

OECD DAC – PDE Thematic Study on Untied Aid: Ghana country study

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SUMMARY

Introduction

In the 2008 Phase One study *The Developmental Effectiveness of Untied Aid*¹, it was found that aid to LDCs is now overwhelmingly untied (excluding the exempt categories, technical co-operation and food aid). However, it was also found that there existed very little formal analysis of both the donor practices in partner countries and the actual consequences of untying aid at a country level. The Phase Two study is in response to the proposals of the Working Party on Aid Effectiveness and the Development Assistance Committee (DAC) Network on Development Evaluation and the reporting requirement in the 2001 DAC Recommendation on untying ODA to LDCs.

Phase Two of the project is intended to provide evidence-based conclusions about the implications of untying aid and its impact on aid effectiveness in selected case-study countries, for presentation to the DAC by December 2009. This report provides the results of the Ghana Country Study.

This study is a contribution to Phase Two of the wider OECD DAC – PDE Thematic Study on Untied Aid¹. The Thematic Study on Untied Aid is designed to provide both a comprehensive assessment of current donor policies and practices regarding the tying status of aid and an assessment of the effects of the untying status on aid effectiveness. The Ghana Country Study is funded partly under a grant from KfW to the Overseas Development Institute (ODI), London, and partly by the Secretariat for the Paris Declaration Evaluation and the DCD of the OECD in supporting the Thematic Study on Untied Aid.

The Phase One report² focused on the HQ level and the extent of the formal untying that has been reported by donors. Phase One concluded that ODA to LDCs, and to developing countries more generally, is now overwhelmingly formally untied, excepting exempted categories under the 2001 Recommendation. However, there has been very little systematic investigation into the effectiveness of untied aid, or even into understanding how untying works at the country level. This country study is part of a wider attempt to address this gap, and was designed to serve as the pilot for the subsequent series of five further recipient country studies.

In selecting Ghana to be a pilot Country Study, several factors were taken into account:

- African states make up a large share of aid recipient countries.
- Ghana is widely regarded as having relatively good governance, and has not suffered any recent large-scale humanitarian crisis or other shock that would have resulted in a high proportion of non-development aid.
- Donors employ a wide range of instruments and modalities.
- Ghana has a recently reformed procurement law and, in addition, a range of procurement options should be available.
- The Government is strongly committed to the PD process for aid effectiveness, as reflected in it hosting the Accra summit in 2008, therefore ensuring the requisite co-operation for a study focussed on the effectiveness of donor practices.

¹ The full title is: *The Developmental Effectiveness of Untied Aid: Evaluation of the Implementation of the Paris Declaration and of the 2001 DAC Recommendation on Untying ODA to the LDCs*.

² <http://www.oecd.org/dataoecd/5/22/41537529.pdf>

Ghana has a population of approximately 23 million and in recent years has enjoyed steady and increasing economic growth, as well as being the first Sub-Saharan African country to achieve the Millennium Development Goal (MDG) on poverty. GNI per capita was US\$ 450 in 2005, and ODA was 10.4% of GDP in 2005. ODA to Ghana amounted to US\$ 1,236 million in 2007, equivalent to 10% of GNI and over \$50 per capita. Ghana is regarded as a ‘star’ partner of the development co-operation community. Support is broad based: the World Bank provided 20.4% of ODA disbursements in 2007; Netherlands, 12.8%; UK, 11.9%; USA, 9.4%; EC, 6.7%; AfDB, 5.4 %; and Denmark 5%, with five other donors - Canada, France, Germany, Japan and Spain – each contributing between 2.5% and 4.7%. Bilateral donors increasingly dominate aid support in Ghana. As the pre-Accra aid performance review recognised, this multiplicity of donors exemplifies the need for action on implementation of the Paris Declaration on aid effectiveness.

Methodology

Untying in practice involves the relaxation of just one constraint on the provision of aid – on the sourcing of goods and services. The approach adopted is to consider the question of effectiveness in terms of five sequential issues. Firstly, the study examines the association between formal untying and aid modalities and uses in statistical terms. Secondly, it looks at the connections between newer and potentially better practices in the PD aid effectiveness sense, for which untying is a necessary condition. Thirdly, it investigates the effects of untying on procurement, in terms of procedures used, the sourcing of goods and services, and the implications for the local and wider regional economy. This leads to a provisional exploration of both the cost efficiency and, finally, developmental effectiveness implications of untying. It is hoped that this study will provide a benchmark against which further moves towards untying could be assessed.

In an initial review, including documentation and discussions with stakeholders, it became clear that to ensure focus and comparability between projects the study should concentrate on one sector. Water and Sanitation (W&SS) was selected, because it is an infrastructure and growth sector with a strong social orientation, which involves procurement of substantial amounts of both physical goods and services, as well as a significant TC component and a variety of approaches. It is also a sector in which ODA plays a key role, many bilateral donors are still involved, and it has both rural and urban coverage.

As an exploratory investigation, the study adopted an eclectic approach, combining different forms of analysis to document and then examine the consequences of current aid practice. This evidence-based investigation initially involved a desk review of the available statistical information, published and grey documents. The study team undertook a series of structured interviews, between November 2008 and February 2009, with major donors and those significant in W&SS and government and its agencies, about current policy and practice. A two-step project analysis included an initial review of six donor activities in this sector and, due to data access problems, only two in-depth studies of current donor-supported projects, to investigate procurement practices and their implications for cost effectiveness. In one case, the team undertook ‘ground-truthing’ field visits.

Aid modalities and tying practices

A review based on OECD CRS data found that, formally, DAC bilateral ODA to Ghana was 75% untied, 11% partially untied, 11% tied and 3% not reported during 2005-7. This pattern is broadly similar to average reported tying status for bilateral ODA for LDCs and HIPC countries overall. There is, however, significant variation among donors, both in terms of tying and also of non-reporting.

There is an existing monitoring system for aid in Ghana (the Development Partner Envelope), reporting to the Government and donors in the Consultative Group (CG), focused on both the MDG and PD objectives that facilitated the study. A 2006 survey to the CG broadly confirmed the tying status of aid, as reported to the CRS. The disbursement by aid modality shows over 40% of bilateral ODA channelled through programmatic modalities, for which untying is necessary and also likely to involve country procurement systems, including general and sectoral budgetary support and some forms of basket funding. The remainder of aid is disbursed through a project approach. Pooled funding of projects, a newer modality that is likely to be associated with untying, was identified as growing in importance, but is not yet separately monitored.

There are wide differences in donor practices with Canada, Denmark, France, Germany, Netherlands, Switzerland, the UK, as well as the EC and World Bank, strongly supporting the programmatic arrangements. Other donors prefer to continue largely with established project-related arrangements (Japan and some minor donors), or even to establish new parallel project-type arrangements (USA), which is seemingly out of step with the PD goal of harmonisation.

There is extensive use of country procurement systems (CPS), including over 50% of aid to the Government sector, implying that at least 20% of bilateral aid in a project approach also uses CPS. An attempted donor survey by the team, to quantify both use of pooling arrangements and different procurement practices, was unsuccessful due to poor response. This was partly because donors' own financial and statistical monitoring appears not to be organised to report directly on either tying practices or use of different procurement arrangements, and partly due to assessment fatigue following the survey undertaken in preparation for the Accra meeting on the PD.

There remain considerable inconsistencies between the high level of reported formal untying and the views of many stakeholders (including some Ghanaian officials interviewed) that, in practice, tying is still widespread, even pervasive, especially on the part of some donors. Most of these officials see untying not so much as avoiding aid-transfer inefficiencies and trade distortions, but rather in terms of ownership and alignment with national priorities for development, which is only assured with unrestricted programmatic aid and the use of the Ghanaian procurement system.

Much technical cooperation (TC) is closely associated with tied aid: between 2005 and 2007 only 35% of stand-alone TC aid was untied, compared with 80% of non-TC aid. Interview evidence suggests that this association is a consequence, not necessarily intended, of a number of factors. Donors choose areas where they have comparative professional strength, e.g. hydraulics and water engineering. Framework contracts favour national consultants and the provision of services in kind is explicit tying.

There are no evident formal links between the use of different aid instruments, grants or concessional loans and tying practices amongst DAC donors. However, this is apparently not so for new donors. The scale and modalities of concessional funding by new donors, such as China, remains outside of the CG and DAC monitoring processes, but appears to be large, growing and in the form of tied concessional export credits.

Tying is, by definition, a practice that confers a competitive advantage on donor exporters of goods and services. If *de facto* tying were widespread, despite formal untying, then this would be reflected in donor exports when compared with the exports of competing exporters. An econometric analysis was, therefore, undertaken to determine whether ODA, formal tying status and the different forms in which aid is provided (loans and grants) had a discernible impact on aggregate donor export flows at a

country level. The overall results suggest that the ODA in general, and grants in particular, have a trade distorting effect, and were felt to justify comparable investigations for the five other case study countries.

Project analysis

Untying is highly influenced by the modality of aid. Budget support and pooling arrangements where funding, once committed, is not distinguishable as coming from any one donor, are both highly associated with untied aid. In contrast, the extent of *de facto* tying or untying within projects is unclear. An initial review of the W&SS related projects supported by seven donors, Canada, Denmark, the EC, Germany (KfW), Netherlands, the UK (DfID) and the USA confirmed that most projects are, whatever their formal status, typically hybrid, comprising a mix of aid elements with different tying status, procedures, implementing agencies and rule sets.

More in-depth investigation into procurement practices and outcomes is resource intensive, and only practical for an on-going project where documentation is locally accessible and personnel in place. The study, therefore, restricted itself to two case studies of water improvement projects: a Danida-DFID (UK) pooled funded project and a CIDA (Canada) supported project. The case studies focused on project inputs and outputs and outcomes, such as the extent of local sourcing and cost-effectiveness.

The ‘head contract’ that determines tying status, as reported to the CRS, was found in practice to be tied in both case study projects. In both cases, the head contract accounted for the majority of the TC resources. However, subcontracting practices and contractor nationalities within the projects were more important in determining, for example, the extent of local sourcing of services and goods and likely trade effects. Use of country systems emerged as both an outcome of and an input to the untying process. Projects and parts of projects which procured goods and services through the CPS, using National Competitive Bidding (NCB), were untied and predominantly contracted locally and regionally. This appeared to be mainly a result of smaller lot sizes and local advertising under the CPS.

An exploratory cost effectiveness analysis of procurement within the Danida-DFID supported project, using the CPS indicated that, for the most part, goods and civil works contracts were bought at competitive prices and done so locally. Once rules had been agreed, the pooling arrangement between Danida and DFID also led to savings from sharing auditing and monitoring, as well as matching responsibilities to sector expertise.

Conclusions

Untying in Ghana is contributing significantly to the aid effectiveness agenda. Untying is creating policy space for recipient country ownership, use of recipient country systems and alignment with recipient country priorities. The existence of strong country leadership, such as through the creation of Sector Wide Approaches (SWAs), was also seen as a driver of untying.

Knowing whether aid support is formally untied provides a quite limited indication as to the balance of actual tying and untying, and the developmental implications of these practices. To understand these relationships requires looking at the choice of modality and, for project-type aid, the actual arrangements for contracting, from the head contract to the lowest level of sub-contracting and the procurement of goods and services. As there is a dearth of empirical studies on how formally untied

aid is working and its implications, this conclusion was felt to justify according a high priority to project analysis in the country studies, for a cross section of donors.

At a macro-level, the donor choice of modalities and an *ex post* econometric investigation into the relationships between aid and trade flows provides further evidence on untied aid practice and its consequences.

Ghana has relatively good co-operative monitoring of aid by Government and the donor community. Nevertheless, what these reporting arrangements tell us about modalities and uses of national and other forms of procurement is quite limited. It also proved almost impossible to relate in detail aid as reported from donor HQ to the OECD, and aid as being monitored at a country level. The conclusion from this pilot study is that investigating the extent of genuine untying, continuing *de facto* tying and the developmental implications of these practices will be far from easy, even with full co-operation from major stakeholders.

ACRONYMS

ACP	African, Caribbean and Pacific
AFD	Agence Française de Développement
CEA	Cost Effectiveness Analysis
CIDA	Canadian International Development Agency
CPS	Country Procurement System
CRS	Creditor Reporting System
CXA	Canadian Executing Agency
DAC	Development Assistance Committee
Danida	Danish International Development Agency
DfID	Department for International Development (UK)
DPE	Donor Partner Envelope
EC	European Commission
EU	European Union
GBS	General Budget Support
GDP	Gross Domestic Product
GNI	Gross National Income
HIPC	Heavily Indebted Poor Country
ICB	International Competitive Bidding
IFI	International Financial Institution
JICA	Japan International Cooperation Agency
KfW	Kreditanstalt für Wiederaufbau, Entwicklungsbank
LDCs	Least Developed Countries
MCA	Mixed Credit Agreement
MCC	Millennium Challenge Corporation (US)
MDBS	Multi Donor Budgetary Support
MDGs	Millennium Development Goals
MOFA	Ministry of Foreign Affairs (Japan)
NCB	National Competitive Bidding
NGO	Non Governmental Organisation
ODA	Official Development Assistance
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
PD	Paris Declaration
PDE	Paris Declaration Evaluation
PPA	Public Procurement Authority (Ghana)
SBS	Sector Budget Support
SECO	State Secretariat for Economic Affairs (Switzerland)
SSA	Sub Saharan Africa
SWAp	Sector Wide Approach

TA	Technical Assistance
TC	Technical Cooperation
US	United States
W&SS	Water & Sanitation Sector
WB	World Bank

1 INTRODUCTION

1.1 Background, Objectives and Scope

This study is a contribution to Phase Two of the wider OECD DAC – PDE Thematic Study on Untied Aid³. The Thematic Study on Untied Aid is designed to provide both a comprehensive assessment of current donor policies and practices regarding the tying status of aid and, an assessment of the effects of the untying status on aid effectiveness. The Phase One report⁴ focused on HQ level and the extent of the formal untying that has been reported by donors. In view of the near complete absence of studies or evaluations into effects of untying the Management Group agreed to a pilot study⁵.

The Ghana country case study was designed as the pilot for the five further country case studies⁶ of aid tying and untying practices being undertaken as part of the Thematic Study. As well as developing the methodology and objectives⁷, the evidence assembled during the course of this exploratory study is being presented here as part of the evidence base for the wider study.

Phase One of the Thematic Study found that both ODA to LDCs and to developing countries more generally is now overwhelmingly formally untied excepting exempted categories⁸ under the 2001 Recommendation. However there has been very little systematic investigation into the effectiveness of untied aid, or even to understand how untying works at the country level. This country study is part of a wider attempt to address this gap. The approach adopted is to consider the effectiveness question in a stepwise manner in terms of five issues. Firstly, the study examines the short-term outcomes of formal untying in terms of aid modalities and uses. Secondly, it considers newer and potentially better practices in the PD sense for which untying is a necessary condition. Thirdly, it investigates the effects of untying on procurement in terms of procedures used, the sourcing of goods and services and the implications for the local and wider regional economy. This leads to a provisional exploration of both the cost efficiency and developmental effectiveness implications of untying. It is hoped that this study will provide a benchmark against which further moves towards untying could be assessed.

1.2 Method of Investigation

Untying in practice involves the relaxation of just one constraint on the provision of aid – on the sourcing of goods and services. This generates two focuses for the investigation, firstly to identify the consequences of untying *per se* and secondly to consider the interactions of untying with other changes that are taking place in the provision of aid. Due to the lack of previous investigations, the study adopts an eclectic approach combining different forms of analysis to documenting and to then

³ The full title is: The Developmental Effectiveness of Untied Aid: Evaluation of the Implementation of the Paris Declaration and of the 2001 DAC Recommendation on Untying ODA to the LDCs.

⁴ <http://www.oecd.org/dataoecd/5/22/41537529.pdf>

⁵ The ToR envisage that: the second stage of the evaluation study ‘will assess the developmental effects (or effectiveness) of tied versus untied aid projects and programmes through a representative number of case studies in partner countries.’

⁶ These are Burkina Faso, Lao PDR, Vietnam, South Africa and Zambia.

⁷ These were discussed in the Phase Two Approach Paper which formed part of Phase One of the Thematic Study.

⁸ These are Food Aid and Freestanding Technical Co-operation and donor administrative costs. The aid channelled without restrictions on use to NGOs, whether or not registered in the donor country, is also presumed to be untied.

indicating the consequences of current aid practice. This evidence-based investigation initially involved a desk review of the available statistical information and published and grey documents. The review was followed by a series of structured interviews between November 2008 and February 2009 with donor and recipient parties in Ghana about current policy and practice, and two in-depth studies of donor supported projects in the W&SS. In one case, a project supported by Danida and DfID with pooled funding member of the team undertook ‘ground-truthing’ field visits.

1.3 Country and Sector Issues

In selecting Ghana to be a pilot country study several factors were taken into account. African states make up a large share of aid recipient countries. Ghana is widely regarded as having relatively good governance and has not suffered any recent large-scale humanitarian crisis or other shock that would result in a high proportion of non-development aid. Donors employ a wide variety of instruments and modalities. Ghana has a recently reformed procurement law and in addition a range of procurement options should be available. As reflected in it hosting the Accra summit in 2008, the government is strongly committed to the PD process for aid effectiveness therefore ensuring the requisite co-operation required for a study focussed on effectiveness of donor practices.

The consequences of general budgetary support (GBS) using untied funding have already been looked at in some depth in a recent joint evaluation (IDD, 2006). The value added of this study therefore appeared more likely to be found in considering the implications of untying on project type assistance. Given very limited resources and time, the study focuses especially on project type aid to the W&SS. During the initial visit it became clear that for practical reasons⁹ as well as to increase comparability, the study should concentrate on one sector. W&SS was selected because it is an infrastructure and growth sector with a strong social orientation, which involves procurement of significant amounts of both physical goods and services, including a significant TC component and a variety of approaches. It is also a sector many bilateral donors are still involved, has both rural and urban coverage, and is a sector where ODA plays a key role.¹⁰

1.4 Outline

The outline of the report is as follows. Chapter 2 presents the statistical evidence of the current status of untying of aid and modalities of aid. Chapter 3 presents the results of an econometric analysis into the potential trading distorting effects of aid, its tying status and use of aid instruments. Chapter 4 first sets in context and then presents the main findings of the project case studies that track the procurement process in detail. Chapter 5 looks at the links between aid untying and both cost effectiveness and developmental effectiveness. Chapter 6 sets out the provisional conclusions from this exploratory study. The appendices include more detailed versions of the econometric analysis and the project case studies.

⁹ Between 2005 and 2008 there were over 3000 ‘activities’ in the Ghanaian W&SS. Focusing on just one sector allowed a deeper understanding by removing some of the inter-sectoral variation and also reduced the number of government departments and agencies involved.

¹⁰ The study initially envisaged investigating in a social and growth sector. This was considered impractical in a pilot study. W&SS was selected in preference to other infrastructure sectors, because the review of recent aid to 13 LDCs and non-LDCs in the approach to Phase Two of the OECD Thematic Study found that in most countries few bilateral donors are currently funding energy or transport (Clay *et al.*, 2008).

2 REVIEW OF AID AND ITS UNTYING STATUS

2.1 Background

Ghana and statistical sources

Ghana has a population of approximately 23 million. In recent years, the country has enjoyed steady and increasing economic growth, with real GDP growth reaching 6.2% in 2007 and gross national income (GNI) per capita amounting to US\$ 586 in 2006. The economy has remained resilient even in the face of external and internal shocks. The strong performance in growth and the reduced poverty experienced in the past few years stems from various factors, including improvements in economic policy management. Extreme poverty has been reduced by half – from 36.5% of the population in 1991/2 to 18.2% in 2005/6. Thus, Ghana is the first Sub-Saharan African (SSA) country to achieve the Millennium Development Goal (MDG) on poverty. Substantial progress has been achieved in regard to MDG 2 on universal primary education: net primary enrolment reached 68.8% in 2006. Further achievements have been made in some areas of MDG 8 on Global Partnership for Development: Ghana reports a consistent decline in the level of external debt service as a percentage of exports of goods and services, from 38% in 1990 to 7% in 2005 (OECD, 2008).

The main source of information about aid flows is the OECD CRS database in terms of commitments. The local Consultative Group Development Partner Envelope database, and information obtained directly from bilateral aid agencies during the course of the study provide contrasts and additional information, such as on modalities and use of country systems on a disbursements basis.

The statistics on modalities of disbursement of funds, including different forms of budgetary support and project uses, is relatively complete only for recent years, since the growth of interest in use of recipients own procedures. The reporting on tying status to the CRS, as documented in the OECD Phase One report, has become only relatively more complete since the 2001 DAC Recommendation. These data sources are used to provide a statistical overview of aid in this sector. In order to throw more light on the ways in which formally untied aid is being disbursed the study team also developed a pilot questionnaire seeking more detailed information about the ways in which aid funds are spent in procuring goods and services, and the results are also reported below.

Aid to Ghana: a historical perspective

As background it is helpful to set this investigation into current aid practice within its historical context. Therefore this section briefly surveys the recent trends and the current pattern of aid to Ghana. Over the period 1975-2002, total ODA to SSA was US\$318.8 billion, which compares with US\$214.1 billion received by East Asia and the Pacific Countries over the same period. The trend of growing dependence on aid for SSA described above is not different for Ghana; GNI per capita was US\$300 in 1975 and by 2005 it had increased to US\$450. In terms of ODA, between 1975 and 2002, Ghana received a total of US\$11.9 billion in aid. ODA rose from the equivalent of 9.5% of GDP in 1990 to 10.4% in 2005. A key question is whether increasing aid to Ghana has had the appropriate impact on economic performance and welfare: that is, has it been effective?

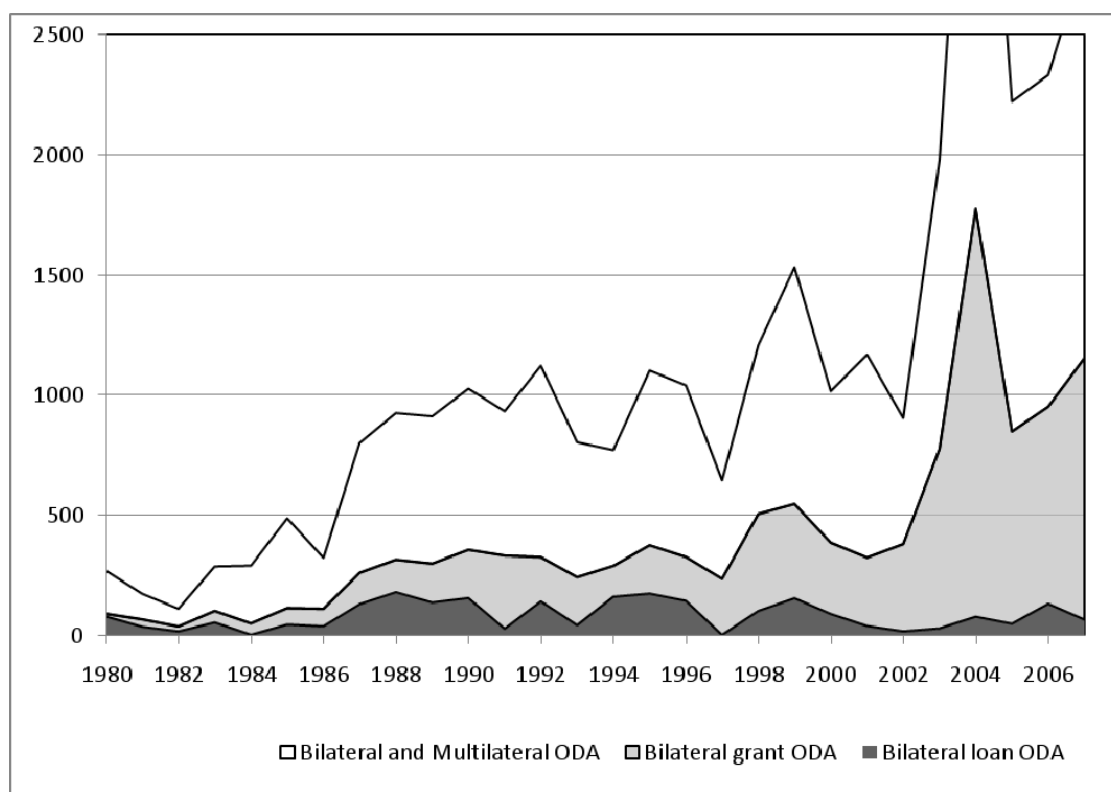
Since the reforms following the near economic collapse in 1981, Ghana has been a ‘star’ partner of the development cooperation community. The willingness of donors to provide enhanced levels of aid is shown in Figure 2.1. Commitments of multilateral and bilateral aid more than tripled between 1983 and 1990, as the economic recovery programme resulted in rapid growth and received

widespread support. The collective willingness of donors to provide further support was sustained during the 1990s. However, the composition of support changed with multilateral aid dominated by IDA credits and bilateral grants becoming more important, and with Japan and the UK emerging as the major partners.

Current aid to Ghana

More recently, ODA to Ghana amounted to US\$ 1,236 million in 2007 (US\$ 51 per capita) and disbursements in 2008 were projected to rise to US\$1,797 million. The World Bank and the EU were the major multilateral donors and the Netherlands and the UK were the major bilaterals. US assistance was projected to rise considerably in 2008 under the Millennium Challenge Account, but problems of slow implementation will probably show, when 2008 estimated ODA is finalized, that these projections were not fully realized. The possible implications of the global financial crisis for ODA are likely to be in 2009 and afterwards. The expectation that oil revenues would provide around 3-4% of GDP from 2009 onwards means that aid to Ghana is considered to be at a turning point.

Figure 2.1 Ghana: Bilateral and Multilateral ODA from 1980 to 2007 (US\$ mn)



Source: OECD Creditor Reporting System (CRS) database.

Notes: Data are based on commitments in current US\$.

Equity investments are not included (either for bilateral or total ODA).

Donors have been comparatively very supportive of an economy which is growing rapidly, performing well on poverty reduction, and with stronger democratic structures, but heavily burdened with official debt. Support for the HIPC debt initiative and Ghana's Poverty Reduction Strategy (GPRS-1) are reflected in the surge in total ODA commitments, which rose by over 100% between

2003 and 2004, bilateral grants and loans by 127% and 160% respectively (Figure 2.1). These higher commitments were also reflected in actual disbursements that rose from US\$833 mn in 2003 to \$2008 mn in 2006, and were then \$1236 in 2007, and provisionally \$1797 in 2008. On a three-year basis disbursements rose 50% between 2003-5 and 2006-9¹¹. The official support is broad based: the World Bank provided 20.4% of ODA disbursements in 2007, Netherlands 12.8%, UK 11.9%, USA 9.4%, EC 6.7%, AfDB 5.4 % and Denmark 5%, with five other donors, Canada, France, Germany, Japan and Spain contributing between 2.5% and 4.7% respectively. However, aid support in Ghana is increasingly dominated by bilateral donors. As the pre-Accra review recognised, this multiplicity of donors (Table 2.2) exemplifies the need for action on implementation of the Paris Declaration on aid effectiveness.¹²

¹¹ Figures are from the Development Partner Envelope (World Bank, 2008).

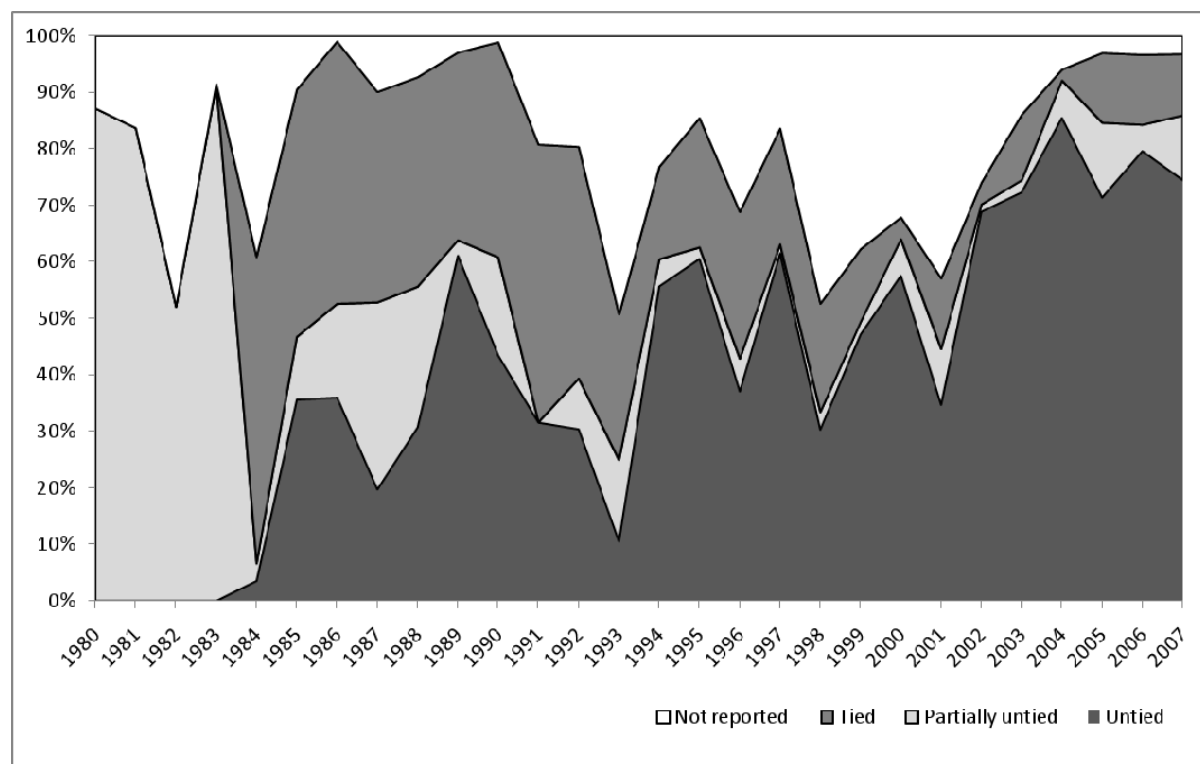
¹² The PD stresses actual ownership by partner countries through alignment, harmonisation, a focus on results and mutual accountability (OECD, 2008).

2.2 Progress in untying aid to Ghana

Trends in formal untying of aid

This statistical review considers the process of untying in terms of historical trends. Since 1983, when reporting of tying status began, there has been a considerable increase in the share of ODA to Ghana that is reported as untied. There is however also much short-term variability, associated in part with non-reporting. The trend to untying is paralleled with a falling share for partially untied, tied and non-reported aid. These trends are consistent with the changing political trends and policies of the period. Since 2001, the major change has been a reduction in ODA where the tying status is not reported. In 2007, the CRS reports that DAC bilateral¹³ ODA to Ghana was 75% untied, 11% partially untied, 11% tied and 3% not reported. This is fairly consistent with the rough average of LDCs and HIPC.

Figure 2.2 Untying bilateral ODA in Ghana 1980-2008



Source: OECD CRS database, commitments in US\$ mn.

As the data prior to 2001 on formal untying are highly incomplete due to partial and non-reporting by donors, it is difficult to draw firmer conclusions from the apparent trend before that year (Clay *et al.*, 2008). Nevertheless, it is clear from consistent multiple sources of information that in the current decade bilateral ODA to Ghana has become overwhelmingly formally untied. A survey supported by CIDA in 2004 found 75% untying of aid apart from debt relief (MAP Consult, 2007). During 2005-2007¹⁴, commitments reported by donor HQ to the CRS indicate that 77% or more of both grants and loans were untied, 8.7% partially untied (mostly EC assistance), and just 11% were formally tied

¹³ For the purposes of the study the EC is being considered as a bilateral donor.

¹⁴ As commitments are periodic in nature the study tries to take averages of three year periods where possible.

(Table 2.2). The bulk of this reported tying is TC linked grant aid (Tables 2.3 and 2.4). Survey results are, in fact, likely to be broadly similar, as most donors were found to rely on the information submitted by HQ to the OECD in responding to the MAP survey. The only difference appears to be the higher estimate of untying in the survey on monitoring the Paris Declaration. In 2006, on the basis of 94% of aid covered, the survey reported that 90% of aid was untied. In the 2008 survey this creeps up to 92%, meeting the target for continued progress over time.

Ghana as a non-LDC was not originally covered by the DAC 2001 Recommendation on untying. Nevertheless, the high level of untying suggests that donors have continued the process of untying generally, rather than just for aid to LDCs. In 2008, the Recommendation was extended to cover HIPC, and so now includes Ghana. The PD, in its Indicator 8 on aid effectiveness, calls for continued efforts to be made by donors to untie their aid. This commitment is found also to be associated with the further progress on formal untying up to 2007 (Clay *et al.*, 2008).

This apparent success story needs to be qualified by recognising that donors are reporting formal untying. The implications in terms of trade and development effectiveness through, for example, encouraging local sourcing have yet to be demonstrated. From the beginning of the untying process it has been recognised that it is important to make the distinction between formal and *de facto* tying. This statistical review can only record formally tied aid, whilst in later chapters issues surrounding *de facto* tied aid will be explored. Ghana has also been the subject of several empirical analyses of the economic effects of tying¹⁵, most notably Osei (2003), who concludes that tying of aid is leading to a significant price mark-up. These studies also provide points of reference against which to measure current practice.

Untying: individual donors actions

As expected, there is significant variation amongst donors on untying performance. Four DAC donors, (UK, Ireland, Norway and Luxembourg) report their aid between 2005 and 2007 as all formally untied. At the opposite end of the scale, Austria and Belgium report less than a quarter of their aid as untied. 13 donors in all report parts of their aid as tied, but in value terms the United States (41%) dominates, followed by the Netherlands, Belgium and Germany.

Partial untying is mainly practised by the EC, Spain, Italy, Canada and New Zealand and dominated by the EC, with over 90% of all partially tied aid. Similarly, various donors have chosen or do not feel able to report parts of their aid programmes. Japan is most significant in this category, with the tying status of 50% of its aid not reported, equivalent to 50% of all unreported aid between 2005 and 2007.

¹⁵ Another reason Ghana was selected as the pilot country case study.

Table 2.1 Bilateral donor commitments and untying status (2005-7)

	Bilateral ODA commitments (US\$ mn)	Untied aid share of donor ODA (%)	Partially untied share of donor ODA (%)	Tied share of donor ODA (%)	Not Reported share of donor ODA (%)
United Kingdom	775.8	100	0	0	0
Ireland	7.4	100	0	0	0
Norway	2.7	100	0	0	0
Luxembourg	0.2	100	0	0	0
Denmark	142.3	95.4	0	0	4.6
France	284.4	92.2	0	2.1	5.6
Sweden	30	89.7	0	10.3	0
Greece	0.5	87.2	0	12.8	0
Switzerland	26.1	86.7	0	1.4	12.0
Germany	379.9	86.0	0	8.7	5.2
New Zealand	0.4	85.1	14.9	0	0
United States	724.5	79.2	0	20.8	0
Netherlands	331.9	70.4	0.1	29.5	0
Canada	31.4	56.8	10.4	28.6	4.2
Italy	4.7	49.8	17.6	10.0	22.6
Japan	108.8	49.1	0	0	50.9
Spain	46.4	47.1	50.8	0	2.1
Australia	0.7	45.1	0	26.3	28.7
Finland	0.8	22.1	0	77.9	0
EC	323.9	20.7	79.3	0	0
Austria	0.7	14.0	0.2	85.8	0
Belgium	62.7	5.2	0	94.8	0
Total	3286.2	77.1	8.7	11.0	3.2

Source: OECD CRS database, commitments in US\$ mn.

Notes: Portugal did not provide ODA to Ghana during this period

Excluding both debt relief¹⁶ and general budget support from the calculation gives a picture of how far donors are untying project aid. This changes the overall picture significantly in some cases. The three biggest shifts are that the proportion of untied aid falls for Sweden from 90% to 14%, for Germany from 86% to 41%, and for Spain from 47% to 13%.., The EC provided no untied aid at all to Ghana between 2005 and 2007, excluding debt relief and GBS However, the shift to budget support should not be ignored as it is an important form of untied aid delivery for many donors.

¹⁶ One justification might be because it is not 'new' aid. Debt relief is also 'temporary' and therefore its inclusion can be misleading as to the underlying trend.

Table 2.2 Bilateral donor commitments and untying across donors (2005-7)

	Bilateral ODA commitments (US\$ mn)	Untied aid share of bilateral ODA (%)	Partially untied share of bilateral ODA (%)	Tied share of bilateral ODA (%)	Not Reported share of bilateral ODA (%)
United Kingdom	775.8	30.6	0	0	0
United States	724.5	22.6	0	41.7	0
Germany	379.9	12.9	0	9.2	19.1
Netherlands	331.9	9.2	0.1	27.1	0
EC	323.9	2.6	90.2	0	0
France	284.4	10.3	0	1.7	15.3
Denmark	142.3	5.4	0	0	6.3
Japan	108.8	2.1	0	0	52.9
Belgium	62.7	0.1	0	16.4	0
Spain	46.4	0.9	8.3	0	0.9
Canada	31.4	0.7	1.1	2.5	1.3
Sweden	30.0	1.1	0	0.9	0
Switzerland	26.1	0.9	0	0.1	3
Ireland	7.4	0.3	0	0	0
Italy	4.7	0.1	0.3	0.1	1
Norway	2.7	0.1	0	0	0
Finland	0.8	0	0	0.2	0
Australia	0.7	0	0	0.1	0.2
Austria	0.7	0	0	0.2	0
Greece	0.5	0	0	0	0
New Zealand	0.4	0	0	0	0
Luxembourg	0.2	0	0	0	0
Total	3286.2	100	100	100	100

Source: OECD DAC CRS database, commitments in US\$ mn.

Notes: Portugal did not provide ODA to Ghana during this period

Untying and aid instruments

Aid to Ghana was also influenced by the wider trend from bilateral loan to grant financing, especially from the mid 1990s. Whereas loans accounted for 86% of bilateral ODA in 1980 and over 50% during 1987-8, the value of new loan commitments, though fluctuating, declined progressively, especially after the Helsinki Accord in 1991, as donors phased out loan aid more generally. So by 2005-07 bilateral ODA is overwhelmingly on grant terms (91.3%), with loans accounting for 8.1% (Figure 2.1). The identification of Ghana as a heavily indebted poor country (HIPC) in 1998 was also pointed to by some donors (e.g. Japan) as a further reason for phasing out loans, even though they retained them in their portfolio of aid instruments. Whilst some 37% of disbursements during 2005-07, including World Bank, IMF and AfDB flows were accounted for by loans, the share of loans in bilateral ODA declined to 8% (Figure 2.1). Currently, there is little difference between loans and

grants in terms of the reported tying status with only a marginally higher share of partially tied ODA for loans¹⁷. The small amount of equity investment has a high share of partially untied aid.

Table 2.3 Untying status and aid instruments (2005-7)

	Bilateral ODA commitments (US\$ mn)	Untied aid share of bilateral ODA (%)	Partially untied share of bilateral ODA (%)	Tied share of bilateral ODA (%)	Not Reported share of bilateral ODA (%)
Grant ODA	3000.4	77.6	7.7	11.1	3.5
Loan ODA	266	74.7	14.8	10.5	0
Equity investment	19.8	34.1	65.9	0	0
Total	3286.2	77.1	8.7	11	3.2

Source: OECD CRS database, commitments in US\$ millions.

Unlike grants and loans, data on mixed credit arrangements (MCA) is very difficult to uncover. The Government of Ghana budget lists several loans that appear to be tied to ongoing aid projects so they have clearly not fully disappeared. However, the generally accepted view in the 1980s and 1990s that bilateral loan funding of some DAC donors, especially as part of a mixed credit arrangement was usually tied to complementing commercial credit sourcing of goods and services in the donor economy is declining. These arrangements have for the most part disappeared. Most DAC member mixed credit arrangements that were still on-going e.g. of the Netherlands under the ORET scheme, were close to completion and would not be replicated.

Table 2.4 Untying status and aid type (2005-7)

	Untied aid share of donor ODA (%)	Partially untied share of donor ODA (%)	Tied share of donor ODA (%)	Not Reported share of donor ODA (%)
Wholly TC (incl. FTC)	35.0	4.4	36.8	23.8
With some TC component	0.8	0.0	0.0	99.2
Without TC component	80.3	15.9	3.8	0.1
TC component not reported	86.8	0.2	12.5	0.5
Total	77.1	8.7	11.0	3.2

Source: OECD CRS database, commitments in US\$ mn.

Notes: Producing a breakdown by TC share involves important assumptions about the structure of the data¹⁸.

¹⁷ This is of course consistent with the conclusions in Clay *et al.* (2009) *The trade implications of aid instruments and tying practices: Ghana country study* – a KfW funded study produced in parallel and responsible for the funding of this pilot study.

¹⁸ All missing values have been considered as zero. Therefore, the table should be interpreted carefully. “Without TC” are projects for which donors either reported the absence of a free standing technical cooperation component, or for which donors did not report at all (and so there may be projects which in reality have a partial technical cooperation component which are erroneously categorized under “without TC”). Similarly, “wholly FTC” are projects for which donors reported a free-standing technical cooperation component and no sector programme/investment project component or for which donors reported a free-standing technical cooperation

Untying and aid type

The ‘type’ of aid has a significant and two-way theorized relationship with untying. Technical Co-operation (TC) is heavily associated with tied aid. This is probably linked to a number of factors, for example, donor comparative advantage and the provision of ‘goods-in-kind’. Between 2005 and 2007, 35% of wholly TC projects were untied compared to 80% of projects with no TC component. Importantly, freestanding technical co-operation is excluded from the 2001 Recommendation. Another feature of TC is the very high share of non-reporting for hybrid projects, (projects having both goods and services components), 99% had no reported tying status. This suggests that there is a serious reporting problem as the vast majority of projects are categorized as hybrid.

Untying and aid modality

The surge in aid has been associated with a shift in the use of modalities, especially the Action to Reduce Indebtedness and the Multi-Donor Budgetary Support (MDBS) Initiative which together accounted for approximately a quarter of aid commitments in 2007 (Table 2.6). When including sectoral budgetary support and multi-donor basket funding, the alternative, project type assistance, accounts for around two thirds of disbursements in 2006 and 2007 (Table 2.7).

Nine donors provide General Budget Support (GBS), with the UK and Switzerland providing GBS as the largest share of their aid of between half and two-thirds. Seven other donors provide GBS, and as a share of budget support provided by all donors, the UK and EC are the largest providers by value after the World Bank. Budget support is important because it is both untied and uses the country procurement system by default.

Over the limited period under review the proportion of ODA as budget support (all forms together) was stable and project based aid was increasing as a share at the expense of pooled/basket funded aid. Given the increase in untied aid over the period this would suggest that untying is not a sufficient condition for the ‘new’ aid modalities.

Beyond the Consultative Group Donor Partner Envelope, data on use of modalities for Ghana is very incomplete, in the CRS, Budget Support is a sector variable only. There is no information about associated procurement in the disbursement of funding. To fill this gap, a pilot questionnaire was circulated to donors seeking additional information; the response was limited but informative. After the Paris Declaration country review some clearly felt themselves to be over-investigated, whilst others were unsure about providing details of contracting and procurement to independent researchers.

The questionnaire was circulated to all the major donors,, but replies were received only from Canada (CIDA) and Switzerland (SECO). The CIDA response is included here as an example of donor use of a range of modalities (Table 2.5).

component and incomplete/missing information on sector programme/investment project component (therefore there may be projects which in reality have a partial technical cooperation component which are erroneously categorized under “wholly TC”).

Table 2.5 CIDA response to modalities questionnaire

	2007 (US\$ mn)	2007 (%)
CG Donor Partner Envelope - total disbursements	58.16	100
a. Budgetary support (including GBS and SBS – unearmarked)	34.6	59.5
b. SBS – earmarked	Nil	Nil
c. Projects using partner government country procurement system (CPS)	6.7	11.5
d. Projects using non-government partner procedures – NGOs and private commercial organizations (PCOs)	4.7	8.1
e. Pooled funding arrangement according to CPS or lead agency procedures	0.7	1.4
f. Project funding involving agency's own procurement at country office level, which may be tied or untied	N/A	N/A
g. Project funding involving agency's own procurement through HQ – tied or Untied	1.3	2.2
h. Hybrid project including c, and f. or g.	3.9	6.7
i. Other (please specify) Projects using Canadian Executing Agencies – project funding involving CEA's own procurement with agency's guidelines.	8.1	13.9

Donors employ a variety of modalities and therefore tend to use a wide range of procurement methods, including hybrids of various procurement systems. The nature of untying will be affected by these different situations. This highlights a current ambiguity of the untying data. A project reported as untied but procured from donor HQ is likely to be different from one which uses the CPS or a private entity's own system.

A second ambiguity in the current data to be explored is the lack of clarity both in terms of actual definition and in terms of data on pooling/basket funding. Pooling in terms of a bilateral donor contributing funding to a project run by a multilateral donor is not new. However, some of the latest approaches to pooling, which go beyond mere coordinated disbursement, are 'new aid modalities' and deserve to be brought into the open.

Ghana is considered to have performed well in strengthening its country systems for public financial management and public procurement and was reviewed as operating 'above average' in the 2008 PD monitoring survey. However, the use of the public financial management system for aid actually declined between 2005 and 2007 from 62% to 51% and the use of the CPS, including budgetary support, rose only from 52% to 56% of total ODA¹⁹. This suggests that donors in Ghana are not responding to the opportunity offered by improvements in these systems to channel untied aid through government and especially shift to budget support.

¹⁹ Figures from 2008 Survey on Monitoring the Paris Declaration.

Table 2.6 Total disbursements by modality (2003-8)

	2003-2005	2006	2007	2008 (e)
General Budget Support (% of total)	867.2 (30.5)	327.7 (26.7)	315.9 (25.6)	381.3 (22.2)
Sector Budget Support (% of total)	13.6 (0.5)	18.6 (1.5)	36.4 (2.9)	120.6 (6.7)
Sector Budget Support (earmarked) (% of total)	36.0 (1.3)	17.6 (1.4)	24.1 (1.9)	39.1 (2.2)
Pooled approach (% of total)	298.3 (10.5)	100.9 (8.2)	100.2 (8.1)	110.7 (6.2)
Project Approach (% of total)	1,471.8 (51.8)	643.8 (52.5)	759.4 (61.4)	1,144.7 (63.7)
IMF BoP Support (% of total)	53.4 (1.8)	116.6 (9.5)	-	-
Total (% of total)	2,840.3 (100.0)	1,225.3 (100.0)	1,236.0 (100.0)	1,796.5 (100.0)

Source: Ghana Consultative Group Donor Partner Envelope, 2008

Table 2.7 Budgetary Support: disbursements by donor (2005-07)

	General Budget Support (GBS)	Sector Budget Support (SBS)	Total ODA	GBS+SBS as a % of Donor's total ODA	Donor BS ODA as a % of total BS ODA
Canada	46.23		183.44	25.2	3.9
Denmark	24.40		200.33	12.2	2.0
EC	79.48	2.90	313.15	26.3	6.9
France	57.71	0.77	130.05	45.0	4.9
Germany	39.27		140.87	27.9	3.3
Japan	3.12		119.64	0.3	0.3
Netherlands	91.09	38.36	459.45	28.2	10.8
Switzerland	22.69		35.94	63.1	1.9
UK	226.96	88.65	446.97	70.6	26.3
WB	353.10	45.00	872.15	45.6	33.2
AfDB	80.79		150.3	58.3	6.7
Total	1,024.84	175.67	3421.59	35.1	100.0

Source: Ghana Consultative Group Donor Partner Envelope, 2008

Notes: GBS – General budgetary support; SBS – Sectoral budgetary support; BS = GBS+SBS.

Sectoral Tying Practice

ODA to Ghana is heavily concentrated in social sectors rather than in growth and infrastructure, aside from transport and storage (Table 2.8). Budget Support and Other Commodity Assistance are the only sectors reported as 100% untied from 2005-7. Across all the sectors, the average share of untied aid is roughly 60%.

Ignoring food aid which is excluded from the Recommendation, of the top 20 sectors in terms of ODA commitments, Transport, Water & Sanitation, Government & Civil Society, Basic Education, Basic Health, Industry, Business & Other Services and Energy all had untied shares under 75%. Clearly there are a wide range of sectors where untying is not complete. Tourism, Trade Policy, Communications, Forestry and Secondary Education all have tied shares above 50% and the first two above 80%. Notably, these are mainly sectors where TC is a key donor input. It is also common for the tied aid to be dominated by a few donors. For example, 96% of reported tying in W&SS is accounted for by Belgium and the Netherlands.

Of the top 20 sectors, non-reporting was highest in Industry, Business and other services, Secondary and Post-secondary education. There is no rationale for these sector specific effects and this outcome is equally likely to be a product of the limited number of projects and donors involved in each sector.

There has been an increase in ODA supplied as debt relief and budgetary support at the same time as increased untying. These two developments are wholly consistent, since debt relief and budgetary support are typically untied. However, MAP Consult (2007) demonstrate the impact of excluding debt relief from untying figures. This can be justified as debt relief is not 'new' aid. Without BS, and on a disbursements basis, the level of untying is reduced by 18% compared to the figure including BS. The impact on particular donors is even larger. For example, MAP Consult report that in 2004, Japanese debt relief was 94% of Japanese ODA to Ghana.

Table 2.8 Sectoral distribution of ODA and untying status (2005-7)

	Untied aid share of sector ODA (%)	Partial tied share of sector ODA (%)	Tied share of sector ODA (%)	Not Reported share of sector ODA (%)	Bilateral ODA commitments (US \$ mn)
VII. Action Relating to Debt	99	0	1	0	518
VI.1. General Budget Support	100	0	0	0	507
II.1. Transport & Storage	59	32	9	0	403
III.1.a. Agriculture	84	2	9	5	327
I.1.a. Education, Level Unspecified	98	0	0	3	260
I.2.a. Health, General	79	7	7	7	169
I.4. Water Supply & Sanitation	29	22	50	0	150
IV.2. Other Multisector	93	0	6	1	147
I.5.a. Government & Civil Society	61	16	16	7	145
I.1.b. Basic Education	72	2	22	3	118
I.2.b. Basic Health	51	34	10	5	77
I.3. Pop'n & Reproductive Health	85	0	12	3	74
VI.2. Dev. Food Aid/Food Security Ass.	10	0	90	0	60
III.2.a. Industry	48	38	2	12	49
II.5. Business & Other Services	18	18	46	18	41
II.3. Energy	59	34	1	7	39
II.4. Banking & Financial Services	98	0	0	2	37
XII. Unallocated/Unspecified	5	0	89	6	32
I.1.d. Post-Secondary Education	13	0	75	11	27
VIII.1. Emergency Response	93	3	3	1	26
I.6. Other Social Infra. & Services	49	14	13	25	21
I.1.c. Secondary Education	28	1	3	68	11
III.1.c. Fishing	9	79	10	2	11
IV.1. General Environment Protection	61	25	8	7	7
III.1.b. Forestry	31	0	0	69	7
III.3.a. Trade Policies & Regulations	39	0	0	60	6
VI.3. Other Commodity Ass.	100	0	0	0	5
IX. Administrative Costs of Donors	54	0	15	31	3
I.5.b. Conflict, Peace & Security	66	0	0	34	3
X. Support to NGO'S	85	0	15	0	2
XI. Refugees in Donor Countries	78	0	20	2	2
II.2. Communications	15	0	0	85	2
III.3.b. Tourism	0	19	0	81	2
VIII.3. Disaster Prevention &	100	0	0	0	0
III.2.b. Mineral Resources & Mining	100	0	0	0	0
Total	77	9	11	3	3286

Source: OECD CRS database, commitments in US\$ mn.

Water & Sanitation Sector

The study considers aid to the W&SS in more detail. Ghana has made considerable progress in extending access to ‘improved’ water and sanitation. The proportion of the population using ‘improved’ water increased from 55% in 1990 to 75% in 2004. However, the proportion using improved sanitation rose only from 15% to 18% over the same period. The challenge in assuring access to potable water and better sanitation is compounded by the growing urban population, increasing from 3 million in 1975 to 10.8 million in 2005, and projected to rise to 15 million in 2015.

The focus of this study on efficiency in aid provision has to be set in the context of the need for more funding and effective use of resources in a key sector for health and development. As a recent ODI Briefing Paper concludes:

“Historically, water and sanitation has suffered from severe under financing. This results from: a lack of internal financial capacity in the poorest of countries to achieve water and sanitation goals; poor political decisions for allocation of development aid; an overall reduction over time in development aid; and the limited cost-recovery potential in poverty-stricken regions. In addition, poor targeting of aid and a multiplicity of actors and structures compound the financial shortfall.... To ensure that resources for safe water and sanitation are used effectively at the local level, the local capacities to design, finance and manage improved service delivery must be greatly enhanced.”(Schuster-Wallace *et al.*, 2008)

As 2007 is the latest available year for which data were available to the study, the conclusions which follow do not take account of the effects of the ensuing global financial crisis, although these effects can be speculated upon.

The team was highly selective when choosing the case studies, purposively focusing on a limited group of donors and their practices in a single sector. The donors included the five largest bilaterals, as well as those with the largest W&SS portfolio and additionally those that had cooperated at HQ level in Phase One of the Thematic study on Untied Aid: Canada (CIDA), Denmark (Danida), the EC, France (AFD), Germany (BMZ, GTZ and KfW separately), Japan (MOFA and JICA), the Netherlands, Switzerland (SECO), the US (Millennium Challenge Corporation) and the UK (DfID).

Table 2.9 Untying in the Water & Sanitation Sector

	Bilateral ODA commitments reported to CRS (US \$ mn)	Untied aid share of donor ODA (%)	Partially untied share of donor ODA (%)	Tied share of donor ODA (%)	Not Reported share of donor ODA (%)
Netherlands	57.7	32	0	68	0
EC	32.4	0	100	0	0
Belgium	32.1	0	0	100	0
United Kingdom	14.2	100	0	0	0
Canada	11.9	79	0	21	0
Germany	1.4	42	0	54	4

Source: OECD CRS database, commitments in US\$ mn.

Six donors reported more than US\$1mn between 2005 and 2007 to the Ghanaian W&SS. Of those, Belgium and the EC had no untied aid. The study targeted untied aid projects but did attempt to also include the EC to investigate partial untying. Germany has been pulling out of the Ghanaian water sector since 2007 and therefore did not have ongoing projects with available documentation to study. The Netherlands projects are mainly run from headquarters in The Hague under the ORET scheme, so again were not suitable for study in-country. As a consequence the study focused on the UK and Canada for case studies. All donors were contacted and as a result, Danish aid to the sector committed before 2005 was brought forward for inclusion. These case studies and their evidence are discussed further in chapter 4. Before that, the econometric analysis is employed to explore quantitatively the influence some of the factors identified above.

3 ECONOMETRIC ANALYSIS OF THE IMPLICATIONS OF BILATERAL AID FOR DONOR EXPORTS

3.1 Objective and scope

As DAC members are developed industrial countries they are likely to be a source of goods and services imports by aid recipients. The flow of exports from a donor country to a recipient country is likely to be influenced by factors such as the size of the exporting economy (France's exports are likely to be larger than those of Belgium), proximity or distance, and sharing a common language. Even the total level of aid might affect the exports of all donor countries. However, in a multi-donor world, where no single donor dominates, there is no reason why the level of aid from a donor to a recipient would influence that donor's exports to that recipient, unless bilateral aid were having a trade distorting effect through explicit or implicit tying. Tying is widely considered to advantage exporters in the donor country. Untying is therefore expected to reduce the distorting bias of aid in favour of the donor's exports. Similarly bilateral concessional loans were thought to be often associated with donor exports, for example through MCAs.

This section therefore investigates whether current bilateral aid flows and associated practices are having trade distorting effects. The aim is to understand whether bilateral ODA is an influence on donor exports, even with current high levels of untying, whilst taking into account other variables which might be influencing this relationship. Conventionally, tying status and the different forms in which aid is provided (for example loans and grants) have been hypothesised to influence aggregate donor export flows at the country level. A similar econometric investigation is being undertaken for each of the six case study countries and an overall analysis for the six countries will be provided in the Synthesis Report for the Thematic Study. The six countries are purposively paired according to trading region to isolate potential regional effects, and Ghana is here paired with neighbouring Burkina Faso.

3.2 Methodology

A range of possible explanatory factors is explored to find out what might be influencing exports of bilateral donors to Ghana.

GDP and GDP per capita of donor countries, which proxy for economic size and level of development respectively, are potentially important determinants of donor bilateral exports. It could be expected that the larger the donor country's GDP the higher the level of exports, with countries such as Japan or United States exporting more than Luxembourg or Switzerland. Empirical investigations have found that bilateral trade between two regions (countries) is inversely related to the *distance* between them; distance usually proxies for transport costs as well as time, unfamiliarity, market access barriers and so on. *Common language*, and the existence of common cultural factors, can help to facilitate trade flows between countries. *Aid flows* from donor countries to Ghana might be a possible influence on exports. But it is important to distinguish between an individual donor's ODA and ODA that Ghana receives from all other bilateral donors when looking for any trade distorting effects of aid, i.e. whether bilateral aid from a particular donor to Ghana affects trade between that donor and Ghana differently from aid from other donors. It is also possible that certain aid instruments impact differently on trade flows; it might therefore be important to disaggregate ODA into *loans and grants* whilst distinguishing aid instruments according to the origin of the flows. Moreover, when a donor provides tied aid, the recipient is constrained to the purchase of donor

country exports, and so there is a direct link between formally tied aid and trade. The *formal tying status of aid*, computed as the percentage of donor ODA reported as tied, is expected to be an important factor in determining bilateral exports. There are other possible influences which should be taken into account: *foreign direct investment* is another potentially important influence on trade between countries, as well as *export credits*. Additionally, any ACP-EU relationship might be an influence on exports from EU countries, so including a variable for *EC disbursements* is a way to explore this relationship further.

The analysis adapts the gravity model as used extensively in the literature, but in this case to estimate bilateral export flows from DAC donors to Ghana, and incorporating many of the influences listed above as explanatory variables.

There may also be a number of unspecified influences that affect both aid and exports in the model. The omission of variables representing such influences (either difficult to measure or unquantifiable relationships such as political ties between the donor and the recipient, or simply underlying relationships not identified as potential determinants) could lead to attributing too great an importance to the explanatory power of foreign aid. Aid could be a proxy for a complex economic relationship including several of these omitted variables. In order to explore this possibility an OLS regression of imports from the aid recipient to the donor is estimated and the *residuals* from this regression are included as a variable in the equations ‘explaining’ donor export. This procedure is carried out on the assumption that underlying relationships, and more in general unmeasured variables, between the donor and the recipient (trading partners in this case) affect imports and exports in the same way (Wagner, 2003).

Annex E includes further details on the empirical specification, as well as the theoretical framework, a review of possible methodologies and a brief discussion of the problems in estimating the determinants of exports related to the nature of the aid and trade relationship.

3.3 Data

Empirical estimation includes 22 DAC donor countries, with observations covering the years 2002-2007, mainly due to data quality issues and availability; further details are given in the Annex. The bilateral trade data comes from the IMF Direction of Trade Statistics database, ODA data is taken from the OECD CRS database, and official export credits are as reported to the OECD. The analysis uses aid disbursements and not commitments, because trade effects are expected to follow ‘real’ disbursements more closely. Data on the tying status of aid are not available in disbursement form²⁰. Therefore, a proxy for the tying status is computed by applying the share of tied commitments to total commitments (average of the previous two years), and then assuming the tied share in disbursed aid to be similar. The data for GDP and GDP per capita come from the World Development Indicators (WDI) Online database. All nominal variables (exports, export credits, GDP and GDP per capita) are deflated into 2000 constant US dollars using DAC deflators. Data for distance and the common language dummy are taken from the CEPII Distance Database.

3.4 Results

Findings at the country level suggest probabilistic and not necessarily robust economic relationships. Limitations on the availability and quality of the data, the small sample and potential problems with

²⁰ In the OECD Creditor Reporting System, tying status is reported against new commitments only.

the econometric model, suggest caution in interpreting the results²¹. The Synthesis Report will provide a fuller and possibly more robust analysis by comparing results from all six countries, and highlighting similar patterns and systematic differences. Bearing that caution in mind, the results for Ghana are presented in Table 3.1. These results are shown for a series of equations in which, first, total bilateral aid as a variable, second, tying is introduced, third, aid is separated into grants and loans, fourth, official export credits are introduced as an explanatory variable, and lastly EU aid is considered as a separate influence only on EU member state exports.

Table 3.1 Ghana: Econometric analysis of donor exports during 2002-2007

Dependent variable: Exports	1. ODA aggregated	2. Tying status	3. ODA disaggregated (loans and grants)	4. Export credits	5. EC variable
GDP	0.606***	0.582***	0.601***	0.603***	0.643***
GDP per capita	-0.308	-0.545	-0.636	-0.635	-0.358
ODA i	0.185***	0.187***			
ODA All-i	0.065	0.03			
Distance	-0.205	-0.184	-0.234	-0.23	0.47
Common language	0.197	0.18	0.136	0.132	0.218
Import residual	0.088	0.033	0.04	0.036	0.057
Tying status %		0.390**	0.430**	0.413**	0.419**
Grants i			0.183***	0.183***	0.180***
Grants All-i			-0.054	-0.059	-0.052
Loans i			0	0	0.002
Loans All-i			0.123	0.122	0.12
Export credits				-0.008	-0.012
EC disbursements					0.051**
Constant	-136.413***	-114.485**	-109.830*	-103.207*	-95.552
N	121	117	117	117	117
N_g	22	21	21	21	21
r2_w	0.269	0.276	0.271	0.272	0.268
r2_o	0.718	0.722	0.714	0.713	0.763
r2_b	0.791	0.794	0.784	0.784	0.829

Note: All variables are in natural logarithms (except common language and tying status). All regressions include a time trend not reported. The dependent variable is the annual level of exports to Ghana during 2003-7 for the i^{th} donor country. Similarly total ODA, grants and loans are for the i^{th} donor or for all other donors.

Key: * significance at 10 percent, **significance at 5 percent, *** significance at 1 percent.

²¹ See data section in annex D for further details.

The results of the econometric analysis are in line with expectations and previously published findings about the broader influences on exports. The size of the donor economy is an important determinant of bilateral exports; the parameter estimate²² indicates that a 1% increase in GDP is associated with around a 0.6% rise in exports. Other potential influences are found to be wholly insignificant: distance and common language, export credits²³, the level of development of donor countries, measured by their income per capita level, have no impact on bilateral export flows. The import residuals variable is not significant indicating that there do not seem to be existing underlying relationships between the donor and Ghana significantly influencing bilateral exports.

Aggregated aid flows from a donor have a significant impact on that donor's exports, whereas ODA from the rest of bilateral donors are not a significant influence.. The results suggest that a 1% increase in donor aggregate aid flows is associated with around a 0.2% rise in exports, even where aid is overwhelmingly untied.

When aid is disaggregated in terms of loans and grants, grants from the donor country are found to be positively associated with donor's exports; a 1% increase in grants from the donor country causes around 0.2% increase in bilateral exports. However, grants made by other bilateral donors are not significant for any single donor's exports. Again disaggregate aid flows estimates could suggest the existence of some trade distorting effects of aid, at least for grants; loans, which are an unimportant form of aid in Ghana, also following the debt relief under the HIPC initiative, are not a significant influence on donor exports²⁴.

The direction of the relationship between formally tied aid and exports is as expected and robust: the estimated tying status variable is significant and positive. The higher the percentage of tied aid over donor ODA the higher the export flows from the donor country to the recipient. This result is not trivial because it is not clear that tied aid always leads to an increase in donor exports; tied aid may simply finance donor exports that would have been procured from the donor country anyway (Johansson and Petterson, 2009).

Results suggest that ODA disbursements from the EC impact positively on bilateral donors' exports. This seems to support the idea that the ACP-EU relationship is a positive influence on exports from EU countries in ACP recipient countries such as Ghana.

These results confirm that bilateral aid, even with a high degree of untying, still has a trade distorting effect. Ghana has long been and still is highly dependent on donors' assistance, and such results are suggestive of informal or *de facto* tying. It is difficult to explain why bilateral grants from a particular donor to a recipient country would affect trade between that donor and recipient pair differently from grants from other donors, without some such explanation. Loans, and also official export credits from DAC members, are an unimportant source of funding and so that may explain the failure to find a statistical relationship. A possible alternative explanation is that aid flows result in increased donor exports reflecting the goodwill on the part of the recipient towards the donor. The aid relationship

²² The parameter estimates commented on in this section refer to the last specification of Table 3.1.

²³ This might be related to the quality of the data (very few observations and missing values have been treated as zeros; See data Annex to see how export credits variable has been computed).

²⁴ Loans represent around 5.5% of aid flows in the dataset.

may facilitate trade by increasing the recipient's proclivity to procure goods from the donor (reinforcing commercial ties)²⁵.

Ghana and Burkina Faso compared: it is interesting to compare the results of the econometric analysis for Ghana, a low income country (OLIC), with those obtained for Burkina Faso, a least developed and relatively aid dependent country in West Africa. The results presented in Appendix E (Table E.1) are quite similar for the two countries. In both cases, donor GDP plays a significant role in explaining exports. There is some support for the hypothesis that aid flows at an aggregated level and grants at a disaggregated level could be informally or *de facto* tied; bilateral ODA, and more specifically bilateral grants from a particular donor to a recipient country, affect bilateral exports between that donor and recipient pair differently from ODA/grants from other donors. In contrast to Ghana, in Burkina Faso bilateral loans from the donor have a significant and positive influence, but there is no robust indication that formal tied aid is associated with higher bilateral export flows.

Both countries are full ACP members, and EU (EC) disbursements are found to be positively associated with export flows from EU member states. However import residuals are not significant, suggesting a more aid dependent rather than reciprocal trading relationship. The other striking difference relates to the common language variable: sharing the same official language, French, with Burkina Faso increases export flows. This language factor does not hold for Ghana; perhaps, with English as the lingua franca of international economic relationship, it confers no advantage on Anglophone countries.

Overall these results suggest that aid is still a distorting influence on trade, even after untying of most bilateral ODA, justifying a closer, disaggregated examination of the uses of aid and sourcing of goods and services with aid funds. The contrasting findings for Ghana and Burkina Faso also suggest that it would be worthwhile to extend the econometric investigation to consider more countries in the Synthesis Report.

²⁵ See theoretical framework in Annex for further details.

4 THE PROCESS OF UNTYING – PROJECT ANALYSIS

4.1 Introduction

The statistical analysis suggested that the impacts of several of the categories of aid are not well detailed, particularly the effect of modalities and project types. The suggestion from the econometric analysis is that both ODA from a bilateral donor to Ghana, and particularly tied ODA from a bilateral donor, may be linked to increasing exports from that donor to Ghana. These relationships are both worth investigating. In addition, the team sought to complement these analyses by reviewing and, where possible, collecting quantitative data about current donor practices for untied aid projects such as the use of instruments and modalities, and also specific institutional practices. By carrying out an individual empirical analysis for each project the aim was to provide a greater understanding of the joint outcome of these many factors, with real examples from the project level. This was not possible at the country level despite the big increase in the level of detail available compared to the global analysis.

Initially the team considered projects supported by CIDA, Danida and DfID, the EC, AFD, KfW, the MCC and the Netherlands. All donors were supportive, meetings were held and preliminary information was collected before it was decided to focus on the CIDA and Danida/DfID projects. Briefly, the EC project was de-prioritised as it was a pool with UNICEF and therefore access to documents and data was difficult. It also used mainly UNICEF, which are not the object of investigation in the study, but it does show the most common impact of ‘full’ pools involving multilateral agencies. AFD, KfW and the MCC all offered projects. The AFD and KfW projects were recently finished and so lacking documentation, or (because of the common two year rotation policy) lacking staff involved in their implementation on the donor side and lacking documentation on the recipient side. The MCC projects were active, but were experiencing delays in starting procurement and therefore there was little to investigate. The Netherlands had active projects but they were not run from the country office so documentation and staff with specific knowledge were not available.

CIDA and Danida/DfID had projects that fitted the criteria of being majority untied, still active and with procurement activities having already taken place, as well as having project staff in place who had worked on the projects, and locally available documentation. These experiences in undertaking the pilot study showed that, even in ‘busy’ sectors with many donors, the number of projects available to be case studies would be severely limited.

CIDA and Danida/DfID therefore assisted this part of the study by providing contacts and access to documents for some of their ongoing projects in the W&SS. The CIDA-supported NORWASP²⁶ project ran from 1999 to 2008 and the NORST²⁷ project was commissioned in 2008. Both projects are mainly targeted at water supply in the Northern Region and have budgets between \$CDN 15-20mn. Their primary concern is the construction and installation of boreholes, wells and pumps. Within the Danida portfolio the team looked at the Damanko-Kpassa (referred to below as ‘Damanko’) water supply project in Nkwanta North District of Volta Region. The project aim is to provide clean drinking water to a number of communities where Guinea worm is endemic, through provision of a water treatment plant and distribution network. The total budget for physical works and equipment is approximately GH¢ 5mn, provided by DfID and the Government of Ghana. The TC component is provided by Danida. It is designed to run from 2006 until 2009.

²⁶ The Northern Region Water and Sanitation Project.

²⁷ Northern Region Small Towns Water and Sanitation.

The flow of funds was tracked from the project gestation right through to the final disbursement and end users. The process involved studying project documents, meetings with key actors and site visits. There was an element of ‘ground truthing’ to verify the reality of facts only seen otherwise on paper. Both projects included infrastructure, TC and capacity building and were grant funded.

This section draws on the material in the factual snapshots provided by the Ghanaian team (see full project case studies, Annexes A and B) and examines the current donor and recipient practice displayed in terms of the administrative transactions which they describe.

4.2 Extent of untying

Both projects were hybrid projects, comprised of both tied and untied components. The TC for both projects was tied, the Canadian being sourced from within Canada and the Danish supplied under a tied framework contract signed in 2003 with a Danish consultancy to support the wider sector programme which included this project. The existence of potential alternative bidders in both cases suggests a degree of competition. Tying of TC appears especially prevalent. In both projects everything else was found to be fully (both formally and *de facto*) untied.

Local officials suggested that tying TC is a “way of doing business” and the “aim is to make their life easier”. They also associated it with donor mentalities, suggesting that most donors found it easier to talk to domestic based consultants. However, when pressed, both donor and recipient partners stated the position as being easier to talk to any 'western' consultant. The discussions were often phrased using the term 'relationships'. These could also be seen as amounting to the 'capture' of donors by specific consulting organisations. The untied component of the Damanko project employed many Ghanaian professionals and consultants, which confirms that there was some scope to recruit in-country. Ghanaian professionals were also employed in NORWASP, but to a lesser extent. However, the comparison on nationality is only approximate, as these services are not perfectly tradable with transparent markets with which to compare services. A long term working relationship and the benefits this brings is seen by some informants to be of significant value, as for example, in the ability of consultants to regularly meet with donor HQ officials. The size and complexity of the TC contracts also meant that there was unlikely to be local supply capacity even if they had been procured in a formally untied manner.

4.3 Untying and project ‘level’

In both NORWASP and Damanko there were variations in the tying status of each project between the level of the head contract and the final disbursement. When donors report ODA to the CRS database they report the tying status of the project funds at the head contract level only. It proved too difficult to effectively identify the NORWASP and Damanko projects in the CRS database to see what is recorded. However, in reality there are multiple levels of contracts and subcontracts²⁸ in each project, each with their own conditions, which can vary between levels and from which a proportion of the funds flow down to the next level. There is no guaranteed hierarchy with tying or untying. In the case of NORWASP, within an initially tied contract there was then subcontracting with instructions to procure goods using ICB. Similarly, an untied contract could have restrictive procurement conditions added as it is further subcontracted, such as CPS tying funds to the local

²⁸ The two case study projects here had between 10 and 50 subcontracts and are not viewed as unusual in this respect.

market. NORWASP and the Damanko project identified how (even for fairly simple project structures) it is very difficult to conclusively identify the definitive tying status for a project.

4.4 Procurement systems

Similarly, there was no single procurement method or system in either project, indicating the difficulty of characterising a project by one form of procurement. For example, numerous clauses in the CIDA guidelines allow for different forms of procurement and these were often used. This flexibility allows different project agencies to manage different stages of the procurement. Both donors used a combination of their national procurement systems, the Ghanaian CPS via the local agency (CWSA), and private rules through private contractors following their own, essentially unrestricted procedures. In order to make a meaningful comparison of procurement 'systems' across projects, it is necessary to look at several key features of the various procurement systems identified in the project case studies.

A. Advertising

The projects studied here involved a mix of international competitive bidding (ICB) and national competitive bidding (NCB) with a few examples of single-sourcing and pre-determined lists. One key difference is that ICBs were advertised internationally whereas NCBs were only advertised in Ghana. In both cases the donor often also advertised in the donor country. The prevailing local view is that the extent of advertising determined which companies tendered bids and were therefore selected. An NCB is still open to international bidders, just not advertised internationally. The more extensive use of NCB in the Damanko project was felt to be a factor in the selection of mainly local firms and consequently of the large domestically sourced content.

The Damanko project involved contracting at the district level whereas NORWASP did so either at the CIDA HQ or CWSA national HQ level. Damanko district level contracting involved a very localised flow of information, explaining the high share of very local (small) companies winning contracts. In contrast, NORWASP, in procuring either internationally or at national level, contracted firms from Sri Lanka, the Netherlands, Kenya, UK, Canada, Burkina Faso, Côte d'Ivoire and China. At this primary contract level the trade implications of the projects are therefore very different. However, these projects also involved subcontracting lower down the scale of administration within Ghana, with the information flow hardly reaching beyond and so in effect targeted the local level, with a remarkably similar eventual outcome.

The level at which tenders are advertised appears to significantly determine which companies bid. In consequence the contractor type and origin depend on where the tender is advertised (globally, regionally, locally, and whether by donor or recipient agency). These guidelines may be specified directly or indirectly, for example, by using thresholds to determine how contracts will be tendered. An activity, which is formally fully untied (no restrictions on origin of bidders) but only is advertised in donor country is unlikely to have a similar outcome to one that is advertised in the local, recipient country media.

B. Lot size

The size of the subcontracted lots was a determinant of both the companies that tendered and those that won tenders for both projects. For the Damanko project, lot size interacted with the threshold determining the Ghanaian procurement standard. Smaller lot sizes reduced the

restrictions on companies in terms of the bond sizes they were required to post and the equipment they were required to have at their disposal. NORWASP allowed subcontracting, and there were approximately 50 different firms involved. Damanko specifically disallowed subcontracting, and instead split the tenders into small sub-projects and only allowed one successful bid per company. Whether by design or not, these rules appear to have resulted in an impact on the origin of the firms carrying out the work. On both projects, locally registered Chinese companies picked up the biggest lots. Small local Ghanaian companies won the remainder. International firms were unlikely to bid for the smaller lots, and local informants suggest that international firms were put off by the small potential turnover, especially when compared to the lower entry costs for Ghanaian firms. The way a project is packaged was important. In the two projects examined, tender size was determining e.g. bond size or experience required and often therefore, minimum company size. This in turn determined whether local companies had the skills and funding to bid. With lump sum contracts, in practice only very large firms were likely to tender, as only they had the cash reserves and access to credit to be able cope with the uneven disbursement flows.

C. Specifications

The only specific restrictions in sourcing the Damanko project arose from the requirement that the parts procured were compatible with CWSA standard parts lists. Usefully for the study this imposes a measure of consistency in terms of quality. A trade effect was observed for some of the more specialised parts, because specifications were associated with limitations on the source of supply. For example, the specifications called for a pipe diameter that was not domestically available (chosen to stop unauthorised connections to the water network). As a result, all contractors were obliged to import, overriding their default choices and with this requirement seemingly impacting on costs. In another case, CWSA specified the exact pump (including the manufacturer) to be procured for a highly unusual task, thus determining the source. It is therefore important to consider who is writing the specifications. In the examples above, the 'demand led' nature of the project was key (as opposed to a donor led mixed credit scheme, for example). Informants pointed to the origin (domestic for 'demand led projects') of the consultants doing the feasibility studies being an important influence on the decisions about specifications.

D. Local Preference

The Ghana CPS optionally allows a domestic preference of 7.5% on ICBs to be implemented before tendering. This option had been used in the past where local capacity could be clearly shown and this was seen (judging both by the complaints from foreign contractors and local opinion) to provide a sufficient margin to exclude non-Ghanaian bidders. The contractors excluded were likely to be those from the OECD countries. The Damanko project also had a stated aim of achieving local 'ownership' in order to be able to sustain maintenance. This was manifested in a push for local employment. At an unskilled level this is likely to have happened anyway, but there is some evidence that this was also true at the consulting level. A further requirement for the Damanko project was that all firms were locally registered with several ministries and had a history of work in the Ghanaian W&SS. Whilst in principle this would not exclude international firms, only those of Chinese origin appeared to find it easy or worthwhile to register local subsidiaries. These measures were seen as effective developmental tools, especially at the local level.

E. Technical Cooperation

The procurement of TC was separate from the rest of both projects and was subject to different rules. In each of the projects the TC component was separately procured by the donor under its national public procurement regulations and was either formally (NORWASP) or *de facto* (Damanko) tied, due to the size and accessibility of the framework contract, to Ghanaian firms. In each case the contract was won by a company based in the donor country that had a long-standing relationship with the donor agency, and was also perceived as 'world class'. As discussed earlier, the TC component was procured through HQ in both projects so that expenditure, although recorded as ODA, does not appear in trade statistics. A key factor in opting for HQ contracting was that the Ghanaian CPS was seen as especially slow in procuring 'international standard' consultants. The alternative recruitment agency tended to be domestically based for the donor ease of communication reasons, and this may affect sourcing of project staff.

F. Capacity

Procurement capacity, for example availability of legal professionals (or even having copies of the relevant documents), was also seen as being important by both donor and recipient informants on both projects. These effects were being amplified with the move to decentralise procurement down to the district level for the Damanko project where there was even less capacity. The impression given by CWSA was that a lack of capacity exacerbated imbalances in relationships within the project, and so reduced the ability of those responsible for monitoring and commissioning to 'throw the book at people'. In effect, without capacity, the recipient partners were likely to follow the sourcing preferences of the donor and their consultants and the private companies actually managing the day to day running of the project. In some cases capacity was seen as more important than the rules themselves. A NCB done badly was seen as likely to be worse for cost effectiveness than a single-sourced contract done well. The capacity required depended on the good or service being procured. Local procurement required far less capacity.

4.5 CPS and private procurement systems

The different procurement systems in evidence in the two case studies involved different combinations of the above features (A to F). Donor systems were only used for TC and/or head contracts and this is covered elsewhere. In both cases goods procurement was done by either the Ghanaian CPS or by the private contractors. Both had some distinctive features. The Ghanaian CPS, which is untied, allows for National Competitive Bidding (NCB²⁹) and International Competitive Bidding (ICB), but permits a premium to locally registered companies of 7.5% in competitive bidding. Its regulations have been closely based on those of the World Bank, which with other donors has provided TC to strengthen domestic procurement and financial management. Several donors in Ghana felt that there was now sufficient capacity to start using CPS in their projects, while other donors strongly disagreed. For example, one response, that of the US MCC, was to set up the

²⁹ NCB under the Public Procurement Act 663 allows international firms to bid under NCB but (differing from e.g. the WB definition of NCB) also allows discretion for international firms to be rejected.

Millennium Development Authority (MIDA), a Ghana-government based PIU solely responsible for disbursement of funds provided under the US MCA.³⁰

4.5 Private contractors

The individual firms in the Damanko project were responsible for their own procurement as long as the items met the agreed quality standards. Sourcing therefore was seen as being determined by 'ability' and 'mentality'. For example, the smaller companies working on the projects reportedly lacked the capacity to procure goods from abroad due to factors such as information, expertise and access to foreign exchange. Similarly, different contractors were able to get different prices for identical inputs and this led them to source from different places, with correspondingly different trade implications.

The prevailing attitudes to sourcing within the firms, part of the culture of the organisation, were also evident as an influence. Chinese firms sub-contracted on the Damanko project were directly importing toilet roll and noodles, even though both are easily obtainable in Ghana³¹. More importantly, this was also true for valves, construction machinery, sinks, etc. A company 'buyer' on one site explained that it is frequently easier or cheaper to ring head office and get everything sent out together by company HQ rather than procuring individual items, because of the additional time and financial cost involved. This attitude appeared to be encouraged within the firms where the contractor was part of a larger (multinational) conglomerate. The site manager explained that he followed established company procedures and in some cases was not responsible for the actual procurement. This function was sometimes undertaken by head office for whom the 'domestic' market was in a different country. In summary, contractors procured goods under the heavy influence of a set of 'default' choices. These defaults differed across contractors and it suggests that contractor origin is likely to be an important influence on sourcing decisions.

³⁰ As it is standard MCC practice to establish a PIU, it could be argued that MCC officials were merely rationalising that practice.

³¹ These companies are formally locally registered with at least 5% of local capital, but are regarded as effectively being subsidiaries of non-national companies.

5 UNTYING AND AID DELIVERY

As well as the project level detail the untying outcomes of the two projects were also heavily influenced by both donor and recipient aid practices such as the project modality, and by factors such as sector and project type.

5.1 Aid Modalities

During the study the range of aid modalities in use in Ghana included general and sectoral budgetary support, forms of pooled and parallel funding and project approaches (Table 2.6). General budgetary support (GBS) provides funding that is usually disbursed according to Ghana's country procurement system (CPS). Pooled and parallel funding is either disbursed using the CPS or a mix of the different donors' own procedures. The project approach adopted for about half of aid can involve use of the CPS. There are considerable differences between donors in their choice of modalities as shown in Table 2.7, ranging from over half of ODA in the form of budgetary support to largely project funding.

Budget support, whether sectoral or general, earmarked or not, is seen as both a driver and a consequence of the untying process. Budget support in Ghana is intimately linked to untying as 100% is recorded as untied aid. For the most part this is because in Ghana, as the CPS is used to procure the goods and services under BS, this support as a modality may be driving untying. Alternatively, opinions indicated that the untying process within donors 'freed' them to move away from traditional project aid delivery.

The Damanko project, which is a pool between DfID and Danida, similarly suggested that pooled funding is a modality that was only available to donors who had committed to untie their aid at HQ level³². The need to cooperate between DfID and Danida and agree a common set of procurement rules means that tying goods and services to one country is not nearly as feasible. The most common outcome (rather than engage in a lengthy negotiation process³³ over conditions, etc.) is either to agree to adopt the CPS or the untied procedures of one of the partners (most common in a lead partner agency³⁴ scenario).

This is certainly so for genuinely pooled funding where, once committed, funds are not distinguishable as coming from any one donor. However, it is worth noting the wide variation in pooling arrangements occurring in Ghana, notably Basket Funding and Parallel Funding. These arrangements often described a situation where donors were cooperating on a project, but their contributions could be distinguished. Donors tended to be responsible for their own procurement (therefore not influencing the tying status of the funding) and the agreements were designed to synchronise the parallel contributions. The TC element of the Damanko project is a variation of this practice, probably due to the ease of separating it from the main procurement.

³² 'Real' pooling where different donors' money is indistinguishable and requires third party accounts. Some donors raised the issue that because of increased auditing requirements and unhelpful donor Ministry of Finance disbursement procedures for project accounts, this was a disincentive to pooling. These procedures can only be modified at donor HQ level and require a political commitment to untying in 'spirit'.

³³ Some donors do follow this path, for example the EU maintains procurement regulations for pooled projects with a range of other entities e.g. the 'FAFA' agreements which cover cooperation with UN entities.

³⁴ Typically where a bilateral donor pools with either the UN or a major development bank. These forms of pooling are not new modalities and are well established. The UN and development banks are assumed to be untied aid providers.

5.2 Aid Instruments: grants and loans

Only a few donors currently provide loan ODA in Ghana (see Table 2.3). Clay *et al.* (2009), suggested that the relationship between untying and aid instrument appears to mainly operate through ownership, alignment and sector effects that simultaneously impact a donor's choice of whether to provide grant or loan support. For example, both donor and recipients mentioned that increased scrutiny for loans (due to payback requirements) might also affect the ability of donors to tie aid and provide a greater need to justify spending (perhaps via local procurement components) for loans. A similar mechanism operated where some donors in Ghana felt it more necessary to tie the TC components of aid either to ensure payback for loans or (and opposing this) to respond to domestic accountability for grant aid. Operationally, Soft Loan ODA such as mixed credits was reported by government departments to be treated no differently to grants, except for the tied status of many mixed credits. If these were untied the department would expect a big reduction in project costs, however, mixed credits were usually the only source of funding on offer.

One further feature of aid instruments seen in Ghana is that TC tended to be grant funded, whereas investment projects were the most likely to be loan funded. Infrastructure projects where the major inputs were unskilled labour and concrete were comparatively more likely to be loan funded compared, for example, to projects such as G-RAP, which comprised experts building capacity in research or in the Ministry of Finance. There is likely to be a tying element to this. Grants appear more likely to include 'goods in kind' and for the most part, this is comprised of TC services. There is a strong positive relationship between 'services-in-kind' and tied TC, which is not unrelated to the issue of framework contracts.

5.3 Sector and project type

In Ghana both the sector and/or the project type appear to influence the level of untying. It is also the case that untying aid to different sectors and project types looks likely to have significantly different impacts because of the different linkages and input requirements, certainly in terms of trade effects but also in terms of cost, aid effectiveness and developmental effects.

The most clear-cut example is debt relief. There is only one type of 'project' available and in Ghana this usually funded through grant ODA. The choice of instrument in other sectors is less clear-cut. To take one example, sectors such as Banking and Financial Services tend to be dominated by TC, and, given the lack of such skills in Ghana, there are likely to be fewer cost benefits from allowing local sourcing; on the other hand there could still be significant competition benefits from opening the procurement to third party High and Middle income countries. This case is very different from a project in which the major input is road or drainage construction. In this latter case there is likely to be substantial in-country or third party developing country capacity. What is implied is that different sectors have a 'sector effect' on untying outcomes, because of the goods and services needed by a project in that sector.

5.4 Technical Cooperation

Freestanding³⁵ TC is excluded from the 2001 Recommendation. In Ghana (excluding non-reporting) approximately half of projects involving TC are tied compared to 11% for all projects. A variety of reasons for this difference were offered. Local informants mentioned the desire of donors to ‘work with someone they knew’ often citing maintaining quality standards. Another factor is the skill set necessary for undertaking the technical advisory or TC component of most projects, as there is a lack of local skills and experience in fields such as civil engineering. Both factors are associated with *de facto* tying. A common solution for donors is to provide services-in-kind however, this form of assistance appears tied from the position of the recipient country and local consultancy firms.

³⁵ “There are two basic types of technical cooperation: (1) free-standing technical cooperation (FTC), which is the provision of resources aimed at the transfer of technical and managerial skills or of technology for the purpose of building up general national capacity, without reference to the implementation of any specific investment projects; and (2) investment-related technical cooperation (IRTC), which denotes the provision of technical services required for the implementation of specific investment projects.” See <http://stats.oecd.org/glossary/detail.asp?ID=6022>

6 UNTYING AND EFFECTIVENESS

The effectiveness of the two projects under review is a highly complex issue. In previous investigations in Ghana into tied aid, where the administrative decision to tie aid restricts the outcome to a single 'option' and is associated with very specific outcomes in terms of cost, aid and developmental effectiveness. In contrast, untying involves a potential increase in flexibility. The variety of untied projects examined by the study indicates that by releasing this tying constraint, many more options for aid delivery become available, and each combination having a potentially different effectiveness outcome.

6.1 Cost Effectiveness³⁶

A cost effective outcome is determined by the interplay of many of the factors discussed above. The cost effectiveness gains from untying can be either to the donor or the recipient, or shared between them. Under tied aid, most of the benefits accrue to the donor country.

Lifting the geographical restriction on sourcing would be expected to make sourcing more cost effective. The size of the gain depends on how expensive the donor is as a source compared to the rest of the world. Essentially this is a gain from competition based on widening the scope of sourcing to include the least or lower cost suppliers. Greater competition due to untying also increases cost effectiveness by creating greater competition between suppliers for each tender. There is less opportunity for excessive profits.

Competition can be informal and formal. Informal competition refers to the number of bidders who tender bids. Formal competition is where a distinction can be made between established rule-sets such as ICB, NCB, Pre-qualification, single-source and direct hire/source procurement procedures. Both types are necessary for cost effective procurement.

As an example of a potential competition effect, the Ghana study team discussed the Odaw Drainage Works with several of the consulting engineers (See Annex C). It seems likely that the degree of competition had an impact on the unit price of the work done. When comparing the cost per km of lots (1-revised, 2 and 3; the comparable works), in this case selective bidding was 176% more expensive than ICB, and single sourcing was 88% more expensive than ICB.

Moving from formal untying to *de facto* untying, the flow of information is a key route through which competition can be fostered. It is, however, important to recognise that these cost effectiveness gains are due to an increase in competition from low cost suppliers. Neither an increase in competition alone, nor an uncompetitive situation with low cost suppliers, is likely to deliver the full benefits.

The Government of Ghana informants had mixed views about the importance of the cost effectiveness implications of untying. Higher-level officials stressed the issue of ownership, whereas lower level and operational agency respondents were more concerned about costs and making most efficient use of the funding committed. Officials responsible for the rural W&SS indicated that they were no longer accepting Japanese grants for boreholes. The high operational cost³⁷ of Japanese aid, which

³⁶ The project specific information in this subsection is largely based on the Damanko project only as NORWASP had completed in late 2008, before the project case study commenced, therefore documentation was no longer available locally for undertaking a similar CEA.

³⁷ Rough prices in US dollars for drilling boreholes were reported as: Japanese 20,000, German 15,000, Danish (using CPS) 6000 and Chinese (tied) 3000. The Chinese were also reportedly the fastest as they brought their own equipment with them.

used Japanese contractors and equipment resulted in low cost effectiveness. The same department were however, complimentary about the cost and speed of Chinese tied aid boreholes.

Cost Effectiveness Analysis at the project level is a useful analytic tool because it can link a micro level analysis, as in this case, with the macro overall trade picture. By viewing import parity prices as a standard and comparing the actual prices paid for project inputs, an indication of the scale of the cost effects can be seen. Clearly this method is more useful the closer the goods are to being widely traded and for which market information is readily available. Such information can be used to compute reference prices for alternative hypothetical commercial transactions at import parity prices even where no imports actually occur. Commodities provided as food aid are an obvious example (OECD, 2006). However, not all goods are easily transportable, some goods are non-tradables, with prohibitively high internal transport, storage and handling costs for example heavy goods such as aggregate or perishable goods.

In the case of many of the goods and services procured for the two projects the contractors were willing to pay above the international market rate for local knowledge, for maintaining existing relationships, for speed of execution, and for not needing a translator. To counter this, goods and services were sought that came closest to the ideal of comparability with widely tradable products. For the Damanko project these included uPVC pipe, concrete, air valves, tipper trucks, masons, site engineers and labourers. Instead of actual IPPs, the cost-effectiveness calculations were based on the ratio of contracted prices and current domestic prices for similar items (Annex B). The prices found show significant variation, between 567% more expensive and 90% less than the domestic price. The price differentials provide a basis for exploring the choices being made and their technical logic.

A second important feature of the results (supporting an idea discussed earlier) is that different contractors were able to access vastly different prices from different sources for identical goods. The price variation closely followed the features of the contractor such as size and nationality. For example, in the case of tipper trucks used in the Damanko project, the Chinese contractors obtained these for 64% less than the Ghanaian firms. This price disparity is almost certainly related to the different source of origin of the trucks and associated import prices. NCB sub-contracting of lots on the Damanko was broadly competitive. The price-difference analysis further confirms that the procurement of goods and services was being executed at costs that were competitive with domestic market reference prices.

The study team also sought views on cost-effectiveness and, by implication, efficiency in sourcing. Local informants had clear perceptions about some individual donors as having procedures and *de facto* tying practices, which were likely to lead to large cost differences in specific technical work, or in the sourcing of goods such as vehicles. The limited evidence that could be assembled on cost-effectiveness is consistent with the hypothesis that it is not formal tying but rather *de facto* tying practices that are likely to have substantial trade and cost implications. In the Damanko project NCB resulted in broadly cost-effective sourcing. Locally registered companies were notably successful, whilst civil contractors from DAC countries had largely withdrawn from these small construction activities. Here too a potentially important issue raised by some aid agency informants is the eventual political sustainability of these untied uses of grant aid in an era of tighter budgets and possibly growing domestic protectionist pressures.

6.2 Untying and aid effectiveness

It is important to draw attention to a clear difference of perceptions about untying and tying practices between donors and recipient country partners. OECD and other international documentation as well as the academic literature are clear that tying concerns unequal opportunities to trade amongst potential exporters with aid recipient countries. In contrast many Ghanaians, including both officials and academics (e.g. Quartey, 2004) equate budget support and projects which use the country procurement system with untied aid, and consider all other aid to be tied. They emphasise ‘ownership’ and alignment implications untying with country priorities rather than a concern about the trade distortion implications of tying. Understandably the government and Ghanaians have a strong preference for BS, which they see as giving ownership. However, many country partner informants practically involved in use of aid funding also have strong views and experiences to offer about the inefficiencies associated with donor tying practices.

The term ‘aid effectiveness’ is used in the same sense as in the Paris Declaration and the aims embodied in Harmonisation, Alignment, Ownership, Managing for results and Mutual accountability. The project case study evidence suggests that untying is very likely to be contributing to some of these aims in Ghana. In the Paris Declaration untying³⁸ is formally grouped under Alignment, for which the dominant theme is provision of aid on the basis of the strategies, plans, institutions and procedures of the recipient countries. In practical terms this means strengthening recipient procurement and financial management systems and, importantly, using them for aid provision:

“Use country systems and procedures to the maximum extent possible. Where use of country systems is not feasible, establish additional safeguards and measures in ways that strengthen rather than undermine country systems and procedures (Indicator 5).

Avoid, to the maximum extent possible, creating dedicated structures for day-to-day management and implementation of aid-financed projects and programmes (Indicator 6).”

Clearly, these aims are hardly compatible with tied aid, and untying is a necessary condition for working towards these goals. Ghana’s public procurement system underwent a World Bank sponsored reform culminating in a new law (GPPA 663) in 2003. Donor use of the CPS however is variable. Even those donors who do use the CPS do not necessarily employ it for all parts of a project. In the Danida-DfID Damanko project the TC component was not procured through the CPS.

The Harmonisation targets are broadly consistent with those on untying. Increased untying (especially through the promotion of BS and pooling - including the monitoring and evaluating procedures) was seen to allow increased use of common procedures, the delegating of responsibility to sector lead agencies, and donors working in a complementary way.

The links between ownership and untying appeared to be multidirectional. In both case studies national ownership of policies/strategies and national leadership (for the most part due to use of the CPS) was equated by civil servants to situations where aid was untied. However, a common theme from donors was that untying (and associated pooling and BS) required the government to demonstrate ownership, capacity and leadership. Pooling was uncommon and harder to achieve in sectors where there was no SWAp. Similarly, BS without a national plan was unlikely. Not having one single planning document, with the input of all entities concerned, was given as a reason for the lack of donor support and co-ordination in the Urban Water sector.

³⁸ Untying itself is indicator 8 (the only indicator without a target).

6.3 Developmental effects of untied aid

Developmental effectiveness refers to the longer term dynamic impacts of sourcing for ODA funded projects. Clearly, there will be implications for local employment, incomes and productivity, knowledge transfer, etc. The outcome will depend on local market capacity, potential and the use of policy tools which are available to facilitate these outcomes (e.g. margins of preference for local suppliers). The following categories of ‘first round’³⁹ effects were evident for the projects reviewed. The Damanko and NORST/NORWASP projects, whether they were tied or untied, employed local unskilled labour where there was a demand such as for construction work and minor earthworks. Furthermore, almost all projects sourced simple goods such as pipes, aggregates and cement on the local market where they were available. In both of these areas, where tied aid is not a realistic alternative for the donor, local employment, incomes and markets were being boosted whether aid was tied or untied. However, where the good (or more likely service) was both transportable to the recipient and significantly closer to the donor’s comparative advantage the potential for tying and the associated losses is greater. On the Damanko project, where Ghanaian service providers were used for the civil works consultancy and management, this was generally reported to be successful both in terms of costs and quality. The use of local contractors strengthened knowledge and commercial capacity to provide further services in the future. However, because of *de facto* tying practices formal untying is a necessary but not sufficient condition for further progress towards achieving such developmental effects. Local procurement should also have a proviso attached, stating that the developmental effects were far greater the higher the value added share of the manufacturing that took place in Ghana.

6.4 Tradeoffs within untying effectiveness

Both donor agency informants and especially officials in the implementing ministries mentioned trade-offs between time and cost, concluding that tied aid was often quicker but could cost more. The increase in speed was often due to the time taken to procure goods and services in the first instance rather than the actual job time. This was part of the justification for donor TC procurement in both projects. Government representatives were very complimentary about the speed of Chinese tied aid, which they explained by the fact that they provided their own equipment and supplies, giving time benefits without an increase in project cost. The same department was negative about donors choosing private procurement agents because, although they were faster, the department resented being locked into high cost solutions as procurement agents sometimes operated using pre-agreed fees for goods and services. In neither project did informants mention issues of quality standards.

The NGO community reminded the study team that it was important to realize that cost and quality were not the only two factors to be traded and that it was important to see the wider perspective. The quickest and cheapest solution might also be less flexible. The example given was that an efficiently functioning country procurement system might be one reason to supply untied aid as budget support; however, the end result depends heavily on the advantages and disadvantages of budget support and what the government budget delivers or does not deliver. Untying aid gives the flexibility to choose, but the outcome depends on a complex process of decision-making.

³⁹ Complex effects beyond the initial transaction/impact are beyond the scope of this study both in regard to theoretical framework and practicality.

7 CONCLUSIONS

This exploratory study was designed as a pilot to develop a methodology for providing evidence-based conclusions about the extent and implications of untying aid and its impact on aid effectiveness, an area in which there has been very little recent systematic research. The study included a statistical analysis of the extent of formal untying, an investigation into donor and recipient practices at the country level which covered the choice of modality and the country procurement system, an econometric study on the trade effects of formally untied aid, and finally an in-depth examination or process analysis of two projects. The project process analysis seeks to answer the seemingly simple question, ‘What is actually happening?’

Formally, the bilateral aid to Ghana of most DAC members is now fully untied, as is found more generally (Clay and others, 2008). But going beyond that purely formal aspect of donor practice, the pilot country study raises several issues for further consideration. What should be the focus of the investigation studying to aid untying? The focus of the untying debate is changing. Historically it has been associated with donor concerns about aid-transfer inefficiencies and trade distortions between OECD countries. But Ghanaians in government and wider civil society and also some donors now see untying primarily as an issue of ownership of the development process and ensuring alignment of aid with recipient priorities.

There is considerable evidence confirming the continued existence of *de facto* untying. This is suggested by both the econometric investigation and individual examples. The full extent of such practices is a question that can only be answered robustly through a systematic examination of more donors and more sectors.

Untying is an issue at the different levels of contracting. This implies comparing the sourcing implications of arrangements that are formally tied at a primary level and those that are formally untied to determine the overall effects of sourcing flexibility. It is conceivable that the outcomes of some formally tied and untied arrangements are not very different, partly due to what happens at a subcontracting level and the limited number of suppliers of many aid related goods and services.

There are very wide differences in donor practices notably on the choice of aid modalities and in the extent of use of country systems. Aid delivered as budgetary support or as project aid through the Ghanaian country procurement system is untied. The newer forms of pooling such as those deriving from SWAs and sector wide feasibility studies, as well as most cooperation with the UN and the development banks are untied. A number of donors choose not use these untied modalities and project aid dominates their portfolios.

Technical cooperation is an aspect of aid that often involves formal tying and is also closely linked with *de facto* tying. This strong association appears to be a consequence, although one not necessarily intended by donors, of a combination of factors. Donors have a tendency concentrate bilateral assistance in the areas of their comparative advantage. Tied outcomes strongly relate to current contracting practices such as using framework contracts, and the provision of services-in-kind. The choice between ICB and NCB and associated advertising practices influences the sourcing of goods and services more than is suggested by the difference in the geographical spread of advertising. Information asymmetry in advertising, the role of informal networks and the willingness of donors and recipients to work within donor preferences should all be considerations when selecting procurement frameworks.

The projects examined in this study are best described as hybrid, comprising a mix of aid elements with different tying status, sourcing, implementing entities and procurement rule sets. Given that aid is overwhelmingly formally untied, many specific outcomes are the result of *de facto* tying. A provisional conclusion is that the procurement ‘culture’ may be as important as formal procurement rules in determining the impact of untied aid on trade, cost and aid effectiveness.

Project case study conclusions

The pooled funding arrangement for the implementation of the Damanko-Kpassa project illustrates the use of interesting and still uncommon modalities for harmonizing and delivering donor support in Ghana. In particular, the funding arrangement made it possible for two donor missions with different resource capacities to pool funds for the implementation of a major development project, without generating complex accounting and reporting systems on the Ghanaian side. The fact that DfID could contribute funds to the project without necessarily committing further resources for running its own monitoring and evaluation systems is an important innovation for development aid effectiveness. The two donor missions depended on each other’s systems for delivering support to the project, thus giving meaning to harmonization of development aid.

The choice of Ghana’s own procurement systems for the implementation of the project also assisted in deepening capacity in managing development projects in both the public and private sectors. It is worth noting that 75% of the components of civil works were managed by locally owned domestic firms who procured all items competitively. Some consultancy services were also delivered by a local group. Altogether these form about 55% of the total contract value for the project. This normally would not happen if funding for the project was fully tied, and is even unlikely if international competitive bidding (ICB) processes were followed.

Having reviewed the tender evaluation and contract award processes, there is sufficient evidence to conclude that the project was broadly competitively tendered. The price-difference analysis further confirms that the project is being executed at costs that are competitive with the available market reference prices during the 2007/2008 implementation period. However, this assessment does not include the technical assistance delivered by Danida, as information on these contracts was unavailable to the research team. Nevertheless it should be noted that the project appears to be being implemented efficiently from a narrowly technical perspective.

The NORST/NORWASP case studies looked at both an older and a newer example of Canadian support, both using a project modality. Both projects involved a similar split in terms of procurement between on one side the head contract covering technical cooperation, project management services and donor interaction, and on the other, the goods and civil works procurement. In both cases the head contract had been tied to Canadian suppliers.

In contrast, almost all other procurement was both formally and *de facto* untied and was carried out either by the head contractor or by using country procurement systems either at the central or district level. Aside from capacity issues at the district level, no management problems were reported and procurement was found to be broadly cost effective. NORWASP is characterised by a large number of subcontracts, through some of which project funding, initially allocated to the head contractor as tied, was then re-tendered in an untied manner.

The range of different procurement systems and actors (private, Ghanaian and Canadian) illustrates the complex nature of much current project based support, and so the difficulty in determining both the tying status and any outcomes. The use of ICB by CIDA and the executing agency appeared to

result in a much wider geographical sourcing of goods and services than NCB, although neither has any formal restriction on origin.

Methodology

The country level investigations were useful in isolating the influence of country specific factors, such as the country aid environment and recipient government capacities on untying outcomes. Similarly, project case studies also proved an important investigative device for uncovering specific examples of actual practice and related documentation. There were many advantages in restricting the investigation to just a single major sector in terms of comparability, as well as making it possible to work within time constraints and to limit the contacts needed to carry out the investigation.

It was only possible to identify procurement practices and track sourcing at the project level for projects that were actively procuring goods and services during the investigation. Recently started or just completed projects lacked documentation and staff with firsthand experience and there was no actual on-going procurement to investigate. The ‘ground truthing’ component was useful, particularly for capturing practices that were not documented, such as those of private contractors. In addition, in Ghana the study benefitted from the full co-operation of both government and the donors whose projects were subject to review, without which it could not have proceeded.

Finding statistical data for the study was a major challenge. Although Ghana has fairly good statistical resources and an active donor group, neither they nor the OECD, compile or report data on the procurement methods used or on modalities beyond distinguishing project aid and budgetary support. The most recent available statistical data were often two years old due to publishing lags. There was also a lack of comparability between country level data and the data as submitted by donor HQ to the OECD. Reporting of tying status is also not consistent, often incomplete and focused only on head contracts. Trade data hardly ever include services and so an investigation into trade effects of aid cannot cover the provision of services and goods in-kind.

Untied aid is inherently more complex to evaluate than tied aid. Once the restriction on sourcing has been lifted, there is no single policy practice associated with procurement. Given the complex possibilities, it was only practical for the study to concentrate on the direct or ‘first-round’ effects. Even then, identifying an aid transaction that were genuinely untied and exploring its developmental implications is anything but straight forward, even where the donors and recipient agencies are open and willing to fully share examples of their practices.

ANNEX A: PROJECT PROCESS ANALYSIS OF DAMANKO-KPASSA WATER SUPPLY PROJECT⁴⁰

A.1 Background

The Damanko-Kpassa project is a rural water supply project being undertaken in the Nkwanta North District of the Volta Region, Ghana. The project is an add-on to the DANIDA supported Community Water and Sanitation Sector Programme (CW&SP) managed by the Community Water and Sanitation Sector Programme Steering Group of which the Danish Mission is a member. It is a component of the second phase (CW&SP II), and a contract for the overall implementation of the project was awarded on 3 April 2007 for a period of two years. The project was conceived as part of a 5-year District Development Plan and aims at providing sustainable, safe drinking water to 13 communities of the district where guinea worm is endemic. These communities have a population of 42,874.

A distinctive feature of the project and one reason for its selection for in-depth review is that it has been financed through a pooled funding arrangement between the Government of Ghana (GoG) and the governments of Denmark and the United Kingdom, acting through their respective development agencies, the Danish International Development Agency (DANIDA) and the Department for International Development (DfID).

A.2 Objectives, Scope and Method of Investigation

This case study was a pilot to explore the process through which a project moves from commitment of funding to disbursement of funds. The investigation involved the use of secondary data sources such as tender documents, Tender Evaluation Reports, contract documents and other financial data obtained from the Community Water and Sanitation Agency (CWSA) project office in Ho. These information sources are complemented with primary data about project implementation processes obtained from interviews with some key personnel of the offices in Ho and Accra. A ‘ground-truthing’ visit to project sites was also made to assess the progress of work and compare ‘first-hand’ information with that gleaned from secondary documentation. The study interviewed some of the project consultants, some of the contractors and members of the beneficiary communities, including opinion leaders and members of the Water and Sanitation Committees (WASANS).

A.3 Funding and Administrative Arrangements

The project was financed through a pooled funding arrangement between the Government of Ghana (GoG), DfID (UK) and DANIDA. The financial contribution to the project by DfID is estimated to be US\$ 2,520,166, with a counterpart funding of about GH¢ 2,236,600 expected from the Government of Ghana. GoG is therefore contributing about 55% of the total financial resources to the project, while the contribution from the UK makes up the rest. Notably, the need for this counterpart funding from the government of Ghana arose out of the shortfall in donor-funding for the project. The DfID funding became available due to an underspend on another project. DANIDA supported the implementation of the project through the provision of a team of technical staff, comprising:

1. Management Advisor and assistant;
2. Software (Extension) Advisor;
3. Engineering Advisor;
4. Financial Advisor; and,

⁴⁰ Annex A is provided by ISSER.

5. Hydrological Advisor.

The cost of the technical support extended to the project by DANIDA drawn from DANIDA's 2003 contract with COWI to support the programme is not currently available. DANIDA allocated TA to the Community Water and Sanitation Sector Programme which is provided and procured directly by HQ in Copenhagen and delivered as services in kind. The Community Water and Sanitation Sector Programme Steering Group was responsible for deciding to use DANIDA TA for the Damanko-Kpassa project and could have chosen to independently source TA under the Ghana Public Procurement Act instead.

Modalities for the disbursement of funds from the donor missions have been structured so that among the two funding agencies, the DANIDA country mission in Ghana receives funds from DfID for onward disbursement to a special account (with the Bank of Ghana). Key signatories to this account are noted to represent the Ministry of Finance and Economic Planning (MoFEP), Ministry of Water Resources, Works and Housing (MWRWH), and the Accountant General's Department (A-GD). These funds are further channelled through the MWRWH to the national office of the Community Water and Sanitation Agency (CWSA), then to the Volta Regional office of CWSA, before final disbursement to the District Water and Sanitation Team (WST) at the Nkwanta District Assembly. This final disbursement is made to the Nkwanta District WST because the project is based at the District level, and therefore financial obligations in respect of the project must be borne, in principle, by the District Assembly.

Though a district-based project, the CWSA Volta Regional office takes the lead in implementation, as it was considered to have more capacity for managing the project than the District's WST. However, the latter is still represented in key committees and processes related to the implementation of all aspects of the project, including community education on water and sanitation and tender evaluation.

The present modality for the disbursement of funds deviates from the previous system, where donor funds for similar projects were disbursed directly to the accounts of CWSA (Ho), without recourse to the finance ministry. Furthermore, CWSA had the mandate to deal directly with the donor mission(s) on projects under implementation. The new system for the disbursement of funds is regarded as one of the key measures established by MoFEP for harmonizing the channels for disbursing development aid to the public sector, especially the Ministries, Departments and Agencies.

In respect of DfID requirements for accounting and reporting on the project, this system of resource-pooling allows DANIDA to lead in receiving reports and assessing progress for subsequent sharing with the DfID country mission. For DANIDA itself, regular first-hand feedback on progress of the project by technical support staff serves as an additional avenue for information.

A.4 Project Structure

The lack of ground water to feed any borehole water supply system in the area underlies the choice of the physical structure of the Damanko-Kpassa water supply scheme. With the availability of the free-flowing, perennial River Oti at Damanko, the present system is designed to provide a year-round supply of potable water to the target communities. The overall project involves the construction of a piped surface water supply system, extracting water from the River Oti for treatment at the main plant at Damanko, and transmission to the communities via strategically located overhead water reservoirs and pipe stands.

Consultancy services for the implementation of the project feasibility studies involved the following:

- the design of the water supply system based on the option of sourcing and treating water from the river;
- design of the transmission and distribution network for the treated water to the beneficiary communities;
- environmental impact assessment of the project;
- tendering, evaluation and award of contracts for the civil works; and,
- supervision of the construction works and post-construction activities.

In particular, civil works for the project have involved the construction of the intake structure to draw water from the River Oti for treatment, and the subsequent transmission and distribution from the Damanko treatment plant to the Damanko township and the other 12 communities. For ease of execution, the overall construction works have been split into eight sub-projects (or lots) and contracted out separately. Taking Lot 6 as a typical example of such construction works, the principal components involve the construction of a fenced, high level 120m³ capacity concrete circular tank at Sibi Hill. This is in addition to the erection of two 8.5m³ polytanks at 8m above ground level, located at Sibi Central and Sibi Badule. These reservoirs are fitted with transmission pipelines that receive treated water from the Damanko plant, for onward distribution to households in those communities. At that level of elevation, water from the tanks flow via gravity to the main distribution pipelines, then to the 23 public standpipes also constructed as part of this lot.

The project also makes provision for the training of some members of the communities as caretakers who will be responsible for generating revenue from the use of the facility towards the self-sustenance of the project. Contractors for the various lots are therefore required to train these potential caretakers, named Water and Sanitation Committees (WASANS). The training of the WASANS under Lot 6, for instance, is expected to enable at least one member of the Sibi Hill, Sibi Central and Sibi Badule communities to understand the nature and structure of the project, the distribution networks and general features of the overall project. This is considered to be a key element for ensuring the sustainability of the project once completed and handed over to the communities, and as such is specifically factored in as a contractual obligation of the contractors under each lot of the project. Ongoing civil works under Lot 8 of the project include the construction of a special office unit to accommodate elected officers of the various WASANS. These will be directly responsible for the day-to-day administration of the project, including revenue mobilization and maintenance of the system.

Following the ‘ground-truthing’ exercise, it was established that excepting the construction of the water intake structure, which has been considerably delayed because of the flooding of the initial site, most of the sub-projects are nearing completion. Two lots are fully completed, and the remaining works for the other lots are assessed to be over 80% complete.

A.5 Tender and Procurement Processes

The procedure for the procurement of services for all the civil works followed national competitive bidding processes as established by the Public Procurement Acts of Ghana (PPA, Act 663). This process was adhered to because the two donors made it a requirement under the financing agreement for the project implementing units to use national procedures.

In the selection of both the consultant and contractors, the tender process was initiated by a national newspaper advertisement inviting sealed bids from all qualified registered companies in Ghana. In the case of contractors, these companies were required by CWSA (Volta Regional office) to hold the

sector Ministry's registration certificate in the category 'K/D/E'. They were also required to demonstrate some experience in the delivery of water and sanitation facilities in rural communities to qualify to bid for a contract under the project. Alongside a clear outline of the procedures for the submission of bids, the advertisement also informed interested bidders of a mandatory pre-bid conference. This was aimed at affording prospective bidders the opportunity to view the state of the construction sites and seek clarifications on the tender document and related processes. The tender evaluation processes were managed by a five-member committee made up of local stakeholders of the project and the DANIDA technical team. In the case of the selection of contractors, the evaluation committee was composed in a similar way, with the addition of a selected consultant to the project. The two key local institutions represented on the committee were the Volta Regional Office of CWSA and the local government, the Nkwanta North District Assembly.

While the bidding process was open to both local and international construction firms, the requirement that these firms must be locally registered and also be certified by the local sector Ministry effectively kept out interested companies with little or no presence in Ghana.

The criteria for the evaluation and selection of bids for the project follow the Public Procurement Act with a technical and financial proposal. The evaluation of the tenders included:

- the responsiveness of the proposal to certain stipulated requirements, including the legal status of the firm, tax clearance certificates, Social Security and National Insurance Trust (SSNIT) clearance certificates, bid security and other related documentation; and,
- the technical capability and financial proposal of the firm, which would include the assessment of the technical report on implementation strategy, experience of the firm in works of similar nature, professional and technical personnel, equipment holding, work programme and implementation strategy and sources of funding.

A score of 75 out of 100 was set as the minimum to pass the technical proposal and qualify for the assessment of the financial proposal. Least-cost formed the core criteria for the ranking and selection of the financial proposal.

The application of these criteria led to the selection of Holix Consult Ltd, a Ghanaian-owned consulting firm. In all, ten consulting firms expressed interest of which six were invited to bid for the project. Two of the six failed to submit a proposal, and of the remaining four, only the proposal submitted by Holix Consult Ltd passed the technical assessment (Table A.1).

The assessment of bids for the civil works also involved an additional stage: which assessed the competitiveness of prices quoted by the various bidders. The evaluation procedure included correction, conversion and adjustment of prices quoted by the bidders, which then provided a basis for comparing the contract prices. These normalized quotations were then ranked and the lowest tendered selected for the subsequent phase of the process. Following these processes, the evaluation committee recommended the best bid for the various lots under the project. Instructions on the recommendation of contracts limited the number of lots to be awarded to a tenderer to only one. Again, the Tender Evaluation Committee followed provisions of the PPA to negotiate on tender prices that were found to be the best, but more than the resources available. The result of the tender evaluation is subject to further review by a Regional Tender Review Committee, beyond which a National Tender Review Committee could provide an additional review of the results of the tender evaluation.

Table A.1 Damanko-Kpassa Water Supply Project : Recommended Construction Firms

Component	Name of Recommended Firm	Origin	Sum (GH¢)	Period
Consultancy	Messrs Holix Consult Limited	Ghana	164,115.00	2 years
VRN 1	Messrs China Geo-Engineering Corporation	China	1,493,446.42*	39 weeks
VRN 2	Messrs Christian Engineering Ltd	Ghana	344,466.51	24 weeks
VRN 3	Messrs Gatrobson Ltd	Ghana	722,377.01	24 weeks
VRN 4	Messrs Defiat Development Company Ltd	Ghana	617,143.97	24 weeks
VRN 5	Messrs Deccos Enterprise Ltd	Ghana	265,374.56	24 weeks
VRN 6	Messrs Thy Will Business and Investment Company	Ghana	207,759.59	24 weeks
VRN 7	Messrs Construction Dynamics Ltd	Ghana	180,478.57	24 weeks
VRN 8	Messrs China Henan Geo Construction	China	555,116.08	30 weeks

Note: *The actual tender price was GH¢2,105,442.48 but this exceeded the budget estimate. This contract sum was therefore reached based on negotiation between the contractor and the Tender Evaluation Board, following the provisions of clause 64(1) of the Public Procurement Act (Act 663).

Source: CWSA, 2008

The low number of bidders for some of the lots raises questions about the competitiveness of the bidding process, and therefore, the competitiveness of the prices quoted for the jobs. For instance, while Lot 1 had only two responsive tenders, Lot 2 had only one responsive bidder. This situation precludes any opportunity for competitive pricing of tenders, more so as the stated time constraint would not have permitted a second call for tender submissions. The PPA nevertheless permits the evaluation of bids, irrespective of the number of bidders. Table A.2 summarizes the number of competitors for the eight lots available under the project.

Table A.2 Damanko-Kpassa Water Supply Project: Number of Responses to the Tender Process

Lot	Purchases	Submissions	Responsive Submissions
VRN 1	5	2	2
VRN 2	13	5	1
VRN 3	11	10	8
VRN 4	11	10	6
VRN 5	4	4	3
VRN 6	5	5	4
VRN 7	10	6	6
VRN 8	6	4	4

Source: CWSA, 2008

'First-level' (Head contract) procurement of contractors under the project followed national procurement rules. Apart from the technical support staff that was sourced by DANIDA (discussed below), all other commitments to the project came fully untied and under the administration of the Ghana government. The contractors were not required to procure goods from any specific country of origin. Indeed, based on the fixed-budget agreement covering the award of contracts under the project,

all firms were responsible for meeting their own procurement needs, as long as the items procured met the specifications outlined and agreed upon in the contract documents.

Consequently, for the implementing body, the primary basis for ensuring competitiveness in the sourcing of goods (and therefore value for money), was the price competitive selection process. Expenses that deviated from the agreed value in the signed contract essentially became the responsibility of the contractor. To reinforce this arrangement, the contractors were required to seek prior inspection by and the approval of, the project consultant before using any equipment or input purchased for the construction work. A breach of this procedure meant no sanction for payment of the finished job.

The competitive procedure notwithstanding, given the special tax reliefs enjoyed by the CWSA on import and Value Added Taxes, major inputs for the project were procured through the facilitation of CWSA. This provided an additional avenue for ensuring that items procured for the project met the recommended specifications. Additional benefits were seen to be derived from deploying the CWSA systems in facilitating the procurement of essential equipment and other inputs for the project. Interviews with key stakeholders indicated that all pumping machines for the intake structure and treatment plant should come from Germany. This was to ensure that pumps used conformed with the system already used by CWSA and also therefore that parts for maintaining these pumps were readily accessible on the market.

CWSA has indicated that although the firms were free to source labour from any place of origin, they were encouraged to use local labour as a means of boosting ownership and the overall cooperation of the communities. These labour resources were however found to be predominantly casual, unskilled workers needed for digging and related field activities. Nonetheless, aside from the Chinese contractors that had Chinese personnel in the head technical and managerial positions, all the firms used local expertise in positions of technical and managerial responsibility.

The source of technical support for the project was a contract signed in 2003 between DANIDA and COWI (Danish Consultancy Firm) to support the CW&SP. Procurement by DANIDA since 2004 has been subject to the rules and regulations of the EU-directive.⁴¹ In 2006 this was extended to worldwide untying. However, the details of this specific tender are unknown so it is unclear whether a Danish consultant was contracted due to a tied arrangement or an EU-wide tender. The selection process was reportedly done without the participation of CWSA and it was considered unlikely that a Ghanaian consultant would have been procured. The provision of such support is nevertheless regarded by some of the CWSA staff interviewed to be a key channel for building capacity, especially as the close working relationship with the team ensured good knowledge transfer. For example, once contracted, the consultant works 'for/with' CWSA. Details for the other 'minor' members of the technical team are not known.

⁴¹www.amg.um.dk/NR/rdonlyres/184410BB-BDF9-4B26-4D7.../0/ProcurementGuideilnesEU_DirectiveFebruary2007.doc

A.6 Cost-Effectiveness Analysis

The analysis of the cost-effectiveness of the Damanko-Kpassa project follows the ‘price-difference’ approach (see Osei, 2003). Within this framework, the cost-effectiveness of the project is assessed based on the degree of deviation of prices quoted for the funded goods from the price of the same or similar goods as obtained from the open market (i.e. the alternative price). This difference is expressed as a percent of the alternative price. In principle, a positive (negative) value measures the extra cost incurred (savings made) in percentage terms by the project in following the procurement system. In assessing the Damanko-Kpassa project procurement, three out of the eight project Lots were selected for a detailed review of the project’s cost-effectiveness. The ‘ground-truthing’ exercise confirmed that, except for the extension of the deadline for completion of works, no situation arose to justify any important changes to the prices agreed in the contract. The alternative reference prices used for the analysis are based on reports from market surveys undertaken by the Head Office of CWSA during the same period that the goods and services were procured for the project (2007/2008). The descriptions or specifications of the goods and services were used as the principal indicator of similarity, and therefore comparability, of the prices.

Table A.3 presents the result of the price-difference analysis for Lots 1, 6 and 8. It shows that the project achieved significant savings in the procurement of skilled labour (site engineers, masons and operators of concrete mixers). For Lots 1 and 8, these savings were up to 80% of the reference price. Savings for unskilled labour were 25% for Lot 1 and 12.5% for Lot 8. However, estimates for Lot 6 suggest extra expenditure of 63% for unskilled labour, though the savings for the concrete mixer operator and mason averaged 25%.

In respect of the day work rates for equipment such as the 0.25m² concrete mixer, 5m³ tipper truck and crawler excavator, the results suggest an average cost savings of 80% compared with the reference price for the two Chinese-managed lots (Lots 1 and 8). Lot 6 however reports additional cost of 125% with 0% and 16% respectively for tipper truck, the concrete mixer and crawler excavator. These price differences are almost certainly related to the different national origins of the trucks and the corresponding import prices.

An important item for the construction of works under Lot 1 is the pump. Two different types of pump were procured under this component and the results provide mixed indications of cost-effectiveness. For instance, the Grundfos submersible pump, which is used for extracting raw water to the treatment plant, was procured at a price 43% higher than the reference price. The centrifugal pump on the other hand was procured for 15% less than the reference price. Given that the contractor had to accept specific restrictions on the source of these pumps (as noted earlier), the price mark-up on the Grundfos pump in particular cannot be said to show cost-inefficiency. Rather it indicates the cost of restricting the sourcing of inputs in order to better manage the post-installation realities such as ensuring access to spare parts and familiarity of the maintenance staff with the equipment.

The above results suggest that procurement in the Damanko-Kpassa project, as executed so far, has been broadly cost-effective. Most of the key elements of the goods and services procured for the project have been priced competitively, as the ‘price-difference’ indices confirm. There are few extremely uncompetitive items. The outcome broadly confirms the effectiveness the national competitive tender process followed in the selection of the contractors. There has not been any strong need to vary the contract cost of any particular sub-project. This control of costs has enabled the overall project to stay within its budget.

Nevertheless, the project has suffered some delays in its completion. Following an earlier extension of the completion dates, the contractors of only two Lots (including Lot 6) have finished work and await the handover to CWSA. All the others are yet to reach completion. In particular, the construction of the intake tank under Lot 1 has been delayed significantly. This is explained to have resulted from the flooding of the first site. For the other uncompleted Lots, a key reason cited by some of the contractors for the delay is the long distance between the project sites and the national and regional capitals. For instance, they report that in mobilizing construction materials such as sand, iron rods and items cleared from Tema Port, several additional days are spent travelling to the sites.

A.7 Monitoring and Accounting Procedures

As with DfID, the Community Water and Sanitation Sector Programme has adopted DANIDA's system for management of funds, reporting and auditing including monitoring, accounting and related reporting arrangements. Thus, a single-spine disbursement, monitoring and reporting system is maintained for the two funding agencies. On the side of the Government of Ghana, quarterly reports on the progress of works to the national office of CWSA by the Volta Regional office satisfy its reporting requirements. A key implication of this pooling arrangement on accounting and reporting procedures is that CWSA is able to produce a single accounting, monitoring, and progress report through its Head Office (in Accra) to the government and the donor missions, without having to report in different formats and under different timelines. As a result, considerable man-hours and resources are saved towards the efficient and timely delivery of the actual project outputs.

The presence of DANIDA technical support teams in the field allows key developments concerning progress with the project to be communicated and discussed between the implementing body and the donor mission in a timely way, without breaching any laid down channel of communication. This is noted to be saving delays usually associated with communication through the channels of government. Furthermore, under this funding and the associated accounting arrangements, rules and regulations concerning procurement remain single and harmonized, because the agencies are required to follow the country's procurement system. The only exception is the technical support services provided under the project that are procured by DANIDA from Danish sources under its own rules. This procedure therefore does not impose any accounting expectations or requirements on CWSA.

Table A.3 Result of the Price-Difference Analysis - Damanko-Kpassa Water Supply Project

Items	Supply Specification	LOT 1 (%)	LOT 8 (%)	LOT 6 (%)
Pump (type 1)	Grundfos SP 30-14, 13.9kW, 4HP, 75mm diameter pump with accessories. Rated flow = 30m ³ /h; Rated head = 108m; Power supply = 3 phase; Net weight = 76kg			
Pump (type 2)	Centrifugal CRN 45-6 pump with accessories. Rated Power = 22kW; Power Supply = 3 phase; Rated Flow = 45m ³ /h; Rated Head = 119m; Net weight = 351kg	-15	-	-
Concrete 1	Concrete blinding 1:3:6-19mm aggregate, average 50mm thick	50	-	-
Concrete 2	Plain in-situ concrete Grade 25, 1:2:4-19mm aggregate, minimum cement content 325kg/m ² (=6.5 bags of cement per m ³), maximum volume = 0.2m ³	-84	-	-
Concrete	Ditto to pipes and materials store ramp	-	-	-
Polytank water reservoir	6,000 Liter polytank (with accessories for connection to water supply source at least 4m below)	67*	-	-
Valve (type 1)	Gate valve 200mm diameter in brass or non-corrosive completed with BSP/PVC flange adaptors	17	-	-
Valve (type 2)	Air valve, 200mm diameter (complete)	0	-	-
Valve (type 3)	Ditto 50mm diameter	-95	-9	-59
Water meter	250 mm diameter, type kent	281	-	-
PVC pipe (class 4, 10 bars)	uPVC 250 mm diameter	-	111	-
PVC pipe (class 4, 10 bars)	uPVC 50mm diameter	567	0	13
PVC fitting	uPVC bend 90 degrees x 50mm diameter	-	-50	-20
Pre-cast Pipe tracers	Reinforced concrete 1:2:4 - 20mm aggregate, 200 x 200x1,000mm with markings, erect 600mm into the ground at max 100m intervals	-	-	-
Day-work Labour (day):	Site Engineer	-77	-77	0
Day-work Labour (day):	Concrete Mixer operator	-80	-73	-33
Day-work Labour (day):	Mason	-60	-60	-20
Day-work Labour (day):	Labourer	-25	-13	63
Day-work Rates (hr):	Tipper Truck 5 m ³	-80	-70	125
Day-work Rates (hr):	Concrete mixer 0.25 m ²	-87	-80	0
Day-work Rates (hr):	Crawler Excavator	-17	-90	17

*The quoted price includes the cost of installation, whereas the alternative price used here refers only to the price of the tank and the cost of delivery to the site.

A.8 Conclusions

The pooled funding arrangement for the implementation of the 2007 Damanko-Kpassa project reveals very interesting and still uncommon modalities for harmonizing and delivering donor support in Ghana. In particular, the funding arrangement made it possible for two donor missions with different resource capacities to pool funds for the implementation of a major development project, without generating complex accounting and reporting systems on the Ghanaian side. The fact that DfID could contribute funds to the project without necessarily committing further resources for running its own monitoring and evaluation systems for the project is an important innovation for development aid effectiveness. The two donor missions depended on each other's systems for delivering support to the project, thus giving meaning to harmonization of development aid. This project is also a good example of a project which is a 'hybrid' in terms of its procurement rules.

The choice of the country's own procurement systems for the implementation of the 2007 project also assisted in deepening capacity in managing development projects in both the public and private sectors. It is worth noting that 75% of the components of civil works were managed competitively by locally owned domestic firms. The civil consultancy services were also delivered by a local group. Altogether, these form about 55% of the total contract value for the project. This normally would not happen if funding for the project was tied and is still unlikely if it followed international competitive bidding (ICB) processes.

Having reviewed the tender evaluation and contract award processes, there is sufficient evidence to conclude that the 2007 project was broadly competitively tendered. The price-difference analysis further confirms that the project is being executed at costs that are competitive with the available market reference prices during the 2007/2008 implementation period. However, this assessment does not include an assessment of the tendering procedures or cost effectiveness of the technical assistance component funded by DANIDA under its 2003 contract, but it should be noted that the project appears to be being implemented efficiently from a narrowly technical perspective.

ANNEX B: PROJECT PROCESS ANALYSIS OF NORWASP / NORST PROJECTS⁴²

B.1 Background

CIDA has been involved in Ghana's water sector since 1973 and has allocated about \$170 million to some 20 water sector projects. Several key projects are (i) the District Capacity Building Project; (ii) The Northern Region Water and Sanitation Project (NORWASP); (iii) the Hydrological Assessment Project (HAP) and (iv) the District-Wide Assistance Project (DWAP) and the Northern Region Small Towns Water and Sanitation (NORST). Two of these projects, namely, the NORWASP and the NORST projects will be reviewed in this study. NORWASP follows an older CIDA modality of which NORST is a more recent evolution. CIDA consider NORST a hybrid project on the path to a programme based approach in a pre-SWAp environment. NORWASP was recently completed, NORST has just started (March 2009).

NORWASP

According to the project TOR, the goal of the project was to improve the health of rural communities affected by lack of portable water in one of the poorest regions in Ghana. The purpose of the project was to increase access to portable water and strengthen the capacity of Ghana and communities to develop community, Demand-Responsive Approach (DRA) to rural water supplies and sanitation services on a sustainable basis. The expected output level results were (i) Well construction; (ii) Procurement of hand pumps, associated tools and spare parts; (iii) Services provided by local consultants pertaining to the social dimensions of the project. NORWASP was expected not just to focus on community mobilization and management, but to go a step further by including a governance component that supports concrete capacity building initiatives at the District Assembly and Regional levels to foster effective and sustainable management of water resources. The main aspects of the project included Community mobilization and management training (management of water points, pumps); Sanitation, Health and hygiene education, Technical support, Local procurement and construction of up to 630 boreholes and 70 hand-dug wells⁴³, Institutional capacity building at the District Assembly and Regional Administration levels related to water resource management. NORWASP had CWSA as its major partner (due to a low level of capacity at the District level in 1999).

NORST

Similarly, the Northern Region Small Towns Water and Sanitation (NORST), is a seven-year project, which aims to provide increased access to water and sanitation to 30 selected communities (small towns) within the Northern region of Ghana. The project is expected to cover approximately 125,000 beneficiaries through the design, installation and capacity building support towards the operation of water supply systems and its associated sanitation activities. The project will support the implementation activities of key authorities and agencies responsible for the delivery of water and sanitation services in the selected small towns in the Northern region. Since its inception NORST has been expanded from 10 to 13 districts. NORST has the District Assemblies as the major partner with CWSA facilitating where necessary but never taking control.

⁴² Annex B was provided by ISSER.

⁴³ This was later changed for 500 boreholes and 35 hand dug wells. The project finished with 542 boreholes and (35+252 orphan borehole rehabilitations)

B.2 Methodology

This review adopts a method of investigation described as ‘project process analysis’. The review is based mainly secondary data sources such as Tender documents, Tender Evaluation Reports, Contract Documents and other information provided by CIDA. In addition, interview notes from discussions with key CIDA personnel were used to complement the secondary data sources. A ground truthing visit to the project area, such as that undertaken for the Damanko Project, was not attempted due to lack of time and because the project had closed. An independent cost-effectiveness analysis could not be attempted again because the project had closed and so, as CIDA advised, documentation was not readily available.

A.3 Project Specifics

NORWASP

NORWASP commenced in October 1999 and was expected to end on October 2006, but it was extended to December 2008, with no extension cost. Similarly, the contract between CIDA and Cowater/Roche to implement the NORST project was signed on July 15, 2008. The project will run from 01 July to 30th June to synchronize with GoG fiscal year quarters.

The projects were implemented in seven districts of the Northern Regions Eastern Corridor. The districts were: Nanumba, Saboba-Chereponi, East Mamprusi, West Mamprusi, Zabzgu-Tatali, Gushiegu-Karaga, Yendi, The project management structure of both NORWASP consisted of 4 key entities: the Canadian International Development Agency (CIDA) Project Team – Canadian Executing Agency, Government of Ghana (GoG) represented by the Community Water and Sanitation Division (CWSD) and Project Steering Committee (PSC).

Under NORWASP, Wardrop Engineering Inc., Winnipeg Canada was selected by CIDA to play the role of Canadian Executing Agency (CEA), to provide technical and management assistance to the implementing agency, CWSA. The key responsibilities of CEA included:

- In collaboration with the CWSA, identifying the requirement for short-term advisory services on the project and providing the required expertise in a timely fashion;
- Supervising its advisors assigned to the project and ensuring that high quality services were provided in a fashion consistent with the capacity building objectives of the project;
- Ensuring that contracting and goods procurement processes associated with the CIDA contribution to the project were in accordance with Treasury Board Guidelines and CIDA’s Procurement Handbook;
- Administering the CIDA contribution to the project by keeping accounts, reviewing expenditures and reporting the financial status of approved activities on a monthly basis, and submitting quarterly financial reports to CIDA.

Community Water and Sanitation Agency (CWSA)

CWSA an agency under the Ministry of Water Resources, Works and Housing was the Project’s implementing agency and CWSA’s Northern Region Regional Director was the Project Manager. The responsibilities of CWSA included among others the following:

- Accessing and managing the Government of Ghana’s contribution to the Project;

- Selecting, contracting and supervising consultants for design, construction management and supervision, and contractors for construction activities with technical assistance from CXA;
- Managing the tendering and procurement process for all project inputs within the guidelines specified in Ghana’s Public Procurement Policy with technical assistance from the CXA;
- Preparation of all progress and financial reports in a timely manner with technical assistance provided by the CXA;
- Collecting and analyzing baseline data and monitoring performance measurement indicators and data.

Project Steering Committee (PSC)

The PSC was to:

- Consider and approve progress reports and annual work plans;
- Assess results and achievements;
- Recommend modifications to the design, approved budget structure, annual work plans and/or the performance management framework to the CIDA Project Manager for final approval.

The membership included:

- Chief Executive, CWSA, Head Office (Chair)
- Regional Director, CWSA, Northern Region
- One representative of each of the Ministries of: Finance and Economic Planning; Water Resources, Works and Housing; Local Government, Rural Development and Environment
- One representative from the Northern regional Co-ordinating Council
- CIDA Project Manager, Ottawa
- CIDA Representative, Canadian High Commission, Accra
- The District Chief Executive (DCE) of each of the NORWASP Districts (ex-officio member)
- CXA Project Director (ex-officio member)
- CXA Team Leader (ex-officio member)

A.4 Funding Arrangement

NORWASP

The total cost of the project was approximately CDN\$ 18.4 million (Table B.1). The Government of Ghana was expected to make a contribution of CDN\$ 2 million. The Government of Canada was to fund the bulk of the total cost of the project – CDN\$16.4 million. Of this, CDN\$4.2 million was tied, while the remaining CDN\$11.4 million was to finance local expenses, and CDN\$0.8 million for third party procurement. It was estimated that about CDN\$ 7.5 million of the local-cost financing will be used for an international tendering process for boreholes and hand-dug well construction. It was also envisaged that a large portion of the untied share of the budget would be used to employ Ghanaian professionals and skilled labourers during the community mobilization and construction phase. The cost breakdown for the various components is as follows:

Table B.1 NORWASP: Budget Summary

CIDA's Contribution		
	Canadian \$000s	Percentage
CXA Services	\$4,250,000	23.1
Community Mobilization	500,000	2.7
Water System	8,360,000	45.5
Hygiene and Sanitation	280,000	1.5
Training/Capacity Building at	700,000	3.8
Procurement	830,000	4.5
Activities to Mitigate Effects of	150,000	0.8
Monitoring and Evaluation	180,000	1.0
Sub-total	\$15,250,000	
Inflation @ 3%	450,000	2.4
Contingencies	700,000	3.8
TOTAL		\$16,400,000
GoG Contribution*		
Water System	840,000	4.6
Local Expenses (Vehicle, staff accommodation)	72,000	0.4
Local expenses (Staff fees and allowances)	1,060,000	5.8
TOTAL*	\$1,972,000	
GRAND TOTAL	\$18,372,000	

Note: * The Government of Ghana contribution never materialized, therefore whole cost was borne by CIDA.

The CXA component and the water system components accounted for a greater share of the budget (23.1% and 45.5% respectively). The third highest proportion (5.8%) went to Local expenses (Staff fees and allowances). As a result, NORWASP had only one funding component which went to the CXA (tied). This did however include an amount of 'flow through' i.e. funds which would pass from the CXA to other entities e.g. for capacity building etc.

NORST

The NORST project differs in that it has two components: under the first component, CIDA will transfer funds to the Government of Ghana primarily to cover the construction cost of the project. This component has a budget of \$17.6 million. Under this component, a joint GoG/CIDA monitoring, evaluation and audit of NORST is required in addition to providing support towards the incremental operational cost of CWSA's project implementation role in the project. There is also the possibility of rehabilitating the supply systems of some other small towns under this component.

The Canadian Advisory Agency (CAA) would provide technical advice to assist CIDA and GoG in outlining the details of component 1 during the initial period. Subsequently, CAA will participate in

monitoring ongoing flow of funds in terms of timely arrival and use at the district level in order to keep CIDA informed as well as to ensure that the two project components are well coordinated by GoG.

The second component has a total budget of \$12 million has been allocated by CIDA for a contract with a CAA to provide the design services, technical assistance, capacity building, management assistance and other important support services to the Northern regional office of CWSA, and some district assemblies within the Northern region to facilitate their role in the NORST project. The activities and associated budgets under this component are as follows⁴⁴:

- (i) \$9.6m will be allocated for Canadian and Ghanaian Personnel, sub-contracts, and reimbursable expenses including but not limited to capacity building costs and procurement of vehicles and office equipment
- (ii) The next four sub-components represent the \$2.4m flow-through of the CAA component of the funding.
- (iii) \$1.5m for locally contracted services related to water supply system design and community mobilization
- (iv) \$50,000 budget will be reserved for CWSA and DA incremental costs in year 1
- (v) \$700,000 budget reserved for DA incremental costs in years 2-7
- (vi) \$150,000 budget reserved for stakeholder participation in policy activities

A.5 Tender Process and Procurement

NORWASP

NORWASP had two strands: (i) the selection of a Canadian Execution Agency under a competitive tendering process based on Canadian Treasury rules to provide technical and managerial support to CIDA in managing the project and (ii) the sub-contracting of some components to local contractors under local competitive tendering procedures (GoG PPA). Tendering for goods and services follows a competitive tendering process. Non- competitive tendering process has to be justified under Government Regulations.

The 'Conditions of Eligibility in CIDA 102 – General Conditions (RFP)' clearly stipulates that the consultant, including each member of the consortium, joint venture or other type of association, must comply with the following eligibility requirements: (i) if the consultant is an individual, he/she must be a Canadian citizen or a Canadian landed immigrant; or (ii) if the consultant is a profit organization, it must be a legal entity and have a place of business in Canada; or (iii) if the Consultant is a not-for-profit organization,, it must be a legal entity established in Canada. Thus, local entities may not be the Consultant, or be a member of a consortium, joint venture or other type of association submitting the proposal or be signatories to the contract form. Local entities may participate in the project only as sub-contractors. Some specific details on all sub-contracted projects under NORWASP are described below:

⁴⁴ CIDA, 2007.

a) New Boreholes and Hand-Dug Siting, and Construction Supervision Consultants

CWSA in November 2000, sole sourced a contract to COMWASAN Consult Limited, a Ghanaian consulting firm which was part of the CXA's original team to carry out the siting and construction supervision of the first 120 boreholes and 25 hand-dug. CIDA requested Wardrop to site and supervise the construction of 60 boreholes in East Mamprusi, West Mamprusi and Gushiegu/Karaga districts, with the excuse of delays encountered in selecting the second consultant.

After evaluating tenders received for the siting and construction supervision (450) CWSA signed a contract with HydroPlan/Beza-Lel in January 2003. HydroPlan Ingenieur-Gessellchaff mbh (HydroPlan), a German consulting firm took a lead role with its Ghanaian partner, Beza-Lel Water and Agro Services Limited (Beza-Lel). Unsatisfactory performance of the second HydroPlan team leader coupled with contractual difficulties between HydroPlan and Beza-Lel saw the dissolution of the joint venture agreement. However, CWSA retained Beza-Lel as the siting and construction supervision consultant to complete the work. In 2007, CWSA amended its contract with Beza_Lel to include the supervision of the assessment and rehabilitation of the first orphan boreholes.

b) New Boreholes Construction and Hand Pump Supply Contractors

CWSA signed a contract with China Henan Geo Construction Company to construct 120 boreholes and supply 120 hand pumps in March 2001. In August 2002, after evaluation of tenders for the lot of boreholes, CWSA signed a contract with Forexi SA of Cote d'Ivoire to construct up to 510 boreholes and supply 580 hand pumps. Because Forexi could not perform to expectations, CWSA instructed it to sub-contract the work which has not been completed by the scheduled date. Forexi used an international procurement process (Open Competitive Bidding under CIDA Procurement Guidelines) to purchase the 580 Afridev hand pumps from a manufacturer in India, Balaji Industries and Engineering Corporation.

c) Borehole Rehabilitation Contractors

There was unspent fund of CDN\$2 million at the original end of the project in October 2006. CIDA agreed that the money be used to rehabilitate orphan boreholes, which had been constructed by other projects and were no longer operating the design frame or parameters. During the phase 1 of the rehabilitation, CWSA contracted 4 Ghanaian companies (TBL Resources Limited, Cephavick Limited, Waterside Company Limited and Stanton Limited) through a regional procurement process (this refers to a special procurement window under the Canada Aboriginal Access Programme whereby the Aboriginals of Canada gain additional points in the bid evaluation process). Stanton Limited was not retained for the phase 2 for unsatisfactory performance; the other 3 companies were taken on board.

d) Hand Pump Installation, Area Mechanics and Caretaker Training Contractors

CWSA commissioned three firms to install hand pumps and train area mechanics and caretakers at newly constructed boreholes, hand-dug wells and rehabilitated orphan boreholes. Beza-Lel supervised the installation and caretaker training work until 2008, when the task of supervising the installation of hand pumps on the last 98 rehabilitated orphan boreholes were assigned to DWSTs. CWSA's water and sanitation Engineer 2 monitored the installation. CWSA awarded contracts for the installation of and caretaker training to Sharanam Ganesh Limited and Water Vision Technology Limited.

e) Latrine Artisans

In January 2001, CWSA contracted New Energy through a selective bidding process to train 70 latrine artisans. New Energy is a Tamale based organization. A CXA Sanitation Engineering Advisor assisted with the development of training plan and materials.

f) Consultant for Hand-Dug Well Feasibility Study

As a result of the lower than expected interest by Communities and District Assemblies and anecdotal reports on poor hand-dug well performance, CWSA contracted a regionally procured consultant to conduct a hand-dug well feasibility study in the Northern region. The consultant was Messr. Stephen Ndebugri.

g) Consultant for Feasibility Study on Rainwater Catchment

Because of the lower than expected drilling success rate, the Project Steering Committee recommended a study to assess the feasibility and subsequent piloting of roof water harvesting as an alternative technological option for communities where groundwater exploration was unsuccessful. CWSA recruited Messr Timothy Netty, an Engineer with experience in the water sector in Northern Ghana to conduct the study in four districts and 16 communities.

h) Capacity Building Consultants

In May 2000, with CIDA's approval, CWSA awarded a contract on a sole source basis to Gariba Development and Associates (GDA) to act as the Small Business Development Unit for 12 months, to increase the capacity of the partner organizations. GDA subsequently won a national procurement competition as specified under the Ghana PPA for an additional 18 months of work, which was awarded in May 2001.

i) Development of District Water Sanitation Plan

CWSA recruited an independent consultant, Messr Edward Kapile, through regional procurement process to work with the Assembly core staff and DWSTs, helping them finalise their plans.

j) Capacity Building of District Assembly Core Staff

CWSA contracted the Planning Department of the Kwame Nkrumah University of Science and Technology in Kumasi through a national competitive procurement process to further enhance the capacity of core DA staff

k) Conflict Management Training

CWSA contracted the Tamale branch of the West Africa Network for Peace Building, a Ghanaian organization, through a national competitive procurement process to provide conflict management.

l) CWSA Capacity Building

Training of staff of CWSA was conducted on both individual and group bases. Capacity building needs are often identified by the CWSA together with the donors. In addition to the CXA arranging study tours. CWSA contracted a number of organizations and individuals to provide training as summarized below in Table B.2.

Table B.2 NORWASP: Summary of Training Provided to CWSA Staff

Date	Training Institution	Content/Focus	Recipient	Course Length
June '01	Mosaic Net International Inc., Ottawa	Participatory monitoring and evaluation training	Extension Services Specialist (1)	9 weeks
Nov. '01	IRC International Water and Sanitation Center, Netherlands	Community water supply management	Regional Director	2 weeks
Nov. '01	Network for Water and Sanitation, Kenya	Community Management in Water projects	Extension Services Specialists (3)	3 weeks
Dec. '01	CVL Computers, Tamale (Ghana)	Network Engineering	Information Technology Specialist	40 hours
Jan. '02	Ghana Institute of Management and Public Administration, Accra	Business Administration	Accountant	3 months
Feb. '02	Gala and Zakaria, Tamale	Conflict Management	All CWSA professional staff	2 days
May '02	VANEF, Accra	Defensive Driving	CWSA Drivers	5 days
June '02	Network for Water and Sanitation, Kenya	Gender Equity in Water and Sanitation Projects	Extension Services Specialist (3) and Information Technology	3 weeks
Aug. '02	University of Ghana, Accra	Data management and analysis	Information Technology Specialist	2 weeks
Sept. '02	Kwame Nkrumah University of Science and Technology, Kumasi	Team Building	All CWSA and CXA staff	4 days
Sept. '02	University of Bradford, UK	Project Planning, appraisal and finance	Regional Director	3 months
Oct. '02	Ernst and Young, Accra	Presentation skills	All CWSA professional staff	2 days
Oct. '02	Ghana Institute of Management and Public Administration, Accra	Executive Masters in Business Administration – Sandwich Program	Extension Services Specialist (1)	Part time over 2 years
July '03	E. Kapile, Tamale	Project Planning	All CWSA professional staff	2 days
Feb. '05	COSI, Foundation for Technical Cooperation, Sri Lanka	Qualitative Information System	Extension Services Specialist (2) and Information Technology	3 weeks
May '05	Brace Institute, Montreal	Water Resources investigation and planning	Water and Sanitation Engineer 2	3 months
June '05	Mosaic. Net International Inc., Ottawa	Participatory monitoring and evaluation	Extension Services Specialist (3)	1 month
Feb. '06	Banff Institute, Calgary	Leadership Development	Regional Director	6 weeks

Source: Project Completion Report

Private Sector Organizations Contracted directly by CIDA: CIDA contracted private sector organizations and individuals to provide technical advice, and monitoring and evaluation services to the project including:

- Wardrop Engineering Inc., as the CXA
- External monitors – Irene Mathias (2002), Dr. Harry MacPherson (2003) and Greg Keast and Associates (2005)
- Auditors to audit the CXA financial accounts in 2003 and 2008 – the audit was undertaken by Collins Barrow Edmonton (Alberta) LLP
- Ismail Najjar, Water Advisor

Human Resource Utilization: CWSA, CXA and other stakeholder staff were used on an as required basis. Canadian interns from Trent University also worked on the project. CXA team initially consisted of eight members, seven advisors who provided inputs in Ghana and from Canada on short and long term bases, and an administrator at head office (Table B.3). All the advisors were engaged according to schedules in the Annual Work Plans and Semi-Annual Reports. There were five Ghanaian Specialists on the CXA team who provided short and long-term inputs to the project in specialized areas (able C.4) . They often provided inputs and follow-up after the Canadians advisors completed their short-term assignment.

Table B.3 NORWASP: Canadian Advisory Services during the Project

Position	Time Input to the end of December 2008
<i>Personnel in Canada and Short-Term Assignment in the Field</i>	
Project Director	300 days
Administrative Assistant	134 days
Team Leader	462 days
Community Water Supply	177 days
Training/HRD	110 days
Financial Controller	110 days
<i>Canadian Advisors on Long-Term Assignment in the Field</i>	
Team Leader	72 months
Community Water Supply	14 months
<i>Outside Canadian Consultants</i>	
Sanitation Education and Engineering	152 days
Health and Hygiene	260 days
Gender	126 days

Source: Project Completion Report

Table B.4 NORWASP: Ghanaian Advisory Services during the Project

Position	Time Input to the end of December 2008
<i>Ghanaian Personnel Short Term</i>	
Small Business Development	7.2 months
Organizational Development	5.4 months
Gender	5.6 months
Local Hydro-geologist	4.5 months
<i>Ghanaian Personnel Long Term</i>	
Community Development	38 months
Local Accountant	90 months

Source: Project Completion Report

The above arrangements demonstrate a mixed impact. The competitive tendering of sub-contracted components at the local level will promote efficiency in project outcomes, because the least cost sources would be used. Secondly, local capacity was significantly built considering the training components in the project as well as the support provided by the CXA. However, the use of CXA exhibits some form of aid tying which can affect the effectiveness of the project. Sole sourcing of some contracts can affect effectiveness except in cases where a least cost and high quality supplier was contracted.

When the NORWASP project started in October 1999, Ghana had not promulgated its procurement law. However, the Public Procurement Act, 2004 (Act 663) was passed during the course of the implementation of the project. In view of this, the project approaches to procurement were amended in the course of the project implementation. For instance, initially CWSA staff in the Northern Region would undertake all procurement on the project. This was found to be inconsistent with the Public Procurement Act, 2004 (Act 663), which assigns the responsibility to various entities from the district (the district assemblies, the revenue agencies etc), through the regional to national levels depending on the value of goods, works or services to be procured. Schedule 3 of the Procurement Act (2004) specifies clearly the limits of each procurement entity be it local, regional or central procurement unit (see Country Notes for detailed discussion on public procurement in Ghana).

NORST

The NORST project had two financial components. The tendering process under Component 2 of NORST clearly exhibits aid tying at the head contract level. Under this component, CIDA will competitively select and contract a Canadian CAA to provide capacity building, design services, technical assistance and management assistance to stakeholders in Ghana in the management and implementation of the project. The CAA will work closely with CWSA Northern region, the DAs and DWSTs of the thirteen participating districts in the Eastern corridor (Nanumba North, Nanumba South, Saboba, Chereponi, East Mamprusi, Bunkpurugu-Yungo, East Gonja, Zabzugu-Tatale, Gushiegu, Karaga and Yendi, West Mamprusi and Kpandai).

By contrast, Component 1 of the financing is fully untied and is to be used for drilling contracts, reservoir construction, pump house construction latrine construction, construction management services, vehicles and construction related materials including pipe, pumps, electromechanical

components, building materials and fittings. The project was to also to ensure⁴⁵ that the majority of Component 1 construction funds would flow to and be disbursed at the district level since that is where the majority of procurement will take place. Procurement funds will be managed by the GoG within GoG systems in accordance with GPPA.

The CIDA guidelines require that contracting of goods and procurement processes associated with CIDA tied funding to the project are in accordance with 'CIDA's Procurement Handbook for Goods and Services'. The extent to which the District Assemblies will handle some procurement activities is not clear to the project managers since GPPA is relatively new and some processes and procedures as stipulated under the Act has not been fully developed at the district level. In addition, the procurement capacity at some districts is uneven and in some cases very limited. This will obviously affect project outcomes in terms of quality when local PPA processes are used in cases when there are capacity constraints. Nevertheless, it was reported that all materials, vehicles, motorbikes and office equipment, except for five laptop computers were procured in Ghana.

It should be noted that contracting and goods procurement processes associated with the CIDA contribution to the project were to be done in accordance with Treasury Board Guidelines and CIDA's Procurement Handbook. The procurement procedure provides that 'whenever possible, the organization should adopt the competitive tendering route'. The lowest compliant bid should be awarded the contract. For purchases under \$2500, \$2500-25000, or above \$25000, two suppliers, at least three suppliers and three qualified suppliers should be required to supplier tenders respectively. This requirement is ambiguous because the aid is in two parts – Tied and Untied. Also, how much of the project funds were subject to Canadian or Ghana Government rules could not be ascertained by the study team except for the NORWASP project. Of the \$16.4 million Government of Canada contribution to the project, 25.6% was tied. Meanwhile, of the \$12.44 million local cost financing, \$7.5 million was budgeted to be used procure equipments, materials, services etc. This policy aims to improve local capacity.

Note that the following sections (6, 7, 8, 9 and 10) concern NORWASP only. As NORST only started recently it is not possible to assess it as has been done for NORWASP below.

B.6 Cost Effectiveness Analysis: NORWASP

According to the Project Completion Report (2008), 45 out of 50 project targets were achieved and or exceeded in some cases and the project was extended for an additional period of two 2years without necessarily having to increase the project budget. It added that at the end of the project \$2 million of the project budget was unspent. The following more specific cost-effectiveness related findings were reported:

- CXA team of advisors tended to be higher in terms of cost and were therefore used only for strategic and specialized activities throughout the project lifespan
- Fees charged by Ghanaian and Canadian consultants were within reasonable range and recorded very minimal increments over the project life span
- The CXA managed its inputs to the project within cost limits determined in 1999 and no increase in budget occurred

⁴⁵ The project managers will have to make sure contract works for services on these projects as well as procurements are undertaken at the local level

B.7 Accounting procedures: NORWASP

The Procurement Act allows for donor accounting procedures to be followed when project(s) are donor financed. Thus in the case of the CIDA projects, the donors accounting procedures were followed especially the tied component. The Canadian Executing Agencies accounts are often audited by an external audit firm. In the case of NORWASP, the CXA (Wardrop) was audited by Collins Barrow Enmonton LLP in 2003 and 2008.

B.8 Monitoring and Evaluation procedures: NORWASP

Internal M&E exercises were to be conducted regularly focusing on the progress made to the realization of all expected outputs and outcomes. Internal M&E exercises began in 2003 but the early exercises did not focus on all of the project's 50 targets which required the team to develop annual work plans and to identify constraints and develop mitigating actions on less than desired data. The first monitoring was conducted in 2003, the second in April 2006 and the final conducted in March 2008. Targets were to be quantitative and subject to interpretation so that progress to achieving them could be measured and reported on. CIDA during the implementation phase of the project has been contracting external monitoring teams who work in collaboration with CWSA. Initially, CWSA played less day-to-day management responsibilities. However, periodic monitoring suggested that CWSA should be made to take more daily responsibilities. Under the NORWASP project for instance, a mid-term evaluation was done in 2005 and this highlighted key anomalies which were immediately rectified.

During such evaluations and subsequent ones, the Project Team were to evaluate design assumptions as part of Project monitoring and evaluation exercises, so that project methodologies can be changed or if the assumptions are found to be wrong, targets can be increased or decreased to levels which are achievable. The monitoring and evaluation procedures were specifically meant to assess project outcomes and outputs – this covered the conditions of the boreholes, latrines, the changes in hygiene and sanitation behaviour of beneficial communities, functionality of spare parts depots and condition of the support provided by DWSTs.

The project monitoring and evaluation procedures had the following impacts on the outcome:

- Defects were found on about 15% of Pads of rehabilitated boreholes and this was charged to the retention fund of the contractor concerned. The contract was also not renewed.
- Hand pump caretakers complained of high fees charged by local mechanics and this was taken into consideration in subsequent stages of the project
- The process also brought to the fore an issue with hand pump installers; a hand pump installer had used an area mechanic for installation and caretaking contrary to the rules. Thus the area mechanic frequently worked on the pump rather than the caretakers and this had to be stopped
- The process also revealed that young children could not use the latrine because the squat holes were large and children could fall in them. To improve project efficiency, a design cover with smaller hole for children was suggested.

B.9 Ground Truthing: NORWASP ⁴⁶

From Table B.4 above, flow through expenses i.e. procurement of equipment, which included construction sub-contracts, accounted for over half of CIDA's contribution to the project. But from some of the sub-contracts awarded, it is not too clear whether the Ghana's Procurement Law or the Treasury Board Guidelines and CIDA's Procurement Handbook were used. However, Table B.4 seems to suggest that the Tied aid was mostly limited to CXA activities since that accounted for 23.1% of the total funds (refer to notes under procurement, i.e., section 6 above).

An interesting revelation of the project was the contracts awarded for feasibility studies on Hand-Dug Well and Rainwater Catchment. This clearly indicates that a feasibility study, which is very crucial in project of such nature, was not considered important to the implementation of the project. It is therefore not surprising that the communities showed little interest especially in the poor hand-dug well and the low drilling success rate. Indeed a consultant was commissioned to undertake a study on Rainwater Catchment in four districts out of the seven implementing districts.

B.10 Overall Assessment

Both projects have had significant impact on the water supply systems in the Northern region. Through the pooled funding arrangement between the Government of Canada and the Government of Ghana, efficiency from the purchase of materials, equipment and use of local services. Thus local materials and labour were sourced where possible. This process enabled CWSA to purchase pumps and other equipments from Canada at a much lower cost than if it was purchased from Canada (see Project memorandum 2004/06/11). It is expected that the untied component be increased in future to enhance project impacts. The proportion of the funds, which were tied, was quite significant and this has serious repercussions on project efficiency and other outcomes. Future projects should gradually build local capacity not at the labourer stage but also by developing middle and high level manpower within the sector. Nevertheless, the project involved the CWSA and gradually increased its management oversight responsibility. In the process CWSA's capacity was developed and decentralized modes of operation is now been used. This has improved the efficiency of the project. Currently, Danida and other donors give CWSA considerable autonomy in view of its improved capacity in recent times.

Although the study team did not visit the project sites, it became evident from previous evaluation reports that the project feasibility studies were not carried out initially as one would have envisaged. This problem is not peculiar to CIDA projects. Often times, projects have been undertaken without the due consultation with stakeholders or beneficiaries. For instance many HIPC funded projects in Ghana have suffered from this anomaly often resulting in low or no patronage of such services.

In conclusion, the water sector in Northern Ghana has received considerable support from CIDA and has made considerable impact on the beneficiary communities. However, the presence of tied aid within the sector remains a challenge as it affects the overall impact of the project. As Ghana develops its institutions including the procurement authority and other institutions involved in water delivery, it is anticipated that less tying practices will be used by CIDA. The gradual improvement in the capacity of CWSA and its staff is a positive sign and this should be built on. In fact, interviews with stakeholders indicate that Danida has been a very key player in the capacity building of CWSA to the

⁴⁶ Secondary sources or evaluation reports were largely used since the team could not visit the project site due to time pressures.

extent that other donors like UNICEF fund the water sector together with Danida without having separate financing and reporting arrangements. Also, community consultations monitoring and evaluation should be intensified in subsequent projects to improve on project outcomes. Finally, the sustainability of these projects has not been discussed in detail if at all. Just like road sector has set up a road fund where road tolls are paid into to ensure continuous maintenance of roads, the water and sanitation sector has not benefited from such a policy. Thus, the threat of the current global financial crisis as well as the anticipated withdrawal of the few donors in the water sector in the coming years as revealed in the field interviews present a major threat to the sector unless new sources of funding is found.

This was also part of a pilot investigation and one lesson learnt is the need to restrict in-depth investigations about sourcing and procurement to active projects. This is first because of limited usefulness of a 'ground truthing' project site visit once staff have departed. Second, it proved impossible to undertake a cost-effectiveness analysis once the project had closed even though very recently. Therefore the coverage of donors in a sectorally focused country study may be far more restrictive than might be implied by, for example, the most recently internationally available data from the CRS.

ANNEX C ODAW DRAINAGE CHANNEL WORKS: COST COMPARISON

Table C.1 Odaw Drainage Channel Works: Cost Comparison

Lot	Length	Principal quantities			Cost (€000)	Cost per km (€000)	Completion Time (months)	Procurement process	Instrument
		Excavation (000 m3)	Concrete (000 m3)	Reinforcement (tonnes)					
1	3.25km	666.5	55.8	1,563	8,506	2,617	24	ICB	IDA Soft loan
1 revised	3.25km	515.3	55.7	2,586	9,904	3,047	24	ICB	IDA Soft loan
2	1.25km	185.6	24.0	1,764	10,507	8,406	18	Selective bidding	AFD Soft loan
3	2.75km	282.1	32.8	666	15,783	5,739	26	Single source	ORET Grant and commercial credit

Source: Government of Ghana, internal assessment exercise, non attributable

Notes:

- Lot 1 Construction of 3.5 km trapezoidal reinforced concrete channel along the Odaw River from Abessey Okai Bridge to the Avenor Bridge
- Lot 1 revised Construction of 3.5km reinforced channel (under revised contract specifying rectangular channel design rather than previous trapezoidal design) along the Odaw River from Abessey Okai Bridge to the Avenor Bridge
- Lot 2 Construction of 1.25 km reinforced rectangular channel along the Odaw river from Avenor Bridge to the Alajo Bridge
- Lot 3 Construction of 2.75 km reinforced rectangular channel along the Odaw river from the Alajo Bridge to Apenkwa Overhead (Motorway extension)

ANNEX D DATA ISSUES AND DEFINITIONS.

- 1) Data availability. The study can only make use of the data available. However, there are two key areas where it is not immediately apparent that the data ideally wanted is not available.
 - a. Firstly, the data on tying can only capture formal tying. Both our investigation and the literature suggest that there is a substantial amount of *de facto* tying which is therefore not captured in the tables or econometrics. The tying status of aid is determined not only from the formal restrictions on spending which require recipients to contractually procure only from the donor country, but also from actual and practical restrictions which render aid funds *de facto* tied. There are several ways for a donor to effectively tie aid without a formal tying agreement. Informal tying might be the result of donors' commercial interests and pressures (and as such intentionally practised). It can occur when powerful donor countries are able to steer procurement towards national firms; through an implicit contract donors are able to persuade recipients to give preference to their suppliers within competitive bidding procedures (Tajoli, 1999). Donors may direct aid towards projects, goods or countries in which its industries have a comparative advantage in an attempt to assure that the procurement will happen in the donor country (Bhagwati, 1985; Jepma, 1991). Donors may also indirectly support national firms through the advertisement of the tender in publications which are not read outside of the donor country, or by evaluating bids against standards only applicable in the donor country (ActionAid, 2000). Donors might also informally tie their aid by first inviting bids and then deciding to support only those projects for which its home suppliers won the contract (U.S. Congress, 1993). Furthermore, informal tying can manifest itself as a 'secondary consequence of an arrangement already in effect' (Jepma, 1991). Tying of a small amount of aid might indirectly lead to a much larger amount. For example, large projects are usually undertaken after some preliminary examinations; when donors tie their aid to this pre-project phase, they often acquire substantial advantages in bidding for the project (U.S. Congress, 1993). In the provision of equipment with technical specifications, recipient countries might prefer to continue procurement from the same donor so as to avoid incompatibility or extra spending in technical training. The definition of (formal) tied aid might therefore underestimate the actual impact of tying practices on export flows. However, it cannot be excluded that some of the exports procured through tied aid would have been procured from the donor country anyway.
 - b. Secondly, *Technical Assistance/Cooperation*, which accounts for a large slice of tied aid, does not usually enter the trade statistics. As highlighted in Stavlöta *et al.* (2006), if donor country representatives carry out consultancy services in a recipient country, the transaction will be registered as domestic (i.e. the consultants bill the donor directly which supplies them as services-in-kind) and will not enter the trade balance although these services could be regarded as export of services. This is important as TC is both a significant share of ODA and an even larger share of tied ODA (during 2005-2007, around 52% of aid commitments to Ghana reported as tied or Not Reported was for wholly or partially TC related activities). Globally, 27% of TC related aid was tied as compared with only 13% for bilateral ODA in 2006 (Clay *et al.*, 2008, Table 3.5).
 - c. Moreover, the definition of exports in our analysis (see Annex E) is restricted to goods and does not include services. This is likely to lead to underestimating the impact of the tying status variable on donor export flows.

- d. As mentioned in the main text it was not possible to get satisfactory data on additional variables for the econometrics e.g. FDI, bilateral trade agreements, etc.
- 2) Data reliability is mainly an issue of reporting⁴⁷ quality. As quality has improved over time, only data for the latest years (2002-2007) was retained but this restricts our sample, leaving the dataset with a limited number of observations. This does not assist the robustness of our results. Reporting was particularly bad due to:
- a. Non response (tying status)
 - i. Overall - Some donors, e.g. the US, only started reporting the tying status of ODA to the CRS this year (2008).
 - ii. Partial – e.g. reporting of TC components (see table 3.6) – 37% of projects by value do not report the TC status.
 - b. Differential reporting

Different donors interpret the reporting directives differently. For example, whether aid channelled through NGOs is tied or untied or over the precise definition of budget support. This has also changed over time and is becoming more consistent.
 - c. Coverage

For the most part the study uses the CRS dataset as it has the project level data required however, comparison with the DAC dataset reveals that especially for the earlier years a substantial amount of ODA is not included.
- 3) Commitments vs. Disbursements. Where possible the study tries to use the most appropriate, commitments have traditionally had more complete coverage whereas disbursements are closer to reality in terms of trade effects.
- 4) The ODA data used in the study includes all forms of ODA including Debt Relief as can be seen in Figure 3.1 - the peak in 2004 refers to the HIPC process. As such, the ODA flows include categories of ODA that are not directly trade related. The rationale is that the study aims to examine the trade effects of grants and loans, not the trade effects of only some categories of grants and loans. Removing all *a priori* trade distorting categories would also mean removing budget support and all aid flows channelled through the country procurement system⁴⁸. This does however highlight an important point, that there are a number of other important factors for example modality of aid. This process would also not allow for testing of the null hypothesis that neither grants nor loans have a statistically significant effect on exports. In addition, sectors such as Debt Relief are grant aid and untied by definition so their removal would be a source of bias.
- 5) The exports data used in the study includes all traded goods. However, data represents only exports of goods and not services. Data is drawn from the IMF DOTS (Direction of Trade Statistics), the same source as in Massa and Te Velde (2008).

⁴⁷ Reporting the tying status of aid is not mandatory; consequently this information is often not complete and missing especially in early years.

⁴⁸ Untied aid should not be considered a priori non-trade distorting; it cannot be excluded that untied aid flows cause donor country exports to increase, as a reflection of the goodwill of the recipient towards the donor.

- 6) The range of donors who gave loans in Ghana between 1996 and 2006 is limited, including Austria, Belgium, France, Germany, Japan and Spain. Donors are not uniform in their practice, for example, excluding Germany, these six donors are all fairly highly associated with tied aid. If tying is significant for trade effects, this will be biasing the study results for loans.

Definitions

Official development assistance (ODA) (source: OECD Glossary)

Grants or Loans to countries and territories on Part I of the Development Assistance Committee (DAC) List of Aid Recipients (developing countries) which are:

- (a) undertaken by the official sector;
- (b) with promotion of economic development and welfare as the main objective;
- (c) at concessional financial terms [if a loan, having a Grant Element of at least 25 per cent].

Official Development Assistance is classified by type of flow in the OECD Creditor Reporting System as follows: ODA Loans, ODA Grants, ODA Grant-like, ODA Equity investments.

Grants are transfers in cash or in kind for which no legal debt is incurred by the recipient. For DAC/CRS reporting purposes, it also includes debt forgiveness, which does not entail new transfers; support to non-governmental organisations; and certain costs incurred in the implementation of aid programmes.

Loans are transfers for which the recipient incurs a legal debt and repayment is required in convertible currencies or in kind. This includes any loans repayable in the borrower's currency where the lender intends to repatriate the repayments or to use them in the borrowing country for the lender's benefit.

Only loans with a grant element above 25 per cent are ODA eligible. In addition, an ODA loan has to be concessional in character. This means that its interest rate must be below the prevailing market rate.

Grant-like flows comprise a) loans for which the service payments are to be made into an account in the borrowing country and used in the borrowing country for its own benefit, and b) provision of commodities for sale in the recipient's currency the proceeds of which are used in the recipient country for its own benefit.

Equity investment comprises direct financing of enterprises in a developing country which does not (as opposed to direct investment) imply a lasting interest in the enterprise.

The above definitions have been extracted from: DCD/DAC(2007)39/FINAL, Reporting directives for the Creditor reporting System www.oecd.org/dataoecd/16/53/1948102.pdf For further information on the creditor reporting system refer to the document above reported.

Exports

The coverage of exports statistics should be sufficiently broad to encompass all merchandise leaving a

country to another country, except goods being transported through a territory (i.e. transit trade) (IMF, 1993).

Export Credits

Official or private bilateral loans which are primarily export-facilitating in purpose. They are usually tied to a specific export from the extending country and not represented by a negotiable instrument. As they have a primarily commercial motive, official export credits are classified as OOF, not as ODA. Premia paid to insure export credits, and indemnities paid under such insurance, do not constitute flows and are not recorded in DAC statistics (DAC directives available at : www.oecd.org/dac/stats/dac/directives).

Problems in estimating the determinants of exports – the aid and trade relationship

Direction of causality

We believe aid could be endogenous to trade. Although aid flows determine exports, there are several arguments that support that trade impacts on aid and therefore the existence of reverse causation (donors might decide to give aid to countries they have a trading relationship with; both aid and trade are likely to be high to countries donor has had a colonial relationship with; and so on). However, albeit was not possible to instrument for aid; it proves difficult to find any variable that could be used as a credible instrument (and therefore an instrument which is correlated with aid but which does not itself belong in the trade explanatory equation) (Pettersson and Johansson, 2009). Granger causality test could be used to pre-test the nature of the aid-trade links for donor-recipient pairs. However, Granger causality itself has several limitations (for Granger causality drawbacks see Osei et al., 2004:112) and would be difficult to implement given the limited number of observations available.

Ideally potential endogeneity of ODA flows to exports should be controlled for by using lagged disbursements. However, the restrictive dataset did not allow to carry out such analysis. There are a limited number of observations in the dataset and the inclusion of an extra variable (lagged disbursements) would have reduced the sample further. Moreover, it is difficult to identify the right lag structure - an assumption is needed to choose the lag lengths for the analysis and the results are crucially dependent upon the lag structure selected for the variable. Several lag lengths were tried with no clear advantage over the results without lags.

Selection bias

When estimating the determinants of exports only trade information on those donor countries that export is observed. If only 50% of DAC donors export to the recipient country under analysis, only export information on those donors that trade will be available. The problem of this kind of model is that the sample actually observed may not be random. In order correct for selection bias the Heckman procedure should be followed.

ANNEX E: ECONOMETRIC RESULTS AND METHODOLOGY

Regressions have been estimated using simple OLS, fixed effects and random effects panel regressions; however, only results obtained using RE estimator are here reported.

Table E.1 Econometric results for Burkina Faso

<i>Dependent variable: Exports</i>	ODA aggregated	Tying status	ODA disaggregated (loans and grants)	Export credits	EC variable (1)
GDP	0.996***	0.821***	0.756***	0.756***	0.944***
GDP per capita	-0.836	-2.524***	-2.693***	-2.693***	-1.914***
ODA i	0.177**	0.104*			
ODA All-i	-1.496	-2.068			
Distance	-1.437	-0.632	-0.377	-0.377	0.256
Common language	0.905*	0.941*	0.768*	0.768*	1.191***
Import residual	0.071	0.038	0.05	0.05	0.042
Tying status %		-0.825	-1.116*	-1.116*	-0.943
Grants i			0.132**	0.132**	0.106**
Grants All-i			-1.05	-1.05	-0.768
Loans i			0.045**	0.045**	0.038**
Loans All-i			0.001	0.001	0.003
EC disbursements					0.077***
Constant	-359.337	-578.231**	-400.266**	-400.266**	-316.561*
N	103	102	102	102	102
N_g	19	18	18	18	18
r2_w	0.1	0.111	0.105	0.105	0.111
r2_o	0.775	0.82	0.845	0.845	0.882
r2_b	0.775	0.859	0.889	0.889	0.926

Note: All variables are in natural logarithms (except Common language and Tying status). All regressions include a time trend not reported.

Legend: * significance at 10 percent **significance at 5 percent *** significance at 1 percent.

Data covers the period 2002-2007.

Theoretical framework

The basic idea is to consider whether there are any trade distorting effects of aid at an aggregated level by examining whether bilateral aid from a particular donor to a recipient country affects trade between that donor and recipient pair differently from aid from other donors.

There could be several reasons why Official Development Assistance could lead to an increase in the donor's exports (*positive impact*). The most obvious explanation is that *aid is formally tied* to exports from the donor country (*direct effect*); by definition tied aid results in trade dependency⁴⁹. However, there are several ways for a donor to effectively tie aid without a formal tying agreement⁵⁰. Therefore, also *de facto* tying by covert restrictions on sourcing can generate increased trade with the recipient.

There are however other *indirect effects* that might lead to a positive correlation between ODA and donor's exports. Aid might have a *macroeconomic impact* in the recipient countries; higher rates of economic growth and structural economic reforms such as trade liberalization might indirectly impact on donor's exports. Moreover, aid flows could result in an increase in trade with the donor, reflecting the *goodwill* of the recipient towards the donor. Finally, the aid relationship might facilitate trade between the donor and the recipient increasing recipient's *proclivity* to procure goods from the donor (reinforcing commercial ties).

In theory, bilateral aid could also decrease donor's exports to the recipient country (*negative impact*); if aid were tied there might be a straight forward *substitution effect* (Osei *et al.*, 2004; Wagner, 2003; Martínez-Zarzoso *et al.*, 2008; Zarin-Nejadan *et al.*, 2008;). Other donor aid could, however, reduce a donor's aid. Also if there were a partial tying restriction, for example to local, regional or developing country sourcing, that could have a negative effect .

In general, earlier studies (Nilsson, 1997; Wagner, 2003; Martínez-Zarzoso *et al.*, 2008; Zarin-Nejadan *et al.*, 2008; Nowak-Lehmann *et al.*, 2008; Petterson and Johansson, 2009) have found a positive correlation between donor aid and donor exports; these results have usually been seen to corroborate the hypothesis that aid is tied (formally or informally) to exports from the donor country (Petterson and Johansson, 2009).

Review of possible methodologies

The aim of the econometric chapter is to study the impact of ODA on bilateral exports; the initial and main hypothesis is however, that tying practices are critically important in driving trade distortion. Some of the methodologies used to study the relationship between bilateral exports and aid which might lend themselves to the possible inclusion of a tying status variable are therefore reviewed here.

One option is the *gravity approach*. The original gravity model (Tinbergen, 1962; Bergstrand, 1985) has bilateral exports as a dependent variable and as explanatory variables: GDP and GDP per capita of donor and recipient; distance; dummies for a common language and colony. Similarly, it is possible to add an aid variable in this way. Nilsson (1997) is the only study using a gravity model which tried to control for the degree of tying by including a dummy. The dummy represented those donor countries which, on average, tied more than half of their bilateral aid. The variable was not found to be significant. However, in the literature there have been criticisms of empirical studies of trade that use aid flows as an explanatory variable (i.e. gravity models). Most of the studies use cross-section or

⁴⁹ Tied aid may simply finance donor exports that would have been procured from the donor country anyway, however, it would be expected that tied aid usually increases donor's exports.

⁵⁰ See Annex D – Data issues.

pooled data; however, the nature of the aid-trade links might differ among donor-recipient pairs. Therefore results may be misleading if estimations are performed over the whole sample. For this reason, data should be pre-tested to determine the nature of the aid-trade links for donor-recipient pairs using *Granger causality* (Osei *et al.*, 2004). Lloyd *et al.* (2000), Arvin *et al.* (2000) and Osei *et al.* (2004) have used this methodology. Arvin *et al.* (2000) is however the only study which distinguishes aid by its tying status. Arvin *et al.* (2000) investigates the relationship between untied assistance and donor country exports using German data over the period 1973-1995.

In general, there are a very limited number of studies which have tried to include explicitly/directly the tying status of aid. One exception is Tajoli (1999) who estimates the impact of Italian tied aid on total imports of recipient countries and tries to examine whether the distortionary impact of tied aid overcomes the trade generating effect.

Methodology – Empirical specification

The gravity approach often demonstrates significant explanatory power and is commonly used in the empirical literature (as opposed to the Tajoli methodology). Granger causality itself has several limitations⁵¹ and would be difficult to implement given the limited number of observations available. For this reason it was decided to use a gravity model and adapt it to the country level. The empirical specification used to empirically test the hypotheses⁵² is set out below and follows closely the methodology adopted by Massa and Te Velde (2009).

First, the following regression is computed in order to understand whether aid flows have an impact on total donors' export flows to the recipient country at an aggregate level.

$$\ln(Exp_{it}) = \alpha + \beta_1 \ln(Y_{it}) + \beta_2 \ln(Ypc_{it}) + \beta_3 \ln(Dist_{it}) + \beta_4 \ln(ComL_{it}) + \beta_5 \ln(ExpC_{it}) + \beta_6 \ln(Im pR_{it}) + \delta_1 \ln(ODA_{it}) + \delta_2 \ln(ODA_{All-i}) + \varepsilon_{it}$$

(ODA aggregated)

The dependent variable Exp_i represents the export flows⁵³ from country i to the recipient country;

Y_i and Ypc_i measure respectively the GDP and GDP per capita of donor country i ;

ODA_i is the country i 's Official Development Assistance to the recipient country whereas ODA_{All-i} represents ODA the recipient country receives from all the bilateral donors other than country i .

$ExpC_i$ stands for export credits;

$Dist_i$ stands for the distance between the exporting and the recipient country whereas $ComL_i$ is a dummy indicating whether the donor country and recipient share a common official language⁵⁴. ε_i is the error term, normally distributed, with mean 0 and variance σ_ε^2 .

⁵¹ See Annex D (Problems in estimating the determinants of exports – the aid and trade relationship) for a full discussion on the direction of causality as well as Granger causality drawbacks.

⁵² See Annex D for further details on problems in estimating the determinants of exports related to the nature of the aid and trade relationship.

⁵³ Exports include all traded goods but not services. Ideally, exports of goods and services would have been used as a dependent variable; this exercise would have proved particularly interesting considering aid is often tied to consultancy services. However, exports of services had to be excluded due to the unavailability of disaggregated data (see Annex D – data issues for further details).

⁵⁴ In order to adapt the original gravity model to the country level, the recipient's GDP and GDP per capita (which only vary across years and not across donors) are not included in the regressions. Also the dummy 'colony' indicating whether the donor and the recipient have been in a colonial relationship was dropped; at the country level this variable loses its interest and moreover it is likely to be highly correlated with the common language variable.

$ImpR_i$ stands for import residuals.

There might be several unmeasured factors that affect both aid and exports in the model. The omission of variables representing such influences (either difficult to measure, such as political ties and other relationships between the donor and the recipient, or simply underlying relationships not identified as potential determinants) could lead to over-estimating the explanatory power of foreign aid, which could be proxying for several of these omitted variables. In order to overcome this problem an OLS regression is run on imports from the recipient to the donor and then the residuals from this regression are included in the original equations. This procedure is carried out on the assumption that underlying relationships, and the omitted relationship variables, between the donor and the recipient (trading partners in this case) affect imports and exports in the same way (Wagner, 2003).

Second, the above regression is re-estimated including a potentially important extra variable TS (tying status). TS_i represents the percentage share of donor ODA reported as tied. There is a direct link between formally tied aid and trade. When a donor provides tied aid, the recipient is constrained to the purchase of donor country exports.

$$\begin{aligned} \ln(Exp_{it}) = & \alpha + \beta_1 \ln(Y_{it}) + \beta_2 \ln(Ypc_{it}) + \beta_3 \ln(Dist_{it}) + \beta_4 \ln(ComL_{it}) + \beta_5 \ln(ExpC_{it}) \\ & + \beta_6 \ln(ImpR_{it}) + \beta_7 \ln(TS_{it}) + \delta_1 \ln(ODA_{it}) + \delta_2 \ln(ODA_{All-it}) + \varepsilon_{it} \end{aligned}$$

(Tying status)

Third, the regression above is re-estimated disaggregating ODA into loans and grants⁵⁵ to test whether certain aid instruments impact differently on trade flows.

$$\begin{aligned} \ln(Exp_{it}) = & \alpha + \beta_1 \ln(Y_{it}) + \beta_2 \ln(Ypc_{it}) + \beta_3 \ln(Dist_{it}) + \beta_4 \ln(ComL_{it}) + \beta_5 \ln(ExpC_{it}) \\ & + \beta_6 \ln(ImpR_{it}) + \beta_7 \ln(TS_{it}) + \delta_1 \ln(Loans_{it}) + \delta_2 \ln(Loans_{All-it}) + \delta_3 \ln(Grants_{it}) + \delta_4 \ln(Grants_{All-it}) + \varepsilon_{it} \end{aligned}$$

(ODA disaggregated)

Aid instruments are distinguished based on the origin of the flows. $Grants_i$ is the country i 's grants to the recipient country whereas $Grants_{All-i}$ represents the grants the recipient country receives from all the bilateral donors other than country i . Similarly, $Loans_i$ and $Loans_{All-i}$ are respectively the loans the recipient country receives from exporting country i , and from all the countries other than country i ⁵⁶.

However, the exclusion of certain potentially important factors may confound the influence of the explanatory variables on export flows. Therefore, the above regression is re-estimated including an EC variable; some donor personnel in Ghana suggested that the ACP-EU relationship might be an influence on exports from EU countries. In order to explore further this relationship a variable for EC disbursements was included.

⁵⁵ Aggregated ODA includes loans, grants, equity investment and grant-like (see definitions). However, once aid is disaggregate the information about equity investment and grant-like is discarded due to their small size. In Ghana they represent 0.6% and 0.0% of ODA (2005-7) respectively.

⁵⁶ The $\log(\text{loans})$ or $\log(\text{grants})$ when the variable is equal to zero (the log is undefined) cannot be computed. To handle this type of problem we add 1 to the data before logging it – $\log(0+1)$. It is assumed that such adjustment is immaterial in the dataset as all positive values in the data are large numbers.

ANNEX F: PROJECT CHARACTERISATION

During the Ghana country study the team reviewed a large number of projects beyond the Damanko and NORWASP projects presented above. Table F.A shown below presents a characterisation of the range of typical project types encountered in terms of their typical features and likely untying status. Both the NORWASP and Damanko projects would be described as ‘Mainly untied’ in this scheme.

Table F.1 Project ‘packages’ and likely untying status

Project Characterisation	Project type	Project environment	TC procurement	Civil works and Goods procurement	Likely Untied aid share ⁵⁷
Fully untied	Investment and/or TC	Budget support, SWAp, full pooling ⁵⁸	Recipient CPS, Recipient ICB	CPS, NCB	95%
Mainly untied	Investment and/or TC	Project / loose pooling	Donor ICB, TC de facto tied, non-recipient	CPS, NCB or significant subcontracting with small tender values	75%
Significantly de facto tied	Investment and/or TC	Project / loose pooling	Donor (Tied, Framework, Goods-in-kind, Donor de facto tied, non-recipient)	Little subcontracting, large tender values, goods & services / skills not available locally	35%
Tied	TC	Project	Donor (Tied, Framework, Goods-in-kind, Donor de facto tied, non-recipient)	No subcontracting	15%

⁵⁷ The untied aid share shown here is designed to reflect all parts of a project including but not limited to, all project procurement, donor administration costs, services-in-kind and donor auditing. This reflects the ability of some donors to untie their administration and also a desire to recognise that it may not be optimal to untie 100% of a project.

⁵⁸ Full pooling refers to pooling arrangements where once funds are committed they no longer distinguishable by donor and therefore are fully untied. Loose pools are arrangements similar to traditional parallel implementation arrangements where funding streams are donor specific and tying remains an option.

ANNEX G: CONTACTS

Due to the nature of the study, all meetings and discussions reported are presented on a non attributable basis be they governmental, donor or other entities. These donors cooperated through meetings in Accra and often therefore also at HQ level: Canada (CIDA and the CIDA PSU), Denmark (DANIDA), EU(EC), France (Embassy and AFD), Germany (The Embassy - BMZ as well as KfW and GTZ), Switzerland (SDC and SECO), Netherlands (The Embassy, MoFA), Japan (JICA and MOFA), UK (DfID) and US (MCC).

We contacted the following donors (agencies) only at HQ level, as they not having substantial programmes in Ghana, Australia (AusAID), Belgium (DGDC), Norway (Norad), Spain (AECI). The study team also contacted the World Bank and UNICEF.

The cooperating agencies of government included:

- Ministry of Finance and Economic Planning (MoFEP): (The Statistics office also comes under the MoFEP);
- Ministries responsible for water: in Ghana there are two, The Ministry of Local Government and Rural Development (MLGRD) for rural water and the Ministry of Water Resources, Works and Housing (MWRWH);
- Agencies and companies responsible for implementing the project in cooperation with the donor: in Ghana. There are four main ones, the Water Directorate (department under the MLGRD), Community Water and Sanitation (under Water Directorate), Ghana Water Company (responsible for urban water under the MWRWH) and Aqua Vitens, a private contractor (responsible for collecting fees and managing urban water delivery) under Ghana Water Company. The Accra Metropolitan Authority is the major example of a municipal body responsible for urban sanitation. The Local Government Information Unit (LGIU) under the MLGRD is also responsible for assisting local governments in working with donors. In addition, MIDA an independent government department setup to administer MCA projects;
- PIUs - the project implementing departments - staff at the ministry who work on the donor projects;
- Public Procurement Agency (PPA) - responsible for administered and monitoring use of the Ghana procurement law; and
- Regional offices of all departments mentioned above;

On the groundtruthing visit to Damanko the team spoke with the firms and staff contracted to the project and available on site as well as end users and their representatives. Finally, Procurement agents Charles Kendall and Wateraid Ghana were consulted.

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