

# First Do No Harm: The Effect of Trade Preferences On Developing Country Exports<sup>1</sup>

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## **Abstract**

Since the early 1970s, developed countries have maintained nonreciprocal tariff preferences, such as the Generalized System of Preferences (GSP), for imports from developing countries. There is a lively debate on the role and future of such preferences, yet there is surprisingly little ex post evidence on their effects on recipients' export performance. We analyze a panel of GSP recipients from 1976 to 2000 and find that their export performance improves after they are removed from the United States GSP program. The results are robust to alternative export measures and to correction for the endogeneity of GSP status. We conclude that, even on their own terms, nonreciprocal preference programs have failed. Developing countries would be better served by full integration into the reciprocity-based world trade regime than by the prevailing form of nonreciprocal trade preferences.

JEL Classification: F13, F14, D72, D78, O19.

# 1 Introduction

Since the early 1970s, developed countries have granted preferential market access for certain exports from developing countries without demanding reciprocal liberalization in return. Three decades after they were first authorized by GATT members as a “temporary” measure, the Generalized System of Preferences (GSP) and similar nonreciprocal market access programs<sup>1</sup> remain a centerpiece of the developing world’s agenda in multilateral trade negotiations (Jackson [1997], Panagariya [2002a]). This is partly because developed “donor” states have unilaterally withdrawn preferences from several dozen developing countries over the past 15 years. Despite the attention such nonreciprocal preferences have received in policy circles, however, there is little comprehensive evidence on how removal of such preferences affects former recipients, which would say a great deal about the merits of nonreciprocal preferences in the first place.

This paper seeks to provide such evidence. Specifically, we examine how withdrawal of eligibility for the United States (US) GSP program affects a beneficiary country’s export performance. We use a dataset with 2880 annual observations on 138 countries, starting from the first year each country was eligible for the US program (i.e., 1976 for most countries) through 2000. Surprisingly, our results show that countries dropped from the nonrecipro-

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<sup>1</sup>The US also administers two Caribbean Basin programs, the Andean Trade Preference Act, and the African Growth and Opportunity Act. The European Union (EU) likewise maintains additional preferences under the Lome/Cotonou Convention for former colonies in Africa, the Caribbean, and the Pacific (ACP) and for all so-called Least Developed Countries under the Everything-But-Arms (EBA) Initiative. But GSP covered about 75 percent of all such preferential imports into the United States in 2000, and GSP eligibility is typically a prerequisite for these programs.

cal preference program subsequently have *better* export performance than those remaining eligible for preferences. These results are robust to four different indicators of export performance, and they control for other important determinants of exports, such as income, market size, GATT membership, and the occurrence of armed conflict. Most importantly, these findings hold even when we correct for endogeneity of a country's eligibility for GSP in the first place. The blame for the perverse consequences of GSP, we argue in conclusion, lies in both its unilateral nature (existing outside the GATT/WTO legal regime) and its nonreciprocal foundation. The former makes GSP act like a quota regime; the latter likewise dampens exports because it encourages recipient states to adopt higher trade barriers of their own.

The empirical literature on GSP and other preference programs emphasizes several points. First, most programs fail to cover certain sectors, such as apparel, in which developing countries have their greatest comparative advantage.<sup>2</sup> Second, export ceilings contained in the programs are often binding, sometimes by design and sometimes by anticipation by the recipients.<sup>3</sup> This also limits the effectiveness of such preferences. Third, the complexity of administrative rules (such as rules of origin) and the paperwork required to qualify for preferential treatment impose a large burden, especially on smaller and lesser developed countries.<sup>4</sup> Fourth, donors may substitute non-tariff barriers to cover GSP-eligible sectors.<sup>5</sup>

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<sup>2</sup>UNCTAD [1999, 2001], Ray [1987], Devault [1996]. For example, just 47 percent of US imports from GSP beneficiaries in 2000 were in tariff lines covered by the program (USITC [2002]).

<sup>3</sup>MacPhee and Rosenbaum [1989], Hoekman and Kostecki [2001], Finger and Winters [1998].

<sup>4</sup>UNCTAD [1999]

<sup>5</sup>Clark and Zarilli [1992]

The poor countries eligible for GSP typically lack the legal experience and resources to challenge such practices in GATT/WTO. Thus, most studies analyzing GSP conclude that it has underperformed.<sup>6</sup>

Our paper improves upon these studies in several dimensions. First, we use 15 years or more of additional data than most previous analyses of GSP. Second, we correct for endogeneity of the eligibility decisions, which by all accounts are clearly influenced by exports and other political variables. Third, also in contrast to prior work, we take advantage of the wave of GSP eligibility *withdrawals* in the past 15 years, which offer an excellent counterfactual (at least, when corrected for endogeneity) for evaluating program performance. This comparison – between countries still eligible and countries whose eligibility has been withdrawn – is also the most relevant for the current policy debate on how best to achieve development objectives within the multilateral trade regime.<sup>7</sup> In this regard, the evidence we present suggests strongly that GSP-style preferential market access policies do not serve the best interests of the recipients, given the way they are administered. Developing countries would be better served by adopting the full responsibilities, and thus rights, of fully participating members of the reciprocity-based, legally-binding global trade regime.

The next section presents the econometric model to be tested, followed by the description of the data and presentation of the empirical results. We conclude the paper with one possible explanation for these findings and some ideas for future research.

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<sup>6</sup>MacPhee and Oguledo [1991], Brown [1989], Grossman [1982], Sapir and Lundberg [1984].

<sup>7</sup>The alternative would be to compare pre-GSP to on-GSP performance, but that is now a purely historical question, since virtually every developing country has received nonreciprocal preferences at this point. The relevant policy question is whether such preferences should be continued.

## 2 Empirical Model

Our empirical strategy aims to analyze the impact of GSP eligibility on the export performance of developing countries. We emphasize that GSP eligibility is necessary (but not sufficient) for eligibility for the subsidiary US preference programs noted earlier. All countries in these programs are therefore in our dataset, and no country has been removed from one of those subsidiary programs yet. Thus our analysis is in practice testing the effect of all US unilateral programs simultaneously. To avoid confusion, however, we henceforth refer to just GSP, since all the US programs are based on the same economic and political principles.

We estimate several sets of equations, comparing countries still eligible to those withdrawn from the US GSP program. We assume that the function relating a country's characteristics to its export performance is given by

$$\begin{aligned} y_{i,t} = & \alpha + \beta_1 GSP_{i,t-1} + \beta_2 IMF_{i,t-1} + \beta_3 Trend_{t-1} + \beta_4 Growth_{i,t-1} \\ & + \beta_5 (\text{Log } GDP_{i,t-1}) + \beta_6 (\text{Log } Income_{i,t-1}) \\ & + \beta_7 (\text{Armed Conflict}_{i,t-1}) + \beta_8 GATT_{i,t-1} + \mu_i + \varepsilon_{i,t} \end{aligned} \quad (1)$$

The dependent variable  $y_{i,t}$  is one of the four export performance measures for country  $i$  in year  $t$ . These measures are (i) total goods and services exports as percent of GDP, (ii) total industrial exports as percent of GDP, (iii) the (natural log of the) real volume of bilateral exports to the US, (iv) the export growth rate expressed as the change in the (natural log of

the) real volume of exports from year  $t - 1$  to  $t$ . The term  $\mu_i$  represents the fixed-effect for country  $i$ . We lag all explanatory variables by one year as a first-cut method of addressing endogeneity. We set  $GSP_{i,t-1} = 1$  for each country's first year in the dataset. Note the sample for each country begins with the first year it is eligible for GSP, continuing in all cases through 2000. Detailed descriptions of the variables are in the next section.

There are alternative methods to evaluate the effects of nonreciprocal preferences. One would be to compare export performances during pre-GSP and GSP years for recipient countries. Or we could compare countries on GSP to countries never eligible for the program. However, there are severe problems with both approaches. First, a vast majority of developing countries were in the program from the very beginning, in 1976, and the detailed pre-1976 data for them is either not available or not reliable. Moreover, countries becoming eligible later, and those never in the program at all, are either members of OPEC or members of the communist bloc. In other words, as a clearly biased sample of developing countries, they are not an appropriate counterfactual. In any case, GSP withdrawal in practice forces a former beneficiary country to offer reciprocal trade barrier reductions of its own if it seeks market access abroad, just as regular GATT/WTO members do. Hence, by comparing export performances during and after the GSP "treatment," we are in effect comparing the impact of unilateralism (in market access concessions) with that of reciprocity.

We include country fixed effects in the panel regression. A total of 154 countries were on the GSP program at some point in time. However, a small group of microstates have very

few observations with nonmissing data on one or more of the dependent variables.<sup>8</sup> To keep the panel more balanced, we exclude these countries outright. We should note that the 138 countries left in our dataset account for more than 98% of all GSP countries in terms of total exports, GDP, and population.

The most critical issue in our empirical analysis is the endogeneity of a country's GSP status. As we mentioned earlier, the granting and removal of GSP eligibility is a unilateral and political decision of the United States authorities. First, the GSP statute specifically declares income level of a recipient developing country, one of the explanatory variables in our regression, as one of the main criteria for graduation. In other words, the US is more likely to maintain the GSP status of countries that have *failed* to improve their exports. Second, there is wide spread evidence that political forces influence GSP decisions. For example, Ozden and Reinhardt [2004] show that the likelihood of a country's removal is positively correlated with the aggregate exports growth in the previous year. This arises from the explicit participation of import competing sectors on the decision making process. These forces imply that export variable  $y$  has a negative effect on *GSP* and, thus, we need to directly address the endogeneity bias to correctly determine whether GSP affects the export performance of the recipient countries.

We use an instrumental variables approach to isolate the effect of GSP on export performance when GSP status itself is endogenous. We posit a GSP decision equation given

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<sup>8</sup>E.g., Tuvalu, Eritrea, Djibouti, Kiribati.

by

$$GSP_{i,t}^* = \mathbf{x}_{i,t}\boldsymbol{\gamma} + u_{i,t} \tag{2}$$

where the  $GSP_{i,t} = 1$  if  $GSP_{i,t}^* > 0$  and 0 otherwise.  $\mathbf{x}$  is a vector of instruments correlated with the error term in equation (1) but also correlated with GSP status. Since  $GSP$  is a discrete variable, we use a “treatment effects” instrumental variables approach instead of standard 2SLS, which would overstate the coefficient estimates. The treatment effects model assumes that  $\varepsilon_{i,t}$  and  $u_{i,t}$  are correlated; we estimate it using maximum likelihood. We use the fitted values of  $GSP_{i,t}$  (not  $GSP_{i,t-1}$  since we are controlling for simultaneous causation) from the first stage probit regression as optimal instruments for GSP status in equation (1). We report heteroscedasticity-consistent standard errors.

Maximizing explanatory power and exogeneity of the instrument(s) are the primary considerations here, as in all IV models. The best single predictor of GSP status, for our current purposes, is the amount of US bilateral foreign economic aid. Such aid is driven in large part by non-economic considerations. In practice, GSP is administered with the same diplomatic and foreign policy priorities in mind; it is a comparable tool in the foreign policy arsenal of the US government. Hence we should expect GSP beneficiary status to go along with such foreign economic aid. As a case in point, in the wake of the September 11th attacks, seeking to recruit Pakistan’s support for the invasion of Afghanistan, the US parceled out a bolus of foreign economic aid and restored full Pakistani GSP privileges (which were partially revoked some years before) simultaneously. Hence we use the natural log of such aid (expressed in real terms), lagged by one year, as our instrument for GSP status. Where we can do so

without yielding overidentification, to further the instrument’s explanatory power, we add  $GSP_{i,t-3}$  as an instrument as well. (Stronger instruments, it has been demonstrated, decrease IV bias.) The instruments we use pass the threshold of collective explanatory power in the first-stage probit, in any case, as per Staiger and Stock [1997].

### 3 Data and Variables

We test the impact of GSP status by comparing various measures of export performance of the countries dropped from the GSP program to those of the countries remaining eligible for unilateral preferences. We construct a dataset with one observation per year per independent developing country, from its first year as a United States beneficiary (minimum 1976, the start of the program) through 2000. Our definition of “independent” follows the official GSP manuals (e.g., USTR [1999]). We have a total of 138 countries and 2880 country-years in the panel, not counting observations with missing data in one or more of the analyses to follow.

Most developed countries implement their own preference programs and all of these should have an impact of the export performance on the recipient developing countries, weighted by the importance of the industrialized country as an export market for the individual country in question. The overall margin of preferences granted by different programs are similar to each other and different GSP programs are correlated in terms of eligibility decisions. For example, the US law clearly states that the President may base the decision to extend GSP status of a country on the decisions of other developed countries (USTR

[1999]). Our measurement of the GSP status, though it is the measure of the US program, is a close approximation of all unilateral preferences for recipient developing countries.

### 3.1 Key Variables

*GSP status.* The dummy variable  $GSP_{i,t}$  is 1 if country  $i$  was eligible for the United States GSP program in year  $t$ ; 0 otherwise.<sup>9</sup> This data is collected from USTR [1999] and Federal Register [*various*]. The data for a given country starts in the first year the country was eligible for GSP with 1976 as the earliest year. The US also administers several regional preference programs such as the Caribbean Basin Initiative, the Andean Trade Preferences, African Growth and Opportunity Act. These programs grant additional preferences (more product eligibility, less stringent administrative rules etc) and have GSP eligibility as a prerequisite. Therefore, we have  $GSP_{i,t} = 1$  for the countries for the years in which they are in these programs. If such programs are more trade promoting than GSP, our coefficient on the *GSP* will have an upward (positive) bias.

*Export Performance Measures.* We use various measures of export performance as a test of the strength of our results. Our first measure is aggregate exports divided by GDP, the most common method in the literature. The second one is industrial exports divided by GDP since the GSP programs are specifically designed to increase the industrial exports of developing countries. Agricultural products are generally excluded while other natural

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<sup>9</sup>The GSP eligibility of main exports of Pakistan and Argentina were removed during the late 1990s. This is coded as withdrawal of GSP.

resources (metals and minerals) already face low tariffs. Thus, if the GSP programs have any positive impact, it should reveal itself in the industrial exports measure. Also, we can isolate the effects of commodity price fluctuations by using this measure. Our third measure is the export volume to the United States since we use the United States GSP program as our main variable. Our final measure is the annual growth rate of aggregate exports from the previous year. Below we estimate models using these four dependent variables separately.

*Trend*<sup>10</sup>. Most developing countries have liberalized their trade policies and increased their exports significantly during the past two decades. More than 30 countries were dropped from the GSP program over time, especially in the 1990s. A positive correlation between GSP removal and increase in exports may result from this trend alone. To control for this phenomenon, we include the variable  $Trend_t$  in each regression. For the first two dependent variables, exports as a percentage of GDP and industrial exports as a percent of GDP, this is the mean of the relevant dependent variable across all countries in the dataset in year  $t$ . For the third dependent variable, natural log of exports to the US, the trend variable is the natural log of total exports from all currently and previously eligible countries in year  $t$ . For the fourth variable, the growth rate of a country' total exports, it is the growth rate of total exports from all currently and previously eligible countries.

*IMF conditionality*. Many developing countries experienced financial crises during this period, and, in some cases, sought assistance from the International Monetary Fund whose conditionality terms generally include trade liberalization, exchange rate depreciation and

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<sup>10</sup>We thank Jagdish Bhagwati for suggesting the inclusion of this trend variable.

other macroeconomic policies. To control for the potential impact on trade performance, we include the variable  $IMF_{i,t}$ , a dummy which takes the value of 1 if an ongoing IMF program is underway in country  $i$  in year  $t$  (Vreeland [2002])<sup>11</sup>, and 0 otherwise.

*Growth.* The business cycle often affects international trade through changes in exchange rates, demand for imports, supply of exports as well as shifts in trade policy. We control for real GDP growth through the variable  $Growth_{i,t}$  in our analyses (World Bank [2001]).

*Market Size.* Countries with larger economies tend to be more diversified and have lower levels of trade relative to their GDP. We introduce  $Log\ GDP_{i,t}$  (in constant 1995 US dollars) as a control for country  $i$ 's market size in year  $t$  (World Bank [2001]).

*Income.* Income level in a country is one of the most important determinants of trade flows as wealthier countries tend to trade more. High income is also a statistically significant predictor (though not the only one) of removal from GSP eligibility (Ozden and Reinhardt [2004]). Therefore, we control for per capita GDP (in constant 1995 US dollars) by using  $Log\ Income_{i,t}$  (World Bank [2001]).

*Armed Conflict.* An internal or external armed conflict can have a large negative effect on economic activity and trade. We control for this using the variable  $Armed\ Conflict_{i,t}$  which takes the value of 1 if there is a military conflict in country  $i$  in year  $t$ , and 0 otherwise.

*GATT membership.* Many developing countries became members of GATT/WTO during this period. Although Rose [2003] argues that GATT membership has no effect on bilateral

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<sup>11</sup>We thank Jim Vreeland for the most current update of this dataset on IMF programs.

trade between any two countries in a gravity model context, it might have an effect on the export performance of developing countries. The variable  $GATT_{i,t}$  takes the value 1 if country  $i$  is a GATT member in year  $t$ , and 0 otherwise.

## 4 Results

We now continue with the analysis of the impact of GSP status on the export performance of the recipient countries. The first dependent variable we consider is the *Total Exports/GDP* which is the most commonly used export performance measure. An increase in the total exports would be the most meaningful indicator of the positive impact from receiving unilateral preferences. The first column of Table 2 shows the results of estimating (1) by OLS with Newey-West standard errors robust to heteroscedasticity and first-order autocorrelation which are confirmed by diagnostics. Adjusted  $R^2$  is 0.91.

The coefficient for the *GSP* dummy variable is negative and significant, implying countries removed from GSP have 2.6% *higher exports/GDP* ratios which have a mean of 36.3% in our sample (Table 1). This result is counter to the objectives of the program. It shows that the beneficiary countries of the preference programs, as they are currently administered, perform better once they lose their eligibility. The coefficients for *Log GDP*, *Log Income* and *Growth* have the expected signs and are significant, implying larger economies export less while wealthier and faster growing countries export more as a percentage of their GDP. *Armed conflicts* have a negative and significant impact while *GATT* membership and pres-

ence of *IMF* programs have positive and significant effects on total exports. For example, countries involved in a military conflict have 2.5% lower exports/GDP ratio while the same ratio is 3.4% higher for GATT member countries. The coefficient of *Trend* is positive and significant reflecting spillover from global trade growth.

Our second set of estimation uses *Industrial Exports/GDP* as the dependent variable. As we stated earlier, there are several reasons for using this measure. First, most of the agricultural commodities are excluded from the GSP eligibility lists while metals, minerals and raw materials already face low tariffs when entering developed countries. In other words, most of the GSP eligible products with meaningful preference margins are industrial goods. GSP granting developed countries maintain that GSP programs aim to diversify the export base of recipient countries from raw materials towards industrial products. Second, there has been a general decline in the overall commodity prices over the last three decades while most of the removals from GSP occurred towards the end of this time frame. It is possible that the previous regression captures this spurious relationship. Finally, commodity prices exhibit high volatility. We would like to isolate our results from this effect.

Since industrial export data is not available for many countries, our sample size is more restricted. We have 2043 country-year observation for 90 countries. Column 2 in Table 2 presents the results from the OLS estimation. The coefficient of the *GSP* variable is negative and significant as it was in the previous case. Furthermore, the negative effect of *GSP* is much larger at 4.6% compared to the previous estimation. *Trend*, *Log Income*, *Armed Conflict*, and *Log GDP* coefficients have the predicted signs and are significant, as it is

the case with the total exports regression from the previous section. However, *GATT* and *Growth* coefficients have the opposite signs but are no longer significant. On the other hand, the *IMF* coefficient is positive but not significant.

The next regression has the (natural log of) aggregate exports to the United States as the dependent variable. As we stated earlier, most developed country GSP programs are highly correlated in terms of the eligible countries. However, if the preference programs of the US is to have any positive impact on the exports, we expect it to appear in the exports to the United States.

Column 3 in Table 2 displays the OLS results from a sample with 2248 country-year observations. Again, the coefficient for *GSP* is negative and significant. If we are to use this coefficient, removal of GSP is associated with a rather large 22.3% difference in exports to the US<sup>12</sup>. The mean value of the dependent variable is approximately \$200 million in our sample ( $e^{5.28}$ , Table 1) so the exports of an average country to the US increases by around \$45 million when removed from GSP. We should note that this estimation might be biased downward due to the declining commodity prices that we mentioned earlier. Most GSP eligible countries export commodities while the countries removed from the program export predominantly manufactured goods. Since most of the removals occurred towards the end of our time frame, our results might be affected by the relative price effect. Ideally we should test the effect of GSP on industrial exports to the US, but this data was not available for a large set of countries. Other coefficients have the expected signs. For example, *GATT*

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<sup>12</sup>This is  $1 - e^{-0.252}$  where  $-0.252$  is the coefficient of the *GSP* eligibility variable.

membership increases exports to the US by 24% ( $e^{0.214} - 1$ ) while presence of *Armed Conflict* decreases it by the same amount ( $1 - e^{-0.271}$ ). These are approximately the same levels we obtain from the first two estimations.

All of the previous estimations use different “level” variables related to exports as the dependent variable. In the next estimation, we use the growth rate of total exports - a “slope” variable. We aim to see if the countries dropped from GSP have different growth rates of their aggregate exports.

Column 4 presents the results from the OLS regressions using the whole sample. Since we are using the growth rate, we lose the first year’s observations and are left with 2471 country-years in the sample. *GSP* coefficient is again negative and significant and it implies that removal from GSP *adds* 4.8% to the average annual growth rate of exports of a beneficiary country. The mean value of the dependent variable in our sample is 3.5% but this exhibits very high variance (as seen in Table 1) probably due to country-specific shocks. Also, this a numerical average attaching equal weights to small and large developing countries. A more appropriate measure might be the growth rate of *total* exports of *all* countries (the *trend* variable) in the dataset over our sample period and the average for this variable is 8.5%. The result implies a rather significant negative effect of GSP eligibility relative to both of these measure. *Trend*, *Growth* and *GATT* have positive and significant effects on the growth rate of exports while *Log GDP* has a negative and significant effect.

This section sets the hardest test for the GSP effects so far and the results are among the most noteworthy we have. Combined with the previous sections, we can state that countries

dropped from GSP not only export more, they also increase their exports at a faster rate. Some of the other variables continue to be significant. We should single out the negative effect of *Armed Conflict* and the positive effect *GATT* variable on the export performance, as each have statistically significant coefficients in three of the four regressions.

## 4.1 Endogeneity of GSP

The next group of regressions addresses the potential endogeneity of GSP status as we discussed earlier. Granting and removal of GSP eligibility are political decisions of the US government and are influenced by the export performance of the countries in question. Table 3 presents the coefficients from the IV estimation with treatment effects using the four export performance variables as the dependent variables. We continue to have country fixed effects.

Column 1 displays the results for the variable *Total Exports/GDP*. We have the same pattern in terms of the significance of the coefficients as the OLS estimation. *GSP* coefficient is still significant and negative at a slightly higher level than the OLS estimate. It states that GSP recipients, on average, have 3.5% lower *exports/GDP* ratios. Since the mean value of this variable 36.3%, GSP eligible countries' total exports are almost 10% lower compared to the countries who lost their eligibility. *Trend*, *IMF*, *Growth*, *Log GDP*, *Log Income*, *Armed Conflict* and *GATT* all have significant coefficients with the expected signs and the coefficient values are not much different than the OLS estimates.

The dependent variables are *Industrial Exports/GDP*, *Natural log of Exports to the U.S.* and *Growth rate of Aggregate Exports* for Columns 2, 3 and 4, respectively. In all cases,

the *GSP* variable has a negative and significant coefficient with higher precision and higher value, compared to the OLS estimates. All other variables' coefficients generally have the same signs and significance as in the OLS cases. According to results in Column 2, GSP-eligible countries' industrial exports as a percentage of their GDP are 8.7% lower which is almost double the difference indicated by the OLS results in Table 2. Similarly, a beneficiary country's exports to the US are 27% lower than an identical country who lost eligibility (Column 3) and its total exports are growing at a rate that is 10% lower. Finally, we would like to point out that we also preformed all of these estimations with year-fixed effects instead of the trend variable and the results were qualitatively identical with marginal differences.

## 4.2 Restriction to Countries Losing GSP Eligibility

We should once again emphasize that the comparison in the above estimations is between countries removed from GSP, on one hand, and the same countries before removal *and* all countries that were never dropped, on the other. It is possible that countries that were dropped are inherently different from those that are not. Although we are using country fixed effects to control for such unobserved heterogeneity in country characteristics, it is possible that the dropped countries share some *unobserved* but *common* characteristics. Thus, in this section, we estimate the same equation using *only* the countries dropped from GSP.

The fist two columns of Table 4 report the results for the *Exports/GDP* variable. In the sample, we have a total 27 dropped countries and 610 country-year observations, of which

154 are “off-GSP.” The mean value for the *Exports/GDP* variable is 45.1% in the sample<sup>13</sup>. The *GSP* coefficient is negative and significant in both columns with a value of -5.4% in the OLS and -10.2% in the IV estimation. In other words, even the countries that were dropped had lower *Exports/GDP* ratios while they were on the GSP and their export/GDP ratios increased around 20% *after* losing their eligibility.

The last two columns of Table 4, are the OLS and IV estimation results for the *Export Growth Rate* variable. We have 547 country-years observations in the sample for 25 countries<sup>14</sup>. The average annual growth rate of *total* exports from all of the dropped 25 countries is 9.9% throughout out the sample. Recall that the average growth rate of exports from *all* countries in the sample is 8.5% which implies the dropped countries might be sharing certain characteristics as a group. The coefficient of the GSP variable has a value of -4.1% in the OLS and -6.9% in the IV estimation. Again, these are relatively large values compared to the group averages. Thus, even dropped countries’ export growth performance is significantly different during their GSP years compared to their years after losing eligibility.

## 5 Conclusion

Developing countries were relieved from many GATT obligations and received preferential market access from developing countries under the so-called Special and Differential Treat-

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<sup>13</sup>The mean value of *exports/GDP* for countries who are never dropped is 33.7%. The difference is an another indicator of the underperformance of the GSP eligible countries as well as the likelihood of better export performance leading to expulsion from GSP. This is the endogeneity that IV estimation aims to resolve.

<sup>14</sup>We exclude Burma and Laos which have fewer than 15 observations in this sample. This is the norm we followed in all other estimations, though their inclusion does not affect the results.

ment (SDT) programs over the last four decades for a variety of economic and political reasons. In the current round of multilateral negotiations, many developing countries continue to view SDT policies as one of the most important issues on their agenda.

The aim of this paper is to contribute to this debate and analyze the effectiveness of unilateral trade preferences. The empirical findings in the paper provide evidence against such programs. More specifically, we show that countries that stay eligible have lower export performance than countries which were removed. These results are quite robust. First, they hold for a variety of export performance measures, especially for export growth rate. Second, we include fixed effects to control for possible unobserved differences among different countries. Third, the results continue to hold when we correct for endogeneity of the GSP eligibility decision. Finally, the results hold when we compare the “on-GSP” and “after-GSP” performance of only the dropped countries.

The natural question at this point is what causes these surprising and perverse results. We explore these issues in detail in other papers but we should mention the main points in this section. The most convincing answer lies with the way these programs are administered. Unilateral preferences, although explicitly sanctioned by GATT/WTO, are outside its purview. Donor countries implement GSP and other preference programs “as they see fit” (GAO [1994]) with complete discretion over decisions on product coverage, country eligibility and preference margins. For example, according to the GSP statute in the US, a country may lose GSP eligibility in a given product if it exports over “the competitive need limit”<sup>15</sup>.

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<sup>15</sup>The limit is \$13 million per year per tariff line if the country has a market share bigger than 50% and

Furthermore, the statute allows explicit “feedback” from domestic lobby groups which leads to GSP status decisions being “essentially controlled by importers” (Wilson [1992]). With these explicit rules and implicit norms in place, GSP works like a “quota” regime where duty-free access is granted only for a limited level of exports (see Ozden & Reinhardt [2003] for a theoretical analysis of these effects). The current exporters earn a certain level of rents (Hoekman et. al [2003]), but they have no incentive to increase their outputs. In the end, the export sector does not expand since preferences are not guaranteed and may even be lost due to expansion. As Leidy [1994] states. “the prospect of protection .... can induce real changes in economic activity independent of whether actual barriers have been imposed. The mere absence of current barriers to trade in some sector, therefore, is not sufficient to assume, as is typically done in trade theory, that firm conduct and trade is free of policy-induced distortions.”

A second effect is that preferences may hinder liberalization of the recipient countries’ own trade policies as Ozden and Reinhardt [2003] demonstrate. This arises since unilateral preferences “remove the incentives that export industries have ... for opposing protectionist policies at home” (Hudec [1987]). The general equilibrium implication of higher import protection is lower exports.

On the other hand, countries dropped from GSP are generally required to reciprocally lower their trade barriers. The resources released from import competing sectors are employed by the export sectors, increasing their output. Although the developing countries

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\$100 million, otherwise.

may now pay tariffs on their exports, they do not face explicit or implicit quantitative restrictions. More importantly, the market access becomes guaranteed and predictable which encourages long term investment in the export sectors. These forces together lead to higher export performance after GSP status is revoked.

If increased trade and integration to the global markets are keys to economic development and growth, our results support Roessler [1998] and Panagariya [2002b] who state that the interests of the developing countries are not properly served with reliance on unilateral preference programs. Reciprocal market access arrangements protected through formal institutional frameworks such as the GATT/WTO are more likely to benefit the developing countries.

## 6 Tables

Table 1. Descriptive Statistics

<b>Dependent Variables</b>	Mean	Std. Dev	Min	Max.	Obs
Exports: % GDP	36.25	26.75	0.44	215.38	2625
Industrial Exports: % GDP	11.11	16.97	0	124.73	1983
Exports to US: Log (1995 \$s)	19.09	2.32	12.11	25.56	2248
Export Growth: $\Delta$ Log (Exports, 1995 \$s)	0.035	0.184	-1.201	1.074	2471
<b>Explanatory Variables</b>					
IMF	0.41	0.49	0	1	2625
Growth: % Real GDP	3.38	6.02	-50.20	71.19	2625
Log Income: Log (Per Capita GDP, 1995 \$s)	7.09	1.23	4.44	10.17	2625
Log GDP: Log (1995 \$s)	22.37	1.99	17.59	27.35	2625
Armed Conflict	0.27	0.45	0	1	2625
GATT	0.65	0.48	0	1	2625
<b>Trend Variables for...</b>					
Exports	36.38	2.51	30.82	41.47	2625
Industrial Exports	10.35	2.81	5.92	15.11	1983
Exports to US	11.98	0.52	10.74	12.81	2248
Export Growth	0.085	0.084	-0.078	0.321	2471

Table 2<sup>16</sup>. OLS Estimates of Export Performance Models

Dependent Var:	Exports <sub><i>i,t</i></sub>	Industrial Exports <sub><i>i,t</i></sub>	Exports to US <sub><i>i,t</i></sub>	Export Growth <sub><i>i,t</i></sub>
Unit:	% of GDP	% of GDP	ln Real Volume	Δ ln Real Volume
Years:	1976-2000	1976-1999	1976-2000	1976-2000
Constant	38.404* (15.703)	-17.898 (15.765)	8.600** (1.243)	2.491** (0.356)
GSP <sub><i>i,t-1</i></sub>	-2.584* (1.277)	-5.244** (1.547)	-0.252* (0.113)	-0.048** (0.017)
Trend <sub><i>t-1</i></sub>	0.315** (0.073)	0.858** (0.066)	0.124** (0.041)	0.423** (0.044)
IMF <sub><i>i,t-1</i></sub>	1.095** (0.365)	0.611 (0.317)	0.091* (0.038)	0.001 (0.010)
Growth <sub><i>i,t-1</i></sub>	0.091* (0.044)	-0.089** (0.029)	0.010** (0.003)	0.002* (0.001)
Log GDP <sub><i>i,t-1</i></sub>	-3.851** (0.969)	-2.104* (0.916)	0.032 (0.070)	-0.125** (0.024)
Log Income <sub><i>i,t-1</i></sub>	10.236** (1.588)	10.470** (1.599)	1.169** (0.121)	0.043 (0.036)
Armed Conflict <sub><i>i,t-1</i></sub>	-2.494** (0.560)	-0.803 (0.460)	-0.271** (0.053)	-0.020 (0.015)
GATT <sub><i>i,t-1</i></sub>	3.442** (0.736)	-0.029 (0.644)	0.214** (0.059)	0.049** (0.013)
<i>N</i> (Countries)	2625 (131)	1983 (87)	2248 (117)	2471 (120)
Freq(GSP <sub><i>i,t-1</i></sub> =0)	154	114	150	124
$\overline{R}^2$	0.904	0.848	0.915	0.080
<i>F</i>	17.91**	42.68**	57.32**	21.85**

<sup>16</sup>\* denotes two-tailed  $p < 0.05$ ; \*\* denotes two-tailed  $p < 0.01$ . Heteroscedastic-consistent robust SEs in parentheses. All models include country fixed effects. The model *F*s reported do not include the fixed effects.

Table 3<sup>17</sup>. IV Estimates of Export Performance Models

Dependent Var:	Exports <sub><i>i,t</i></sub>	Industrial Exports <sub><i>i,t</i></sub>	Exports to US <sub><i>i,t</i></sub>	Export Growth <sub><i>i,t</i></sub>
Unit:	% of GDP	% of GDP	ln Real Volume	Δ ln Real Volume
Years:	1976-2000	1976-1999	1976-2000	1976-2000
Constant	30.696* (15.421)	7.123 (19.120)	14.870** (1.383)	3.505** (0.419)
GSP <sub><i>i,t-1</i></sub>	-3.477* (1.579)	-7.116** (1.597)	-0.321* (0.136)	-0.214** (0.026)
Trend <sub><i>t-1</i></sub>	0.310** (0.071)	0.827** (0.064)	0.117** (0.040)	0.444** (0.043)
IMF <sub><i>i,t-1</i></sub>	1.139** (0.357)	0.681* (0.310)	0.097** (0.037)	0.007 (0.010)
Growth <sub><i>i,t-1</i></sub>	0.091* (0.042)	-0.088** (0.029)	0.010** (0.003)	0.002* (0.001)
Log GDP <sub><i>i,t-1</i></sub>	-3.958** (0.952)	-2.332** (0.900)	0.023 (0.067)	-0.129** (0.023)
Log Income <sub><i>i,t-1</i></sub>	10.205** (1.549)	10.294** (1.555)	1.163** (0.119)	0.030 (0.035)
Armed Conflict <sub><i>i,t-1</i></sub>	-2.509** (0.545)	-0.820 (0.445)	-0.272** (0.052)	-0.023 (0.015)
GATT <sub><i>i,t-1</i></sub>	3.449** (0.718)	0.036 (0.621)	0.214** (0.057)	0.049** (0.013)
Countries	131	87	117	120
<i>N</i>	2625	1983	2248	2471
Freq(GSP <sub><i>i,t</i></sub> =0)	171	126	168	140
Model $\chi^2$	151.01**	357.52**	499.57**	209.28**

<sup>17</sup>\* denotes two-tailed  $p < 0.05$ ; \*\* denotes two-tailed  $p < 0.01$ . Heteroscedastic-consistent robust SEs in parentheses. All models include country fixed effects. The model  $\chi^2$ s reported do not include the fixed effects.

Table 4<sup>18</sup>. OLS and IV Estimates for Countries Losing GSP Eligibility

Dependent Var: Unit:	Exports <sub><i>i,t</i></sub> % of GDP OLS	Exports <sub><i>i,t</i></sub> % of GDP IV	Export Growth <sub><i>i,t</i></sub> Δ ln Real Volume OLS	Export Growth <sub><i>i,t</i></sub> Δ ln Real Volume IV
Constant	171.648** (24.544)	134.096** (20.546)	2.102** (0.455)	1.850** (0.380)
GSP <sub><i>i,t</i></sub> { <i>t</i> or <i>t</i> -1}	-5.350** (1.304)	-10.174** (2.046)	-0.041* (0.019)	-0.069* (0.028)
Trend <sub><i>t</i>-1</sub>	0.198 (0.175)	0.006 (0.178)	0.521** (0.081)	0.539** (0.078)
IMF <sub><i>i,t</i>-1</sub>	1.073 (0.795)	1.774* (0.821)	0.007 (0.023)	0.011 (0.023)
Growth <sub><i>i,t</i>-1</sub>	-0.027 (0.086)	-0.006 (0.084)	0.000 (0.002)	0.000 (0.002)
Log GDP <sub><i>i,t</i>-1</sub>	-12.767** (1.562)	-13.678** (1.561)	-0.104** (0.031)	-0.109** (0.031)
Log Income <sub><i>i,t</i>-1</sub>	20.759** (2.845)	21.259** (2.795)	0.044 (0.050)	0.045 (0.049)
Armed Conflict <sub><i>i,t</i>-1</sub>	-6.152** (1.523)	-6.468** (1.480)	-0.021 (0.024)	-0.021 (0.023)
GATT <sub><i>i,t</i>-1</sub>	4.745* (2.222)	4.867* (2.157)	0.001 (0.022)	0.000 (0.021)
<i>N</i> (Countries)	610 (27)	610 (27)	547 (24)	547 (24)
Freq(GSP <sub><i>i,t</i></sub> { <i>t</i> or <i>t</i> -1}=0)	154	171	124	140
Model Test	<i>F</i> - 10.89**	$\chi^2$ - 97.88**	<i>F</i> - 10.98**	$\chi^2$ - 94.05**
$\bar{R}^2$	0.946	—	0.159	—

<sup>18</sup>\* denotes two-tailed  $p < 0.05$ ; \*\* denotes two-tailed  $p < 0.01$ . Heteroscedastic-consistent robust SEs in parentheses. All models include country fixed effects. The model *F*s and  $\chi^2$ s reported do not include the fixed effects.

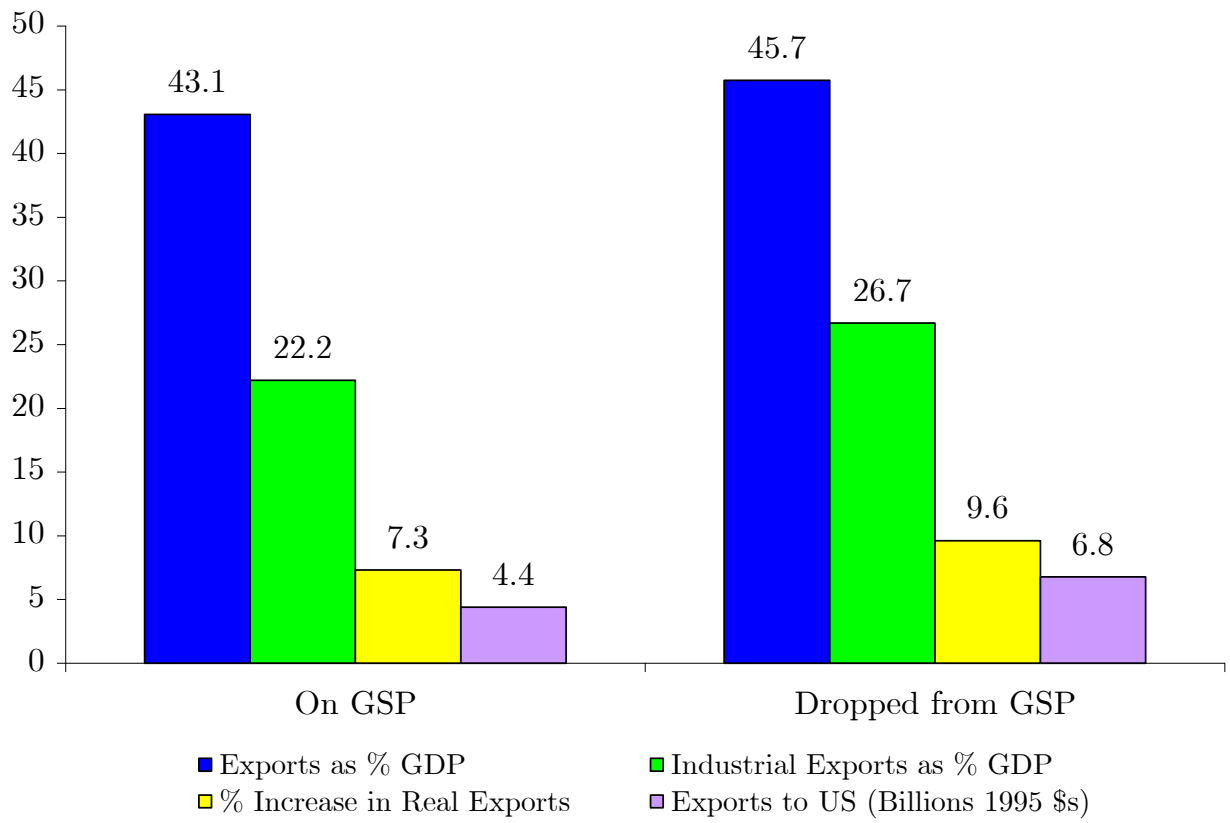


Figure 1. Average Annual Export Performance Indicators, Five Years Before and After GSP Withdrawal, 30 Dropped Countries

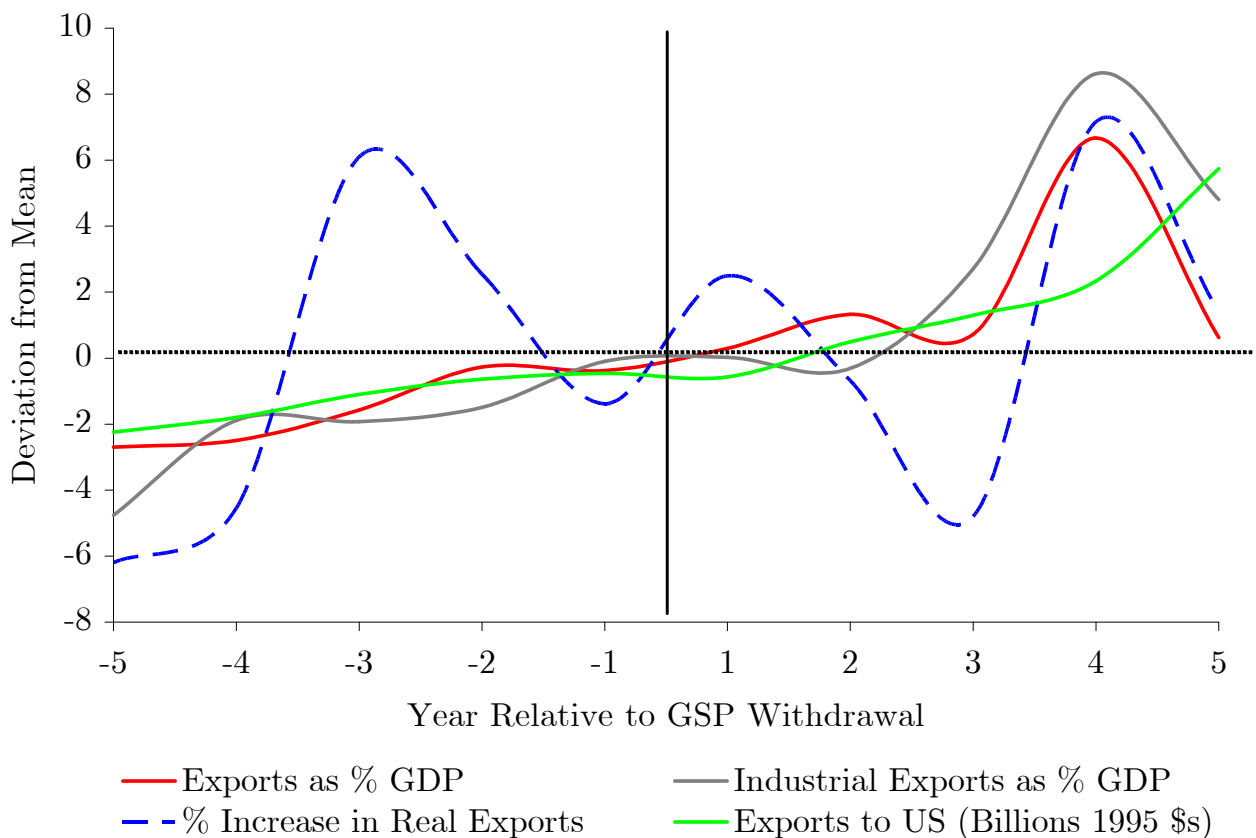


Figure 2. Average Export Performance for the Years Surrounding GSP Withdrawal, 30 Dropped Countries

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