

# Are Retail Prices Higher for Legal or Illicit Cigarettes? An Analysis in 14 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 is limited information on the purchase price of illicit cigarettes, especially in low- and middle-income countries (LMICs).
- We examined differences in mean purchase price of legal and illicit cigarettes in 14 low- and middle-income countries.

## Methods

- Cigarette (n=3,017) and kretek (n=224) packs systematically purchased in 14 countries in 2013
- Three purchase cities selected in each country, based on population size and diversity
- Per city, 12 vendors selected from low-, middle- and high-socioeconomic areas
- Per country, bought one of every unique cigarette pack; purchase price recorded
- Pack categorized as 'legal' or 'illicit' based on presence of country's health warning label (HWL)
- High correlations between correct tax stamp and having HWL from that country (R=0.97-1.00, n=8)
- Prices of cigarettes scaled to 20 sticks; prices converted to USD for comparison
- Mean purchase price of legal and illicit packs calculated; t-tests assessed differences in mean purchase price by legal status

Example of **legal** pack: HWL from Viet Nam



Purchase Price:  
USD 1.09

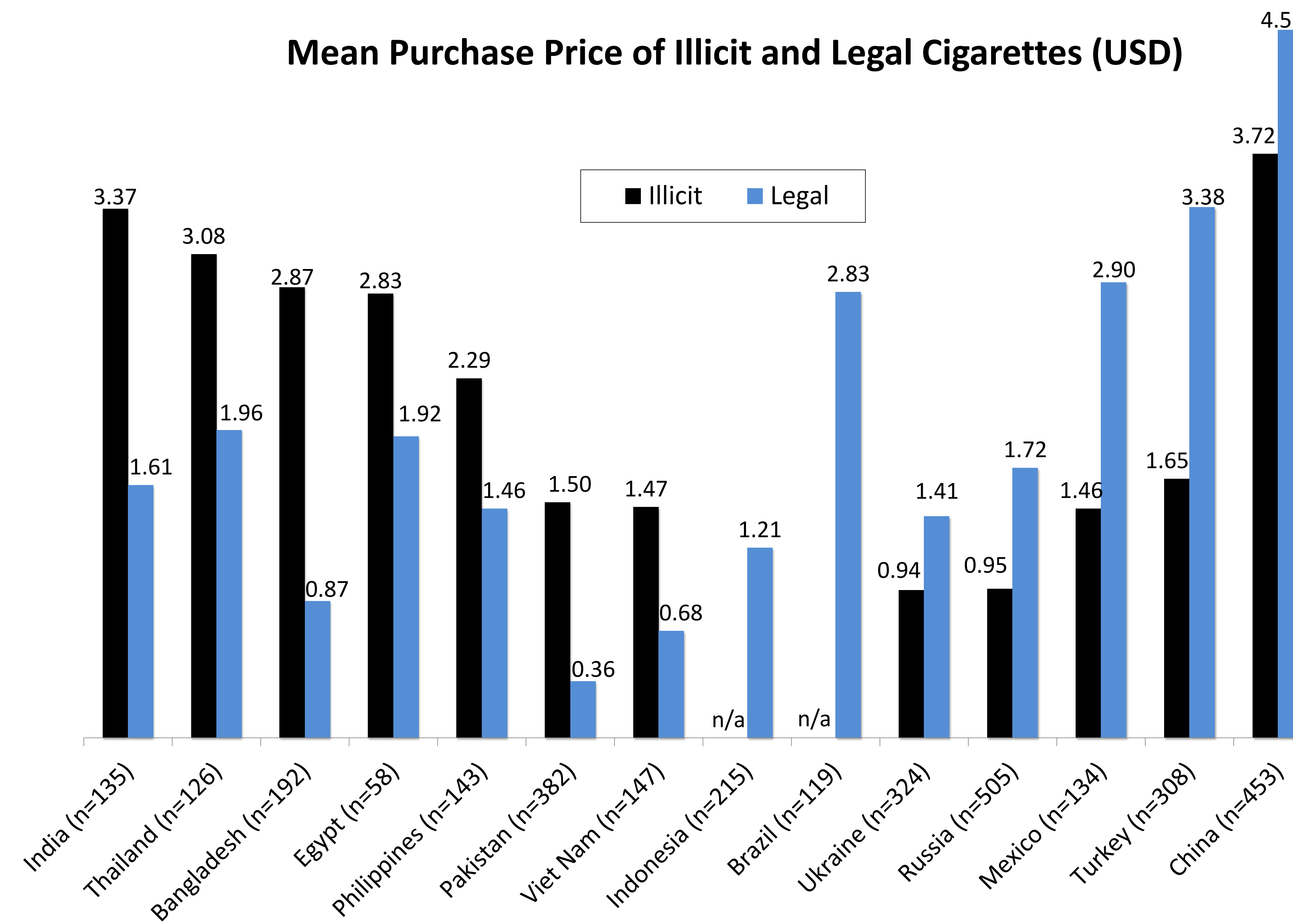
Example of **illicit** pack: HWL NOT from Viet Nam



Purchase Price:  
USD 1.52

## Results

Mean Purchase Price of Illicit and Legal Cigarettes (USD)



Examples of Illicit Packs from Countries Where the Mean Purchase Price of Legal Packs in our Sample was <1 USD (Purchase Price (USD))



## Discussion

- Mean retail price was higher for illicit than for legal cigarettes in the six countries where illicit packs comprised  $\geq 25$  percent of packs purchased, and in Egypt (5 percent illicit packs).
- Presence of a domestic health warning label appears to be a good proxy of legal, tax-paid cigarettes.
- This is the first study to systemically assess the relationship between price and pack legal status in 14 LMICs; further research should confirm these findings using other methods of pack collection.

- Overall, 24 percent of the 3,241 cigarette and kretek packs purchased were deemed to be illicit, ranging from none in Brazil and Indonesia to 81 percent in Pakistan.
- Mean sticks per pack was 18-20, except for India and Indonesia (mean=15)
- Mean purchase price of **legal cigarettes was higher than for illicit cigarettes** in: Mexico, Turkey and Ukraine ( $p < 0.05$ )
- Mean purchase price of **illicit cigarettes was higher than for legal cigarettes** in: Bangladesh, Egypt, India, Pakistan, Philippines, Thailand and Viet Nam ( $p < 0.05$ ); in these countries, the difference in mean retail price, controlling for sticks per pack, ranged from US\$0.80 (Viet Nam) to US\$2.01 (Bangladesh)
- Three of the four countries that had the largest proportion of illicit packs in our sample had very low prices of legal cigarettes – under 1 USD.

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