UK Research Aid: Tied, Opaque, and Off-Topic?

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Abstract

The UK has considerably increased the amount of aid it spends on research in recent years. This policy follows statements by DFID that research is among the best ways of spending aid. It also follows the UK legislating a commitment to spend 0.7 percent of GNI as foreign aid. In pursuing this target, the UK has decreased the proportion of bilateral aid spent through DFID and has channelled more through other departments. BEIS and the Department for Health and Social Care have been big recipients, and research accounts for much of their increased share of aid budgets.

The information associated with the majority of this research aid is vague, raising questions about transparency. A large amount of the research is financed using an allocation mechanism that effectively ties it to UK institutions. There are also questions as to the poverty focus of some of the research conducted, given the explicit intention of the UK government to find existing activity to reclassify as ODA following the legislating of the 0.7 percent target.

We suggest reporting reforms that will increase transparency and allow greater scrutiny of the way UK research aid is spent. We also call for the UK to live up to its reporting to the OECD that all British aid is untied.
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Introduction

The UK government has signalled its intention\(^1\) to make high quality research central to its aid spending. The UK’s Department for International Development (DFID) reported\(^2\) to the House of Lords as early as 2009 that there is “overwhelming evidence that [research] is the best way of spending [aid]”. Whether or not this is true, there is certainly a strong case to be made for spending aid on research. Innovation and the spread of knowledge play a substantial role in the improvement of people’s lives. Quality aid funded research could accelerate development-orientated innovation. But research aid should be held to the same standards of transparency and reporting requirements as all other aid, otherwise it is impossible to tell whether this potential is being met. Furthermore, while research might have more chance of success if carried out in richer countries with greater facilities and more research experience, this sacrifices the potential long-term benefits of building local research capacity. And although the expertise of researchers is important in determining what is funded, research should also be demand-led, i.e. focused on pressing development needs.

In this paper we provide data and analysis on UK Official Development Assistance (ODA) R&D spend before discussing policy issues. We argue that the level of transparency of this aid-funded research is not sufficient to accurately assess its developmental impact, far less to be able to demonstrate that it is the best way of spending aid. We also highlight some allocation processes that suggest that the trade-off between research effectiveness and the need to build local capacity is not being fully considered. We suggest reporting changes that would help bring the transparency of this spending in line with the majority of UK aid.

How UK Research Aid is Spent

Most Research Aid Is Spent Bilaterally

The UK government spent £14 billion in ODA in 2017 (Figure 1).\(^3\) Roughly 37% of this (£5.2bn) was channelled through multilateral organisations like the World Bank and IMF, with the other 63% (£8.8bn) being spent bilaterally (or bilaterally through multilaterals, using vehicles including trust funds).

Of this ODA, only a small share was classified by the UK Government as research and development (“research ODA”). Bilateral research ODA was £737.9m, which accounts for 8.3% of bilateral aid spending or 5% of all aid spending. Medical research is a high priority in UK aid, comprising 34% of all research aid. ‘Multisector’ research, comprising 41%, is a miscellaneous category and is discussed in more detail below.

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\(^1\) DFID, “DFID Research Review.”
\(^2\) Parliament, “House of Lords Minutes of Evidence.”
\(^3\) In this report we refer to net ODA figures, to be consistent with the total ODA budget (gross figures are slightly higher, as there were some loans for R&D purposes that were repaid during 2017, but the broad story does not change).
None of the £5.2bn of ODA channelled through Multilaterals was explicitly categorised as research in these data, though a rough figure of £168m, which is 3.2% of Multilateral ODA, could be imputed using data reported to OECD’s Creditor Reporting System. 82% of this multilateral research ODA goes to Medical research, 9% to Technological R&D, 5% to agricultural, with the remainder split between the other categories (see below). Although the government has some influence on multilateral aid spending, it has more direct control over bilateral spending, and so in this paper we focus on bilateral research ODA.

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4 DFID, “Data Underlying SID 2017.”

5 OECD, “Creditor Reporting System.”
To put research ODA in context of broader spending on R&D, total global public and private R&D in 2018 was around £1.5 trillion, of which the USA spent £340bn (i.e. a quarter of the global total) and the UK, £35bn (about 2-3 percent of the global total). Of this, the UK government directly financed around £10bn, of which around £1bn is likely to be counted as ODA. This makes the UK the 6th largest R&D public funder in absolute terms, but only the 21st relative to national income (see the Technology Component of the Commitment to Development Index for details).

**The UK Is a Leader on (Reported) Research ODA**

Research projects are not always classed as ODA under the OECDs Creditor Reporting System (CRS) even if they meet the OECD standard, and not all research spending that is reported as ODA is classified using the CRS research code. For instance, the US does not report its Centers for Disease Control (CDC) or National Institutes of Health (NIH) spending as research ODA. Furthermore, the UK does not report as research its funding for the Global Innovation Fund (GIF), the Advance Market Commitment, or GAVI.

But relative to its peers, the UK does report a lot of its ODA spending as being research. Although it is just 8% of the UK’s bilateral aid total, the UK’s research aid is substantially larger than that reported by other donors (Figure 2). According to figures reported to the OECD, the UK spends nearly 4 times as much as the next largest Development Assistance Committee (DAC) donor, France, which spent £207m, and as much as the next 15 countries combined. Relative to the aid budget, only Azerbaijan spent more of its ODA on research: its R&D spending of £592,000 was 14.25% of its £4m aid spending. The average of all other countries was 0.77%.

Recognising that at least part of what lies behind the UK’s impressive figure could be that other countries do not classify aid as research as much as does the UK, it is worth examining the growth and character of UK research aid to see what is behind it.

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8 Mag, “Global R&D Funding Forecast.”
7 CGD, “Commitment to Development Index.”
8 CDC, “Centers for Disease Control.”
9 NIH, “National Institutes of Health.”
10 GIF, “Global Innovation Fund.”
High Research Spending Is a Relatively Recent Trend

Research as a share of aid spending has been increasing since as early as 2009 (Figure 3). But R&D spending rose dramatically from 2014. This also overlaps with the UK’s 2015 aid strategy, which made explicit a commitment to increasing R&D spend. Most of the increase since 2011 is due to a sharp uptick in spending by the Department for Business, Energy and Industrial Strategy (BEIS), whose research ODA increased five-fold between 2012 and 2017 (Figure 4). BEIS is responsible for UK science policy and for funding basic research and is central to the government strategy to be an R&D leader. It: oversees UK research councils; administers the £735m Newton Fund\(^{11}\) whose mandate is to develop science and innovation partnerships that promote the economic development and social welfare of partner countries; runs the £1.5bn Global Challenges Research Fund (GCRF)\(^{12}\), whose aim\(^{13}\) is “to ensure UK science takes the lead in addressing the problems faced by developing countries, whilst developing our ability to deliver cutting-edge research”; and oversees R&D conducted by UK Higher Education institutions.

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\(^{11}\) Fund, “Newton Fund.”

\(^{12}\) GCRF, “Global Challenges Research Fund.”

\(^{13}\) BEIS, “UK Strategy for the Global Challenges Research Fund (GCRF).”
The other agency with a significant-sized ODA R&D portfolio is the Department of Health (DH). Its R&D spending, although low relative to BEIS and DFID, increased tenfold from 2016 (£5.1m) to 2017 (£51m).

Source: Data from DFID, CRS

Notes: The Department for Business, Energy and Industrial Strategy (BEIS) was formed in 2016 from the merger of the Department for Business, Innovation and Skills (BIS) and Department of Energy and Climate Change (DECC). They are amalgamated under BEIS here, including before 2016, for simplicity. BIS spends the vast majority of BEIS’s R&D – 99% in 2017. These data do not correspond exactly with the 2017 DIFD data as they are from a different source (DAC Creditor Reporting System – CRS) which reports in dollars.
The ‘others’ include the Department for Environment, Food and Rural Affairs (DEFRA), the Ministry of Defence (MOD) and the Prosperity Fund (PF) of the Foreign and Commonwealth Office (FCO), which even collectively have relatively insignificant amounts of R&D spending and will not be discussed further.

Of the ODA spending departments, DFID complies most fully with its transparency commitments. It is a signatory to the International Aid Transparency Initiative (IATI) and publishes all of its projects in full through IATI to its Development Tracker\textsuperscript{14} (Devtracker) website, including multi-year budgets, descriptions, business case for the project, and project updates. This transparency allows exploration of the multi-year dimensions of most of DFID’s currently active projects.

Spending by BEIS and DH (and others) is significantly less transparent than that by DFID. Other than the annual single line, single year project reporting in DFID and OECD data, their ODA spending portfolios are not all reported in one place as DFID’s are.

\section*{Medicines and Miscellaneous}

The OECD requires donors to report their spending by purpose\textsuperscript{15}. These purposes are fairly self-explanatory, but the interested reader can explore their guidelines\textsuperscript{16}. This allows data-users to see in which sectors most research ODA is spent.

The specific sector in which the UK spent the most research ODA was “medical research” (slightly more research ODA was directed to the non-sector-specific “research / scientific institutions”, discussed below) (Figure 5). This reflects the government’s goal of pursuing a greater focus on health systems and leading a major new global programme to accelerate the development of vaccines and drugs to eliminate the world’s deadliest infectious diseases. There has been significant medical research spending by the Department of Health (DH), DFID and BEIS. This category also contains spending by the £1bn Ross fund, co-administered by DFID and DH, whose work focuses on developing products for infectious & tropical diseases and implementation programmes for malaria and neglected tropical diseases.

\footnote{\textsuperscript{14} DFID, “Devtracker.”}
\footnote{\textsuperscript{15} OECD, “Purpose Codes: Sector Classification.”}
\footnote{\textsuperscript{16} OECD, “Purpose Code Guidelines.”}
Although health was the specific sector to receive the most funding directly, slightly more research ODA went to “Research / scientific institutions”, which is managed mostly by DFID and BEIS. The majority of projects delivered by BEIS are classed in this way. This is the R&D part of ‘Multisector’ category of aid, shown in the first chart. Projects within this can be multisector - spanning several purpose codes. CRS reporting conventions force donors classing complex projects that have cross-sector benefits to assign a single purpose code in this way. (IATI by contrast permits multiple purpose codes in projects reported to it, requiring\(^{17}\) that the apportionment across them sums to 100%). But the guideline for this category also resemble an ‘other’ or ‘miscellaneous’ category: CRS guidelines for classifying projects as “research/scientific institutions” includes “when sector cannot be identified”\(^{18}\).

\(^{17}\) IATI, “Iati Standard Activity Guidelines.”
\(^{18}\) In terms of vague reporting of research aid, the UK is only slightly above the average among DAC donors. However, given the difference in magnitude in research aid spending, it is more significant in the case of the UK. For example, all of Denmark's research aid is reported as this miscellaneous category, but they only reported research aid spend of £19 million, rather than £809 million in the case of the UK (gross). The same applies to reporting on location.
The sub-classifications used to describe UK aid within this multi-sector category are equally vague, with ‘Type of aid’ frequently classed as the undescriptive ‘other technical assistance.’ Vague reporting may reflect ill-defined research spend or limited information at the reporting level, as we will see.

**Most Aid Goes to Unspecified Destinations**

Along with limited information on sectoral spend and type of support, reporting on beneficiary targets is similarly vague.

The overwhelmingly dominant location reported for R&D is “Developing countries, unspecified” – allocated 62 percent of the R&D budget (See Figure 6). This category includes allocations to global institutions such as WHO and IBRD (which come under the ‘bilateral through multilateral’ classification), multi-country and multi-regional projects with impacts across the world, and domestic spending in the UK. 73% of DFID’s research (£224m) was classed this way, 49% of BEIS’s (£183m) and 87% of DH’s (£44m). Including the other spending departments, this results in a total of £456m in 2017 alone (we can roughly estimate 6.7 times that in multi-year commitments, totalling over £3bn).

![Figure 6. Regions: £552m](source: DFID data, XKCD Chart concept)

Any more granular breakdown relies on project descriptions, which are not standardised and often do not mention location. But judging by these numbers, a very large share of the unspecified projects appears to be UK-based research. As we will argue, some research produces global public goods, the production locations of which are less important than...
their global benefits. But the host of a research project enjoys several economic benefits, and these must be considered as a qualifier to that argument.

**UK Universities Are the Main Channel through which Research ODA is Spent**

Figure 7 shows the spending channels of the spending departments (just the top 5 for DFID, which has a much more diverse portfolio) and how much of that is “Developing Country, Unspecified” (with the caveats and nuances discussed around that above, for example, there are 15 IBRD disbursements classed this way which include multi-country projects).

**Figure 7. Top spending channels by department and degree that spending is specified**

Source: DFID data

The main channel of spending for both DFID and BEIS, and the second largest for DH, is “University, college or other teaching institution, research institute or think tank”. Over 90% of BEIS’s research aid is classed this way, over half of which is unspecified. It includes financing for the GCRF, a £1.5bn fund, that funds ODA eligible research in UK universities, and whose aims explicitly state ensuring UK science takes the lead on addressing developing country problems.

This explicit commitment to “UK science” raises concerns about the extent to which this aid is tied – given on the condition that it be used to procure goods and services from the donor country. Some of this aid is explicitly tied, such as the “Quality Related” ODA research funding discussed in the next paragraph. And some funding calls are clear that the lead researcher must be UK based. But even in cases where aid is not literally tied, there is still a
heavy bias towards UK institutions: it is tied *de facto* if not *de jure*. The UK reports that 100% of its aid is untied. But if funding for UK research projects is classed as ODA, and directed to UK researchers without competition, then this claim is incorrect.

Furthermore, it is hard to have confidence that all of the University funding is being rigorously scrutinised to ensure it has the promotion of the economic development and welfare of developing countries as its primary objective, as it should do if it is to count as ODA. An illustration of this is given by examining “Quality Related” ODA research funding. As the name suggests, this is allocated according to the quality of research output produced by universities and is relatively unrestricted. To be eligible universities have to submit a strategy demonstrating how their research will be ODA compatible. But of the 107 universities that applied for this funding under the GCRF, all 107 were successful\(^20\). The funding was allocated in proportion to the GCRF’s standard non-ODA allocation formula, i.e. allocated according to national priorities, rather than development ones

More broadly, the government has explicitly asked\(^21\) departments to reclassify existing spending as ODA where possible, and BEIS appears to have gone to some lengths to accomplish that. The department’s ODA R&D spending increased more than its total R&D spend between 2014-16, suggesting existing projects may have been replaced or reclassified as ODA. As an example, one project listed by BEIS, which provides £57m of funding through the Higher Education Council, has been “imputed to be spent on ODA-compliant research” by the department. The method of imputation is not reported, but a Freedom of Information request sent to BEIS confirmed that this was classed as ODA “retrospectively”, meaning that it was neither allocated competitively, or according to development priorities

### Improving UK Research ODA

The considerable majority of UK bilateral R&D spend classified as ODA is spent by design though UK institutions on projects that cannot be specified in terms of countries or regions of impact, and much of it is spent on projects that cannot be classified by sector or type. There are strong reasons to believe that some proportion of that support would be difficult to justify as meeting high-priority research topics in development. This suggests the need to reconsider tying, allocation and transparency.

With regard to where aid is spent, Angus Deaton, a foreign aid sceptic, has argued that donors should spend aid *on* developing countries, rather than *in* them. In some sense, DFID’s assertion, quoted in the introduction, that research is the best way to spend aid echoes this view: if research is the best way to help developing countries then the primary concern is the quality of this research. Countries such as the UK, with excellent universities and highly developed research infrastructure, are good places to conduct aid-funded research, in this view.

\(^{20}\) GCRF, “Research Fund Allocations.”  
But this ignores the two other potential benefits that aid-funded research could bring. One is the benefit that a developing country could receive from hosting research and development projects. This will help them to develop their own research capacity, and thereby conceive and execute projects relevant to their own needs in the future. It might also increase opportunities for higher education in developing countries more broadly as research departments develop, creating both skilled jobs and transferring skills. Furthermore, the organisation(s) delivering the project gains income, which may also diffuse throughout the economy, creating more demand and jobs. There are therefore three factors that should be taken into account when deciding where aid-funded research is conducted:

a. The new knowledge created by the research, which can be considered a global public good

b. The boost to skills and research capacities in the delivering organisation, and more broadly in the hosting country, and

c. The income to the research organisation

There is potentially a trade-off between these objectives: the places with higher research capacity – and which therefore have higher chances of successful innovation – are also the places with the least need for building capacity. This should be acknowledged explicitly in funding decisions. If donors spend all of their research ODA in rich countries, they should be able to justify this in terms of the urgency of the projects funded.

However, funders should also acknowledge that there is not always a trade-off: there may be situations in which the importance of local knowledge and experience means that the research is better conducted in developing countries. For example, social science research is better conducted locally where tacit knowledge of local politics and culture improves the likelihood of success. Furthermore, take-up of innovation is also important, and if a research project has influential in-country champions on board, then it may also help to remove some institutional and policy barriers to the adoption of new technology, which could increase the chance of economic benefits.

It is encouraging to see that many UK aid projects have as their objectives developing the research capacities of developing countries, even though many of these are not explicitly classed as research. Some examples include investing in innovative firms, funding education and research programs, and supporting developing country researchers to gain international experience. Both the Newton Fund and the GCRF encourage partnerships with researchers in developing countries. But even if it is decided that the potential benefits to successful research overwhelm capacity-building considerations, so that the research should be conducted in the best-resourced and experienced department, it does not follow that it should be conducted in the UK. There are many renowned research departments across the world that may be better placed than the UK to conduct particular pieces of research. By allocating funds without competition to UK institutions, UK funders are tying their aid.
The OECD reports that tying aid is estimated to raise project costs by 15-30%\(^\text{22}\). Although R\&D ODA is not covered by the “OECD recommendation on Tied Aid”, the costs may well be similar. The question of tying aid clearly has political overtones, particularly in the context of the fusion doctrine\(^\text{23}\) - a national interest approach that sees the UK seeking more win-win outcomes from its aid model\(^\text{24}\). But if UK researchers really are the best candidates for projects, then they would win well designed open tenders. If they are not, tying carries a cost –and the UK should stick to the principle of opposing tied aid.

The way that the UK is allocating research aid also risks distorting the choice between “pull” and “push” funding mechanisms. With pull mechanisms, funders do not choose who conducts research; this is determined by whichever research is successful in meeting the conditions for receiving funds. With push mechanisms, on the other hand, funders are able to decide ex-ante who will receive the funds, and therefore it is easier to take considerations other than development into account (such as wanting to direct funding to certain universities). Ideally, these two types of mechanisms should be used in complementary ways\(^\text{25}\), with the optimal mix dependent on the type of research goal, among other things. But if funders are trying to kill two birds with stone by using research aid to further their own priorities, they may be drawn more toward push mechanisms than would be appropriate for this optimal mix.

With regard to what aid is spent on, when BEIS, which has a stated objective\(^\text{26}\) of “Maximising investment opportunities and bolstering UK interest”, reports rather technically that a large proportion its projects are ‘imputed’ to be ‘compliant’ with ODA requirements, one might question the spirit of this commitment, whether this really is the primary objective of the project. More generally, one might be concerned that the effectiveness of aid is reduced by delivering aid through departments with primary goals which, though perfectly legitimate in themselves, are domestically focused. Such concerns have previously been raised by both Owen Barder\(^\text{27}\) of CGD and the Commons Select Committee\(^\text{28}\) for international development.

A project should only be classified as aid if it has the promotion of the economic development and welfare of developing countries as its main objective. If existing projects did not previously meet this criterion, then what about them has changed? And if they did previously meet this criterion, then why were they not previously reported as aid? Because the government treats the 0.7% spending target as a ceiling for aid spending, as well as a floor, scoring R\&D as aid reduces funds available for other projects. Those potential

\(^{22}\) OECD, “Untied Aid.”
\(^{24}\) DFID, “Spending 0.7% on UK Aid - and in the National Interest.”
\(^{26}\) Kell and Jones, “A Short Guide to the Department for Business, Energy & Industrial Strategy.”
\(^{27}\) Barder, “What I Want to Hear from the UK Development Secretary: How to Improve Whole-of-Government Aid Spending.”
\(^{28}\) Parliament, “Commons Select Committee - Objectives - Poverty Reduction and National Interests.”
projects may have made a much greater contribution to economic development and poverty reduction than the R&D that has replaced it - indeed this seems likely since, until recently, the R&D was not recognised as having development as its main objective.

It should be noted again that this is not a criticism of research ODA per se. BEIS’s spending is directed towards areas that undoubtedly have the potential to deliver public benefits in developing countries, such as medical, environmental, and agricultural research. Furthermore, even where research conducted by UK providers is vaguely categorised, there is no reason to doubt the professionalism or good intentions of the researchers who receive funding, or even that in many cases it can deliver tangible benefits to developing countries.

But these funds should be allocated as part of a coherent aid strategy, with clear guidelines for what qualifies as research ODA and why, and there should be strict selectivity and (preferably) open competition for these funds. Winning bids should have economic development and poverty reduction as their primary goal - a requirement which is not mere semantics, but which prevents split loyalties diluting the effectiveness of achieving this primary purpose and has real consequences for how projects are delivered, where they are hosted, how all the benefits of a project are shared, and how opportunity costs are perceived and managed.

Finally, but crucially, there should be sufficient transparency to permit the level of scrutiny that ensures this. For all agencies spending aid, including those other than DFID, any spending classed as ODA should be on the Devtracker site and should adhere to International Aid Transparency Initiative (IATI) standards, including showing the full business case and the transactions for the full project life. If UK research aid is tied to a UK institution it should be correctly reported as such to CRS and IATI. To assist in more clearly highlighting these issues, the CRS should include a ‘Domestic’ country category in its CRS codes to make it very clear when donors are directing aid to national providers.

**Untie and Focus Research Aid, Report More Diligently**

The UK’s spending on research in its aid budget has grown rapidly in recent years and a large portion of that goes towards health research, which is broadly recognised as yielding high development returns. There is evidence to suggest that medical research can yield 10-100 Disability-Adjusted Life Years per $1,000 spent\(^\text{29}\), which would suggest it ranks with some of the most cost-effective health programs known (including basic vaccination and micronutrient interventions).

But at least some of the growth in research aid appears to be pre-existing projects being reflagged as aid in light of the legislated commitment to spend 0.7% of gross national income on aid. Analysis of the available data suggests most research aid is reported as going to countries and activities essentially classed as ‘other’, which is multidimensionally opaque.

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\(^{29}\) Dupont, “The Impact of UK Development Aid Research Spending Briefing Note.”
And much aid is simply directly awarded to UK research institutes – a form of tied aid. This system needs urgent reform.

On the location of spending, all else equal, the preferred recipients for UK R&D ODA spend should be researchers in developing countries. Failing that, ODA should at least be untied and awarded using allocation procedures designed to select the best institutions to do the work wherever they are located.

On the targets for spending, ODA-funded R&D is scarce, and for impact it should focus on questions for which there is a ready demand for answers in the developing world. All ODA funding should be allocated according to the importance to development of the research, not solely the prestige of the institution receiving the funds. Government should consider different funding mechanisms that encourage more focus on development problems, such as “pull” mechanisms, whereby funders specify the project rather than the researcher, instead of providing as a default “push” funding to any research that can claim (however tenuously) to benefit developing countries. The Ross Fund30 provides an example of how this could be done.

And on the transparency of spending, all ODA projects through all spending departments, should be published within a specified deadline in full to IATI and their tied status should also be reported31. This will allow better assessment of estimated impact, and how that relates to demand in the recipient and beneficiary countries. The OECD should also assist with greater transparency by including ‘Domestic’ as a country category in its reporting requirements to enable tighter scrutiny of DAC countries’ aid.

30 Health, “Ross Fund.”
31 IATI, “Tied Status.”
References


