Tobacco control in Africa

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Summary

The proposed intervention is to raise the excise tax on tobacco to 75% of the retail price, following guidance from the World Health Organization. We used a pre-existing model that measures ROI of multiple tobacco control policies called the MPOWER package (WHO) but calculated the effects of only the tax increase intervention. According to traditional economic practice, we calculated the welfare cost of taxation – deadweight loss (DWL) – under 3 scenarios. The BCR of 5.6 includes the DWL which occurs in the year following the tax increase and based on cumulative tax increases from 2020 to 2033. The BCR of 23 includes the DWL, based the incremental tax increases from 2020 to 2033. The third is the ROI of tobacco tax increase without DWL based on more recent economic theory. The calculated BCR range is 5.6 to 120 (no deadweight loss). The costs of implementing the tax are purely administrative and enforcement. They are extracted from the WHO NCD Costing Tool. Benefits are the value of reduced mortality and illness plus the associated avoided medical expenditures and productivity increases. Not included is expected increased tax revenue.

Opportunities for scaling up this intervention are high as many countries are signatories to the Framework Convention on Tobacco Control – a legally binding multi-country agreement to control tobacco consumption. The FCTC Secretariat provides support to countries for policy implementation of tobacco control policies, including taxation. In addition, a high-level Task Force on Fiscal Policy issued a strong report in April 2019 advocating for health taxes.[18] The challenges of raising taxes are fierce opposition from industry and resistance among public finance economists in ministries of finance. There is abundant evidence that tobacco taxes work to achieve health goals but the implementation of the FCTC framework and policies has been unsatisfactory and must be strengthened for these goals to be achieved in practice.

The problem

Seven million people die each year from tobacco use, an estimated 13% of all deaths worldwide. Half of lifetime smokers will die before they reach 70, losing an average of 10 years of life. There is no safe level of tobacco use. More than 1 billion people in the world smoke; 21% of the world's population. 80% of smokers live in LMICs and, while smoking prevalence is still low in most African countries, it is rising in direct response to industry promotion of smoking. Unlike in Asia, smoking among adolescent girls appears to be rising at similar rates to smoking among adolescent boys.

Smoking substantially increases the risk of death from lung and other cancers, heart disease, stroke, respiratory disease and tuberculosis. Excise taxation can be used to raise prices, curb unhealthy consumption, promote health, and, in turn, enhance economic growth. Excise taxes are relatively simple to implement, and most governments already levy them on tobacco products. The empirical evidence on the effectiveness and cost-effectiveness of these taxes in reducing consumption and its consequences is well established for tobacco. WHO has identified tobacco taxation as among the 'best buys' for preventing NCDs. At the same time, these taxes generate considerable revenues that can be used to support complementary evidence-based cost-effective interventions to reduce NCDs. Tobacco use in Africa lags other regions of the world but is increasing fast as global tobacco companies target the largely naive populations in many African countries where tobacco control is in early stages. Due to rising concerns about worsening noncommunicable diseases and interest in revenue-increasing

[18] "Health Taxes to Save Lives," April 2019. Task Force on Fiscal Policy for Health. New York. https://www.bbhub.io/dotorg/sites/2/2019/04/Health-Taxes-to-Save-Lives.pdf (accessed July 20, 2019)

policies, African countries are motivated to implement proven tobacco control measures, especially taxation.

The analysed solution

Tobacco taxes are an effective health promotion policy because they increase the price of the harmful good leading directly to reductions in consumption. This leads to reduced prevalence, both by deterring prospective smokers and by reducing consumption of current smokers. We combine these effects in a model designed to measure the broad impacts of tobacco control policies.

We apply the tobacco tax increase in a setting that approximates Zambia in many, but not all respects. We average tobacco consumption levels from four other countries for our assumption of 7 sticks per day per smoker. In our baseline model taxes represent 37.3 percent of the retail price of an average priced pack of cigarettes. We model an average annual 13 percent real tax increase leading to a tax share of 75 percent by 2027, followed by more gradual increases until the tax share reaches 80 percent in 2033. The baseline price is USD 1.78 and by year 15 of the model (2033) the price is USD 5.56.

We estimate the impacts over a 15-year time horizon. Based on global experience, the toll of tobacco-related illnesses will rise rapidly in Africa contributing to the already burdensome problem of non-communicable diseases (NCDs) that countries are struggling to manage. Tobacco taxation has been proven across many countries to be the most effective tobacco control policy: it raises revenues; can be progressive if it reduces smoking more among the poor than the rich as recent literature suggests; and confers benefits across the population from pregnant women and young children who are especially susceptible to second-hand smoke to the productivity of working people.

The costs and benefits

The economic benefits of reducing tobacco consumption through increased taxation are substantial. By raising the tobacco tax to 75% of the retail price, we expect smoking prevalence to drop by 20%. We estimate cumulative discounted benefits of USD 331,134,838 over 15 years for our example country, while cumulative discounted costs are USD 2,759,523. The result is a BCR of 120. This compares to much higher BCRs obtained by modelling tax increases in other countries. For instance, Sri Lanka shows a BCR of 724 for a tax increase to the same level, Jordan shows a BCR of 1547, and Colombia shows a BCR of 1196. These differences arise from differences in baseline smoking prevalence, initial taxation levels, other tobacco control policies in place, and assumptions about enforcement. The central take-away however, is that the BCR for tobacco tax increases is consistently very high.

Raising taxes incurs some costs and benefits beyond the direct administrative and enforcement costs included in this model and the improved health and productivity measured in the model. First, traditional economics literature includes the purported social welfare costs of “coercing” smokers to pay more for their desired product or stop purchasing it. This concept, called “deadweight loss”, is relevant to situations where consumer sovereignty is being sacrificed for social gain and is a premise behind the rationale economic model. However, in regard to addictive substances such as tobacco, the existence and amount of DWL is debated among economists. The arguments against including deadweight loss are that smokers are time inconsistent causing them to act against their own interest in not smoking. Since taxation leads to their reduced smoking, they are benefited rather than harmed by the tax.

As the empirical basis for deadweight loss to be included or not is unsettled (see references in spreadsheet), we offer three scenarios for the ROI. The BCR of 5.6 includes the DWL which occurs in the year following the tax increase, based on cumulative tax increases from 2020 to 2033. The BCR of 23 includes the DWL, based on incremental tax increases over the same period. The third does not reduce the benefits of taxation to account for a deadweight loss. The ROI is 120.

Finally, we anticipate about discounted USD 200 million in increased tax revenues during the 15-year period which we do not add into the benefits, according to standard economic practice, but which are generally seen by governments as an inducement to raise tobacco taxes. Table 1 shows the costs and benefits included in the calculations.

TABLE 1: COSTS AND BENEFITS FROM RAISING TOBACCO TAX, USD2017

Costs (,000 US$)	
Operations and maintenance	2,759

Benefits (,000 US$)	
TOTAL Benefits	331,135
13,353 avoided deaths	148,475
Averted health care expenditure	20,046
Averted absenteeism	26,515
Averted presenteeism	79,668
Reduced smoking breaks	56,430

Discussion

Tobacco taxation is a valuable tool for all governments to achieve reduction in NCD mortality and morbidity. The SDG 3.4 target aims to reduce premature NCD mortality by one-third by 2030 but more than 100 countries are far from on track to reach that goal. Because of low coverage of NCD health services, African countries are in special jeopardy of missing the target and experiencing a continuing double burden of ill-health. The optimal time to institute tobacco taxation is now, before tobacco prevalence increases. This will prevent uptake and prevent onset of diseases. Scaling the intervention to multiple countries in the sub-region is desirable to reinforce positive social norms and health behaviors and because illicit tobacco trade will be discouraged if the retail price levels of tobacco are roughly similar from country to country. Challenges of tobacco taxation include tax avoidance (such as consuming hand rolled cigarettes or other forms of tobacco not easily taxes) and tax evasion (illicit imports that are difficult to detect and tax), and maintaining the real price of tobacco at the desired level.