“Assessing Aid” and the Collier/Dollar Poverty Efficient Aid Allocations: A Critique

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FOREWORD

The World Bank's "Assessing Aid" and the poverty efficient aid allocation models developed by Paul Collier and David Dollar have attracted much attention. The central message is that aid only really works when government policies are good, and that a reallocation of aid to "good policy / high poverty" countries would lead to larger reductions in poverty: as much in fact as could be achieved by a tripling of current aid budgets.

Is this really true? And what are the implications for DFID's own allocation of resources?

This paper seeks to address these questions and provoke further discussion both within and beyond DFID. It comes in three parts, each prepared as a free-standing paper but cross-referenced where appropriate. The **Overview Paper** presents a non-technical summary of the main issues and sets out some possible implications for DFID. **Annex 1** presents a detailed but uncritical comparative analysis of DFID's bilateral framework with the aid allocation results of the Collier/Dollar models. **Annex 2** presents a more technical review and critique of the econometric analysis and modelling work undertaken by the World Bank.

This paper was written by Jonathan Beynon, DFID Economic Adviser, on temporary assignment to DFID's Economic Policy and Research Department. A slightly different version was previously titled "Assessing Aid - Is It Really True?" (28 October 1999). The thoughts and comments of colleagues both within and outside DFID expressed during the course of this research, including many helpful clarifications offered by David Dollar at the World Bank, are gratefully acknowledged. The views expressed in this paper, however, remain solely those of the author, and do not necessarily represent the views of DFID.

"Assessing Aid" and the Collier/Dollar Poverty Efficient Aid Allocations: A Critique

OVERVIEW PAPER

Jonathan Beynon, DFID, December 1999[1]

1. Introduction and Summary

Recent research by the World Bank into aid effectiveness and the implications for the allocation of donor aid - summarised in the book "Assessing Aid" - has attracted much attention[2]. The central message is that aid only really works when government policies are good, and that a reallocation of aid to "good policy / high poverty" countries would lead to larger reductions in poverty: as much in fact as could be achieved by a tripling of current aid budgets.

This paper examines some of this literature and assesses its implications for DFID. Section 2 describes the Collier/Dollar "poverty efficient" aid allocation models and presents a comparative analysis of their results with DFID's present bilateral aid framework. Section 3 interprets these results in the light of a more critical assessment of the models and the broader aid effectiveness literature, and of the global pattern of aid allocations. More detailed discussion of both sections is annexed. Section 4 concludes with some general implications for DFID in its own resource allocation process.

In summary:

- the gains from a more efficient allocation of aid are potentially highly significant.
- both policies and poverty matter, but re-allocating aid on the basis of poverty indicators produces bigger benefits than re-allocating on the basis of policy scores.
- the Collier/Dollar results are very sensitive to changes in model specification, and a mechanistic application of their results would not be appropriate….
- ….but the benefits of a more effective aid allocation are potentially very large and further quantitative analysis is warranted.
- nevertheless, the conclusion that some DFID aid could be effectively reallocated from LACA and CEE to Asia looks pretty robust, subject to more considered assessment of DFID comparative advantage and the potential for policy influence in different countries.

[1] The views presented remain those of the author and not necessarily those of DFID.

[2] "Assessing Aid" was published by the World Bank in Nov'98. It draws in particular on earlier work by Burnside and Dollar (1997, 1998), and has been developed further by Collier and Dollar (1999a, 1999b).

- contrary to perception, the overall impact of aid has been reasonably good *and is getting better*.
- re-allocation might matter most …. but there is also a case for substantial increases in DFID's aid budget.

2. "Poverty Efficient" Aid Allocations: A Comparative Analysis

2.1 The Collier/Dollar models described

The allocative models developed by Paul Collier and David Dollar represent the latest evolutions in a series of World Bank research that have informed "Assessing Aid". Two versions exist (CD1 and CD2), both of which the follow the same 3 steps:

> *Step 1* estimates the impact of aid on growth through regression analysis, in which growth is explained as a function of a set of initial conditions (X), policy (P, as measured by the World Bank's CPIA[3] rating), aid (both A and A^2), and an interactive term combining aid and policy (AP):
>
> $$G = c + b_1X + b_2P + b_3A + b_4A^2 + b_5AP$$
>
> The A^2 term (with a negative b_4 coefficient) signifies that there are "diminishing marginal returns to aid", i.e. that at some point the additional impact of aid on growth falls as the volume of aid increases.
>
> *Step 2* estimates the impact of growth on poverty reduction in each country, using data on the level of poverty and the responsiveness (elasticity) of poverty to growth in incomes[4].
>
> *Step 3* optimises aid allocations between countries so as to maximise the number of people lifted out of poverty. In both models, aid to India is constrained to actual (1996) levels to prevent India dominating the allocation results (otherwise, India would receive about two thirds of all aid: see below). In CD1, aid to China has also to be constrained to actual levels (in CD2, no such constraint is necessary as China receives a zero allocation anyway).

The two models differ in that step 1 in CD1 is based only on the period 1990-96 and uses the 1997 CPIA score throughout. It also has to "borrow" estimates for b_3 and b_4 from another dataset[5]. CD2 covers the period 1974-97

[3] The Country Policy and Institutional Assessment, a composite index of 20 measures of policy performance, each scored on a scale of 1-6. Estimated for most countries since 1980.

[4] Different approaches involving alternative poverty lines and elasticities are tested and found to produce similar results (though results for *some* individual countries are very different). A constant poverty elasticity of 2 is therefore used for simplicity and to maximise the number of countries to which the model can be applied. PPP$2/day is the chosen poverty line.

[5] This is because the b_4 coefficient for diminishing marginal returns to aid generated by CD1 proved to be insignificant. The "borrowed" estimates comes from earlier World Bank research by Burnside and Dollar (1997).

but is based on some retrospective policy ratings for many countries pre-1980. CD2 thus has the advantage that its coefficients are internally consistent, but has the disadvantage that it is based on policy data that are somewhat arbitrary for earlier years. Thus both are flawed, though CD2 is preferred. Both models are applied to over one hundred developing countries, the only difference being the inclusion of Tanzania in CD2[6].

2.2 Results of the Collier/Dollar models

CD's key finding (in both models) is that the aid coefficient is insignificant (i.e. aid has no effect on growth), the policy term is positive and significant, and the aid*policy interactive term is positive and highly significant. This is interpreted as meaning that aid works, but only in a good policy environment. Country-specific allocations differ between the two models, in some cases quite substantially, with the number of countries receiving some aid falling from 60 in CD1 to 42 in CD2[7]. Eighteen of the top 20 recipients are African when ranked by aid *as a % of GDP*. But when converted into shares of global aid, the biggest recipients are Asian (see Appendix). Two features in particular stand out:

- a re-allocation of existing aid produces the same benefits as would a TRIPLING of current aid budgets if allocations are unchanged

- policies matter …. but poverty matters more:
  - the impact of re-allocating aid on the basis of poverty criteria is bigger than re-allocating aid according to policy criteria[8], while the headcount poverty rate and per capita income have a much stronger relationship with aid (as a % of GDP) than policy[9].

Moreover, the overall impact of aid is reasonably good in all but the worst policy environments. For a country with an average policy score (3.3 out of a possible 6) and average aid receipts (2% of GDP), CD2 estimates that an extra 1% of GDP in aid would boost growth annually by 0.47%: equivalent to a "rate of return" of about 40%. Even in relatively poor policy countries (with a

[6] However, the poverty data for Tanzania are highly suspect and CD now concede that there was an additional computational error in their Tanzanian result: see below.

[7] This is because CD2 yields a lower estimate of diminishing marginal returns to aid, so that more aid can be effectively absorbed by countries higher up the rankings (in terms of aid as a % of GDP, not as a % of total aid), with none being left for the bottom 18 (including China).

[8] CD2 report that if current aid flows are reallocated on the basis of equalising aid per capita, the number of people lifted out of poverty would rise by 2 million. If allocations also take account of information on country specific levels of poverty, an additional 9m will be lifted out of poverty. If information on differences in policy is also factored in, a further 3m people benefit. Note, however, that these estimates are for the unconstrained model. If Indian allocations are constrained, the total falls from 14m to 9m, though reallocating by poverty criteria would still emerge as the dominant factor.

[9] See Appendix for scatter diagrammes which plot the various components of the CD optimal allocation formula against aid (as a % of GDP). The *number* of people in poverty appears to show the strongest relationship with aid as a % of *all* aid, with policy again largely uncorrelated: see Annex 2.

policy score of 2.6), an extra 1% of GDP in aid would boost growth by 0.34%. There *is* a policy threshold below which aid is ineffective, but it is very low, especially for very poor countries.

Overall, the CD2 results (with Indian aid constrained) show that it would cost about $3000 (£1900) to lift one extra person permanently out of poverty (and about $1500 in CD1): see summary table.

The two Collier/Dollar models: a summary of key results

	CD1	CD2
Time period covered	1990-96	1974-97
No. of countries covered	107	108
Number of aid-receiving countries	60	42
Marginal cost of lifting someone out of poverty: a) constrained model b) unconstrained model	 $1502/hd $665/hd	 $3026/hd $1626/hd
Numbers of poor people currently lifted out of poverty by present $40bn global aid budget	30 million	16 million
Additional numbers that could be lifted out of poverty if aid re-allocated: a) constrained model b) unconstrained model	 27 million 51 million	 9 million 14 million
Benefits of extra $10bn aid in terms of extra people lifted out of poverty: a) existing allocations b) poverty efficient allocations	 7 million 25 million	 2 million 7 million

2.3 DFID and CD: A Comparative Analysis

CD have themselves done a rough analysis of DFID's pattern of aid allocation[10], by comparing the UK's shares of aid going to each of the four poverty-policy quadrants (good policy/high poverty; poor policy/high poverty; poor policy/low poverty; good policy/low poverty) with the same shares for all aid. The UK looks relatively good in the sense that a higher share (65%) is allocated to the good policy/high poverty quadrant than is the case for aid overall (55%).

More detailed analysis (Annex 1) compares DFID and CD allocations by region, department, and country. While noting that it would not necessarily be appropriate for DFID allocations to mirror CD allocations (see section 3 below), the main results are as follows:

- *Regional Analysis*: DFID allocates significantly less to Asia than CD, and more to Africa, LACA and CEE (Appendix):
  - ⇒ DFID's 1999/2000 Aid Framework allocates about 50% of the bilateral country programme to Africa, 30% to Asia, and 10% to each of LACA and CEE. The CD models allocate 52-58% to Asia, 37-45% to Africa, and 3-5% to LACA and CEE combined (deviations

[10] These results have already been presented by Paul Collier to Treasury ministers.

being less pronounced in model 2)[11]. Recent trends in DFID allocations have actually been in the *opposite* direction to those apparently suggested by the CD models[12], with the shares for the next two years to 2001/02 remaining largely unchanged.

- *Country level analysis*: In comparison with CD2:
  - ⇒ A third of DFID's programme (directed to 38 countries, of which 13 in each of LACA and CEE) goes to countries which receive a zero allocation under the CD2 model[13]. The most notable cases (excluding Tanzania) are South Africa, Russia, Montserrat and China, which collectively account for nearly 13% of DFID's bilateral programme.
  - ⇒ DFID's most "over-funded" countries (in diminishing order) are Tanzania (because of CD2 error[14]), India (because of the imposed constraint in the CD model), Malawi, South Africa, Russia, Montserrat, Ghana, Mozambique, China and Uganda.
  - ⇒ DFID's most "under-funded" countries are Bangladesh, Pakistan, Vietnam, Nigeria, and Ethiopia. Bangladesh receives around £126m less than CD2 model results, and the next three each around £75-85m less. India would also feature in this list if the constraint were relaxed.

3. Interpreting the Results: A More Critical Assessment

There are, however, two reasons for interpreting these comparative results with caution. First, a number of criticisms have been levelled at the World Bank analysis and consequent policy conclusions which need to be considered. Second, even if the CD modelling approach and results are found to be basically correct, various factors may justify a bilateral donor such as DFID adopting a pattern of aid allocations that differs from the CD outcome. These are discussed below.

3.1 A Critique of the World Bank research and Collier/Dollar models

The underlying analysis and consequent policy conclusions of the WB research have not gone unchallenged. Critics[15] have focused on the

[11] Correcting the Tanzanian error would increase Africa's CD2 share by about 1.3 percentage points and correspondingly decrease Asia's share.

[12] 1999 Departmental Report figures (p.13), which are not quite comparable as they include ATP, indicate a fall in DFID's allocation to Asia (incl. Middle East and Pacific) from 38.6% in 1996/97 to 34.7% in 1999/2000 in favour of Africa (up from 40.9% to 47.7%). CEE shares have fallen from 12.2% to 8.6% over the same period, but LACA shares have risen from 8.3% to 9.4%.

[13] But around 27% (and 37 countries) if the Tanzanian error is corrected.

[14] Though even when adjusted, Tanzania would continue to be one of the most over-funded (at a level similar to South Africa's £30m).

[15] Notably Lensink and White (LW); Hansen and Tarp (HT).

econometrics of the models and consequent interpretation of the results, but a number of problems (discussed more fully in Annex 2) can be highlighted:

- there are inherent weaknesses in the use of cross country regression analysis to explain the determinants of growth (e.g. due to problems of omitted variable bias and the assumption of constant productivity of aid) which may invalidate the findings, though the WB argues that their results only serve to support similar conclusions from case study work and project level evidence.

- the selective choice, use and interpretation of the different policy variables, notably in the earlier Burnside and Dollar (BD) research, is questionable[16].

- model results appear to be very sensitive to re-specification, with relatively modest modifications producing some quite different results. Alternative specifications of the BD model by Hansen and Tarp, for example, suggest that various aid*policy interactive terms are insignificant, while aid, aid squared and lagged aid all have a significantly positive impact on growth. The WB, however, have counter-challenged with their own critique of HT's analysis[17], and confidently assert that their own model is robust under a wide range of re-specifications[18].

- some of the CD results for individual countries are quite surprising and appear based on some unreliable basic data, notably regarding poverty measures[19]. In addition, constraining India's share to present levels is as arbitrary as allowing it to rise to the unconstrained level is infeasible.

- the interactive term means both that the impact of aid on growth increases with the quality of policy, *and* that the impact of policy on growth increases with the quantity of aid. Although it acknowledges the latter[20], the WB have very much emphasised the former.

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[16] This criticism is less relevant to the Collier/Dollar model, based as it is on the broader CPIA measure, but some potentially important variables for poverty reduction (particularly those directed at redistribution such as land reform) are still omitted.

[17] The WB have commented, for example, that HT are *not* re-estimating their model: instead, they use a measure of aid expressed as a percentage of nominal (rather than real) GDP which is vulnerable to suggesting spurious changes in aid levels in response to rapid changes in the exchange rate.

[18] However, differences in the absolute value of the parameters can produce significant differences in country rankings *as a % of global aid*, even if the significance of the coefficients and country rankings in terms of aid *as % of GDP* are largely unchanged (as illustrated by a comparison of CD1 and CD2).

[19] For example, quite apart from the computational error distorting Tanzania's result, Tanzania has an improbably low poverty headcount rate of 45% under $2/day (cf. 55% for China and 78% for Kenya, which are both much richer in per capita income terms).

[20] For example, AA shows that the impact of a 1 point improvement in its policy index on growth increases with the level of aid (from 1.3% at average aid levels to 1.9% when aid is doubled).

- evidence demonstrating high degrees of aid fungibility, used to explain why attempts to target aid at poverty reducing measures are unlikely to succeed, is perhaps not as conclusive as the World Bank suggest.

- growth is not the only route to poverty reduction. Other factors such as investments in human capital and other targeted social sector spending, and measures to increase the assets of the poor are likely to have a positive impact.

- the CD model would be inappropriate if the objective is to achieve the poverty reduction International Development Target *in each country* (rather than to maximise the number of people lifted out of poverty). The former would require taking into account the extent to which each country's *unaided* growth path is already sufficient to achieve the IDT.

- the strategic importance of certain countries, in terms of their ability to influence (for better or worse) growth and development in a wider region (especially in conflict situations) may justify higher allocations than the present model would suggest.

- a wider review of the literature assessing the effectiveness of aid over several decades has concluded that the majority - in spite of perceptions to the contrary - show that aid IS effective in stimulating growth.

In summary, the debate remains unresolved and is likely to run for some time to come.

3.2 Reasons for DFID to differ

But even if the CD model were correct (in terms of methodology and data), it would not be appropriate for DFID to adopt the CD pattern of aid allocation for at least two reasons. First, there is a need to take into account the global pattern of aid allocations; second, individual donors including DFID have specific areas of comparative advantage that may justify a certain bias in terms of geographical focus. These are discussed briefly below:

Taking account of global aid allocations

It would not necessarily be appropriate for DFID to adjust its own allocations to be closer in line with CD results if this were to accentuate a region's or country's over- or under-funding pattern at the global level. Annex 2 shows that, overall, Asia appears to be significantly under-aided (by c. £5bn annually), while Latin America & the Caribbean and Central & Eastern Europe are significantly over-aided (by c.£2.5bn each). This mirrors the pattern of DFID allocations. Africa however appears to be marginally *under*-aided at the

global level once the Tanzanian anomaly is corrected (by c. £0.5bn), with *Sub-Saharan* Africa being particularly under-aided (by c. £2.5bn)[21].

Annex 1 analyses DFID's aid framework in the context of this global picture. The main finding is that, while the narrow comparative analysis in section 2 suggests that DFID is over-aiding Africa, LACA and CEE to the detriment of Asia (suggesting some reallocation from all three in favour of Asia), reducing DFID's allocations to Africa would probably *not* be appropriate. This conclusion is likely to be reinforced by analysis which takes into account the extent to which each country's *unaided* growth path is already sufficient to achieve the poverty reduction IDT.

Uganda and Ghana are the two main countries "over-funded" by DFID but under-funded in global terms (by £565m and £224m respectively). Malawi and Lesotho (CD2 only) are the only others (together with Tanzania (by c. £85m) once adjusted for CD's error). There are a larger number of countries where the opposite applies, notably (in diminishing order of significance) Nicaragua (£435m), Cote d'Ivoire, Congo, a collection of mostly central Asian states of the Former Soviet Union, Cameroon, and Mauritania (around £100m)[22].

Comparative advantage and geographical focus

There are a number of regions and countries to which DFID allocates no or limited resources, notably but not exclusively in West and Central Africa, while resources are partly skewed in favour of countries with which Britain has strong historical (often colonial) ties. This is not surprising. Nor is it inappropriate given that the delivery of aid is likely to be more effective where there are similar systems of administration and government, and that a donor's ability to inform and influence policy is likely (though not always) to be enhanced by such historical ties. Both factors would justify some deviation from the poverty efficient allocations for individual, especially bilateral (and of course regional) donors.

Allowance may also be necessary to take account of the different role and effect of different forms of aid. The greater the extent to which aid is provided as technical assistance to support policy dialogue, build institutional capacity, and demonstrate new approaches - as opposed to simply transferring resources - the stronger the case for allowing allocations to reflect the distribution of the world's poor (rather than its *present* policy rating), and judgements about the expected *influence* of such assistance.

[21] These results are, however, contingent on constraining allocations to India at present levels (ie. about 5% of all aid), although only if the "efficient" allocation to India were to be fixed at more than 30% would SSA become over-aided.

[22] Others, in diminishing order down to less than £10m over-funded, are Guinea-Bissau, Mongolia, Cape Verde, Haiti, Central African Republic, Lao, Zambia, Burundi, Togo and Honduras.

4. Conclusions: Some Implications for DFID

In summary, the World Bank's modelling approach to deriving poverty efficient aid coefficients is fraught with difficulties. Debate about the underlying econometrics is likely to continue for some time, and the allocation results are highly sensitive to changes in data, model specification and sample. More thought needs to be given to complementary policies for poverty reduction, the importance of distribution, and the role that aid might play in each. More explicit linkages to the poverty reduction IDT need to be made if the target is to be achieved in each country, while the importance of poverty, rather than policy, in informing resource allocation decisions needs to be highlighted. How individual donors might respond will depend very much on their own areas of comparative advantage, the nature of aid they provide, the global context of aid allocations, and their own mandates.

This concluding section suggests some questions for DFID that emerge from the above analysis, in terms of specific results, processes by which DFID might over time adjust its own allocation systems, and DFID's overall aid budget.

4.1 Specific results

- Shift resources away from LACA and CEE in favour of Asia

  The central World Bank policy conclusion remains unproven, and the results are sensitive to changes in model specification and data. Nevertheless, no amount of model re-specification is likely to change the overall implication that, at least in terms of resource transfer for poverty reduction, DFID is allocating too much money to LACA and to CEE, and not enough to Asia. There is therefore need to consider whether there are other justifications for such flows. Implications for Africa are more ambiguous, but maintaining Africa's share at at least its present levels would seem appropriate.

4.2 Allocation processes

- A mechanistic application of the CD model is not appropriate....

  Given the model's sensitivity to re-specification and its inability to take into account DFID-specific factors, a mechanistic application of the Collier/Dollar approach would not be appropriate to DFID in its own resource allocation decision-making processes[23].

- ...but the case for a more quantitative approach needs to be considered

  Nevertheless, modelling work of this nature does have the potential to identify outliers and anomalies in present allocation patterns, and may at least serve to inform discussion if not to determine decisions.

[23] A point with which Collier and Dollar, who acknowledge that percentage shares to different countries will vary with model specification even though the *ranking* of countries (in terms of aid *as a % of GDP*) remains largely the same, would be the first to agree.

- Further analysis is warranted

  The relative scale of the benefits of aid reallocation (compared with increasing aid budgets) emerging from the CD analysis - even if this proves to be flawed - warrants further research and analysis to inform DFID's allocative procedures and outcomes. Options include:

  ⇒ encourage the World Bank to release the details of its model so that more in-house re-specification and sensitivity analysis can be undertaken

  ⇒ request/commission some more specific analysis from the World Bank research team to respond to some of the observations made above and tailor it more specifically to DFID

  ⇒ reconsider and develop some of the alternative modelling approaches which have been previously explored by DFID

- Seek to influence allocation of multilateral budgets to which DFID contributes

  DFID is already seeking to influence the allocation of multilateral - notably EU - budgets to be more poverty focused. This assessment, by demonstrating the potential gains from aid re-allocation, provides a strong endorsement of these efforts[24].

- Decentralise allocative decisions

  This paper has refrained from advocating specific reallocations at country level (though some pointers appear in section 3.2), partly because of the difficulties with the CD model outlined above, but also because such a process needs to be informed by those with a more detailed country and regional knowledge. A case can in fact be made for giving managers considerable freedom to allocate resources within a previously agreed regional budget ceiling to meet agreed objectives[25].

4.3 Overall DFID budget

- There is a strong case for increasing DFID's overall budget

  DFID already has a good reputation for the effectiveness of its aid. The World Bank analysis appears to confirm this. Yet in spite of recent increases, Britain remains less generous (aid as % of GNP) than most

[24] The more successful these initiatives, the stronger the case for allocating a greater proportion of DFID's overall budget through multilateral channels. Similarly, the more that donors unite around a common set of objectives (the IDTs), the greater the case for allocating aid multilaterally - and for individual bilateral donors to become far more selective in the number of countries they individually support (while ensuring collectively that the overall allocation and focus of aid is about right). This could significantly reduce the costs of donor co-ordination at country level, and significantly reduce the global transactions costs of delivering aid.

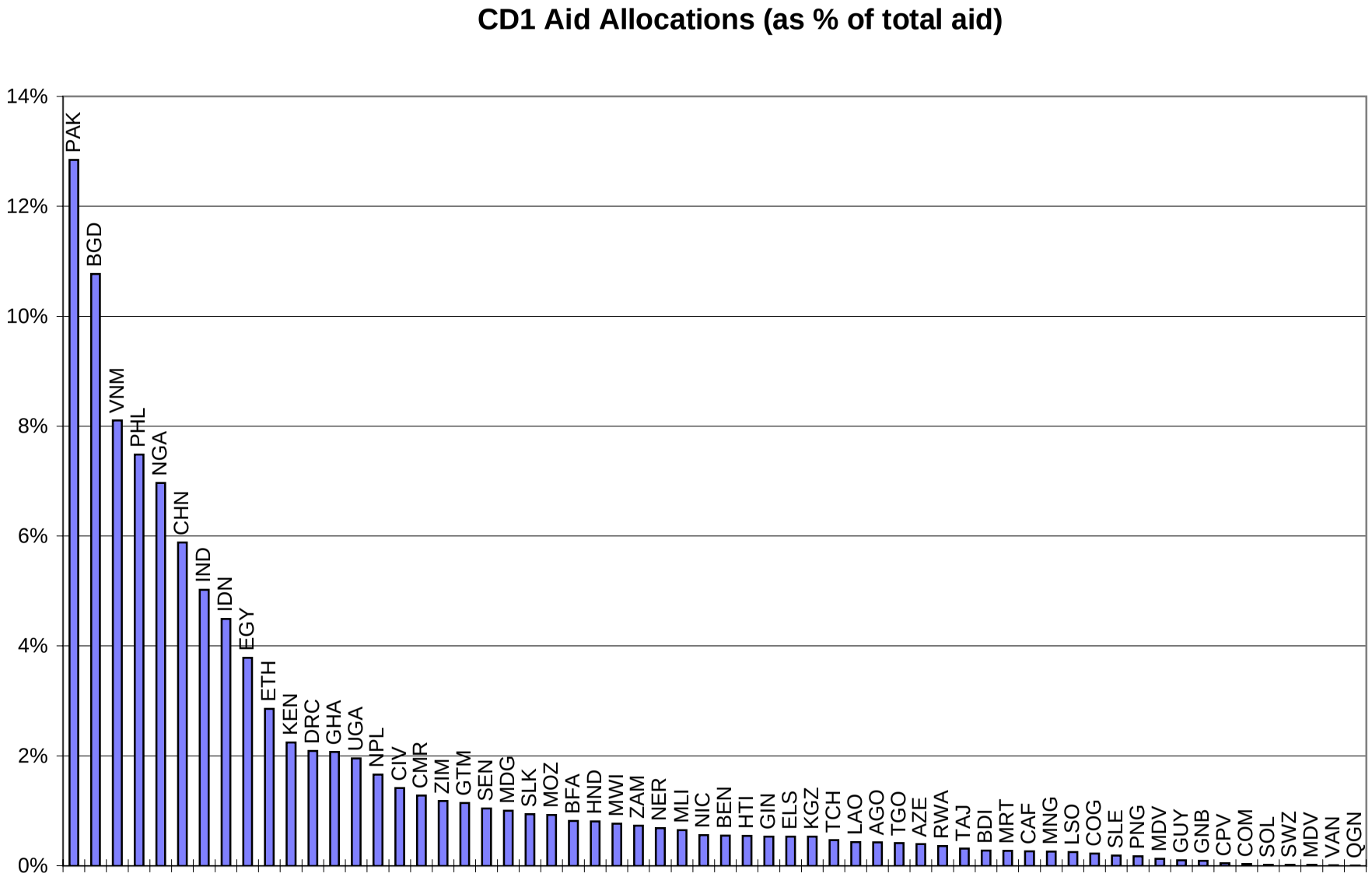
[25] This approach could further cascade down to heads of department. Thus in one sense it involves decentralising allocative decisions. But at the same time, to ensure that overall allocative priorities are met, it requires a more top-down approach than currently prevails to establishing ceilings *within which those decisions are made*.

of the DAC nations. Moreover, a wider review of the literature suggests that the overall impact of aid has been reasonably good *and is getting better*[26]. These factors all strengthen DFID's case for seeking further substantial increases in its aid budget. The case would be further reinforced by, and perhaps dependent on, DFID being seen to be seeking to improve the allocation of its existing resources.

[26] See Annex 2 for details. The fact that there remains a widespread perception that aid is largely ineffective suggests a case for a concerted PR campaign to highlight the successes of aid.

Appendix: Summary Tables and Charts
Contents List

*Note: all charts/tables are contained in the excel spreadsheets "**cd-data.xls**" [1] and "**dfid-cd.xls**" [2]; the reference in square brackets refers to the specific spreadsheet and sheet name. Further charts and tables are in the Annexes.*


CD1 Aid Allocations (as % of total aid)
14%
12%
10%
8%
6%
4%
2%
0%
PAK
BGD
VNM
PHL
NGA
CHN
IND
IDN
EGY
ETH
KEN
DRC
GHA
UGA
NPL
CIV
CMR
ZIM
GTM
SEN
MDG
SLK
MOZ
BFA
HND
MWI
ZAM
NER
MLI
NIC
BEN
HTI
GIN
ELS
KGZ
TCH
LAO
AGO
TGO
AZE
RWA
TAJ
BDI
MRT
CAF
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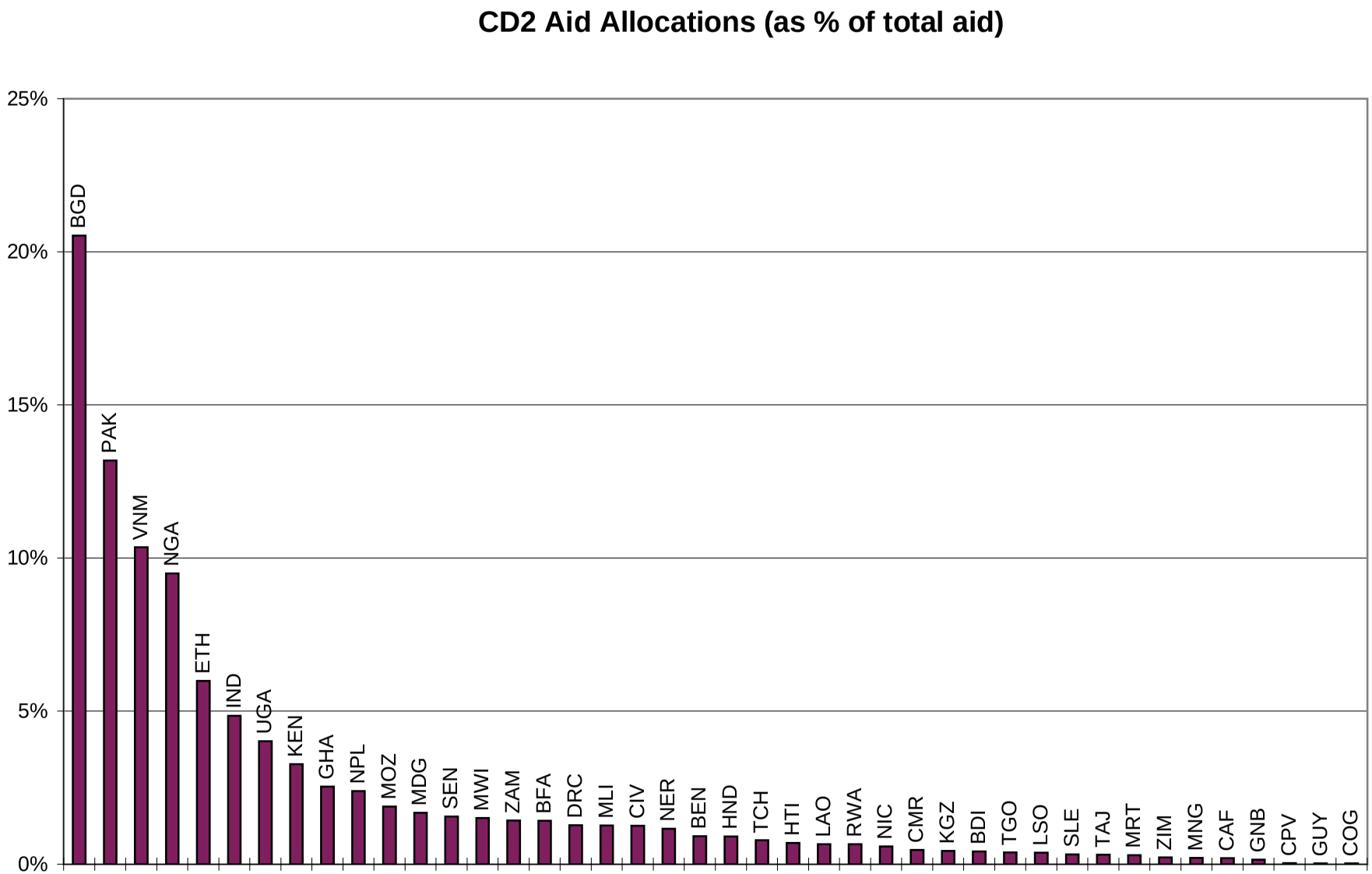
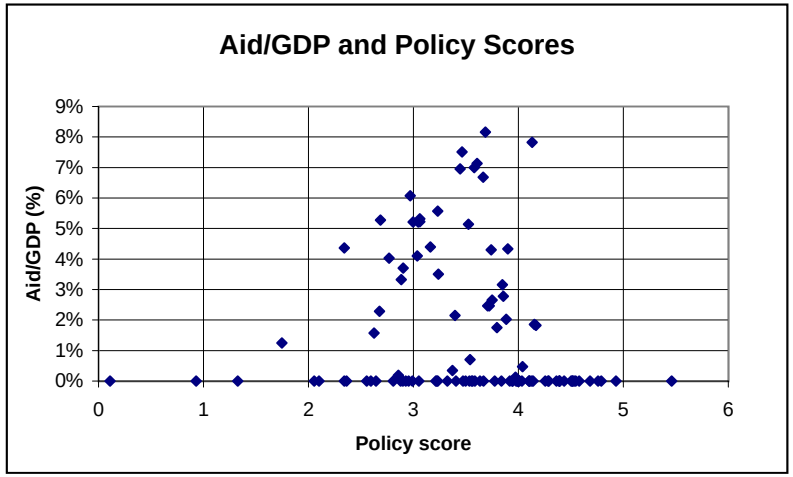
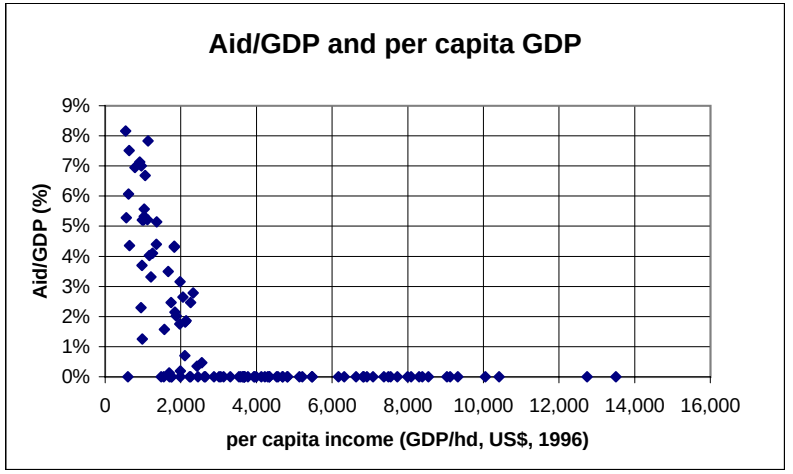
MDV
GUY
GNB
CPV
COM
SOL
SWZ
MDV
VAN
QGN

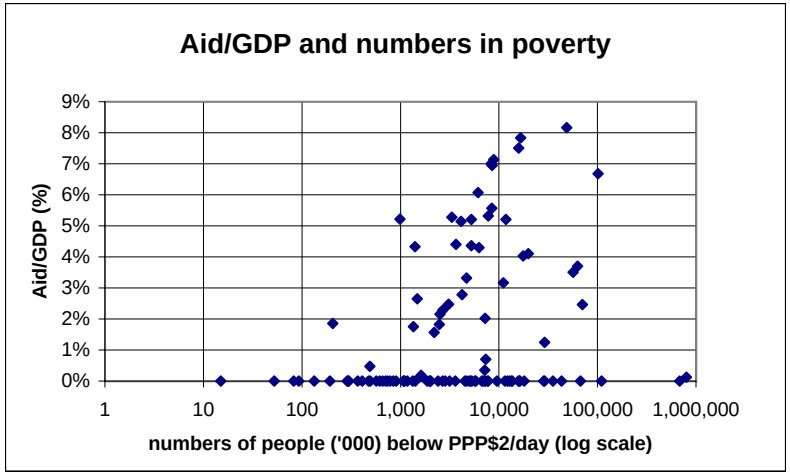
cd1

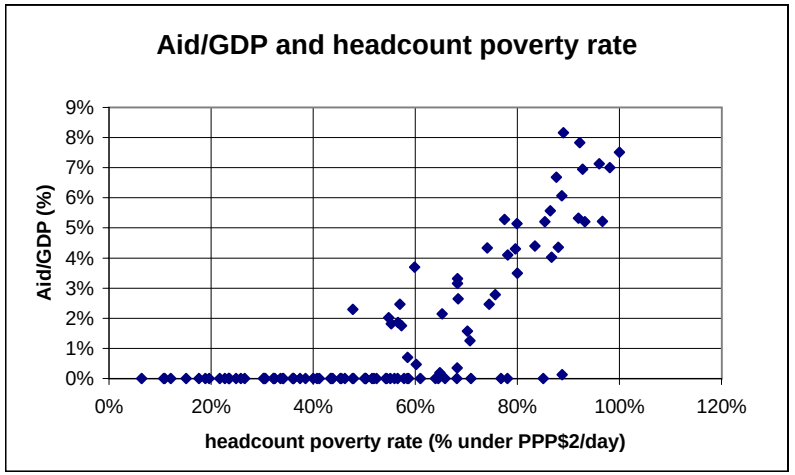

CD2 Aid Allocations (as % of total aid)
25%
20%
15%
10%
5%
0%
BGD
PAK
VNM
NGA
ETH
IND
UGA
KEN
GHA
NPL
MOZ
MDG
SEN
MWI
ZAM
BFA
DRC
MLI
CIV
NER
BEN
HND
TCH
HTI
LAO
RWA
NIC
CMR
KGZ
BDI
TGO
LSO
SLE
TAJ
MRT
ZIM
MNG
CAF
GNB
CPV
GUY
COG
cd2

Scatter diagrammes of aid/GDP v. different components of the Collier/Dollar poverty efficient aid allocation formula, 108 countries, CD2

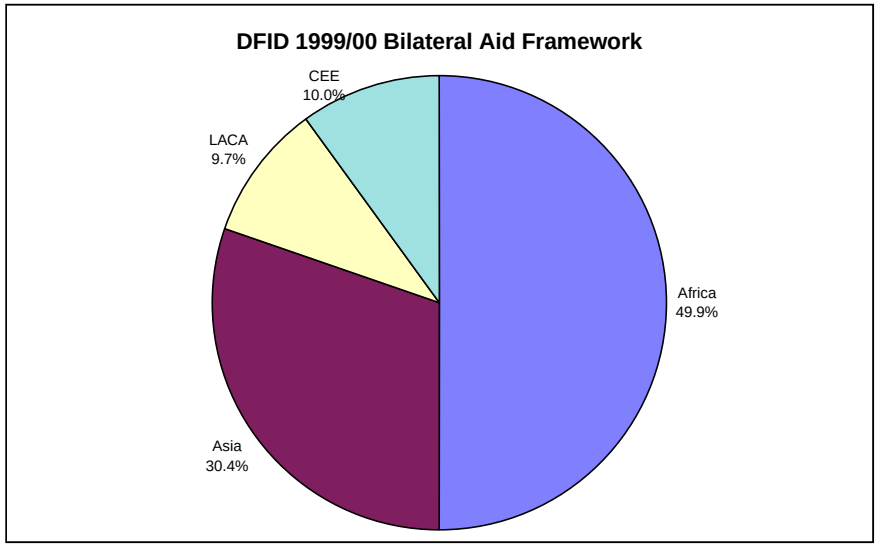


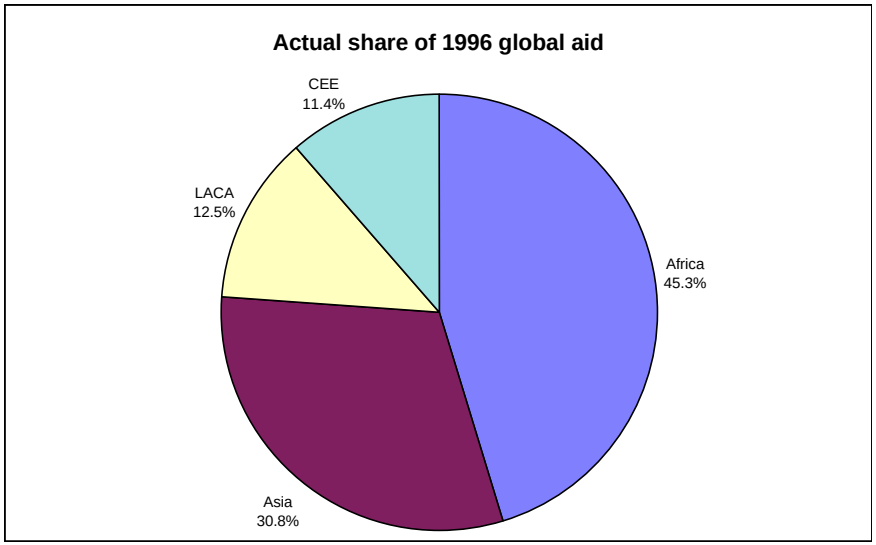


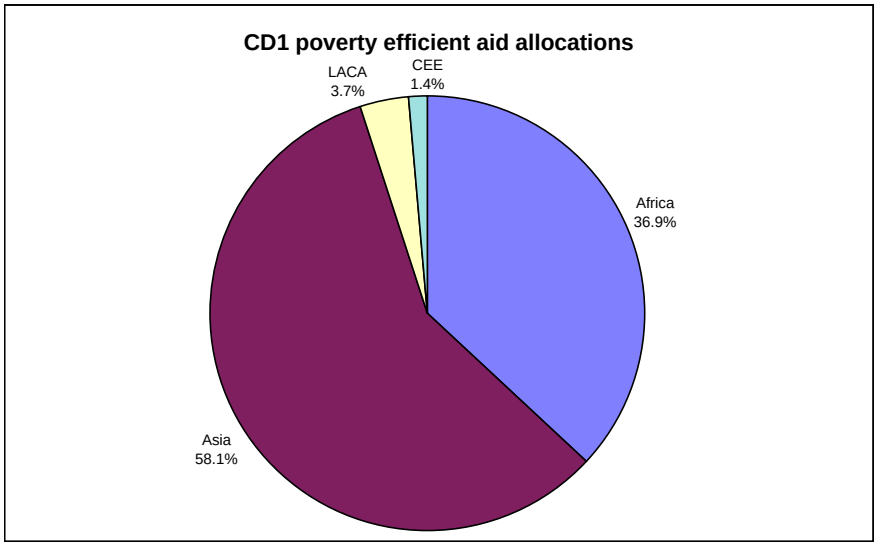


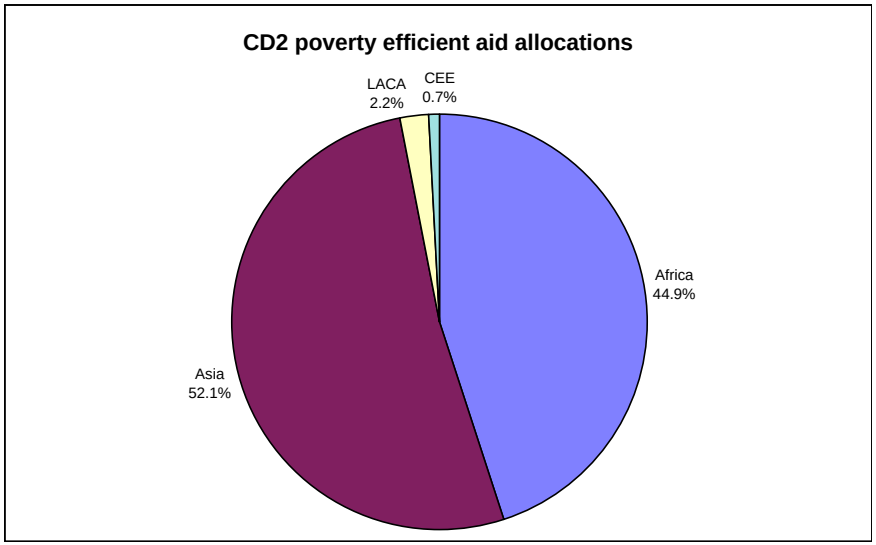


DFID Bilateral Aid Framework (1999/00) compared with Actual Global Aid Allocations (1996) and with Collier/Dollar Poverty Efficient Aid Allocations (CD1 & CD2)

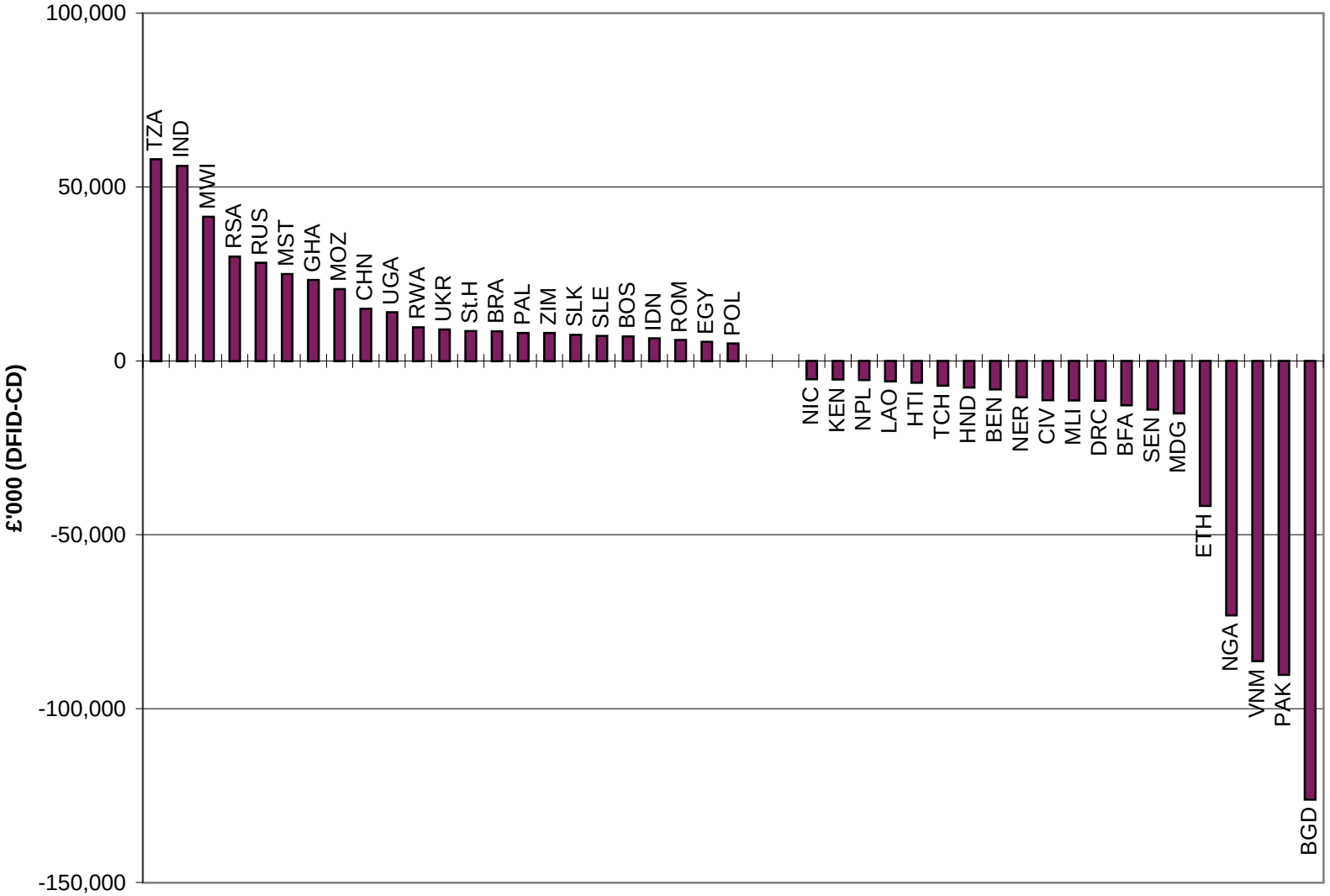








DFID 1999/00 Aid Framework cf. Collier/Dollar (cd2) Allocations (main differences only, ranked)



DFID 1999/00 cf. global 1996 "over/under-spend" (cf. CD1 and CD2)