6 We exclude developed countries from the calculation, although acknowledge that some countries, notably Germany, have hosted a large share of refugees and asylum-seekers. See Appendix A for a full list of countries included in each year.

Indicator 1C Assisting conflict-affected states: share of humanitarian ODA to countries with active violent conflicts

Data source
Bilateral ODA and humanitarian data are sourced from the OECD's CRS database; data on armed conflict is taken from the Uppsala Conflict Data Program (UCDP)/Peace Research Institute Oslo (PRIO) 'Armed Conflict Database' (ACD).

Justification
This indicator captures the degree to which donors allocate humanitarian aid to countries experiencing violent conflict. It is well documented that poverty is increasingly focused in fragile and conflict-affected states (Kharas and Rogerson, 2017) and that conflict is a key contributor to growing hunger and displacement (UN DESA, 2018). Moreover, violent conflict is now occurring in an increasing number of countries: in 2016, more countries were experiencing violent conflict than at any point over the last 30 years (UN and World Bank, 2018). This increase threatens to reverse and limit development gains by hindering economic progress, increasing the risk of famine, making disease more difficult to treat and increasing forced displacement (ibid.).

Acts of violent conflict provide an alternative to 'fragile state' lists, as the latter is often a measure of governance quality. While fragility and conflict may be correlated, donor engagement in countries experiencing active conflict is a better measure of targeted ODA to protect vulnerable populations facing catastrophic threats to their lives and livelihoods.

Approach and caveats
For this indicator, we define 'active conflict' as one which involves at least 25 battle-related deaths within a calendar year. This definition is consistent with the UCDP definition of active conflict and is regularly employed in the conflict literature (see Gleditsch and Ruggeri, 2010; Themnér and Wallensteen, 2011; Pettersson and Eck, 2018). Using the UCDP/PRIO ACD, we compile a list of all countries experiencing an active conflict by calendar year (see Appendix B). For more information on the UCDP/PRIO ACD, see Gleditsch et al. (2002) and Pettersson and Eck (2018).

We use humanitarian, rather than development, aid on the basis that countries experiencing active crises require immediate support to respond. We capture ODA flows designed to respond to the urgent needs of civilians affected by crisis, which is best proxied through shorter-term humanitarian flows.

Indicator 1D Targeting gender inequality: amount of gender-focused bilateral ODA to countries with the highest levels of gender inequality, as a share of total bilateral ODA

Data source
Bilateral ODA data is sourced from the OECD's CRS database using the gender marker; data on gender inequality is taken from the United Nations Development Programme's (UNDP's) Gender Inequality Index (GII).

Justification
Reducing gender inequality and ensuring that women achieve equal access to basic services underlies much of the 2030 SDG agenda. It is also well documented that achieving the SDGs will require significant improvements to the livelihoods of women across the globe (see Wahlén, 2017). Based on the understanding that women often face differing access to basic services (see UN DESA, 2009; UN WOMEN, 2018), and that engaging women in development contributes to poverty reduction and growth (OECD, 2012a), this indicator captures the degree to which donors target their gender-focused ODA on countries with the highest levels of gender inequality.

Approach and caveats
Using the DAC's gender markers, we sum the amount of ODA allocated to projects that have a 'principal' focus on gender, as denoted by a score of two, for the countries with the highest levels of gender inequality. This figure is then taken as the share of total bilateral ODA to identify the portion of donor spending that is targeted to support gender equality in countries with the greatest need. We exclude ODA with a 'significant' focus on gender to avoid overstating the amount allocated for gender activities. OECD guidance on the gender markers cautions that while the full costs of projects marked with a

'significant' gender focus are counted under the gender marker, only a portion of the project costs may be allocated for gender activities (OECD, 2012b). As a result, the 'significant' gender marker tends to overestimate the amount of ODA allocated for gender-related activities.

The GII measures gender inequalities in three areas of human development: (1) reproductive health, (2) empowerment and (3) economic status (UNDP, 2018).[7] A higher value denotes greater disparities between men and women and more loss to human development. We consider countries with the highest degree of gender inequality to be those with a score above 0.5. In the absence of a strong theoretical rationale for selecting a particular level of gender inequality, we selected the 50% cut-off for statistical reasons as it correlates more strongly with other indicators within the subcomponent than alternatives levels. In 2017, there were 40 countries with GII scores above 0.5, representing around 25% of all countries (160 in total) ranked in the most recent year.[8]

2.4 Indicators to proxy the Global cooperation principle

Indicator 2A Aid-for-trade facilitation: share of bilateral ODA allocated to support trade facilitation

Data source
All data for this variable is sourced from the OECD's CRS database.

Justification
Trade is an engine for growth that lifts millions of people out of poverty and supports development (see IMF et al., 2017; World Bank and WTO, 2017). This indicator measures the share of ODA allocated to support developing countries to build the trade capacity, policies and infrastructure needed to expand and benefit from trade liberalisation. Aid-for-trade facilitation can reduce import and export costs and increase global output by supporting increases in capital stock, production possibilities and enhanced productivity (Holland and te Velde, 2012). It is also one way to mitigate market failures in international trade and to realise mutual gains from trade for both donors and recipients (Carter, 2016). Allocating ODA for trade can be considered an expression of a principled national interest due to the potential for both donors and recipients alike to benefit from market expansion and increased trade.

Approach and caveats
This indicator is measured as the share of bilateral ODA allocated to aid-for-trade activities. We use the DAC's definition of ODA activities included as aid-for-trade, such as: 'technical assistance for trade policy and regulations', 'trade-related infrastructure', 'productive capacity building', 'trade-related adjustment' and 'other trade related needs'. The specific CRS purpose codes included under each category are defined by the OECD and available from their website (OECD, n.d.).

7 The GII is only one of several potential measures of gender inequality. Other measures – including the Global Gender Gap Index (World Economic Forum) and the Gender Development Index (UNDP) – could also have been used to calculate this measure. We rejected the Gender Development Index because it does not measure gender inequality but accounts for differences in developmental achievements between men and women (Ferrant, 2010). While both the GII and Global Gender Gap Index are specifically designed to capture gender inequalities and use many of the same underlying indicators (see UNDP, 2018; and WEF, 2017), we ultimately selected the GII on the basis of data coverage; in 2017, the GII reported data for 160 countries (189 in total for the Human Development Index, minus those with blank entries for the GII specifically), while the Global Gender Gap Index reported data for only 144 countries.

8 See Appendix C for the full list of countries with GII scores above 0.5, per year. Please note that GII data for this variable was unavailable for 2016. As a result, we used the 2015 GII for both the 2015 and 2016 calculation.

Indicator 2B Support for the multilateral system: share of total ODA allocated as core multilateral support (minus support for EU institutions)

Data source
This variable uses the OECD's 'Members' total use of multilateral system' and DAC1 databases.

Justification
Donors that provide a larger proportion of their ODA as core contributions to multilateral organisations demonstrate a stronger commitment to working with and supporting the capacity of the international system. While higher levels of engagement through multilateral institutions mean that donors lose some oversight and control over the direction and use of their resources, multilateral institutions allow donors to 'leverage and pool expertise, presence and resources in ways that might be hard to achieve if individual donor countries acted unilaterally' (Baker et al., 2018: 267). Multilateral institutions are also better purveyors of GPGs, due to their position as instruments for global burden-sharing (Martens, 2005; Milner and Tingley, 2013). Allocations through core multilateral channels constrain the strong geopolitical impulses of bilateral donors and are better conduits for GPG provision (OECD, 2015a). By contrast, earmarking funds to multilateral institutions allows donors to privilege their pet interests, often with deleterious consequences for the institutional capacity, governance and efficiency of multilateral institutions (Gulrajani, 2016). We contend that providing core ODA funding to multilateral institutions supports organisations that are uniquely placed to advance GPGs and collective norms, which brings value to donors and recipients alike.

Approach and caveats
This indicator is measured as the share of a donor's total ODA allocated as core contributions to multilateral institutions.

We subtract core support allocated to EU institutions on the basis that several donors, notably new DAC donors, allocate a much higher proportion of total ODA as mandatory core payments to the EU. This includes new EU Member States (Czech Republic, Hungary, Poland, Slovakia and Slovenia) that joined the DAC post-2013. By removing core support to EU institutions, we hope to mitigate any potential positive bias for new European DAC members caused by mandatory payments.

Indicator 2C Climate finance: share of ODA allocated for climate mitigation and adaptation activities

Data source
Climate-related ODA data is sourced from the OECD's Climate Finance Dataset (provider perspective);[9] OECD's 'Members' total use of multilateral system'; and the DAC1 dataset.

Justification
Donors that provide support to climate-related activities demonstrate a commitment to key GPGs that benefit both donors and recipients alike. The link between poverty and climate change is well documented, with poor countries that are reliant on natural resources and environmental services likely to be the most vulnerable to environmental degradation (Hallegatte et al., 2016). At the same time, donors stand to benefit from activities designed to reduce and prevent climate change in the future, because 'if the developing nations follow the lead of the North, and develop wasteful and dirty energy and industry systems, then the US Midwest dries out, and the seas around Britain rise' (Timberlake and Thomas, 1990, in Burnell, 1997: 74). This indicator captures the degree to which donors support adaptation for countries already facing climate-related challenges and to mitigate the future effects of climatic change.

9 The 2017 iteration of the Climate Finance Dataset from the providers' perspective was not updated at the time of writing. As a result, the data presented for 2017 uses the Climate Finance methodology but was replicated by the authors. The full methodology for the Climate Finance Dataset is available at: www.oecd.org/dac/financing-sustainable-development/development-finance-topics/climate-change.htm.

Approach and caveats

This indicator measures the three-year rolling average share of total ODA allocated to support climate mitigation and adaptation activities. Using the OECD's Climate Finance Dataset (provider perspective), we sum bilateral ODA commitments for climate mitigation and adaptation, and subtract any overlap from cases where projects are marked as being related to both climate mitigation and adaptation.[10] We consider bilateral commitments to climate activities as those which have a 'principal' climate focus using the Rio markers.[11] We add core multilateral commitments to select multilateral organisations with a primary focus on climate-related action.[12] The sum of bilateral and multilateral climate finance is then divided by total ODA commitments and taken as an average over three years. We use the three-year average to control for potential large fluctuations in the share of donor ODA committed to climate change in response to international calls for increased funding.

We acknowledge that finance for climate adaptation could be considered a national public good (rather than a GPG) because preventing the effects of climate change in particular countries may safeguard them against climate-related incidents. However, we opt to include climate finance for adaptation because poor countries will need to adapt to the effects of climate change over the short term as they bear a disproportionate burden of the costs of climate change (Collier, 2016). Moreover, investing in adaptation reduces the likelihood of spillovers from developing countries as climate change advances, for example, through climate-induced migration (Blodgett Bermeo, 2018).

While this variable considers ODA support to climate activities, we note that best practice would be for donors to support climate-related activities through funding that is 'additional' to ODA. This is in line with thinking that funding for GPGs should be in addition to, rather than a substitute for, ODA (Kaul, 2017). We recognise this is a higher standard than that we are setting to qualify as a principled donor, but if we were to adopt it, hardly any donor would meet it. [13]

Indicator 2D Reducing the spread of communicable disease: share of ODA allocated to preventing the spread of infectious disease

Data source

Bilateral ODA data is sourced from the CRS; core multilateral allocations taken from the OECD's 'Members' total use of the multilateral system' dataset.

10 The Climate Finance Dataset is only available on a commitment basis.

11 Weikmans and Roberts (2017) caution that the 'significant' climate marker overstates the amount of money allocated for climate-related activities. This is because the full costs of projects marked with a 'significant' focus on climate are counted as climate finance, yet only a portion of total project costs may be allocated for climate-related issues. Instead, we consider only projects with a 'principal' climate objective as these projects are theoretically designed to address climate-related issues, meaning that a larger portion of project costs are likely to be attributable to climate activities.

12 The multilaterals included in our measure are: Adaptation Fund; Strategic Climate Fund; Clean Technology Fund; Green Climate Fund; Green Environment Facility (Least Developed Countries Trust Fund); Green Environment Facility (Special Climate Change Trust Fund); Global Green Growth Institute; Intergovernmental Panel on Climate Change; Multilateral Fund for the Implementation of the Montreal Protocol; Nordic Development Fund; and United Nations Framework Convention on Climate Change. These organisations were selected using the DAC's imputed multilateral contributions list that is published annually on the Climate Finance website. Each organisation included targets of 100% of financing for climate-related activities. The only exception is the Global Green Growth Institute, which allocated around 99% of funding for climate activities in 2017 and 98% in 2016.

13 As far as we are aware, only one donor – Luxembourg – currently provides climate finance that is additional to its ODA budget. In 2014, Luxembourg committed €120 million between 2014 and 2020 in international climate finance for developing countries that is additional to ODA (UN Climate Change, 2015; UNEP, 2018). To ensure that Luxembourg is not penalised for providing additional climate resources outside of its ODA budget, we add the approximate annual amount of additional climate finance (around €20 million per year) to Luxembourg's climate ODA and total ODA spending, per year. Seeing as ODA flows are typically calculated using US dollars, we transform euros to dollars using the World Bank's Official Exchange Rate (local currency units per $US, period average) dataset taken from the World Development Indicators.

Justification
The spread of infectious disease present risks to all countries and can be considered a systemic global challenge. Poor global health and a high disease burden hurt economic growth, increase migration and threaten stability (Audibert et al., 2012; Global Fund, 2018). The World Health Organization's Action and Investment to Defeat Malaria 2016–2013 estimates that eliminating malaria by 2030 has the potential to add $4 trillion in economic gains. But treating malaria in donor countries also imposes healthcare costs and burdens (APPG, 2017). Donor support for the control of infectious disease can be considered in the principled national interest, mitigating the likelihood of global pandemics, improving global growth prospects and reducing domestic health expenditures.

Approach and caveats
This indicator measures the share of ODA allocated to preventing the spread of communicable diseases. We calculate this as the sum of bilateral ODA provided under the following CRS purpose codes: '12250: Infectious disease control', '12262: Malaria control', '12263: Tuberculosis control', '12281: Health personnel development' and '13040: STD control including HIV/AIDS', plus core multilateral contributions to the Global Alliance for Vaccines and Immunization (GAVI) and the Global Fund to Fight AIDS, Tuberculosis and Malaria and UNAIDS.[14] Core funding to GAVI and the Global Fund includes spending for health systems strengthening, which is necessary for sustainably reducing the likelihood of health pandemics (see Rabinowitz and Greenhill, 2018). This multilateral and bilateral contribution is then divided by total ODA.

2.5 Indicators to proxy the Public spiritedness principle

Indicator 3A Tied aid: share of bilateral ODA commitments that are formally or informally tied

Data source
Data for this variable is taken from the OECD's CRS database and the OECD's *Report on the DAC untying recommendation* (2015b; 2017; 2018).

Justification
This indicator represents the extent to which donors comply with international standards by 'untying' their ODA commitments to developing countries. High tied aid indicates that the donor country may be using ODA to boost commercial opportunities for domestic firms (Meeks, 2017). Donors have committed to end the practice of tied aid with many assessments of their performance rewarding untying (see Knack et al., 2010; CGD, 2018). The most principled donors would limit the degree of tying in their aid activities.

Approach and caveats
To develop this indicator, we average donor performance on two indicators of aid tying.

Formally tied aid: we measure the share of ODA which is declared to be 'tied' according to the OECD Tied Aid Dataset. We divide the amount that is declared as 'tied' and 'partially tied' by the total values for fully/partially/untied aid.[15]

Informally tied aid: we consider the share of the value of donor contracts awarded to companies or consultants from the donor country. We proxy the potential for informal tying using data compiled from the OECD's *Report on the DAC untying recommendation*. We measure the proportion of contracts that donors award to domestic companies as a share of total contract value. Donors with a high share of contracts awarded to domestic companies

14 We include these multilaterals because reducing the spread of communicable disease is a primary element of their ODA activities. While other multilateral agencies also contribute to reducing the disease burden, they do so to a much smaller degree. We include core multilateral contributions only on the understanding that contributions earmarked to multilaterals are captured by the CRS as bilateral ODA.

15 These three categories typically add up to less than the donor's total ODA commitments, in the case of virtually every donor – thus, there is 'missing' data across the board. For this reason, we have opted not to penalise countries for a gap between the total of the three reported categories and their total ODA commitments.

may use informal barriers to prevent competitive tendering (Meeks, 2017).

The raw values from each indicator were transformed into a z-score to ensure comparability. We then took the average of the z-scores for the two tied aid indicators.

In cases where donors did not report levels of formal or informal tying, donors were penalised by assigning them a score identical to the lowest score by reporting donors.[16] In cases where donors reported that they did not award contracts in a given year, as was the case for Greece and Slovenia in 2015 and 2016, we take the donor's score on only the formally tied-aid measure.[17]

Indicator 3B UN voting patterns and aid: correlation between UN voting agreement across donors and recipients, and the amount of bilateral ODA donors allocate to recipient countries

Data source

Bilateral ODA data is sourced from the OECD's CRS; UN voting data is taken from the UN General Assembly Voting Data developed by Voeten et al. (2009).

Justification

This indicator captures the degree to which donors use aid to pursue geostrategic interests, indicating the extent to which donors align aid allocation to countries that most often vote in agreement with them at the UN. Such voting patterns have commonly been used in the aid allocation literature, where strong correlation between donor ODA disbursements and recipient voting records at the UN is suggestive of donors aligning aid to further their geopolitical relationships and interests (see Alesina and Dollar, 2000; Dreher et al., 2008). This practice has recently become even more explicit in the context of an 'America first' strategy (Pipa, 2018).[18] A leaked memo by a former US Ambassador to the UN said that making aid contingent on UN voting records risks penalising poorer recipients such as South Sudan for rejecting key US-sponsored motions like the recognition of Jerusalem as Israel's capital.

Approach and caveats

To develop this variable, we combine two datasets – CRS for ODA data and the UN voting dataset – based on the amount of aid allocated between donors and recipients and the degree to which they voted the same way in the UN General Assembly. We then correlated ODA flows and UN voting alignment for each donor to show the degree to which donors allocate aid to countries that most often vote with them.[19] While there are many ways to calculate UN voting convergence (see Voeten, 2012; Rose, 2018), we proxy UN voting agreement using the 'agree3un' variable calculated by Voeten et al. (2009). While the agree3un variable is only calculated until 2014, we replicated the methodology for the

16 For more, please see section 3.3 on the treatment of missing data.

17 Data on informally tied aid for 2017 was unavailable at the time of the 2017 data update (January 2019), as the contracts dataset on which the variable is based is typically published in June. We therefore use 2016 data to proxy the share of ODA that is informally untied as reported in the most current dataset available (published June 2018). The share of formally tied aid has been updated using the 2017 figures reported in the 2017 CRS update.

18 While President Trump's comments explicitly pointed to a policy of vote-buying at the UN, Rose (2018) notes that using aid to influence votes has been part of the US government's diplomatic toolkit for some time.

19 The 'agree3un' variable is a voting similarity index measured on a scale from 0 to 1, where a score of 1 suggests that two countries voted the same way in 100% of UN General Assembly votes. For more information on how this measure is calculated, see Voeten at al. (2009).

years 2015, 2016 and 2017, using data released in 2018.[20]

We recognise that this variable may be more relevant to large donors than small ones. Nonetheless, studies including Alesina and Dollar (2000) and Blodgett Bermeo (2018) have used it to measure geopolitical interests across donors, irrespective of size.

Indicator 3C Aid and arms trade: correlation of dyadic bilateral ODA flows and arms exports between donors and recipients

Data source

Bilateral ODA data is sourced from the OECD's CRS; arms exports data are taken from the UN International Trade Statistics Database (UN Comtrade).

Justification

This variable measures the degree to which donors prioritise aid allocation to countries which purchase its arms and ammunition exports. The supply of arms can affect global peace and security, especially to countries that are undemocratic, heavily militarised and impoverished (CGD, 2018). Donors that align aid allocation to the sale of arms and ammunition act in a manner which prioritises domestic interests over the global good. Aid allocation literature has used the relationship between aid and arms flows to capture donor strategic military relations (see Clist, 2011). In addition, this variable is likely to capture domestic commercial interest in increasing exports (as suggested by Betzold and Weiler, 2018).

Approach and caveats

This indicator measures the correlation of bilateral ODA flows between donors and recipients and arms and ammunition exports between donor and recipient countries. For our purposes, arms and ammunition export flows are calculated as the sum of exports for 'arms and ammunition' and 'tank and armoured vehicles' between each donor and recipient pair. We recognise that these categories do not capture all exports of military materials, such as warships or aircrafts. However, the UN Conference on Trade and Development export codes do not make it possible to include these categories of flows without also counting non-military expenditures. Other studies using an arms trade variable – including the Commitment to Development Index – compile an aggregate measure of arms trade per donor, which does not provide the granularity (i.e. arms trade flows by donor–recipient pairs) needed for our purposes.[21]

We use a rolling three-year average of arms exports per donor–recipient pair to account for fluctuations in annual arms purchases. This is based on the understanding that 'arms exports, like armed interventions, are volatile in quantity from year to year' (CGD, 2018: 41).

20 To ensure that our calculations of the agree3un index matched those previously reported by Bailey et al. (2009), we replicated the variable for the last year that the agree3un data was calculated (2014), using the latest version of the raw dataset (Voeten et al., 2009). We then cross-checked the data to ensure consistency by comparing the average agree3un score per donor across the original data and our replicated test. In all cases except one (Korea), our averages showed scores within 1% of the original data. This suggests that our calculation is sufficiently consistent with Bailey et al.'s (2009) methodology to ensure uniformity in the proxy over time.

21 We also explored using the Stockholm International Peace Research Institute (SIPRI) Arms Transfer database as the basis for this variable. However, we rejected this data source for two reasons. First, our sample downloads of 'registers' from the SIPRI database, which provides a list of large arms purchases from selected countries (donors) to other countries, did not consistently identify the value of purchases of arms flows. Seeing as our measure depends on the availability of the value of arms export flows, the missing data in the SIPRI registers made it a problematic source. A second type of data available from the SIPRI arms export database produces a list of recipients of arms flows from selected countries (i.e. donors) as well as an estimated value of such arms trade. However, when we compared the results of this dataset to that from the Comtrade source, we found that SIPRI lists far fewer recipient importers than the Comtrade data. For instance, the SIPRI data shows that in 2016, Australia exported arms to Indonesia and the Philippines only (in terms of developing-country partners), while the Comtrade set includes exports to Indonesia and the Philippines, but also shows trade in arms to other countries, including Papua New Guinea and Samoa. As a result, we opted to use the Comtrade data to ensure that the largest sample of arms-importing countries were captured and accounted for in our correlations with ODA flows.

The average annual arms exports measure is lagged by one year to reduce the potential for reverse causality between arms exports and ODA.[22] Average annual arms exports are then correlated with annual ODA flows per donor–recipient pair for the current year. Higher scores suggest that donors are more likely to aid countries that purchase its arms exports, while negative correlations suggest a weaker relationship between arms trade and aid.[23]

Indicator 3D Aid spent in recipient countries: share of bilateral ODA spent as CPA, plus humanitarian and food aid

Data source
CPA is sourced from the OECD's CPA dataset; humanitarian and food aid are taken from the OECD's CRS.

Justification
Donors with a higher share of in-country spending are considered more public spirited by providing a larger share of ODA directly to countries. 'Phantom aid' is a significant concern for many aid observers who note that aid expenditures are often at risk of not reaching intended beneficiaries (ActionAid, 2005: 3). Instead, aid remains in donor countries and funds administrative costs, debt relief, consultants, scholarships and in-donor refugee costs. Challenges to the current aid accounting system permits the inclusion of aid spent domestically in donor countries as international assistance (see Roodman, 2014). While such flows are necessary for an aid programme – there can be no such programme without the costs of staff needed to run it – donors with a higher share of in-country spending are at risk of subsidising domestic industries and stakeholders at the expense of beneficiaries located in-country. There is an argument to be made that in-donor spending does not directly assist the people and areas most in need.

Approach and caveats
We use CPA as it excludes flows that entail no cross-border flows, for example in-donor spending on refugee costs.[24] Assuming that donors have a fixed pool of resources for ODA, higher levels of in-donor spending potentially means that the share of ODA used for in-country developmental programming is decreasing.

CPA excludes non-programmable flows, such as humanitarian and food aid, which tends to be responsive to crises. As such, flows support recipient countries on the ground, we add humanitarian and food aid to donors' CPA to ensure that our measure does not penalise them for responding to crises. While we acknowledge that a small proportion of humanitarian and food aid may be spent in-donor (such as logistical or communication costs for providing humanitarian assistance), we are unable to meaningfully control for this potential bias due to the absence of more disaggregated data. Excluding humanitarian flows will likely penalise donors more than their inclusion, despite the risk of potential in-donor spending.

2.6 Other indicators considered

When developing the PA Index, we considered but rejected several indicators as they did not meet at least one of the inclusion criteria outlined in this chapter. We review these rejected indicators below.

22 This is because it is also possible that large ODA flows could entice recipients to purchase arms from preferred donors.

23 Based on the methodology used, two countries appear not to provide any arms exports: Iceland and Slovenia. This creates a problem as the actual zero values associated with no arms trade are higher than negative values that occur in the correlations. While the correlations for both countries return a score of zero, the fact that all other correlation results are between 1 and -1 mean that Iceland and Slovenia could place in the middle of the rankings. However, as the absence of arms exports makes it impossible for either country to align arms exports with ODA flows to support commercial or strategic interests, we assign both countries a score equal to the lowest correlation value reported across donors in a given year.

24 Under OECD DAC reporting regulations, donors can count the costs incurred to provide basic assistance (food, shelter, health care, etc.) to refugee and asylum-seekers over a 12-month period as ODA. In recent years, the migration crisis has led an increasing share of ODA to be allocated within donor countries as refugee costs.

2.6.1 Needs

Share of bilateral ODA allocated to fragile states (World Bank list of fragile situations)
This measure was ultimately replaced by indicator 1D and was rejected on conceptual grounds due to questions about the clarity and strength of various fragility measures as well as concern that most fragility metrics measure governance quality rather than immediate crisis or need.

Share of bilateral ODA to under-resourced countries
This variable measures the share of bilateral ODA allocated to countries with the lowest ability to use domestic resources to fund social services, as described in Manuel et al. (2018). However, this measure was rejected due to the lack of available data, which was only provided for a single year and may not be annually updated.

Share of bilateral ODA allocated to countries with the highest headcount poverty ratio at $1.90 a day
We considered using the share of ODA allocated to countries with the highest headcount poverty ratios as a proxy for donors targeting the poor. The main problem with using this variable is there is no globally accepted ratio of headcount poverty which donors are expected to target. Using this variable thus requires selecting an arbitrary level of headcount poverty. We tested several iterations of the variable using different benchmarks for countries with the highest poverty levels (headcount poverty rate at 50%, 40%, 30%; as well as top 10, 20, 25 countries) and found that donor scores changed substantially depending on the level that was selected. In the absence of strong theoretical guidance for selecting a specific ratio of headcount poverty for donors to target, we rejected the indicator.

2.6.2 Global cooperation

Share of ODA to support SDG 8 for decent work
We considered using the share of ODA to support SDG 8 for decent work as a proxy for donor support for the global system. This was based on the understanding that donors may seek to support employment generation and growth in partner countries as a long-term effort to slow migration, boost productivity, and increase stability. However, this indicator was not selected due to data unavailability.

Share of bilateral ODA to support GPGs
We considered a proxy measuring the share of ODA allocated to support a list of GPGs identified by Reisen et al. (2004), using the CRS purpose codes. However, the use of the CRS purpose codes meant that the data would focus exclusively on bilateral spending. Seeing as donors may support GPGs through multilateral as well as bilateral action, we rejected this measure on the basis of conceptual clarity.

2.6.3 Public spiritedness

Correlation between foreign direct investment flows per donor–recipient pair and ODA
We explored using a correlation between foreign direct investment and ODA flows as a proxy for public spiritedness, where lower correlations show that donors give less aid to countries in which they have investment interests and suggest lack of alignment with donors' commercial priorities. However, this variable was hampered by the availability of foreign direct investment data between donor–recipient pairs.

Correlation between asylum-seekers and ODA
We tested a variable that correlated the number of asylum-seekers entering donor countries from origin countries with the amount of bilateral ODA allocated to each recipient country. This aimed to capture the degree to which donors may use aid to attempt to curb the number of asylum claimants from key sending countries (see Clemens and Postel, 2018). However, this variable was rejected due to a negative correlation with other measures in this dimension.

Share of ODA going to former colonies
We explored whether donors are more likely to allocate ODA to countries that are its former colonies, which would suggest that aid allocation is aligned to the donors' geostrategic interests. However, given only 11 out of 29 donors are former colonial powers, this variable was untenable.

Ratio of other official flows to total ODA
We explored using a ratio of other official flows to ODA to capture the degree to which donors allocate funds that are provided on less concessional terms than ODA and are typically reimbursable to the donor country. However, data coverage for this variable was inconsistent, with no available information for several donors.

Correlation between ODA and trade flows by donor–recipient pairs
We considered and explored using a correlation between ODA and trade flows as a proxy for public spiritedness, where lower scores would denote more public-spirited behaviour given that allocations would be less tied to commercial interests. However, there were questions about whether this proxy was actually measuring vested interests or a potential 'win-win'. Due to this conceptual confusion, we rejected this variable.

Correlation between dyadic ODA and the geographic distance between donor and recipient capital cities (i.e. distance between Canberra, Australia and Port Moresby, Papua New Guinea).
We considered this variable as a potential proxy for public spiritedness, where lower scores would suggest that donors are less actively using aid to support regional stabilisation. However, we found that this proxy privileged those donors that had fragmented aid programmes.

3 Data testing and approaches

3.1 Donor selection and datasets

The PA Index assesses the motivations of 29 bilateral donors that are members of the OECD DAC.[25] For DAC members, there is reliable and consistent cross-national time series ODA disbursement data available at the disaggregation level required to construct our indicators. Equivalently detailed data across all indicators is not available for other aid providers, including those that voluntarily report to the DAC's CRS and for emerging South–South cooperation providers.

Unless otherwise stated:

- the source for most of the data regarding ODA is the CRS bulk file, downloaded on 2 January 2019 (for 2017 data)
- ODA data refer to gross disbursements, rather than commitments – the exception being tied aid, which the CRS records in the form of commitments, and the climate finance variable, which is reported in the Climate Finance Dataset on a commitment basis. We use aid disbursements on the basis that it better reflects donor actions and *actual* allocation patterns
- all ODA-eligible financial flows – grants, loans and equity, as reported against each project recorded in the CRS – are included under the measure of ODA
- donors are included in the dataset based on DAC membership. Five donors joined the DAC in 2013 (Czech Republic, Iceland, Poland, Slovakia and Slovenia) and one, Hungary, in 2016.

The PA Index compiles data for the years 2013, 2014, 2015, 2016 and 2017; at the time of development, 2017 was the most recent year with a full dataset available.

3.2 Scoring and aggregation

We choose to aggregate the Principled Aid Score on the three dimensions underlying the PA Index – need, global cooperation and public spiritedness. Our theoretical model understands principled aid as the combination of donor performance against these three dimensions.[26]

The indicators described in Chapter 2 yielded an overall Principled Aid Score for each donor in each year of interest. We developed this score in three phases.

First, we normalise the data prior to aggregation to treat extreme values and highly skewed indicators. We log transform the raw values of four indicators with highly skewed distributions – 1D (targeting gender inequality), 2D (reducing communicable diseases), 3B (UN voting patterns and aid) and 3C (aid and arms exports) – to ensure the comparability of results

25 We do not include 'EU institutions' in our sample. While the EU engages in development as a bilateral partner and is counted among DAC donors, the factors influencing its motivation for aid allocation may differ from other donors by virtue of being funded by multiple EU states.

26 To demonstrate this, we used principal component analysis (PCA) to statistically verify that our indicators were capturing a single concept. For more on the PCA analysis, please see section 3.6.

(see OECD, 2008). We then partially treat extreme outliers by assigning values outside the 2.5 and 97.5 percentile with the score closest to either percentile. For example, observed values higher than the 97.5 percentile are lowered to match the value closest to the 97.5 percentile.[27] In total, this treatment changes the values of six observations per indicator between 2013–2017.[28]

Second, we standardise the data by converting the treated raw values of each indicator into z-scores calculated across all values and over time.[29] This has the advantage of positioning each donor comparatively, while accounting for the average and standard deviation of the distribution across the sample. Within each of the three subcomponents, we then sum the z-scores for each indicator, resulting in the donor's overall score per subcomponent, per year.[30]

We then use a min-max scaling method to score donor performance on each subcomponent against all other scores for that subcomponent, across years. This method transforms the variables to have an identical range (between 0 and 1) by subtracting the minimum value and dividing by the range of values (ibid.). In doing so, the highest value of each subcomponent becomes equivalent to a score of 1 while the lowest takes on a value of 0; all other values are scored within this range. We then multiply the value of each subcomponent by 10 so that each is assessed on a scale of 0–10. Finally, the scores are summed across the three subcomponents to create an overall score per donor out of a maximum score of 30. In all cases, higher scores indicate more principled performance.

Our aggregation methodology has two main strengths. First, by standardising the indicators using z-scores calculated across all values for each indicator over time, we can assess both relative and absolute changes in donor performance. For instance, by calculating Australia's 2017 z-score on the gender inequality variable against all other scores for that indicator, we can compare Australia's performance to other donors as well as to its own score in previous years.

Second, by scaling the values using the min-max method, we maintain untreated outliers within the scoring. This is preferable to rank-based aggregation methods, which would remove outliers entirely by reducing the distance between each donor to a standard value of 1.

We also considered alterative aggregation methods, such as the geometric mean, ranks and aggregating across z-scores. We rejected geometric aggregation as this method reduces the compensability for indicators with low values. This means that distorted average performance would skew our results by penalising poor performers or unduly privileging improvements in such countries over time. We rejected the rank aggregation method as it significantly reduces the spread between values to a distance of one

27 This method is consistent with the approach to outliers adopted by the Environmental Sustainability Index (OECD, 2008).

28 We consider the raw values for each indicator over the years 2013–2017 as the basis of our aggregation methodology. This means that each indicator has a total of 142 observations, of which 6 are changed over the sample period. One exception to this methodology is the treatment of naturally occurring zeros in the data. Two variables – targeting gender inequality and infectious diseases – have multiple zeros in the raw data. In both cases, these zeros mean that donors provide no aid for gender targeting or disease control according to the specifications of the indicators. Seeing as the zeros represent extreme values, we treat the zeros by taking the average of the zero value and the second lowest value in the sample. This slightly raises the base of the distribution while keeping the zeros as the lowest values in the sample. We note that the overall rankings are the same regardless of whether we treat the zeros or maintain them in the sample.

29 We log transform the raw values of the four indicators prior to the z-score transformation. This was done as the distribution of each indicator was positively skewed. Log transformations are typically used to normalise positively skewed distributions.

30 We note that the raw values on the 'tied aid', 'UN voting alignment' and 'arms exports' variables were flipped to ensure consistency in the interpretation. In these three variables, high raw values indicate less principled performance; for instance, a high share of tied aid runs counter to our understanding of principled allocation practices. In all other variables, high performance denotes a more principled aid allocation. By flipping the values on these three measures, we ensure that the interpretation of all variables is aligned and allows us to aggregate across all measures.

rank. We also rejected simply aggregating across z-scores in the absence of min-max scaling as the presence of negative values made it difficult to meaningfully interpret and convey results to users.

3.3 Treatment of missing data

Missing data was a challenge for only one variable – untied aid. In this case, where the CRS did not include data under any of the variables for untied aid, partially tied aid or fully tied aid, this means that the donor has not reported this information to the DAC Secretariat. As donors have committed to reduce and ultimately end the practice of tied aid, we consider it incumbent upon them – and necessary for accountability towards this commitment – to provide this information as part of their regular reporting of ODA to the DAC. We therefore 'penalised' the single non-reporting donor (Hungary) by assigning it a value equivalent to the lowest score (i.e. the highest proportion of tied aid) among reporting donors. This score then became the basis for averaging the level of tied aid with the score awarded for informal contracts (see section 2.5). A similar approach of penalising donors for missing data that should be reported has been used by others, for example in the Commitment to Development Index (Kappeli et al., 2017).

3.4 Time lags

We acknowledge that there are often time lags between policy changes and implementation. This means that the impact of recent policy changes on donor motivation may not be seen in the data immediately. For instance, we do not expect the UK's Aid Strategy to be reflected in pre-2015 data but we do expect to capture its influence in the years that follow. This being said, the effect may still take time because spending patterns are stickier than the desire for political changes. A significant portion of ODA is typically determined by multi-year commitments, therefore the proportion that can be actively oriented towards new aid policies is often small in the years following policy declarations. For example, an analysis of spending room in the Canadian context shows that 15% of the ODA budget managed by Canada's main development actor – Global Affairs Canada – is 'programmable' in future fiscal cycles (from 2017/18 to 2019/20) (Bhushan, 2017). This means that in the Canadian context, new policy directives will likely unfold incrementally in alignment with the programmable budget room available each year.

3.5 Weighting and controls

The PA Index's three dimensions – needs, global cooperation and public spiritedness – are equally weighted in the index calculation. This is in the absence of any strong theoretical rationale for asymmetrical emphasis or any meaningful way to determine their relative importance (OECD, 2008). We have also assigned each indicator equal weighting within each dimension on similar grounds.

Most of our indicators are ratios, therefore inherent in their calculation is a control by a certain variable (e.g. bilateral ODA, total ODA). These denominators were chosen on an individual basis to best represent the concept we were trying to convey with each indicator. Examining total values rather than ratios would in most cases simply result in the largest countries (e.g. the US) dominating the Index. By taking ratios, we ensure that donors are assessed on how they choose to allocate their aid resources, regardless of the absolute size of their budget.

3.6 Data tests

We analysed the correlation between both the set of raw and z-score-transformed values for each indicator against every other indicator (Table 2). This tested whether the indicators in the same dimension were capturing a facet of the same underlying concept; in other words, were they telling a similar story about each donor? On the basis that each indicator is capturing new/non-duplicative information, the higher the positive correlation, the better. Negative correlations within the same dimension suggests possible incoherence in the concept being represented. We considered and rejected several indicators in previous iterations of the PA Index (see section 2.6) because they were negatively correlated with one or more indicators within the

same dimension, which we decided in each case was a result of a conceptual incoherence.

Using the raw values, the results of the analysis shows one negative correlation within the global cooperation dimension, between the aid-for-trade and infectious disease variables. However, the negative correlation is very small, at less than 10%. This correlation becomes positive once the variables are treated for skewness and outliers, suggesting that it was driven by anomalies in the data. Correlations using the z-score-transformed variables show no negative values among indicators within the same dimension (Table 2).

We also ran PCA on the treated values of the four indicators in each dimension to confirm that the indicators measure a coherent concept. PCA is a variable reduction technique that identifies principal components which account for the variation observed across the indicators. In our case, we use it to verify that the indicators used capture a coherent underlying concept – that is, the dimension that each is intended to proxy. The PCA shows that there is one component (eigenvalue >1) underlying the global cooperation and public-spiritedness dimensions. While the needs dimension shows two components, one component is dominant with an eigenvalue of almost double the value of the second component. In all cases, this suggests a strong degree of conceptual clarity within each dimension.

We also ran a sensitivity test for the PA Index by calculating the changes in each country's ranking when removing each indicator from the aggregation methodology.[31] With the removal of any one indicator, we would expect to see changes of no more than around 10 places in the rankings (i.e. roughly one-third of the size of the total number of countries being ranked). The sensitivity test returns no instances of large changes in rank across our entire sample. This suggests that the data is relatively stable across donors, whereby no one indicator is shown to drive the results.

31 We conduct this test using the transformed variables to test whether specific indicators are driving our overall results.

Table 2 Correlations test using transformed z-scores

		Poverty targeting	Displacement	Active conflict	Gender targeting	Aid-for-trade	Core multilateral	Climate finance	Diseases	Tied aid	UN voting alignment	Arms exports	In-country spending
NEEDS	Poverty targeting	1.00											
	Displacement	0.053	1.00										
	Active conflict	0.333	0.448	1.00									
	Gender targeting	0.548	0.181	0.363	1.00								
GLOBAL COOPERATION	Aid-for-trade	0.096	0.242	-0.105	0.029	1.00							
	Core multilateral	0.355	0.259	0.206	0.403	0.403	1.00						
	Climate finance	0.502	0.333	0.351	0.357	0.186	0.364	1.00					
	Diseases	0.529	0.337	0.357	0.496	0.201	0.464	0.479	1.00				
PUBLIC SPIRITEDNESS	Tied aid	0.431	-0.094	0.107	0.277	0.246	0.283	0.295	0.318	1.00			
	UN voting alignment	0.528	0.263	0.337	0.575	0.279	0.465	0.469	0.685	0.459	1.00		
	Arms exports	0.375	-0.014	0.117	0.330	-0.046	0.127	0.094	-0.066	0.134	0.108	1.00	
	In-country spending	0.197	0.263	0.059	0.044	0.543	0.141	0.152	0.232	0.004	0.173	0.054	1.00

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Appendix A

Variable 1B Support to internationally displaced populations

List of countries that cumulatively host approximately 70% of internationally displaced populations (according to the parameters specified in the discussion presented in Chapter 2).

2013	2014	2015	2016	2017
Afghanistan	Afghanistan	Afghanistan	Bangladesh	Afghanistan
Bangladesh	Bangladesh	Cameroon	Cameroon	Bangladesh
Chad	Cameroon	Chad	Chad	Cameroon
China	Chad	China	China	Chad
DRC	China	DRC	DRC	China
Egypt	DRC	Egypt	Egypt	DRC
Ethiopia	Egypt	Ethiopia	Ethiopia	Egypt
India	Ethiopia	Iran	India	Ethiopia
Iran	Iran	Iraq	Iran	Iran
Iraq	Iraq	Jordan	Iraq	Iraq
Jordan	Jordan	Kenya	Jordan	Jordan
Kenya	Kenya	Lebanon	Kenya	Kenya
Lebanon	Lebanon	Malaysia	Lebanon	Lebanon
Malaysia	Pakistan	Pakistan	Malaysia	Malaysia
Pakistan	South Africa	South Africa	Niger	Pakistan
South Africa	South Sudan	South Sudan	Pakistan	South Africa
South Sudan	Sudan	Sudan	South Africa	South Sudan
Tanzania	Tanzania	Tanzania	South Sudan	Sudan
Turkey	Turkey	Turkey	Sudan	Tanzania
Uganda	Uganda	Uganda	Tanzania	Turkey
Venezuela	Yemen	Yemen	Turkey	Uganda
Yemen			Uganda	Yemen
			Yemen	

Note: DRC = Democratic Republic of the Congo

Appendix B

Variable 1C Support to countries experiencing armed conflict

2013	2014	2015	2016	2017
Afghanistan	Afghanistan	Afghanistan	Afghanistan	Afghanistan
Algeria	Algeria	Algeria	Algeria	Algeria
CAR	Azerbaijan	Azerbaijan	Azerbaijan	Angola
Colombia	Burundi	Burundi	Bangladesh	Azerbaijan
DRC	Colombia	Cameroon	Cameroon	Bangladesh
Ethiopia	DRC	Chad	Colombia	Cameroon
India	Egypt	Colombia	Congo	Chad
Iraq	Ethiopia	Egypt	DRC	DRC
Malaysia	India	Ethiopia	Egypt	Egypt
Mali	Iraq	India	Eritrea	India
Mozambique	Lebanon	Iraq	Ethiopia	Iran
Myanmar	Libya	Kenya	India	Iraq
Nigeria	Mali	Lebanon	Iran	Kenya
Pakistan	Myanmar	Libya	Iraq	Lebanon
Philippines	Nigeria	Mali	Jordan	Libya
Somalia	Pakistan	Myanmar	Kenya	Mali
South Sudan	Philippines	Niger	Libya	Myanmar
Sudan	Somalia	Nigeria	Mali	Niger
Syria	South Sudan	Pakistan	Mozambique	Nigeria
Thailand	Sudan	Philippines	Myanmar	Pakistan
Turkey	Syria	Somalia	Niger	Philippines
Uganda	Thailand	South Sudan	Nigeria	Somalia
Yemen	Uganda	Sudan	Pakistan	South Sudan
	Ukraine	Syria	Philippines	Sudan
	Yemen	Thailand	Rwanda	Syria
		Turkey	Somalia	Thailand
		Uganda	South Sudan	Turkey
		Ukraine	Sudan	Uganda
		Yemen	Syria	Ukraine
			Thailand	Yemen
			Tunisia	

Variable 1C Support to countries experiencing armed conflict cont'd

2013	2014	2015	2016	2017
			Turkey	
			Uganda	
			Ukraine	
			Yemen	

Note: Russia was also listed as a country experiencing armed conflict in each year of our sample, according to the ACD. However, seeing as Russia was not eligible for ODA over this period, we have excluded Russia from the calculation and from our list. CAR = Central African Republic; DRC = Democratic Republic of the Congo.

Appendix C

Variable 1D Countries with a GII score above 0.5

2013	2014	2015	2016	2017
Afghanistan	Afghanistan	Afghanistan	Afghanistan	Afghanistan
Bangladesh	Bangladesh	Bangladesh	Bangladesh	Bangladesh
Benin	Benin	Benin	Benin	Benin
Burkina Faso	Burkina Faso	Burkina Faso	Burkina Faso	Burkina Faso
Burundi	Cameroon	Cambodia	Cambodia	Cameroon
Cambodia	CAR	Cameroon	Cameroon	CAR
Cameroon	Chad	CAR	CAR	Chad
CAR	Congo	Chad	Chad	Congo
Chad	Côte d'Ivoire	Congo	Congo	Côte d'Ivoire
Congo	DRC	Côte d'Ivoire	Côte d'Ivoire	DRC
Côte d'Ivoire	Egypt	DRC	DRC	Eswatini
DRC	Eswatini	Egypt	Egypt	Ethiopia
Dominican Republic	Ethiopia	Eswatini	Eswatini	Gabon
Egypt	Gabon	Gabon	Gabon	Gambia
Eswatini	Gambia	Gambia	Gambia	Ghana
Ethiopia	Ghana	Ghana	Ghana	Guyana
Gabon	Guatemala	Guyana	Guyana	Haiti
Gambia	Guyana	Haiti	Haiti	India
Ghana	Haiti	India	India	Iraq
Guatemala	India	Iran	Iran	Kenya
Guyana	Iran	Iraq	Iraq	Lesotho
Haiti	Iraq	Kenya	Kenya	Liberia
India	Kenya	Lesotho	Lesotho	Malawi
Indonesia	Lesotho	Liberia	Liberia	Mali
Iran	Liberia	Malawi	Malawi	Mauritania
Iraq	Malawi	Mali	Mali	Mozambique
Kenya	Mali	Mauritania	Mauritania	Niger
Lao PDR	Mauritania	Mozambique	Mozambique	Pakistan
Lesotho	Morocco	Niger	Niger	Papua New Guinea
Liberia	Mozambique	Pakistan	Pakistan	São Tomé and Príncipe
Malawi	Niger	Papua New Guinea	Papua New Guinea	Senegal

Variable 1D Countries with a GII score above 0.5 cont'd

2013	2014	2015	2016	2017
Mali	Pakistan	São Tomé and Príncipe	São Tomé and Príncipe	Sierra Leone
Mauritania	Papua New Guinea	Senegal	Senegal	Sudan
Mozambique	Senegal	Sierra Leone	Sierra Leone	Syrian Arab Republic
Niger	Sierra Leone	Sudan	Sudan	Tanzania
Pakistan	Sudan	Syria	Syria	Togo
Panama	Syria	Tanzania	Tanzania	Uganda
Papua New Guinea	Tanzania	Togo	Togo	Yemen
Samoa	Togo	Tonga	Tonga	Zambia
Senegal	Tonga	Uganda	Uganda	Zimbabwe
Sierra Leone	Uganda	Yemen	Yemen	
Sudan	Yemen	Zambia	Zambia	
Syria	Zambia	Zimbabwe	Zimbabwe	
Tanzania	Zimbabwe			
Togo				
Uganda				
Yemen				
Zambia				
Zimbabwe				

Note: CAR = Central African Republic; DRC = Democratic Republic of the Congo; Lao PDR = Lao People's Democratic Republic

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