The WHO Tobacco Tax Simulation (TaXSiM) Model

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Advancing tobacco taxes in Latin America, Washington DC, 28-30 Oct 2024

Modelling Health Taxes

- **_Tobacco TaXSiM:_ first developed in 2015 based on first-5-6 years of Unit's experience with countries, updated again in 2021 to reflect the evolution of this work and modelling practices.**

- **_SSB TaXSiM_: a 'pilot' model has been developed, including with the capability to model sugar-content excise systems and some limited substitution to healthy alternatives.**

- **_HGF Integrated Health Tool:_ models the scale-up cost and health impacts of sector or programmatic interventions like NCDs. A simple (light) version of the Tobacco TaXSiM has been developed for the IHT and health taxes will also enter the health financing module.**

- **_Alcohol TaXSiM:_ will be developed for IHT then tailored as a stand-alone TaXSiM model based on evolution of modelling practices.**

Tobacco TaXSiM

- **TaXSiM is a stand-alone Exel-based model that can be saved onto user's laptops (retains confidentiality of data).**

- **Is a 'market' model meaning that it quantifies the impact of tax policies on retail prices, consumption, smoking behavior, and tax revenues from the tobacco marketé.**

- **Focuses on tax policy design including the reform of weak excise systems (tiered systems, weak tax bases, etc). Hence, it's unique in being able to capture most excise systems.**

- **Can project impact of tax plans (roadmaps) up to five-years ahead.**

- **Includes a market segment approach to better assess impacts at different price-points as well as substitution concerns.**

- **Designed to function with very little data, but uers will need to input at least the smoking rate, a single (or average) retail price, and tax-paid sales volumes. Note TaXSiM works best with at least three prices.**

Main Set-up
- Selected country macro indicators can be over-written.
- Requires user entry of combined (male/female) prevalence rate.
- Select forecast period of interest (max 5 years from baseline).

Baseline Excise
- Enter current baseline excise system.
- Explanatory notes are available for each question.
- Note includes tiered excise systems if applicable.

Baseline Other Taxes
- Enter other baseline taxes (import duty, sales tax, dedicated taxes).
- VAT may need to be converted into an 'effective' rate.
- The tax base for any given dedicated tax may not match exactly.

Market Inputs
- At minimum, enter three price segments and own price elasticities even if there isn't brand data available.
- Model assumes industry prices increase with inflation, but this can be over-written (e.g. over or under shifting).

Brand Inputs
- Enter base (e.g. CIF/producer price) per pack in the instance of any ad valorem taxes.
- CIF prices are typically 10-25% of retail price.

Simulation Excise
- Enter new excise system or changes in excise rates.

Simulation Other Taxes
- Enter any expected changes.

Modelling Results

The TaXSiM model automatically generates a separate Excel sheet that contains a summary of the modelling, including:

- The consumer and industry behavioral assumptions adopted.

- A description of the baseline and simulation tobacco tax system.

- Real (or inflation-adjusted) tax and retail price per pack on average by market segment.

- Real annual excise and total tax revenues by market segment.

- Smoking behavior (number of smokers, smoking rate, and affordability).

- The average excise and total tax share (or burden) by market segment.

Thank You

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