

The Effect of Aid for Trade on Export Diversification of Recipient Countries

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Abstract

The importance of Aid for Trade (AfT) as a useful tool for facilitating trade, economic growth and social development has come to light since the concept was introduced in the Hong Kong Ministerial meeting of 2005. While export diversification is cited as one of the most desired target of AfT by partner countries in the survey conducted by WTO and OECD in 2011, there are not many efforts to measure the effect of aid for trade on export diversification. This paper, therefore, attempts to trace the relationship between aid for trade and export putting emphasis on export diversification. A number of indices that measure the variety of export commodities are used as dependent variables to show more complete picture of export structure. Simple count of products and markets, Herfindahl–Hirschman Index (HHI), EXPY, and share of manufactured exports calculated from export commodities classified by the Harmonized System (HS) and Standard Industrial Trade Classification (SITC) code. Since aid is comprised of highly diverse sectors and flow types, regression is run separately for each aid sector and type. The regression results using generalized method of moments (GMM) prove that overall aid for trade has no significant impacts on diversifying exports of recipient countries from 1996 to 2010 although some specific types of AfT influence certain trade indicators.

Keywords: aid for trade, aid effectiveness, official development assistance (ODA), export diversification, export sophistication

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1. Introduction

Aid for Trade (AfT) denotes a type of development assistance that is intended to promote trade of developing countries which are faced with many challenges in the global trade regime. The concept was first introduced in the Hong Kong Ministerial Meeting in 2005 in order to emphasize the role of international trade as a basis for economic growth and social development. The objective of AfT stated by the final Hong Kong Ministerial Declaration is to assist developing countries, especially Least Developing Countries (LDCs), to “build the supply-side capacity and trade-related infrastructure that they need to assist them to implement and benefit from World Trade Organization (WTO) Agreements and more broadly expand their trade” (WTO, 2005, para. 57).

Even though the role of AfT is emphasized over time, there have not been many papers measuring the effectiveness of AfT on trade performance. Also, existing papers which attempt to examine the impact of AfT focus only on the bilateral flows between donors and recipients but do not look at the effect of AfT on the total export flows from each recipient to the world. It is partly because the scope of Aid for Trade has continued to evolve since the early 2000s, and partly because AfT data with sufficient quality and time length is not available.

Regardless of such limitations, there have been some previous efforts to assess the impact of aid for trade. However, most of papers simply use export volume as the dependent variable to quantify the effect of AfT. Yet, sheer increase of export volume may not necessarily lead to the development of one nation, and thus, should not be used as the sole measure for the effectiveness of AfT.

This paper, therefore, aims to investigate the effectiveness of AfT using export diversification as the main index. Although the concept of AfT was first brought in 2005, aid that can qualify for AfT, namely aid that falls under CRS purpose code of 200 and 300 (See Appendix C for the complete list), has continued to exist before. To improve the robustness of panel regression, the sample includes all 129 recipients across the region and income group and timespan of 1996 and 2010.¹

To account for the endogeneity problem which is prevalent in aid literature, the paper uses system generalized method of moments (GMM). GMM is specified so that the estimation uses the first-lagged and first-differenced regressors as instruments of the estimation equation so that unobserved country-specific fixed effects are eliminated. In addition, the second lagged regressors are used as instruments for the first-differenced equation.

¹ Coverage ratios

The coverage ratio measures the comprehensiveness of aid activity data. It indicates the extent to which the data can be exploited in analytical work. High coverage permits an in-depth analysis. Low coverage means that the data, though descriptive, may not present a balanced picture of DAC members' aid.

Coverage ratios vary over time. The coverage of the data for a specific recipient or sector varies according to the donors and types of assistance involved. When analysing data for the last two decades, the main issue to take into consideration is the progressive improvement in donors' reporting. But in general data on a commitment basis is of a better quality than based on disbursement.

The completeness of CRS commitments for DAC members has improved from 70% in 1995 to over 90% in 2000 and reached nearly 100% starting from 2003 flows.

As to the analysis on CRS disbursements it is not recommended for flows before 2002, because the annual coverage is below 60%, while it is around and over 90% since 2002 and reached nearly 100% starting with 2007 flows.

Therefore data on commitments before 1995 and disbursements before 2002 are not available in the results table or in the micro data. However if you are still interested in this information it is possible to download it by clicking on the icon: Related Files, bearing in mind that these data may not be complete for some donors.

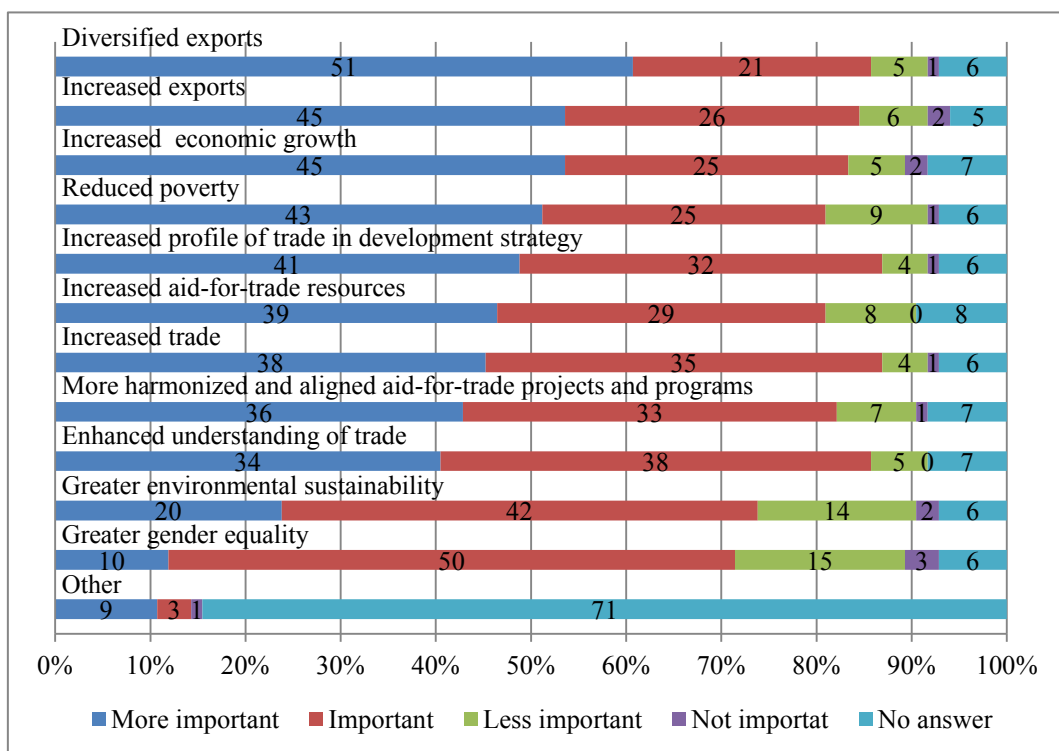
<http://www.oecd.org/dac/stats/crsguide.htm>

In the analysis, aid for trade is broken down into three sectors (economic infrastructure, building productive capacity, and trade policy and regulations) and two flow types (grant and loan). The results show that aid for trade in sum has not contributed to export diversification measured by Herfindahl–Hirschman Index and simple count of products, as well as export sophistication measured by share of manufactured goods and EXPY, i.e. income content of exports. When aid for trade is divided by sectors and flow types, some portion of aid for trade significantly affected the export structure of recipient countries although there was no constant pattern.

2. Why Diversification is Important

For better management of aid resources, the concept of aid effectiveness received much attention from the aid industry. Aid effectiveness measures the extent to which an aid activity attains its objectives and is included as one of the key criteria for evaluating development assistance by the Development Assistance Committee (DAC) of OECD in 2000.

Figure 1: Main Goals Recipients Want to Achieve through Aid for Trade

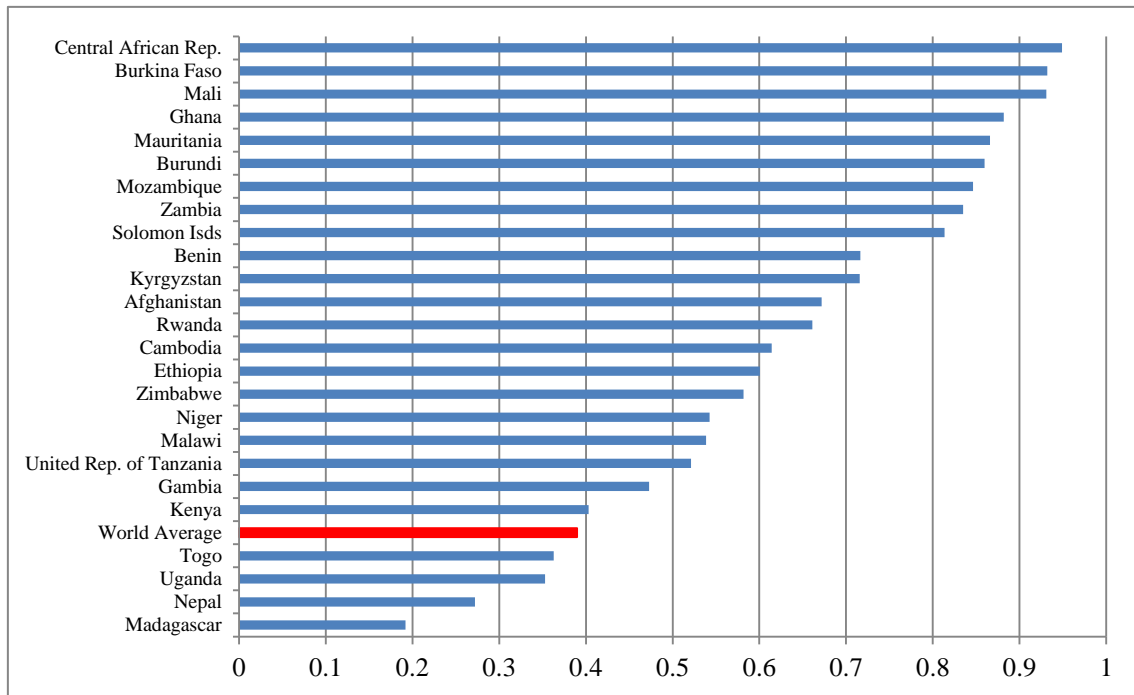


Note. From *Aid for Trade at a Glance 2011: Showing Results* by WTO/OECD, 2011, p. 94. Reproduced by author. The original question given to recipients was “How do you define the success of aid for trade in your country?”

In order to measure the aid for trade effectiveness, it is necessary to look at the original objectives set by donors and recipient countries. According to the self-assessment questionnaires collected by the OECD in 2011, the main goals of each stakeholder varied across the range. While all stakeholders agreed that the aid for trade must realize both trade and development objectives, what recipients especially hoped for

was export diversification. As shown in Figure 1, about 60% (51 out of 84 countries that responded) emphasized diversified exports as the main goal even more than increased exports and increased economic growth.

Figure 2: Low Income Countries' Sum of Share of Top Three Commodities (2010)



Note: Share is based on SITC revision 3, 5-digit. Income classification is based on World Bank Classification of July 2010. 25 countries out of 40 Low income countries which SITC data is available are presented. Calculated by author.

The reason that developing countries value export diversification is that many of them are faced with severe export concentration. As Figure 2 illustrates, top three commodities of low income countries take up a major portion of their total export. While the world average is little below 40%, some countries such as Central African Republic and Burkina Faso have highly concentrated export structure where top three commodities take up more than 90% of the total export. Despite the government's effort putting high priority on export diversification, many developing countries continue to rely on the few export commodities (WTO/OECD, 2011b, 22). In this respect, AfT projects can create a vanguard effect and lead the recipient government and private

sectors to invest in other various sectors. Given this relatively concentrated export structure, export diversification is one of the most crucial components in measuring the effectiveness of aid for trade from the viewpoint of recipient countries.

3. Estimation Model

3.1 What affects export diversification?

How does a nation diversify its export basket? According to Imbs and Wacziarg (2003), as a country's per capita income increases, production structure as well as export composition become more diversified. Cadot et al. (2007) discovered that production and employment concentration follow a U-shaped pattern and countries first diversify and specialize again at a certain point. Still, the turning point is very late in the development process and it is safe to assume that the development of both low and middle income countries is accompanied by a diversification of exported products. Parteka and Tamberi (2008) suggest that larger economies may have higher chance of export diversification. Hence *GDP* and population (*POP*) are used as control variables in the model.

On the top of size factor, natural endowment can affect the production diversification, and thus export diversification. If a nation is endowed with abundant natural resources, factors of production will be concentrated in natural resources sectors. There is less incentive to develop manufacturing sectors so that dependency on a handful of natural resources will deepen so that the country experiences highly concentrated export structure (Sachs and Warner, 1995). Varela (2013) and Gylfason (2004) showed the tendency for the resource-rich countries to have more concentrated export structures. To take account of natural resources dependency, the share of natural resources rents (*RENT*) that are the sum of oil rents, natural gas rents, coal rents, mineral rents, and forest rents out of the total GDP is included.

In addition to the size or characteristics of an economy, the quality of economy has a direct impact on diversification of exporting products. One crucial part that

determines the quality of nation's economy is the quality of human capital. Education level is more popular means to measure the level of human capital quality (Cabra and Veiga, 2010), but due to greater availability of data, morality rate (*MORT*) is used to represent the health condition of nation's human resources in this paper.

Another aspect that represents the quality of economy is country's institutional setting. Some countries may have higher openness than others. In general, more trade helps lower trading cost and time due to increasing economies of scale. Therefore, it makes easier for a country to export new products. Nevertheless, countries heavily relying on a few resources may have high export/GDP ratio. Thus import (*IMPORT*) and foreign direct investment (*FDI*) are used as proxy to measure the openness.

Finally, following the paper by Burnside and Dollar (2000) which found the interaction of aid and institutional quality has a robust positive relationship with the country's growth, the model includes an interaction term between Aft volume and the regulatory quality (*Regqual*) calibrated by the World Bank Good Governance. Regulatory quality is chosen as the proxy for institutional quality as the index measures the quality of regulations that influence private sector development in a country. The better the national administration, the lower the cost and time it takes for trading. Therefore, government quality would be positively linked to export diversification.

It is commonly accepted that relationship between aid and economic growth is difficult to detect as there are too many variables involved. Limited and inconsistent data and heterogeneity of aid motives and types further contribute to complexity of the causality. Therefore, the effectiveness of aid still remains as a controversy (Bourguignon and Sundbert, 2007; Rajan and Subramanian, 2008; and Hansen and Tarp, 2000). Therefore, in order to measure the effectiveness of aid despite such challenges, one

must narrow down the scope of aid and use more direct, less distant output as a dependent variable.

Although there are few in number, there are some previous attempts to study the effect of aid for trade on diversification. When aid is generally considered, it does not help diversify the export of recipient countries. Osakwe (2007) finds that aid has a negative impact on the real exchange rate so that it leads to further concentration among the sample of 31 African states. Nonetheless, when the scope is limited to aid for trade only, it seems that it is effective in diversifying exports. Cadot et al. (2007) find that infrastructure for which more than 40% of aid for trade is allocated notably contributes to export diversification. Likewise, Munemo (2011) analyzes the effect of foreign aid on export diversification and finds an interesting correlation. As Osakwe notes, there is a danger of anti-export bias also known as the Dutch disease associated with aid so that countries heavily depending on aid (more than 20% of GDP) experience negative relation between aid and diversification while countries with aid not exceeding 20% of GDP enjoy positive relation. Based on the findings of previous literatures, the next chapter establishes the regression model.

3.2 How to measure diversification

The next question is how to define the export diversification. There are four diversification measures used in this paper to capture different types of diversification. The first diversification index is simple count of export commodities (*CountP*) and export destinations (*CountM*) at the Harmonized System 1998 six-digit level. Yet, the simple count does not tell how the total export is divided among different products. One country may have more export products than another but can heavily rely on a few commodities so that its export structure is highly concentrated. Therefore, Herfindahl–

Hirschman Index, the second type of index is adopted. This shows how much the export is concentrated using the sum of squared share of each commodity, commodity i . Having only one export product will result in HHI of 1 and having equally divided export value among its export commodities will result in low number close to 0 (1/number of product). Then HHI is normalized so that all HHI ranges from 0 to 1 regardless of each country's number of export products. HHI of country j is calculated using the following formula:

$$(1) \quad HHI_j = \sum_i \left(\frac{X_{ij}}{X_j} \right)^2$$

HHI is then normalized:

$$(2) \quad NHHI_j = \frac{HHI_j - 1/\text{count}P}{1 - 1/\text{count}P}$$

The problem of HHI is that it treats all commodities, for example coffee and cars, the same. It is important to increase the variety of products to lower the risk of depending on a small number of products and markets. Yet, many developing countries are more concerned with exporting a higher value added products and that is more helpful for achieving the development and goals of aid for trade. In order to incorporate income level associated with export commodities, the third index $EXPY$ is used. Hausmann, Hwang & Rodrik (2007) constructed this measure by a weighted average of the $PRODY$ for country j , where the weights are the value shares of the product i in the country's total exports. The formular is:

$$(3) \quad EXPY_j = \sum_i \frac{X_{ij}}{X_j} \times PRODY_i$$

where $PRODY_i$ is:

$$(4) \quad PRODY_i = \sum_j \left(\frac{X_{ij}/X_j}{(\sum_j X_{ij})/X} \times GDP \text{ per capita}_j \right)$$

$PRODY$ is a weighted average of the GDP per capita of the countries exporting a product i , where the weights are the revealed comparative advantage of each country in that product. Using revealed comparative advantage as a weight controls for the size of country. Rich countries export products that tend to be exported by other rich countries and those products are likely to yield more income than those exported by poor countries. Increased $EXPY$ means country exports more goods that are exported by higher income countries therefore achieving more sophisticated export basket. The last measure is the share of manufactured goods out of total exports (MVA) since many developing countries are depending largely on primary commodities which are vulnerable to price shock and therefore decreasing terms of trade. Having higher MVA may signify the country's export diversifying from agricultural based or resource based exports to manufacturing goods.

3.3 The model and data

Using these three diversification indices and control variables, the following equation is used to estimate the effect of aid for trade on export diversification:

$$\begin{aligned}
(5) \quad \ln DIVERSIFICATION_{jt} & \\
& = p \ln DIVERSIFICATION_{jt-1} + \beta_1 \ln GDP_{jt-1} \\
& + \beta_2 \ln POP_{jt-1} + \beta_3 \ln IMPORT_{jt-1} + \beta_4 \ln MORT_{jt-1} \\
& + \beta_5 \ln FDI_{jt-1} + \beta_6 \ln AFT_{jt-1} + \alpha_j + \alpha_t + \varepsilon_{jt}
\end{aligned}$$

where *DIVERSIFICATION* would be substituted with four indices explained above and α_j and α_t denote country and time fixed effect respectively.

For *HHI* and *EXPY*, trade data is from UN COMTRDE database using SITC revision 3 and HS92 classifications. The reason for using two nomenclatures is that there are more countries reporting their trade data using SITC but HS system has more detailed categorization so that it is more sensitive in capturing changes in diversification. Both export data reported by exporters and mirror data reported by importers are used for cross-checks. Imports are considered to have higher accuracy than exports because imports generate tariff revenues, and many of developing countries do not submit their trade data to the UN database. Simple count is from World Bank's World Integrated Trade Solution and also from mirror data for the same reasons above. Also, only products with value greater than 100,000 USD are counted.

Table 1. Comparison between HS and SITC nomenclature

	HS92		SITC3	
Agricultural products:				
All food items and Agricultural raw materials	855	17%	585	19%
Manufacturing Products	3845	77%	2324	74%
Natural resources:				
Ores and metals and Fuels	319	6%	212	7%
Total	5019		3121	

AFT represents aid for trade value. To define the scope of aid for trade in this paper, it may be useful to use the purpose coding system of the Creditor Reporting System (CRS) which was jointly produced by Organisation for Economic Co-operation

and Development (OECD) and the World Bank in 1967. Under this CRS purpose coding, aid for trade can be largely divided into three sectors: economic infrastructure, building productive capacity, and trade policy and regulations. Economic infrastructure includes aid for communications, energy, transport and storage while building productive capacity covers aid for sectoral developments in the field of banking and financial services, business and other services, agriculture, forestry, fishing, industry, mineral resources and mining, construction, and tourism. Trade policy and regulations refer to aid used for trade policy and administrative management, regional trade agreements (RTAs) and multilateral negotiations, and trade education/training. Strictly speaking, aid given for economic infrastructure and production sectors do not necessarily affect the trade all the time and can be mostly for domestic uses. Yet, due to the fact that trade is greatly affected by nation's infrastructure and production capacity of each industry, the broad definition of aid for trade including these two sectors is generally accepted and widely used by WTO and OECD. Thus, this paper will also take account of the three sectors as aid for trade. About more than 90% of aid for trade is directed to economic infrastructure and building productive capacity building. Only less than 5% is used for trade policy and regulations. This can be attributed to the nature of infrastructure and capacity building projects which require a larger sum of financial resources. Aid for Trade can be classified not only by its purpose but also by type of flow. In order to be considered as official development assistance (ODA), the financial flow from one country to another must be either in form of grant or loan. If ODA does not have any pay-back duty and does not incur any debt, it is qualified as grant. To be classified as ODA loan, it must have a grant element above 25 per cent. In addition, an ODA loan has to have interest rate below the prevailing market rate. Since aid for trade

varies by its sector and type, its effect may also vary by its nature and hence *AFT* would be substituted with overall aid for trade, aid for trade by sector (economic infrastructure, production capacity building, and trade policies and regulations), aid for trade by type (grant and loan) and interaction term of aid for trade and regulatory quality. In addition, non-aid-for-trade aid (*NONAFT*) is also used for comparison between aid that is specifically designed for trade and that are not. All *AFT* data is actual disbursement data in USD current value and 1 is added to avoid losing observation due to missing data.

Table 2. Summary statistics

Variable	Description	Obs	Mean	Std. Dev.	Min	Max
lnaftoda	Log of sum of all official development aid disbursed for 200.Economic Infrastructure and Services and 300.Production Sectors	2125	3.043	1.759	-0.017	7.929
lnnonaft	Log of sum of all official development aid disbursed for sectors other than 200.Economic Infrastructure and Services and 300.Production Sectors	2126	7.387	2.373	-0.854	13.292
lnecooda	Log of sum of all official development aid disbursed for 210.Transport and Storage, 220.Communications and 230.Energy Generation and Supply	2124	2.3	1.799	-1.207	7.548
lnprooda	Log of sum of all official development aid disbursed for 240.Banking and Financial Services, 250.Business and Other Services, 310.Agriculture, Forestry, Fishing, 320. Industry, Mining, Construction, and 332.Tourism	2125	2.362	1.57	-0.007	6.819
lntraoda	Log of sum of all official development aid disbursed for 331. Trade Policy and Regulation	2126	0.324	0.639	-0.062	5.797
lngrant	Log of sum of grants disbursed for 200.Economic Infrastructure and Services and 300.Production Sectors	2126	2.477	1.495	-0.017	7.929
lnloan	Log of sum of loans disbursed for 200.Economic Infrastructure and Services and 300.Production Sectors	2124	1.894	1.956	-0.301	7.594
lnaftregqual	log of aftoda * log of regulatory quality. Regulatory quality is perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. It is based on survey respondents and experts in the public and private sectors, as well as various NGOs. With zero mean, unit standard deviation, it ranges approximately from - 2.5 to 2.5	2069	2.302	1.951	-29.188	7.683
lngdp	Log of gross domestic products in current U.S. dollars	2051	22.69	2.127	16.328	29.411
lnpop	Log of total population	2126	15.426	2.157	9.134	21.014
lnimport	Log of imports of goods and services including the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services divided by GDP	2005	3.701	0.566	-2.08	5.31
lnmort	Log of under-five mortality rate (the probability per 1,000 that a newborn baby will die before reaching age five, if subject to current age-specific mortality rates)	2114	3.539	0.79	1.411	4.997
lnfdi	Log of net inflows of foreign direct investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor divided by GDP. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments	1891	0.905	1.521	-13.553	5.904
lnrent	Log of total natural resources rents that are the sum of oil	1861	1.263	1.822	-5.934	5.389

	rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents divided by GDP					
lnhsnhhi	Log of normalized HHI in HS	1539	-2.315	1.223	-6.553	-0.013
lnhsnmrhi	Log of normalized HHI from mirror data in HS	2091	-2.207	1.223	-5.523	-0.015
lnsitenhhi	Log of normalized HHI in SITC	1573	-2.437	1.111	-5.578	-0.009
lnsitenmrhi	Log of normalized HHI from mirror data in SITC	2023	-2.34	1.124	-5.118	-0.053
lnhsexpy	Log of EXPY in HS	1526	8.739	0.649	6.23	10.016
lnhsmrepy	Log of EXPY from mirror data in HS	2022	8.72	0.576	6.586	10.365
lnsitcexpy	Log of EXPY in SITC	1574	8.751	0.599	6.155	10.177
lnsitcmrepy	Log of EXPY from mirror data in SITC	2024	8.716	0.571	6.55	10.368
lnhsmva	Log of share of manufactured goods in HS	1534	-1.546	1.371	-12.147	-0.036
lnhsmrmva	Log of share of manufactured goods from mirror data in HS	2091	-1.53	1.309	-7.09	-0.002
lncountp	Log of count of export products	2087	5.261	1.536	0	8.461
lncountm	Log of count of export markets	2087	3.859	0.771	0	5.136

Note: Regulatory Quality from the Worldwide Governance Indicators were updated every two years between 1996 and 2002 and annually from 2002. To increase the sample size, missing years (1997, 1999, 2001) were replaced with average estimate of one year before and one year after.

There are several problems that must be addressed before the regression. First, there is a possibility of reverse causality. As is widely recognized by several authors (Lloyd *et al.*, 2001), the causality between aid flows and trade flows can obviously also go both way. While this paper is concerned with the causal link from aid for trade to export, trade can affect aid allocation in different ways. One possible way to check for reverse causality is to conduct the Granger test. In this paper, we implicitly incorporate this idea of causality by using 1 year lag of independent variables. Endogeneity problem is further corrected by using generalized method of moment (GMM) estimation developed by Blundell and Bond (1998). Between the difference GMM and system GMM, system GMM used in which the second lagged regressors are used as instruments for the first difference equations. Instead of one-step GMM, two-step GMM is used. To check for the autocorrelation, instruments proliferation and weak instruments, the Arellano-Bond statistics and Hansen J statistics are presented respectively.

4. Results

Starting with the simple count of products, aid for trade in column 1 of Table B1 has affected the number of products in a negative way. This is partially due to the negative impact of aid for economic infrastructure shown in column 3. More infrastructure may lead to higher dependency on fewer products as infrastructure projects seek for profit and may have been invested among few leading sectors. However, this regression result is weak due to highly autocorrelated nature of index shown by high AR statistics. The result shown in Table 4 show that none of aid has significant effect in diversifying the export destination of recipient countries. Low Hansen statistics suggest that instruments are weakly correlated so that the GMM estimation is not robust.

Impact of aid for trade on export diversification measured by HHI is presented in Table B3 to Table B6. Throughout all estimations, aid for trade had no substantial impact on export diversification measured by HHI.

On the other hand, aid for trade has positive and significant effect on export sophistication measured by EXPY both in HS or SITC as shown in Table B7 and Table B9. 1% increase in the amount of aid for trade resulted in 2 to 3% of increase in EXPY value. This positive impact of aid for trade is attributed to the aid projects to building capacity production sector. Aid given to specific sectors helped countries to export products that are associated with higher income components. Nevertheless, this result may have derived from selection bias due to data availability. Table B8 and Table B10 show that EXPY obtained from mirror import data has no significant relationship with aid for trade, suggesting that aid for trade only worked among those countries which reported data to the UN Comtrade. The fact that governments collected and submitted

the data to the international organization may be evidence that those governments have relatively more capable of doing trade and more caring for trade. This is also supported by the result of column 8 of Table B10. Although this was mirror data including both reporting and non-reporting countries, aid for trade when combined by good regulatory quality, EXPY increased by 3%.

Finally, the effect of the total aid for trade as well as sectoral aid for trade on the share of manufactured products out of total export is insignificant as shown in all estimations of Table B11 and B12.

5. Conclusion

This paper attempts to investigate whether aid for trade facilitates export diversification using GMM specification to avoid endogeneity problem persistent in aid literature. In sum, although some significant effect of aid for trade on export sophistication measured by EXPY was spotted, the general trend was that aid for trade has no influence on the export structure of aid receiving countries.

Obviously, there are some limitations so that this result should not be taken as granted. The biggest problem is that only one-year and two-year lags were used for independent variables and instruments respectively. Productive capacity is a sine qua non for the trade enhancement of developing countries in the medium to long-run, and must be a central feature of aid for trade when the goal is diversification of exports. As the model only measured the impact after a year, its significance would be rigorously underestimated. Having longer timespan would have helped to measure more accurate long-term impact of aid for trade but OECD's aid data coverage before the 90s are limited. According to the *CRS User's Guide*, coverage ratios vary over time and it is not recommended to use disbursement flows before 2002, because the annual coverage is below 60%. Later, it has improved to around and over 90% since 2002 and reached nearly 100% starting from 2007 flows.

For the policy implication, it is important to clarify the role of export diversification on growth and development for policies and aid-for-trade projects. If policies and projects aiming at diversifying exports result in shifting resources into substantially less productive uses, the cost will be large and may dampen the benefits of diversification. Therefore, aid-for-trade projects and policies aiming at diversifying exports should not seek export diversification for its own sake ignoring "fundamentals"

but rather aim at tackling the constraints that prevent a diversification consistent with evolving comparative advantages. Also, over-exaggeration of the effect of aid for trade may divert non-aid for trade ODA flows into aid for trade sectors. Thus, AfT volumes should increase together with overall official development assistance to avoid competition between different development cooperation areas. The positive impact of non-trade related aid in diversifying exports shown in column 2 of Table B3, Table B5 and Table 9 signifies the importance of other aid such as social infrastructure aid can also relieve concentrated export situation of developing countries.

Further research topic related to the impact of aid for trade may include diversification in terms of technology intensity, adding complementary case studies and qualitative analysis, impacts of aid for trade on poverty alleviation based on diversification, diversification not only on merchandise exports but also service industries, the impact of donor coordination in yielding the optimal level of aid for trade and geographical diversification.

Aid for trade may create various positive social and economic externalities that go beyond the specific areas of intervention such as technology transfers, networks among key trade-related institutions, and disseminate best practices. Therefore, there must be continuous efforts to evaluate and monitor AfT activities to improve its effectiveness and to produce the best possible development path for the international community.

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Appendix

A. Data Availability (15 years between 1996-2010)

Stat type	SITC		HS		
	Original Stat	Mirror Stat	Original Stat	Mirror Stat	
Indices	HHI & EXPY	HHI & EXPY	HHI & EXPY & MVA	HHI & EXPY & MVA	Count
Afghanistan	3	10	3	10	15
Albania	15	15	15	15	15
Algeria	15	15	15	15	15
Angola	0	15	0	15	15
Antigua and Barbuda	6	15	6	15	15
Argentina	15	15	15	15	15
Armenia	13	15	13	15	15
Aruba	0	4	0	4	4
Azerbaijan	15	15	15	15	15
Bahrain	6	9	5	9	9
Bangladesh	10	15	11	15	15
Barbados	15	15	14	15	15
Belarus	6	6	6	6	6
Belize	15	15	15	15	15
Benin	13	15	13	15	15
Bhutan	8	15	8	15	15
Bolivia	15	15	15	15	15
Bosnia and Herzegovina	8	15	8	15	15
Botswana	11	11	11	11	11
Brazil	15	15	15	15	15
Burkina Faso	14	15	14	15	15
Burundi	15	15	15	15	15
Cabo Verde	13	15	13	15	15
Cambodia	11	15	11	15	15
Cameroon	13	15	13	15	15
Central African Republic	14	15	15	15	15
Chad	0	15	0	15	15
Chile	15	15	15	15	15
China	15	15	15	15	15
Colombia	15	15	15	15	15
Comoros	12	15	14	15	15
Congo, Dem. Rep.	0	15	0	15	15
Congo, Rep.	4	15	4	15	15
Costa Rica	15	15	15	15	15
Cote d'Ivoire	15	15	15	15	15
Croatia	15	15	15	15	15
Cuba	8	15	8	15	15
Cyprus	1	1	1	1	1
Djibouti	0	12	0	12	14
Dominica	14	15	14	15	15
Dominican Republic	12	15	12	15	15
Ecuador	15	15	15	15	15
Egypt, Arab Rep.	15	15	15	15	15
El Salvador	15	15	15	15	15
Eritrea	1	15	1	15	15

Ethiopia	14	15	14	15	15
Fiji	11	15	10	15	15
Gabon	14	15	14	15	15
Gambia, The	15	15	15	15	15
Georgia	15	15	15	15	15
Ghana	13	14	13	14	14
Grenada	13	15	13	15	15
Guatemala	15	15	15	15	15
Guinea	12	15	12	15	15
Guinea-Bissau	3	15	3	15	15
Guyana	14	15	14	15	15
Haiti	2	15	2	15	15
Honduras	13	15	14	15	15
India	15	15	15	15	15
Indonesia	15	15	15	15	15
Iran, Islamic Rep.	10	15	11	15	15
Iraq	6	7	0	7	15
Israel	1	1	1	1	1
Jamaica	15	15	15	15	15
Jordan	14	15	14	15	15
Kazakhstan	15	15	11	15	15
Kenya	15	15	14	15	15
Kiribati	5	15	9	15	15
Korea, Dem. Rep.	0	0	0	0	15
Korea, Rep.	4	4	4	4	4
Kyrgyz Republic	14	15	12	15	15
Lao PDR	0	15	0	15	15
Lebanon	14	15	14	15	15
Lesotho	6	11	7	11	11
Liberia	0	15	0	15	15
Libya	0	9	3	9	9
Macedonia, FYR	13	15	14	15	15
Madagascar	15	15	15	15	15
Malawi	15	15	15	15	15
Malaysia	15	15	15	15	15
Maldives	15	15	15	15	15
Mali	14	15	14	15	15
Malta	7	7	7	7	7
Marshall Islands	0	15	0	15	15
Mauritania	10	15	10	15	15
Mauritius	15	15	15	15	15
Mexico	15	15	15	15	15
Moldova	14	14	13	14	14
Mongolia	12	15	12	15	15
Montenegro	10	9	8	10	5
Morocco	15	15	15	15	15
Mozambique	14	15	11	15	15
Myanmar	0	0	0	0	14
Namibia	8	11	11	11	11
Nepal	6	15	6	15	15
New Caledonia	1	4	1	4	4
Nicaragua	15	15	15	15	15
Niger	15	15	15	15	15
Nigeria	13	15	13	15	15

Oman	14	15	15	15	15
Pakistan	15	15	8	15	15
Palau	0	15	0	15	15
Panama	15	15	15	15	15
Papua New Guinea	6	15	6	15	15
Paraguay	15	15	15	15	15
Peru	15	15	15	15	15
Philippines	15	15	15	15	15
Rwanda	14	15	14	15	15
Samoa	10	15	10	15	15
Sao Tome and Principe	10	11	11	11	14
Saudi Arabia	11	12	11	12	12
Senegal	15	15	15	15	15
Serbia	12	6	10	10	15
Seychelles	13	15	13	15	15
Sierra Leone	2	15	2	15	15
Slovenia	7	7	7	7	7
Solomon Islands	0	9	3	9	9
Somalia	0	0	0	0	15
South Africa	11	11	11	11	15
Sri Lanka	11	15	12	15	15
St. Kitts and Nevis	12	15	14	15	15
St. Lucia	13	15	13	15	15
St. Vincent and the Grenadines	15	15	15	15	15
Sudan	13	14	13	14	15
Suriname	14	15	13	15	15
Swaziland	8	11	8	11	11
Syrian Arab Republic	8	12	7	12	12
Tajikistan	1	15	0	15	15
Tanzania	14	15	14	15	15
Thailand	15	15	15	15	15
Timor-Leste	2	11	2	11	14
Togo	14	15	14	15	15
Tonga	11	15	11	15	15
Trinidad and Tobago	15	15	15	15	15
Tunisia	15	15	15	15	15
Turkey	15	15	15	15	15
Turkmenistan	4	15	2	15	15
Tuvalu	4	15	4	15	15
Uganda	15	15	15	15	15
Ukraine	6	6	6	6	6
Uruguay	14	15	15	15	15
Uzbekistan	0	15	0	15	15
Vanuatu	3	15	4	15	15
Venezuela, RB	14	15	14	15	15
Vietnam	10	15	11	15	15
Yemen, Rep.	9	15	7	15	15
Zambia	15	15	15	15	15
Zimbabwe	13	15	10	15	15
Grand Total	1534	1994	1522	1999	2069

B. Regression Results

Table B1. Impact of Aid for Trade. Dependent Variable: Count of Products

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	0.019 [0.093]	0.031 [0.085]	0.035 [0.086]	0.039 [0.093]	0.053 [0.094]	0.024 [0.091]	0.037 [0.089]	0.037 [0.092]
L.lnpop	0.202** [0.085]	0.194** [0.077]	0.177** [0.081]	0.195** [0.087]	0.180** [0.088]	0.196** [0.085]	0.181** [0.083]	0.166* [0.090]
L.lnimport	0.089 [0.101]	0.086 [0.094]	0.078 [0.093]	0.103 [0.102]	0.08 [0.103]	0.091 [0.098]	0.114 [0.093]	0.081 [0.098]
L.lnrent	-0.004 [0.039]	-0.002 [0.038]	0 [0.038]	-0.017 [0.038]	-0.021 [0.042]	-0.004 [0.040]	-0.001 [0.039]	-0.008 [0.038]
L.lnmort	-0.436*** [0.165]	-0.427*** [0.155]	-0.405** [0.163]	-0.398** [0.163]	-0.357** [0.172]	-0.445*** [0.163]	-0.396** [0.178]	-0.380** [0.189]
L.lnfdi	-0.011 [0.011]	-0.009 [0.011]	-0.009 [0.010]	-0.011 [0.011]	-0.009 [0.012]	-0.01 [0.011]	-0.007 [0.011]	-0.01 [0.011]
L.lnaftoda	-0.029* [0.014]							
L.lnnonaft		-0.015* [0.009]						
L.lnecooda			-0.022** [0.011]					
L.lnprooda				-0.022 [0.017]				
L.lntraoda					-0.023 [0.020]			
L.lngrant						-0.018 [0.017]		
L.lnloan							-0.015 [0.010]	
L.lnaftregqual								-0.001 [0.018]
L.lncountp	0.657*** [0.075]	0.647*** [0.075]	0.665*** [0.072]	0.661*** [0.074]	0.681*** [0.073]	0.645*** [0.072]	0.677*** [0.079]	0.674*** [0.085]
_cons	-0.419 [1.894]	-0.548 [1.800]	-0.568 [1.772]	-1.016 [1.870]	-1.313 [1.944]	-0.422 [1.885]	-0.945 [1.851]	-0.64 [1.833]
N	1436	1439	1434	1436	1439	1439	1436	1431
Individuals	128	128	128	128	128	128	128	128
AvgObs/Indv	11.219	11.242	11.203	11.219	11.242	11.242	11.219	11.18
Instruments	29	29	29	29	29	29	29	29
Hansen	0.222	0.198	0.187	0.165	0.114	0.271	0.196	0.08
AR2	0.888	0.944	0.911	0.902	0.908	0.944	0.859	0.928

Table B2. Impact of Aid for Trade. Dependent Variable: Count of Markets

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	0.008 [0.065]	0.02 [0.071]	0.036 [0.060]	0.011 [0.070]	0.011 [0.069]	0.016 [0.069]	0.008 [0.061]	0.027 [0.076]
L.lnpop	0.097 [0.064]	0.093 [0.063]	0.079 [0.063]	0.099 [0.065]	0.093 [0.064]	0.084 [0.064]	0.101 [0.061]	0.092 [0.067]
L.lnimport	-0.093 [0.073]	-0.08 [0.072]	-0.074 [0.065]	-0.087 [0.075]	-0.092 [0.072]	-0.088 [0.071]	-0.075 [0.069]	-0.063 [0.071]
L.lnrent	0.018 [0.034]	0.018 [0.034]	0.015 [0.033]	0.013 [0.030]	0.019 [0.032]	0.018 [0.032]	0.02 [0.033]	0.005 [0.034]
L.lnmort	-0.155* [0.091]	-0.149 [0.096]	-0.125 [0.083]	-0.147* [0.088]	-0.154* [0.089]	-0.151* [0.090]	-0.156* [0.092]	-0.121 [0.107]
L.lnfdi	-0.007 [0.008]	-0.007 [0.008]	-0.005 [0.008]	-0.008 [0.008]	-0.006 [0.008]	-0.006 [0.008]	-0.007 [0.008]	-0.01 [0.008]
L.lnaftoda	0.002 [0.009]							
L.lnnonaft		-0.008 [0.006]						
L.lnecooda			-0.006 [0.008]					
L.lnprooda				0.002 [0.010]				
L.lntraoda					-0.004 [0.009]			
L.lngrant						0.011 [0.012]		
L.lnloan							-0.009 [0.006]	
L.lnaftregqual								-0.001 [0.009]
L.lncountm	0.510*** [0.106]	0.499*** [0.102]	0.505*** [0.106]	0.510*** [0.108]	0.516*** [0.102]	0.505*** [0.105]	0.525*** [0.101]	0.526*** [0.104]
_cons	1.171 [1.407]	0.99 [1.497]	0.689 [1.206]	1.03 [1.422]	1.144 [1.388]	1.154 [1.459]	1.011 [1.363]	0.558 [1.612]
N	1436	1439	1434	1436	1439	1439	1436	1431
Individuals	128	128	128	128	128	128	128	128
AvgObs/Indv	11.219	11.242	11.203	11.219	11.242	11.242	11.219	11.18
Instruments	29	29	29	29	29	29	29	29
Hansen	0.072	0.067	0.051	0.06	0.076	0.054	0.054	0.028
AR2	0.061	0.061	0.069	0.06	0.06	0.054	0.053	0.079

Table B3. Impact of Aid for Trade. Dependent Variable: Normalized HHI in HS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	0.102 [0.199]	0.134 [0.185]	0.099 [0.209]	0.125 [0.200]	0.098 [0.235]	0.011 [0.198]	0.126 [0.231]	0.095 [0.227]
L.lnpop	-0.309 [0.211]	-0.266 [0.226]	-0.301 [0.211]	-0.327 [0.212]	-0.274 [0.222]	-0.213 [0.207]	-0.303 [0.221]	-0.308 [0.226]
L.lnimport	-0.265 [0.244]	-0.181 [0.246]	-0.247 [0.244]	-0.24 [0.247]	-0.228 [0.233]	-0.304 [0.242]	-0.236 [0.243]	-0.274 [0.244]
L.lnrent	0.134 [0.111]	0.092 [0.118]	0.115 [0.124]	0.138 [0.110]	0.103 [0.118]	0.121 [0.130]	0.128 [0.123]	0.127 [0.112]
L.lnmort	0.654 [0.396]	0.721* [0.390]	0.647 [0.412]	0.687* [0.392]	0.649 [0.421]	0.488 [0.402]	0.655 [0.446]	0.654 [0.418]
L.lnfdi	-0.004 [0.027]	-0.004 [0.026]	-0.004 [0.026]	-0.003 [0.027]	-0.004 [0.027]	-0.008 [0.027]	-0.004 [0.026]	-0.004 [0.027]
L.lnaftoda	-0.002 [0.040]							
L.lnnonaft		-0.032* [0.019]						
L.lnecooda			0.009 [0.029]					
L.lnprooda				-0.006 [0.034]				
L.lntraoda					0.025 [0.041]			
L.lngrant						0.007 [0.048]		
L.lnloan							-0.01 [0.024]	
L.lnaftregqual								0.012 [0.035]
L.lnhsnhhi	0.505*** [0.172]	0.515*** [0.177]	0.524*** [0.176]	0.497*** [0.172]	0.512*** [0.172]	0.547*** [0.195]	0.521*** [0.184]	0.509*** [0.177]
_cons	0.076 [3.987]	-1.586 [3.350]	-0.002 [4.138]	-0.394 [4.034]	-0.486 [4.404]	1.467 [4.026]	-0.655 [4.729]	0.223 [4.281]
N	1047	1050	1048	1047	1050	1050	1049	1047
Individuals	113	113	113	113	113	113	112	113
AvgObs/Indv	9.265	9.292	9.274	9.265	9.292	9.292	9.366	9.265
Instruments	29	29	29	29	29	29	29	29
Hansen	0.267	0.208	0.223	0.252	0.204	0.159	0.184	0.27
AR2	0.985	0.91	0.946	0.986	0.937	0.942	0.961	0.965

Table B4. Impact of Aid for Trade. Dependent Variable: Normalized HHI in HS

from Mirror Data

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	-0.026 [0.142]	0.04 [0.139]	-0.011 [0.142]	0.024 [0.149]	0.05 [0.153]	0.028 [0.152]	-0.009 [0.141]	-0.081 [0.104]
L.lnpop	-0.127 [0.112]	-0.180* [0.108]	-0.14 [0.111]	-0.162 [0.111]	-0.17 [0.105]	-0.148 [0.112]	-0.148 [0.107]	-0.12 [0.109]
L.lnimport	-0.248 [0.163]	-0.22 [0.137]	-0.254 [0.157]	-0.238 [0.159]	-0.221 [0.151]	-0.244 [0.162]	-0.269* [0.143]	-0.280** [0.137]
L.lnrent	0.156* [0.081]	0.165** [0.082]	0.160** [0.077]	0.155* [0.082]	0.154* [0.085]	0.140* [0.083]	0.173** [0.081]	0.204*** [0.069]
L.lnmort	0.185 [0.221]	0.244 [0.211]	0.195 [0.219]	0.246 [0.218]	0.271 [0.224]	0.236 [0.225]	0.19 [0.224]	0.069 [0.177]
L.lnfdi	-0.027 [0.023]	-0.023 [0.021]	-0.027 [0.022]	-0.023 [0.022]	-0.023 [0.021]	-0.025 [0.023]	-0.024 [0.022]	-0.022 [0.023]
L.lnaftoda	0.022 [0.027]							
L.lnnonaft		0.007 [0.015]						
L.lnecooda			0.015 [0.021]					
L.lnprooda				0.022 [0.024]				
L.lntraoda					0.014 [0.025]			
L.lngrant						0.022 [0.029]		
L.lnloan							0.012 [0.016]	
L.lnaftregqual								0.021 [0.038]
L.lnhsnmrghi	0.712*** [0.093]	0.696*** [0.086]	0.709*** [0.092]	0.698*** [0.087]	0.695*** [0.086]	0.717*** [0.085]	0.700*** [0.093]	0.732*** [0.096]
_cons	2.065 [3.102]	1.018 [2.861]	1.945 [2.993]	1.175 [3.141]	0.607 [3.244]	0.983 [3.297]	2.067 [2.971]	3.758* [1.932]
N	1445	1448	1443	1445	1448	1448	1445	1440
Individuals	129	129	129	129	129	129	129	129
AvgObs/Indv	11.202	11.225	11.186	11.202	11.225	11.225	11.202	11.163
Instruments	29	29	29	29	29	29	29	29
Hansen	0.203	0.46	0.206	0.38	0.433	0.26	0.353	0.228
AR2	0.36	0.364	0.352	0.368	0.357	0.36	0.371	0.386

Table B5. Impact of Aid for Trade. Dependent Variable: Normalized HHI in SITC

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	-0.103 [0.201]	0.014 [0.219]	-0.1 [0.205]	-0.094 [0.207]	-0.052 [0.231]	-0.107 [0.193]	-0.083 [0.212]	-0.183 [0.162]
L.lnpop	-0.154 [0.172]	-0.179 [0.183]	-0.167 [0.177]	-0.155 [0.167]	-0.166 [0.183]	-0.116 [0.158]	-0.176 [0.181]	-0.098 [0.169]
L.lnimport	-0.099 [0.266]	0.056 [0.292]	-0.103 [0.260]	-0.089 [0.277]	-0.023 [0.282]	-0.082 [0.255]	-0.075 [0.258]	-0.191 [0.214]
L.lnrent	0.084 [0.098]	0.049 [0.110]	0.08 [0.097]	0.08 [0.099]	0.058 [0.110]	0.074 [0.100]	0.084 [0.097]	0.126* [0.074]
L.lnmort	0.428 [0.320]	0.631* [0.333]	0.417 [0.329]	0.438 [0.334]	0.474 [0.391]	0.425 [0.305]	0.445 [0.349]	0.27 [0.208]
L.lnfdi	0.002 [0.032]	0.007 [0.032]	0.001 [0.032]	0.002 [0.032]	0.003 [0.035]	-0.001 [0.031]	0.001 [0.032]	0 [0.027]
L.lnaftoda	-0.003 [0.028]							
L.lnnonaft		-0.045** [0.019]						
L.lnecooda			0.015 [0.023]					
L.lnprooda				-0.007 [0.026]				
L.lntraoda					0.01 [0.034]			
L.lngrant						-0.036 [0.042]		
L.lnloan							0.007 [0.026]	
L.lnaftregqual								-0.033 [0.037]
L.lnsitenhhi	0.463*** [0.087]	0.462*** [0.080]	0.478*** [0.091]	0.469*** [0.087]	0.495*** [0.098]	0.474*** [0.089]	0.477*** [0.091]	0.465*** [0.090]
_cons	2.521 [4.166]	-0.713 [4.726]	2.667 [4.108]	2.268 [4.477]	1.134 [4.968]	2.12 [4.148]	2.248 [4.291]	4.433* [2.415]
N	1077	1080	1078	1077	1080	1080	1079	1077
Individuals	115	115	115	115	115	115	114	115
AvgObs/Indv	9.365	9.391	9.374	9.365	9.391	9.391	9.465	9.365
Instruments	29	29	29	29	29	29	29	29
Hansen	0.694	0.67	0.58	0.686	0.49	0.627	0.607	0.694
AR2	0.739	0.743	0.798	0.753	0.824	0.736	0.762	0.661

Table B6. Impact of Aid for Trade. Dependent Variable: Normalized HHI in SITC

from Mirror Data

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	0.099 [0.127]	0.138 [0.126]	0.113 [0.133]	0.105 [0.139]	0.117 [0.146]	0.099 [0.147]	0.091 [0.125]	0.066 [0.164]
L.lnpop	-0.192* [0.113]	-0.192* [0.112]	-0.193 [0.117]	-0.197* [0.115]	-0.187 [0.123]	-0.169 [0.118]	-0.190* [0.113]	-0.189 [0.135]
L.lnimport	-0.134 [0.163]	-0.105 [0.164]	-0.114 [0.165]	-0.144 [0.166]	-0.131 [0.165]	-0.124 [0.164]	-0.157 [0.156]	-0.203 [0.182]
L.lnrent	-0.03 [0.048]	-0.043 [0.050]	-0.037 [0.051]	-0.029 [0.048]	-0.037 [0.052]	-0.036 [0.051]	-0.034 [0.050]	-0.013 [0.059]
L.lnmort	0.481*** [0.176]	0.547*** [0.176]	0.498*** [0.179]	0.490** [0.188]	0.503** [0.200]	0.470** [0.184]	0.481*** [0.182]	0.427* [0.231]
L.lnfdi	0.008 [0.034]	0.009 [0.032]	0.009 [0.034]	0.009 [0.033]	0.008 [0.033]	0.007 [0.034]	0.005 [0.032]	0.013 [0.036]
L.lnaftoda	0.014 [0.032]							
L.lnnonaft		-0.018 [0.017]						
L.lnecooda			0.006 [0.024]					
L.lnprooda				0.006 [0.029]				
L.lntraoda					-0.004 [0.034]			
L.lngrant						0.001 [0.037]		
L.lnloan							0.013 [0.016]	
L.lnaftregqual								0.026 [0.032]
L.lnsitenmrhhi	0.703*** [0.073]	0.707*** [0.074]	0.710*** [0.074]	0.702*** [0.073]	0.706*** [0.073]	0.713*** [0.073]	0.700*** [0.072]	0.707*** [0.074]
_cons	-1.087 [2.358]	-2.096 [2.380]	-1.477 [2.392]	-1.127 [2.608]	-1.618 [2.644]	-1.358 [2.688]	-0.817 [2.316]	0.026 [3.115]
N	1433	1436	1431	1433	1436	1436	1433	1428
Individuals	129	129	129	129	129	129	129	129
AvgObs/Indv	11.109	11.132	11.093	11.109	11.132	11.132	11.109	11.07
Instruments	29	29	29	29	29	29	29	29
Hansen	0.594	0.672	0.606	0.611	0.652	0.619	0.649	0.255
AR2	0.338	0.342	0.332	0.345	0.34	0.338	0.376	0.351

Table B7. Impact of Aid for Trade. Dependent Variable: EXPY in HS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	0.218*** [0.082]	0.181** [0.082]	0.185** [0.080]	0.222*** [0.084]	0.194** [0.089]	0.190** [0.084]	0.162** [0.077]	0.208** [0.087]
L.lnpop	-0.143** [0.067]	-0.107 [0.072]	-0.104 [0.069]	-0.141** [0.068]	-0.104 [0.071]	-0.109 [0.070]	-0.092 [0.069]	-0.129* [0.070]
L.lnimport	0.232** [0.094]	0.229** [0.094]	0.251*** [0.095]	0.240** [0.095]	0.260** [0.103]	0.246*** [0.088]	0.214** [0.105]	0.252*** [0.094]
L.lnrent	0.023 [0.047]	0.042 [0.048]	0.034 [0.054]	0.03 [0.046]	0.038 [0.057]	0.024 [0.055]	0.043 [0.048]	0.025 [0.046]
L.lnmort	0 [0.104]	-0.054 [0.101]	-0.026 [0.105]	0.008 [0.112]	-0.014 [0.126]	-0.018 [0.109]	-0.054 [0.108]	0.012 [0.109]
L.lnfdi	0.009 [0.009]	0.011 [0.009]	0.011 [0.009]	0.011 [0.009]	0.012 [0.009]	0.012 [0.010]	0.012 [0.009]	0.009 [0.009]
L.lnaftoda	0.029* [0.015]							
L.lnnonaft		0.008 [0.007]						
L.lnecooda			0.011 [0.010]					
L.lnprooda				0.024* [0.014]				
L.lntraoda					-0.013 [0.014]			
L.lngrant						0.024 [0.019]		
L.lnloan							0.006 [0.009]	
L.lnaftregqual								0.030** [0.015]
L.lnhsexpy	0.529*** [0.115]	0.534*** [0.116]	0.550*** [0.115]	0.539*** [0.116]	0.551*** [0.118]	0.555*** [0.122]	0.552*** [0.119]	0.540*** [0.120]
_cons	0.434 [1.385]	0.919 [1.245]	0.497 [1.339]	0.195 [1.555]	0.243 [1.747]	0.367 [1.524]	1.072 [1.507]	0.248 [1.466]
N	1041	1044	1042	1041	1044	1044	1043	1041
Individuals	113	113	113	113	113	113	112	113
AvgObs/Indv	9.212	9.239	9.221	9.212	9.239	9.239	9.313	9.212
Instruments	29	29	29	29	29	29	29	29
Hansen	0.651	0.498	0.467	0.598	0.442	0.354	0.391	0.581
AR2	0.33	0.384	0.402	0.418	0.471	0.444	0.442	0.262

Table B8. Impact of Aid for Trade. Dependent Variable: EXPY in HS from Mirror

Data	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	0.161** [0.073]	0.169*** [0.061]	0.171** [0.075]	0.152** [0.072]	0.172** [0.077]	0.179** [0.073]	0.154** [0.068]	0.189** [0.088]
L.lnpop	-0.159** [0.062]	-0.166*** [0.051]	-0.170*** [0.063]	-0.144** [0.061]	-0.162** [0.064]	-0.174*** [0.058]	-0.150** [0.061]	-0.194*** [0.066]
L.lnimport	-0.029 [0.081]	-0.034 [0.079]	-0.037 [0.080]	-0.028 [0.085]	-0.035 [0.081]	-0.02 [0.079]	-0.014 [0.077]	-0.017 [0.083]
L.lnrent	0.044 [0.032]	0.045 [0.032]	0.05 [0.034]	0.036 [0.030]	0.039 [0.034]	0.05 [0.034]	0.042 [0.031]	0.043 [0.039]
L.lnmort	-0.03 [0.082]	-0.029 [0.073]	-0.031 [0.086]	-0.026 [0.079]	-0.016 [0.090]	-0.022 [0.084]	-0.044 [0.080]	0.005 [0.104]
L.lnfdi	0.018 [0.015]	0.018 [0.015]	0.019 [0.015]	0.019 [0.014]	0.02 [0.014]	0.017 [0.015]	0.019 [0.014]	0.017 [0.015]
L.lnaftoda	0.002 [0.013]							
L.lnnonaft		-0.001 [0.006]						
L.lnecooda			0.002 [0.010]					
L.lnprooda				-0.001 [0.012]				
L.lntraoda					0.006 [0.019]			
L.lngrant						-0.006 [0.014]		
L.lnloan							0.001 [0.008]	
L.lnaftregqual								0.014 [0.017]
L.lnhsmrexp	0.605*** [0.080]	0.598*** [0.076]	0.599*** [0.079]	0.604*** [0.080]	0.592*** [0.076]	0.595*** [0.077]	0.583*** [0.080]	0.590*** [0.080]
_cons	2.474** [1.049]	2.483** [0.987]	2.495** [1.089]	2.449** [1.045]	2.363** [1.088]	2.339** [1.086]	2.689*** [1.020]	2.305 [1.491]
N	1431	1434	1429	1431	1434	1434	1431	1426
Individuals	129	129	129	129	129	129	129	129
AvgObs/Indv	11.093	11.116	11.078	11.093	11.116	11.116	11.093	11.054
Instruments	29	29	29	29	29	29	29	29
Hansen	0.349	0.352	0.304	0.292	0.282	0.344	0.382	0.255
AR2	0.503	0.509	0.522	0.49	0.516	0.515	0.478	0.48

Table B9. Impact of Aid for Trade. Dependent Variable: EXPY in SITC

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	0.266*** [0.088]	0.243*** [0.085]	0.258*** [0.086]	0.278*** [0.091]	0.278*** [0.092]	0.269*** [0.088]	0.225*** [0.083]	0.262*** [0.098]
L.lnpop	-0.141* [0.082]	-0.146* [0.079]	-0.111 [0.080]	-0.145* [0.082]	-0.129 [0.079]	-0.118 [0.084]	-0.104 [0.076]	-0.112 [0.085]
L.lnimport	0.262** [0.127]	0.212* [0.122]	0.285** [0.126]	0.263** [0.130]	0.280** [0.138]	0.302** [0.128]	0.254* [0.136]	0.305** [0.130]
L.lnrent	-0.025 [0.036]	-0.009 [0.035]	-0.029 [0.038]	-0.024 [0.036]	-0.025 [0.036]	-0.032 [0.040]	-0.02 [0.038]	-0.031 [0.044]
L.lnmort	-0.018 [0.117]	-0.057 [0.119]	-0.03 [0.119]	-0.02 [0.122]	-0.003 [0.123]	-0.017 [0.120]	-0.048 [0.115]	-0.011 [0.127]
L.lnfdi	0.008 [0.010]	0.009 [0.011]	0.008 [0.010]	0.009 [0.011]	0.01 [0.011]	0.01 [0.010]	0.008 [0.010]	0.011 [0.010]
L.lnaftoda	0.024* [0.013]							
L.lnnonaft		0.026** [0.010]						
L.lnecooda			0.005 [0.011]					
L.lnprooda				0.023** [0.011]				
L.lntraoda					-0.018 [0.015]			
L.lngrant						0.008 [0.017]		
L.lnloan							0.013 [0.008]	
L.lnaftregqual								0.006 [0.014]
L.lnsitcexpy	0.341*** [0.113]	0.359*** [0.117]	0.337*** [0.112]	0.322*** [0.108]	0.347*** [0.118]	0.326*** [0.110]	0.357*** [0.117]	0.348*** [0.115]
_cons	0.999 [1.515]	1.652 [1.624]	0.811 [1.493]	0.98 [1.631]	0.474 [1.666]	0.614 [1.591]	1.409 [1.564]	0.47 [1.669]
N	1078	1081	1079	1078	1081	1081	1080	1078
Individuals	115	115	115	115	115	115	114	115
AvgObs/Indv	9.374	9.4	9.383	9.374	9.4	9.4	9.474	9.374
Instruments	29	29	29	29	29	29	29	29
Hansen	0.401	0.346	0.368	0.353	0.26	0.264	0.321	0.376
AR2	0.006	0.015	0.006	0.005	0.004	0.006	0.007	0.006

Table B10. Impact of Aid for Trade. Dependent Variable: EXPY in SITC from

Mirror Data

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	0.127*	0.128	0.138*	0.135	0.146	0.143	0.139**	0.184**
	[0.075]	[0.080]	[0.077]	[0.082]	[0.090]	[0.090]	[0.068]	[0.089]
L.lnpop	-0.099	-0.094	-0.102	-0.099	-0.087	-0.103	-0.101	-0.146*
	[0.078]	[0.080]	[0.080]	[0.077]	[0.088]	[0.086]	[0.070]	[0.083]
L.lnimport	0.108	0.101	0.112	0.109	0.125	0.127	0.113	0.132
	[0.094]	[0.096]	[0.095]	[0.097]	[0.091]	[0.088]	[0.096]	[0.096]
L.lnrent	-0.006	-0.003	-0.005	-0.006	-0.012	-0.006	-0.005	-0.016
	[0.028]	[0.029]	[0.029]	[0.025]	[0.029]	[0.029]	[0.028]	[0.033]
L.lnmort	-0.143	-0.146	-0.135	-0.13	-0.117	-0.124	-0.137	-0.051
	[0.093]	[0.102]	[0.092]	[0.098]	[0.102]	[0.098]	[0.091]	[0.107]
L.lnfdi	0.006	0.006	0.007	0.007	0.008	0.007	0.008	0.011
	[0.016]	[0.016]	[0.016]	[0.016]	[0.015]	[0.016]	[0.015]	[0.015]
L.lnaftoda	0.019							
	[0.012]							
L.lnnonaft		0.009						
		[0.009]						
L.lnecooda			0.014					
			[0.009]					
L.lnprooda				0.014				
				[0.015]				
L.lntraoda					-0.002			
					[0.017]			
L.lngrant						0.011		
						[0.014]		
L.lnloan							0.008	
							[0.008]	
L.lnaftregqual								0.030**
								[0.013]
L.lnsitcmrexp	0.449***	0.453***	0.445***	0.454***	0.442***	0.450***	0.430***	0.431***
	[0.089]	[0.082]	[0.088]	[0.089]	[0.087]	[0.093]	[0.085]	[0.083]
_cons	3.582***	3.497**	3.423**	3.356**	2.974**	3.183**	3.521**	2.740*
	[1.356]	[1.476]	[1.326]	[1.492]	[1.367]	[1.415]	[1.418]	[1.599]
N	1431	1434	1429	1431	1434	1434	1431	1426
Individuals	129	129	129	129	129	129	129	129
AvgObs/Indv	11.093	11.116	11.078	11.093	11.116	11.116	11.093	11.054
Instruments	29	29	29	29	29	29	29	29
Hansen	0.192	0.198	0.2	0.174	0.168	0.193	0.206	0.166
AR2	0.078	0.065	0.081	0.066	0.072	0.074	0.072	0.074

Table B11. Impact of Aid for Trade. Dependent Variable: Share of Manufactured

Exports in HS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	0.11 [0.272]	-0.015 [0.235]	0.127 [0.298]	0.098 [0.283]	0.12 [0.322]	0.171 [0.292]	0.061 [0.297]	0.134 [0.307]
L.lnpop	0.106 [0.301]	0.195 [0.258]	0.111 [0.311]	0.113 [0.297]	0.13 [0.303]	0.068 [0.303]	0.164 [0.301]	0.116 [0.314]
L.lnimport	0.770** [0.362]	0.718* [0.400]	0.793** [0.359]	0.721* [0.389]	0.794** [0.395]	0.807** [0.346]	0.766** [0.372]	0.852** [0.367]
L.lnrent	-0.174 [0.117]	-0.139 [0.109]	-0.169 [0.121]	-0.184 [0.114]	-0.182 [0.120]	-0.207* [0.119]	-0.174 [0.112]	-0.172 [0.113]
L.lnmort	-0.119 [0.439]	-0.308 [0.364]	-0.096 [0.483]	-0.134 [0.461]	-0.098 [0.523]	-0.021 [0.456]	-0.165 [0.499]	-0.078 [0.497]
L.lnfdi	-0.028 [0.035]	-0.026 [0.034]	-0.028 [0.035]	-0.03 [0.036]	-0.03 [0.036]	-0.034 [0.036]	-0.032 [0.033]	-0.025 [0.034]
L.lnaftoda	0.023 [0.045]							
L.lnnonaft		0.015 [0.017]						
L.lnecooda			0.005 [0.033]					
L.lnprooda				0.036 [0.043]				
L.lntraoda					-0.036 [0.031]			
L.lngrant						0.048 [0.058]		
L.lnloan							-0.005 [0.025]	
L.lnaftregqual								0.004 [0.038]
L.lnhsmva	0.585*** [0.189]	0.556*** [0.186]	0.591*** [0.185]	0.583*** [0.197]	0.581*** [0.201]	0.598*** [0.194]	0.575*** [0.196]	0.588*** [0.191]
_cons	-7.303* [4.108]	-5.073 [4.192]	-7.850* [4.628]	-6.909 [4.602]	-7.948 [5.688]	-8.622* [4.454]	-6.812 [4.955]	-8.387* [4.977]
N	1042	1045	1043	1042	1045	1045	1044	1042
Individuals	112	112	112	112	112	112	111	112
AvgObs/Indv	9.304	9.33	9.313	9.304	9.33	9.33	9.405	9.304
Instruments	29	29	29	29	29	29	29	29
Hansen	0.258	0.257	0.243	0.285	0.304	0.245	0.315	0.277
AR2	0.634	0.656	0.637	0.641	0.623	0.624	0.642	0.631

Table B12. Impact of Aid for Trade. Dependent Variable: Share of Manufactured

Exports in HS from Mirror Data

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GMM	GMM	GMM	GMM	GMM	GMM	GMM	GMM
L.lngdp	-0.238*	-0.239	-0.253*	-0.257*	-0.254*	-0.271*	-0.211	-0.2
	[0.137]	[0.148]	[0.133]	[0.137]	[0.143]	[0.147]	[0.138]	[0.179]
L.lnpop	0.291**	0.320**	0.297**	0.290**	0.270**	0.302**	0.269**	0.278*
	[0.126]	[0.138]	[0.122]	[0.123]	[0.120]	[0.132]	[0.121]	[0.152]
L.lnimport	0.156	0.203	0.132	0.19	0.193	0.155	0.18	0.237
	[0.205]	[0.209]	[0.198]	[0.205]	[0.196]	[0.194]	[0.199]	[0.220]
L.lnrent	-0.078	-0.098	-0.073	-0.06	-0.075	-0.074	-0.083	-0.097
	[0.076]	[0.078]	[0.076]	[0.073]	[0.077]	[0.078]	[0.076]	[0.084]
L.lnmort	-0.481**	-0.448*	-0.499**	-0.532**	-0.497**	-0.515**	-0.457*	-0.366
	[0.239]	[0.241]	[0.231]	[0.224]	[0.230]	[0.243]	[0.242]	[0.329]
L.lnfdi	0.03	0.031	0.029	0.028	0.025	0.028	0.033	0.022
	[0.027]	[0.026]	[0.027]	[0.027]	[0.026]	[0.026]	[0.025]	[0.031]
L.lnaftoda	-0.032							
	[0.029]							
L.lnnonaft		-0.039**						
		[0.018]						
L.lnecooda			-0.025					
			[0.022]					
L.lnprooda				-0.023				
				[0.031]				
L.lntraoda					0.02			
					[0.026]			
L.lngrant						-0.017		
						[0.039]		
L.lnloan							-0.02	
							[0.019]	
L.lnaftregqual								-0.029
								[0.034]
L.lnhsmrmva	0.697***	0.689***	0.696***	0.681***	0.687***	0.692***	0.686***	0.761***
	[0.093]	[0.096]	[0.094]	[0.091]	[0.098]	[0.096]	[0.090]	[0.114]
_cons	1.719	1.214	2.103	2.128	2.182	2.358	1.178	0.465
	[2.908]	[3.000]	[2.826]	[3.008]	[3.095]	[2.998]	[2.897]	[3.747]
N	1445	1448	1443	1445	1448	1448	1445	1440
Individuals	129	129	129	129	129	129	129	129
AvgObs/Indv	11.202	11.225	11.186	11.202	11.225	11.225	11.202	11.163
Instruments	29	29	29	29	29	29	29	29
Hansen	0.737	0.729	0.768	0.714	0.674	0.78	0.713	0.494
AR2	0.891	0.876	0.886	0.876	0.859	0.865	0.856	0.711

Appendix C. List of OECD CRS Purpose Codes for Aid for Trade

a) Economic Infrastructure

210	TRANSPORT AND STORAGE	Note: Manufacturing of transport equipment should be included under code 32172.
21010	Transport policy and administrative management	Transport sector policy, planning and programmes; aid to transport ministries; institution capacity building and advice; unspecified transport; activities that combine road, rail, water and/or air transport.
21020	Road transport	Road infrastructure, road vehicles; passenger road transport, motor passenger cars.
21030	Rail transport	Rail infrastructure, rail equipment, locomotives, other rolling stock; including light rail (tram) and underground systems.
21040	Water transport	Harbours and docks, harbour guidance systems, ships and boats; river and other inland water transport, inland barges and vessels.
21050	Air transport	Airports, airport guidance systems, aeroplanes, aeroplane maintenance equipment.
21061	Storage	Whether or not related to transportation.
21081	Education and training in transport and storage	
220	COMMUNICATION	
22010	Communications policy and administrative management	Communications sector policy, planning and programmes; institution capacity building and advice; including postal services development; unspecified communications activities.
22020	Telecommunications	Telephone networks, telecommunication satellites, earth stations.
22030	Radio/television/print media	Radio and TV links, equipment; newspapers; printing and publishing.
22040	Information and communication technology (ICT)	Computer hardware and software; internet access; IT training. When sector cannot be specified.
230	ENERGY GENERATION AND SUPPLY	
23010	Energy policy and administrative management	Energy sector policy, planning and programmes; aid to energy ministries; institution capacity building and advice; unspecified energy activities including energy conservation.

23020	Power generation/non-renewable sources	Thermal power plants including when heat source cannot be determined; combined gas-coal power plants.
23030	Power generation/renewable sources	Including policy, planning, development programmes, surveys and incentives. Fuelwood/ charcoal production should be included under forestry (31261).
23040	Electrical transmission/distribution	Distribution from power source to end user; transmission lines.
23050	Gas distribution	Delivery for use by ultimate consumer.
23061	Oil-fired power plants	Including diesel power plants.
23062	Gas-fired power plants	
23063	Coal-fired power plants	
23064	Nuclear power plants	Including nuclear safety.
23065	Hydro-electric power plants	Including power-generating river barges.
23066	Geothermal energy	
23067	Solar energy	Including photo-voltaic cells, solar thermal applications and solar heating.
23068	Wind power	Wind energy for water lifting and electric power generation.
23069	Ocean power	Including ocean thermal energy conversion, tidal and wave power.
23070	Biomass	Densification technologies and use of biomass for direct power generation including biogas, gas obtained from sugar cane and other plant residues, anaerobic digesters.
23081	Energy education/training	Applies to all energy sub-sectors; all levels of training.
23082	Energy research	Including general inventories, surveys.

b) Building Productive Capacity

240	BANKING AND FINANCIAL SERVICES	
24010	Financial policy and administrative management	Finance sector policy, planning and programmes; institution capacity building and advice; financial markets and systems.
24020	Monetary institutions	Central banks.
24030	Formal sector financial	All formal sector financial intermediaries; credit lines; insurance, leasing,

	intermediaries	venture capital, etc. (except when focused on only one sector).
24040	Informal/semi-formal financial intermediaries	Micro credit, savings and credit co-operatives etc.
24081	Education/training in banking and financial services	
250	BUSINESS AND OTHER SERVICES	
25010	Business support services and institutions	Support to trade and business associations, chambers of commerce; legal and regulatory reform aimed at improving business and investment climate; private sector institution capacity building and advice; trade information; public-private sector networking including trade fairs; e-commerce. Where sector cannot be specified: general support to private sector enterprises (in particular, use code 32130 for enterprises in the industrial sector).
25020	Privatisation	When sector cannot be specified. Including general state enterprise restructuring or demonopolisation programmes; planning, programming, advice.
311	AGRICULTURE	
31110	Agricultural policy and administrative management	Agricultural sector policy, planning and programmes; aid to agricultural ministries; institution capacity building and advice; unspecified agriculture.
31120	Agricultural development	Integrated projects; farm development.
31130	Agricultural land resources	Including soil degradation control; soil improvement; drainage of water logged areas; soil desalination; agricultural land surveys; land reclamation; erosion control, desertification control.
31140	Agricultural water resources	Irrigation, reservoirs, hydraulic structures, ground water exploitation for agricultural use.
31150	Agricultural inputs	Supply of seeds, fertilizers, agricultural machinery/equipment.
31161	Food crop production	Including grains (wheat, rice, barley, maize, rye, oats, millet, sorghum); horticulture; vegetables; fruit and berries; other annual and perennial crops. [Use code 32161 for agro-industries.]

31162	Industrial crops/export crops	Including sugar; coffee, cocoa, tea; oil seeds, nuts, kernels; fibre crops; tobacco; rubber. [Use code 32161 for agro-industries.]
31163	Livestock	Animal husbandry; animal feed aid.
31164	Agrarian reform	Including agricultural sector adjustment.
31165	Agricultural alternative development	Projects to reduce illicit drug cultivation through other agricultural marketing and production opportunities (see code 43050 for non-agricultural alternative development).
31166	Agricultural extension	Non-formal training in agriculture.
31181	Agricultural education/training	
31182	Agricultural research	Plant breeding, physiology, genetic resources, ecology, taxonomy, disease control, agricultural bio-technology; including livestock research (animal health, breeding and genetics, nutrition, physiology).
31191	Agricultural services	Marketing policies & organisation; storage and transportation, creation of strategic reserves.
31192	Plant and post-harvest protection and pest control	Including integrated plant protection, biological plant protection activities, supply and management of agrochemicals, supply of pesticides, plant protection policy and legislation.
31193	Agricultural financial services	Financial intermediaries for the agricultural sector including credit schemes; crop insurance.
31194	Agricultural co-operatives	Including farmers' organisations.
31195	Livestock/veterinary services	Animal health and management, genetic resources, feed resources.
312	FORESTRY	
31210	Forestry policy and administrative management	Forestry sector policy, planning and programmes; institution capacity building and advice; forest surveys; unspecified forestry and agro-forestry activities.
31220	Forestry development	Afforestation for industrial and rural consumption; exploitation and utilisation; erosion control, desertification control; integrated forestry projects.
31261	Fuelwood/charcoal	Forestry development whose primary purpose is production of fuelwood and charcoal.
31281	Forestry education/training	

31282	Forestry research	Including artificial regeneration, genetic improvement, production methods, fertilizer, harvesting.
31291	Forestry services	
313	FISHING	
31310	Fishing policy and administrative management	Fishing sector policy, planning and programmes; institution capacity building and advice; ocean and coastal fishing; marine and freshwater fish surveys and prospecting; fishing boats/equipment; unspecified fishing activities.
31320	Fishery development	Exploitation and utilisation of fisheries; fish stock protection; aquaculture; integrated fishery projects.
31381	Fishery education/training	
31382	Fishery research	Pilot fish culture; marine/freshwater biological research.
31391	Fishery services	Fishing harbours; fish markets; fishery transport and cold storage.
321	INDUSTRY	
32110	Industrial policy and administrative management	Industrial sector policy, planning and programmes; institution capacity building and advice; unspecified industrial activities; manufacturing of goods not specified below.
32120	Industrial development	
32130	Small and medium-sized enterprises (SME) development	Direct support to the development of small and medium-sized enterprises in the industrial sector, including accounting, auditing and advisory services.
32140	Cottage industries and handicraft	
32161	Agro-industries	Staple food processing, dairy products, slaughter houses and equipment, meat and fish processing and preserving, oils/fats, sugar refineries, beverages/tobacco, animal feeds production.
32162	Forest industries	Wood production, pulp/paper production.
32163	Textiles, leather and substitutes	Including knitting factories.
32164	Chemicals	Industrial and non-industrial production facilities; includes pesticides production.
32165	Fertilizer plants	

32166	Cement/lime/plaster	
32167	Energy manufacturing	Including gas liquefaction; petroleum refineries.
32168	Pharmaceutical production	Medical equipment/supplies; drugs, medicines, vaccines; hygienic products.
32169	Basic metal industries	Iron and steel, structural metal production.
32170	Non-ferrous metal industries	
32171	Engineering	Manufacturing of electrical and non-electrical machinery, engines/turbines.
32172	Transport equipment industry	Shipbuilding, fishing boats building; railroad equipment; motor vehicles and motor passenger cars; aircraft; navigation/guidance systems.
32182	Technological research and development	Including industrial standards; quality management; metrology; testing; accreditation; certification.
322	MINERAL RESOURCES AND MINING	
32210	Mineral/mining policy and administrative management	Mineral and mining sector policy, planning and programmes; mining legislation, mining cadastre, mineral resources inventory, information systems, institution capacity building and advice; unspecified mineral resources exploitation.
32220	Mineral prospection and exploration	Geology, geophysics, geochemistry; excluding hydrogeology (14010) and environmental geology (41010), mineral extraction and processing, infrastructure, technology, economics, safety and environment management.
32261	Coal	Including lignite and peat.
32262	Oil and gas	Petroleum, natural gas, condensates, liquefied petroleum gas (LPG), liquefied natural gas (LNG); including drilling and production.
32263	Ferrous metals	Iron and ferro-alloy metals.
32264	Nonferrous metals	Aluminium, copper, lead, nickel, tin, zinc.
32265	Precious metals/materials	Gold, silver, platinum, diamonds, gemstones.
32266	Industrial minerals	Baryte, limestone, feldspar, kaolin, sand, gypsym, gravel, ornamental stones.
32267	Fertilizer minerals	Phosphates, potash.
32268	Offshore minerals	Polymetallic nodules, phosphorites, marine placer deposits.

323	CONSTRUCTION	
32310	Construction policy and administrative management	Construction sector policy and planning; excluding construction activities within specific sectors (e.g., hospital or school construction).
332	TOURISM	
33210	Tourism policy and administrative management	

c) Trade Policy and Regulations

331	TRADE POLICY AND REGULATIONS AND TRADE-RELATED ADJUSTMENT	
33110	Trade policy and administrative management	Trade policy and planning; support to ministries and departments responsible for trade policy; trade-related legislation and regulatory reforms; policy analysis and implementation of multilateral trade agreements e.g. technical barriers to trade and sanitary and phytosanitary measures (TBT/SPS) except at regional level (see 33130); mainstreaming trade in national development strategies (e.g. poverty reduction strategy papers); wholesale/retail trade; unspecified trade and trade promotion activities.
33120	Trade facilitation	Simplification and harmonisation of international import and export procedures (e.g. customs valuation, licensing procedures, transport formalities, payments, insurance); support to customs departments; tariff reforms.
33130	Regional trade agreements (RTAs)	Support to regional trade arrangements [e.g. Southern African Development Community (SADC), Association of Southeast Asian Nations (ASEAN), Free Trade Area of the Americas (FTAA), African Caribbean Pacific/European Union (ACP/EU)], including work on technical barriers to trade and sanitary and phytosanitary measures (TBT/SPS) at regional level; elaboration of rules of origin and introduction of special and differential treatment in RTAs.
33140	Multilateral trade negotiations	Support developing countries' effective participation in multilateral trade negotiations, including training of negotiators, assessing impacts of

		negotiations; accession to the World Trade Organisation (WTO) and other multilateral trade-related organisations.
33150	Trade-related adjustment	Contributions to the government budget to assist the implementation of recipients' own trade reforms and adjustments to trade policy measures by other countries; assistance to manage shortfalls in the balance of payments due to changes in the world trading environment.
33181	Trade education/training	Human resources development in trade not included under any of the above codes. Includes university programmes in trade.