



# The African cigarette price data landscape:

## An overview of gaps and opportunities

AUTHOR: SAMANTHA FILBY

### BACKGROUND

The number of tobacco users in Africa is expected to increase [1]. Research from across the globe [2, 3], and from Africa specifically [4-6], shows that excise tax increases are a powerful tool for reducing tobacco use. The World Health Organization (WHO) Framework Convention on Tobacco Control Article 6 Guidelines encourage Parties to raise taxes on tobacco products consistently to reduce their affordability over time [7].

Despite this, countries classified as African under the WHO African Regional Office (WHO-AFRO) are the weakest performers in the area of tobacco taxation [8]. Although it is not a sufficient condition for securing tax policy change, policymakers typically require local evidence before increasing tobacco taxes [9]. Local price data are needed to produce this evidence.

### STUDY OBJECTIVE

This study aimed to locate and describe datasets that provide information on cigarette prices in African countries and to identify opportunities for expanding the region's cigarette price information base.

### DATA and Methods

Three data repositories (the World Bank Microdata Library, the WHO Non-Communicable Disease Microdata Repository, and the DataFirst Open Data Portal), and literature available on Pubmed and EconLit, were searched to locate datasets that:

- Contain information on manufactured cigarette prices (retail-level or self-reported), or provide information on both the amount spent on cigarettes, and the number of cigarettes purchased during a specified time frame.
- Were collected in one of the 47 WHO AFRO countries.
- Were accessible free of charge.

Thirteen categories of information were extracted from each dataset that met the inclusion criteria. Among them were the type of price data collected (self-reported versus observational), whether the dataset provides information on the cigarette brand, the retail outlet type, and the cigarette packaging type associated with the price observations, and whether the prices are nationally representative.

To provide an overview of Africa's current cigarette-price landscape, the number of outliers and summary statistics (mean, median, standard deviation, and coefficient of variation), for the price of 20 cigarette sticks, were calculated using the most recent data available from each data collection project identified in a country. T-tests were used to compare differences in the proportion of outliers, and the main summary statistics, for countries with both self-reported and observational cigarette price data available.

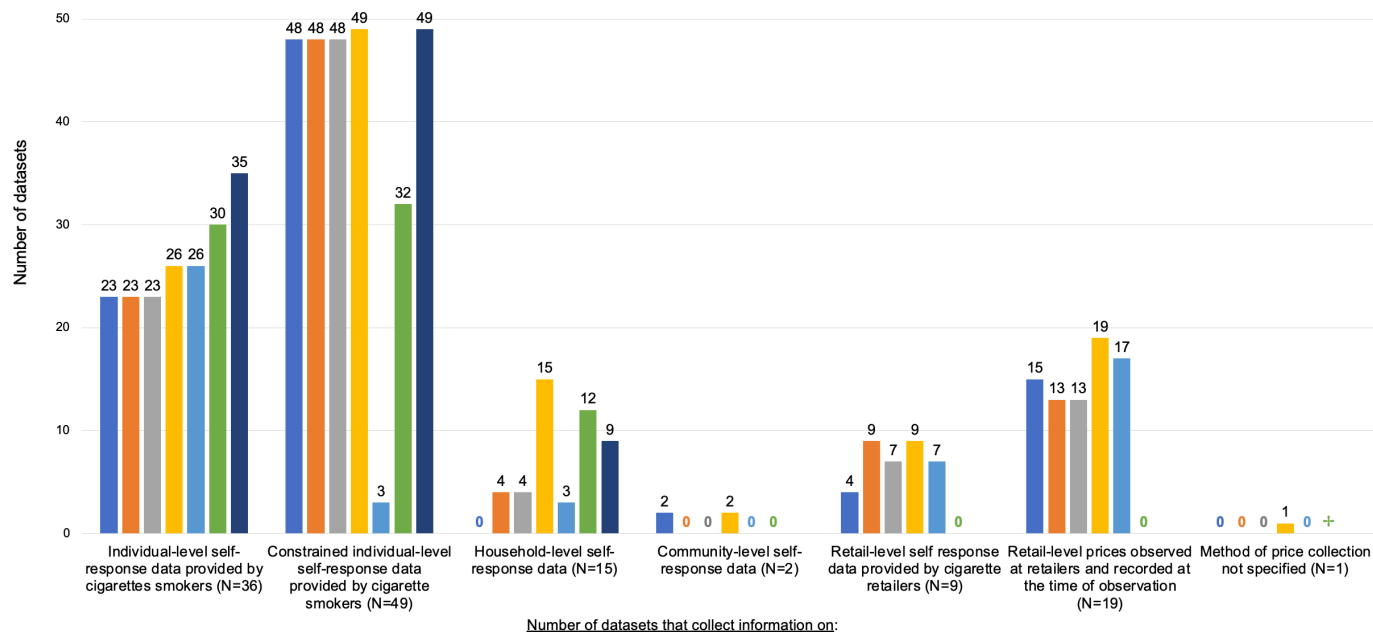
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- [1] World Health Organization. WHO global report on trends in prevalence of tobacco use 2000-2030. Geneva, Switzerland: World Health Organization. Available: <https://iris.who.int/bitstream/handle/10665/375711/9789240088283-eng.pdf?sequence=1> [2024, June 28]. 2024.
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## RESULTS

One hundred and thirty-one datasets, covering 39/47 African countries, contain information on cigarette prices. Figure 1 summarizes the features of these datasets. Most datasets (N=111/131) provide self-reported information. Just over half of the datasets (N=74/131, 56%) provide prices collected from nationally representative samples.

**Figure 1. Characteristics of datasets that collect information on cigarette prices in WHO-AFRO countries, grouped by data type (N=131)**



Notes to Figure 1: Only one dataset that provides cigarette price information could not be classified because the method used to acquire the prices was not specified. These are time series average cigarette prices for the most popular price category in Ghana and Zimbabwe, collected by Philip Morris, and made public through the Master Settlement Agreement [10]. † Indicates that the sample's representativity could not be assessed due to a lack of information about how the prices were acquired (only applied to the Phillip Morris dataset [10]). \* Indicates that the criteria were assessed based on individual-level and household-level self-response data only.

Across all 131 datasets, 92 (70%) provide information on the brand corresponding with each price observation. 97 datasets (74%) provide information on the type of retail outlet at which the prices were paid/observed. Of these, 95 datasets (98%) provide information that allows researchers to derive estimates for the prices paid at informal retailers, specifically.

121 datasets (92%) provide information on the packaging type associated with each price observation. Of these datasets, only 56 (46%) provide information that allows for single-stick prices to be derived (Figure 1).

Only 11 countries have utilized the three large-scale surveys that repeatedly collect information on smoking behaviour across Africa (Multiple Indicator Cluster Survey, Demographic and Health Survey, STEPwise) to collect information on cigarette prices. There are no active projects that collect self-reported price data that draw their sample from the youth (aged<15).

Among the 14 countries with more than one type of cigarette price data available, the proportion of outliers is lower, by 2.8 percentage points, for prices collected at retailers than it is for self-reported prices ( $p<0.05$ ). Furthermore, the average CoV obtained using self-reported data is 10.3 percentage points higher than that obtained using retail-level prices ( $p<0.05$ ). This signifies that self-reported price information indicates a wider distribution of cigarette prices than is suggested by prices collected through observations at retailers.

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## POLICY IMPLICATIONS

This study helps researchers and funders to identify those African countries in which little is known about cigarette prices, and where skills and resources are most necessary to obtain a comprehensive understanding of the cigarette price landscape in the region. It also serves as a reference point for researchers seeking a roadmap of the different sources of cigarette price data available for countries located in Africa.

Findings indicate that Africa's cigarette price data landscape is populated, but gaps exist. A broader base of cigarette price information for the region could be attained through proactive efforts by the tobacco control community. These efforts should include lobbying governments to leverage existing surveys that already collect information on cigarette smoking behaviour across the continent (such as the Multiple Indicator Cluster Survey, Demographic and Health Survey, STEPwise surveys), to also collect information on the prices that people pay for the cigarettes that they smoke.

However, this does not represent a stand-alone solution for expanding Africa's cigarette price information base since current surveys of cigarette smoking behavior do not sample from youth. Expanding observational price-data collection efforts would address the existing information gap concerning the prices that young people pay for cigarettes and improve understanding of the degree of misreporting in self-response surveys implemented in African countries. The end result: better insight into the cigarette prices in African countries, and acquisition of the data required to generate evidence that can aid in securing public health gains.

*The full paper:*



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