

From high to low aid: a proposal to classify countries by aid receipt

By Jonathan Glennie and Annalisa Prizzon

'... if aid is truly effective, it will progressively put itself out of business. Effective aid should therefore be designed with this in mind – to strengthen, not displace, domestic energy and capacity; and to build up, not replace, alternative sources of development finance.'

Donald Kaberuka, President of the African Development Bank, at the Second Regional Meeting on Aid Effectiveness, 4 November 2010

The development paradigm has evolved dramatically over the past decade, with high levels of official development assistance now seen by many recipient countries as a problem to be dealt with over time. While there has always been a view that aid should eventually work itself out of a job, more countries are now voicing their desire to reduce the amount of aid they receive in the medium rather than just the long term.

This dynamic, long underway in Latin America and parts of Asia, is now part of the common discourse in Africa, the continent most dependent on aid. Even the President of Liberia, one of the poorest countries in the world, has expressed her desire to see her country free of aid dependence in a decade (Moss, 2011). There is also growing recognition that it is time to move from a focus on aid policies towards other sources of financing for development and greater coherence of development policies: the 'beyond aid' agenda.

This paper argues that a classification of countries according to their aid receipts could contribute to that agenda and help donors and recipients monitor changes. High aid levels do not equal aid dependence, which is more complex, but they are a critical factor. We suggest that the ratio of recipient aid to Gross National Income (GNI) is a more relevant measure than the traditional focus on aid as a proportion of donor GNI, symbolised by the 0.7% target.

We classify recipient economies in four categories: High Aid Countries (HACs), Middle Aid Countries (MACs), Low Aid Countries (LACs) and Very Low Aid Countries (VLACs), on the basis of their net aid to GNI ratio above 10%, between 2% and 10%, between 1% and 2%, and below 1%, respectively. These categories shed light on some changes over the past two decades, particularly in countries where most poor people live (Sumner, 2011).

The Background Note is structured as follows. First, it discusses the motivations for classifying countries according to their aid receipts and the relevance of monitoring aid targets from the recipients' perspective. On the basis of this taxonomy, the paper analyses major trends over the past two decades and sheds some light on the composition of the LACs and HACs groups. Finally some caveats in the interpretation of the classification and a future research agenda are discussed.

Assessing countries by their aid-to-GNI ratio

Country classification can be a useful tool to monitor and evaluate progress towards a specific target across time and countries. In the context of developing and emerging economies, the grouping used most commonly is the World Bank income categorisation based on per capita GNI – high-income (HICs), middle-income (MICs), and low-income (LICs) countries.

For political and economic reasons, many recipient countries view aid dependence as undesirable in the medium to long term, with the negative aspects of aid dependence being discussed in a growing number of publications. Many poor countries aspire to reduce aid as a proportion of their economy and government budget in the same way as they aspire to reach middle-income status. Just as categorisation by income per capita has been a useful way to plot a country's economic performance, so categorisation by aid receipt

may help policy-makers in both donor and recipient countries monitor progress on this increasingly important variable, whether that means increasing or reducing aid levels.

However, no such classification yet exists. One previous attempt is an OECD paper (2003) that defines high aid dependency as net ODA greater than 9% of GNI and low aid dependency as below 3%. The paper uses the common shorthand that identifies aid dependence with high aid-to-GNI. While this shorthand can be useful, it is not entirely accurate. While high levels of aid do correlate with aid dependence, that dependence is linked to many other factors, such as a country's history and culture (more assertive countries may be viewed as less aid dependent), how long a country has been receiving aid, and the quality of a country's institutions. Brautigam (2000) defines aid dependency as 'a situation in which a country cannot perform many of the core functions of government, such as operations and maintenance, or the delivery of basic public services, without foreign aid funding and expertise'.

Importantly, while reductions in aid levels are often described as reductions in 'aid dependence', countries reducing aid from already low levels have never been aid dependent. India, for example, has reduced aid from about 0.8% to 0.2% of GNI in the past 20 years, but describing this as a reduction in dependence implies that 0.8% indicates a dependent relationship, which is not the case.

In our suggested classification scheme, presented for comment and debate, we take the *aid-to-GNI ratio* as a critical factor in an assessment of aid dependence and for other analysis that may impact aid policy. Another option is to view aid as a proportion of government expenditure, as in ActionAid (2011). However, in some countries large amounts of aid are spent outside of government systems, and we wish to focus on the role of aid overall, not just in the government budget. Another concern is the difficulty of carrying out time-series analysis and cross-country comparison, given the limited availability and consistency of data on government revenues. Looking at aid per capita is useful for some types of analysis, as is simply looking at the absolute amount in current or constant dollars, but these analyses do not show the importance of aid to the economy as a whole.

We use the neutral terms high, middle, low and very low aid to describe our classifications (following the better-known World Bank income classification). It is worth emphasising that these terms do not refer to absolute quantities of money, but to proportions. Some countries with the lowest aid as a proportion of GNI actually receive the most aid in terms of absolute volume because the countries themselves are so vast. For example, in 2009-10 India was the third largest ODA recipient and China the fourth.

Our central argument is that aid should be measured as a proportion of *recipient* GNI, as opposed to solely *donor* GNI. Aid has long been monitored at an international level as a proportion of donor country GNI, with the 0.7% target considered the benchmark of responsible global citizenship. This fairly arbitrary target (Clemens and Moss, 2005) may be useful as a political tool, but tells us little about the value or role of aid in its supposed beneficiary countries. The country classification presented here seeks to shift the emphasis from aid giving to aid receiving countries.

To illustrate this point, Figure 1 plots the evolution of aid flows both as a proportion of recipient GNI and as a proportion of donor GNI since 1960. An interesting picture emerges. While the two variables move in the same direction both in the 1960s and in the 1990s, the other decades – particularly the 1980s and 2000s – show a weak or even negative correlation.

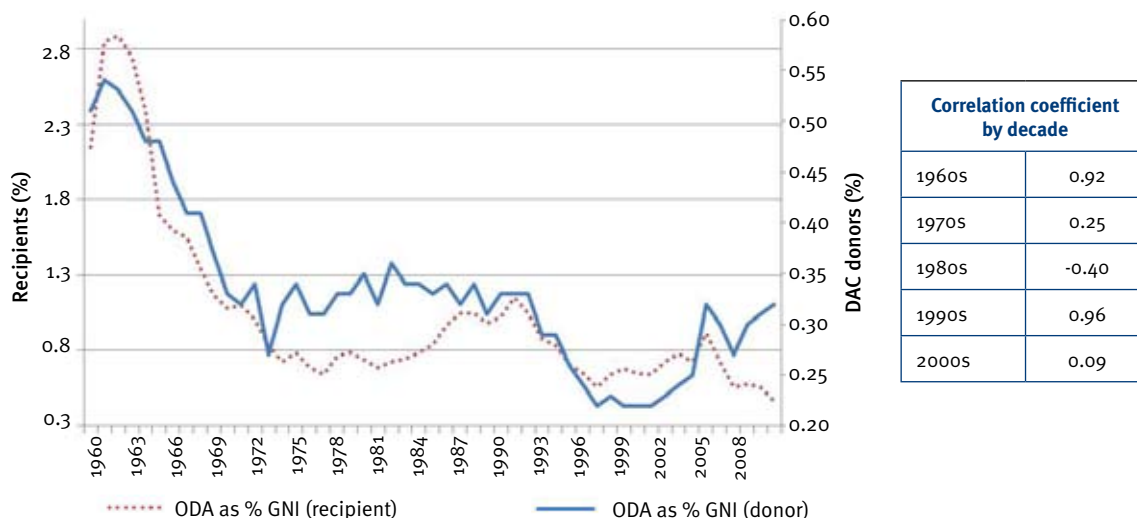
From the DAC donors' perspective, the steep downward trend in their aid-to-GNI ratio in the 1990s was accompanied by fast economic growth, while the 2000s saw increased ODA and slower growth than the previous decade, especially after the 2008-09 financial and economic crises.

But that is not how it looked to the recipients. While their aid-to-GNI ratio also fell in the 1990s, as it did for donors, it kept on falling in the 2000s, probably because of much faster economic growth. These different trends stem from the interplay between falling and rising aid supply – the numerator – and different economic performance in recipient and donor countries – the denominators. Given the diversity of countries aggregated here, it is hard to attribute these trends and broad generalisations will have to suffice.

Having decided on the indicator, the next step is to mark out the classifications. Most categorisation methods contain an element of arbitrariness, including the income categorisation that defines a country as 'middle-income' when annual GNI per capita reaches \$1,000 (Glennie, 2011). Equally, a country can be described, factually, as having *lower* or *higher* aid than another, but whether a country is specifically Low or High Aid will always be a matter of opinion.

One characteristic of our proposed scale is more differentiation at the lower values of aid to GNI than suggested by, for example, the OECD's definition of low aid dependency of below 3%. If we look at the density function of aid-to-GNI ratios across developing and emerging economies based on 10-year averages for the 2000s (Figure 2) we find that almost half of all developing and emerging countries fall under the 3% threshold. Given the increasing density of countries at this end of the scale, we propose that Low Aid Countries be defined as those with aid-to-GNI ratios between 1% and 2%, and that a Very Low Aid category be used to describe countries with ratios of less than 1%. The fact that most of the poorest people live in

Figure 1: Total net ODA as a proportion of donors and recipients GNI 1960-2010



Notes: ODA as a % of GNI (Recipient) includes aid to all Part I Developing country recipients from DAC donors. ODA as a % of GNI (DAC Donors) includes DAC Donors only. The correlation coefficient illustrates the linear relationship between aid to GNI from donors and recipients' perspectives. Source: DAC Aggregate Aid Statistics, accessed 4 January 2012.

countries where aid is less than 2% of GNI (Glennie, forthcoming) furthers the argument for two small classification ranges at the bottom of the scale.

The cut-off points we suggest in Table 1 provide an acceptably balanced representation of the distribution of aid recipient countries between four bands, with a concentration on the lower aid ratios.

Countries that have an aid/GNI ratio below 1% are categorised as Very Low Aid Countries (VLACs), between 1% and 2% Low Aid Countries (LACs), between 2% and 10% Middle Aid Countries (MACs), and over 10% High Aid Countries (HACs).

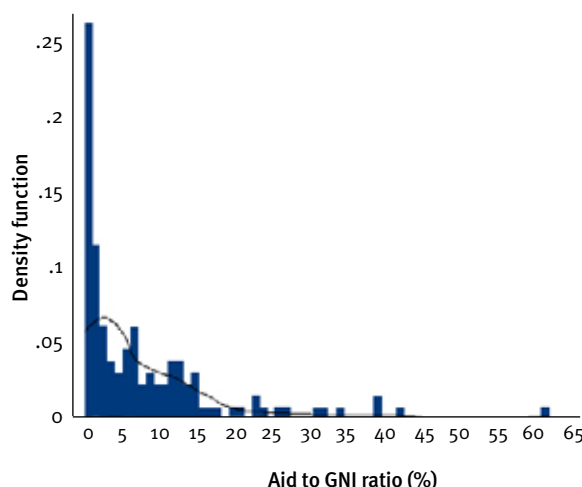
It is important to note that this analysis looks only at ODA (official development assistance as defined by the OECD's Development Assistance Committee). Results might be different if we limited the analysis to Real Aid (ActionAid, 2011) or Country Programmable Aid (an OECD definition excluding aid that does not reach country budgets), or if we expanded it to cover non-DAC aid including from emerging powers and major philanthropists

The next section describes and examines trends in aid ratios through time by applying this classification.

A brief analysis of trends in aid receipts

Now that we have categorised countries according to aid ratios, we can analyse trends by movement between bands, rather than just aggregate percentages. Our analysis starts in 1990 – generally considered a turning point for aid flows and aid allocation as the Cold War ended – and covers all aid recipient countries for which data are available, including high-income countries that remain net aid recipients.

Figure 2: Density functions – average aid-to-GNI ratios in the 2000s



Source: Authors' elaboration based on World Bank (2011). The line represents the kernel density function.

Table 1: Proposed country categorisation by aid receipt

	Aid/GNI (%)
Very Low Aid Countries (VLAC)	Under 1%
Low Aid Countries (LAC)	1.00-1.99%
Middle Aid Countries (MAC)	2.00-9.99%
High Aid Countries (HAC)	Over 10%

Figure 3 maps the taxonomy for the years 1990 and 2009 – the latest year for which comparable data are available – across recipient countries. Even though data availability and the number of recipient countries (especially in Eastern Europe and Central Asia) rose slightly, the figure reveals some trends.

The number of countries classified as HAC decreased from 48 to 37 while the number of VLACs and LACs rose from 40 to 54. To shed more light on this point, we looked more closely at recipient countries with available data for the entire period 1990-2009, and compared shifts from one band to another by decade.

Tables 2, 3 and 4 highlight the transition through categories and compare the snapshots for 1990, 2000 and 2009. The use of transition matrices also helps to underline whether movements span one, two or three bands. Along the main diagonal in dark-blue, the matrices show the number of countries that did not change aid category from the initial year (row) to the final year (column). The other cells count the number of countries shifting aid category: rows denote the starting year and columns the final year. Light-blue cells below the

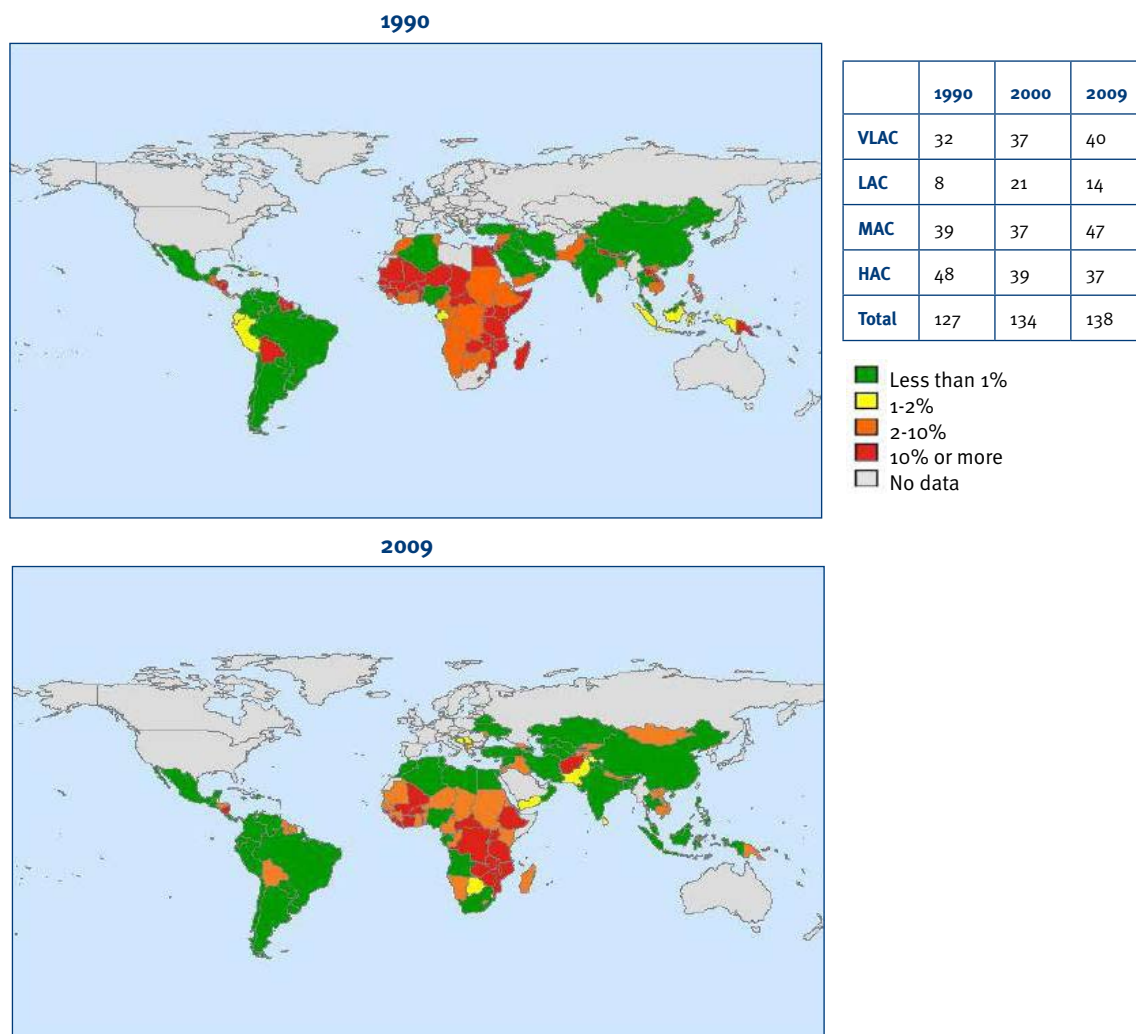
principal diagonal indicate recipients whose aid-to-GNI ratios decline while white cells above measure the number of countries moving up the aid classification.

During the overall 20-year period only four of the 103 countries moved up a band, and only a further two moved up two bands (Table 2). In contrast, 36 countries moved down a band, six moved down two bands and only two countries – Egypt and Equatorial Guinea – completed the full transition from HAC to LAC (although 1990 was something of a spike year for Egypt).

However, when we split this 20-year period into decades (Tables 3 and 4), an interesting picture emerges that seems to contradict conventional wisdom, even though these results are driven in part by the selected time horizon and the cut-off values of the proposed aid classification.

In the 1990s, 48 countries, almost half the countries with data, moved down at least one band, and only three moved up (at least) one band (Table 3). In the 2000s, in stark contrast, more countries moved up in the classifications (20) than down (only 14) (Table 3), implying increasing aid-to-GNI ratios.

Figure 3: Mapping aid classification



Source: World Bank (2011). Authors' elaboration.

While the number of HACs fell in number from 45 in 1990 to just 27 in 2009, this entire shift happened in the 1990s, by the end of which there were only 25 HACs; in the 2000s, the number of HACs actually increased to 27. Meanwhile the number of LACs/VLACs fell in the 2000s from 47 to 42. While the 1990s trend is probably because of falling aid levels after the end of the cold war, the mixed picture in the 2000s is the result of a combination of strong growth in some countries, leading to a higher denominator in the ratio, and increased aid efforts focused on some countries in particular. These trends are confirmed by reviewing the evolution of the aid classification from 1990 to 2009 (Figure 4).

Who are the LACs and VLACs?

From an initial analysis, the LACs and VLACs of 2009 fall into two main groups: populous and upper-middle-income (see Table 5, overleaf). There are also two small sub-groups – small Latin American lower-middle-income countries, high-income economies still receiving aid, and some miscellaneous countries. Of the 54 LACs/VLACs in 2009 with available data, 28 are upper-middle-income countries. Meanwhile, 13 have more than 50 million people. Four countries fall into both these categories, Brazil, Mexico, Iran and Turkey. There was only one low-income country in the LAC/VLAC classification in 2009: Bangladesh.

A different picture emerges when we look at these two classifications together. There are only 40 VLACs/LACs in 1990, of which 16 are lower-middle-income. There are 13 upper-middle-income and 4 populous low-income countries.

UNDP’s analysis of 26 countries registering aid-to-GNI ratios above 10% found that 17 are Least Developed Countries (LDCs) and that 16 of these are in sub-Saha-

Table 2: Matrix of classification change 1990-2009

		2009				
		VLAC	LAC	MAC	HAC	Total
1990	VLAC	15	1	2	0	18
	LAC	7	1	0	0	8
	MAC	6	10	13	3	32
	HAC	2	0	19	24	45
	Total	30	12	34	27	103

Table 3: Matrix of classification change 1990-2000

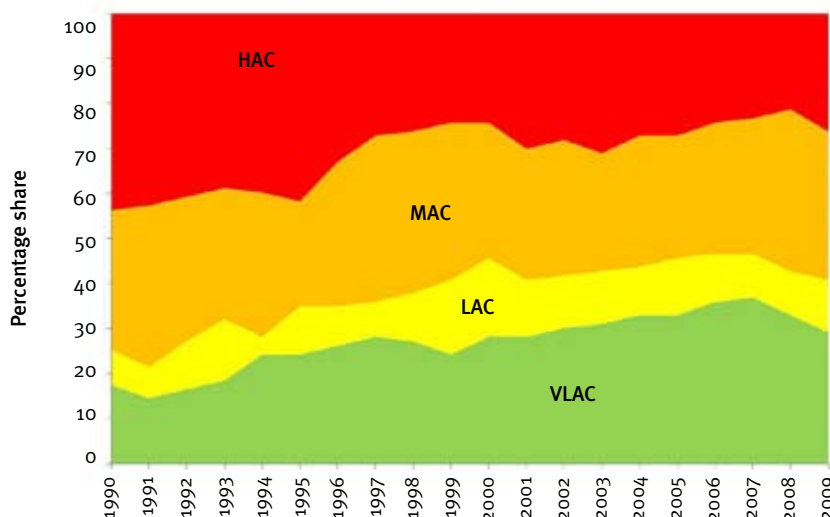
		2000				
		VLAC	LAC	MAC	HAC	Total
1990	VLAC	16	0	1	1	18
	LAC	4	4	0	0	8
	MAC	9	13	9	1	32
	HAC	0	1	21	23	45
	Total	29	18	31	25	103

Table 4: Matrix of classification change 2000-2009

		2009				
		VLAC	LAC	MAC	HAC	Total
2000	VLAC	23	4	2	0	29
	LAC	5	7	6	0	18
	MAC	2	1	20	8	31
	HAC	0	0	6	19	25
	Total	30	12	34	27	103

Source: Authors’ calculations based on World Bank (2011).

Figure 4: How the classification changed in the past 20 years



Note: The sample covers 103 recipient countries whose net ODA to GNI ratio data are available for the entire period.
Source: Authors’ calculations based on World Bank (2011) World Development Indicators.

Table 5: The VLAC and the LAC groups 1990 and 2009 (green = VLAC; yellow = LAC)

1990							
	Aid-to-GNI ratio	Pop > 50m		Aid-to-GNI ratio	Pop > 50m		
Low-income			Lower-middle-income			Upper-middle-income	
China	0.57	x	Mongolia	0.52		Oman	0.54
India	0.45	x	Panama	1.97		Saudi Arabia	0.01
Indonesia	1.57	x	Paraguay	1.06		Trinidad & Tobago	0.38
Nigeria	1.00	x	Peru	1.56		Uruguay	0.59
			Thailand	0.94	x	Venezuela, RB	0.17
			Turkey	0.81	x		
Lower-middle-income						High-income	
Albania	0.53					Bahamas, The	0.1
Algeria	0.22		Upper-middle-income			Brunei Darussalam	0.11
Argentina	0.12		Antigua & Barbuda	1.33		Cyprus	0.67
Chile	0.35		Barbados	0.15		Hong Kong SAR, China	0.05
Colombia	0.23		Brazil	0.03	x	Kuwait	0.02
Cuba	0.18		Iraq	0.13		Qatar	0.02
Dominican Republic	1.5		Korea, Rep.	0.02		Singapore	-0.01
Ecuador	1.74		Macao SAR, China	0.01			
Iran, Islamic Rep.	0.09	x	Malta	0.19			
Malaysia	1.11		Mexico	0.06	x		

2009							
	Aid-to-GNI ratio	Pop > 50m		Aid-to-GNI ratio	Pop > 50m		
Low-income			Lower-middle-income			Upper-middle-income	
Bangladesh	1.26	x	Turkmenistan	0.23		Libya	0.06
			Ukraine	0.58		Malaysia	0.08
			Uzbekistan	0.58		Mauritius	1.75
Lower-middle-income						Mexico	0.02
Angola	0.35					Montenegro	1.82
China	0.02	x	Upper-middle-income			Panama	0.28
Ecuador	0.41		Algeria	0.23		Peru	0.37
Egypt, Arab Rep.	0.49	x	Argentina	0.04		Serbia	1.54
El Salvador	1.38		Azerbaijan	0.57		South Africa	0.39
Guatemala	1.03		Belarus	0.2		St. Kitts & Nevis	0.86
India	0.18	x	Brazil	0.02	x	Turkey	0.22
Indonesia	0.2	x	Chile	0.05		Uruguay	0.17
Morocco	1.03		Colombia	0.47		Venezuela, RB	0.02
Nigeria	1.05	x	Costa Rica	0.39			
Pakistan	1.67	x	Dominican Republic	0.27			
Paraguay	1.06		Gabon	0.79			
Philippines	0.18	x	Iran, Islamic Rep.	0.03	x	High-income	
Sri Lanka	1.69		Jamaica	1.25		Barbados	0.35
Syrian Arab Republic	0.46		Kazakhstan	0.29		Croatia	0.28
Thailand	-0.03	x	Lebanon	1.85		Equatorial Guinea	0.35
Tunisia	1.15					Oman	0.48
						Trinidad & Tobago	0.04

Notes: Countries are shown in this table on the basis of data availability for the specific year (unlike countries in Tables 2, 3 and 4 (based on a balanced sample). Income classification is on the basis of 1990 and 2000, respectively. Source: World Bank (2011).

ran Africa) and nine are SIDS (Small Island Developing States). Four are both LDCs and SIDS, leaving two further countries, one of which is low-income (Nicaragua), the other middle-income (Iraq) (UNDP, 2011). Of the 31 developing countries where aid represented less than 0.5% of GNI in 2008, 11 are in Latin America and the Caribbean, eight in Asia, five in the Middle East and

North Africa, and three in sub-Saharan Africa.

Of the countries that self-classify as fragile states as part of the g7+ group we have data for 17, of which 11 are HACs and six MACs in 2009. Predictably, there were no LACs/VLACs. There are two other g7+ countries for which we have no data, but that are likely to be heavily aid reliant: Somalia and South Sudan.

Concluding remarks

The quantity of aid a country receives is not the only factor that determines the impact of that aid. Other factors, such as aid quality and national policies, will determine the impacts of aid on growth and development (e.g. Arndt et al., 2009). Aid quantity is, nevertheless, one of the critical factors. This paper has proposed a way to classify aid recipient countries by the volume of aid they receive as a proportion of their GNI, and outlined how such classification can be useful for analysing trends. This is an initial proposal and comments are welcome on how to take the work forward.

It is not our intention to create blunt new targets. In the short and even medium term some countries will certainly need *more* aid not less. While moving up the income ladder is unequivocally a good thing for a country, moving towards a lower aid classification may not be. We need to know more about a country's specific circumstances before making judgements about data and country classification. But these data and classification criteria could be a useful *additional* way to think about better use of limited aid resources based on analysis of the specific country context. Ideally, they would be used by citizens of recipient countries as much as by governments.

Presenting the data in this way has led to one main finding: there are more LACs and VLACs than 20 years ago, and fewer HACs (roughly half the number). But the raw data leave large questions unanswered about the role of aid, particularly at relatively low ratios in LACs and VLACs, and how allocation and modality decisions might be impacted.

As donors prioritise reducing aid to MICs, what has changed to make them think that aid reductions are appropriate now that were not appropriate 20 years ago? While the common reason given is that the new MICs no longer need aid, these data imply that they never really needed it. Do the present tendencies to reduce aid to MICs have more to do with the changed financial context of the traditional donors than a serious assessment of the potential continuing role of aid at relatively low levels (as a proportion of GNI)? This question is vital, especially given that three quarters of the world's poorest people live in LACs or VLACs, while only about 15% live in HACs (Glennie, forthcoming).

As countries grow they are likely to reduce aid receipts as a proportion of their national income. While it is tempting to characterise reductions in aid levels as a 'reduction in aid dependency', the classification of countries by aid, as suggested in this paper, guards against this assumption. Countries that have been LACs or VLACs for decades may reduce aid without reducing dependency, because they were never aid dependent.

In some countries, including India, it may be more appropriate to talk about aid to people rather than to the country, as donors (public and private) target aid

at the most vulnerable parts of society. There seems to be no contradiction in being a country that both gives and receives aid, contributing to global public goods and national interest, while continuing to receive help with complex problems. Many countries have been doing so for decades, and the renewed emphasis on South-South cooperation suggests this way of thinking is growing in importance.

Rather than ending aid, or even reducing aid by a set proportion, one option is to seek to bring it down to sustainable levels where returns are higher (if the evidence of diminishing returns is correct) and risks of the negative aspects of aid dependence are reduced. It is acknowledged in the literature that there are diminishing returns to aid levels (Radelet et al., 2006; de Renzio, 2005), and that high aid can be harmful (Glennie, 2008). We are, however, unaware of any evidence that no aid is better than low aid.

There is a significant difference in policy terms between seeking to reduce aid and seeking to enter the LAC and VLAC categories. Aid at low levels can be an important source of finance for specific sectors and geographical regions, catalyse change, support civil society to hold powerful actors to account, and help to crowd-in other types of finance (Rogerson, 2011; Glennie, 2011; Kharas et al., 2011). More thinking is required to analyse the role aid has played, whether similar roles exist in the future, and how they can be emulated in other countries. The key may be not to focus so much on what the money buys, but on the incentives it creates (Eyben and Lister, 2004; Glennie, 2011). The incentives created and changes promoted by aid are as important in HACs as in LACs and VLACs, but in HACs aid also fills a financing gap at the national level.

While much effort is made to follow trends in aid levels as a proportion of *donor* GNI, the analysis presented here underlines the importance of looking at aid from the *recipient* point of view. While donors aim to reach the 0.7% target, recipients could also aim to reduce their aid to GNI ratio to become LACs or VLACs. This could help countries focus on bringing aid down to sustainable levels, rather than constantly seeking more aid or, as is now becoming more common, seeking to end aid entirely. Such an approach might also help solve the mathematical conundrum of how rich countries can spend 0.7% of their GNI on aid while recipient countries reduce their aid levels: recipient countries could seek to reach and stay within the LAC or VLAC classification, but then allow absolute aid levels to increase as the economy grows, having minimised the risk of aid dependence.

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References

- ActionAid (2011) 'Real Aid – Ending Aid Dependency' (<http://bit.ly/zG41a7>).
- Arndt, C., Jones, S. and Tarp, F. (2009) *Aid and Growth: Have We Come Full Circle?* UNU-WIDER Discussion Paper No. 2009/05, October. Helsinki: UNU-WIDER.
- Brautigam, D. (2000) 'Aid Dependence and Governance', Expert group on development issues. Report prepared for the Division for International Development Cooperation, Ministry for Foreign Affairs, Sweden (<http://bit.ly/AmYAdd>).
- Clemens, M. and Moss, T. (2005) *Ghost of 0.7%: Origins and Relevance of The International Aid Target*. Center for Global Development Working Paper Number 68. Washington, DC: CGD.
- Eyben, R. and Lister, S. (2004) *Why and how to aid 'Middle Income Countries*. IDS Working Paper 231. Brighton: Institute of Development Studies.
- Glennie, J. (2008) *The Trouble with Aid – Why less could mean more for Africa*. London: Zed Books.
- Glennie, J. (2011) *The role of aid to middle income countries: a contribution to evolving European Union (EU) development policy*. ODI Working Papers 331. London: ODI.
- Glennie, J. (forthcoming) 'What if three quarters of the world's poor live (and have always lived) in Low Aid Countries?' (working title). London: ODI.
- Kharas, H., Jung, W. and Makino, M. (eds) (2011) *Catalysing Development: a New Vision for Aid*. Washington, DC: Brookings Institution Press.
- Moss, T. (2011) 'President Sirleaf's Ambition for Liberia: Aid-Free in a Decade'. Centre for Global Development blog, 27 June 2011 (Sirleaf-Johnson, E. (<http://bit.ly/wGLcTX>)).
- OECD (2003) *Harmonising Donor Practices for Effective Aid Delivery*. Paris: OECD.
- Radelet, S., Clemens, M. and Bhavnani, R. (2006) 'Aid and Growth: The Current Debate and Some New Evidence', in Peter Isard, Leslie Lipschitz, Alexandros Mourmouras and Peter Heller (eds.), *Macroeconomic Management of Foreign Aid: Opportunities and Pitfalls*. Washington, DC: International Monetary Fund.
- de Renzio, P. (2005) 'Scaling up versus Absorptive Capacity: Challenges and Opportunities for Reaching the MDGs in Africa'. ODI Briefing Paper. London: ODI.
- Rogerson, A. (2011) 'What if development aid were truly "catalytic"?' ODI Background Note. London: ODI.
- Sumner, A. (2011) 'Where Do The Poor Live?', *World Development*, doi:10.1016/j.worlddev.2011.09.007.
- UNDP (2011) *Towards Human Resilience: Sustaining MDG progress in an Age of Economic Uncertainty*. New York: UNDP.
- World Bank (2011) World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>).