Evidencing Donor Heterogeneity in Aid for Trade

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Abstract

This paper is the culmination of a multi-country, multi-method investigation into the export effects of aid for trade (AfT). Building off of previous single-donor statistical studies of AfT, this paper conducts a statistical study of 19 OECD AfT donors and then examines the delivery and implementation of AfT in four recipient countries, Indonesia, the Philippines, Timor-Leste, and Vietnam, from four donor countries, Germany, Japan, Norway, and the United States.

The paper finds considerable variation in the export effects of the AfT programs, ranging from programs with no impact on recipient country exports to programs that are positively correlated with recipient country exports to the donor country and/or the rest of the world. Taking a closer look at the AfT programs of Germany, Japan, Norway and the United States suggests that differences in program design and implementation may account for differences in AfT export effects.

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Introduction

What is the impact of foreign aid? Despite decades of research and debate the question remains unsettled. While there may be consensus that foreign aid does not alleviate poverty or promote development unconditionally, opinions on the impact of aid range from Simeon Djankov, Jose Montalvo and Marta Reynal-Querol's (2008) despair, to William Easterly, Ross Levine, and David Roodman's (2004) skepticism, to Craig Burnside and David Dollar's (2000) qualified optimism. Hristos Doucouliagos and Martin Paldam (2008) provide an excellent review of the aid literature of the past 40 years in which they lament the sad fact that no conclusion regarding the overall impact of aid has been reached. A parallel discussion conceptualizing 'development' beyond a simple measure of per capita GDP began nearly 60 years ago (Lewis (1954) or Mydral (1957)) and includes measures of 'development' as 'basic needs' (Streeten and Burki 1978) or human development (Noorbakhsh 1998), freedom (Sen 1999), or even happiness (Bates 2009). These multiple conceptualizations of development have prompted literatures that have shown increased promise in analyzing the effects of particular 'types' of foreign aid when outcomes are measured as something beyond per capita GDP. Examples include investigations into human development (Gomanee et al. 2005), education aid (Michaelowa 2004), health aid (Dodd and Hill 2007), democracy promotion (Brown 2005), or the so-called 'Aid for Trade' (AfT).[i]

This piece contributes to the efforts to understand the effects of the last strand. A flurry of articles has been produced in recent years examining the impact of AfT. Susan Prowse's 2002 work was the first examination of the impact of AfT, but this work was neither statistical nor systematic. Recently, interest in AfT has picked up with Bernard Hoekman and John Wilson's (2010) examination of the upward trend in AfT allocation and survey of some recent work on AfT effects. Massimiliano Cali and Dirk Willem te Velde (2009) and Paul Brenton and Erik von Uexkull (2009) have conducted studies on specific kinds of, or product-specific, AfT, and find positive impacts on recipient exports, while Matthias Helble, Catherine Mann and John Wilson (2012) find positive overall export and import effects for AfT. Author (2010a), and David Bearce, Steven Finkel, Anibal Perez-Linan, Juan Rodriguez-Zepeda and Lena Surzhko (2011), both examined the trade capacity building program of a single donor, the United States, and each found some degree of positive export effects. Beyond these studies, there are a number of donor evaluations that provide anecdotal evidence of the success of specific programs (USAID 2003, USTR 2007, BMZ 2008). However, none of this research examines AfT programs differentiating by donors and recipients.

This paper contributes to the growing literature by conducting a cross-country analysis of 19 OECD Donor AfT programs.[ii] The purpose of this study is to investigate whether all AfT programs are 'created equally' or if their export effects may depend on donor-specific considerations. Foreign aid heterogeneity has been examined in the context of differing donor motivations (Berthelemy and Tichit (2004), Berthelemy (2006), Clist (2011), Dalgaard (2008), or Kilby and Dreher (2010)) or differing 'modalities' (i.e. types) of foreign aid (Mavrotas (2005), Mavrotas and Nunnenkamp (2007)). However, beyond motivation and modalities it is entirely plausible that aid program *design* and/or *implementation* may account for heterogeneous aid outcomes. In other words, some donors may be simply more efficient in designing and carrying out foreign aid programs that 'work.' In the context of AfT, this efficiency would imply programs that are correlated with increases in the recipient country's exports. Evidencing donor

heterogeneity contributes to the literature by adding a further degree of nuance to the understandings of aid impacts. The 'correct' motivation and modality may not be enough; how programs are put together and run may matter as well. The identification of heterogeneous aid impacts may suggest a further refinement in the search for 'best practices' in foreign aid and development.

In order to look for donor heterogeneity in AfT, this study follows established statistical procedures for assessing aid. After finding evidence of differing levels of export effects by donor, the study attempts to account for this heterogeneity by examining the AfT program design and implementation of four donors, Germany, Japan, Norway, and the United States, in four recipient countries, Indonesia, the Philippines, Timor-Leste, and Vietnam. The study finds institutional design and implementation strategies do differ substantially across the donor countries and that these differences offer plausible explanations for the differences in the observed export effects.

Aid for Trade

'Aid for Trade' is foreign aid that is intended to reduce the transaction costs associated with the transnational exchange of goods or services (Prowse 2002). Using this broad definition, it is difficult to distinguish AfT from other forms of foreign aid. A recent OECD (2007, p. 10) report makes an attempt to do so, however, by classifying AfT as that aid in which the funding goes to support 'activities that have been identified as trade related development priorities in the recipient country's national development strategies.' As noted by Johannes Urpelainen (2009), AfT is intended to decrease both the infrastructural and institutional barriers to trade in developing countries. The OECD expands this typology by further classifying AfT into the following six categories: (1) trade policy and regulations (TPR), (2) trade development (TD), (3) trade related infrastructure (TRI), (4) building productive capacity, (5) trade-related adjustment, and (6) other trade-related needs. In aggregate, from 2001-2006, bilateral and multilateral donors provided 11.6 billion USD in trade development, 35.5 billion USD in transportation, 2.9 billion USD in communications, 26.6 billion USD in energy, and 5.2 billion USD in trade policy AfT.[iii] These broad categories allow for a substantial range of assistance to be classified as AfT. This is perhaps unsurprising, as AfT has increasingly become the foreign aid modality *de jour*, especially following the Aid for Trade initiative launched at WTO Hong Kong Ministerial Conference in 2005. It does not seem out of the realm of possibility, and indeed can be inferred in the case studies below, that donors took advantage of AfT's broad definition to 'reclassify' existing aid programs as AfT in order to show enthusiasm for the initiative.

<Table 1 About Here>

There is significant variance in the amount of AfT provided and received by the 19 donors and 154 recipient countries examined in this study. Much of this variance is due to the relative size of the donors and recipients. Table 1 presents a snapshot of the median values of AfT provided between 2001-2006. The mean statistics are skewed due to the presence of a few large donors and recipients, particularly on the donor side. As donors, the United States and Japan account for 49 percent of the total instances, and 69 percent of the total amount, of bilateral AfT provided during this time period.[iv]

As seen in Table 1, bilateral donors emphasize provision of trade development and infrastructure AfT, while recipient countries receive mainly TPR AfT projects, that are worth, on average, only 36 thousand dollars each. The discrepancy is due to the fact that multilateral donors, provide numerous instances of TPR assistance. For example, from 2001-2006, the World Trade Organization (WTO) provided 15,595 instances of TPR AfT worth 83.0 million dollars and the European Community (EC) provided 668 instances of TPR AfT worth 2.3 billion dollars.[v] Provision of multilateral aid has continued to expand as AfT has 'grown up,' with a renewed focus stemming from the WTO's Hong Kong Ministerial and the establishment of an AfT task force in 2006. The potential for donor coordination or complementarities has expanded with the multilateral initiative, and Helbe et al (2012) have examined AfT export and import effects from this angle. However, during the years covered by this statistical study, bilateral donors were the primary actors and, as such, my focus is on bilateral programs.

Based on the definition of AfT above, it would be reasonable to assume that an increase in recipient trade capacity developed through AfT would enhance exports universally, or to all of the recipient country's trading partners. Author (2010b) shows how AfT can be incorporated into a gravity model of trade by introducing the concept of a trade capacity 'stock' be increased by the provision of AfT. This stock consists of all trade-related capacity – institutional, infrastructural, and 'know how' – that reduces the cost of exporting which in turn increases the number of firms that are globally cost competitive. This rationale largely follows firm-level exports decisions, or 'self-selection', as discussed by Helpman et al (2008). As trade costs diminish, more firms may 'self-select' into exporting. Thus one would expect increased exports as a potential outcome of AfT provision.

Hypothesis 1: AfT increases recipient country exports.

It is also worth noting a related literature that finds at least qualified evidence that foreign aid is linked to recipient *imports* from the donors because of explicitly tied aid, goodwill or demonstration effects (Lloyd et al 2000, Osei et al 2004, Nowak-Lehman et al 2009), although this examines linkages with general aid as opposed to AfT. Helbe et al (2012) find evidence of specific AfT 'import effects' where aid for trade increases imports by reducing CIF costs or the cost of port or customs procedures. However, the authors find that the magnitude of these import effects is less than that of the AfT export effects, meaning that AfT is balance-of-payments enhancing. This paper does not examine the 'imports effects' of AfT – which may have an element of 'donor interest' (ala McKinlay and Little 1979) wherein donors provide AfT in order to boost their own exports. An examination of export effects does not lend itself to this type of assessment, and this paper does not seek to contribute to the discussion of 'donor interest' vs. 'recipient need.' Donor motivation enters into the current study only through an expectation that AfT that is not designed to engender positive recipient country export effect will fail to show any relationship with exports.

There are also reasons to expect that AfT export effects may only be evident in exports to the donor country. For instance, AfT may be used facilitate and increase the volume of pre-existing trade linkages, or may be used to facilitate donor imports of an important resource or input in the recipient country. This suggests that, *a priori*, donor countries that are larger importers in the

first instance would be more likely to show evidence of this type of export effect. This 'selective' export effect need not be insidious as long as any increase in trade is a result of trade creation and does not lead to declining terms of trade. On the other hand, if the donor country is a small export market, or is already well supplied with the recipient country's primary product(s), there may be no export effect to the donor, despite an overall export effect.

Hypothesis 2: AfT increases recipient country exports only (or disproportionately) to the donor country.

Based on the hypotheses above, I suggest AfT exports effects may be classified as 'universal,' 'selective,'' or 'absent.'

Identifying Heterogeneity in Export Effects

My approach to evaluating the export effects of the nineteen OECD donors closely follows the method used by Author (2010a) and Bearce et al (2011). As is cannon when evaluating trade flows I use the gravity model to measure the change in exports of countries who receive AfT. However, since the aim of the statistical test is to look for donor-heterogeneity, I supplement this approach by using three-dimensional (year x donor x recipient) panel techniques as employed in Berthelemy and Tichit (2004). The gravity-inspired estimating equation derived in Author(2010b) modified for a three-dimensional panel suggests the following specification:

$$m_{ijt} = \beta_0 + \lambda_t + \chi_i + \beta_1 m_{ijt-1} + \beta_2 d_{ij} + \beta_3 y_{it} + \beta_{4+l} b_{ijt-l} + v_{ijt} \textit{ (eq. 1)}$$

where m_{ijt} is the exports from region i to region j at time t, m_{ijt-1} is the one year lag of those exports, λ_t captures all time (business cycle) effects and χ_i captures the local country fixed-effects, d_{ij} is the distance between i and j, y_{it} is the income of exporting region i and b_{ijt-l} is the AfT received by i from j at t-l, where l is a time lag. AfT is lagged since the export effects of AfT almost certainly take time to come to fruition, however the lag-structure of AfT is not well-established. While there is a tendency in previous statistical work to use a lag of *t-2* this has only anecdotal support (Author 2010a, Bearce et al 2011, Osei et al 2004). Beyond that, it is highly plausible that the impact of AfT is of distributed-lag form, and distributed lags tend to display high degrees of multicollinearity. Since the main negative impact of multicollinearity is *increased* standard errors, I do not take corrective action unless the multicollinearity substantively affects the results. When it does I follow a standard practice of dropping one of the multicollinear variables, in this case one of the collinear AfT lags. The error term is given by $v_{ijt} = \mu_{it} + \eta_{ijt} \sim N(0, \sigma^2_v)$, where μ_{it} is the measurement error associated with the trade capacity stock, which changes through a law of motion, and η_{ijt} is a white-noise error term associated with any measurement error of m_{ijt}.

My vector of importing countries contains each of the 19 OECD donor countries and the 'Rest of the World' (ROW). As discussed by Bergstrand (1985), Matyas (1997), Matyas (1998), Egger (2000), Feenstra (2002), and Anderson and Van Wincoop (2003) there are a number of reasons to justifying using both random and fixed-effects generalized-least squares (GLS) models when using the gravity model to evaluate panel trade data. However, as discussed at greater length in Bearce et al (2011), using a fixed effects model is preferable when studying export effects of

AfT as in addition to controlling for time-invariant regressors (such as distance) it also controls for systemic fluctuations in global market conditions. Finally, I include a lagged-dependent variable (LDV) in order to control for any trade-persistence despite the risk of Nickell bias *underestimating* the significance of the relationship in the model, as done in both Bearce et al (2011) and Author (2010a). Results from a fixed effects model without a LDV, a random effects model, and a population-averaged generalized estimating equations (GEE) model are broadly consistent with the results presented below and are available upon request.

I test the hypotheses by evaluating the coefficients β_{4+l} that measure the relationship between AfT and recipient country exports. For the controls I expect β_1 and β_3 to be positive. β_2 drops out of the fixed effects model as a time-invariant regressor. As with the three-dimensional panel in Berthelemy and Tichit (2004) I first run aggregate donor models, one looking for export effects generally, and one looking for export effects to the donor. While the simplest test for export effects is to look for a relationship between total AfT and recipient exports the data can be, and is, disaggregated in the WTO/OECD database along several dimensions. At the most general level, the AfT data is broken down into infrastructural, bi_{ijt-l}, trade development, bd_{ijt-l}, and trade policy and regulations, bp_{ijt-l} elements. It is conceivable, and perhaps even likely, that these different modalities of AfT have differing export effects, due both to their nature but also to their timing. For instance, presumably it takes longer to build a port than it does to hold a seminar on how to meet SPS requirements. If this is the case, then aggregating this data might aggregate conflicting lag structures, limiting the possibility of meaningful statistical results. Accordingly, Tables 2 and 3 include models with both the aggregated and disaggregated measures of AfT.

<Tables 2 and 3 About Here>

The results from the aggregate donor models show almost no evidence of AfT export effects. This result is consistent with the contention that there is donor heterogeneity in AfT export effects. If only some donors have positive export effects, then a full model may not evidence strong export effects. Alternatively, the lack of significant results could also be the result of conflated timing of different donors' AfT export effects. Accordingly, to more directly identify donor heterogeneity in AfT export effects I again turn to the methods employed in Berthelemy and Tichit (2004). Like them, I test parameter differences among donors by estimating an equation for each donor using the explanatory variables from equation 1 together with those variables multiplied by a donor dummy. This allows me to both estimate parameters by donor, but also to compare the parameters between a given donor and the group of other donors. As this calls for 19 sets of empirical results, I also follow the display approach of Berthelemy and Tichit (2004), by providing the direction and significance of the parameter estimates in Tables 4 and 5, and the parameter differences in Tables 6 and 7 below. Full numerical results are available in a SSRN working paper version of this manuscript (Author 2011) or upon request.

<Tables 4-7 About Here>

The results in tables 4 to 7 suggest a significant amount of donor heterogeneity in AfT export effects. The donor-level analysis reveals both 'selective' and 'universal' export effects. Table 4 shows evidence of strong selective export effects to the United States and to a lesser extent,

Japan, Ireland, Denmark, France and Greece. Swedish TPR AfT appears to be associated with negative export effects in the one year lag, but with positive effects in the two and three year lags. Finally, Swiss infrastructure AfT is strongly associated with negative export effects. Table 5 evidences even greater heterogeneity with no less than 10 of the 19 donors evidencing positive universal export effects in at least parts of their AfT programs. Again infrastructure AfT, this time from Italy, curiously shows a negative export effect, while both Australia and Greece show evidence of negative export effects in TPR AfT. Beyond evidencing heterogeneity in donors, the results also suggest heterogeneity in AfT 'types,' or modalities. TD AfT evidenced positive export effects in 7 of the 19 OECD programs, TPR AfT in 5 of the 19, but infrastructure in only 1 of the 19. This could be due simply to the fact that a three-year lag is insufficient to capture any export effects associated with this type of AfT as infrastructure projects are likely to take substantially longer to complete than TD or TPR AfT projects.

Tables 6 and 7, presenting a direct comparison of the donors, largely reflect the results from tables 4 and 5. Finland, Ireland, Belgium, Norway, Switzerland and the United Kingdom all evidence positive export effects parameter differences vis-à-vis their counterparts, for at least some AfT types and lags, while Canada, Italy, Portugal, and Spain show negative export effects parameter differences with the other OECD donors. Australia, Denmark, Sweden, the United States and France all display positively different export effects parameters for some types/timings of AfT and negatively different export effects parameters for other types/timings. These results suggest that export effects are not attributable to AfT, *carte blanche,* bur rather, that differences in donor, type of AfT, and timing of projects all have a measurable impact on AfT export effects. The results do not suggest any 'grand champion' of AfT, instead suggesting that certain donors may have aspects of their AfT programs that are more efficient at producing export effects than others.

Interpreting the results above also requires several caveats. First, one must take the results of 'small' donors with some skepticism due to fact that the limited number of non-zero AfT observations may lead to anomalous results. Further, while the fixed-effects specification controls for time-invariant factors in the donor-recipient relationship, there may be other, unobserved changes in the recipient-donor, or recipient-ROW, trade structure that influence trade patterns.[vi] These qualifications spur the closer investigation of four specific AfT programs in the section below.

Understanding Heterogeneity

A brief glance at the data reveals some potential explanations for the heterogeneity of the results above. First, almost all of the donors that had a positively significant result for the b_{ijt-l} coefficients had programs that provided AfT assistance to the same recipient countries in multiple years. It is plausible to infer that this pattern of AfT allocation would be more conducive to systematically increasing the trade capacity stock than AfT that is given, as Prowse (2002, p. 1239) puts it, 'randomly' or 'indiscriminately,' with no pattern as to recipient and/or time period. Further, donors that concentrated their capacity building funds on fewer recipients tended to display stronger export effects than those that gave less aid to a greater number of recipients.

To develop a more thorough understanding of what accounts for differences in export effects of donors' AfT programs I take a closer look at four of the donors, Germany, the United States, Japan, and Norway. One would expect that differences in program design and/or implementation will lead to different outcomes. Examining the design and implementation principles followed by the four donor donors may shed light on those that are most conducive to export effects. This investigative logic follows Easterly's (2007), Easterly and Pfutze's (2008), and Easterly and Williamson's (2011) critiques of 'best practices' in aid agencies. Some agencies may simply do a poor job of creating and running programs that work. Alternatively, given the broad definition of AfT, it is possible that some donor programs, being of a more general nature, were never intended to increase exports.

In order to control for recipient country effects, I look at the programs of each of the four donors in the same four recipient countries, Indonesia, the Philippines, Timor-Leste, and Vietnam. These countries each host AfT programs from the four donors above, and also provide (within a specific region) a wide range of other socio-economic recipient characteristics that might influence AfT export effects. The amount of AfT from each donor to each recipient, a summary of the recipient characteristics, and exports from the recipients to the donor and the ROW are presented in Tables 8, 9 and 10 below.

<Table 8 About Here>

<Table 9 About Here>

<Table 10 About Here>

Table 10 reveals substantial increases in the exports of all four recipient countries over the time period of the study, consistent with a claim that AfT programs in these countries had positive universal export effects. However, parsing out specific projects that could be linked to increased exports requires a closer analysis.

Evaluating Cases

This section explores donor heterogeneity through the use of case studies. My evaluation is based on a detailed examination of donor AfT program documentation and press releases, which is corroborated and expanded through personal interviews with program implementers in the host countries conducted from May to July 2011. While these narratives may not rise to a true case-study 'hypothesis test', they at least provide a 'thumbnail' insight that may shed light on the statistically revealed donor heterogeneity in AfT export effects.

Germany – 'Absent'

Germany's AfT program ranks among the largest of all the OECD donors, with a total AfT portfolio of 1,654 projects worth some 3.7 billion (USD) from 2001 to 2006.[vii] Germany's AfT efforts largely focus on using increased trade as a means to combat poverty, as opposed to specifically increasing recipient country exports, and trade is not one of the eleven priority areas

of German development cooperation (Voionmaa and Bruntrup 2009, p. 64). In response to an OECD questionnaire, German officials responded by indicating that:

> Germany does not have an individual strategy document on Aid for Trade. Trade is not a specific single sector of German development projects. Rather, trade-related elements encompass the key aspects of development cooperation in specific projects focusing on agriculture, business development, etc (OECD 2007, p. 105).

Germany's AfT program is largely administered by the Federal Ministry for Economic Cooperation and Development (BMZ) although it is implemented by a veritable 'alphabet soup' of affiliated agencies including KfW, GTZ(GIZ), BGR, InWEnt, DED and CIM.[viii] The most comprehensive analysis of Germany's Aid for Trade program, a 2009 report by Petra Voionmaa and Michael Bruntrup, thoroughly examined BMZ strategy papers and found no explicit direction or goal-orientation for German trade capacity, specifically considered. In fact, a 2009 BMZ report on 'Shaping German Aid for Trade' states:

> Until recently, the BMZ lacked the tools for strategically planning the AfT activities that were implemented under this wide range of headings, instead they 'happened' without much possibility to predict future flows and with severe difficulties when it came to determining their scale *ex-post* (BMZ 2009, p. 8).

Accordingly, it appears that the main role of German AfT assistance during the period under examination in this study, 2001-2006, was to be an auxiliary component to other development projects.

This lack of an export focus is a straight forward and powerful explanation for the 'absent' classification of German AfT export effects from 2001-2006. German AfT programs in Timor-Leste and Vietnam focused primarily on vocational training. In Timor-Leste the GIZ program directly trained youth to work in rural agriculture. The Technical and Vocational Education and Training (TVET) program in Vietnam followed a 'train the trainer' approach to build vocational skills in the electronics and metalworking fields. While a number of vocational graduates may ultimately work for farms growing export products or firms in export processing zones, increasing exports was not the intent of either program and any export effects would indeed appear a number of linkages down the 'causal chain.'

In both the Philippines and Indonesia, German 'AfT' funded 'private sector promotion' projects aimed at increasing production in micro, small, and medium enterprises (MSMEs). The projects consisted primarily of technical assistance aimed at increasing sectoral competitiveness and moving production up the value chain. While a joint Filipino-German evaluation (2010, p. 7) noted that Filipino MSME exports had increased by 16 percent annually from 2004 to 2010, the same report commented that national statistics suggest '[t]hey (MSMEs) hardly contribute to exports at all.' In Indonesia, one project in the Regional Economic Development (RED) program was a TA effort to move Indonesian production of rattan furniture up the value chain. While this project was explicitly intended to increase Indonesian exports of rattan furniture, a GIZ (2011) report revealed a 12.6% *decrease* in the value rattan furniture exports from 2007 to 2010, attributed both to changing global market conditions and an increase in Vietnamese and Chinese

competition. This scant evidence of 'export-intent' corroborates the results in tables 4-7 and is consistent with the general stagnation of exports from the case-study countries to Germany as evidenced in table 10.

The United States – 'Selective/Universal'

The United States' AfT program began in earnest in 1999 and is one of the two largest, both in terms of the number of countries who receive some form of AfT and in the total amount given. The WTO database indicates that between 2001 and 2006 the United States distributed 15 billion USD in various forms of AfT assistance across a total of 10,442 projects.[ix] According to a recent USAID report, 55 per cent of AfT in the United States is appropriated by the United States Agency for International Development (USAID), through the agency's Economic Growth budget. An assortment of nineteen other agencies distributed the remaining AfT funds, with the Millennium Challenge Corporation, the Department of Labor, and the United States Department of State as major additional players (USAID 2003, USAID 2008). Since 2001, US AfT efforts have been coordinated through the 'AfT Inter-agency Group,' which has resulted in an ongoing process of 'informal' meetings to coordinate AfT activities (GAO 2005).

As the most prolific AfT donor, USAID has the most extensive collection of documentation regarding its AfT efforts, which reveals a somewhat mixed message. As has been noted elsewhere, the aim of USAID funded projects as documented in its own reviews and in Government Accountability Office (GAO) reports is generally of a 'universal' nature (Ott 2009). There is also some indication that the US invites assessments of trade constraints from recipient partner countries. A USTR official, in response to the GAO, reported that:

> We have asked our partners to develop an assessment -- a 'national strategy' --- that defines their AfT needs. The national strategy provides US agencies and other donors with a guide to target their programs....'(GAO 2005, p. 57)

However, the same government auditor, the GAO, also cites 'national security,' 'foreign policy,' and 'regional considerations' as potential objectives, along with 'country needs,' in formulating assistance. This broader-based donor motivation also corresponds with a 2002 USAID report entitled *Foreign Aid in the National Interest.*

Closer examination and discussion regarding US projects in the recipient countries revealed that, in most cases, they were intended to be 'universal' programs. However, the case studies revealed the possibility of some 'unintended' consequences that may explain the US 'selective' result. First, substantial portions of US AfT in these countries were 'trade policy and regulation' (TPR) technical assistance programs that assisted in developing a trade-friendly institutional environment. Some of the US programs, such as the AGILE/AGTA program in the Philippines, the STAR program in Vietnam, and the ITAP program in Indonesia, were TA projects implemented by US government contractors. The goal of these projects was to facilitate TPR reforms aiming to improve the overall business environment and, in some cases, ease the entry of recipient countries into the US export market. For instance, one project in the Filipino program helped the Philippine Bureau of Customs with pre-shipment compliance with the then new US customs and port of origin regulations (USAID/Philippines 2005). Similarly, the STAR program

in Vietnam conducted trainings on navigating US customs procedures and meeting US sanitary-phytosanitary (SPS) standards. Additionally, the STAR program was in direct support of the US-Vietnamese bilateral trade agreement (BTA) that entered into force in 2001, and was a substantial portion of US AfT to Vietnam over the time period. The United States is known to direct AfT funding to countries with whom the United States is actively involved in either trade negotiations or a preferential trading agreement (USAID 2003, GAO 2005). It is unsurprising that AfT that accompanies a preferential-access BTA is correlated with a 'selective' export effect, although this result is almost certainly driven by the increased market access.

The case studies also revealed US trade development programs that utilized the networks of the contractors to increase exports to the US. For instance, the National Cooperative Business Association (NCBA) ran a program that primarily provided technical assistance to increase 'output, production efficiency, and quality' of Timor-Leste agricultural projects through coffee farm rehabilitation and assistance in obtaining 'organic' certification. The project also linked producer organizations to markets by assisting the Timor Coffee Cooperative (CCT) to connect with Starbucks, which began marketing the CCT's coffee under the 'Arabian Mocha Timor' brand in 2005. Likewise, in Indonesia, the garment component of USAID's SENADA project used TA to help facilitate identification of markets and/or distributers by connecting the Garment Partnership Indonesia (GPI) alliance with US brands such as Gap, Jones Apparel, Adidas and Nike (USAID/Indonesia 2008, p. 44). However, despite these US-linked programs, the data from table 10 suggest a 'selective' effect only with regard to Vietnam. Endoegeneity makes it difficult to attribute the Vietnamese rise in exports to the US to AfT or increased market access, but one may suspect the increase is driven far more by the latter. US AfT may thus be prone to 'universal' export effects, but this relationship may be also be overshadowed by a market-access effect when AfT accompanies bilateral trade agreements.

Japan – 'Universal'

Japan's AfT program rivals that of the United States both in terms of the number of countries that receive aid and in total volume, although the bulk of Japanese AfT is directed to countries in Asia and Oceania (WTO-OECD 2005). The WTO database records 10,313 instances of AfT worth 22.3 billion USD from Japan between 2001 and 2006.[x] Japan has consistently led all OECD donors in the provision of infrastructure AfT, allocating tens of billions of dollars for roads, rail systems, ports, and airports (MOFA 2003). Japan's bilateral AfT funds are distributed through the Customs Technical Cooperation Programme in the Ministry of Finance, the Japan International Cooperation Agency (JICA), the Japanese External Trade Organization (JETRO), the Japan Bank for International Cooperation (JBIC), and through the Ministry of Foreign Affairs (MOFA)(WTO 2005). The MOFA is the primary provider of grant aid, including the bulk of infrastructure AfT. JICA is the primary agency with regard to technical cooperation (JICA 2009). Japan's trade capacity program was initially part of its larger official development assistance (ODA) program and the strategy and goals of this program are laid out in Japan's official development assistance charter, produced by the MOFA in 1992 and revised and updated in 2003.

Japan's detailed approach to AfT was outlined in a development strategy known as the 'Development Initiative for Trade' (DIT) that was formulated in 2005. As described in a 2006

presentation, this strategy internalizes the 'one village, one product' approach to trade facilitation and focuses its efforts at three levels: 'produce,' 'sell,' and 'buy'(MOF 2006). Although the DIT emerged as a comprehensive AfT strategy in 2005, there is little discussion of the initiative in documents pertaining to Japanese ODA. It was referenced in the 2007 OECD review of AfT, but the DIT receives scant attention in the MOFA's internal documentation and is not mentioned in the MOFA 2010 ODA review final report. In fact, the topic of trade is only explicitly addressed once in the document:

> Sustainable growth of developing countries requires dynamic economic activities in the private sector including trade ... Japan will provide assistance to develop infrastructure, trade and investment-related systems, human capacity and improved governance (MOFA 2010, p. 26).

and this phrase is merely reflective of the aims set forth in the 2003 charter.

It is clear in reviewing Japanese documentation that their AfT program is an afterthought to their larger ODA goals. To the extent that the Japanese have come forth with explicit programs on aid and trade, they have been largely in response to multilateral efforts, such as the 2005 WTO Hong Kong Ministerial and the 2007 OECD review of Aid for Trade. The 'culture' of AfT does not appear to be ingrained in the Japanese ODA effort. This may be due to the fact that Japan has largely pursued its own, rather than the 'global,' development agenda. Masahiro Kawai and Shinji Takagi (2004) have noted that Japan has faced international scorn for its hesitancy to engage in more coordinated development efforts. Others have highlighted that this unilateral Japanese program is a response to weak domestic support for foreign aid and a perceived need by Japanese policy-makers to frame ODA in *Japan's* national interest (Kawai and Takagi 2004, Sunaga 2004, Solis and Urata 2007, and Trinidad 2007). The 'foreign interest' view also came up frequently in interviews in the field. The dearth of AfT promotion in the Japanese ODA documentation may be explained by a concern that AfT that would aim to increase recipient country exports would not be immediately perceived as in line with what Japan calls its 'enlightened national interest.' (MOFA 2010).

Investigation in the field largely confirmed this view. By far the largest Japanese AfT programs were large scale 'Yen-loan' infrastructure projects. These projects were selected based on requests from recipient countries subject to the scrutiny of feasibility studies conducted with the help of JICA TA. While the Government of Japan, usually through JICA, retains some measure of financial control, the project is implemented by a contractor that was often, but not always, a Japanese firm. This procedure differs only slightly in Grant Aid countries such as Timor-Leste. Yen-loan AfT infrastructure projects include rural, arterial and expressway road projects and the Subic Bay port project in the Philippines; the Surabaya Airport project, Maura Karang Gas Power Plant project, the Java Rail Double Track Railway project, and the Road Access to the Port of Tanjung Priok project in Indonesia; the Hai Van Tunnel and the Phu My and Omon thermal power projects in Vietnam; and a national road project in Timor-Leste. These are classic trade-related infrastructure projects, and there is strong theoretical support that these types of projects will reduce costs for recipient-country exporters. While table 10 shows increases in recipient exports to Japan and overall, and while Japanese total and trade development AfT show some evidence of positive export effects in tables 4 and 5, Japanese trade infrastructure AfT does

not show any positive export effects. This may be due to the fact that the model does not capture with export effects of infrastructure AfT projects that take longer than three years to become operational. The Japanese case may be worth revisiting as a test of the infrastructure AfT modality once extended time series are available.

Norway – 'Universal'

Of the four donors in this study, Norway has the smallest program in terms of funding, although according to the WTO database it did fund more instances of AfT than Germany between 2001 and 2006. Total Norwegian expenditure on AfT during that period was 750 million USD spread across 2,252 projects. Norwegian AfT has largely focused on trade development and trade infrastructure, with these two categories accounting for 96 percent of the funding and 92 percent of the projects. The main institutional organ of Norway's AfT is the Ministry of Environment and International Development within the Ministry of Foreign Affairs. This ministry has developed a comprehensive strategy document for Norwegian AfT that outlines Norway's intent and approaches to AfT (Norwegian MOFA 2007). This document is by far the most succinct statement of any of the four donors in this study and states the intent behind Norway's AfT program as:

> However, market access is not sufficient for the least developed and other low income countries. They lack the necessary prerequisites in terms of well-functioning regulations and trade procedures, productive capacity, infrastructure and marketing expertise (Norwegian MOFA 2007, p. 4).

While some Norwegian AfT is directed through the MoFA and its implementing agencies, NORAD and NORFUND, the majority of Norwegian AfT is directed through multilateral agencies and the WTO's integrated framework (IF), since:

> Weak institutions and limited capacity pose a particular challenge for many developing countries.... Consequently, it may often be more appropriate to channel resources through multilateral agencies ... rather than through individual, bilateral projects, which often impose an unnecessary burden on national authorities (Norwegian MOFA 2007, p. 10).

Norway's action plan also makes it clear that it is the intent of Norwegian AfT programs to increase recipient country exports to Norway with language such as:

> Norway aims to make targeted efforts to ensure that LDCs ... make use of their tariff and quota-free access to the Norwegian market (Norwegian MOFA 2007, p. 15).

suggesting a certain element of 'selective' design in Norway's AfT program.

Investigation at the project level revealed a program that potentially makes Norway a 'special case' and also lends a possible explanation to the result of positive Norwegian export effects to the RoW but not to Norway. Of the four countries studied, Norway had virtually no export-oriented presence in the Philippines, with the closest thing to trade-related assistance being an

agriculture project, the South-East Asia Regional Initiatives for Community Empowerment (SEARICE) that primarily focused on ensuring bio-diversity. In Indonesia, Norway ran a program with an Indonesian NGO, APINDO, that focused on training and capacity building for management of private sector firms, with a particular focus on empowering women for those roles. While an aspect of the program served to put APINDO members in directly in touch with Scandinavian companies through an organization known as the Centre for Promotion of Imports from Developing Countries (CBI), this was the only small exception to a program that was otherwise devoid of explicit export orientation. As table 10 shows, exports from these two countries to Norway were largely stagnant during the time period of the study.

The more interesting, and more direct, route for Norwegian AfT export effects came in Timor-Leste and, to a lesser extent, Vietnam. In these two countries, a substantial portion of Norway's AfT was provided through a program known as 'Norwegian Petroleum-Related Assistance' or 'Oil for Development' (OfD). This program focused on emerging petroleum-producing countries and helped them establish the institutional and regulatory framework necessary to be a petroleum producer and exporter. In addition to Timor-Leste, this program was funded at a high-level in ten 'core' emerging petroleum producing countries, including Mozambique, Bangladesh, and Angola. Table 11 presents each of the ten 'core' countries along with their respective percent increase in fuel exports from 2000 to 2008, along with the total amount of trade capacity building assistance received from Norway during that time.

<Table 11 About Here>

Table 11 clearly shows dramatic expansion in exports by the OfD `core' countries. While these numbers are somewhat misleading due to the drastic increase in the price of fuel during the same time period, the increases are still massive even accounting for this effect. However, it is difficult to discern if the OfD program 'leads' or 'follows' these increases. While a substantial portion of the increased production is certainly a response to changes in external market conditions, it is still conceivable that the OfD program facilitated this scaling up. At any rate, the correlation between the OfD AfT and the increase in oil exports almost certainly accounts for the Norwegian AfT export effects result above.

Conclusions

Not all donor AfT programs perform equally. Of the 19 OECD donor programs examined, four showed no recipient country export effects, two evidenced positive exports effects only to the donor, four to both the donor and the rest of the world, and six showed export effects to the rest of the world but not to themselves. A further three donors evidenced only negative export effects. A direct comparison of the donors further supports substantial heterogeneity in the export effects of different AfT programs. Closer scrutiny of four donors with differing export effects, Germany, the United States, Japan, and Norway, suggests several lessons that may explain the differences in donor outcomes.

Donor design and implementation of AfT programs appear to be as heterogeneous as the statistical export effects. While the focus of AfT has narrowed considerably with recent WTO coordination, during the time period of the study (2001-2006), it appears that a substantial

amount of aid that was broadly designated as 'AfT' lacked significant, if any, export-enhancing focus. To the extent that AfT with no export focus had no measurable export effects is hardly surprising, and suggests that increased exports is only one of several aims of AfT. As discussed above, the German AfT program exemplified this lack of export-focus between 2001 and2006 - and thus its 'absent' export effects ares not only reasonable, but expected.

It also appears that the form of donor-implemented programs matters substantially. US AfT programs in the countries studied consisted of (mainly) trade policy and regulation (TPR) assistance, but also some trade development assistance. The US TPR programs, primarily implemented by contracted donors, focused on improving the general trade-related institutional environment. In principle such improvements should be 'universal,' and could account for the evidenced US universal export effects, but because AfT may accompany increased US market access from preferential trade agreements, may utilize the networks of US-based contractors, or may strengthen existing trade links through enhanced marketing or supply-linkages, it is also understandable that the US AfT program has selective export effects.
Conversely, as described in documentation and confirmed in interviews, the bulk of Japan's AfT program design was trade-related infrastructure. While the rhetoric of Japan's program may have been more nationalistic, the provision of trade-related infrastructure supports its 'universal' result. Infrastructure has a 'public good' quality in terms of the trade capacity stock and it is hard to create trade infrastructure that is 'excludable' in terms of the markets it helps to serve (unless of course the funds go to, say, build 'bridges to Japan'). Thus, the nature of the AfT program may dictate its export effects.

Finally, Norway proved to be a special case. By focusing substantial portions of its AfT on a program to facilitate a high global demand industry, it is unsurprising that the AfT is correlated with positive export effects. Since Norway is in a special position of not importing petroleum products, these export effects materialize to the RoW but not to Norway This suggests that it may be useful for smaller AfT donors to find a specialization or 'focus' on a particular industry or region where they have a strong comparative advantage. While the opportunities for such programs may be limited in scope to 'special cases,' it does indeed seem from the Norway experience that this type of program is possible.

It is quite clear, through statistical testing and a close substantive look at design and implementation features, that substantial donor heterogeneity exists in AfT programs. To the extent that donor programs are coordinated, or engender 'spillovers' this heterogeneity may not matter. While this paper did not explicitly test for these effects, the field interviewees were almost unanimous in their opinion that 'high-level' proclamations on donor coordination rarely lead to effective 'ground-level' cooperation. Accordingly, individual donor programs may remain the most appropriate level of analysis. These concerns aside, the evidence suggests that AfT can contribute to positive recipient export effects under the appropriate conditions and design, supporting Burnside and Dollar (2000) and perhaps helping to rebuff Easterly et al's (2004) more skeptical claims. As the AfT agenda moves forward, it seems vital to ensure that what is called AfT is explicitly focused on increasing recipient country exports. There is substantial evidence that growth in trade causes broader economic growth and development. AfT can assist in this endeavor if equipped with the will and design to work effectively.

[i] With thanks to an anonymous reviewer for the reminder that 'development' has been broadly conceptualized for some time and that 'effectiveness' can depend on a particular conceptualization.

[ii] The donor countries evaluated in this study are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Italy, Ireland, Japan, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States.

[iii] Source OECD Data Cubes found at: http://old.developmentgateway.org/reports/oecd/oecd-inf.

[iv] OECD Data Cubes

[v] OECD Data Cubes

[vi] For instance, there were only 11 recipient-year instances of non-zero Irish TD AfT from 2001 to 2006 and 6 of these were to the only recipient, Mozambique, who received Irish TD AfT in more than one year. One final caveat to the empirical results is a discussion of the potential endogeneity between aid and trade – i.e. countries receive aid because they export to the donors. While this would seem more likely when testing for *import* effects, I nonetheless look for this endogeneity by testing receipient exports against general aid, as was done in Author (2010a). These results (available upon request) suggest that this form of endogeneity is not present with AfT and recipient country exports.

[vii] OECD Datacube

[viii] For a more detailed discussion of each of these implementing agencies, see Voionmaa and Bruntrup 2009, pp. 66, 75-78. The main AfT implementing agencies, GTZ, DED and InWent were consolidated in 2011 into a new agency, GIZ, although this was well after the time period in the statistical study.

[ix] OECD Datacube.

[x] OECD Datacube.

References

Anderson, James and Eric Van Wincoop. 2003. Gravity with Gravitas: A Solution to the Border Puzzle. *The American Economic Review* 93 (1):170-192.

Bates, Winston. Gross National Happiness. *Asian-Pacific Economic Literature* 23(2):1-16.

Bearce, David, Steven Finkel, Aninbal Perez-Linan, Juan Rodriguez-Zepeda and Lena Surzhko. 2010. Has Aid for Trade Increased Recipient Exports? The Impact of US AfT Allocations from 1999-2008. Working Paper. New York, NY: SSRN no. 1663325.

Bergstrand, J. 1985. The Gravity Equation in International Trade: Some microeconomic Foundations and Empirical Evidence. *The Review of Economics and Statistics* 67(3):474-481.

Berthelemy, Jean-Claude and Ariane Tichit. 2004. Bilateral Donors' Aid Allocation Decisions - a Three Dimensional Panel Analysis. *International Review of Economics and Finance* 13 (3):253-274.

Berthelemy, Jean-Claude. 2006. Bilateral Donors' Interest vs Recipients' Development Motives in Aid Allocation: Do All Donors Behave the Same? *Review of Development Economics* 10 (2):179-194.

Brenton, Paul and Eric von Uexkull. 2009. Product Specific Technical Assistance for Exports - Has it been Effective? *The Journal of International Trade and Economic Development* 18 (2):235-254.

Brown, Stephen. 2005. Foreign Aid and Democracy Promotion: Lessons from Africa. *The European Journal of Development Research* 17 (2):179-198.

Burnside, Craig and David Dollar. 2000. Aid, Policies and Growth. *The American Economic Review* 90 (4):847-868.

Cali, Massimiliano and Dirk Willem te Velde. 2009. Does Aid for Trade Really Improve Trade Performance? Overseas Development Institute. London, UK.

Clist, Paul. 2011. 25 Years of Aid Allocation Practice: Wither Selectivity? *World Development* 39(10):1724-1834.

Dalgaard, Carl-Johan. 2008. Donor Policy Rules and Aid Effectiveness. *Journal of Economic Dynamics and Control.* 32(6):1895-1920.

Djankov, Simeon, Jose Montalvo and Marta Reynal-Querol. 2008. The Curse of Aid. *Journal of Economic Growth* 13 (3):169-194.

Dodd, Rebecca and Peter Hill. 2007. The Aid Effectiveness Agenda: Brining Discipline to Diversity in Global Health? *Global Health Governance* (I) (2):1-11.

Doucouliagos, Hristos and Martin Paldam. 2008. The Aid Effectiveness Literature: The Sad Results of 20 Years of Research. *Journal of Economic Surveys* 23 (3):433-461.

Easterly, William. 2007. Are Aid Agencies Improving? *Economic Policy* 22 (52):633-678.

Easterly, William and Claudia Williamson. 2011. Rheotric versus Reality: The Best and Worst of Aid Agency Practices. *World Development*. 39 (11):1930-1949.

Easterly, William, Ross Levine and Ddavid Roodman. 2004. Aid, Policies and Growth: Comment. *The American Economic Review* 94 (3):774-780.

Easterly, William and Tobia Pfutze. 2008. Where Does the Money Go? Best and Worst Practices in Foreign Aid. The Brookings Institution, Washington DC. Brookings Global Economy and Development Working Paper No. 21.

Egger, Peter. 2000. A Note of the proper specification of the gravity equation. *Economic Letters* 66(1):25-31.

Federal Ministry for Economic Cooperation and Development (BMZ). 2008. Monitoring German Contributions in Trade-Related Development Cooperation. Special 160. Germany.

Federal Ministry for Economic Cooperation and Development (BMZ). 2009. Shaping German Aid for Trade - Past Experience, Lessons Learnt, and the Way Forward. Germany.

Federal Ministry for Economic Cooperation and Development (GIZ). 2011. Value Chain Promotion in the Rattan Furniture Sub-Sector in Indonesia. Jakarta, Indonesia.

Feenstra, Robert. 2002. Border effects and the Gravity Equation: Consistent Methods for Estimation. *Scottish Journal of Political Economy* 49(5):491-506.

Gomanee, Karuna, Oliver Morrissey, Paul Mosley, and Arjan Verschoor. 2005. Aid, Government Expenditure, and Aggregate Welfare. *World Development* 33(3):355-370.

Government of Japan, JICA. 2009. Enhancing South-South Cooperation and Regional Approach to AfT. Presentation. Technical Segment Session 4. Siem Reap, Cambodia. May 29, 2009.

Government of Japan, Ministry of Finance (MOF). 2006. Japan's New Development Initiative's Implications to Trade Facilitation. Presentation March 14, 2006.

Government of Japan, Ministry of Foreign Affairs (MOFA). 2003. Japan's Official Development Assistance Charter.

Government of Japan, Ministry of Foreign Affairs. 2010. Enhancing Enlightened National Interest, ODA Review Final Report.

Government of Norway, Ministry of Foreign Affairs. 2007. Aid for Trade Strategy Document.

Helbe, Matthias, John Wilson and Catherinee Mann. 2012. Aid for Trade Facilitation. *Review of World Economics* 148(2):357-376.

Hoekman, Bernard and John S. Wilson. 2010. Aid for Trade: Building on Progress Today for Tomorrow's Future. *in* Postcrisis Growth and Development. Eds. Fardoust et al. The World Bank. Washington, DC.

Kawai, Masahiro and Shinji Takagi. 2004. Japan's Official Development Assistance: Recent Issues and Future Directions. *Journal of International Development* 16 255-280.

Kilby, Christopher and Axel Dreher. 2010. The Impact of Aid on Growth Revisited: Do Donor Motives Matter? *Economic Letters* 107(3):338-340.

Lewis, W. Arthur. 1954. Economic Development with Unlimited Supplies of Labor. *The Manchester School* 22(2):139-191.

Mavrotas, George. 2005. Aid Heterogeneity: Looking at Aid Effectiveness from a Different Angle. *Journal of International Development* 17(8):1019-1036.

Mavrotas, George and Peter Nunnenkamp. 2007. Foreign Aid Heterogeneity: Issues and Agenda. *Review of World Economics* 143(4):585-595.

Matyas, Lorenzo. 1997. Proper Econometric Specification of the Gravity Model. *The World Economy* 20(3):363-368.

-- 1998. The Gravity Model: Some Econometric Considerations. *The World Economy* 21(3):397-401. McKinlay, Robert and Richard Little. 1979. The US Aid Relationship: A Test of the Recipient-Need and Donor-Interest Models. *Political Studies* 27 (2):236-250.

Michaelowa, Katharina. 2004. Aid Effectiveness Reconsidered: Panel Data Evidence for the Education Section. Working Paper. Hamburg, Germany: Hamburg Institute of International Economics Discussion Paper No. 264.

Melitz, Jacques. 2007. North, South and Distance in the Gravity Model. *European Economic Review* 51 (4):971-976.

Myrdal, G. 1957. Economic Theory and Under-developed Regions. Duckworth. London.

Noorbakhsh, Farhad. 1998. The Human Development Index: Some Technical Issues and Alternative Indices. *Journal of International Development* 10 (5):589-605.

Nowak-Lehmann, Felicitas, Immaculada Martinez-Zarzoso, Stephan Klasen, and Dierk Herzer. 2009. Aid and Trade – A Donor's Perspective. *Journal of Development Studies* 45(7):1182-1202.

Organization for Economic Co-operation and Development. 2007. Aid for Trade at a Glance 1st Global Review.

Osei, Robert, Oliver Morrissey, and Tim Lloyd. 2004. The Nature of Aid and Trade Relationships. *The European Journal of Development Research* 16(2):354-374.

Ott, Mary C. 2009. *Testimony of Mary C. Ott Before the Subcommittee on Trade*. United States Congress. Washington, DC. November 17, 2009.

Philippines Department of Trade and Industry and German Technical Cooperation (GTZ). 2010. Evaluation of the SMED Plan 2004-2010. Makati City, Philippines.

Prowse, Susan. 2002. The Role of International and National Agencies in Trade-Related Capacity Building. *The World Economy* 25 (9):1235-1261.

Sen, Amartya. 1999. Development as Freedom. Oxford University Press. Oxford, UK.

Solis, Mireya and Shujiro Urata. 2007. Japan's New Foriegn Economic Policy: A Shift Toward a Strategic and Activist Model? *Asian Economic Policy Review* 2:227-245.Streeten, Paul and Shahid Javed Burki. Basic needs: Some issues. *World Development* 6(3):411-421.

Sunaga, Kazuo. 2004. The Reshaping of Japan's Official Development Assistance (ODA) Charter. FASID Discussion Paper on Development Assistance No. 3. Ministry of Foreign Affairs, Japan.

Trinidad, Dennis. 2007. Japan's ODA at the Crossroads: Disbursement Patterns of Japan's Development Assistance to Southeast Asia. *Asian Perspective* 31 (2):95-125.

Urpelainen, Johannes. 2009. Political-Economic Problems in Trade Capacity Building. *Review of International Organizations* 4 (4):329-359.

United States Agency for International Development. 2003. Improving Trade Policy Coordination and Dialogue in Developing Countries. Washington, DC.

United States Agency for International Development. 2004. USAID Strategic Plan for Indonesia. Washington, DC.

United States Agency for International Development. 2008. Trade Capacity Building Activities in Developing Countries and Transitional Economics: Survey Submitter's Guide. Washington, DC.

United States Agency for International Development/Indonesia. 2008. USAID/Indonesia Economic Growth Sector Assessment. Washington, DC

United States Agency for International Development/Philippines. 2004. Evaluation of Economic Growth Technical Assistance. Washington, DC

United States Agency for International Development/Philippines OEDG. 2005. Risk Management Diagnostic Report: The Bureau of Customs. Makati City, Philippines.United States Central Intelligence Agency. 2011. The World Factbook. McClean, VA.

United States Government Accountability Office. 2005. Foreign Assistance: U.S. Trade Capacity Building Extensive, but Its Effectiveness Has Yet to Be Evaluated. GAO-05-150. Washington, DC.

United States Trade Representative. 2007. Trade Capacity Building Success Stories: Dominican Republic Central America United Free Trade Agreement (CAFTA-DR).

Voionmaa, Petra and Michael Bruntrup. 2009. German Aid for Trade: Past Experiences, Lessons Learnt, and the Way Forward. German Development Institute. Bonn, Germany.

World Bank. 2011a. World Development Indicators. Washington, DC.

World Bank. 2011b. The Changing Wealth of Nations. Washington, DC.

World Trade Organization and the OECD. 2005. Joint WTO/OECD Report on Trade-Related Technical Assistance and Capacity Building.

World Trade Organization and the OECD. 2007. Aid for Trade at a Glance: 1st Global Review.

Appendix I - Data

I obtained my AfT data from the WTO Doha Development AfT database available at http://AfTdb.wto.org/. The original database used in the paper appears, without much rationale, to have been abandoned, supplanted by the Global Trade-Related Technical Assistance Database (GTAD). Unfortunately this later only has AfT coverage beginning in 2010. Official inquiries to the WTO regarding the fate of the original database have gone unanswered, but anecdotal (unverified) investigation reveals that the WTO was unhappy with the coverage/coding of that database and chose to take it town. I have chosen the WTO database over the more commonly used OECD CRS database for several reasons described in greater length in Bearce et al (2011). The primary reason for this choice is that the WTO database, unlike the OECD database, disaggregates AfT by type. Trade-related aid can only be gathered at the broader sector level (economic assistance) or at the purpose code level. While there are a number of trade-related purpose codes, review of this data finds that the fields are substantially under-populated with regard with respect to the WTO database. As a check, I ran the models in tables 4-7 using both CRS Sector and Purpose data, but the results from these regression were almost exclusively insignificant, and nowhere robust. The WTO data was used for b_{jit}, bd_{jit}, bi_{jit} and bp_{jit}. For income, y_{it}, total export, and the trade capacity stock variables I obtained my data from: http://web.worldbank.org/.
European import data was collected from:
http://epp.eurostat.ec.europa.eu.
For non-European countries I collected import data from:
Australia: http://www.dfat.gov.au/geo/fs/
Canada: http://www.ic.gc.ca/eic/site/tdo-dcd.nsf/eng/Home
Japan: http://www.customs.go.jp/toukei/srch/indexe.htm
Norway: http://www.ssb.no/uhaaren/tab-17-en.html
Switzerland: http://www.snb.ch/en/iabout/stat
United States: http://dataweb.usitc.gov
Additionally, total export data for Timor-Leste presented in table 10 was gathered from:
http://dne.mof.gov.tl/trade/annualreports/index.htm
To construct the 'exports to the ROW' variable, I simply subtracted the donor exports from the total exports. All monetary stock data is measured in current USD. My data set consists of 154 countries that received aid from any of the 19 OECD donors from 2001 to 2006. Thus, i =1,...,154, j=1,...,19 and t = 2000,...,2006. When there was no observation for m_{ijt} for a given *ij* pair, the data is treated as missing and was omitted from the regression. When there was no observation for b_{ijt} for a given *ij* pair, the data was treated as '0'. This treatment is due to the fact that the WTO AfT database is comfortably treated as a complete database. Accordingly, '0' observations hold interesting value for evaluating the effectiveness of AfT. Since b_{ijt} undergoes a log-linear transformation, the '0's' are replaced with .01 as is a common practice for replacing '0' values in log-linearized specifications. This is at variance with, and discussed at some length in, Bearce et al (2011). In spot-checking some of the results (replacing the transformed .01 with 0 after taking the log) I find no significant difference in the results with this dataset.

Data for table 11 in the qualitative study was gathered from a number of sources. Land Mass and population were from the CIA Factbook 2011 available at:
https://www.cia.gov/library/publications/the-world-factbook/

Per capita natural resources, and total natural resources come from the World Bank's natural resource wealth estimates available at:
http://data.worldbank.org/news/the-changing-wealth-of-nations
Literacy Rate and Mean Schooling come from the United Nation's Human Development Reports available at:
http://hdr.undp.org/en/statistics/data
The Corruptions Perception Index (CPI) score is from Transparency International and is available at:
http://www.transparency.org/policyresearch/surveysindices/cpi
The Polity IV scores are from the Polity IV project and are available at:
http://www.systemicpeace.org/polity/polity4.htm

Information from interviews was gathered by country visits to Indonesia from May 23rd, 2011 to May 27th 2011, Timor-Leste from May 30th, 2011 to June 2nd 2011, The Philippines from July 4, 2011 to July 8th, 2011, and Vietnam from July 8th, 2011 to July 14th, 2011. Interviews were conducted with members and contractors of USAID, JICA, the Embassy of Japan, the Embassy of Norway, NORAD, GIZ, APINDO, and the Government of Timor-Leste.

Table 1:
AfT 'Median' Statistics (Thousands of Current USD Annual Average), 2001-2006

	TD	Transportation	Communications	Energy	TPR
'Donor' Instances	52	26	19	13	18
'Donor' Amounts	25,307	30,564	6,707	36,387	5,474
'Recipient' Instances	10	4	4	3	23
'Recipient' Amounts	3,106	9,087	414	2,661	831

Table 2: Export Effects to Donor Country (Full Sample)

	(I)	(II)	(III)	(IV)
Constant	-2.6676*	-2.7341*	-2.4795*	-2.6461*
	(-1.85)	(-1.90)	(-1.70)	(-1.85)
m_{ijt-1}	-0.0141	-0.0144	-0.0142	-0.0141
	(-1.13)	(-1.15)	(-1.13)	(-1.13)
y_{it}	0.7961***	0.7994***	0.7894***	0.7965***
	(12.62)	(12.66)	(12.41)	(12.63)
b_{jit-1}	-0.0004			
	(-0.18)			
b_{jit-2}	-0.0004			
	(-0.17)			
b_{jit-2}	-0.0003			
	(-0.10)			
bi_{jit-1}		0.0024		
		(0.98)		
bi_{jit-2}		-0.0017		
		(-0.73)		
bi_{jit-3}		-0.0010		
		(-0.42)		
bd_{jit-1}			0.0013	
			(0.49)	
bd_{jit-2}			0.0018	
			(0.63)	
bd_{jit-3}			-0.0007	
			(-0.23)	
bp_{jit-1}				-0.0016
				(-0.48)
bp_{jit-2}				0.0017
				(0.51)
bp_{jit-3}				0.0019
				(0.58)
N	9101	9101	9101	9101
R^2	0.4122	0.4128	0.4154	0.4147
F	32.31	32.59	32.34	32.40

Method of Estimation: Fixed-Effects FGLS; ***,**,* significant positive at 1%, 5%, 10% level.

Table 3: Export Effects to the Rest of the World (Full Sample)

	(I)	(II)	(III)	(IV)
Constant	1.1798***	1.1683***	1.2025***	1.1962***
	(6.41)	(6.33)	(6.47)	(6.53)
m_{ijt-1}	0.3463***	0.3466***	0.3462***	0.3460***
	(32.70)	(32.71)	(32.67)	(34.67)
y_{it}	0.5750***	0.5754***	0.5746***	0.5746***
	(41.26)	(41.24)	(41.16)	(41.26)
b_{jit-1}	0.0005			
	(1.57)			
b_{jit-2}	-0.0003			
	(-1.05)			
b_{jit-2}	0.0001			
	(0.22)			
bi_{jit-1}		0.0002		
		(0.76)		
bi_{jit-2}		-0.0001		
		(-0.45)		
bi_{jit-3}		0.0002		
		(0.79)		
bd_{jit-1}			0.0003	
			(0.97)	
bd_{jit-2}			0.0002	
			(0.46)	
bd_{jit-3}			0.0006	
			(1.53)	
bp_{jit-1}				0.0002
				(0.46)
bp_{jit-2}				-0.0009**
				(-2.12)
bp_{jit-3}				0.0008*
				(1.86)
N	8041	8041	8041	8041
R^2	0.9660	0.9660	0.9659	0.9660
F	3274.76	3272.45	3273.52	3278.93

Method of Estimation: Fixed-Effects FGLS; ***,**,* significant positive at 1%, 5%, 10% level.

Table 4: Estimated Parameters by Donor (Exports to Donor Country)

	m_{ijt-1}	y_{it}	b_{jit-1}	b_{jit-2}	b_{jit-3}	bi_{jit-1}	bi_{jit-2}	bi_{jit-3}	bd_{jit-1}	bd_{jit-2}	bd_{jit-3}	bp_{jit-1}	bp_{jit-2}	bp_{jit-3}
Australia	+++	+ + +												
Austria		+++												
Belgium	-	+++												
Canada		+++												
Denmark	-								+ +					
Finland	-													
France													+	
Germany		+ + +												
Greece		+ + +	+											
Ireland	- - -	+ + +									+ + +			
Italy		+ + +												
Japan	+ + +	+ + +							+ + +					
Norway		+ + +												
Portugal	-	+ + +												
Spain		+ + +												
Sweden			- -									- -	+ +	+ +
Switzerland		+ + +					- - -	- - -						
United Kingdom	+ + +													
United States	+ + +	+ + +		+ + +									+ +	

Method of Estimation: Fixed-Effects FGLS; + + + (- - -) = significant positive (negative) at 1% level; + (- -) = significant positive (negative) at 5% level; + (-) = significant positive (negative) at 10% level;

Table 5: Estimated Parameters by Donor (Exports to ROW)

	m_{ijt-1}	y_{it}	b_{jit-1}	b_{jit-2}	b_{jit-3}	bi_{jit-1}	bi_{jit-2}	bi_{jit-3}	bd_{jit-1}	bd_{jit-2}	bd_{jit-3}	bp_{jit-1}	bp_{jit-2}	bp_{jit-3}
Australia	+ + +	+ + +		- -									- -	
Austria	+ + +	+ + +												
Belgium	+ + +	+ + +	+ +										+	
Canada	+ + +	+ + +												
Denmark	+ + +	+ + +							+			-		
Finland	+ + +	+ + +												
France	+ + +	+ + +			+ +						+ +			
Germany	+ + +	+ + +												
Greece	+ + +	+ + +											- -	
Ireland	+ + +	+ + +												
Italy	+ + +	+ + +			- -			- - -						
Japan	+ + +	+ + +			+									
Norway	+ + +	+ + +							+ +					
Portugal	+ + +	+ + +			-					- -				
Spain	+ + +	+ + +	+			+								
Sweden	+ + +	+ + +										+ + +		
Switzerland	+ + +	+ + +										+ +		
United Kingdom	+ + +	+ + +			+					+				+ + +
United States	+ + +	+ + +									+ + +			

Method of Estimation: Fixed-Effects FGLS; + + + (- - -) = significant positive (negative) at 1% level; + (- -) = significant positive (negative) at 5% level; + (-) = significant positive (negative) at 10% level;

Table 6: Differences of Parameters with Others, by Donor (Exports to Donor Country)

	m_{ijt-1}	y_{it}	b_{jit-1}	b_{jit-2}	b_{jit-3}	bi_{jit-1}	bi_{jit-2}	bi_{jit-3}	bd_{jit-1}	bd_{jit-2}	bd_{jit-3}	bp_{jit-1}	bp_{jit-2}	bp_{jit-3}
Australia	+ + +	+ + +					+							
Austria														
Belgium														
Canada														
Denmark	- -	- -	+						++					
Finland	- -	- - -	+						+					
France		- -												
Germany														
Greece														
Ireland	- - -								+ +	+ +	+ + +			
Italy														
Japan	+ + +													
Norway														
Portugal	- -													
Spain														
Sweden		-	- - -									- -	+ + +	+ +
Switzerland														
United Kingdom	+ + +	- - -												
United States				+										

Method of Estimation: Fixed-Effects FGLS; + + + (- - -) = significant positive (negative) at 1% level; + (- -) = significant positive (negative) at 5% level; + (-) = significant positive (negative) at 10% level;

Table 7: Differences of Parameters with Others, by Donor (Exports to ROW)

	m_{ijt-1}	y_{it}	b_{jit-1}	b_{jit-2}	b_{jit-3}	bi_{jit-1}	bi_{jit-2}	bi_{jit-3}	bd_{jit-1}	bd_{jit-2}	bd_{jit-3}	bp_{jit-1}	bp_{jit-2}	bp_{jit-3}
Australia				- - -									- - -	
Austria														
Belgium													+	
Canada												-		
Denmark												-		
Finland	+													
France	- - -	+			+ +	-					+			
Germany	- - -	+ +												
Greece	+													
Ireland														
Italy					-			- - -						
Japan														
Norway						-			+ +					
Portugal					-					- -				
Spain											-			
Sweden												+ + +		
Switzerland	+	-										+		
United Kingdom										+				+ +
United States	- - -	+ + +					-				+ + +		-	+

Method of Estimation: Fixed-Effects FGLS; + + + (- - -) = significant positive (negative) at 1% level; + (- -) = significant positive (negative) at 5% level; + (-) = significant positive (negative) at 10% level;

Donor	Indonesia	Timor-Leste	Philippines	Vietnam
Norway	1,899	22,800	1,636	8,275
Germany	294,051	12,112	37,867	65,216
Japan	3,900,675	32,985	1,281,677	3,538,580
United States	85,510	25,520	95,758	42,842

Table 8: Aft by Donor in Thousands of USD

Characteristic	Indonesia	Philippines	Timor-Leste	Vietnam
Land Mass (sq km)	1,904,569	298,170	14,874	331,210
Population (Millions)	245.6	101.8	1.2	90.5
PC Natural Resources (USD)	3,472	1,549	N/A^*	2,075
Total Natural Resources (USD)	716 Billion	119 Billion	N/A^*	163 Billion
Literacy Rate	90.4	92.6	58.6	94.0
Mean Schooling	5.7	8.7	2.8	5.5
CPI	2.8	2.4	2.5	2.7
Polity IV	6/8	8	6/7	-7

Table 9: Summary of Recipient Characteristics

Table 10: Exports from Case Study Recipient Countries (Millions of Current USD Unless Otherwise Noted)

Exporter	Importer	2001	2002	2003	2004	2005	2006	2007	2008
Indonesia	Norway	90	78	76	77	90	85	82	108
	Germany	2,131	1,978	1,862	2,009	2,069	2,295	2,593	2,656
	Japan	14,857	14,148	16,434	18,688	20,850	24,134	26,268	32,681
	United States	10,100	9,640	9,520	10,800	12,000	13,400	14,304	15,799
	Total	62,625	63,956	71,553	82,744	97,387	113,143	127,082	152,095
Philippines	Norway	33	48	22	28	36	30	31	113
	Germany	1,879	2,019	1,930	1,924	1,577	1,579	1,416	1,392
	Japan	6,408	6,524	7,034	8,246	7,712	7,959	8,715	8,441
	United States	11,300	11,000	10,100	9,140	9,250	9,700	9,407	8,722
	Total	35,009	38,589	39,519	44,271	47,551	56,923	64,614	64,080
Timor-Leste†	Norway	0	0	0	.0	0	0	N/A	0
	Germany	1,785	1,976	563	441	1,672	2,042	N/A	3,395
	Japan	0	46	75	80	100	119	N/A	641
	United States	N/A	N/A	N/A	3,551	3,978	3,447	N/A	3,380
	Total	N/A	N/A	N/A	6,972	8,093	8,455	7,734	12,899
Vietnam	Norway	44	44	55	67	74	83	93	111
	Germany	1,116	1,074	1,088	1,228	1,232	1,571	1,890	2,036
	Japan	2,606	2,522	3,088	3,854	4,551	5,293	6,113	9,111
	United States	1,050	2,390	4,550	5,280	6,630	8,570	10,634	12,901
	Total	17,752	19,640	23,393	29,870	36,830	44,811	53,893	70,982

†Thousands of Current USD, exports of products from extractive industries (oil, gas) not included. Figures for Timor-Leste energy exports are not available for the time-period of the study, but a 2009 audit reveals oil and gas government *revenues* at $1.76 billion.

Table 11 : Oil Exports and AfT in Norway's 'Core' OfD Countries

Country	Percent Change Fuel Ex (2001-2008)	AfT (2001-2006, thousands USD)
Angola	990	5154
Bolivia	959	312
Ghana	5	630
Madagascar	623	357
Mozambique	335	76766
Nigeria	317	4057
Sudan	531	576
Timor-Leste	N/A	22800
Uganda	115	32010
Vietnam	267	8276