THE POTENTIAL TO INCREASE EXPORTS UNDER THE GENERAL SYSTEM OF PREFERENCES

Patricia Mueller

David Riker

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Abstract

We document the partial utilization of the U.S. General System of Preferences program by exporters in Brazil, Egypt, and Thailand in 2020. Then we use tariff line-level econometric models to estimate the potential expansion of the exports of these beneficiary developing countries if the program were fully utilized.

Patricia Mueller, Research Division
patricia.mueller@usitc.gov

David Riker, Research Division
david.riker@usitc.gov

1 Introduction

The U.S. General System of Preferences (GSP) program allows for duty-free importation of certain products from beneficiary developing countries. There are a number of statutory and discretionary factors that exclude certain countries and products from the preference program.[1] However, even when products and countries are GSP-eligible, the program is not always fully utilized. Imports that do not utilize GSP or other preference programs are subject to higher tariffs, so partial utilization limits the export opportunities of the beneficiary developing countries.

Reasons for partial utilization of the GSP program might include rules of origin requirements, small preference margins, the availability of other preference programs, inadequate information, inadequate scale of trade to cover administrative costs, and trade policy uncertainty.[2] Policy levers that might increase GSP utilization include less stringent rules of origin, greater certainty about the permanence of program eligibility, and possibly some form of technical assistance.

In Section 2, we document the partial utilization of the GSP program by exporters in three developing countries: Brazil, Egypt, and Thailand. We find that there were hundreds of GSP-eligible tariff lines with duty-paid imports from the three countries in 2020, accounting for a combined $91.3 million in duties paid. Average duty rates on these tariff lines ranged from 3.2% on imports from Thailand to 4.3% on imports from Egypt.

Then, in Section 3, we use econometric models at the level of individual tariff lines to estimate the potential expansion of the exports of these beneficiary countries if the GSP program were fully utilized. Our calculation of the potential increase in exports does not assess whether it is feasible to resolve current barriers to full utilization – it simply quantifies

[1] Blanchard and Hakobyan (2015) discusses the program and examines these exclusions in principle and in practice.

[2] Most of these reasons are discussed in Hakobyan (2015).

the potential increase in exports *if* the preferences were fully utilized for each GSP-eligible tariff line.

We find that of the three countries, Thailand stands to gain the most from increasing its utilization of GSP, at least for the ten tariff lines that we model, with an estimated $151.9 million of potential gains from full utilization. Three tariff lines from Harmonized System (HS) chapter 85 ("Electric machinery, Etc.") account for $77.9 million of the estimated potential gains available to Thailand. For the ten tariff lines modeled for Brazil, there is an estimated $78.5 million of potential gains from full GSP utilization. Four of the ten tariff lines we model for Brazil are aluminum products, two plate products and two foil products. Together they account for approximately 40% of the estimated potential gains from full utilization. Model estimates for Egypt's ten tariff lines suggest Egypt could gain up to $1.4 million from full utilization of preferences, with the gains spread out across nine different HS chapters.

There are several econometric studies in the economics literature that address the issues of GSP utilization and the trade effects of GSP. For example, Hakobyan (2015) examines GSP utilization between 1997 and 2008. She focuses on the determinants of partial utilization rather than the impact of partial utilization on trade. She finds that approximately 40% of GSP-eligible U.S. imports did not claim the preferences, and that lower local content was a significant determinant of lower utilization, suggesting the importance of rules of origin requirements. Hakobyan (2020) estimates the impact of GSP on trade using 2010–2012 data. In this study, Hakobyan focuses on the lapse in GSP in 2011 rather than partial utilization of the program throughout the period. She finds that exports from beneficiary countries declined by 3% on average during the expiration, even though the duties that were collected were ultimately refunded after GSP was re-authorized. Neither of these papers quantify the potential export expansion from full utilization of the GSP program, which is this focus of our paper. Another difference is that we use more recent data disaggregated at the level of

individual tariff lines.

2 Pattern of US GSP Utilization by Country

To measure GSP utilization, we analyze detailed data that are publicly available from the USITC/DOC Trade Dataweb. The data include the customs value, landed duty-paid value, and duties paid on imports at the level of individual tariff lines and country of origin.[3] The data on GSP eligibility by tariff line are from the USITC Tariff Database.[4]

In 2020, there were a total of 1,302 GSP-eligible tariff lines with imports from Brazil, 295 lines from Egypt, and 1,030 lines from Thailand.[5] Table 1 reports the combined customs value of these imports and the value of duties paid by preference program.[6] Of these three countries, Thailand recorded the largest customs value of imports that entered under the GSP program, followed by Brazil.

Table 2 reports the number of GSP-eligible tariff lines with imports that did not claim any preference program for each of the three countries in 2020, along with the share of these no-program imports in the total customs values in these tariff lines, and the average tariff rate paid on these imports. The countries' average tariff rates on these imports ranged from 3.2% to 4.3%. The no-program share of the customs value for the GSP-eligible tariff lines indicates partial utilization of the program.

These measures of partial utilization are not calculated the same as the 40% GSP non-utilization rates reported in Hakobyan (2015). The greatest difference is that Hakobyan includes imports that enter under alternative preference programs and free trade agreements in her definition of non-utilization of GSP, while these are not included in our definition

[3] `https://dataweb.usitc.gov/.`

[4] `https://dataweb.usitc.gov/tariff/annual/.`

[5] U.S. imports from these three developed countries in tariff lines with "A" in the program code and most with A* were eligible for duty-free treatment under GSP in 2020.

[6] The Civil Aircraft and Pharmaceuticals import programs are alternative, non-GSP preference programs available for imports of certain products.

Table 1: GSP-Eligible Imports in 2020

Preference Program by Country	**Customs Value ($)**	**Duties Paid ($)**
Brazil		
GSP	2,085,658,624	0
Civil Aircraft	52,685	0
Pharmaceuticals	14,628,586	0
No Program	690,415,611	26,979,476
Egypt		
GSP	188,681,104	0
Civil Aircraft	94,023	0
No Program	16,096,514	687,906
Thailand		
GSP	3,129,671,936	0
Civil Aircraft	1,455,735	0
Pharmaceuticals	60,951	0
No Program	1,983,118,976	63,595,420

Table 2: No-Program Imports in 2020

Beneficiary Country	**Number of GSP-Eligible Tariff Lines with No-Program Imports**	**Share of Customs Value** (%)	**Average Value Rate** (%)
Brazil	969	24.3	3.9
Egypt	156	7.8	4.3
Thailand	838	38.8	3.2

of no-program imports. The imports entering under alternative preference programs are not utilizing GSP, but they are still entering duty free, so there would probably not be an expansion of imports if they were to switch to GSP. For this reason, we focus on no-program imports in our assessment of potential export expansion from full utilization of the program. The second difference is that her data cover a much earlier time period, 1997-2008, while we focus on trade data for 2020. If we apply a calculation similar to Hakobyan's to 2020, we estimate GSP-preference non-utilization rates equal to 25.3% for Brazil, 7.9% for Egypt, and 38.8% for Thailand.[7]

3 Estimated Potential Economic Benefits

If it were feasible to increase GSP utilization, how much would this expand the exports of the three beneficiary countries? The status quo utilization rates and the average tariff rate paid on non-program GSP-eligible imports in table 2 indicate that there is room for expansion, but they do not directly answer this question. The increase in exports from full utilization of the program is a counter-factual outcome, and so we simulate this increase econometric models for the specific tariff lines.

3.1 Modeling Trade Effects

Each model assumes a constant elasticity of substitution (CES) demand for U.S. imports, with an elasticity of substitution between products equal to one and an elasticity of substitution between varieties of the same product j from different source countries equal to σ_j. Equation (1) represents the percent change in the value of exports by country c of product j into port district d in import program k in year t.

[7]These national average rates are based on table 1. Section 3.3 reports the rates of GSP preference non-utilization for the ten HTS 8-digit product codes with the highest value of duties paid in 2020. Results by country are in table 4 for Brazil, table 5 for Egypt, and table 6 for Thailand.

$$\hat{v}_{jcdkt} = (\sigma_j \; - \; 1)\, \hat{P}_{jdt} \; + \; (1 \; - \; \sigma_j) \; \hat{p}_{jct} \; - \; \sigma_j \; \hat{f}_{jcdkt} \tag{1}$$

The notation $\hat{x}$ indicates the percent change in each variable x. v_{jcdkt} is the customs value of the imports. It is the value of the imports before the addition international freight charges and tariffs. P_{jdt} is the price index for product j entering port district d in the destination market (the United States). p_{jct} is the producer price of imports from c, and f_{jcdkt} is the trade cost factor, which includes international freight costs and tariffs.

3.2 Econometric Estimation

Econometric estimation of the elasticity of substitution for individual tariff lines is based on the trade cost method in Riker (2020), modified to distinguish between imports by preference program, as well as country of origin and district of import. We estimate a separate model for each relevant tariff line j, using a line-specific panel of annual values for 2018–20. Equation (2) is the econometric specification.

$$ln \; v_{jcdkt} = \alpha_{jckt} \; + \; \beta_{jdt} \; - \; \sigma_j \; ln \; f_{jcdkt} \; + \; \epsilon_{jcdkt} \tag{2}$$

f_{jcdkt} is calculated as the ratio of the landed duty-paid value to the customs value of imports of product j from country c entering port district d in import program k in year t. ϵ_{jcdt} is the error term of the model. Supply factors, which enter equation (1) through prices, are absorbed in the product-country-program-year fixed effect α_{jckt}. The elasticity of substitution, σ_j, is identified from variation in f_{jcdkt} across districts, within the same product, country, program, and year. Since tariff treatment does not vary within a specific product, country, program, and year combination, this variation should reflect only freight costs, and it should not be subject to concerns about policy endogeneity that are often raised in the context of gravity models of trade policy.

We estimated the parameters of the model using OLS.[8] For each of the countries, we estimated the value of σ_j for the ten GSP-eligible tariff lines with the largest value of duties on imports. Table 3 reports the point estimates and standard errors of the elasticity of substitution parameters. For the diverse set of products in this table, the elasticity of substitution estimates range from 1.40 to 11.29.

3.3 Potential Increase in Exports

Finally, we calculate the increase in exports from full utilization of the GSP preferences as follows. We simulate the change in the customs value of exports assuming that $\hat{p}_{jt} = \hat{f}_{jt} = 0$. We assume full pass-through (as in perfect competition or monopolistic competition models with CES preferences), and we assume that the share of the developing country's exports in total US market for products in the specific tariff line is very small, so $\hat{P}_{jt} \approx 0$.[9] Equation (3) represents potential export revenues not realized due to the partial GSP utilization for tariff line j, country c, and year t.

$$\Delta v_{jct} = -\sigma_j \ \hat{\tau}_{jct} \ v_{jct} \tag{3}$$

The results are presented in a separate table for each country below. For each tariff line, we report the value of duties paid, the tariff rate on imports that did not enter under the program, the preference non-utilization rate (i.e., the share of the customs value of imports within the GSP-eligible tariff line that do not enter under the GSP program), and the dollar value of the potential increase in exports from full utilization. The tariff lines are sorted in descending order by the dollar value of duties paid. The dollar value of the estimated potential increase in exports with full utilization has a similar ranking. Potential export gains are generally larger for products with higher non-program tariff rates and lower preference

[8] We also estimated the parameters using negative binomial regression models, and the results were similar.

[9] If $\hat{P}_{jt} < 0$, then the calculation in (3) will be an upper bound on the absolute magnitude of the change.

Table 3: Elasticity of Substitution Estimates and Standard Errors

Brazil			
HTS Code	Product Description	Elasticity	Standard Error
2931.90.90	Organic-Inorganic Compounds	7.72	1.14
4418.20.80	Doors of Wood	4.41	0.63
7606.12.30	Aluminum Plate, Not Clad	5.97	0.74
7606.12.60	Aluminum Plate, Clad	5.05	0.90
7607.11.30	Aluminum Foil, Less Thick	4.52	0.74
7607.11.60	Aluminum Foil, Thicker	5.43	0.87
8207.50.20	Drilling Tools	9.00	1.47
8481.80.90	Taps and Valves	9.05	1.10
8501.53.80	AC Motors	6.26	0.90
9609.10.00	Pencils and Crayons	10.50	1.29
Egypt			
HTS Code	Product Description	Elasticity	Standard Error
1211.90.40	Mint Leaves	1.40	1.32
1806.90.90	Chocolate	6.25	0.63
2005.70.25	Green Olives	4.52	1.95
2102.10.00	Active Yeasts	6.28	1.36
3923.90.00	Plastic Packaging	2.41	0.19
4202.92.31	Travel and Sports Bags	4.11	0.39
7019.31.00	Glass Fiber Mats	2.52	1.04
7019.39.50	Glass Fiber Webs	1.72	1.06
7606.12.30	Aluminum Plate, Not Clad	5.97	0.74
8544.30.00	Wiring Sets	6.61	0.79
Thailand			
HTS Code	Product Description	Elasticity	Standard Error
2008.99.91	Bean Cakes	4.02	0.94
3926.90.99	Plastic Articles	3.07	0.21
6307.90.98	National Flags	4.32	0.28
7318.15.80	Screws and Bolts	3.25	0.49
8415.90.80	Air Conditioning Parts	5.58	0.54
8502.20.00	Electric Generating Sets	11.29	5.21
8516.71.00	Coffee and Tea Makers	10.36	1.91
8537.10.91	Electrical Boards	10.79	0.97
8708.29.50	Motor Vehicle Bodies	2.73	0.35
9002.11.90	Lenses and Parts	10.44	2.13

Table 4: Tariff Line Level Analysis, Brazil 2020

HTS Code	Duties Paid ($)	Non-Program Tariff Rate (%)	Preference Non-Utilization Rate (%)	Potential Increase in Exports with Full Utilization ($)
7607.11.60	4,141,785	15.2	71.7	19,518,204
8481.80.90	1,493,324	1.9	97.5	13,254,934
9609.10.00	1,271,972	5.4	39.2	12,676,646
7606.12.30	1,218,322	11.9	52.6	6,502,792
8501.53.80	1,031,766	2.8	45.1	6,286,296
8207.50.20	820,169	5.0	76.0	7,027,525
7607.11.30	706,563	12.3	39.9	2,841,818
2931.90.90	684,796	3.7	100.0	5,099,932
4418.20.80	632,604	4.8	8.9	2,661,673
7606.12.60	611,876	16.5	100.0	2,651,562

non-utilization rates.

Table 4 reports results for the ten GSP-eligible tariff lines with the largest value of duties on imports from Brazil in 2020. Together, these ten tariff lines account for 46.8% of duties paid on GSP-eligible imports. Across these top ten tariff lines, the total dollar value of potential benefits sums to $78.5 million. Four of the GSP-eligible products lines for which Brazil paid the most duties in 2020 are aluminum products, two aluminum plate products and two aluminum foil products. These account for approximately 40% of the estimated potential gains from full utilization of the preferences in table 4.

Table 5 reports results for the ten GSP-eligible tariff lines with the largest value of duties on imports from Egypt in 2020. Together, these tariff lines account for 66.7% of duties paid on GSP-eligible imports. Across the top ten tariff lines for Egypt, the total dollar value of potential benefits sums to $1.4 million. Egypt's potential gains are the smallest of the three countries modeled, in terms of total dollar value. The top ten products on which Egypt paid duties in 2020 were spread out across nine different HS chapters.

Table 6 reports results for the ten GSP-eligible tariff lines with the largest value of

Table 5: Tariff Line Level Analysis, Egypt 2020

HTS Code	Duties Paid ($)	Non-Program Tariff Rate (%)	Preference Non-Utilization Rate (%)	Potential Increase in Exports with Full Utilization ($)
7019.39.50	206,649	4.9	94.3	339,695
2005.70.25	63,190	2.6	81.3	278,361
7606.12.30	35,705	12.9	6.7	188,973
1806.90.90	29,249	6.0	100.0	172,592
1211.90.40	28,638	4.8	59.3	38,332
8544.30.00	21,853	5.0	93.8	137,588
2102.10.00	20,128	6.4	31.6	118,721
7019.31.00	19,030	4.3	89.0	46,019
3923.90.00	18,175	3.0	78.7	42,561
4202.92.31	15,983	17.6	97.1	55,908

duties on imports from Thailand in 2020. Together, these tariff lines account for 36.1% of duties paid on GSP-eligible imports. Across the top ten tariff lines for Thailand, the total dollar value of potential benefits sums to $151.9 million. Of the three countries we examine, Thailand stands to gain the most from increasing its utilization of GSP for the ten tariff lines modeled. There is diversity in the products covered by the modeling, with the three lines from Harmonized System (HS) chapter 85 ("Electric machinery, Etc.") accounting for $77.9 million of the estimated potential gains.

Table 6: Tariff Line Level Analysis, Thailand 2020

HTS Code	Duties Paid ($)	Non-Program Tariff Rate (%)	Preference Non-Utilization Rate (%)	Potential Increase in Exports with Full Utilization ($)
8537.10.91	3,948,878	2.7	85.3	41,474,476
6307.90.98	3,913,908	7.0	92.3	15,817,282
8415.90.80	3,644,292	1.4	56.6	20,058,806
7318.15.80	1,861,818	8.5	54.1	5,570,297
9002.11.90	1,851,383	2.3	99.8	18,895,030
8502.20.00	1,787,504	2.0	100.0	19,787,160
8516.71.00	1,631,284	1.5	100.0	16,664,474
2008.99.91	1,539,025	6.0	68.8	5,840,195
3926.90.99	1,397,382	5.3	47.3	4,070,250
8708.29.50	1,382,414	2.5	58.7	3,677,677

4 Conclusions

We conclude by discussing the limitations of the model and potential extensions. These calculations can be easily extended to other tariff lines, other beneficiary countries, and other years. We could relax the simplifying assumption that $\hat{P}_{jt} = 0$ if we had information on domestic shipments and could calculate import penetration rates; however, it is difficult to collect this non-trade information at the level of the individual tariff lines. It is probably only feasible for a limited number of tariff lines, so this does not appear to be a practical alternative for our simplifying assumption.

The greatest limitation of our analysis is that it does not determine which tariff lines with partial utilization *could* more fully utilize the GSP program, and *how*. For some tariff lines, the preferences are not utilized because the supply chain does not meet the local content requirements in the rules of origin, and restructuring supply chains to meet the requirements may be infeasible. For others, greater program utilization might be achievable through outreach and education. Our calculation of the potential increase in exports does not assess whether it is feasible to resolve current barriers to full utilization. Instead, it quantifies the

potential increase in exports if preferences were fully utilized for the specific tariff line.

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