

# Alternative Ways of Financing Healthcare Systems: Investigating the Fiscal Impact of Health Taxes in Greece

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## Background & Objective

As health systems are under constant cost constraints, the search for alternative sources of funding is a continuous challenge. Excise duties on harmful products with proven negative effects on the general population's health can - under certain circumstances - be an alternative solution to the wider effort of finding alternative resources to finance health systems, while also acting as an incentive for consumers to adopt a more balanced diet and a healthier lifestyle. The present study aimed to assess the expected impact of health taxes on cigarettes and sugar-sweetened beverages (SSBs) on fiscal revenue and on total consumption in Greece.

## Methods

Data on the current total consumption in Greece were sought from a relevant study for SSBs [1], while for cigarettes, data were derived from the international literature [2] (Table 1). Estimates on the current prices were sought from the most recent price data available from the relevant literature [1,3]. The expected changes in fiscal revenues were estimated with the typical elasticity formula. The data concerning price elasticities were sought from a relevant Greek-specific study regarding cigarettes [4] and from the international literature for SSBs [5]. The base case scenario investigated the application of a 20% taxation on the current prices of cigarettes and SSBs, while two alternative scenarios of 25% and 30% taxation on the mean current price were analysed.

## Results

The base case scenario of a 20% health tax on the mean current price of cigarettes, estimated a reduction in consumption by 62.7 million packets, while achieving an increase of fiscal revenue by 371,596,100.35€ per year.

For sugar-sweetened beverages, a 20% health tax is expected to lead to reduced consumption by 133.3 million liters while producing 199,402,112.00€ additional revenue.

The alternative scenarios of 25% and 30% health taxes indicate increased revenues of 447,891,347.79€ and 517,964,322.08€ for cigarettes and 227,585,800.50€ and 247,102,752.00€ for sugar-sweetened beverages, respectively.

In all scenarios, the increase in revenue is accompanied by reduction in consumption for both cigarettes and sugar-sweetened beverages. The results for the primary analysis are presented in Table 2.

The bootstrapping analysis for both cigarettes and SSBs revealed that, in the majority of iterations, the economic impact of an additional excise duty is expected to have a significantly positive impact on tax revenues (Figure 1, Figure 2).

Table 1. Baseline data of the analysis

	Price elasticity	Current average price (€)	Current excise duty (€)	Current consumption
Cigarettes	-0.441	4.19	2.74	711,297,071 packs
SSBs	-1.29	2.6	0.00	516,800,000 litres

Table 2. Results of the primary analysis for cigarettes and SSBs (base case and alternative scenarios)

	% of excise duty on current price	Change in consumption	Estimated impact in tax revenue (€)
Cigarettes	20%	- 62,736,401 packs	+ 371,596,100.35
	25%	- 78,383,070 packs	+ 447,891,347.79
	30%	- 94,104,602 packs	+ 517,964,322.08
SSBs	20%	- 133,334,400 liters	+ 199,402,112.00
	25%	- 166,668,000 liters	+ 227,585,800.00
	30%	- 200,001,600 liters	+ 247,102,752.00

## Conclusions

The results of the present analysis demonstrate that health taxes can lead to reductions in harmful lifestyle products consumption, while simultaneously producing additional fiscal revenues. Overall, the fiscal revenues produced by the implementation of sin taxes are expected to be significant, as estimated in the present analysis. Based on all the scenarios, excise duties are estimated to both decrease consumption and increase tax revenues. The issue arising from these findings concerns the proper allocation of these additional financial resources; the optimal choice seems to be within the healthcare system and, more specifically, in direct association with the burden of disease these harmful behaviors incur.

### References

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Figure 1. The bootstrap analysis results for cigarettes

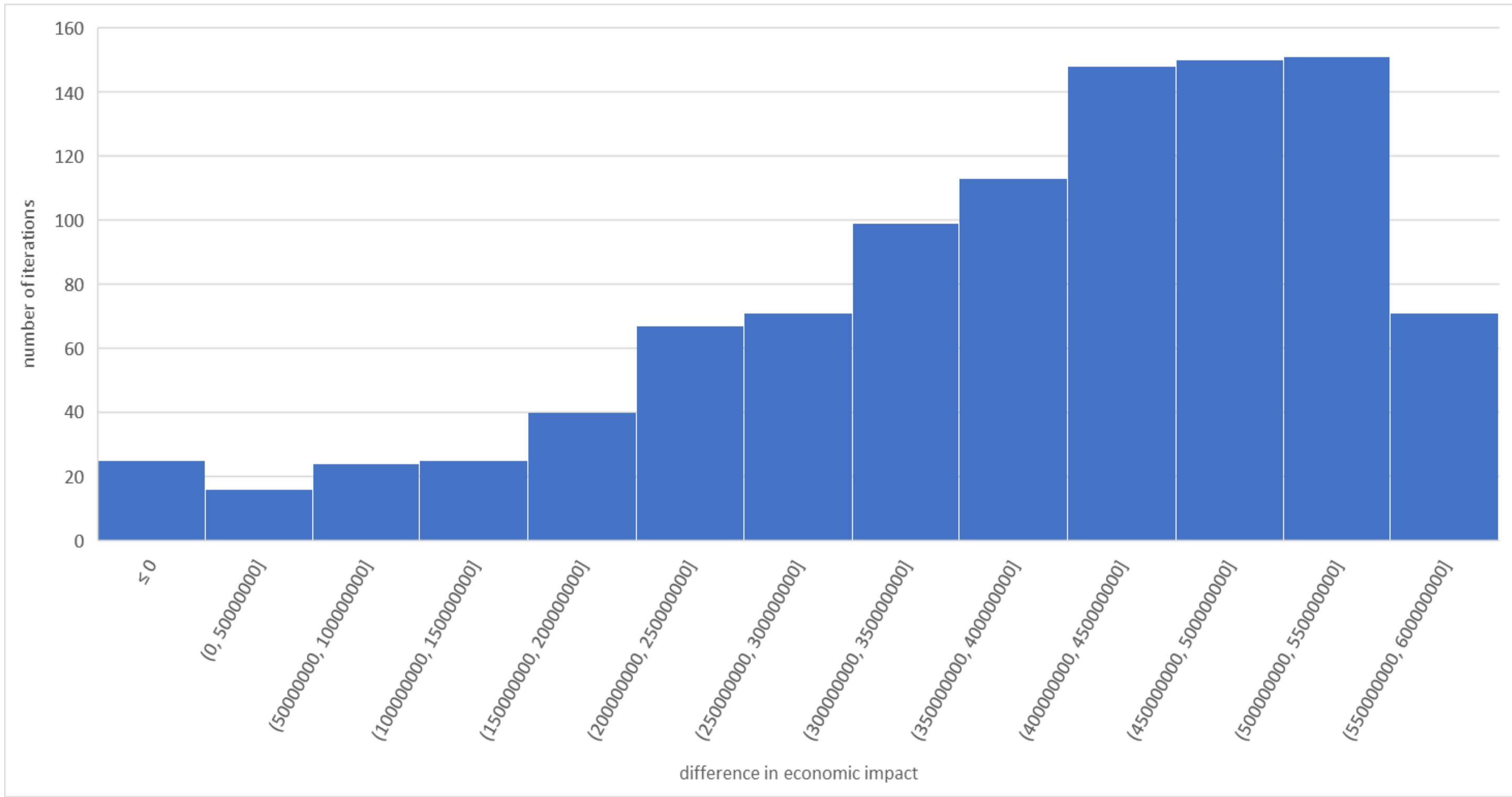


Figure 2. The bootstrap analysis results for SSBs

