

Export Promotion Agencies: What Works and What Doesn't*

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Abstract

The number of national export promotion agencies (EPAs) has tripled over the last two decades. While more countries have made them part of their national export strategy, studies have criticized their efficiency in developing countries (Hogan, Keesing and Singer, 1991). Partly in reaction to these critiques, EPAs have been retooled (see ITC, 1998 or 2000 for example). This paper studies the impact of existing EPAs and their strategies, based on a new data set covering 104 developing and developed countries. Results suggest that on average they have a strong and statistically significant impact on exports. For each \$1 of export promotion, we estimate a \$300 increase in exports for the median EPA. However, there is heterogeneity across regions, levels of development and types of instruments. Furthermore, there are strong diminishing returns, suggesting that as far as EPAs are concerned small is beautiful.

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1 Introduction

In 1985, in the midst of the highest levels of hyperinflation ever recorded in the history of the Bolivian economy, President Victor Paz Estenssoro proclaimed that the country was in its death throes and that it could survive only by exporting more of its production. Thus, the phrase “export or die” was coined. As part of the reform package –whose cornerstone was to reduce inflation and introduce macroeconomic stability– an export promotion agency (EPA) was created (INPEX).

Bolivia’s search for development through exports is not exceptional. The first EPA –still existing– was created in 1919 in Finland, and in the mid-1960s they became a very popular instrument to boost exports and reduce trade deficits, under the auspices of the International Trade Center (a joint UNCTAD-GATT multilateral institution). By the early 1990s their efficiency began to be questioned (Keesing and Singer, 1991 and 1991a). EPAs in developing countries were criticized for lacking strong leadership, being inadequately funded, hiring staff which was bureaucratic and not client oriented, and suffering from government involvement.¹ As a result, many development institutions withdrew their support to EPAs.² Part of the blame for the failure of the early EPAs was put on the import substituting trade regimes that prevailed at the time. Overcoming such a strong anti-trade bias was probably too much to ask of any specialized agency. However, more than a decade later, the trade environment

¹Similar critiques emerged for EPAs in developed countries; see for example Kotabe and Czinkota (1992) study of the United States sub-national EPAs.

²Of the 73 export promotion agencies in developing countries surveyed for this paper only 21 had some budgetary support from multilateral donors in 2005, and in only 11 agencies the budgetary support from multilateral donors represented more than 25 percent of the total budget. In the case of one Sub-Saharan Africa agency more than 75 percent of its budget in 2005 came from multilateral donors.

has significantly changed in the developing world and some EPAs under the auspices of the ITC have evolved in the direction suggested by Hogan, Keesing and Singer (1991) in their influential piece. The objective of this paper is to provide an assessment of the impact of today's EPAs on national exports.

The objective of EPAs is to help (potential) exporters find markets for their products, as well as provide them with a better understanding of products demanded in different export markets. One can divide the services offered by EPAs into four broad categories: 1) country image building (advertising, promotional events, but also advocacy); 2) export support services (exporter training, technical assistance, capacity building, including regulatory compliance, information on trade finance, logistics, customs, packaging, pricing); 3) marketing (trade fairs, exporter and importer missions, follow-up services offered by representatives abroad); and 4) market research and publications (general, sector, and firm level information, such as market surveys, on-line information on export markets, publications encouraging firms to export, importer and exporter contact databases).

The economic justification for government involvement in export promotion is based on the theory of asymmetric information and other market failures. There are important externalities associated with the gathering of foreign market information related to consumer preferences, business opportunities, quality and technical requirements, etc. Private firms alone will not provide foreign market information, as companies hesitate to incur research and marketing costs that can also benefit competitors. The same applies to pioneer exporters, who make a considerable investment in attempts to open a foreign markets, cultivating contacts, establish

distribution chains and other costly activities that can be used by their rivals (Hausmann and Rodrik, 2003). Higher uncertainty associated with trading across borders in markets with different legislation have also been put forward as a justification for export insurance schemes supported by the public sector.

From an economic perspective the argument for public funding of EPAs needs to be based on an assessment of the social costs and benefits associated with the activities of the EPA. Social benefits are likely to be larger than the social costs if there are large positive externalities associated with higher current exports across firms, sectors or time and within the exporting country.³

It should be clear that program evaluation of EPAs on economic welfare grounds is difficult if not impossible. Thus often –if not always– evaluations of EPAs stop short of an assessment based on welfare grounds, and focus on the more modest objective of assessing whether exports have increased or whether new markets have been opened. This paper is no exception. Our goal is twofold: first to determine whether EPAs are having an impact on exports; and second, to identify the activities and institutional structures of agencies that seem to have positive effects on exports.

In order to answer these questions we undertook a world survey of national EPAs to gather information on their objectives, activities and institutional structure. To answer the questions of what works and what does not work, we then try to econometrically identify the impact

³Note that some of these externalities may travel across borders. It is clear that some of the benefits from export promotion activities can be captured by consumers in the importing country for whom search costs are reduced. This undermines the case for national government funding of export promotion programs and calls for multilateral interventions.

on exports of different institutional structures, objectives and activities.

The resulting evidence suggests that on average EPAs have a positive and statistically significant impact on national exports. There is heterogeneity across levels of development, however. In countries with a GDP per capita below \$982, export promotion agencies have a negative (but statistically insignificant) impact on exports, thus suggesting that poor country governments might not have the capacity to manage EPAs effectively. Above \$982 the impact is positive, but it becomes statistically significant (at the 5 percent level) only in countries with a GDP per capita above \$2790. There is also heterogeneity across regions: larger impacts are found in Latin America and Asia, with agencies in Sub-Saharan Africa and the Middle East and North Africa lagging behind.

In terms of what type of institutional arrangements, objectives and activities lead to a stronger impact on exports our results suggest the following. EPAs should have a large share of the executive board in the hands of the private sector, but a large share of their budget should be publicly funded. The proliferation of small agencies within a country leads to an overall less effective program. EPAs are more effective when focusing on non-traditional exports, or have some broad sector focus (e.g., agriculture, manufacturing, tourism, high-tech, etc...). They should also focus their activities on large firms (which can take advantage of EPAs services), but which are not yet exporters (although this last result is statistically weak).

Our analysis also suggests that there are some characteristics that seem to matter more for EPAs in developing countries. They are more efficient when the export promotion activities are shared with other activities such as investment promotion, or export financing under an

umbrella type organization. They should also focus their activities on on-shore export support services rather than country image or marketing and market research activities. Finally, the presence of EPAs offices in foreign markets does not appear to help exports from developing countries, thus reinforcing the focus should be on on-shore activities.

The rest of this paper is organized as follows. Section 2 reviews the existing literature on export promotion. Section 3 describes our global survey of EPAs and provides some descriptive statistics to help understand the type of objectives, activities and institutional setup that exist in EPAs throughout the world. Section 4 we describes the econometric strategy. Section 5 provides the empirical results and section 6 concludes.

2 EPAs: What do we know so far?

As far as we are aware, there has been no cross-country statistical analysis of the impact of EPAs on exports. The exception is perhaps Rose (2005), who estimates the impact that the presence of an embassy or consulate may have on bilateral trade using a gravity model. Rose argues that as communication costs fall, foreign embassies and consulates have lost much of their role in decision-making and information-gathering, and therefore are increasingly marketing themselves as agents of export promotion. In a sample of twenty-two exporting countries –of which eight are developing countries– and around 200 potential trading partners he finds that for each additional consulate abroad, exports increase by 6 to 10 percent.

The bulk of the empirical literature that has looked more closely at the effectiveness of export promotion has focused on agencies in developed countries, particularly the United

States. There have been two broad approaches. One relies on surveys of random samples of exporters and potential exporters, asking which programs they have made use of, their opinions of these programs and the success they have had in exporting. Kedia and Chhokar (1986), for example, found that export promotion programs in the United States have little impact, largely because of a lack of awareness of their programs. Seringhaus and Botschen (1991) surveyed the opinion of nearly 600 firms in both Canada and Austria, and found that export promotion service use is low and that the programs are not well-oriented to the specific needs of exporters. Gencturk and Kotabe (2001) tested the link between program usage and export performance in a sample of 162 US firms, and found that usage of export programs increases profitability, but not sales, which suggests that there are no externalities across firms and that export programs represent a mere transfer from agencies to the exporting firm. Gencturk and Kotabe also found that experienced exporters benefit from government programs in terms of profitability more than new exporters. Despite their criticism of existing programs, these studies do support the argument, however, that EPAs are a response to a genuine need of small and medium-sized firms and that they can be crucial for export success.⁴

In the late 1980s, the World Bank undertook an important assessment of existing EPAs in the developing world (Hogan, Keesing and Singer, 1991). The report argued that a consensus had emerged with a strong negative view of EPAs in developing countries. In a series of influential studies (Keesing and Singer, 1991, 1991a) the authors argued that EPAs had failed

⁴Czinkota (2002) argues that governments should lead efforts to help firms appreciate that they are ready for export or learn what they need to do to get ready. Many executives do not initiate export activities because of their uncertainty about new factors such as variable currency exchange rates, greater distances, new government regulations, new legal and financial systems, etc. The government is well positioned to help firms overcome such information failures.

to achieve their goals and in many instances had had a negative impact, except in those countries that already had favorable policies *vis-à-vis* exports, namely Singapore, Hong Kong, Korea, and Taiwan (Keesing, 1993). A series of weaknesses were noted: EPAs were manned by poorly trained civil servants who were out of touch with their clients in the private sector; these public sector institutions did not provide the incentives to ensure a high-quality service to exporters; agencies failed to address the major supply constraints on exporters, which were often not marketing-related, particularly in environments where import substitution policies prevailed.

Others (Hogan, 1991, de Wulf, 2001) argued that the key problem with EPAs was their lack of funding and that bad policy environments could be overcome by well funded EPAs, as the examples of Korea, China and Taiwan - contrary to Keesing's argument - in fact demonstrated. Hogan also argued that the one-size fits all solution often advocated by donors was ill-suited and that different environments required different structures.

In spite of the strong criticisms, EPAs were not abandoned. Indeed, the number of publicly funded agencies increased over the course of the 1990s. More recently, the development literature has taken a slightly more positive view of the potential role of export promotion agencies in poor countries. The rationale underlying the criticisms of Keesing and Singer (1991, 1991a) was that the early failures of EPAs were mainly due to import substitution policies that made the job of EPAs very difficult. In the 1990s, that strong bias against exports vanished, and prominent development economists have adopted a more benign view of EPAs. For example, in a study of how governments can promote non-traditional exports in Africa, one of the main

recommendations of G.K.Helleiner –who led the study– was to create an adequately funded EPA to help exporters overcome the costs and risks of entering unfamiliar and demanding international markets (Helleiner, 2002).

In terms of what type of program, institutional set-up, and financing is more likely to succeed, Alvarez (2004) provided evidence from a survey of 295 small-and-medium-sized sporadic and permanent exporters in Chile. While trade shows and trade missions did not affect the probability of being a successful exporter, a program of exporter committees showed a positive and significant impact. Such committees are composed of a group of firms with common objectives in international business, which cooperate on research, marketing and promotion.

Macario (2000) identified the policies that determine successes and failures in Brazil, Chile, Colombia, and Mexico. On the basis of interviews with successful exporters, she sets out various recommendations for export promotion agencies: they should be directed at firms with new products or who are entering new markets; they should emphasize cost-sharing to ensure that programs are used only by those truly dedicated to export; support should be given for a maximum of 2-3 years so that it does not turn into a subsidy; programs should be submitted to external evaluation; agencies work best when they are subject to a mix of public and private management.

The conclusion about private management is shared by the ITC (see for example ITC, 2000), and by much of the early literature (Keesing and Singer, 1991a 1991b, de Wulf, 2001).⁵

However, the view that the focus should be on new products and entering new markets is not

⁵The ITC also provides constantly updated information about best practices and advice on export promotion strategies (see <http://www.intracen.org/instasptp>), and their annual conferences are an useful tool for agencies from different part of the world to compare strategies.

shared by everyone. Indeed, ITC (1998) or Boston Consulting (2004) suggest that it is most useful to target firms that are “threshold” or “mature” exporters, as inappropriate targeting at the firm level can be wasteful.

In his survey of the early literature, de Wulf (2001) stressed the importance of emphasizing on-shore activities. EPAs have traditionally focused on off-shore activities, such as information gathering, trade fairs and trade representation, sometimes neglecting the importance of home country supply conditions. Well-targeted support to potential exporters could have large impacts.

Our global survey of EPAs sheds light on some of the old and current debates. As noted by Hogan (2001), heterogeneity of environment, structures, policies and their impact are an important concern that we will try to seriously address. Nonetheless, cross-country analysis inherently limit the extent to which the heterogeneity of impacts can be addressed.⁶ Ultimately, this type of exercise must be complemented with country-specific case studies.

3 Survey of EPAs: Summary statistics

During the summer and fall of 2005 we conducted an 18 question survey of EPAs around the world.⁷ Through the ITC website (www.intracen.org/tpo) we obtained a database with contact information. We complemented this list with the help of many World Bank country economists who provided contact information for national EPAs. We contacted agencies or

⁶Although we do test for the existence of heterogeneity across countries, if fully addressed one is likely to run out of degrees of freedom.

⁷The survey is available from the authors upon request.

Ministries in 147 countries. In 31 countries we were informed that there was no national EPA. The survey was sent to 116 countries and 92 answered (of which 4 responded that they could not respond). Each of the 88 surveys that we received was followed up with phone conversations to confirm and clarify some of the answers. The list of 88 agencies appears in the Appendix Table.

The survey contains five parts: i) institutional structure, ii) responsibilities of the agency, iii) the strategies followed, iv) resources and expenditures, and v) activities and functions. Below we provide summary statistics by region.

3.1 Institutional Structure

Around 10 percent of agencies surveyed are fully private; another 5 percent are joint public private entities. The bulk of the agencies –62 percent– are semi-autonomous entities reporting to a Ministry or the Office of the President or the Prime Minister. The remainder –23 percent of the agencies– are sub-units of a Ministry, and therefore subject to government hiring regulations, and pay scales. The regions with the lowest percentage of agencies structured as a sub-unit of a Ministry are the Middle East and North Africa (MENA) and Sub-Saharan Africa (SSA), where only 11 percent of agencies are under the direct control of a Ministry. The region with the highest percentage of agencies under a sub-unit of a Ministry is Asia with 36 percent. Latin America and the Caribbean (LAC) is below average with 17 percent of its agencies subject to the direct control of a Ministry.

Within the 73 agencies that reported having an executive board, on average half the seats

in the board –53 percent to be precise– represent the private sector. Figure 1 shows the distribution of the share of seats granted to the private sector in export promotion agencies executive boards by region. The largest share is among OECD agencies, and within the developing world LAC has the highest median at 58 percent of the seats representing the private sector.

Finally, 80 percent of the agencies are either the only export promotion agency in the country or are clearly the largest and most important, although there are significant public and private agencies working in closely related areas. This includes umbrella organizations in which all private sector associations are members. In 20 percent of the countries surveyed there are 2 or more agencies of equal importance. There are few differences across regions, but SSA is the region where multiple EPAs are most rare.

3.2 Responsibilities

In terms of responsibilities, we explored whether the agency in charge of export promotion activities was exclusively dedicated to export promotion, and if not, we asked the degree of priority granted to export promotion within the agency. Figure 2 summarizes the degree of priority given to export promotion across regions. There is a contrast between the OECD, and MENA on the one hand, and LAC and Asia, on the other. For the former, export promotion is the top priority of the agencies (values 1 and 2 in the histogram) in almost 70 to 80 percent of the countries. In the second group, the agencies for which export promotion is the top priority represent 50 percent of the cases.

3.3 Strategies

The principal strategy followed by 60 percent of the agencies surveyed is to increase aggregate exports, no matter which sector or how big or small the export volumes. Around 18 percent of agencies aim at promoting non traditional exports only and around 20 percent aim at promoting specific sectors. Around 2 percent aim at developing industrial clusters, and other objectives. There are some interesting differences across regions, as illustrated in Figure 3. Clearly, the objective of OECD agencies is primarily to promote overall exports, whereas in LAC the promotion of non-traditional exports is the most frequent strategy. In Asia, MENA, and SSA the focus on particular sectors is more common than elsewhere –even though most agencies in these regions aim primarily at the development of overall exports.

We also asked the agencies whether the export promotion strategy was part of a national economic development plan. Almost 80 percent of agencies answered that this was the case, but again there are some interesting differences across regions: 60 percent of OECD agencies answered yes; 65 percent in LAC; 70 percent in MENA; 89 percent in SSA, and 100 percent in Asia.

3.4 Resources and Expenditures

The average budget of EPAs surveyed is around 0.11 percent of the value of exports of goods and services, with a standard deviation of 0.35 and a median of 0.04 percent. The region with the largest average budget is LAC at 0.17 percent of exports. It is followed by Asia at 0.12 percent, and then MENA, SSA and the OECD with average budgets at around 0.09 to 0.10

percent of exports. The distribution within regions varies as shown in Figure 4. The OECD has the bulk of its agencies' budget between 0.03 and 0.13 percent of exports (agencies within the 25th and 75th percentile). In SSA, the bulk of the agencies is between 0.00 and 0.05; the large mean is explained by the fact that a few countries have extremely large budgets relative to exports, often supported by multilateral and bilateral donors.

Regarding funding sources, around 52 percent of the agencies obtained more than 75 percent of their budget from public funding; 2 percent of the agencies obtained more than 75 percent of their budget from private funding; 3 percent of the agencies obtained more than 75 percent of their budget from selling their services (customer fees); and 2 percent of the agencies obtained more than 75 percent of their budget from either multilateral or bilateral donors. Thus, public funding seems to predominate as a source of funding. Three quarters of the agencies surveyed had no private funding, and half had no income associated with the selling of their services. When they reported some income, it represented on average less than 10 percent of their budget. The importance of public funding varies across regions as illustrated in Figure 5. The region where public funding may be less predominant is Latin America, where only 35 percent of the agencies reported that public funding represented more than 75 percent of their total budget. The largest share of agencies funded at more than 75 percent by public funding is found in Asia.

3.5 Activities and client orientation

We considered four main activities: 1) country image building (advertising, promotional events, but also advocacy); 2) export support services (exporter training, technical assistance, capacity building, including regulatory compliance, information on trade finance, logistics, customs, packaging, pricing); 3) marketing (trade fairs, exporter and importer missions, follow-up services offered by representatives abroad); and 4) market research and publications (general, sector and firm level information, such as market surveys, on-line information on export markets and electronic bulletin, publications encouraging firms to export, importer and exporter contact databases). Figure 6 provides a view of the share spent on each of these activities by region. The largest share is generally spent on marketing and market research and publications. Another item which shows a large median –but also a much larger variance– is other activities not related to export promotion, except in the OECD, where the bulk (more than 75 percent of them) spent less than 10 percent on activities not related to export promotion. At the opposite end, in SSA other activities not related to export promotion represent between 10 and 25 percent of the budget of most agencies (at the median). The importance of export support services is also much larger in SSA than in other regions. In LAC, Asia and MENA the distribution of the budget allocated to each activity is very similar.

In terms of client orientation, we checked the percentage of expenditures spent on large versus small and medium size firms, and established versus new and occasional exporters. Results are quite clear across regions. A very small share of total expenditure is spent on large firms, whereas a relatively large share is spent on established exporters. Thus, in all

regions the focus of the agencies is on small and medium size firms which are established exporters. As shown in Figure 7, LAC and SSA agencies are at opposite ends when it comes to the share of expenditure on established firms (with LAC having the highest share and SSA the lowest).

In terms of representation abroad for EPAs, 41 percent of the agencies have offices abroad (22 percent of the agencies in SSA, 33 percent of the agencies in MENA, 35 percent of the agencies in LAC, 47 percent in Asia and 67 percent in the OECD). In most regions agencies spend a small amount of their budget on offices abroad, with the exception of the OECD where on average 39 percent of the EPA budget is dedicated to offices abroad. In other regions, the average is 7 percent in LAC and Asia, 4 percent in SSA and 1 percent in MENA. In terms of the geographic coverage of the agencies abroad, Figure 8 highlights the importance in the budget of expenditures in Western Europe and North America (Canada and the United States). In all regions, with the exception of LAC, export promotions agencies spend a larger share of their budget for offices abroad in Western Europe.

4 The empirical framework

Our objective is to disentangle the impact of export promotion agencies, their structure, responsibilities, strategies, resources and activities on overall exports in order to understand what works and what doesn't.⁸

The first step is to explore whether there is any correlation between export promotion

⁸In a separate paper we explore the impact on export diversification and new exports.

budgets and exports. Figure 9 provides a plot of exports per capita on EPA budgets per capita. There is a clear positive correlation between these two variables. Figure 9 also provides the predicted value obtained from the corresponding locally weighted regression (*lowess*), which provides us with some *prima-facie* evidence of which are the agencies that are under-performing in terms of exports per capita given their budgets.⁹ For example Rwanda (RWA) would be expected to have a much higher level of exports given the budget of its EPA (under-performer), whereas the Irish agency (IRL) would be expected to have a lower level of exports (over-performer).

An interesting feature is that the curve flattens at very high budgets. Most of the countries among this group of high-budget agencies are developed countries. Thus, in order to check for any heterogeneity between developed and developing countries we divided the sample accordingly. Figure 10 shows the two scatter plots. Clearly, the positive correlation is driven by developing country data, and the correlation between exports and the budget of export promotion agencies is unclear within the sub-sample of developed countries.

There are two clear problems with putting too much importance on the correlations and analysis above. First, the sample might be biased, because it is restricted to the agencies for which we were able to find a local contact. It is also further restricted to those agencies that answered the survey, even though we had a perhaps surprisingly high 76 percent response rate.¹⁰ Second, because of the endogeneity of the export promotion budget, a correlation can

⁹An in depth and robust analysis of each agency performance is beyond the scope of this paper and would need to be tackled through agency-specific studies. In this paper, we limit the scope at providing averages across different groups and variables.

¹⁰Even with such a high response rate, it may still not be a representative sample.

exist between the unobserved factors contributing to both the budget of EPAs and exports, which will also result in spurious correlations.

We correct selection bias, by using a selection equation (Heckman, 1979) that explains why some countries were not surveyed and why some agencies did not answered. Our experience collecting contact information for EPAs helped us identify variables that should be part of this selection equation. It was clear that in poorer and smaller countries it was more difficult to obtain contact information for the relevant Ministry or institution, and even when we did, it was difficult to get them to answer the survey. So GDP per capita and GDP are part of the selection equation. The extent of aid per capita also seemed to be an important determinant as many of the poorest agencies were substantially funded by bilateral and multilateral donors. More formally, the selection equation that explains the latent variable z_c^* , which captures the likelihood of obtaining and answer to the export promotion survey in country c , is given by:

$$\begin{aligned} z_c^* &= \xi' \mathbf{x}_c + \varepsilon_c; \\ z_c &= \begin{cases} 1 & \text{if } z_c^* > 0 \\ 0 & \text{otherwise} \end{cases} \end{aligned} \tag{1}$$

where ξ is a vector of parameters and $\mathbf{x}_c$ is a matrix of independent variables determining the probability that the EPA in country c answered the survey. The latter includes variables explaining exports below, except the budget of the EPA and the activities of the agency that help us identify the export equation plus the log of GDP, the log of aid per capita discussed above, and dummy variables identifying developing countries in Africa, Asia, Latin America,

Sub-Saharan Africa and the OECD.¹¹

Regarding the endogeneity of export promotion, ideally we would like to find suitable instrumental variables, but it is difficult to find a good instrument for the export promotion budget that will not be correlated with exports. So our approach is to control for numerous determinants of exports that may be also correlated with export promotion budgets. The control variables we considered are: GDP per capita, an index of trade restrictiveness imposed on imports, an index of trade restrictiveness faced by exports in the rest of the world, volatility of the exchange rate, an indicator of the export regulation burden that measures the number of days that it takes on average to comply with all necessary regulations to export goods, a dummy for landlocked countries, and regional dummies for Asia, LAC, MENA, SSA and the OECD.¹² We also try several specifications where we use infrastructure variables (share of paved roads, main telephone lines per capita), and indices of institutional quality (ICRG indices) as control variables. However these are highly collinear with GDP per capita and were not statistically significant. Moreover, in some cases they significantly reduced our sample because of lack of information for some countries. Because, our focus is to try to understand what works in terms of export promotion, and that including or excluding these variables did not affect qualitatively our results on export promotion, we decided to drop these variables from the regressions we report here.

To further assess the potential reverse causality, we restrict the sample to those agencies

¹¹Developed countries are not included in the regional dummies.

¹²GDP per capita is the average for the period 2000-2004 in 2005 constant \$ from the World Bank's World Development Indicators; the indices of trade restrictiveness imposed at home and abroad are from Kee, Nicita, and Olarreaga (2006); the volatility of the exchange rate is measured by the coefficient of variation of the dollar to local currency exchange rate during the period 2000-2004 obtained from the World Development Indicators.

that existed more than 5 and 10 years ago and check whether the estimated coefficient of export promotion budgets declines as we restrict the sample to those EPAs. If the coefficient on the budgets of old EPAs is equal or larger than those of new EPAs, we infer that causality runs essentially from export promotion agencies to exports.¹³

We will further address reverse causality by focusing not on the budget of the EPA, but its presence. That is, we estimate a treatment effect regression where we use as instruments the log of aid per capita and regional dummies. In this treatment regression we *de facto* control for sample selection bias. Unfortunately, we cannot estimate the effects of different EPA modalities in this framework, because these are perfectly collinear with the treatment effect (i.e., the existence of an EPA).

The basic export equation to be estimated is then:

$$\begin{aligned} \ln(Exp/pop)_c &= \beta_0\beta_1\ln(Bud/pop)_c + \beta_2\ln(GDP/pop)_c + \beta_3\ln(T)_c + \beta_4\ln(MA)_c \\ &+ \beta_5\ln(Vol)_c + \beta_6\ln Reg_c + \beta_7Llocked_c + Dummies_R + e_c \end{aligned} \quad (2)$$

where β s are parameters to be estimated; Exp/pop_c are exports per capita in country c ; Bud/pop_c is the budget of the EPA per capita in country c ; GDP/pop_c is GDP per capita, T_c is an index of trade restrictiveness imposed by country c on its imports from the rest of the world; MA_c is an index of the market access trade restrictiveness imposed by the rest of

¹³One reason why the coefficient may increase is that older EPAs may have more experience and therefore have a stronger impact on exports.

the world on exports of country c ; Vol_c is the volatility of the exchange rate in country c ; Reg_c is the number of days necessary to comply with all regulations and procedures required to export goods from Djankov, Freund and Pham (2006); $Llocked_c$ is a dummy that indicates whether the country is landlocked; $Dummies_R$ are regional dummies, and e_c is the standard white-noise. When testing for what works and what doesn't in EPA modalities we add to (2) the variables discussed in section 3.

We estimate equations (1) and (2) using a two-step Heckman model information maximum likelihood estimator. The full information maximum likelihood (FIML) is generally more efficient than the two-step approach, especially in the presence of high levels of correlation between the explanatory variables of the selection and main equations (the two exclusion restrictions we imposed are aid per capita and the log of GDP).¹⁴ However, the FIML failed to converge as we increased the number of explanatory variables. We therefore opted for reporting the two-step results throughout.¹⁵ We also provide OLS estimates, as it sometimes performs better than full and limited information maximum likelihood, when the additional variables associated with the exclusion restrictions are also directly correlated with the outcome variable, as shown by Rendtel (1992) using Monte Carlo simulations.¹⁶

¹⁴See Puhani (2000) for a survey of the literature.

¹⁵Note however that when the FIML converged, results of the two-step and the FIML approach were very similar.

¹⁶Admittedly, economic size and aid per capita may directly affect exports per capita. However, empirically, aid per capita was not significant after controlling for the presence of EPAs. This suggests that it is a valid instrumental variable.

5 Results

The result from the estimation of (1) and (2) are shown in Table 1 for the whole sample and for developing countries only using OLS and a Heckman correction (for the Heckman estimation, we also report the selection equation). Across all four specifications the EPA budget has a positive and statistically significant impact on exports. In the sub-sample containing only developing countries the impact of EPA budget is slightly stronger, although the difference is not statistically significant.

A quick back-of-the-envelope calculation suggests that the effect calculated at the median value both in the full sample and in the sub-sample of developing countries, of an additional \$1 of EPA budget generates around \$320 of additional exports. These may seem very large, but when evaluating the elasticity at the median of the sample, we have that activities by the median EPA explain only 12 percent of the median country exports. This is slightly higher than the estimates by Rose (2005) discussed earlier, which suggest that the presence of a consulate or embassy engaged on export promotion leads to a 6 to 10 percent increase in exports.¹⁷ Also, it is important to note, that this is clearly not a welfare calculation, and such “returns” may be consistent with a welfare loss associated with EPA’s activities, as discussed earlier. Nevertheless they are encouraging numbers, when measured in terms of export returns. However, the estimated elasticities of about 0.17 suggest that there are strong diminishing returns to scale. Consequently, large expansions of EPAs budgets may not be

¹⁷Our larger estimates can be explained by the fact that Rose’s sample includes mainly developed countries, where our sample is mostly composed of developing countries, and a quick look at table 1 suggests that elasticities are larger for developing countries.

desirable.

Regarding the other explanatory variables in the regression in Table 1, GDP per capita ($\ln GDP/pop$) has a positive and statistically significant sign in all specifications suggesting that richer countries, with stronger and better institutions –including trade institutions– export more. Countries with restrictive import regimes ($\ln T$) export less, capturing well known general equilibrium effects, but the sign is not statistically significant.¹⁸ The restrictiveness faced by exporters ($\ln MA$) in the rest of the world strongly reduces exports across all specifications with a slightly higher coefficient for developing countries when correcting for sample selection bias. Exchange rate volatility ($\ln Vol$) also has a negative impact on exports, although it is statistically significant only in the case of developing countries after correcting for sample bias. The number of days necessary to comply with export regulation in the exporting country has a negative, but insignificant impact on exports.¹⁹

As discussed in the previous section, one concern with the results presented in Table 1 is reverse causality, as countries that export more might be more likely to establish EPAs. The first three columns of Table 2 provide Heckman estimates for the full sample, for the sub-sample of agencies established prior to 2000 and agencies that were established prior to 1995. If reverse causality were a problem one would expect the coefficient to decline as we focus only on the agencies that were established earlier. The estimates in Table 2 suggest

¹⁸This result also suggests that in the early 2000s contrary to what was observed by Keesing and Singer (1991a) in the 1980s, the main constraint to export is no longer the anti-trade bias of the import regime.

¹⁹In both selection equations, size and aid per capita –which are our exclusion restrictions– are both statistically significant. Larger countries receiving large amounts of aid were more likely to be in our sample. This reflects in part, our capacity to identify the relevant agency in the country (as we were helped by World Bank’s country economists), but also the agencies capacity to answer the survey.

that this is not the case. The coefficient actually increases as we restrict the sample to older agencies probably due to learning by doing. The fourth column provides a treatment effect estimate, where the treatment is the presence of an export promotion agency, which is instrumented with log of aid per capita and regional dummies. The coefficient is positive and statistically significant suggesting that the presence of EPA helps; all the other coefficients are qualitatively similar to the ones reported in Table 1, with the exception of days to comply with export regulation which shows a positive, but statistically insignificant coefficient. Note also that the negative coefficient on exchange rate volatility becomes statistically significant in the treatment regression.²⁰

5.1 Heterogeneity across regions and levels of income

We also explored the heterogeneity of the impact of export promotion budgets across regions and levels of income by allowing the coefficient to vary by regions (Asia, LAC, MENA, OECD and SSA) in the first two columns of Table 3 and level of income (GDP per capita) in the last two columns of Table 3. OLS and Heckman estimates are presented. In terms of region heterogeneity, LAC is the region where the export promotion budget seems to have the strongest impact on exports, and the differences with other regions are statistically significant at the 5 percent level. LAC is followed by the OECD and Asia, but the coefficient on the export

²⁰The endogeneity issue could be tackled with a difference-in-differences estimator, but this requires panel data. There are three problems with this. First, agencies may change names without much deeper changes and we will have a late starting date for the agency, while it has existed for a long time. Second, the agencies in the 1980s are apparently a very different animal from the agencies today, and different agencies have reformed at different times. A difference-in-difference approach will not capture that. Finally, some of our explanatory variables are only available for the early 1990s. This is the case of the trade restrictiveness index and the market access trade restrictiveness index.

promotion budget is statistically significant only in the case of Asia. MENA and SSA have smaller coefficients which are not statistically different from zero. All the other coefficients show a similar pattern to the one observed in Table 1.

One could use the Heckman estimates to compare the “return” for each \$ invested on export promotion across regions. Note however that in the case of MENA and SSA the coefficients are far from being statistically different from zero. Nevertheless, a quick back-of-the-envelope calculation suggests that for each \$1 invested on export promotion there are \$490 of additional exports in LAC, \$227 in Asia, \$160 in the OECD, \$137 in SSA and \$96 in MENA.

In terms of heterogeneity across levels of development, the estimates suggest that at very low levels of income the impact of EPA’s budget on exports may be negative, but it rapidly increases with income. As can be seen in the top quadrant of Figure 11 –where we plotted the predicted impact of EPAs budget from the Heckman estimates against GDP per capita and the size of the EPA budget– the impact of EPA expenditures is always positive in our sample (negative impacts would only be observed in out of sample extremely poor countries). The coefficient also always increases with GDP per capita. Figure 11 also shows the correlation between income per capita and EPA budgets in the bottom right quadrant, and unsurprisingly richer countries have bigger budgets. Finally, as shown in the bottom left quadrant of Figure 11 there is a inverted U-shape relationship between the impact of EPAs budget on exports and the budget of the EPA which suggests –everything else equal– that very low or very high budgets may actually lead to lower impacts. The maximum impact is achieved somewhere between \$0.6 and \$2.7 per capita.

5.2 What works, what doesn't?

To explore the type of institutional setups, strategies, and activities that are more efficient we added to our basic specification in (2) some of the variables discussed in section 3. Heckman estimates are presented in Table 4 for the full sample, as well as the sub-sample of developing countries. The top of the table shows the estimates for the variables in (2), which are qualitatively similar to the ones in Tables 1.

The bottom of the table reports estimates for the additional variables capturing EPA modalities. In both regressions, exports increase with the share of the EPA executive board seats that are held by the private sector. But exports also increase with the share of EPA funding coming from the public sector. This suggests that agencies that are directed by the private sector, but have public funding are the best performers. After all, the rationale for export promotion is about externalities, and it may be difficult to raise private sector funding when benefits are diffuse.

The proliferation of agencies dedicated to export promotion within a country ("Degree of decentralization of agencies") hurts exports. A single and strong EPA seems to be the most effective.

Exports increase with the share of the agency budget spent on non-export promotion activities, such as investment promotion and export financing. This is particularly true for the sub-sample of developing countries, where the coefficient is larger and statistically significant. Indeed, in developing countries, externalities with other activities such as investment promotion and export financing are likely to be more important than in developed countries with

more sophisticated financial markets.²¹

Exports are also higher when the strategy of the agency is to focus on non-traditional exports or has some sector specific component, rather than just focus on overall exports. Note however that by sector focus we mean broad aggregates (agriculture, manufacturing, services, tourism, etc...), rather than specific products.

The allocation of expenditures between country image, export support services, marketing and market research does not seem to matter in the full sample. However, in the sub-sample of developing countries, exports increase with the share of the budget spent on export support services. Thus, on-shore activities may matter more than off-shore activities in developing countries.

Exports increase with the share of the budget spent on large clients and declines with the share of the budget spent on established exporters, which suggest the focus should be on large firms (which have the potential to export), but are not yet exporting. The coefficients, however, are only statistically significant for the case of established exporters in the full sample.

Whether the agency has offices abroad does not seem to matter in the full sample. It appears with a negative effect in the sub-sample of developing countries. Thus the evidence provides little support for funding foreign offices by EPAs.

²¹Wilkinson and Brouthers (2000) argue that the success of trade missions and trade shows depends on the presence of foreign firms in the country, as they help establish contacts.

6 Concluding Remarks

In their influential study of export promotion agencies in the 1980s, Hogan, Keesing, and Singer (1991) argued that EPA in developing countries were not effective because they lacked strong leadership, had inadequate funding, were too bureaucratic, and not client oriented, with heavy government involvement. Moreover, they also had to overcome strong anti-trade biases to be effective.

Over the last decade, the structure and activities of EPAs changed in the direction suggested by Hogan, Keesing and Singer, and under the auspices of the International Trade Center in Geneva. Also, trade policies became more export-oriented. Our estimates suggest that today's EPAs are effective in terms of having an impact on national exports. For every \$1 in the EPA budget there is an additional \$490 dollars of exports in LAC, \$227 in Asia, \$160 in the OECD, \$137 in SSA and \$96 in MENA, although the last two estimates are not statistically different from zero. On average, exports increase with EPAs' budgets, even though our estimates suggest that at levels around 60 cents the marginal efficiency starts declining.

In terms of what works and what doesn't, our estimates suggest that EPAs should have a large share of the executive board in the hands of the private sector, but they should also have a large share of public sector funding. In other words, a full privatization of EPAs does not seem to work. A single and strong EPA should be preferred to the sometimes observed proliferation of agencies within countries. Results also suggest that EPAs should focus on non-traditional exports or have some broad sector orientation, rather than attempt to promote overall exports. They should also focus on large firms that are not yet exporters (although

this last result is statistically weak).

There are some characteristics that seem to be particularly important for developing countries. For instance, the export promotion activity of the agencies should be shared with other activities such as investment promotion and export financing. Similarly, they should focus their expenditure on on-shore export support services rather than on country image or marketing and market research activities. Also, EPA offices abroad do not seem to have a positive impact on exports, again suggesting that agencies should focus on on-shore activities.

Last but not least, words of caution are warranted. First, regarding the methodology used to derive these conclusions, cross-country regressions cannot fully capture the heterogeneity of policy environments and institutional structures in which agencies operate, without running out of degrees of freedom. To complement our study and provide adequate policy advice, case studies are needed. Second, the large “returns” that we found on average to EPA’s expenditure do not provide a justification for those budget on welfare grounds, as these will need some measurement of the externalities and net benefits associated with export promotion. Moreover, larger returns may be obtained by investing those resources in improving the overall business climate (infrastructure, education, etc..) and we do not provide such an analysis. What this paper does is to provide guidelines in terms of institutional design, objectives and activities of EPAs that help maximize the impact of EPAs on exports. Finally, the evidence of diminishing returns to scale in EPA budgets in fact suggests that small is beautiful in this context.

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Table 1: EPA's budget: Does it Help?

	All countries		Developing countries	
	OLS	Heckman	OLS	Heckman
		Export Eq.	Export eq.	Selection ^a
Log of Budget per capita ($\ln Bud/pop$) ^a	0.159 *** (0.048)	0.173 *** (0.044)	0.171 *** (0.052)	0.184 *** (0.047)
Log of GDP per capita ($\ln GDP/pop$)	0.893 *** (0.170)	0.863 *** (0.157)	0.798 *** (0.185)	0.796 *** (0.181)
Log of Trade restrictiveness ($\ln T$)	-0.121 (0.170)	-0.150 (0.178)	-0.131 (0.182)	-0.237 (0.196)
Log of Trade restrictiveness in ROW ($\ln MA$)	-1.159 *** (0.350)	-1.237 *** (0.345)	-1.163 *** (0.403)	-1.443 *** (0.424)
Log of Forex volatility ($\ln Vol$)	-0.262 (0.177)	-0.237 (0.167)	-0.256 (0.184)	-0.287 * (0.180)
Days to comply with export regulation ($\ln Reg$)	-0.006 (0.009)	-0.005 (0.009)	-0.011 (0.011)	0.021 (0.021)
Log of GDP ($\ln GDP$)				0.306 ** (0.145)
Log of Aid per capita ($\ln Aidc$)				0.541 *** (0.179)
Constant	-3.576 *** (1.602)	-3.692 *** (1.717)	-3.193 * (1.706)	-4.701 ** (2.058)
Regional dummies ^b	Yes	Yes	Yes	Yes
$P - value$ of F or Chi-squared Wald-test. ^c	0.000	0.000	0.000	0.000
Number of observations	78	144	63	120
Number of uncensored	78	77	63	62
R-squared	0.92		0.887	

^a Standard errors are in parenthesis. *** stands for significance at the 1 percent level; ** stands for significance at the 5 percent level; and * stands for significance at the 10 percent level.

^b The regional dummies are LAC, OECD, ASIA, MENA, and SSA.

^c In the case of OLS regressions we report the F-test and in the case of Full or limited information maximum likelihood we report the Wald test on the joint significance of all coefficients.

Table 2: Reverse causality?^a

	All	Before 2000	Before 1995	Treatment
Log of Budget per capita (ln <i>Bud/pop</i>) ^b	0.173 *** (0.044)	0.179 *** (0.05)	0.227 *** (0.063)	
Log of GDP per capita (ln <i>GDP/pop</i>)	0.863 *** (0.157)	0.784 *** (0.168)	1.084 *** (0.218)	1.101 *** (0.077)
Log of Trade restrictiveness (ln <i>T</i>)	-0.150 (0.178)	-0.198 (0.187)	-0.019 (0.274)	-0.109 (0.069)
Log of Trade restrictiveness in ROW (ln <i>MA</i>)	-1.237 *** (0.345)	-1.406 *** (0.345)	-0.916 ** (0.391)	-2.361 *** (0.268)
Log of Forex volatility (ln <i>Vol</i>)	-0.237 (0.167)	-0.251 (0.185)	-0.109 (0.341)	-0.276*** (0.041)
Days to comply with export regulation (ln <i>Reg</i>)	-0.005 (0.009)	-0.010 (0.010)	0.001 (0.011)	0.007 (0.004)
Treatment (Dummy=1 if EPA exists)				1.407 *** (0.141)
Constant	-3.692 *** (1.717)	-3.318 *** (1.770)	-4.612 ** (2.010)	-10.431 *** (0.847)
Regional dummies ^c	Yes	Yes	Yes	Yes
Chi-squared Wald-test	0.000	0.000	0.000	0.000
Number of observations	144	130	106	142
Number of uncensored	77	63	39	

^aAll regressions used a two-step estimator. In the case of the treatment regression it is rather a “three”-step estimator as we also correct for sample selection bias.

^bStandard errors are in parenthesis. *** stands for significance at the 1 percent level; ** stands for significance at the 5 percent level; and * stands for significance at the 10 percent level.

^cThe regional dummies are LAC, OECD, ASIA, MENA, and SSA.

Table 3: Heterogeneity of the impact of EPAs' budget on exports

	By region		By level of income	
	OLS	Heckman	OLS	Heckman
Log of Budget per capita ($\ln Bud/pop$) ^a			-0.583 (0.363)	-0.580 * (0.359)
Log of Budget per capita in LAC ($\ln Bud/pop * LAC$ dummy)	0.227 *** (0.050)	0.241 *** (0.063)		
Log of Budget per capita in OECD ($\ln Bud/pop * OECD$ dummy)	0.126 (0.084)	0.145 (0.129)		
Log of Budget per capita in Asia ($\ln Bud/pop * ASIA$ dummy)	0.118 * (0.067)	0.133 * (0.071)		
Log of Budget per capita in MENA ($\ln Bud/pop * MENA$ dummy)	0.072 (0.112)	0.082 (0.089)		
Log of Budget per capita in SSA ($\ln Bud/pop * SSA$ dummy)	0.079 (0.101)	0.095 (0.088)		
Log of GDP per capita ($\ln GDP/pop$)	1.020 *** (0.179)	0.994 *** (0.178)	1.053 *** (0.166)	1.020 *** (0.171)
Log of Trade restrictiveness. ($\ln T$)	-0.164 (0.172)	-0.210 (0.183)	-0.046 (0.146)	-0.081 (0.179)
Log of Trade restrictiveness in ROW ($\ln MA$)	-1.104 *** (0.420)	-1.202 *** (0.362)	-1.144 *** (0.388)	-1.215 *** (0.338)
Log of Forex volatility ($\ln Vol$)	-0.290 * (0.150)	-0.272 * (0.170)	-0.255 * (0.135)	-0.227 (0.164)
Days to comply with export regulation ($\ln Reg$)	-0.004 (0.008)	-0.003 (0.009)	-0.007 (0.007)	-0.005 (0.009)
Interaction Budget and Income ($\ln Bud/pop * \ln GDP/pop$)			0.085 ** (0.040)	0.087 ** (0.041)
Interaction Budget and Income squared ($\ln Bud/pop * \ln GDP/pop$) ²			-0.0002 (0.0002)	-0.0002 (0.0002)
Constant	-4.795 *** (1.662)	-5.081 *** (2.062)	-5.167 *** (1.589)	-5.236 *** (1.840)
Regional dummies ^b	Yes	Yes	Yes	Yes
P – value of F or Chi-squared Wald-test. ^c	0.000	0.000	0.000	0.000
Number of observations	78	144	78	144
Number of uncensored	78	77	78	77
R ²	0.935		0.936	

^aStandard errors are in parenthesis. *** stands for significance at the 1 percent level; ** stands for significance at the 5 percent level; and * stands for significance at the 10 percent level.

^bThe regional dummies are LAC, OECD, ASIA, MENA, and SSA.

^cFor OLS estimates we report the F-test and for Heckman estimates we report the Wald test on the joint significance of all coefficients.

Table 4: EPAs: what works, what doesn't?^a

	All countries	Developing Countries
Log of Budget per capita (ln <i>Bud/pop</i>)	0.115 *** (0.049)	0.164 *** (0.05)
Log of GDP per capita (ln <i>GDP/pop</i>)	0.714 *** (0.153)	0.623 *** (0.150)
Log of Trade restrictiveness (ln <i>T</i>)	-0.136 (0.187)	0.181 (0.187)
Log of Trade restrictiveness in ROW (ln <i>MA</i>)	-1.730 *** (0.327)	-2.439 *** (0.365)
Log of Forex volatility (ln <i>Vol</i>)	-0.275 * (0.167)	-0.279 * (0.157)
Days to comply with export regulation (ln <i>Reg</i>)	-0.015 * (0.009)	-0.006 (0.010)
Executive Board seats to private sector	0.903 *** (0.211)	0.760 *** (0.226)
Degree of decentralization of agencies devoted to exp. prom.	-0.279 *** (0.100)	-0.248 ** (0.115)
Share of agency budget spent on non-export promotion activities	0.048 (0.052)	0.128 ** (0.051)
Strategy focuses on non traditional exports or sector specific	0.131 * (0.072)	0.146 * (0.082)
Share of EPA funding coming from public sources	0.111 *** (0.038)	0.187 *** (0.040)
Share of country image activities in EPA's expenditure	-0.059 (0.068)	-0.003 (0.077)
Share of export support serv. in EPA's expenditure	0.025 (0.064)	0.137 ** (0.068)
Share of large clients in EPA expenditure	0.043 (0.074)	0.031 (0.073)
Share of established exporters in EPA expenditure	-0.071 * (0.042)	-0.055 (0.044)
EPA has representation offices abroad	0.087 (0.137)	-0.255* (0.162)
Constant	-3.736 ** (1.684)	-6.101 *** (1.773)
Regional dummies ^b	Yes	Yes
Chi-squared Wald-test	0.000	0.000
Number of observations	117	98
Number of uncensored	50	40

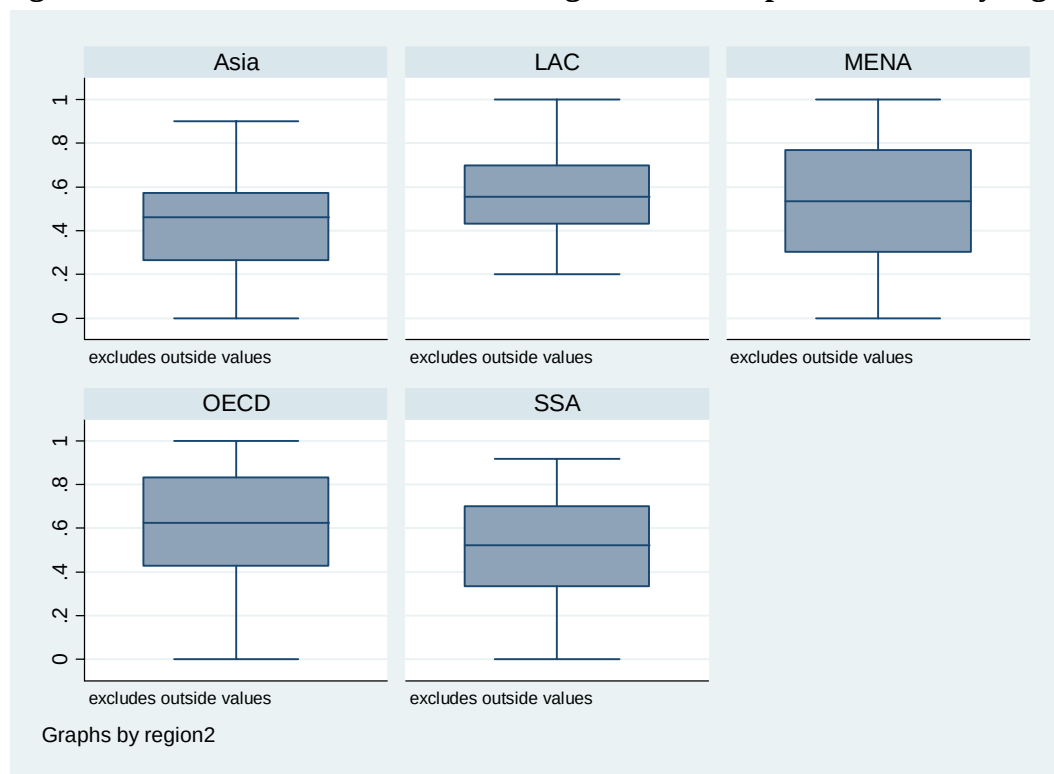
^aTwo-step Heckman estimates.

^bThe regional dummies are LAC, OECD, ASIA, MENA, and SSA.

Appendix Table: Sample Coverage

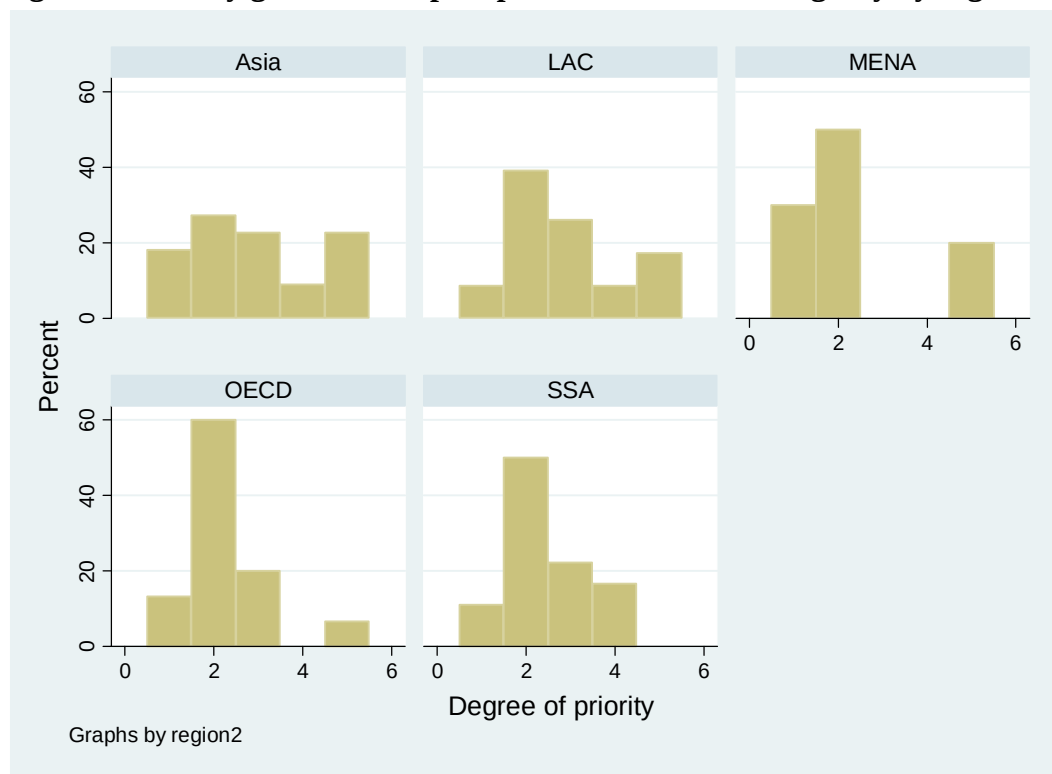
Country	Name of the Agency	Region
Albania	ANE	ASIA
Algeria	ALGEX	MENA
Armenia	ADA	ASIA
Australia	Austrade	OECD
Austria	Austrian Trade, Austrian Federal Economic Chamber	OECD
Bangladesh	EPB	ASIA
Belize	Belize Trade & Investment Development Service	LAC
Bolivia	CEPROBOL	LAC
Botswana	BEDIA	SSA
Brazil	APEX-Brasil	LAC
Bulgaria	BSMEPA	ASIA
Burkina Faso	ONAC	SSA
Cambodia	Export Promotion Department, Ministry of Commerce	ASIA
Chile	PROCHILE	LAC
China	CCPIT	ASIA
Colombia	ProExport	LAC
Costa Rica	Procomer	LAC
Cote d'Ivoire	APEX-CI	SSA
Czech Republic	Czech Trade	ASIA
Denmark	Trade Council of Denmark	OECD
Dominica	DEXIA	LAC
Dominican Republic	CEI-RD	LAC
Ecuador	CORPEI	LAC
Egypt, Arab Rep.	ExpoLink	MENA
El Salvador	Exporta El Salvador	LAC
Estonia	Enterprise Estonia	ASIA
Fiji	FTIB	ASIA
Finland	Finpro	OECD
France	UBIFRANCE	OECD
Germany	BFAI	OECD
Ghana	GEPC	SSA
Grenada	Trade & Industry Unit, Ministry of Finance	LAC
Guatemala	AGEXPRONT	LAC
Guyana	GO-INVEST	SSA
Honduras	FIDE	LAC
Hong Kong, China	HKTDC	ASIA
Hungary	Hungarian Investment and Trade Development Agency	ASIA
Iceland	Trade Council of Iceland	OECD
Ireland	Enterprise Ireland	OECD
Israel	Israel Export & International Cooperation Institute	MENA
Jamaica	JAMPRO	LAC
Jordan	JEDCO	MENA
Kenya	Export Promotion Council	SSA
Latvia	LIDA	ASIA
Lebanon	IDAL	MENA
Lesotho	Trade Promotion Unit	SSA
Lithuania	LDA	ASIA
Malawi	MEPC	SSA
Malaysia	MATRADE	ASIA
Malta	Malta Enterprise	MENA
Mauritius	Enterprise Mauritius	SSA
Mexico	Bancomext	LAC
Moldova	MEPO	ASIA
Morocco	CMPE	MENA
Mozambique	IPEX	SSA
Netherlands	EVD	OECD
Nicaragua	APEN	LAC
Niger	ANIPEX	SSA
Norway	Innovation Norway	OECD
Panama	National Direction of Investment & Export Promotion	LAC
Paraguay	PROPARAGUAY	LAC
Peru	Prompex	LAC
Portugal	ICEP Portugal	OECD
Puerto Rico	Compania de Comercio y Exportacion	LAC
Rwanda	RIEPA	SSA
Senegal	ASEPEX	SSA
Serbia and Montenegro	SIEPA	ASIA
Sierra Leone	SLEDIC	SSA
Slovak Republic	SARIO	ASIA
Slovenia	TIPO	ASIA
South Africa	TISA	SSA
Spain	ICEX	OECD
Sweden	Swedish Trade Council	OECD
Switzerland	OSEC Business Network Switzerland	OECD
Taiwan, China	TAITRA	ASIA
Tanzania	Board of External Trade	SSA
Thailand	Department of Export Promotion	ASIA
Trinidad and Tobago	TIDCO Limited	LAC
Tunisia	FAMEX	MENA
Turkey	IGEME	ASIA
Uganda	Uganda Export Promotion Board	SSA
United Kingdom	UKTI	OECD
Uruguay	Uruguay XXI	LAC
Venezuela, RB	BANCOEX	LAC
Vietnam	Vietrade	ASIA
West Bank and Gaza	Paltrade	MENA
Yemen, Rep.	Yemen Export Supreme Council	MENA
Zambia	EBZ	SSA

Figure 1: Share of Executive Board seats granted to the private sector by region



Note: Each box provides the bounds for the 25th and 75th percentile in each region, and the lines coming out of the box provide the adjacent value to the 25th and 75th percentiles in each region. The line within the box provides the median.

Figure 2: Priority granted to export promotion within the agency by region



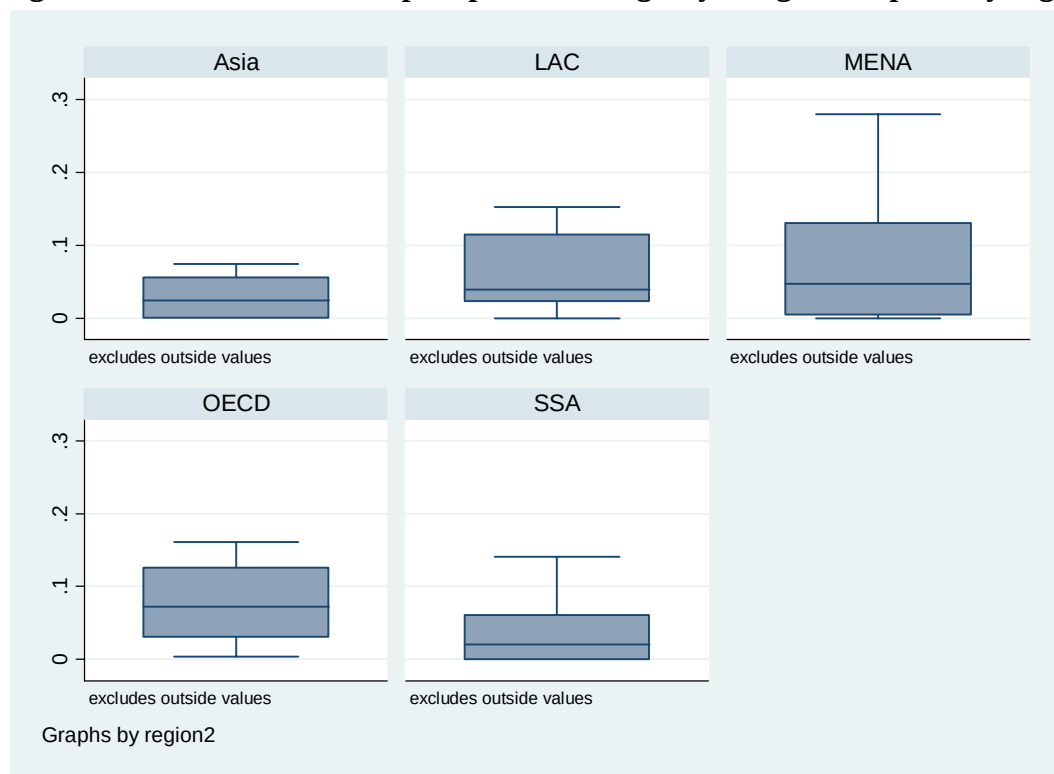
Note: A value of 1 means that export promotion is the only activity of the agency; a value of 2 means that it is its top priority; a value of 3 means that it is one of its top two priorities; a value of 4 means that it is one of its top 3 priorities and a value of 5 means that export promotion is a secondary activity of the agency.

Figure 3: Strategy or goals of export promotion agencies by region



Note: A value of 1 indicates that the agency's goal is to promote overall exports; a value of 2 indicates that the goal of the agency is to promote non traditional exports only; a value of 3 indicates that the agency aims at promotion specific sectors, and a value of 4 indicates that the agency aims at promotion industrial clusters and other objectives.

Figure 4: Ratio of national export promotion agency budget to exports by region



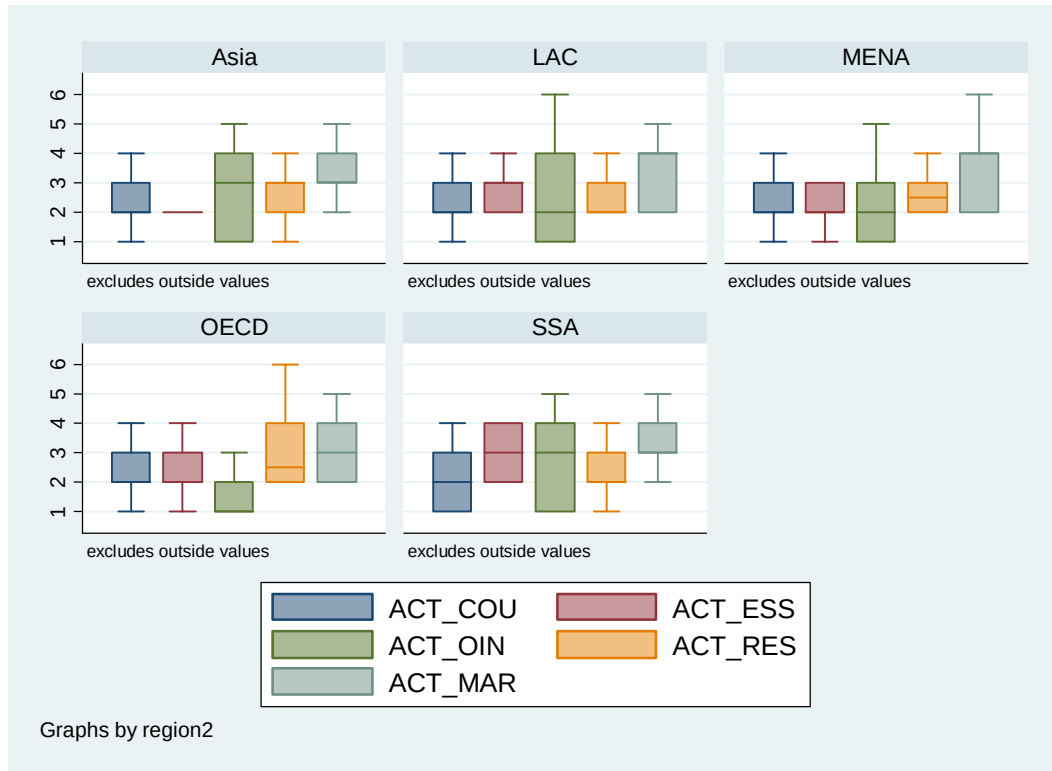
Note: Each box provides the bounds for the 25th and 75th percentile in each region, and the lines coming out of the box provide the adjacent value to the 25th and 75th percentiles in each region. The line within the box provides the median.

Figure 5: Importance of public funding in agencies budget by region



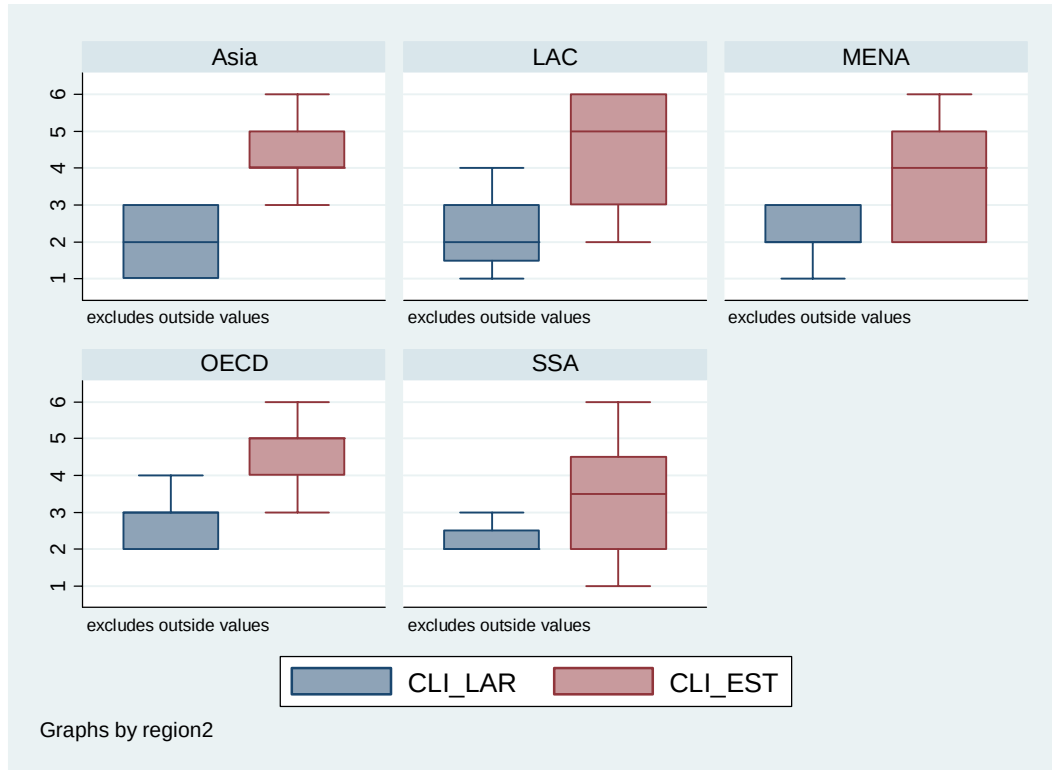
Note: The importance of public funding is a discrete variable that takes values between 1 and 6. A value of 1 indicates that public funding represents 0 percent of the budget; a value of 2 indicates that public funding is less than 10 percent of the budget; a value of 3 indicates that public funding is between 10 and 25 percent of the budget; a value of 4 indicates that public funding is between 25 and 50 percent; a value of 5 indicates that public funding is between 50 and 75 percent and a value of 6 indicates that public funding represents more than 75 percent of the budget.

Figure 6: Export promotion agencies activities by region



The share of each activity in total expenditure is a discrete variable that takes values between 1 and 6. A value of 1 indicates that the activity represents 0 percent of the total expenditure; a value of 2 indicates that the activity represents less than 10 percent of total expenditure; a value of 3 indicates that the activity represents between 10 and 25 percent of total expenditure; a value of 4 indicates that the activity represents between 25 and 50 percent; a value of 5 indicates that the activity represents between 50 and 75 percent and a value of 6 indicates that the activity represents more than 75 percent of total expenditure. The 5 activities considered are country image building (act_cou), export support services (act_ess), marketing (act_mar), research and publications (act_res), and other activities not related to export promotion (act_oin). Each box provides the bounds for the 25th and 75th percentile in each region, and the lines coming out of the box provide the adjacent value to the 25th and 75th percentiles in each region. The line within the box provides the median.

Figure 7: Export promotion agencies activities by type of client and by region



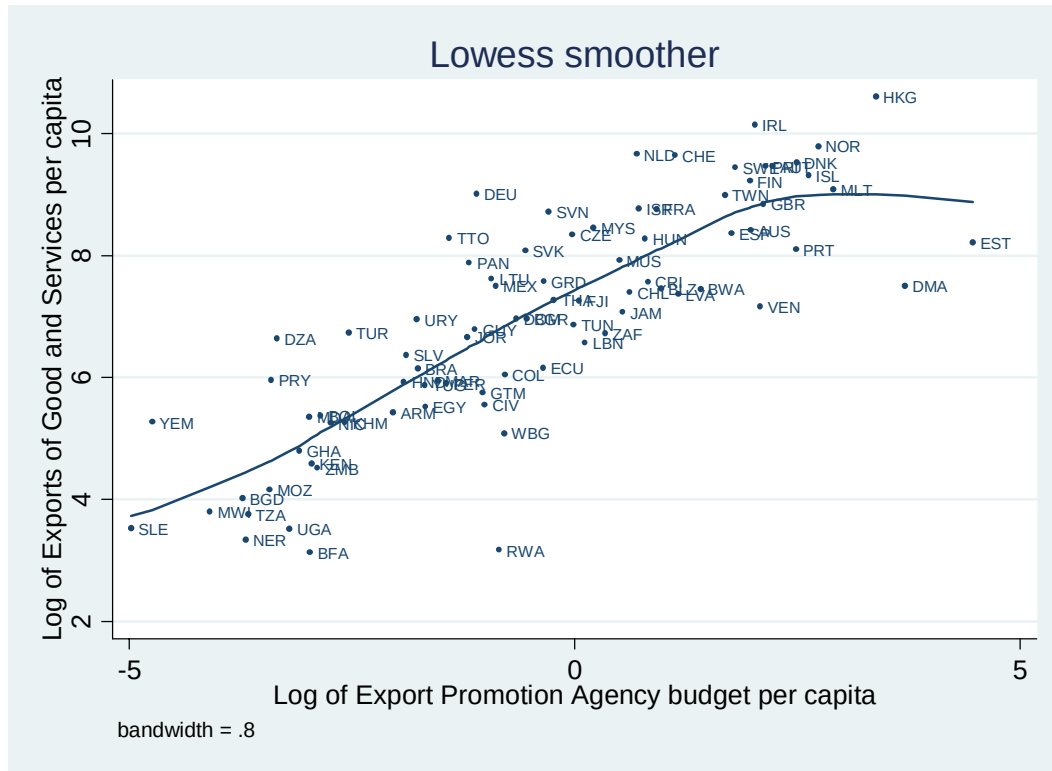
The share of each type of client in total expenditure is a discrete variable that takes values between 1 and 6. A value of 1 indicates that the type of client represents 0 percent of the total expenditure; a value of 2 indicates it represents less than 10 percent of total expenditure; a value of 3 indicates that it represents between 10 and 25 percent of total expenditure; a value of 4 indicates that it represents between 25 and 50 percent; a value of 5 indicates that it represents between 50 and 75 percent and a value of 6 indicates that it represents more than 75 percent of total expenditure. The 2 types of clients considered are large (cli_lar) and established (cli_est). Each box provides the bounds for the 25th and 75th percentile in each region, and the lines coming out of the box provide the adjacent value to the 25th and 75th percentiles in each region. The line within the box provides the median.

Figure 8: Geographic decomposition of offices abroad by region



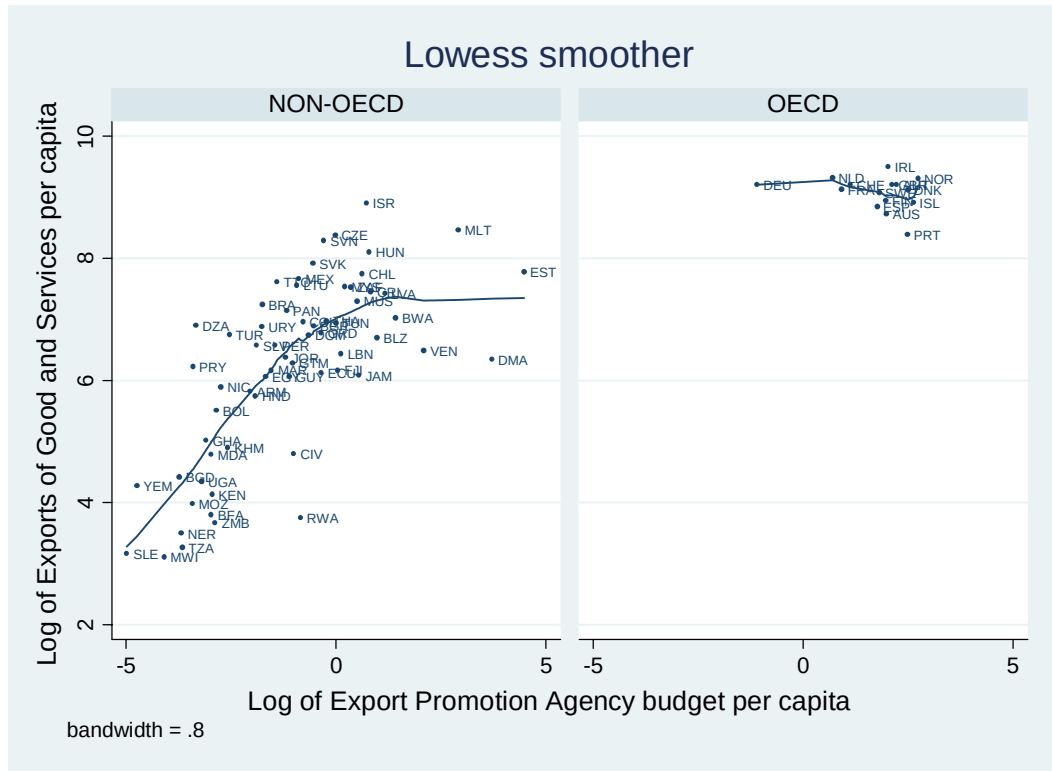
Note: The share of the budget of offices abroad spent in Western Europe (WEU) and North America (NAM) is a discrete variable that takes values between 1 and 6. A value of 1 indicates that the expenditure in a particular region represents 0 percent of the total expenditure of offices abroad; a value of 2 indicates it represents less than 10 percent of total expenditure of offices abroad; a value of 3 indicates that it represents between 10 and 25 percent of total expenditure; a value of 4 indicates that it represents between 25 and 50 percent; a value of 5 indicates that it represents between 50 and 75 percent and a value of 6 indicates that it represents more than 75 percent of total expenditure. Each box provides the bounds for the 25th and 75th percentile in each region, and the lines coming out of the box provide the adjacent value to the 25th and 75th percentiles in each region. The line within the box provides the median.

Figure 9: Exports increase with export promotion budget



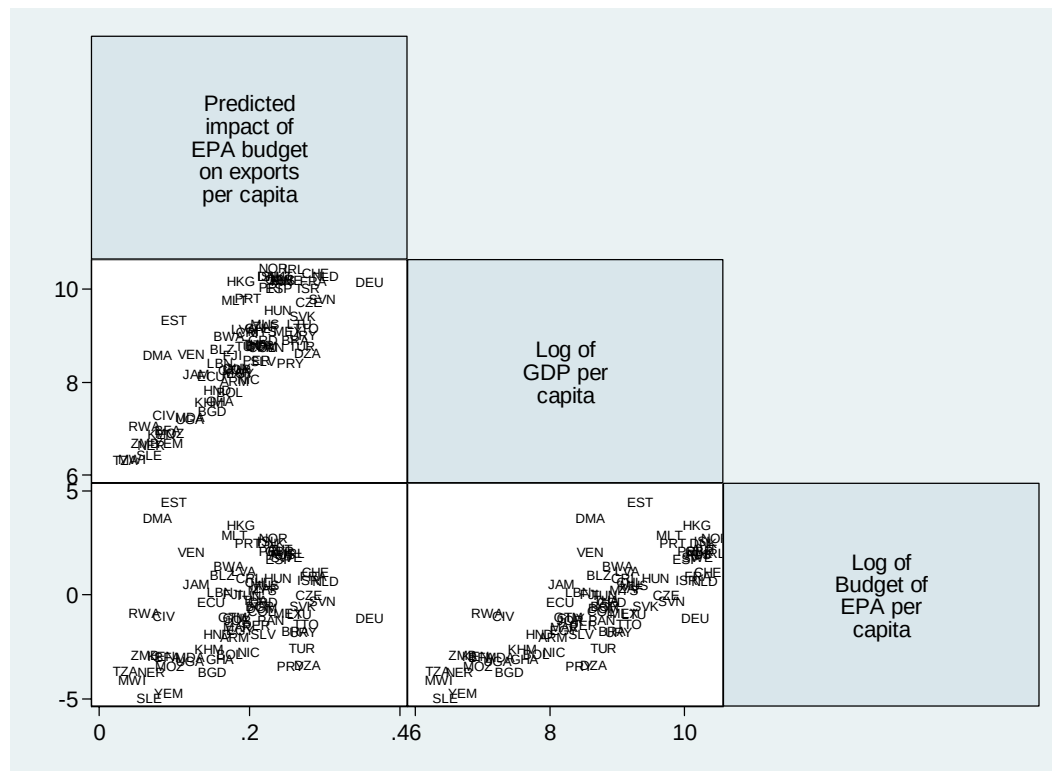
Note: Authors' calculations using data from the survey and World Bank's WDI. The lowess smoother used involves running a locally weighted regression of the log of exports of goods and services per capita on the log of the export promotion agency budget per capita for small sub-samples of data (we used the STATA 9 default options).

Figure 10: Differences between developed and developing countries



Note: Authors' calculations using data from the survey and World Bank's WDI. The lowess smoother used involves running a locally weighted regression of the log of exports of goods and services per capita on the log of the export promotion agency budget per capita for small sub-samples of data (we used the STATA 9 default options).

Figure 11: Impact of EPA budget on exports by level of income and budget size



Note: The top axis is the predicted impact of EPA budget on exports using the estimates of the regression results reported in the fourth column of Table 2 (Heckman estimates).