JOHNS HOPKINS
BLOOMBERG SCHOOL
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Institute for
Global Tobacco Control

# Illicit trade studies: An example from Mexico

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# Acknowledgements

**Research team**: Belén Saenz-de-Miera, Luz Myriam Reynales, Ignacio Mendez, René Santos, Graziele Grilo, Kevin Welding

**Work team**: Government agencies, field supervisors, field teams, and administrative and logistical support

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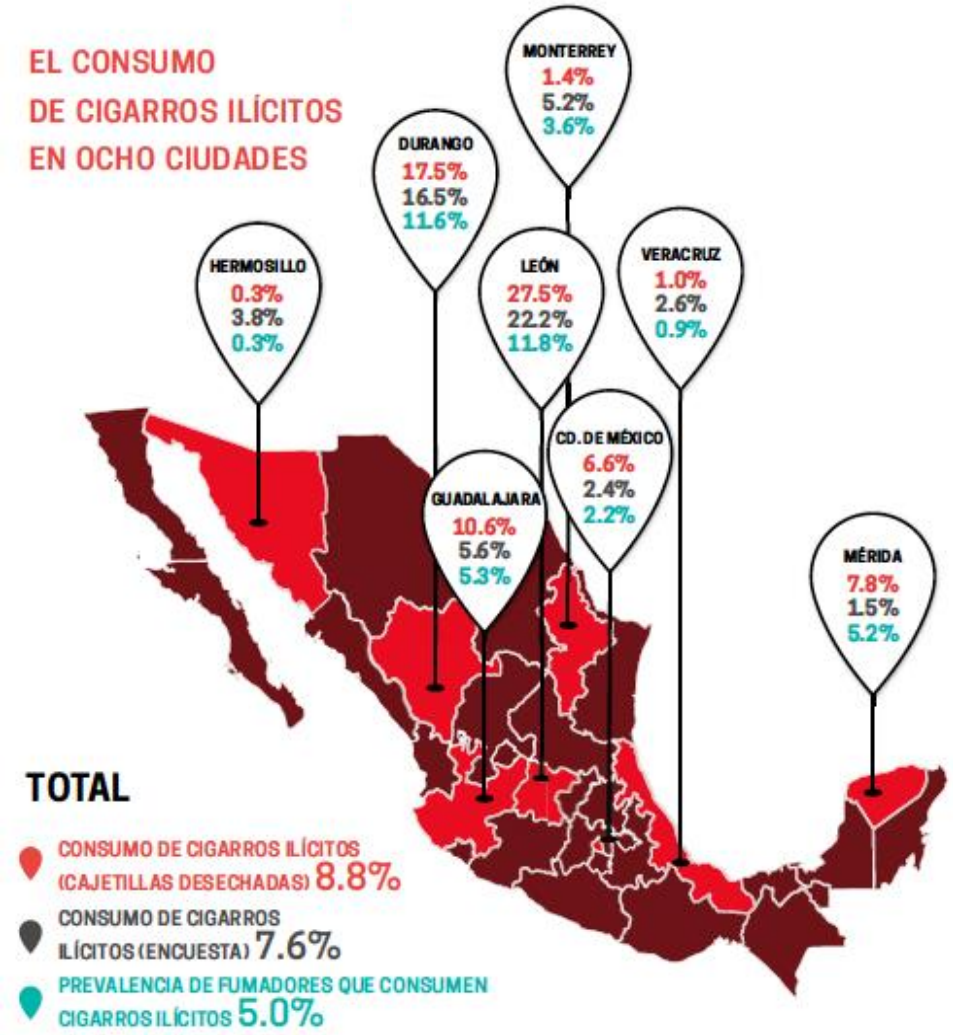
# Previous Study (2017)

- **Motivation**: industry estimate of 16.6%
- **Methods**: discarded packs and consumer survey; 8 cities (Hermosillo, Durango, León, Guadalajara, Monterrey, CDMX, Veracruz, Mérida)
- **Results**: from discarded packs: 8.8%
  from consumer survey: 7.6%
- **Discussion**: wide geographical variance; suggests that tax/price is not the main determinant.
- **Citation**: Saenz de Miera Juarez B, Reynales-Shigematsu LM, Stoklosa M, Welding K, Drope J. Measuring the illicit cigarette market in Mexico: a cross validation of two methodologies. Tobacco Control 2021;30:125-131.

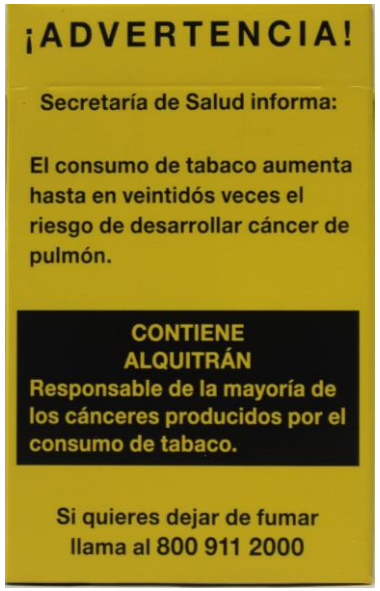


# Definitions of legality

- Definitions of legality by method

- **Discarded packs**:
  - Compliance with 3 regulations that determine the appearance of packs (details to come)

- **Survey of people who smoke**:
  - Brand analysis



# Follow-up Study (2022-23)

- **Motivation**: industry groups accepted previous results, but current situation much worse
- **Location**: same 8 cities (Hermosillo, Durango, León, Guadalajara, Monterrey, CDMX, Veracruz, Mérida) + 3 new cities (La Paz, Puebla, Toluca)
- **Methods**: discarded packs (12,607 of them)
- **Results**: coming out in 2 weeks in Mexico City
- **Context**: Smoking prevalence remains stagnant; taxes were only adjusted for inflation during this period; customs enforcement taken over by the military

# Identifying illicit packs

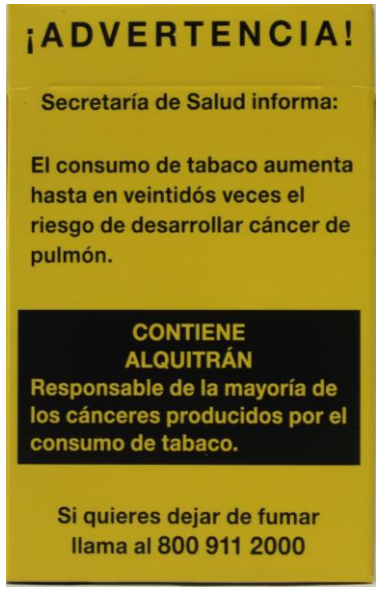
- Compliance with 3 regulations that determine the appearance of packs (first study)
  - pictogram on the front face that occupies 30%
  - text health warning on the back face that occupies 100%
  - text "Para venta exclusiva en México"

- Brand analysis
  - Legal brand list from:

  Miscellaneous Tax Resolution (RMF)

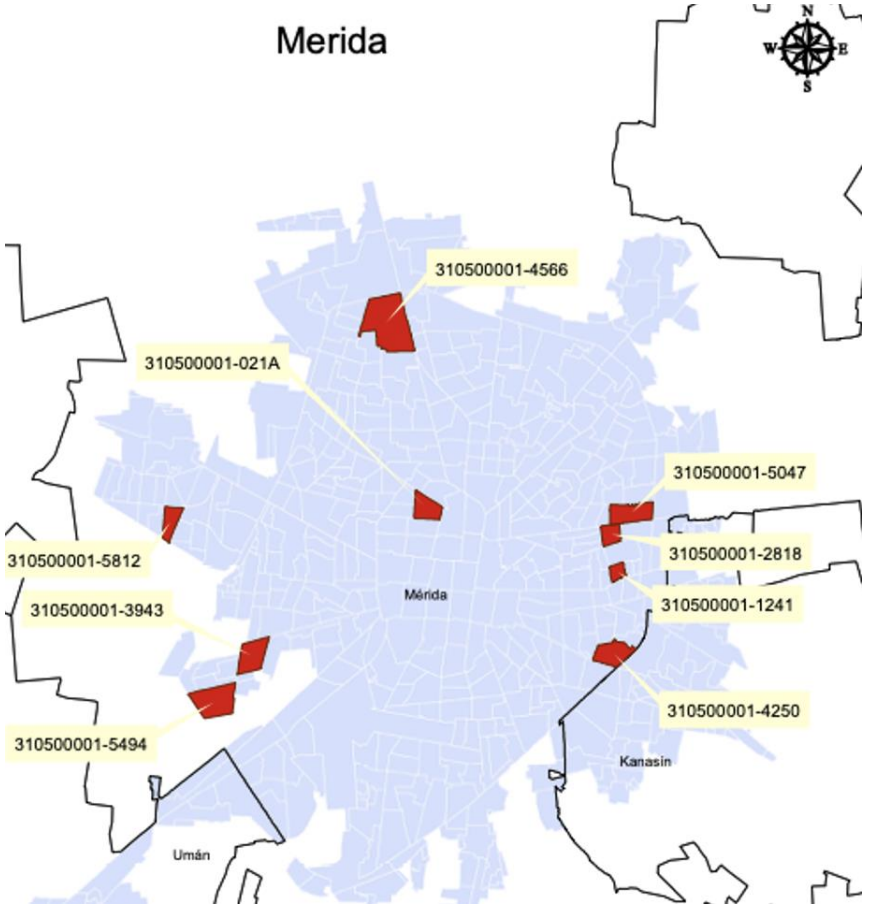
- Presence of the security code
  - Law of the Special Tax on Production and

  Services (LIEPS) and RMF rules



# Sampling

- **Pilot**: estimated 100 discarded packs every 12.36km of road
- **Power calculation**: 670 discarded packs per city -> 82.8 kilometers required
- **Routes**: those traveled correspond to major roads in a set of well-defined areas (Basic Geostatistical Area, AGEB)
- **Method**: two-stage probability sampling to select the AGEBs
- **Considerations**: street cleaning schedules, tourist areas
- **Adjustments**: convenience sampling within a capitol or major city could also result in useful information



# Strengths and Limitations

- **Limitation 1**: discarded pack collection estimate could be an over-estimate of the issue
- **Limitation 2**: Need to have some way to identify illicit: health warning labels, required statement, tax stamp, brands
- **Limitation 3**: initial sampling of routes can require expertise

- **Strength 1**: It is relatively inexpensive to conduct with an even lower marginal cost in follow-ups
- **Strength 2**: It can be conducted relatively quickly; does not rely on sampling consumers
- **Strength 3**: It doesn't require a lot of pre-existing (high quality) data unlike gap analyses

# Discussion

- If you can do more than one method, do it.
- If you have high quality data, use it.
- If you have unlimited resources, do an extensive survey of consumers.
- If you have to chose one method; don’t have high quality data; don’t have unlimited time and money…
    - Consider discarded pack collections to estimate illicit market size

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