Aid and trade: do services matter?*

Bernard Hoekman† and Anirudh Shingal‡

October 17, 2019

Abstract

Empirical research on aid for trade (AfT) mostly considers its effects on merchandise trade and investment. This paper analyses the relationship between AfT and trade in services over 2002-2015, instrumenting AfT with the average AFT in the geographical neighbourhood of a recipient country. We find that a doubling of total AfT increases merchandise imports of recipient countries by a third after one year and their services exports by 40 percent with a three year lag. There is suggestive evidence that AfT allocated to services activities promotes services provision through cross-border modes of supply as opposed to via foreign direct investment. Quantile analysis suggests trade effects are more significant for broad sub-types of AfT along the conditional distribution of trade and tend to follow a U-shape along the conditional distribution, especially for services exports, suggesting the heterogeneity of trade may matter for its response to different types AfT.

JEL-Classification: F10, F14, F35

Keywords: Aid for trade, services trade, goods trade complementarities, modes of supply, quantile analysis

*The project leading to this paper has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 770680. The data that support the findings of this study are available from the corresponding author upon reasonable request.

†Robert Schuman Centre for Advanced Studies, EUI and CEPR (bernard.hoekman@eui.eu).

‡European University Institute and Indian Council for Research on International Economic Relations (anirudh.shingal@eui.eu).

1 Introduction

A wide range of producer services activities such as finance, information and communications, transport, logistics and professional services are inputs into modern production processes. Services play an important role in economic development. The availability and cost of services determines economic opportunities and the performance of manufacturing and agricultural sectors. Services play an important role in the process of structural transformation, and in the inter-sectoral reallocation of labor and capital out of agriculture into manufacturing and services (Schettkat and Yocarini, 2006), including in shifts between services activities, e.g., growth in business and information services. Although the shift to services in lower-income countries has been characterized as constituting premature deindustrialization (Rodrik, 2016), much depends on the structure and performance of services sectors. Many services are (can be) high productivity and offer prospects for positive external effects, in part by enhancing the productivity performance of other sectors (Balchin et al., 2016). Services also figure centrally if a human development perspective is taken. Realization of many of the sustainable development goals (SDGs) depends on the performance of a range of specific services sectors (Fiorini and Hoekman, 2018).

In high income countries services account for the bulk of economic activity. Services also make up a significant part of the economy in developing countries, including low-income countries. For example, services account for some 50 percent of GDP in sub-Saharan Africa, while services trade is equal to about 10 percent of GDP. For many developing countries the balance of payments cataegory "Travel" (which includes tourism) is the major export category and has been growing faster than other categories of services. But many developing countries have also experienced significant growth in trade in so-called commercial services. During the 2000s, the group of least developed countries (LDCs) taken together expanded their services exports more rapidly than the world as a whole, suggesting services are an area of revealed comparative advantage. Their share of global trade in services rose from 0.4 percent in 2005 to 0.8 percent in 2015, with commercial services exports growing by 14 percent over this period, more than twice the rate of other countries (WTO, 2016).

Motivated by the importance of services trade for many low-income countries and the role that services play as inputs into all sectors of economic activity and in the realization of many SDGs, in this paper we analyze the relationship between trade-related development assistance, so-called aid for trade (AfT), and international trade. We provide an in-depth analysis of AfT allocated to services sector activities, decomposing AfT into different cat-

egories to analyze the effect of AfT as a whole as well as of sub-components of AfT on international trade. We examine the trade effects of AfT along the conditional distribution of exports and imports using recent empirical advancements in the estimation of non-additive fixed-effects IV quantile regressions (Powell, 2015). Our main interest is to assess the relationship between AfT and trade in services, including the different modes of supply through which trade in services may occur, using a new database compiled by the WTO.

Our identification strategy exploits changes in the AfT-recipient status of some of our sample countries over the time period of analysis (2002-2015). While this change in recipient-status arguably renders the treatment effect in our analysis exogenous, we control for potential endogeneity in the AfT-trade relationship by instrumenting AfT with the average AFT in the geographical neighbourhood of a recipient country, following Uberti and Jackson (2019). We also experiment with different lag structures to allow for trade to respond to AfT non-contemporaneously and to further mitigate endogeneity-related concerns.

Our results suggest that a doubling of AfT increases merchandise imports of recipient countries by 33.7% after one year and their services exports by 39.7% after three time periods. AfT allocated to services is also found to increase both cross-border trade and trade that involves the movement of a consumer or buyer to the country of a supplier (Modes 1 and 2 as defined in the WTO General Agreement on Trade in Services [GATS]) appreciably after one year, although the effects are only statististically significant at the 10% level. AfT is not found to affect foreign direct investment (commercial presence or GATS Mode 3 trade).

The trade effects for broad sub-types of AfT are more significant along the conditional distribution of trade in the quantile analysis, and tend to be U-shaped along the conditional distribution, especially for services exports. Moreover, AfT allocated to services activities, especially to productive capacity building, is found to enhance services exports of small exporting countries, which is consistent with the intended objective of AfT donors. This finding is also supported by the positive effect of AfT on services exports that is observed for the sub-sample of lower-middle income countries in the sensitivity analysis.

The plan of the paper is as follows. Section 2 briefly reviews the related literature. Section 3 describes the AfT variables and the allocation of AfT across countries and sectors. Section 4 presents the empirical methodology and data used in the analysis. Section 5 discusses the findings. Section 6 concludes.

2 Related literature

Most empirical research on AfT is cross-sectional in nature and involves cross-country analysis, assessing the effects of AfT on (different dimensions of) merchandise trade. Cadot et al. (2014) review much of the literature. Examples include Brenton and von Uexkull 2009; Cali and te Velde, 2011; Königer et al. 2011; Busse et al. 2012; Helble et al. 2012; Portugal-Perez and Wilson, 2012; Vijil and Wagner, 2012; Nowak-Lehmann et al. 2013; Pettersson and Johansson 2013; Ferro et al. 2014; and Hühne et al. 2014.

Often a particular focus within this literature has been the analysis of AfT in support for trade facilitation, reflecting the effort to negotiate an agreement on trade facilitation in the WTO and efforts by developing countries to reduce trade costs. Martínez-Zarzoso et al. (2009), Skärvall (2012), Bearce et al. (2013) find that aid for trade has a strongly trade-promoting effect, espcially AfT for trade facilitation. The latter type of AfT has also been found to support greater diversification. See e.g., Cadot et al. (2011); Beverelli et al. (2015) and Persson (2013).

Our study is most closely related to three papers in this literature. Ferro et al. (2014) focus on AfT directed towards service sector-related projects and activities, but is limited to the relationship between such AfT and merchandise exports. They find that AfT allocated to services increases manufactured exports. Hoekman and Shingal (2019) undertake a bilateral analysis of AfT allocated to services activities, finding a positive effect of services AfT on recipients' merchandise exports to donor countries. Martínez-Zarzoso et al. (2017) examine the effects of AfT on aggregate goods and services exports and conclude that AfT mainly promotes goods exports for the lower quantiles of the conditional export distribution. We complement this paper by studying disaggregated effects of AfT by sector, including effects on imports.

Another strand of research has examined the impact of AfT on investment. Such work includes Harms and Lutz (2006), Selaya and Sunesen (2012), Donabauer et al. (2016) and Lee and Ries (2016). These studies generally find positive associations between measures of AfT and investment. We add to this literature as well by analyzing the relationship between AfT and GATS Mode 3 trade flows (FDI or "commercial presence" in GATS parlance), utilizing a new WTO dataset that breaks down trade in services by modes of supply.

3 AfT definitions and allocations

In the empirical analysis that follows we use data from the OECD Creditor Reporting System (CRS). The CRS spans data on official development assistance (ODA) that is committed and disbursed by donor countries in recipient countries. The dataset spans a large sample of countries and sectors for the 2002-2015 period. AfT is a subset of total ODA and comprises the following three categories:

• technical assistance for trade policy (e.g. helping countries to develop trade strategies and negotiate trade agreements);

• trade-related infrastructure (e.g. roads, ports, and telecommunications networks); and

• productive capacity building for trade (e.g. supporting the private sector to expand exports)[1].

The CRS does not provide data that exactly match these AfT categories. Only parts of ODA data are reported as aid going to building economic infrastructure and to the creation of "productive capacity." Infrastructure includes several services sectors – e.g., transport, storage, and information and telecommunications networks – for which data are reported separately. Aid for productive capacity spans all sectors of the economy, and thus includes services. Three services activities are split out in the CRS for this productive capacity AfT category: banking and financial services, business and other services, and tourism. These data are proxies at best for aid targeting trade-related infrastructure and productive capacity building, as not all of ODA reported under these headings is trade-related. This said, ODA statistics reported under these headings are the closest approximation of AfT going to services.[2]

Total AfT disbursements increased from $9.1bn in 2002 to an average of $21bn in 2006-2008 to $39.8bn in 2015 (OECD and WTO, 2017). Asian and African countries have been the major recipients of AfT disbursements, each region accounting for around 40 percent of total AfT global aid since 2002. The global distribution is qualitatively similar when we look at AfT allocated to services sectors. We define AfT for services to span the following categories of AfT: (1) assistance to economic infrastructure in three sectors,

[1]The OECD includes two other categories of AfT: trade-related adjustment assistance and aid to address other trade-related needs identified as development priorities by partner countries' national development strategies. Donors report very little aid falling under these cataegories and we do not use them in the analysis.

[2]No data are reported regarding allocations to services sectors for other categories of AfT (technical assistance for trade policy and regulations, trade-related adjustment and other trade-related needs).

transport/storage; ICT and energy; and (2) assistance for productive capacity building in financial services, business services and tourism activities. We do so largely because these six categories are identified in the OECD data on AfT as services.[3] A breakdown of AfT into different categories, following OECD definitions, is provided in Figure 1.

<Insert Figure 1 here>

Globally, AfT mapped to these six categories increased from 59 percent of total AfT to 72.4 percent in 2015. Thus, most AfT over the period was allocated to services sectors, a feature of AfT that is generally not emphasized in AfT reporting or analysis.[4] Within services, the transport and energy sectors have been the largest recipients of global ODA disbursements, accounting for 45.9% and 30.2%, respectively, of total AfT in services disbursed over 2012-2015 on average.

4 Empirical methodology and data

The relationship between AfT and aggregate goods and services trade is assessed by estimating the following augmented export and import demand functions using fixed effects specifications:[5]

$$x_{jt} = \alpha_0 + \alpha_1 aft_{jt-1} + \alpha_2 NAfT_{jt-1} + \Sigma\beta_k z_{kjt} + \delta_j + \delta_t + \varepsilon_{jt} \quad (1)$$

$$m_{jt} = \alpha_0 + \alpha_1 aft_{jt-1} + \alpha_2 NAfT_{jt-1} + \Sigma\beta_k z_{kjt} + \delta_j + \delta_t + \varepsilon_{jt} \quad (2)$$

where x_{jt} = log of services (goods) exports of recipient j in year t; m_{jt} = log of (goods) services imports of recipient j in year t; aft_{jt-1} = log of AfT in recipient j in year $t-1$; z_{kjt} = vector of recipient-time varying controls; δ_j = recipient fixed effects; δ_t = year fixed effects; ε_{jt} = error term.

[3] Although technically energy is not regarded as a services sector in the national accounts or the BOP (e.g., electricity is a good), part of the AfT going to this sector involves distribution of energy (grids, pipelines, storage, etc.).

[4] Ferro et al. (2014) and Hoekman and Shingal (2019) are exceptions.

[5] This is consistent with other studies in the literature such as Cali and te Velde (2011) and Martínez-Zarzoso et al. (2017).

We allow trade flows to respond to AfT with a lag and also experiment with alternative lag structures. To accommodate zero AfT flows in the analysis (which are more prevalent in the disaggregated decompositions of AfT data), following the methodology suggested by Wagner (2003), we define aft_{jt-1} as $ln(max1, AfT_{jt-1})$ and include a $NAfT_{jt-1}$ dummy in the estimating equations, which takes the value of 1 when $AfT = 0$ and is zero otherwise. Thus, the coefficient of aft_{jt-1} measures the elasticity of exports (or imports) where AfT is positive while the coefficient of $NAfT_{jt-1}$ serves as an adjustment to the constant in cases where AfT is zero. The log of trade when AfT is positive exceeds the log of trade when AfT is zero by $\alpha_1 ln(AfT)$–α_2 i.e. $x_{jt}|AfT > 0 - x_{jt}|AfT = 0 = \alpha_1 ln(AfT)$–$\alpha_2$.

The control variables are analogous to those used by Cali and te Velde (2011). They comprise a measure of country size – (log of) population (POP); a measure of geographic distance to global markets – (log of) market penetration (MP), computed as a distance (d_{ij}) weighted measure of other countries'GDP (GDP_{it})[6], i.e. $MP_{jt} = \sum_i \frac{GDP_{it}}{d_{ij}}$; a measure of domestic prices – (log of) the consumer price index (CPI);[7] and a measure of government effectiveness (GE) to reflect the institutional strength of the recipient country. Each of these variables is expected to be positively correlated with exports and imports, which justifies their choice as controls in the estimating equations.

We include foreign direct investment (FDI) in the recipient country as an additional control, since two-thirds of international trade in services occurs through establishing a commercial presence in export markets (Francois and Hoekman, 2010; WTO, 2019), and FDI is a driver of global value chains and the associated trade in services they give rise to, both directly and through embodiment in the value of the products that are produced.

To study trade effects by type of aid, we follow the OECD classification and decompose aggregate AfT into three broad categories: AfT in economic infrastructure, AfT in productive capacity building and AfT in trade policies and regulation. We also replace total AfT with the sum of AfT in the six aggregate services sectors identified in the OECD data to arrive at a composite measure of AfT in services (which we include in equations (1) and (2) along with the "residual" non-services AfT). In addition, we examine the sectoral relationship between trade and AfT for seven disaggregated services sectors: business, communications, computer-and-related services, energy, financial, tourism and transport

[6]Note that the market potential of country j at time t is calculated as the sum of the (inverse) bilateral distance weighted GDPs of all other countries and not only of all countries for which we analyse the effect of AfT on trade - which are primarily developing countries.

[7]Using the CPI instead of the real effective exchange rate (REER) maximizes the number of observations for empirical analysis. Our overall findings are robust to using the REER.

services.[8] We also consider the effect of non-AfT ODA on trade in both goods and services flows in equations (1) and (2).

Studies on the determinants of development assistance (e.g., Neumayer, 2003) suggest that donor countries are more likely to disburse aid to countries which are important markets for their exports. As such, the AfT-trade relationship is expected to be positive. Even if this is not the case, insofar as aid targeted at services sectors has a direct positive impact on the development of economic infrastructure, this is expected to contribute to economic growth and fuel the trading potential of the recipient countries. This again translates into an expected positive AfT-trade relationship.[9]

Finally, to control for possible endogeneity in the aggregate AfT-trade relationship, following Uberti and Jackson (2019), we instrument for AfT in each recipient country at time t by the average AfT received by all its neighbouring countries in the geographical neighbourhood at the same time t.[10] A recipient's neighbouring countries are likely to be associated with similar determining characteristics for attracting AfT given similarities in geographical location, which further motivates our choice of this instrument. The geographical regions include North Africa, Sub-Saharan Africa, Caribbean, Central America, South America, Central Asia, West Asia, South Asia, South-east Asia, Europe and Oceania.

4.1 Data sources and summary statistics

As noted previously, annual AfT data come from the OECD CRS and span the 2002-2015 period. Aggregate goods and services trade data for this period are sourced from UN Comtrade. Data on services trade by modes of supply come from WTO (2019) and are available for 2005-2017, yielding an eleven year overlap with the AfT data. The control variables are sourced as follows: the consumer price index (CPI), foreign direct investment (FDI) and population (POP) are taken from the World Development Indicators; market penetration (MP) is computed using bilateral distance data from CEPII (Head et al. 2010); GDP data come from the World Development Indicators and government effectiveness (GE) is sourced from the Worldwide Governance Indicators (Kaufmann et al. 2011).

[8] Computer-and-related services are included in the communications sector in OECD AfT data.

[9] See Cali and te Velde (2011) for AfT in a simple export demand model.

[10] In an earlier version of this paper, we also experimented with GMM specifications. The results from this analysis, available upon request, were found to be both statistically and diagnostically weak.

The analysis is carried out on 159 ODA recipients over 2002-2015; the sample of recipients is reported in Annex Table A. Fourteen countries in our sample witnessed a change in their AfT-recipient status over the period of analysis, a fact that we exploit in identification.[11] Summary statistics are reported in Annex Table B. The dataset has over 1800 observations on services trade and the aid variables, and more than 1300 observations on goods trade.

5 Results

5.1 IV analysis

Tables 1 and 2 report the results from estimating equations (1) and (2) for exports and imports of goods and services, respectively, for the full sample of AfT recipients using 2SLS-IV regressions. The AfT variables are lagged by one, two and three time periods, respectively, in columns (1)-(4), (5)-(8) and (9)-(12). All regressions control for country (recipient) and year fixed effects; standard errors are clustered by $country * year$.

5.1.1 Impact of total AfT on trade

The first set of results reported in Table 1 use data on total AfT as well as non-AfT ODA. They suggest that, across different lag structures, total AfT affects merchandise imports. More specifically, a doubling of AfT increases the merchandise imports of recipient countries by 33.7% after one year, with the effect dissipating both in magnitude and statistical significance over time. Total AfT is also found to have a positive effect on services exports after three time periods. A doubling of AfT increases services exports of recipient countries by 39.7% after three time periods.

The IV estimates of the AfT variables for services and merchandise trade in all other columns are not statistically different from zero. ODA that is not classified as AfT by the OECD does not have a significant impact on either trade in goods or trade in services. All control variables, except MP_{jt}, are significant until the second lag and have the expected

[11] These include Bahrain that became an AfT-non-recipient after 2004; Malta and Slovenia that only received AfT in 2002; Saudi Arabia and Turks & Caicos Islands that became AfT-non-recipients after 2007; Kosovo that only began receiving AfT after 2008; Croatia, Mayotte, Oman and Trinidad & Tobago that became AfT-non-recipients after 2010; Belarus, Libya and Ukraine that only began receiving AfT after 2004; and South Sudan that was an AfT-non-recipient before 2011.

signs. Notably, FDI is strongly significant in these results justifying its inclusion as a control.

The Wooldridge (1995) F-statistic and associated p-values reported in Table 1 suggest that endogeneity of the AfT variables is a legitimate concern that needs to be addressed in empirical analysis. The table also reports the Anderson canonical correlations likelihood-ratio test of instrument relevance/identification and the associated Chi-squared p-values, which suggest that the model is identified in the highlighted cases where the null of underidentification is rejected.

<Insert Table 1 here>

5.1.2 AfT in services and goods and services trade

Focusing on AfT allocated to services-related projects and activities gives a different picture. AfT allocated to services sectors in the year time period is found to affect merchandise imports, though the result is only weakly significant. AfT allocated to non-services is also found to have a positive effect on services exports, which is statistically significant after three time periods. More specifically, a doubling of non-services AfT increases services exports of recipient countries by 63.0% after three time periods.

Disaggregating the AfT variable into the three major categories defined by the OECD (AfT for economic infrastructure, for productive capacity building and for trade policies and regulation), dividing AfT for productive capacity building into projects and programs that involve service activities as opposed to aid that benefits non-services sectors, and breaking AfT down by services sectors did not result in any statistically significant relationships.[12]

<Insert Table 2 here>

5.1.3 Sensitivity analysis

Given the country and time coverage of our data, we examine the sensitivity of our aggregate IV results to including different sub-samples. The results from these regressions are reported in Tables 3 and 4. In each case the AfT variables are lagged by three time periods.

[12]These results are not reported and are available on request.

<Insert Tables 3 and 4 here>

We first exclude the Gulf countries and Libya from the dataset, given the oil-dependent nature of their economies. The IV estimates suggest that AfT (and within that AfT allocated to non-services) has a positive effect on services exports as well as on imports of both goods and services after three time periods. IV estimates at further levels of disaggregation of AfT or sectoral AfT lacked statistical significance and are not reported. When we decompose the country sample by World Bank income classification, we find that the effect of total AfT on services exports is driven by the low- and lower-middle-income countries in the sample (Table 4), suggesting that AfT benefits the countries that need it most. In addition, a statistically weak effect of total AfT is observed for merchandise imports of low-income and services imports of lower-middle-income countries after three time periods. All other IV results were found to be statistically insignificant and are not reported.[13]

5.2 Results by modes of supply (MoS)

In WTO parlance, there are four modes of supply (MoS) through which services trade can be transacted.[14] In July 2019 the WTO Secretariat released data on international trade in services broken down by the four MoS for 200 economies over 2005-2017. In this subsection, we replicate the analysis in Section 5.1 using these recently released data. The results by MoS are reported in Table 5, for services exports in columns (1) - (4) and for services imports in columns (5) - (8).

<Insert Table 5 here>

The results suggest that AfT allocated to services has economically large effects on services trade delivered by Modes 1 and 2 after one year, although the relationship is only weakly significant at the 10% level. More specifically, a doubling of services AfT increases Mode 1 and Mode 2 services exports of recipient countries by 43.9 and 76.6 percent, respectively; the corresponding rise for services imports is 54.2 and 116.6 percent. Results for Modes 3

[13] Splitting the panel into two time periods, defined by the global financial crisis, and considering cross-sectional analysis by averaging all data over 2002-2015 also did not result in estimates statistically different from zero.

[14] These comprise cross-border trade or Mode 1; consumption abroad or Mode 2; commercial presence or Mode 3; and the movement of natural persons or Mode 4.

and 4 and all other sub-types of aid lack statistical significance across time lags and are not reported. The lack of statistical significance also makes it difficult to distill the drivers of the economically large magnitudes of the services AfT trade effects on Modes 1 and 2 any further, although these are likely to be driven by AfT allocated to economic infrastructure (ICT) and productive capacity building (tourism), respectively.

5.3 Quantile analysis (IV)

The trade effect for broad sub-types of AfT may vary along the conditional distribution of trade. We examine this hypothesis using fixed effects IV quantile regressions.[15] The results from these regressions are reported in Tables 6 and 7, for exports and imports, respectively.

<Insert Tables 6 and 7 here>

The results suggest that the trade effects of AfT for broad sub-types of AfT may be stronger along the conditional distribution of trade, and tend to follow a U-shape along the conditional distribution, especially for services exports. Significantly, this is also observed in the case of AfT allocated to trade policies and regulation. Thus, the effect of AfT (including AfT for services and broad sub-types of AfT) on services exports is larger for both lower and upper quantiles than around the median. This finding is somewhat in contrast to that in Martínez-Zarzoso et al. (2017), where the trade effects of AfT decline along the conditional distribution and are observed primarily for goods exports.

AfT allocated to services sectors and activities is found to enhance services exports of small exporting countries, suggesting that such AfT meets its intended objective. This is particularly true of AfT allocated to productive capacity building in services and AfT allocated to financial and travel services. The finding that large exporting countries also benefit from services AfT makes intuitive sense given that such countries are likely to be relatively less capacity constrained and hence, more capable of utilising aid to their advantage. Another implication of these results is that the heterogeneity of trade may matter for responses to AfT.

[15]The quantile regressions were estimated in STATA using the Qregpd estimator developed by Powell (2015) to account for non-additive fixed effects. The optimization technique used was adaptive Markov Chain Monte Carlo. AfT variables were instrumented using the average AfT received by a recipient's neighbouring countries in the geographical neighbourhood.

6 Conclusion

Many dimensions of the potential relationship between AfT and the trade performance of recipient economies have been studied in the literature on this subject. A common characteristic of the extant body of research is that it mostly focuses on the effects of AfT on merchandise trade, and to a lesser extent, on investment flows. The analysis in this paper complements Ferro et al. (2014) and Hoekman and Shingal (2019) by focusing on AfT and trade in services. The results provide some new evidence for complementarities between AfT allocated to services and merchandise imports of recipient countries across lag structures. This is consistent with the role that services play as inputs into production and the fact that most AfT is allocated to services sectors. AfT directed at non-services activities is also found to affect services exports positively but only after three time periods, suggesting that any complementarities take time to materialise. The evidence for complementary relationships is weaker than would be expected a priori based on the literature analysing the relationships between manufacturing sector competitiveness and the performance of domestic services sectors (e.g., Beverelli, Fiorini and Hoekman, 2017).

Trade effects are found to be significant for broad sub-types of AfT along the conditional distribution of trade, and tend to be U-shaped along this distribution, especially for services exports. Thus, AfT allocated to services activities seems effective in enhancing services exports of small exporting countries. This finding is supported by the positive effect of AfT on services exports observed for the sub-sample of lower-middle income countries in the sensitivity analysis. Finally, AfT allocated to services activities is found to have economically large but statistically weak effects on services trade delivered by Modes 1 and 2, but not for inward FDI (mode 3).

References

Balchin, N., B. Hoekman, H. Martin, M. Mendez-Parra, P. Papadavid and D. te Velde. 2016. Trade in Services and Economic Transformation. London: Overseas Development Institute.

Bearce, D. H., Finkel, S. E., Pérez-Liñán, A. S., Rodríguez-Zepeda, J., and Surzhko-Harned, L. (2013). Has the New Aid for Trade Agenda been Export Effective? Evidence on the Impact of US AfT Allocations 1999-2008. International Studies Quarterly 57(1): 163-170.

Beverelli, C., M. Fiorini and B. Hoekman (2017). Services Trade Restrictiveness and Manufacturing Productivity: The Role of Institutions. Journal of International Economics 104: 166-82.

Beverelli, C., S. Neumueller and R. Teh (2015). Export Diversification Effects of the WTO Trade Facilitation Agreement. World Development 76: 293-310.

Brenton, P. and E. von Uexkull (2009). Product Specific Technical Assistance for Exports – Has It Been Effective? Journal of International Trade & Economic Development 18(2), 235-254.

Busse, M., R. Hoekstra and J. Königer. (2012). The Impact of Aid for Trade Facilitation on the Costs of Trading. Kyklos 65(2): 143-63.

Cadot, O., A. Fernandes, J. Gourdon, A. Mattoo, and J. de Melo (2014). Evaluating Aid for Trade: A Survey of Recent Studies. The World Economy 37(4): 516-529.

Cali, M. and D. te Velde (2011). Does Aid for Trade Really Improve Trade Performance? World Development 39(5): 725-40.

Ferro, E., Portugal-Perez, A., and Wilson, J. S. (2014). Aid to the services sector: does it affect manufacturing exports? The World Economy 37(4): 530-541.

Fiorini, M. and B. Hoekman. (2018). Services Trade Policy and Sustainable Development. World Development 112: 1-12.

Francois, J. and B. Hoekman. (2010). Services Trade and Policy. Journal of Economic Literature 48(3): 642-92.

Harms, P., and Lutz, M. (2006). Aid, governance and private foreign investment: some puzzling findings for the 1990s. The Economic Journal 116(513): 773-790.

Head, K., T. Mayer and J. Ries (2010). The erosion of colonial trade linkages after independence. Journal of International Economics 81(1): 1-14.

Helble, M., C.L. Mann and J.S. Wilson (2012). Aid-for-trade facilitation. Review of World Economics 148(2): 357-376.

Hoekman, B. and A, Shingal (2019). Aid for trade and international transactions in goods and services. Review of International Economics. Forthcoming.

Hühne, P., Meyer, B., and Nunnenkamp, P. (2014). Who benefits from aid for trade? Comparing the effects on recipient versus donor exports. Journal of Development Studies 50(9): 1275-1288.

Kaufmann, D., Kraay, A., and Mastruzzi, M. (2011). The worldwide governance indicators: methodology and analytical issues. Hague Journal on the Rule of Law 3(02): 220-246.

Lee, H. H., and Ries, J. (2016). Aid for Trade and Greenfield Investment. World Development 84, 206-218.

Martínez-Zarzosa, I., F. Nowak-Lehmann D., S. Klasen and M. Larch (2009). Does German development aid promote German exports? German Economic Review 10(3): 317-338.

Martínez-Zarzoso, I., Nowak-Lehmann, F., & Rehwald, K. (2017). Is Aid for Trade Effective? A Panel Quantile Regression Approach. Review of Development Economics 21(4): 175-203.

Neumayer, E. (2003). Do human rights matter in bilateral aid allocation? A quantitative analysis of 21 donor countries. Social Science Quarterly 84(3): 650-666.

Nowak-Lehmann, F., Martínez-Zarzoso, I., Herzer, D., Klasen, S., and Cardozo, A. (2013). Does foreign aid promote recipient exports to donor countries? Review of World Economics 149(3): 505-535.

OECD. Aid for trade statistical queries (ODA/AfT database).

OECD and WTO (2017). Aid for Trade at a Glance 2017: Promoting Trade, Inclusiveness and Connectivity for Sustainable Development, WTO, Geneva and OECD Publishing, Paris.

Persson, M. (2013). Trade facilitation and the extensive margin. Journal of International Trade & Economic Development 22(5): 658-93.

Pettersson, J. and L. Johansson (2013). Aid, Aid for Trade, and Bilateral Trade: An Empirical Study. Journal of International Trade & Economic Development 22(6), 866-894.

Portugal-Perez, A. and J. Wilson (2012). Export Performance and Trade Facilitation Reform: Hard and Soft Infrastructure. World Development 40(7): 1295-1307.

Powell, D. (2015). Quantile Regression with Nonadditive Fixed Effects. Working Papers RAND Corporation Publications Department.

Rodrik, D. 2016. Premature Deindustrialization. Journal of Economic Growth 21(1): 1-33.

Schettkat, R. and L. Yocarini. 2006. The Shift to Services Employment: A Review of the Literature. Structural Change and Economic Dynamics 17(2): 127-147.

Selaya, P. and E. R. Sunesen (2012). Does foreign aid increase foreign direct investment? World Development 40(11), 2155-2176.

Skärvall, L. (2012). Does Swedish aid help or hinder bilateral trade: An empirical study on the effect of Official Development Assistance and Aid for Trade.

Uberti, L.J., and D. Jackson (2019). Does Aid Promote Electoral Integrity? The Journal of Development Studies, DOI: 10.1080/00220388.2019.1657572.

UN Comtrade. Trade in Services database.

Vijil, M. and L. Wagner (2012). Does Aid for Trade Enhance Export Performance? Investigating the Infrastructure Channel. The World Economy 35(7): 838-68.

Wagner, D. (2003). Aid and trade: An empirical study. Journal of the Japanese and International Economies 17(2): 153-173.

Wooldridge, J. M. (1995). Score diagnostics for linear models estimated by two stage least squares. In Advances in Econometrics and Quantitative Economics: Essays in Honour of Professor C. R. Rao, ed. G. S. Maddala, P. C. B. Phillips, and T. N. Srinivasan, 66-87. Oxford: Blackwell.

WTO. 2016. World Trade Statistical Review 2016. Geneva: WTO.

WTO. 2019. Trade in Services by Modes of Supply (TISMOS). Geneva: WTO.

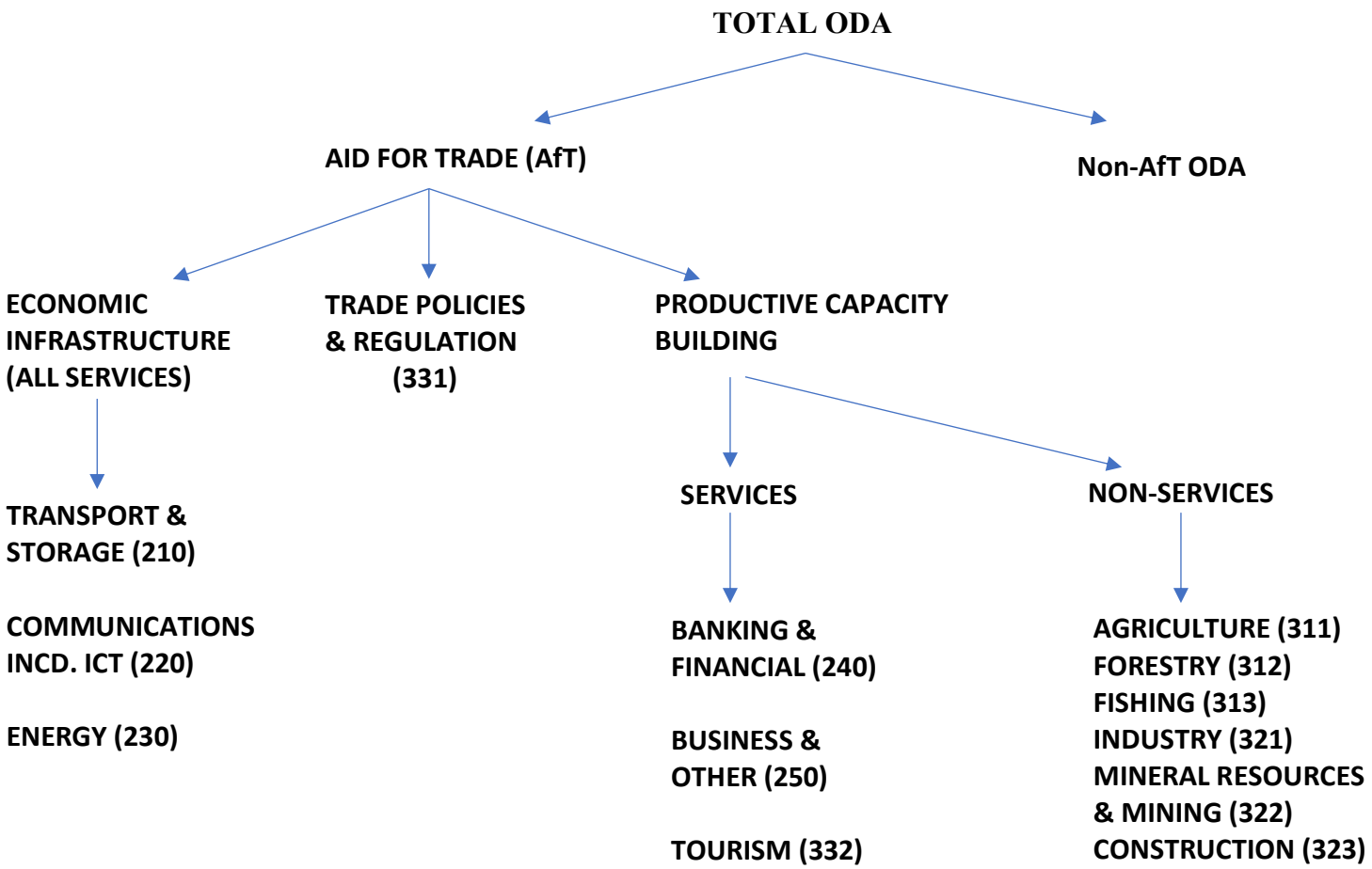
Data citation:

ODA/AfT database; OECD; 2002-2015; Query Wizard for International Development Statistics; https://stats.oecd.org/qwids/

Trade in Goods and Services database; UN Comtrade; 2002-2015; International Trade Statistics Database; https://comtrade.un.org/data

Trade in Services by Modes of Supply (TISMOS); WTO; 2005-2017; https://www.wto.org/english/res$_e$/*sta*

Figure 1: Breakdown of ODA and AfT categories



Note: Numbers in parentheses indicate OECD CRS codes

Table 1: Impact of total AfT on trade in services and trade in goods (IV estimates)

	AfT variables lagged one time period				AfT variables lagged two time periods				AfT variables lagged three time periods			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	$\ln(X^S)$	$\ln(X^G)$	$\ln(M^S)$	$\ln(M^G)$	$\ln(X^S)$	$\ln(X^G)$	$\ln(M^S)$	$\ln(M^G)$	$\ln(X^S)$	$\ln(X^G)$	$\ln(M^S)$	$\ln(M^G)$
$\ln(AfT_{jt-1})$	-0.0147	0.173	-0.199	**0.337****	0.0538	0.0217	0.0125	**0.254***	**0.397****	-0.147	0.172	**0.203****
	(0.177)	(0.193)	(0.221)	(0.169)	(0.124)	(0.211)	(0.126)	(0.130)	(0.171)	(0.223)	(0.134)	(0.101)
$NAfT_{jt-1}$	0.0327	0.627	-0.0164	0.681	-0.149	0.749	0.163	0.316	0.170	0.548	0.175	-0.277
	(0.198)	(0.628)	(0.180)	(0.496)	(0.350)	(0.766)	(0.149)	(0.419)	(0.223)	(0.870)	(0.163)	(0.520)
$\ln(Non\_AfT_{jt-1})$	-0.0949	-0.628	-0.00628	-0.442	0.156	-0.730	0.161	-0.190	0.0264	-0.677	0.0776	0.0149
	(0.151)	(0.511)	(0.164)	(0.361)	(0.161)	(0.566)	(0.153)	(0.286)	(0.202)	(0.708)	(0.153)	(0.407)
$NNon\_AfT_{jt-1}$	-0.328	-1.893	-0.532	-1.199	0.702	-2.500	0.270	-0.374	0.652	-2.281	0.382	0.560
	(0.450)	(1.549)	(0.472)	(1.080)	(0.551)	(1.832)	(0.418)	(0.891)	(0.615)	(2.367)	(0.464)	(1.345)
$\ln(Pop_{jt})$	0.452*	1.589*	0.767***	1.447***	0.0981	1.794**	0.541**	1.062**	-0.0906	1.524	0.467	0.738
	(0.246)	(0.823)	(0.230)	(0.558)	(0.283)	(0.903)	(0.270)	(0.428)	(0.371)	(1.054)	(0.321)	(0.611)
$\ln(MP_{jt})$	0.303	0.233	-0.214	1.424*	0.269	0.249	-0.175	1.091*	0.687	-0.612	-0.0556	0.671**
	(0.409)	(0.933)	(0.493)	(0.769)	(0.369)	(1.016)	(0.382)	(0.612)	(0.437)	(0.540)	(0.365)	(0.315)
$\ln(CPI_{jt})$	0.333***	0.292**	0.286***	0.199**	0.323***	0.205	0.179**	0.192**	0.214*	0.0988	0.0811	0.209**
	(0.110)	(0.116)	(0.0972)	(0.0887)	(0.0988)	(0.139)	(0.0855)	(0.0809)	(0.116)	(0.191)	(0.0997)	(0.0935)
GE_{jt}	0.218***	0.346**	0.0329	0.300**	0.178**	0.563*	-0.0173	0.328**	0.251**	0.358	0.0409	0.231
	(0.0648)	(0.172)	(0.0661)	(0.122)	(0.0858)	(0.323)	(0.0689)	(0.157)	(0.107)	(0.267)	(0.0829)	(0.145)
$\ln(FDI_{jt})$	0.0486***	0.0328*	0.0738***	0.0503***	0.0545***	0.0370*	0.0706***	0.0646***	0.0419***	0.0580**	0.0592***	0.0606***
	(0.0127)	(0.0184)	(0.0151)	(0.0153)	(0.0129)	(0.0196)	(0.0162)	(0.0141)	(0.0158)	(0.0277)	(0.0174)	(0.0149)
Constant	-7.464	-23.59	-1.245	-47.40**	-3.236	-24.85	-0.686	-34.88**	-10.07	-0.239	-1.967	-21.52*
	(10.87)	(30.35)	(12.49)	(23.29)	(9.763)	(32.13)	(9.932)	(17.71)	(11.26)	(18.88)	(9.333)	(11.04)
N	1,421	1,053	1,421	1,051	1,318	1,004	1,318	1,002	1,209	943	1,209	941
r2	0.980	0.978	0.970	0.975	0.980	0.975	0.973	0.986	0.969	0.975	0.969	0.989
Wooldridge F-stat	0.18836	1.13926	0.717955	6.39882	0.943559	1.77005	0.736679	4.84199	5.30477	1.24678	2.02433	2.90814
p-value	0.8283	0.3204	0.4879	**0.0017**	0.3895	0.1709	0.4789	**0.0081**	**0.0051**	0.2879	0.1325	**0.0551**
Anderson canon. corr. LR stat	5.575	2.262	5.575	2.839	10.107	2.59	10.106	3.02	11.226	1.379	11.226	1.154
Chi-sq p-value	**0.0182**	0.1326	**0.0182**	**0.092**	**0.0015**	0.1076	**0.0015**	**0.0822**	**0.0008**	0.2402	**0.0008**	0.2827

Note: Robust standard errors, clustered by AfT-recipient*year, reported in parentheses. Levels of significance: * (10%), ** (5%), *** (1%). All estimations include recipient and year fixed effects. Wooldridge (1995) F-statistic and associated p-value for endogeneity test of regressors; and Anderson canonical correlations likelihood-ratio test of identification and associated Chi-squared p-value, also reported.

Table 2: Impact of AfT in services on goods and services trade (IV estimates)

	AfT variables lagged one time period				AfT variables lagged two time periods				AfT variables lagged three time periods			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	$\ln(X^S)$	$\ln(X^G)$	$\ln(M^S)$	$\ln(M^G)$	$\ln(X^S)$	$\ln(X^G)$	$\ln(M^S)$	$\ln(M^G)$	$\ln(X^S)$	$\ln(X^G)$	$\ln(M^S)$	$\ln(M^G)$
$\ln(AfT\_Ser_{jt-1})$	-0.167	0.0523	-0.0653	**0.182***	-0.118	-0.0830	0.0824	0.122	-0.142	-0.480*	-0.0624	-0.0124
	(0.192)	(0.130)	(0.181)	(0.0941)	(0.152)	(0.181)	(0.123)	(0.0915)	(0.244)	(0.271)	(0.154)	(0.117)
$NAfT\_Ser_{jt-1}$	0.0538	0.000654	0.0370	0.0749	-0.234	-0.0969	-0.0483	-0.0678	0.00126	-0.382	0.0837	-0.0905
	(0.125)	(0.212)	(0.143)	(0.139)	(0.228)	(0.209)	(0.202)	(0.100)	(0.260)	(0.235)	(0.186)	(0.110)
$\ln(AfT\_Non\_Ser_{jt-1})$	0.108	-0.370	-0.152	-0.140	**0.294***	-0.440	-0.0435	0.0433	**0.630****	-0.0434	**0.239***	0.192
	(0.130)	(0.225)	(0.110)	(0.148)	(0.160)	(0.271)	(0.128)	(0.147)	(0.246)	(0.369)	(0.140)	(0.147)
$NAfT\_Non\_Ser_{jt-1}$	-0.256	-0.392	-0.408	0.00806	0.289	-0.586*	0.119	0.222	0.411	-0.406	0.115	0.126
	(0.316)	(0.263)	(0.322)	(0.168)	(0.223)	(0.327)	(0.174)	(0.159)	(0.287)	(0.375)	(0.190)	(0.176)
$\ln(Pop_{jt})$	0.211	1.093***	0.802***	1.034***	0.171	1.157**	0.712***	0.915***	0.104	0.860	0.578**	0.929***
	(0.270)	(0.371)	(0.219)	(0.237)	(0.265)	(0.452)	(0.223)	(0.223)	(0.378)	(0.569)	(0.278)	(0.229)
$\ln(MP_{jt})$	0.0137	-1.166***	-0.245	0.512	0.324	-1.484**	-0.0152	0.747**	1.099*	-1.343	0.00195	0.810*
	(0.484)	(0.414)	(0.464)	(0.324)	(0.460)	(0.601)	(0.403)	(0.351)	(0.590)	(1.071)	(0.412)	(0.433)
$\ln(CPI_{jt})$	0.320**	0.325***	0.320***	0.225***	0.228*	0.233	0.192*	0.169**	-0.000762	-0.0535	0.0228	0.0993
	(0.143)	(0.116)	(0.106)	(0.0830)	(0.128)	(0.145)	(0.1000)	(0.0805)	(0.180)	(0.201)	(0.122)	(0.0942)
GE_{jt}	0.264***	0.102	-0.0154	0.108	0.237***	0.179**	0.0301	0.224***	0.209*	0.0756	0.0444	0.208***
	(0.0892)	(0.118)	(0.0751)	(0.0792)	(0.0787)	(0.0893)	(0.0598)	(0.0437)	(0.119)	(0.117)	(0.0756)	(0.0542)
$\ln(FDI_{jt})$	0.0552***	0.0377**	0.0765***	0.0509***	0.0358**	0.0579***	0.0670***	0.0597***	0.0335	0.0601**	0.0558***	0.0560***
	(0.0159)	(0.0167)	(0.0155)	(0.0121)	(0.0151)	(0.0187)	(0.0166)	(0.0127)	(0.0205)	(0.0249)	(0.0168)	(0.0135)
Constant	2.844	13.28	-1.555	-22.13***	-4.229	21.04	-6.088	-25.57***	-20.92	24.96	-3.847	-26.75***
	(13.77)	(10.25)	(12.40)	(7.478)	(11.65)	(14.98)	(10.05)	(7.866)	(14.93)	(23.97)	(10.01)	(9.314)
N	1,421	1,053	1,421	1,051	1,318	1,004	1,318	1,002	1,209	943	1,209	941
r2	0.975	0.982	0.971	0.986	0.973	0.979	0.973	0.990	0.950	0.972	0.969	0.990
Wooldridge F-stat	1.2757	2.32735	1.30159	4.10656	2.64943	3.1734	0.219196	1.30443	9.85657	4.44818	1.83904	0.909272
p-value	0.2796	**0.0981**	0.2724	**0.0167**	**0.0711**	**0.0423**	0.8032	0.2718	**0.0001**	**0.0119**	0.1594	0.4032
Anderson canon. corr. LR stat	5.318	7.974	5.318	7.474	7.831	5.83	7.831	5.114	6.365	5.089	6.365	4.964
Chi-sq p-value	**0.0211**	**0.0047**	**0.0211**	**0.0063**	**0.0051**	**0.0158**	**0.0051**	**0.0237**	**0.0116**	**0.0241**	**0.0116**	**0.0259**

Note: Robust standard errors, clustered by AfT-recipient*year, reported in parentheses. Levels of significance: * (10%), ** (5%), *** (1%). All estimations include recipient and year fixed effects. Wooldridge (1995) F-statistic and associated p-value for endogeneity test of regressors; and Anderson canonical correlations likelihood-ratio test of identification and associated Chi-squared p-value, also reported.

Table 3: IV results without Gulf and Libya

	(1) $\ln(X^S)$	(2) $\ln(X^G)$	(3) $\ln(M^S)$	(4) $\ln(M^G)$
$\ln(AfT_{jt-3})$	**0.303****	-0.00603	**0.444*****	**0.286****
	(0.122)	(0.122)	(0.156)	(0.119)
$\ln(Non\_AfT_{jt-3})$	0.0924	-0.140	-0.0472	0.0931
	(0.143)	(0.299)	(0.167)	(0.282)
Observations	1,162	903	1,162	906
R2	0.977	0.990	0.954	0.985
Wooldridge F stat	6.06627	0.046696	10.3921	7.07998
p-value	**0.0024**	0.9544	**0.0000**	**0.0009**
Anderson canon. corr. LR stat	15.07	3.766	15.07	3.853
Chi-sq p-value	**0.0001**	**0.0523**	**0.0001**	**0.0497**
$\ln(AfT\_Ser_{jt-3})$	0.0451	-0.616	0.182	0.279
	(0.212)	(0.885)	(0.154)	(0.729)
$\ln(AfT\_Non\_Ser_{jt-3})$	**0.688****	-0.349	0.291	0.747
	(0.331)	(1.602)	(0.228)	(1.250)
Observations	1,162	903	1,162	906
R2	0.944	0.949	0.957	0.925
Wooldridge F stat	9.55591	2.97417	4.34711	1.64387
p-value	**0.0001**	**0.0516**	**0.0132**	0.1938
Anderson canon. corr. LR stat	5.564	0.386	5.563	0.405
Chi-sq p-value	**0.0183**	0.5342	**0.0183**	0.5244

Note: Sample excludes Gulf countries and Libya. Each panel indicated by broken lines has been estimated separately using 2SLS IV estimation. Robust standard errors, clustered by AfT-recipient*year, reported in parentheses. All estimations include year and recipient fixed effects. All estimations include control and NAfT variables, output unreported. Wooldridge (1995) F-statistic and associated p-value for endogeneity test of regressors; and Anderson canonical correlations likelihood-ratio test of identification and associated Chi-squared p-value, also reported. Levels of significance: * (10%), ** (5%), *** (1%).

Table 4: IV results by World Bank income classification

	LI		LMI		UMI		HI		LI		LMI		UMI		HI	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	$\ln(X^S)$	$\ln(X^G)$	$\ln(X^S)$	$\ln(X^G)$	$\ln(X^S)$	$\ln(X^G)$	$\ln(X^S)$	$\ln(X^G)$	$\ln(M^S)$	$\ln(M^G)$	$\ln(M^S)$	$\ln(M^G)$	$\ln(M^S)$	$\ln(M^G)$	$\ln(M^S)$	$\ln(M^G)$
$\ln(AfT_{jt-3})$	**0.346****	0.295	**0.341****	-1.272	-0.145	0.476	0.577	-0.374	0.0405	**0.445***	**0.290***	0.550	-0.0427	-0.00587	-2.269	-0.773
	(0.175)	(0.261)	(0.161)	(1.466)	(1.372)	(1.112)	(1.034)	(0.475)	(0.321)	(0.247)	(0.158)	(0.756)	(1.699)	(0.306)	(3.569)	(0.822)
$\ln(Non\_AfT_{jt-3})$	-0.0984	-0.135	-0.0482	0.724	-2.167	2.159	-0.647	0.557	0.242	-0.0758	-0.113	-0.391	-2.800	0.594	2.183	0.886
	(0.493)	(0.231)	(0.225)	(1.255)	(5.311)	(3.469)	(1.226)	(0.573)	(0.602)	(0.223)	(0.215)	(0.743)	(6.598)	(1.038)	(4.270)	(0.909)
Observations	364	265	443	341	309	259	93	78	364	265	443	338	309	260	93	78
R2	0.965	0.977	0.980	0.927	0.673	0.831	0.936	0.979	0.904	0.973	0.983	0.972	0.578	0.977	0.308	0.859
Wooldridge F stat	1.73929	1.82599	2.93555	2.59585	1.91785	3.09205	0.527984	2.18958	1.62554	3.24286	5.27206	2.03443	5.8044	1.05172	5.78714	4.05797
p-value	0.1771	0.1631	**0.0541**	**0.0761**	0.1487	**0.0471**	0.5916	0.1189	0.1982	**0.0406**	**0.0055**	0.1324	**0.0034**	0.3508	**0.0043**	**0.0211**
Anderson canon. corr. LR stat	2.308	2.658	6.863	0.944	0.177	0.401	0.405	0.867	2.308	2.657	6.863	0.506	0.177	0.336	0.405	0.867
Chi-sq p-value	0.1287	0.1030	**0.0088**	0.3312	0.6743	0.5267	0.5248	0.3517	0.1287	0.1031	**0.0088**	0.4770	0.6743	0.5621	0.5247	0.3517

Note: Each income classification indicated by broken lines has been estimated separately using 2SLS IV estimation. All estimations include year and recipient fixed effects as well as control and NAfT variables, the output of which is unreported. Robust standard errors, clustered by recipient-year, are included in parentheses. Levels of significance: *10%, **5%, ***1%. LI = Low income; LMI = Lower-middle income; UMI = Upper-middle income; HI = High income as classified by World Bank. Wooldridge (1995) F-statistic and associated p-value for endogeneity test of regressors; and Anderson canonical correlations likelihood-ratio test of identification and associated Chi-squared p-value, also reported.

Table 5: Impact of AfT in services on services trade by modes of supply (IV estimates)

	(1) $\ln(X^{S, M1})$	(2) $\ln(X^{S, M2})$	(3) $\ln(X^{S, M3})$	(4) $\ln(X^{S, M4})$	(5) $\ln(M^{S, M1})$	(6) $\ln(M^{S, M2})$	(7) $\ln(M^{S, M3})$	(8) $\ln(M^{S, M4})$
$\ln(AfT\_Ser_{jt-1})$	0.4394*	0.7662*	0.8417	-0.1659	0.5418*	1.1664*	0.4673	0.7331
	(0.2559)	(0.4299)	(0.5672)	(0.5745)	(0.2780)	(0.7079)	(0.3813)	(0.5083)
$NAfT\_Ser_{jt-1}$	7.1415*	12.7578*	13.4903	-2.7393	8.7757*	19.1864*	7.4700	12.0195
	(4.1383)	(6.9678)	(9.1553)	(9.2528)	(4.4915)	(11.4665)	(6.1590)	(8.2018)
$\ln(AfT\_Non\_Ser_{jt-1})$	-0.2044	-0.1416	-1.0732	-0.1366	-0.3905	0.1832	-0.7843	-0.1859
	(0.3701)	(0.6567)	(0.8815)	(0.6968)	(0.4447)	(1.0738)	(0.5631)	(0.8122)
$NAfT\_Non\_Ser_{jt-1}$	-3.0950	-2.0692	-16.8381	-2.6233	-5.9530	3.8329	-12.4207	-2.7040
	(5.9838)	(10.6182)	(14.1990)	(11.0486)	(7.1853)	(17.3682)	(9.0752)	(13.1082)
$\ln(Pop_{jt})$	1.5444***	0.3011	2.2017**	-0.0651	1.6064***	0.8311	1.4268**	0.9034
	(0.4690)	(0.8484)	(1.0331)	(0.8900)	(0.5451)	(1.3148)	(0.6781)	(0.9816)
$\ln(MP_{jt})$	-0.5312	0.4400	1.0816	-1.0387	-0.3424	-1.0424	1.0802*	-2.0283**
	(0.4723)	(0.8918)	(0.9273)	(0.7821)	(0.5116)	(1.4019)	(0.5841)	(0.8833)
$\ln(CPI_{jt})$	0.2655	0.0681	0.8074**	0.9842***	0.2214	-0.3532	0.4084	0.2861
	(0.1836)	(0.3300)	(0.3781)	(0.3529)	(0.2003)	(0.5344)	(0.2591)	(0.3729)
GE_{jt}	0.1071	-0.0329	0.0606	0.3570	0.0557	0.0080	-0.0009	0.0328
	(0.1147)	(0.1895)	(0.2228)	(0.2798)	(0.1131)	(0.2976)	(0.1549)	(0.3893)
$\ln(FDI_{jt})$	0.0901***	0.0423	0.1198**	0.0576	0.0940***	0.0084	0.0472	0.0913*
	(0.0227)	(0.0381)	(0.0484)	(0.0469)	(0.0263)	(0.0638)	(0.0328)	(0.0500)
Constant	-14.4201	-22.8619	-59.9121***	32.2300*	-17.2352	-10.1977	-38.2815***	21.2290
	(10.8916)	(21.8231)	(21.6312)	(18.7867)	(12.1630)	(32.3782)	(13.9466)	(22.2053)
N	1,179	1,179	1,179	1,125	1,179	1,179	1,179	1,173
r2	0.9740	0.9198	0.9401	0.9173	0.9595	0.8032	0.9471	0.8785
Wooldridge F-stat	2.447	4.609	5.737	0.275	7.818	8.501	7.718	1.647
p-value	0.0870	0.0101	0.00331	0.759	0.000424	0.000216	0.000468	0.193
Anderson canon. corr. LR stat	2.519	2.519	2.519	2.417	2.519	2.519	2.519	2.530
Chi-sq p-value	0.113	0.113	0.113	0.120	0.113	0.113	0.113	0.112

Note: Robust standard errors, clustered by AfT-recipient*year, reported in parentheses. Levels of significance: * (10%), ** (5%), *** (1%). All estimations include recipient and year fixed effects. Wooldridge (1995) F-statistic and associated p-value for endogeneity test of regressors and Anderson canonical correlations likelihood-ratio test of identification and associated Chi-squared p-value, also reported.

Table 6: Quantile regressions for exports

	Quantile=0.1		Quantile=0.25		Quantile=0.35		Quantile=0.5		Quantile=0.75		Quantile=0.9	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	$\ln(X^S)$	$\ln(X^G)$	$\ln(X^S)$	$\ln(X^G)$	$\ln(X^S)$	$\ln(X^G)$	$\ln(X^S)$	$\ln(X^G)$	$\ln(X^S)$	$\ln(X^G)$	$\ln(X^S)$	$\ln(X^G)$
$\ln(AfT_{jt-1})$	-0.0181	-0.109***	0.138	-0.0250**	**0.0576*** **	-0.0886***	-0.0553	-0.0762***	**0.0412*** **	-0.0527***	**0.0876*** **	-0.105***
	(0.0129)	(0.0204)	(0.0899)	(0.0105)	(0.0213)	(0.00699)	(0.0703)	(0.00119)	(0.00729)	(0.0123)	(0.0224)	(0.0222)
$\ln(Non\_AfT_{jt-1})$	-0.0769***	-0.227***	0.0381	-0.381***	-0.233***	-0.345***	-0.194	-0.314***	-0.118***	-0.437***	-0.137***	-0.313***
	(0.0164)	(0.0218)	(0.108)	(0.00996)	(0.0526)	(0.00847)	(0.122)	(0.00268)	(0.0440)	(0.0216)	(0.0332)	(0.0440)
$\ln(AfT\_Ser_{jt-1})$	-0.135***	-0.145***	**0.0480*** **	-0.0773***	-0.282***	-0.0958***	**0.0265*** **	-0.0863***	0.0345	-0.0634***	**0.0585*** **	-0.118***
	(0.0312)	(0.0561)	(0.00305)	(0.00635)	(0.0851)	(0.0142)	(0.000846)	(0.00369)	(0.163)	(0.0111)	(0.00796)	(0.0105)
$\ln(AfT\_Non\_Ser_{jt-1})$	**0.101*** **	-0.197***	-0.107***	-0.312***	-0.00441	-0.268***	-0.132***	-0.263***	-0.268**	-0.253***	-0.0761***	-0.230***
	(0.0325)	(0.0474)	(0.00136)	(0.00990)	(0.0563)	(0.0190)	(0.00172)	(0.00304)	(0.115)	(0.0134)	(0.0221)	(0.0106)
$\ln(AfT\_EI_{jt-1})$	-0.175	-0.111***	-0.0353***	-0.0735***	-0.0337	-0.0849***	**0.0122*** **	-0.0809***	**0.0170*** **	-0.0179***	**0.0190*** **	-0.0791***
	(0.146)	(0.00405)	(0.00184)	(0.00397)	(0.0300)	(0.00621)	(0.00174)	(0.00174)	(0.00188)	(0.00152)	(0.00307)	(0.00512)
$\ln(AfT\_PCB\_Ser_{jt-1})$	**0.271*** **	**0.0464*** **	**0.149*** **	-0.0426***	**0.199** **	-0.00204	**0.0759*** **	-0.0309***	**0.0446*** **	-0.00696*	**0.0191*** **	-0.0130
	(0.0474)	(0.00473)	(0.0143)	(0.0116)	(0.0958)	(0.0258)	(0.00178)	(0.00407)	(0.00487)	(0.00385)	(0.00495)	(0.00794)
$\ln(AfT\_PCB\_Non\_Ser_{jt-1})$	0.170	-0.345***	-0.216***	-0.281***	-0.311**	-0.295***	-0.234***	-0.246***	-0.195***	-0.290***	-0.152***	-0.211***
	(0.134)	(0.00866)	(0.00451)	(0.00322)	(0.126)	(0.0195)	(0.00202)	(0.00325)	(0.00288)	(0.00477)	(0.00323)	(0.00637)
$\ln(AfT\_TPR_{jt-1})$	-0.0538	**0.162*** **	**0.115*** **	**0.110*** **	**0.104*** **	-0.0319	**0.146*** **	**0.0290*** **	**0.190*** **	-0.0106**	**0.142*** **	-0.0531***
	(0.289)	(0.0129)	(0.00980)	(0.00548)	(0.0171)	(0.0323)	(0.00475)	(0.00401)	(0.00267)	(0.00441)	(0.00934)	(0.00732)
$\ln(AfT\_Transport_{jt-1})$	-0.0528***	-0.177***	-0.0301***	-0.0943***	-0.0463***	-0.0993***	-0.0269***	-0.0816***	0.00240	-0.0460***	-0.0599***	-0.0534***
	(0.00369)	(0.00349)	(0.000943)	(0.00406)	(0.00177)	(0.00253)	(0.000743)	(0.00154)	(0.00370)	(0.000928)	(0.00213)	(0.00104)
$\ln(AfT\_Communications_{jt-1})$	-0.111***	**0.0646*** **	-0.127***	-0.0477***	-0.0733***	-0.0287***	-0.105***	-0.0670***	-0.147***	-0.0111	-0.0222***	**0.0376*** **
	(0.00674)	(0.00515)	(0.00690)	(0.0138)	(0.00320)	(0.00729)	(0.0150)	(0.00223)	(0.0262)	(0.00724)	(0.00836)	(0.00163)
$\ln(AfT\_Financial_{jt-1})$	**0.0809*** **	-0.0193***	**0.0698*** **	-0.0479***	**0.0415*** **	-0.0311***	-0.0296*	-0.0524***	-0.0445**	**0.0233*** **	**0.00702*** **	**0.0461*** **
	(0.00884)	(0.00463)	(0.00192)	(0.0102)	(0.00395)	(0.00486)	(0.0160)	(0.00403)	(0.0206)	(0.00199)	(0.00266)	(0.00223)
$\ln(AfT\_Energy_{jt-1})$	-0.00437	-0.0573***	0.00128	-0.0581***	**0.0223*** **	-0.0648***	**0.0732*** **	-0.0827***	0.00596	-0.0976***	**0.0598*** **	-0.0485***
	(0.00339)	(0.00417)	(0.00150)	(0.00306)	(0.00117)	(0.00359)	(0.00651)	(0.00264)	(0.00931)	(0.00151)	(0.00260)	(0.00182)
$\ln(AfT\_OBS_{jt-1})$	0.00582	0.00899	-0.0457***	-0.0916***	-0.0313***	-0.0869***	-0.0328***	-0.0204***	-0.0306***	-0.159***	-0.0908***	-0.240***
	(0.00677)	(0.00721)	(0.00356)	(0.00958)	(0.00270)	(0.00453)	(0.00939)	(0.00729)	(0.0103)	(0.00167)	(0.00734)	(0.00188)
$\ln(AfT\_Travel_{jt-1})$	**0.313*** **	**0.419*** **	**0.197*** **	**0.314*** **	**0.145*** **	**0.301*** **	**0.0620*** **	**0.301*** **	0.118	**0.164*** **	**0.0238*** **	0.000770
	(0.0361)	(0.0181)	(0.0131)	(0.0354)	(0.0154)	(0.0212)	(0.0172)	(0.00716)	(0.0788)	(0.00753)	(0.00633)	(0.00650)
$\ln(AfT\_CRS_{jt-1})$	-0.475***	-0.243***	-0.211***	-0.305***	-0.196***	-0.214***	-0.233***	**0.0853*** **	**0.254*** **	-0.133***	**0.179*** **	-0.239***
	(0.0285)	(0.00576)	(0.0106)	(0.00837)	(0.00284)	(0.00684)	(0.0225)	(0.0107)	(0.0537)	(0.00573)	(0.0174)	(0.00215)
Observations	1,421	1,053	1,421	1,053	1,421	1,053	1,421	1,053	1,421	1,053	1,421	1,053

Note: The quantile regressions have been estimated in STATA using the Qregpd estimator developed by Powell (2015). Each quantile and panel indicated by broken lines has been estimated separately. Optimization technique used was adaptive MCMC. All estimations include year and recipient fixed effects as well as control and NAfT variables; the output of the latter unreported. AfT variables were instrumented using the average for all neighbouring countries in a geographical region. Robust standard errors are included in parentheses. Levels of significance: *10%, ** 5%, ***1%.

Table 7: Quantile regressions for imports

	Quantile=0.1		Quantile=0.25		Quantile=0.35		Quantile=0.5		Quantile=0.75		Quantile=0.9	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	$\ln(M^S)$	$\ln(M^G)$	$\ln(M^S)$	$\ln(M^G)$	$\ln(M^S)$	$\ln(M^G)$	$\ln(M^S)$	$\ln(M^G)$	$\ln(M^S)$	$\ln(M^G)$	$\ln(M^S)$	$\ln(M^G)$
$\ln(AfT_{jt-1})$	-0.0659***	-0.0719***	-0.0357	-0.0295*	-0.407***	-0.00447	-0.270***	-0.122***	-0.171***	-0.00423	-0.128***	-0.0746***
	(0.00651)	(0.00856)	(0.120)	(0.0175)	(0.117)	(0.0676)	(0.0915)	(0.0399)	(0.00976)	(0.0165)	(0.00557)	(0.0137)
$\ln(Non\_AfT_{jt-1})$	0.00386	-0.0781***	-0.0859	-0.189**	-0.000633	-0.129***	-0.0142	-0.0640	-0.0467***	-0.174***	-0.0863***	-0.144***
	(0.0176)	(0.0206)	(0.0703)	(0.0756)	(0.0779)	(0.0217)	(0.0362)	(0.0692)	(0.0122)	(0.0446)	(0.00659)	(0.0132)
$\ln(AfT\_Ser_{jt-1})$	-0.0324***	**0.0178*** **	-0.118***	0.00671	-0.0524	-0.00415**	-0.0581***	0.0178	-0.0425***	-0.0859**	-0.0115**	-0.0728***
	(0.00389)	(0.00507)	(0.00721)	(0.00526)	(0.0330)	(0.00176)	(0.00873)	(0.0447)	(0.00730)	(0.0416)	(0.00465)	(0.00757)
$\ln(AfT\_Non\_Ser_{jt-1})$	-0.00331	-0.234***	-0.0748***	-0.206***	-0.0831***	-0.194***	-0.153***	-0.137***	-0.230***	-0.0692*	-0.237***	-0.0525***
	(0.0370)	(0.00503)	(0.0162)	(0.00613)	(0.00618)	(0.0131)	(0.0192)	(0.0260)	(0.0153)	(0.0398)	(0.00434)	(0.0135)
$\ln(AfT\_EI_{jt-1})$	-0.0663***	-0.0267***	0.0481	-0.0449***	-0.0378***	-0.0545***	-0.0176***	-0.0606***	**0.0307*** **	-0.0351***	-0.0216**	-0.111***
	(0.00394)	(0.000752)	(0.0379)	(0.00228)	(0.00768)	(0.00385)	(0.000649)	(0.00156)	(0.00666)	(0.000906)	(0.00864)	(0.0175)
$\ln(AfT\_PCB\_Ser_{jt-1})$	**0.0220*** **	**0.0804*** **	**0.155** **	**0.0244*** **	-0.00450	**0.0411*** **	-0.0369***	-0.0290***	-0.0604***	**0.00489*** **	-0.109***	0.00905
	(0.00251)	(0.00269)	(0.0627)	(0.00449)	(0.00967)	(0.00242)	(0.00132)	(0.00200)	(0.00723)	(0.000877)	(0.00642)	(0.0161)
$\ln(AfT\_PCB\_Non\_Ser_{jt-1})$	-0.0373***	-0.277***	-0.114*	-0.230***	-0.118***	-0.222***	-0.189***	-0.198***	-0.255***	-0.118***	-0.206***	-0.165***
	(0.00206)	(0.00128)	(0.0622)	(0.00678)	(0.00394)	(0.00223)	(0.00208)	(0.000945)	(0.00799)	(0.00123)	(0.00293)	(0.0154)
$\ln(AfT\_TPR_{jt-1})$	**0.0274*** **	**0.0510*** **	-0.231***	**0.105*** **	**0.0671*** **	**0.0999*** **	**0.0822*** **	**0.143*** **	**0.0392*** **	**0.0851*** **	0.0143	**0.142*** **
	(0.00382)	(0.00193)	(0.0872)	(0.00820)	(0.00331)	(0.00331)	(0.00150)	(0.00120)	(0.00872)	(0.00205)	(0.00968)	(0.0151)
$\ln(AfT\_Transport_{jt-1})$	-0.0126***	-0.123***	-0.0486***	-0.0888***	-0.0428***	-0.0699***	-0.0386***	-0.0636***	-0.0374***	-0.0475***	-0.0165***	-0.0419***
	(0.00200)	(0.00321)	(0.00275)	(0.000648)	(0.00189)	(0.000483)	(0.000580)	(0.000901)	(0.00114)	(0.000449)	(0.00313)	(0.00130)
$\ln(AfT\_Communications_{jt-1})$	-0.134***	**0.0504*** **	-0.0686***	-0.0441***	**0.0115*** **	-0.0450***	-0.00389	0.00121	-0.00483	-0.0205***	**0.0906*** **	**0.00773*** **
	(0.00405)	(0.00345)	(0.0133)	(0.00348)	(0.000689)	(0.00121)	(0.00262)	(0.00294)	(0.00642)	(0.00480)	(0.00518)	(0.00233)
$\ln(AfT\_Financial_{jt-1})$	-0.000388	7.32e-05	-0.0873***	-0.0150***	-0.0192***	-0.0136***	-0.0269***	-0.0226***	-0.0882***	-0.00413***	-0.0557***	**0.0157*** **
	(0.00380)	(0.00324)	(0.0138)	(0.00261)	(0.00551)	(0.00135)	(0.000890)	(0.00159)	(0.00803)	(0.000970)	(0.00379)	(0.00207)
$\ln(AfT\_Energy_{jt-1})$	**0.0108*** **	**0.0357*** **	**0.0512*** **	-0.00661	-0.0201***	-0.0402***	-0.0146***	-0.0296***	**0.00989*** **	-0.0256***	**0.0164*** **	-0.0591***
	(0.00218)	(0.00191)	(0.00685)	(0.00413)	(0.00158)	(0.000692)	(0.00109)	(0.00270)	(0.00188)	(0.00122)	(0.00302)	(0.00149)
$\ln(AfT\_OBS_{jt-1})$	-0.0560***	**0.0196*** **	**0.107*** **	-0.0146***	-0.00834	-0.0346***	-0.0589***	-0.0761***	-0.0400***	-0.0253***	-0.0779***	-0.0569***
	(0.00934)	(0.00390)	(0.0176)	(0.00329)	(0.0101)	(0.00174)	(0.00131)	(0.00215)	(0.00581)	(0.00247)	(0.00386)	(0.00301)
$\ln(AfT\_Travel_{jt-1})$	0.0634	**0.250*** **	**0.189*** **	**0.151*** **	**0.0513*** **	**0.126*** **	**0.0279*** **	**0.134*** **	-0.00855	**0.104*** **	-0.00673	**0.0458*** **
	(0.0484)	(0.00813)	(0.0581)	(0.00638)	(0.00727)	(0.00176)	(0.00563)	(0.00442)	(0.0232)	(0.00591)	(0.0122)	(0.00529)
$\ln(AfT\_CRS_{jt-1})$	-0.557***	-0.257***	-0.163***	**0.0139** **	-0.0210***	**0.0860*** **	-0.00602***	-0.00952*	-0.0861***	-0.0601***	-0.245***	-0.0388***
	(0.0296)	(0.00829)	(0.0108)	(0.00632)	(0.00109)	(0.00204)	(0.00168)	(0.00546)	(0.0115)	(0.00259)	(0.00847)	(0.00325)
Observations	1,421	1,051	1,421	1,051	1,421	1,051	1,421	1,051	1,421	1,051	1,421	1,051

Note: The quantile regressions have been estimated in STATA using the Qregpd estimator developed by Powell (2015). Each quantile and panel indicated by broken lines has been estimated separately. Optimization technique used was adaptive MCMC. All estimations include year and recipient fixed effects as well as control and NAfT variables; the output of the latter unreported. AfT variables were instrumented using the average for all neighbouring countries in a geographical region. Robust standard errors are included in parentheses. Levels of significance: *10%, ** 5%, ***1%.

Annex Table A: Full sample of AfT recipients

Afghanistan Albania Algeria Angola Anguilla Antigua and Barbuda Argentina Armenia Azerbaijan Bahrain Bangladesh Barbados Belarus Belize Benin Bhutan Bolivia Bosnia and Herzegovina Botswana Brazil Burkina Faso Burundi Cabo Verde Cambodia Cameroon Central African Republic Chad Chile China Colombia Comoros Congo, Dem. Rep. Congo, Rep. Costa Rica Côte d'Ivoire Croatia Cuba Djibouti Dominica Dominican Republic Ecuador Egypt, Arab Rep. El Salvador Equatorial Guinea Ethiopia Fiji Gabon Gambia, The Georgia Ghana Grenada Guatemala Guinea Guinea-Bissau Guyana Haiti Honduras India Indonesia Iran Iraq Jamaica Jordan Kazakhstan Kenya Kiribati Kyrgyzstan Laos Lebanon Lesotho Liberia Libya Macedonia Madagascar Malawi Malaysia Maldives Mali Malta Marshall Islands Mauritania Mauritius Mexico Micronesia Moldova Mongolia Montenegro Montserrat Morocco Mozambique Myanmar Namibia Nepal Nicaragua Niger Nigeria Oman Pakistan Palestine Panama Papua New Guinea Paraguay Peru Philippines Rwanda Samoa Sao Tome and Principe Saudi Arabia Senegal Serbia Seychelles Sierra Leone Slovenia Solomon Islands South Africa Sri Lanka St. Helena St. Kitts and Nevis St. Lucia St. Vincent and the Grenadines Sudan Suriname Swaziland Syria Tajikistan Tanzania Thailand Timor-Leste Togo Tonga Trinidad and Tobago Tunisia Turkey Tuvalu Uganda Ukraine Uruguay Uzbekistan Vanuatu Venezuela Vietnam Yemen Zambia Zimbabwe

Annex Table B: Summary statistics

	Aggregate exports of recipient					Aggregate imports of recipient				
Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
AID ($ mn)										
Total	2,119	661.0897	1148.972	0.095669	21747.91	2,119	661.0897	1148.972	0.095669	21747.91
Transportation	1,952	55.56358	126.9979	-1.688756	1621.018	1,952	55.56358	126.9979	-1.688756	1621.018
Travel	1,494	0.9422122	3.513761	-0.019474	79.24411	1,494	0.9422122	3.513761	-0.019474	79.24411
Communications	1,819	2.438257	12.4537	-8.747788	360.1552	1,819	2.438257	12.4537	-8.747788	360.1552
Comptuter-related	1,127	1.038337	2.430153	-1.5	31.6613	1,127	1.038337	2.430153	-1.5	31.6613
Energy	1,854	39.36329	103.1598	-5.792794	1475.002	1,854	39.36329	103.1598	-5.792794	1475.002
Financial	1,756	17.17677	76.48937	-2.047174	1738.172	1,756	17.17677	76.48937	-2.047174	1738.172
Business	1,798	7.491399	22.97945	-2.136141	480.6981	1,798	7.491399	22.97945	-2.136141	480.6981
Agriculture	1,981	28.06268	50.72854	0.00014	571.6846	1,981	28.06268	50.72854	0.00014	571.6846
Forestry	1,438	4.421154	14.31882	-0.413632	208.996	1,438	4.421154	14.31882	-0.413632	208.996
Fishing	1,541	1.765939	3.9492	-6.0254	78.73472	1,541	1.765939	3.9492	-6.0254	78.73472
Industry	1,849	8.391316	24.36596	-0.347324	470.8252	1,849	8.391316	24.36596	-0.347324	470.8252
Mining	1,157	6.099436	43.11883	-4.627965	957.3649	1,157	6.099436	43.11883	-4.627965	957.3649
Construction	671	0.7427091	3.262765	-1.268064	50.25599	671	0.7427091	3.262765	-1.268064	50.25599
AfT_EI	2,070	90.35993	207.3331	-0.00377	2422.776	2,070	90.35993	207.3331	-0.00377	2422.776
AfT_PCB	2,102	63.16919	133.8926	0.003527	2164.208	2,102	63.16919	133.8926	0.003527	2164.208
AfT_PCB_Services	1,997	22.55363	78.28466	-2.13614	1754.119	1,997	22.55363	78.28466	-2.13614	1754.119
AfT_PCB_Non-Services	2,082	42.14315	79.21089	0.003527	1065.419	2,082	42.14315	79.21089	0.003527	1065.419
AfT_TPR	1,766	3.440087	11.81081	-0.066788	328.35	1,766	3.440087	11.81081	-0.066788	328.35
Total AfT	2,112	154.3096	321.6611	0.003449	3162.586	2,112	154.3096	321.6611	0.003449	3162.586
Total Non_AfT	2,119	507.2899	936.3704	0.05005	19117.66	2,119	507.2899	936.3704	0.05005	19117.66
AfT_Services	2,091	110.9922	256.5237	-2.13614	2751.688	2,091	110.9922	256.5237	-2.13614	2751.688
AfT_Non-Services	2,084	45.01787	82.40597	0.003527	1072.222	2,084	45.01787	82.40597	0.003527	1072.222
TRADE ($ mn)										
Total services	1,852	4680	15500	0.05089	211000	1,852	5710	19600	0.02	383000
Transportation	1,723	973	2980	0.011828	38900	1,738	1880	5880	0.01	96200
Travel	1,736	1870	5000	0.057	56900	1,715	1430	6730	0.01	165000
Communications	1,291	133	254	0.009475	2480	1,278	95	236	-3.81	3130
Financial	1,052	136	563	-1.2	6380	1,192	157	580	-10.00	8300
Comptuter-related	983	753	5510	-0.062	72600	1,167	149	615	-4.80	10700
Business	1,476	1030	4910	-38.8	68900	1,580	1220	4280	-110.00	53400
Total goods	1,325	40600	165000	0.002344	2340000	1,329	37500	133000	28.70	1810000
CONTROLS										
Population (mn)	1,811	40	153	0	1360	1,811	40	153	0.010	1360
FDI ($ mn)	2,052	3400	17100	-7120	291000	2,052	3400	17100	-7120	291000
CPI	1,649	93.01479	30.58031	15.34757	730.0414	1,649	93.01479	30.58031	15.34757	730.0414
REER	773	99.20476	30.4206	52.15331	827.1733	773	99.20476	30.4206	52.15331	827.1733
Government effectiveness	1,819	-0.413602	0.65701	-2.24773	1.59649	1,819	-0.413602	0.65701	-2.24773	1.59649
Market penetration (mn)	1,822	4210	4240	0	32600	1,822	4210	4240	0	32600