

EXECUTIVE SUMMARY

Introduction

Since the introduction of the Sales and Use Tax (SUT) in 2006, there has been concern with its effectiveness in raising the amount of revenue it was designed to collect. Some early estimates of the SUT's collection rate, defined as the ratio of actual revenues to potential revenues, were disappointingly low: only about 52% of the potential revenues from retail sales were being realized. Other estimates were higher, but proved to be sensitive to the source of the data used to measure the tax base. Over the years, the issue became a focus of controversy, due to the diversity of collection rates estimated by different analysts using different data sets and assumptions.

In October 2015, the Puerto Rico Treasury Department (Hacienda) commissioned a task force of economists to devise a methodology for a consistent measure of the SUT collection rate. Conceptually, the task is straightforward: apply the statutory SUT rate to the intended tax base to calculate potential revenue, then divide actual revenues by potential revenues. However, the task force quickly found that it is very difficult to identify the SUT base using existing data sets in Puerto Rico. Some sources presented issues with the quality of the data, others were not available with the frequency and timeliness required for a quarterly measurement. The task force needed two months to find an acceptable approach to the data problem and produce a reliable estimate of the collection rate.

This report presents the methodology, data sources and results of the calculations carried out by the task force. A more lasting output of the effort is a procedure to produce a regular calculation of the collection rate at Hacienda on a quarterly basis.

The SUT on consumer goods

After evaluating various sets of data on household expenditures on final consumer goods, the task force decided to use the following approach:

1. Identify SUT-taxable items in a highly disaggregated list of merchandise imports that are currently paying the tax at the port of entry in Puerto Rico. This provides a highly reliable and readily available list of taxable consumer goods imports by NAICS code.
2. Apply wholesale trade average markups by NAICS code to the taxable imports list to obtain a list of wholesale values for taxable items.
3. Apply retail trade average markups by NAICS code to the list of wholesale values for taxable items to obtain a list of retail values for taxable items.

The last of these lists is the tax base for imported consumer goods at the final consumer level.

The steps above may be summarized as follows:

SUT Tax Base for Imported Consumer Goods =

Value of taxable imports x (1 + wholesale markup) x (1 + retail markup)

The wholesale and retail markups by NAICS code were obtained from the Almanac of Business and Industrial Financial Ratios, 2013.

The tax base obtained in the manner described above was adjusted by subtracting the estimated government consumption, which was set at 5% of the total using data from the Economic Census of 2012. Another adjustment was to add the value of taxable consumer goods produced locally to the value of imported taxable consumer goods to arrive at a final total value for consumer merchandise taxed at the retail level.

Thus, the SUT Tax base for consumer goods for 2015 was estimated at \$24,276 million. The same procedure was applied to data for 2012, 2013 and 2014.

The next step is to calculate the potential revenues from a fully effective SUT, multiplying the tax base by the statutory rate. For the year 2015, the statutory rate¹ was 6.0% (excluding the rate applied by municipalities), which resulted in potential revenues of \$1,457 million = $.06 \times \$24,276$ million.

The final step is to divide actual SUT revenues by potential revenues to obtain the collection rate. Actual revenues attributable to imported consumer goods sold at the retail level were \$1,083 million in 2015, resulting in a collection rate of **74.3%** = $\$1,083 \text{ million} / \$1,457 \text{ million}$.

¹ In previous years analysed, the statutory tax rate was calculated at 5.5%.

The following table shows the calculation of the collection rate on consumer goods for fiscal years 2012 through 2015.

	2012	2013	2014	2015
Taxable Imports	\$12,805 m	\$12,578 m	\$12,206 m	\$12,469 m
Wholesale Markup	1.28	1.28	1.28	1.28
Wholesale Value of Goods	\$16,411 m	\$16,111 m	\$15,583 m	\$15,964 m
Retail Markup	1.47	1.47	1.47	1.47
Retail Value of Goods	\$23,854 m	\$23,426 m	\$22,716 m	\$23,228 m
Less: Government Consumption	\$1,193 m	\$1,171 m	\$1,136 m	\$1,161 m
TAX BASE Imported Goods	\$22,662 m	\$22,255 m	\$21,580 m	\$22,067 m
Plus: Retail Value Local Production	\$1,401 m	\$1,331 m	\$1,267 m	\$2,209 m
TAX BASE Consumer Goods	\$24,063 m	\$23,585 m	\$22,847 m	\$24,276 m
Potential revenues	\$1,323 m	\$1,297 m	\$1,257 m	\$1,457 m
Actual Revenues	\$838 m	\$875	\$917 m	\$1,083 m
Collection rate	63.3%	67.4%	73.0%	74.3%

The SUT on services

The task force was unable to find a direct data source for taxable services that was reliable and readily available. However, via econometric analysis it was possible to identify a systematic and stable relationship between SUT collections by establishment for consumer goods and SUT collections by establishment for services. The latter was estimated at 58% of the former.

Using this relationship, the task force was able to estimate a tax base for services based on the tax base for tangible goods, as follows:

$$\text{SUT Tax Base Services} = .58 \times \text{SUT Tax Base Imported Goods}$$

The following table summarizes the calculation of the collection rate for services.

CONCEPT	2012	2013	2014	2015
Tax Base	\$13,144 m	\$12,908 m	\$12,516 m	\$12,799 m
Potential Revenues	\$723 m	\$710m	\$688 m	\$768 m
Actual Revenues	\$301 m	\$288 m	\$325 m	\$334 m
Collection Rate	41.6%	40.5%	47.2%	43.5%

Not surprisingly, the collection rate on services is significantly lower than the collection rate on tangible consumer goods. Part of the explanation lies in the fact that the SUT on tangible consumer goods is initially collected at the port of entry into the island, which facilitates collection and enforcement by Hacienda.

The Overall Collection Rate

The final stage in the Task Force's work was to combine the data on goods and the data on services to calculate an overall collection rate. The results are summarized in the following table:

CONCEPT	2012	2013	2014	2015
Tax Base Goods	\$24,063 m	\$23,585m	\$22,847m	\$24,276m
Tax Base Services	\$13,144 m	\$12,908 m	\$12,516 m	\$12,799m
Total Tax Base	\$37,206 m	\$36,493 m	\$35,363 m	\$37,075m
Potential Revenues	\$2,046 m	\$2,007 m	\$1,945 m	\$2,224 m
Actual Revenues	\$1,139m	\$1,162m	\$ 1,242 m	\$1,417m
Collection Rate	55.6%	57.9%	63.9%	63.7%

The results indicate that there is room for improvement in collecting the SUT, especially in services. It should be noted, however, that no sales tax can collect 100% of its potential revenues, due to the fact that there are diminishing returns and increasing costs to collection efforts. Thus, the optimal collection rate is probably in the order of 85%.

It seems feasible to raise the collection rate on goods to 75% in the near future and then aim for a sustained increased to reach 80% - 85% within ten years. Raising the collection rate on services

will be more of a challenge for Hacienda, but resources can be directed increasingly to that effort as the collection rate for goods stabilizes at an acceptable level.

Quarterly Measures

The methodology designed by the task force can and will be used to measure the collection rate on a quarterly basis, because the data are available with a monthly or at least a quarterly frequency. The goal is for Hacienda to track the collection rate with as short a lag as possible and to keep the community aware of trends in the SUT's performance. This will continue garnering support from the citizenship for Hacienda's enforcement campaigns and will help to make educated consumers partners of Hacienda in detecting and fighting evasion.