

# An Analysis of Purchase Price of Legal and Illicit Cigarettes in Low- and Middle-Income Countries

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## Background

Illicit trade of tobacco products is a global problem that undermines tobacco control policies. There are few data on the price of illicit cigarettes, particularly in low- and middle-income countries (LMICs). This study examines the average purchase price of legal and illicit cigarettes in 14 LMICs.

## Methods

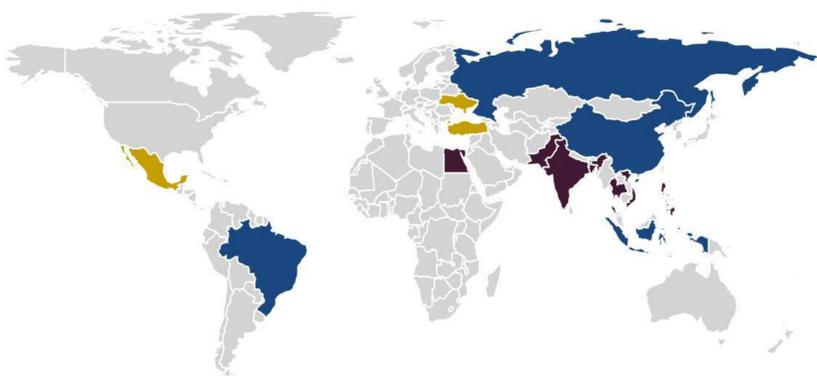
- Data from 2013 surveillance study on tobacco packs, including white cigarettes and kreteks (n=3,241)
- Three sample cities selected in each country, based on population and diversity; in each city, 12 vendors selected from different socioeconomic neighborhoods
- Packs categorized as 'legal' vs. 'illicit' based on presence of country's health warning label (HWL)
- High correlations between correct tax stamp and having HWL from that country (8 countries; R=0.97-1.00)
- Prices of cigarettes scaled to 20 sticks and all prices converted to USD for comparison
- Mean price of legal and illicit packs calculated; t-tests used to assess significance of mean difference in price

Example of 'legal' vs. 'illicit' packs: Viet Nam



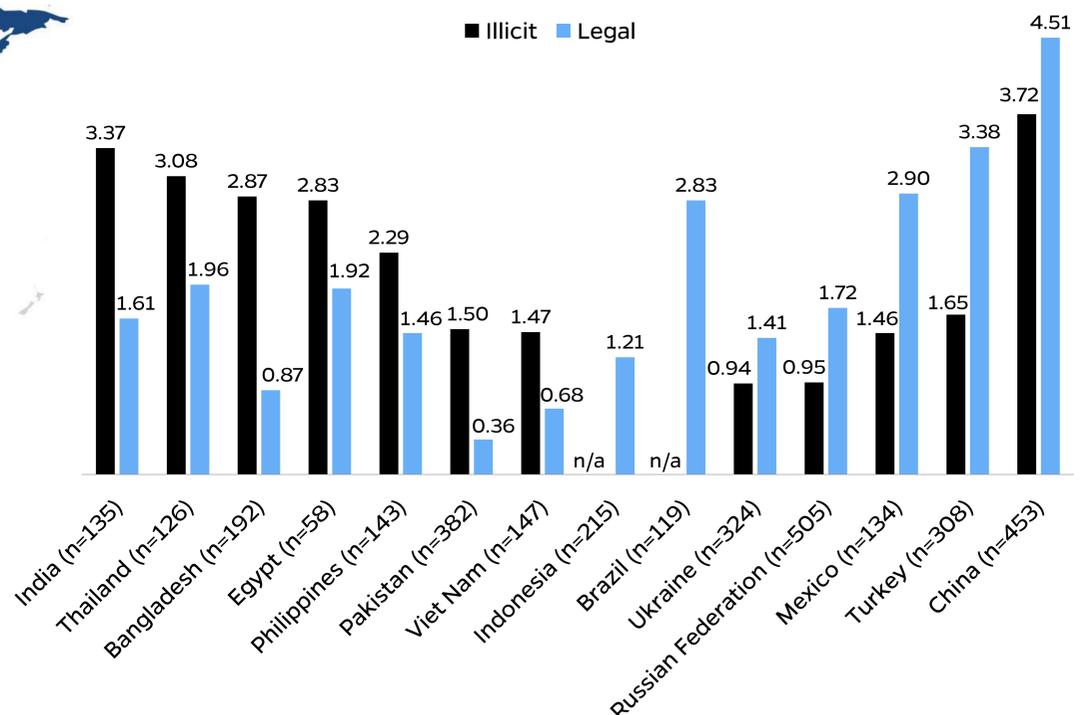
## Results

- Overall, 23.8 percent of packs purchased categorized as illicit, ranging from 0 percent from Brazil and Indonesia to 81.2 percent from Pakistan



- Mean purchase price of illicit cigarettes is significantly higher than legal (7 countries;  $p < 0.05$ )
- Mean purchase price of legal cigarettes is significantly higher than illicit (3 countries;  $p < 0.05$ )
- Not significant or all packs were legal (4 countries)

Mean purchase price of legal and illicit cigarettes (USD)



## Conclusions

- There is large variation across countries in terms of the price difference between legal and illicit cigarettes.
- Results contribute to evidence base that suggests non-price factors drive the presence of illicit cigarettes.
- Presence of appropriate HWLs correlates highly with the presence of tax stamps (Bangladesh, Pakistan, India, Thailand, Viet Nam, Ukraine, Russian Federation, Turkey).
- Further research between price and legal status of packs in LMICs is needed.

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