

# The Future of Official Aid Flows

 Charles Kenny and Zack Gehan

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## Abstract

In absolute dollar amounts official development assistance (ODA) reached an all-time high in 2021. But as a percentage of recipient country GDP, aid (and broader public investment) flows have been declining for some time. This paper looks at the scale of ODA and official financial flows (including multilateral flows) in comparison to donor and recipient GDP, and suggests some scenarios for the range of flows going forward, as well as examining the potential share of resources taken by climate finance. It concludes that there is a non-trivial chance that ODA for non-humanitarian and climate finance falls in absolute terms over the coming years and that aid becomes increasingly focused on richer countries. In terms of increasing aid available, the most promising strategy for bilateral ODA flows may be to increase the generosity of traditional donors but for broader finance for international development, and particularly multilateral finance, increasing the range of donors may have a larger payoff. This will be necessary, because demand for multilateral finance is likely to rise.

## The Future of Official Aid Flows

Charles Kenny and Zack Gehan

*Center for Global Development*

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### **CENTER FOR GLOBAL DEVELOPMENT**

2055 L Street, NW Fifth Floor

Washington, DC 20036

202.416.4000

1 Abbey Gardens

Great College Street

London

SW1P 3SE

[www.cgdev.org](http://www.cgdev.org)

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# 1 Introduction

The reported ‘financing needs’ of lower income countries in the coming decades to meet the Sustainable Development Goals (SDGs) and deal with climate change are huge. UNCTAD has estimated an “average annual financing gap” to achieve the Sustainable Development Goals of \$2.5 trillion per year from 2015-2030, including \$950 billion for power infrastructure, \$850 billion for climate change mitigation, and \$770 billion for transport infrastructure.<sup>1</sup> Similarly, a 2019 World Bank report estimated that the costs for new SDG related infrastructure to allow low and middle-income countries to reach the related SDGs and stay on track to limit climate change to 2 degrees Celsius would cost 4.5 percent of GDP in investment and 2.7 percent of GDP in maintenance (a little over \$2 trillion a year).<sup>2</sup>

There is widespread acceptance that such sums would never be provided by plausible levels of ODA alone. There are also significant notes of caution around the SDG’s broader plausibility and the impact of greater investment (alone) on achieving them.<sup>3</sup> Nonetheless, there are increasing calls on ODA and official finance more broadly to help deliver—both through direct investment and by ‘leveraging’ the private sector using technical assistance, guarantees and subsidies.<sup>4</sup> In particular, climate concerns have created pressures to redirect efforts from humanitarian relief and basic needs towards low carbon infrastructure provision in richer developing countries. Of current bilateral climate finance, about 84 percent is ODA, and multilaterals are also providing increasing finance to projects labeled as relating to climate.<sup>5</sup>

In an environment where aid and international finance is asked to do ever more while ODA volumes are only rising slowly (and we will see quality is declining), examining scenarios for po-

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<sup>1</sup>[https://unctad.org/system/files/official-document/tdb\\_efd3d2\\_en.pdf](https://unctad.org/system/files/official-document/tdb_efd3d2_en.pdf), UNCTAD. 2014. “*World Investment Report: Investing in the SDGs: An Action Plan*.” United Nations Conference on Trade and Development (UNCTAD) (2014) estimated financing needs for developing countries. The same report suggested that even given an incredibly rapid expansion of private sector investment in SDG sectors in the Least Developed Countries (LDCs) at 11 percent per year, public sector spending (domestic and ODA combined) would have to increase six-fold, to about \$150 billion per year in order to finance investments necessary to meet the SDGs in those countries.

<sup>2</sup>Rozenberg, Julie; Fay, Marianne. 2019. “*Beyond the Gap: How Countries Can Afford the Infrastructure They Need while Protecting the Planet*.” Sustainable Infrastructure; © Washington, DC: World Bank. The Sustainable Development Solutions Network estimates that 59 Low Income Developing Countries (LIDCs in IMF parlance) with a combined 2019 population of 1.5 billion would still require \$400 billion of annual external finance to support investments connected with the Sustainable Development Goals even if they increase the share of government revenues in their GDP by five percentage points (<https://resources.unsdsn.org/sdg-costing-financing-for-low-income-developing-countries>). The IMF itself estimated that meeting the SDGs in five priority areas—education, health, roads, electricity and water and sanitation—would require additional annual spending of \$528 billion for low- and lower middle-income countries as a group. Again assuming a five percentage point increase in domestic tax revenues the IMF suggested this left an international finance shortfall of US\$358 billion for low-income countries alone (<https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2019/01/18/Fiscal-Policy-and-Development-Human-Social-and-Physical-Investments-for-the-SDGs-46444>).

<sup>3</sup>Henry, P. B., & Gardner, C. (2019). “*Global infrastructure: Potential, perils, and a framework for distinction*.” NYU Stern School of Business. Kenny, C. & Patel, D. (2017). “*Estimating the SDGs’ Demand for Innovation*.” Center for Global Development Working Paper (469). Kenny, C. & Snyder, M. (2017). “*Meeting the Sustainable Development Goal Zero Targets: What Could We Do?*” Center for Global Development Working Paper (472).

<sup>4</sup>The SDG and climate ‘costing exercises’ share most of the same pitfalls around similar exercises with the Millennium Development Goals. See: Kenny, C & Snyder, M. (2017), Clemens, M. A., Kenny, C. J., & Moss, T. J. (2007). “*The Trouble with the MDGs: Confronting Expectations of Aid and Development Success*.” World Development, 35(5), 735-751. See also: Gardner, C. & Henry, P. B. (2021). “*The Global Infrastructure Gap: Potential, Perils, and a Framework for Distinction*.” Journal of Economic Literature.

<sup>5</sup><https://unfccc.int/BR4>, [https://www.oecd-ilibrary.org/sites/f0773d55-en/1/3/1/index.html?itemId=/content/publication/f0773d55-en&csp\\_=5026909c969925715cde6ea16f4854ee&itemIG0=oced&itemContentType=book](https://www.oecd-ilibrary.org/sites/f0773d55-en/1/3/1/index.html?itemId=/content/publication/f0773d55-en&csp_=5026909c969925715cde6ea16f4854ee&itemIG0=oced&itemContentType=book).

tential growth in ODA, Finance for International Development (FID) and Multilateral Finance for International Development (MFID) as well as the potential growth trajectory of recipient countries can help provide a framework for discussing the future and uses of that finance.

This paper lays out potential pathways for the supply of ODA and FID (which includes bilateral cross-border grants, the grant element of cross-border loans and equity and core contributions to multilateral institutions) and multilateral FID over the next few decades, based on scenarios for donor country membership, economic growth and the proportion of GDP committed to development finance. It also examines ‘demand side’ factors, including the membership of the low-income country category and electricity consumption. It discusses potential sectoral allocations as well as issues regarding the quality of aid. A final section concludes.

It should be emphasized that all of the numbers presented are extremely speculative, based on growth forecasts and aid allocation models chosen on the basis of simplicity and fit, which carry extremely large error margins. They form the basis for a discussion more than a reasonable prediction for outcomes. But, hopefully, they are suggestive of the challenges and opportunities that might be faced regarding international financing for development going forward.

This work builds on previous papers that have examined elements of future financial flows for development. Kenny and Gehan (2023) suggest that future growth patterns imply that current upper middle-income countries including China should have a considerably larger shareholding in both the IMF and World Bank. Mitchell and Hughes (2023) point out that new donors have increased their participation in the UN core system as a whole, providing assistance equivalent to five percent of DAC country core contributions in 2010, but 17 percent in 2019. New donors have a particularly large role in new multilateral institutions, in particular the Asian Infrastructure Investment Bank and the New Development Bank. In the future, Mitchell and Hughes suggest that emerging donors could provide enough resources to fund a new World Bank by 2050.

## 2 How Much ODA?

While donor and recipient income and a range of historical factors are correlated with the size of flows, the majority of current aid allocation cannot be explained by need, humanitarian demand, capacity and donor relations.<sup>6</sup> Predicting the growth and distribution of aid into the future is subject to multiple additional uncertainties including around economic growth, donor commitment, recipient performance and demand. Given that considerable uncertainty, we develop a central forecast and scenarios for aid volumes and distribution going forward.

We calculate the below regression (Table (1)) to predict donor ODA from reporting donor countries using data back to 1960:

$$Aid_{ct} = GDP_{ct} + C + t \tag{1}$$

Where  $Aid_{ct}$  is ODA outflows as a percent of donor country  $c$  GNI at time  $t$ ,  $GDP_{ct}$  is GDP Per Capita (PPP) of country  $c$  at time  $t$ ,  $C$  is a donor dummy and  $t$  is time (calendar year). We chose this particular regression because of the comparative robustness of GDP Per Capita and a

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<sup>6</sup>Fuchs, A., Dreher, A., & Nunnenkamp, P. (2014). “Determinants of donor generosity: A Survey of the Aid Budget Literature.” *World Development*, 56, 172-199. [http://www2.wvl.wiso.uni-goettingen.de/courant-papers/CRC-PEG\\_DP\\_121.pdf](http://www2.wvl.wiso.uni-goettingen.de/courant-papers/CRC-PEG_DP_121.pdf). See also: <https://www.cgdev.org/publication/why-do-some-donors-give-more-aid-poor-countries>.

number of country fixed factors.<sup>7</sup> Note that the table excludes country dummy values, which can be found in Appendix B. It also performs reasonably well against a barrage of alternative models examined in Appendix A.

Table 1: Regression Results for ODA Outflows as a Percentage of GNI.

	ODA Outflows %GNI
GDPPC	0.00001*** (0.00000)
Year	0.0003 (0.001)
Constant	-0.383 (1.089)
Adjusted R <sup>2</sup>	0.712
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

We use coefficients from regression (1) along with GDP Per Capita forecasts from Kenny and Gehan (2023) and population forecasts from the UN to predict ODA budgets for (current) donors in 2050. We use forecasts of GNI in 2050 from Kenny and Gehan (2023) along with our forecasts of ODA as a percentage of GNI to predict absolute volumes.

To develop aid volume scenarios, we use high and low growth scenarios from Kenny and Gehan (2023) for donor GNI and GDP Per Capita. With regard to aid as a percentage of donor GNI, we use historical data and official targets to provide bounds. In the early 1960s, thanks to the scale of the US ODA program at the time, DAC countries provided a little more than 0.5 percent of their GNI to ODA. Since 1970, that number has never risen above 0.35 percent. The unweighted average has never risen above 0.45 percent. The weighted low point was only a little above 0.2 percent.<sup>8</sup> That all suggests reasonable grounds for scenarios of donor aid budgeting might lie between 0.2 percent and 0.5 percent. Nonetheless, the official UN target is for donor countries to reach 0.7 percent of GNI in aid, and so we use this value as our upper-end scenario for aid share. We also incorporate a scenario in which more countries provide ODA at the level predicted by the regression. We apply coefficients from equation (1) to all countries classified as high-income in a given forecast year (based on 2023 GNI Per Capita cutoffs) in each growth scenario to examine how a larger ODA donor pool would affect volumes.

Table (2) reports predicted ODA flows under various scenarios in 2030 and Table (3) reports those same numbers for 2050. ‘More Aid’ and ‘Aid Fatigue’ are calculated by applying the 0.7% and 0.2% of GNI rules to all predicted High Income Countries, while ‘More Donors’ shows the results if all High Income Countries donate the predicted percentage of GNI, according to the regression coefficients and country dummies from (1), and a zero dummy for new donors (suggesting an underlying donor generosity about equal to the UK or Australia). Table (4) shows Mid Growth ODA outflow figures for the largest (2050) ODA donors with historic donors only, while Table (5) shows the same with all HIC as donors. The Historic Donors/Mid Growth scenario suggests a considerable increase in ODA between 2019 and 2030. This is largely driven by a forecast that US

<sup>7</sup>Fuchs, A., Dreher, A., & Nunnenkamp, P. (2014). Determinants of donor generosity: A survey of the aid budget literature. *World Development*, 56, 172-199.

<sup>8</sup>Rogerson and Ritchie (2020).

ODA will climb from \$33 billion to \$98 billion over that time and is an artefact of the regression analysis which suggests current US flows are considerably below what would be expected given income and the US' past ODA contributions. While US ODA has already increased to \$52 billion in 2021 (driven by support to Ukraine), US policy watchers might well be skeptical that the increase will be sustained and extended. That would be a reason to downgrade expectations toward the 'Aid Fatigue' scenario.

With that significant caveat, the Historic Donors/Mid Growth scenario suggests ODA volumes might approximately double by 2050, suggesting they will stay about the same as a percentage of global output in 2050. It is worth noting with regard to less optimistic outcomes that Low Growth and Aid Fatigue scenarios see very little increase in the absolute volume of aid between now and 2030, and the Low Growth scenario out to 2050 actually suggests a decline in absolute ODA flows from historic donors.

Comparing the 'Historic Donors Only' and 'More Donors' scenarios under mid-growth, these new donors increase aid volumes by about 35 percent in 2030 and by 63 percent in 2050 compared to old donors alone. China would become the largest donor by 2050 under this scenario, while Brazil and Russia would both enter the top ten.

Rising aid volumes are to be expected, perhaps, but they are by no means assured. Note also that we forecast global GNI to expand from \$88 trillion to \$150 trillion between 2019 and 2050, so that (even) the Mid Growth/Historic Donors scenario suggests ODA will be stagnant as a percentage of recipient GNI (something we will return to). On the optimistic side, the numbers also make clear how much upside potential there is both from raising ODA budgets from existing donors and from bringing more high-income countries into the ODA community.

Table 2: Projected ODA Outflows in 2030 (Billions) (2019 total = \$162B)

	High Growth	Mid Growth	Low Growth
Historic Donors Only	362	264	194
More Donors (All High Income Countries)	505	356	203
More Aid (0.7%)	803	629	382
Aid Fatigue (0.2%)	229	180	109

Table 3: Projected ODA Outflows in 2050 (Billions) (2019 total = \$162B)

	High Growth	Mid Growth	Low Growth
Historic Donors Only	730	323	149
More Donors (All High Income Countries)	1160	526	222
More Aid (0.7%)	1403	858	471
Aid Fatigue (0.2%)	401	245	134

### 3 How Much Finance for International Development?

Finance for International Development is a measure of flows of official, cross-border concessional finance, measured in terms of grant-equivalent value, provided by 40 major economies which to-

Table 4: Projected ODA Outflows (Billions), Top 10 Donors in 2050 (Central Growth Forecast, Historic Donors Only), with 2019 Predicted Values.

	Actual 2019	Predicted 2019	2030	2040	2050
United States	33.0	74.0	97.9	113.3	122.8
Germany	24.1	19.2	23.7	25.1	24.8
United Kingdom	19.3	13.6	18.0	21.7	24.5
France	12.0	16.9	18.9	20.7	21.3
Japan	11.7	16.3	18.3	19.3	17.6
Canada	4.5	5.3	8.1	10.3	12.2
Australia	2.9	6.5	8.4	9.9	11.3
Netherlands	5.3	7.2	8.6	9.2	9.0
Italy	4.3	5.6	7.2	8.2	7.7
Turkey	8.7	2.4	3.7	5.3	7.1

Table 5: Projected ODA Outflows (Billions), Top 10 Donors in 2050 (Central Growth Forecast, All High Income Donate), with 2019 Predicted Values.

	Actual 2019	Predicted 2019	2030	2040	2050
China	NA	41.2	69.5	102.3	126.1
United States	33.0	74.0	97.9	113.3	122.8
Germany	24.1	19.2	23.7	25.1	24.8
United Kingdom	19.3	13.6	18.0	21.7	24.5
France	12.0	16.9	18.9	20.7	21.3
Japan	11.7	16.3	18.3	19.3	17.6
Brazil	NA	5.6	0.0	11.8	14.8
Russia	NA	5.9	8.4	10.6	13.2
Canada	4.5	5.3	8.1	10.3	12.2
Australia	2.9	6.5	8.4	9.9	11.3

gether accounted for around 90 percent of global GDP in 2018. In order to predict Finance for International Development, we use the data from Mitchell et. al. (2020) to run a regression:<sup>9</sup>

$$FID_{ct} = Ln(GDPPC_{ct}) + C \quad (2)$$

Where  $FID_{ct}$  is FID as a percentage of GNI of country  $c$  in year  $t$ ,  $GDPPC$  is GDP Per Capita, and  $C$  is a country dummy. First, we forecast  $FID_{ct}$  for all countries currently providing FID reported in Mitchell et. al. using coefficients from the regression and country residuals. Second, we assume all countries that pass the cutoff for upper middle income or above in a given forecast year<sup>10</sup> in each growth scenario provide FID according to the coefficients from the regression. Third, we take the 25<sup>th</sup> and 75<sup>th</sup> percentiles of FID as a percentage of GNI in the data to present ‘More Aid’ and ‘Less Aid’ scenarios.

Table 6: Regression Results for FID as a Percentage of GNI.

	FID %GNI
Ln(GDPPC)	0.261*** (0.065)
Constant	-2.444*** (0.683)
Adjusted R <sup>2</sup>	0.280
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Tables (7) and (8) report the results. This broader and more accurate measure of actual financial assistance to developing countries presents a somewhat similar picture to the ODA forecasts, although with a greater risk from Low Growth or Aid Fatigue compared to a higher potential from a larger donor pool. As with ODA, the Historic Donors/Mid Growth scenario suggests FID will be stagnant as a percentage of global GNI over the long term.

Table 7: Projected FID Outflows in 2030 (Billions) (2017 total = \$150B)

	High Growth	Mid Growth	Low Growth
Historic Donors Only	282	206	147
More Donors (All High Income Countries)	357	235	141
More Aid (0.37%)	425	332	202
Aid Fatigue (0.11%)	126	99	60

<sup>9</sup><https://www.cgdev.org/sites/default/files/WP529-FID-Mitchell-Full.pdf>

<sup>10</sup>Based on 2023 GNI Per Capita cutoffs, found here: <https://blogs.worldbank.org/opendata/new-world-bank-country-classifications-income-level-2022-2023>.



Table 8: Projected FID Outflows in 2050 (Billions) (2017 total = \$150B)

	High Growth	Mid Growth	Low Growth
Historic Donors Only	538	254	106
More Donors (All High Income Countries)	853	382	128
More Aid (0.37%)	742	454	249
Aid Fatigue (0.11%)	221	135	74

We also look at Multilateral FID in particular from the data in Hughes and Mitchell (2023). This is finance for international development fused to support multilateral institutions including the World Bank and its sister regional development banks. Using 2010 and 2019 data and running the regression:

$$MFID_{ct} = Ln(GDPPC_{ct}) + (Ln(GDPPC_{ct}))^2 + C \quad (3)$$

Table 9: Regression Results for MFID as a Percentage of GNI.

	MFID %GNI
Ln(GDPPC)	-0.871*** (0.161)
(Ln(GDPPC)) <sup>2</sup>	0.048*** (0.008)
Constant	3.940*** (0.817)
Adjusted R <sup>2</sup>	0.374
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Where  $MFID_{ct}$  is MFID outflows as a percentage of GNI for country  $c$  in  $t$ ,  $Ln(GDPPC_{ct})$  is the natural log of GDP Per Capita, and  $C$  is a country dummy. We use coefficients from the regressions along with population and GDP Per Capita forecasts from Kenny and Gehan (2023) to predict MFID budgets for (current) donors in 2030 and 2050. We first forecast  $MFID_{ct}$  for all countries currently providing MFID for which we have data from Hughes and Mitchell (2023) and using coefficients from the regression and country dummy values, i.e. historic donors. Second, we assume all the countries that pass the cutoff for upper middle income or above in a given forecast year (based on 2023 GNI Per Capita cutoffs) in each growth scenario provide MFID according to the coefficients from the regression (with a country dummy value of 0). The More Aid scenario, where all countries give 0.15%, is the 75<sup>th</sup> percentile of MFID % GNI in the historical data, and Aid Fatigue, 0.02% of GNI, is the 25<sup>th</sup> percentile in the historical data.

Once again, the Historic Donors/Mid Growth scenario suggests MFID will stagnate as a share of the global economy over the long term. The benefits of adding more donors appears limited (probably because nearly all large countries are already captured by the MFID data), but large donors are already near the 75<sup>th</sup> percentile, so that the opportunities for increasing generosity within historical limits also appears limited. If multilateral FID is to expand in relative terms over the next few decades it will have to be because of comparatively unprecedented commitment from shareholders.

Table 10: Projected MFID Outflows in 2030 (Billions) (2019 total = \$69B)

	High Growth	Mid Growth	Low Growth
Historic Donors Only	168	118	81
More Donors (All High Income Countries)	194	131	83
More Donors (All HIC and UMIC)	197	136	92
More Aid (0.15%)	172	135	82
Aid Fatigue (0.02%)	23	18	11

Table 11: Projected MFID Outflows in 2050 (Billions) (2019 total = \$69B)

	High Growth	Mid Growth	Low Growth
Historic Donors Only	345	146	56
More Donors (All High Income Countries)	480	192	65
More Donors (All HIC and UMIC)	498	199	71
More Aid (0.15%)	301	184	101
Aid Fatigue (0.02%)	40	25	13

## 4 Recipients

To predict recipient country *share* of total *recipient allocable* ODA, we run a regression using World Bank aid receipt data:<sup>11</sup>

$$\frac{Aid_{rt}}{Aid_{wt}} = RankGDPPC_{rt} + \frac{Pop_{rt}}{Pop_{wt}} + \left( \frac{Pop_{rt}}{Pop_{wt}} \right)^2 + R \quad (4)$$

Where  $Aid_{rt}$  is dollars of ODA to recipient country  $r$  in year  $t$ ,  $Aid_{wt}$  is (market) total global dollars of recipient allocable ODA in year  $t$ , and  $RankGDPPC_{rt}$  is the global ranking of country  $r$  in terms of GDP Per Capita (PPP) in year  $t$  (1 = lowest).  $Pop_{rt}$  is recipient population in year  $t$ , while  $Pop_{wt}$  is world population in year  $t$  and  $R$  is a recipient dummy. The regression is reported in table (12).

Table 12: Regression Results for ODA Inflows as a Fraction of World Total.

	ODA Inflows Frac. World Total
RankGDPPC	-0.0001*** (0.00001)
Pop Frac. World Total	-1.002*** (0.172)
(Pop Frac. World Total) <sup>2</sup>	-6.176*** (0.576)
Constant	0.012*** (0.003)
Adjusted R <sup>2</sup>	0.563
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

For the forecast/scenario exercise, we assume the recipient allocable share of total ODA remains equal to the proportion

$$\frac{\text{global sum of recipient allocable ODA}}{\text{global sum of donor ODA}}$$

for 2010-2020.<sup>12</sup> We return to this assumption later.

We use coefficients from the regression along with population and GDP Per Capita forecasts from Kenny and Gehan (2023) to predict recipient share of allocable ODA receipts in 2030 and 2050. We take these raw share predictions and make two adjustments: (i) excluding any country predicted by Kenny and Gehan (2023) to be high income by 2030 and 2050; (ii) rescaling the remaining shares to equal 100%. Combined with the results of the donor budget forecast exercise and the recipient-allocable share adjustment, this gives forecasts for absolute aid volumes per recipient country in 2030 and 2050.

Table (13) reports the results for various income groups. Note that these are income groups at the time of the forecast: countries that will be low-income in 2030, for example. Because countries are getting richer over time, many graduate to higher income categories. For example, China's GNI

<sup>11</sup>Using <https://data.worldbank.org/indicator/DT.ODA.ODAT.KD>.

<sup>12</sup>World Bank Indicators  $\frac{DT.ODA.ODAT.KD}{DC.ODA.TOTL.KD}$ .

Per Capita was \$12,850 in 2022, while the cutoff for high income status is \$13,846, a line it will likely soon cross. We predict high income countries’ share of global population will increase from 16 to 38 percent by 2050 in our central forecast, while low-income countries share of global population will fall from 8 percent to one percent. At the same time, thanks to both rising incomes and population, those economies that remain become larger. All of this also interacts with our model of recipient shares, where some countries (‘donor darlings’) are predicted to continue receiving more ODA than their income and population would predict, while other countries (‘orphans’) receive less. But the overall effect that we predict from these changes is a notable shift of ODA resources toward middle income countries and in particular Upper Middle Income Countries. By 2050, aid as a percentage of UMIC GNI may climb from 0.06 percent to 0.51 percent while ODA as a percentage of LIC GNI is predicted to fall throughout the forecast period.<sup>13</sup> While this may overplay the real risk of refocusing aid toward richer countries, we will see that a greater focus on climate mitigation points in the same direction.

Table 13: Projected Recipient Allocable ODA Inflows as Percentage of GNI Atlas, Income Groups and Africa (Central Growth Forecast).

	2019	2030	2040	2050
LIC	9.17	8.82	6.72	2.53
LMIC	0.57	0.99	0.96	1.44
UMIC	0.07	0.55	0.84	0.67
Africa	2.06	2.23	1.72	1.18

Table (14) then examines the impact of different outcomes in terms of growth forecasts for recipient and donor countries and generosity on developing countries as a group (i.e. excluding countries that graduate to high-income status). In high growth scenarios, all countries graduate out of LIC status by 2050. But the central forecast of rising aid volumes as a percentage of recipient GNI for richer recipient countries appears reasonably robust across scenarios, reflecting the prediction that a number of ‘donor darlings’ will become richer and this effect will outweigh the influence of relative low income on allocation. Needless to say, this outcome is hardly an inevitable one. It is to be hoped that donors will utilize mechanisms to preserve more of their scarce ODA resources for poorer countries.

<sup>13</sup>The countries that are still LIC in 2030 are Afghanistan, Burkina Faso, Burundi, Central African Republic, Chad, DR Congo, Gambia, Guinea-Bissau, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Sierra Leone, Somalia, and Uganda. In 2050, only Burundi and Niger are projected to remain LICs—both countries with strongly negative country dummies in the regression.

Table 14: Projected Recipient Allocable ODA Inflows as Percentage of GNI Atlas in 2050, by Generosity Scenario, Growth Scenario, and Country Income Level Group.

		2019	Mid Growth	High Growth	Low Growth
LIC	Historic Donors Only	9.17	2.53	NA	1.83
	More Donors (All High Income Countries)	9.17	4.12	NA	2.73
	More Aid (0.7%)	9.17	6.72	NA	5.78
	Aid Fatigue (0.2%)	9.17	1.92	NA	1.65
LMIC	Historic Donors Only	0.57	1.44	4.27	0.48
	More Donors (All High Income Countries)	0.57	2.34	6.78	0.72
	More Aid (0.7%)	0.57	3.82	8.20	1.52
	Aid Fatigue (0.2%)	0.57	1.09	2.34	0.43
UMIC	Historic Donors Only	0.06	0.67	1.09	0.27
	More Donors (All High Income Countries)	0.06	1.09	1.72	0.41
	More Aid (0.7%)	0.06	1.78	2.09	0.87
	Aid Fatigue (0.2%)	0.06	0.51	0.60	0.25

## 5 Demand for Multilateral Finance

Looking at the World Bank in particular as an indicator of demand for multilateral finance, the decision to ‘graduate’ countries from IDA eligibility is based on a combination of income thresholds, creditworthiness for IBRD loans and broader analysis of economic fragility. Empirical analysis of graduation suggests a number of factors are associated with graduation including income per capita, creditworthiness, country size, life expectancy, reduced poverty, urbanization, and institutional development.<sup>14</sup> The IBRD ‘Graduation Discussion Income’ is US\$6,795, however, this is where borrowers begin discussions about graduation and many continue to borrow considerably after crossing that threshold, and there are some high-income borrowers from the IBRD.

Given that, to forecast the size of the IDA borrower pool under existing rules, we use the official cutoff of \$1,255. We look at the absolute size of IDA economies, and the percentage of the world economy and population in 2030 and 2050 with High/Low/Base Growth forecasts from Kenny and Gehan (2023) that will be below that Atlas GNI Per Capita. We forecast the potential IBRD borrower pool split into two: ‘above IDA graduation and below IBRD graduation discussion income’, and ‘between IBRD graduation discussion income and the High Income Country cutoff’. For each group we report the absolute size of economies. Tables (15) through (18) present the results. The tables suggest demand for IDA resources will not decline in the short term: IDA eligible economies will see rising income growth but enough will remain under the threshold and populations will increase sufficiently that the total size of IDA economies will grow. By 2050, our mid-range forecasts suggest the IDA pool may have considerably shrunk, but it is worth noting that this is based on a forecast that has all low- and lower-middle-income countries considerably outperforming the average growth pattern of the last thirty years for their income group—in that sense it is an optimistic scenario. Under any scenario, the demand pool for IBRD lending appears to grow, with the GDP of IBRD-eligible countries below the graduation discussion approximately doubling by 2050 in the Mid Growth scenario. (Note also, of course, these cutoffs may be raised as average world income climbs.)

Table 15: Projected GDP (Billions) in Each Borrower Tier in 2030, by Growth Scenario.

	2019	Mid Growth	High Growth	Low Growth
Below IDA Cutoff	1504	1862	1199	1760
Above IDA, Below IBRD Cutoffs	26201	35885	40497	30339
Above IBRD, Below HIC Cutoffs	37304	19030	11582	46159

Table 16: Projected GDP (Billions) in Each Borrower Tier in 2050, by Growth Scenario.

	2019	Mid Growth	High Growth	Low Growth
Below IDA Cutoff	1504	300	97	2348
Above IDA, Below IBRD Cutoffs	26201	51503	25846	45576
Above IBRD, Below HIC Cutoffs	37304	26307	79316	23688

<sup>14</sup>Heckelman, Knack, and Rogers (2011), <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/244791468147851867/crossing-the-threshold-an-analysis-of-ibrd-graduation-policy>.

Table 17: Projected GNI Atlas (Billions) in Each Borrower Tier in 2030, by Growth Scenario.

	2019	Mid Growth	High Growth	Low Growth
Below IDA Cutoff	532	664	470	651
Above IDA, Below IBRD Cutoffs	9535	12564	14089	10674
Above IBRD, Below HIC Cutoffs	22487	9113	4860	27918

Table 18: Projected GNI Atlas (Billions) in Each Borrower Tier in 2050, by Growth Scenario.

	2019	Mid Growth	High Growth	Low Growth
Below IDA Cutoff	532	124	31	873
Above IDA, Below IBRD Cutoffs	9535	17564	9673	16127
Above IBRD, Below HIC Cutoffs	22487	10094	26973	11081

## 6 Which Sectors?

The above discussion has taken as given that relative income and country fixed effects will continue to be the most significant (forecastable) variable in determining aid flows. To the extent that climate mitigation becomes an increasingly important source of aid flows, electricity consumption may be an increasingly important determinant. Table (19) reports on income group share of electricity consumption in 2050 from Kenny and Gehan (2023), this based on current income group membership. It is clear that low income countries will remain small players in mitigation up to 2050, suggesting any greater focus of international finance on mitigation will be a focus aimed at middle income (and primarily upper middle income) countries.

Table 19: Electricity Consumption 2050, Trillions of Kilowatt-hours

	2014	KG	KG +	KG -
Africa	0.63	3.45	5.77	1.98
China	5.47	8.42	12.59	5.36
DAC Members	9.57	11.77	16.33	8.08
EU Members	2.66	4.12	5.79	2.79
India	1.03	4.61	7.48	2.71
United States	4.14	4.64	6.33	3.24
Low income	0.09	0.89	1.60	0.47
Lower middle income	2.43	11.84	19.10	7.00
Upper middle income	8.66	15.95	23.76	10.20
High income	10.45	13.37	18.56	9.18
World	21.71	42.06	63.03	26.85

ODA marked as significantly or principally related to climate climbed from 19 percent in 2015



to 26 percent of the total in 2019.<sup>15</sup> Developed countries have committed to raise more than \$100 billion in climate finance annually. If they meet this commitment, assuming the composition of climate financing remains the same, this would likely mean over \$35 billion of ODA is spent on mitigation.<sup>16</sup> Humanitarian assistance as a percentage of ODA has also been rising—from 10 percent in 2015 to 14 percent in 2019.<sup>17</sup>

Using these historical percentages of total ODA, an estimate that climate might rise to 35 percent of total spend by 2030 and humanitarian to 20 percent, plus our forecast ODA volumes for 2030, Table (20) suggests what this might imply for ODA going to all other activities. Note that these numbers imply ‘all other’ ODA will shrink as a percentage of recipient GDP and, if the US ODA forecast does turn out to be optimistic, it is likely to shrink in real terms.

Table 20: \$ (Billions) of ODA by Sector: 2030 Scenario

	2015	2019	2030
Climate (rising to 35%)	28	43	93
Humanitarian (rising to 20%)	15	23	53
All Other	106	99	119

## 7 Aid Quality

There are a number of reasons for concern regarding aid quality and its potential (further) deterioration. Not least, DAC rules have been continually loosened to allow lower quality aid spend. Among recent changes, Rogerson and Ritchie (2020) warn that changed rules around accounting for debt and debt relief could inflate ODA numbers above assistance delivered by billions over the next few years, including decisions on scoring debt relief for export credits, payment arrears, and principal that has already seen significant interest payments.<sup>18</sup> Again, excess Covid-19 vaccines were allowed to be charged as ODA.<sup>19</sup> There are particular concerns with the quality of climate finance supported by ODA (as effective development *or* climate mitigation/adaptation finance).<sup>20</sup>

The minimum standard for effective development assistance excludes humanitarian aid or debt relief, involves cross-border flows (excluding administrative expenses and refugee hosting costs), and is part of a cooperation agreement: country programmable aid. It is a shrinking fraction of the total (currently a little above one third, see Figure (1)).<sup>21</sup> If we assume that country programmable aid

<sup>15</sup><https://devinit.org/resources/aid-data-2019-2020-analysis-trends-before-during-covid/#section-1-3>

<sup>16</sup><https://www.cgdev.org/blog/if-were-going-fund-climate-mitigation-oda-we-need-double-it>

<sup>17</sup><https://devinit.org/resources/aid-data-2019-2020-analysis-trends-before-during-covid/#section-1-3>

<sup>18</sup>Andrew Rogerson and Euan Ritchie, 2020. “ODA in Turmoil: Why Aid Definitions and Targets Will Come Under Pressure in the Pandemic Age, and What Might Be Done About It” CGD Policy Paper 198.

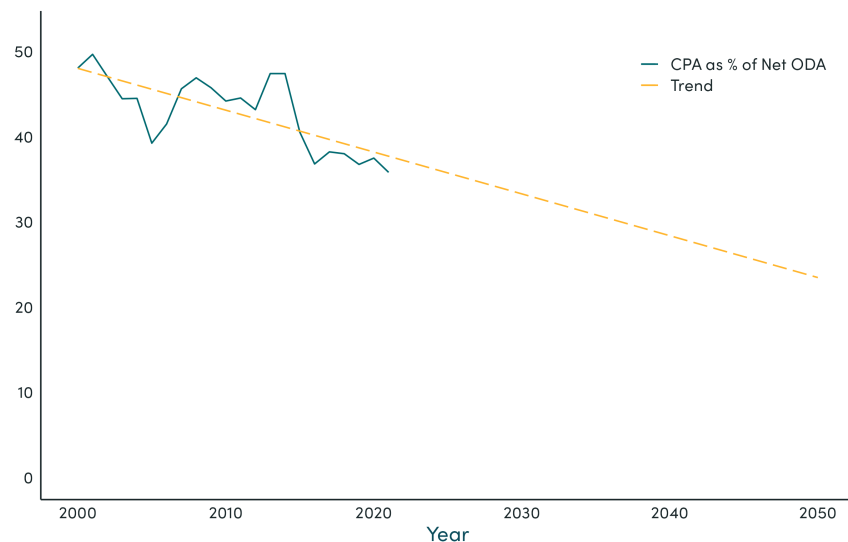
<sup>19</sup>See DAC Working Party on Development Finance Statistics Summary record of the WP-STAT meeting of 28-30 September 2022 [https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DCD/DAC/STAT/M\(2022\)3/FINAL&docLanguage=en](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DCD/DAC/STAT/M(2022)3/FINAL&docLanguage=en)

<sup>20</sup>Juden, M., & Mitchell, I. (2021). Cost-Effectiveness and Synergies for Emissions Mitigation Projects in Developing Countries. *Center for Global Development*.

<sup>21</sup><https://www.cgdev.org/blog/how-much-foreign-aid-reaches-foreign-governments>

as a percentage of the total continues to fall approximately along this linear trend, then it would reach 33.1 percent by 2030 and 23.6 percent by 2050.

Figure 1: World Total Country Programmable Aid as a percent of World Total Net ODA.



## 8 Conclusion

Our optimistic central forecast for ODA in 2030 is \$264 billion, up from \$162 billion in 2019. Multilateral Finance for International Development may climb from \$69 billion to \$118 billion over that period. At the same time this increase is reliant on a resurgence of the US aid program, and it would still leave ODA and finance for development as a whole little larger as a proportion of recipient GNI than it is today. Existing trends suggest the quality of ODA will be lower while the proportion going to core development will decline. Compared to the promises of trillions early in the SDG era, this seems markedly inadequate, especially in an environment of increased realism about the role of the private sector in meeting development and climate finance needs.

The pool of major donors should surely expand, with many countries providing extremely limited finance for international development despite being very rich on any historical scale.<sup>22</sup> At the same time, collectively, historical donors have never lived up to their promises on ODA and, particularly in an age of rich-country-induced climate change, they should be providing more finance. But the outlook for greater generosity may be dark: future growth rates in many of these donor countries are likely to be suppressed by ongoing demographic change and (potentially) slower technological

<sup>22</sup>See <https://www.cgdev.org/blog/why-world-so-stingy>.

progress. One potential bright spot is that greater immigrant stocks are associated with higher support for aid, and rich countries are increasingly recognizing the need for larger immigration flows as part of their response to aging, shrinking populations.

Regardless, given the likelihood of limits to additional finance, it is vital that what finance there is available is concentrated in the places where it can do the most good—the world's poorest countries. Prioritizing and protecting tools like the World Bank's IDA, ensuring it is well financed and retains a focus on poor countries, is ever more vital.

# Appendices

## A Cross Validation

Table 21: ODA Outflows as a Percentage of GNI models' Cross-Validation Performance (3 Folds)

	Model Formula	R <sup>2</sup>	R <sup>2</sup> Cross Val
1	oda_outflows_pctgni ~ gdppc + year + country_code	0.72	0.68
2	oda_outflows_pctgni ~ lngdp + year + country_code	0.72	0.70
3	oda_outflows_pctgni ~ lngdppc + year + country_code	0.72	0.69
4	oda_outflows_pctgni ~ lngdp + lngdppc + year + country_code	0.72	0.70
5	oda_outflows_pctgni ~ lngdppc + lngdppc2 + year + country_code	0.72	0.70
6	oda_outflows_pctgni ~ lngdp + lngdp2 + lngdppc + year + country_code	0.76	0.75
7	oda_outflows_pctgni ~ lngdp + lngdp2 + lngdppc + lngdppc2 + year + country_code	0.76	0.75
8	oda_outflows_pctgni ~ gdppc_over_wgdppc + year + country_code	0.72	0.70
9	oda_outflows_pctgni ~ gdppc_over_wgdppc + gdppc_over_wgdppc2 + year + country_code	0.72	0.70
10	oda_outflows_pctgni ~ gdppc_over_wgdppc + lngdp + year + country_code	0.72	0.70
11	oda_outflows_pctgni ~ gdppc_over_wgdppc + lngdp + lngdppc + year + country_code	0.72	0.69
12	oda_outflows_pctgni ~ gdppc_rank_desc + year + country_code	0.72	0.70
13	oda_outflows_pctgni ~ gdppc_rank_desc + I(gdppc_rank_desc^2) + year + country_code	0.72	0.70

## B Country Dummies

Country	Dummy	Country	Dummy	Country	Dummy
Australia	-0.01	United Kingdom	0.02	Netherlands	0.30
Austria	-0.14	Greece	-0.21	Norway	0.37
Azerbaijan	-0.24	Croatia	-0.24	New Zealand	-0.11
Belgium	0.10	Hungary	-0.22	Poland	-0.25
Bulgaria	-0.21	Ireland	-0.12	Portugal	-0.13
Canada	-0.16	Iceland	-0.24	Qatar	-0.39
Switzerland	-0.11	Israel	-0.31	Romania	-0.23
Cyprus	-0.28	Italy	-0.16	Slovakia	-0.26
Czechia	-0.26	Japan	-0.11	Slovenia	-0.24
Germany	-0.00	Kazakhstan	-0.33	Sweden	0.33
Denmark	0.37	South Korea	-0.28	Thailand	-0.26
Spain	-0.14	Lithuania	-0.24	Timor-Leste	-0.10
Estonia	-0.24	Luxembourg	0.02	Turkey	-0.05
Finland	-0.03	Latvia	-0.25	United States	-0.19
France	0.15	Malta	-0.20		

Table 22: Country Dummies for ODA Outflows as a Percentage of GNI.