

SOUTHMOD

Policy note

# Taxing the harms in Ethiopia

Simulating the budgetary and distributional impacts of higher VAT on alcohol consumption

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## Findings

- An increase in the value-added tax (VAT) on alcohol—from 15% to 25%—generates an additional 3.5 billion Ethiopian Birr (ETB) in revenue (USD 63 million)
- Although the reform slightly increases poverty, it is progressive, generating more revenue from higher income groups
- If revenue is earmarked for an afterschool support programme for low-income students in government-owned schools, it will improve the well-being of the poorest 40% of households

Alcohol consumption is a major public health problem leading to liver disease, cancer, and heart disease. It can also lead to social problems such as violence, crime, and accidents. According to the [Ethiopian Demographic and Health Survey \(EDHS 2016\)](#) survey, nearly 46.6% of individuals aged 15–59 years have consumed alcohol at some point in their lives. This is lower than the average in other African countries, but it is still a significant problem.

In this regard, the Ethiopian government has taken some measures to address the problem of alcohol consumption. These measures include raising the price of alcohol through [excise taxes](#), [limiting alcohol advertising](#), and [enforcing stricter regulations on alcohol sales](#). Another potential policy intervention to discourage alcohol consumption is an increase in the value-added tax (VAT) on alcohol.

In this policy note, we discuss the budgetary and distributional implications of imposing a higher VAT rate on alcohol consumption. The results are based on a simulation conducted using version 3.0 of [ETMOD, the tax-benefit microsimulation model for Ethiopia](#), with underpinning microdata computed from the [2018/19 rounds of the Ethiopian Socioeconomic Survey](#). The distributional results are produced based on household consumption levels once accounting for indirect taxes and using the national absolute poverty line.

## Consumption of alcohol relative to food

In Table 1, using the 2018/19 Ethiopian Socioeconomic survey data, we compare households' expenditure on alcohol with expenditures on food. On average, households' spending on alcohol is 34% of their spending on food. Households in the first quantile spend as much as 67% of their food expenditure on alcohol, while the share of outlays on alcohol is the lowest in the fifth quintile.

**Table 1: Ratio of expenditure on alcohol consumption relative to outlays on food (by quantile)**

Quantiles of disposable income	Food
1	0.67
2	0.42
3	0.25
4	0.29
5	0.23
Total	0.34

Note: a quantile is 20% of the measured population taken after it is ranked.

Source: authors' elaboration based on simulations using ETMOD v3.0.

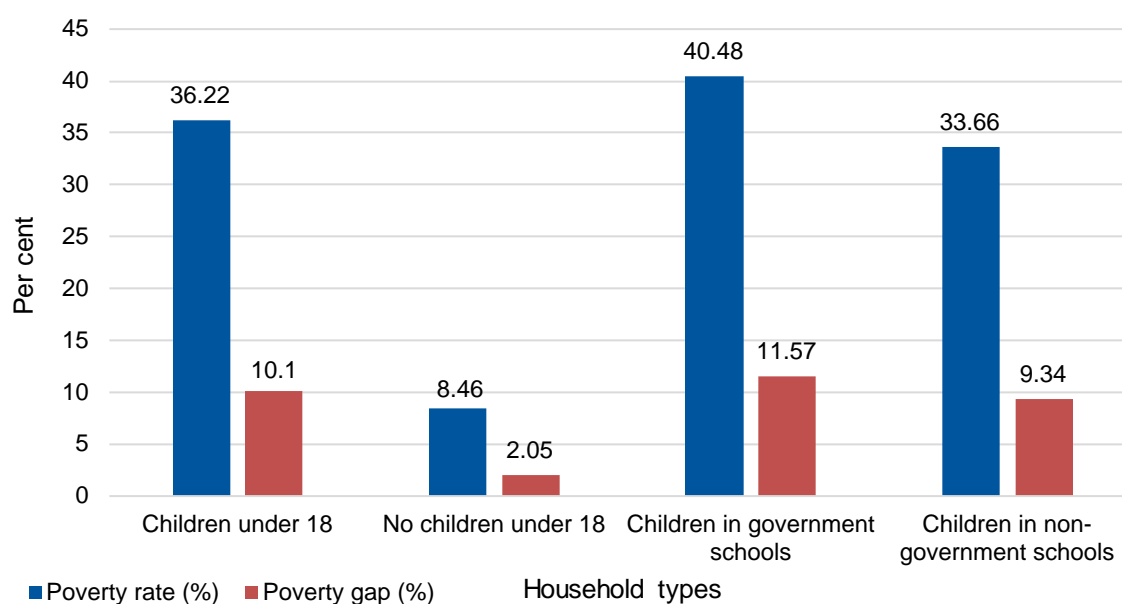
The poorest households spend disproportionately more money on alcohol than richer households. This trend results, in part, from lower total consumption on basic needs by households in the lower-income groups. On the other hand, alcohol use may be more common as a coping mechanism for poverty, anxiety, and stress, or due to low financial literacy.

## Poverty prevalence among households

In Figure 1 below, we present the poverty rate and poverty gap among different groups of households in Ethiopia.. Poverty is prevalent among households with children (36.2%) compared to households without children (8.5%). The size of the poverty gap is also larger for households with children, at about 10.1% compared to 2.1%.

The poverty rate is particularly high among households with children in government schools (40.5%) relative to households with children in private schools (33.7%). When taxing the harms, the government should consider reinvesting the revenue in well-targeted social transfers, such as after-school support for students from poor households who attend government schools.

**Figure 1: Poverty rate and poverty gap by household types**



Notes: headcount poverty rates and poverty gaps are compiled based on the nationally defined absolute poverty line, taking into account consumption expenditure net of indirect taxes.

Source: authors' elaboration based on simulations using ETMOD v3.0.

Drawing on these concerns, this policy note aims to quantify the effects of increasing VAT on alcohol consumption and using the revenue generated to cover a hypothetical after-school support programme in government-owned schools. The proposed after-school support programme would provide disadvantaged children with access to additional academic support, along with opportunities for enrichment activities such as sports, music, and art. The implementation of this programme would address existing educational inequalities, level the playing field, and provide these children with better opportunities for success in school and life.

## Simulation scenarios and results

The analysis presented addresses the following questions: What are the effects on poverty, inequality, and government revenue of increasing VAT on alcohol consumption from the current 15% to 25%? Could the revenue generated from higher VAT cover the cost of an after-school programme?

To evaluate these questions, the following scenarios are modelled in ETMOD:

- **The tax reform only:** introducing a 10 percentage points increase in the VAT rate on alcohol consumption;
- **The tax reform and a new benefit:** reallocating the tax revenue into an after-school support programme for students from households below the absolute poverty line with children attending government-owned schools, from kindergartens up to the 12<sup>th</sup> grade. The benefit amounts to 535 ETB per month (ca. USD 10) per eligible student. The benefit constitutes an in-kind transfer, not a cash transfer provided to the household.

## Taxing harms generates revenue in a progressive manner

**Table 2: Budgetary and distributional impacts of higher VAT on alcohol consumption**

Outcome	Baseline	Difference to base	
		VAT increase	VAT increase + after-school programme
Government revenue from indirect taxes	177,313	+3,527	+3,527
Government expenditures on child benefits	2,833	+0	+3,497
Share of the poor population	33.54	+0.15	+0.10
Gini coefficient (0–100)	35.41	-0.03	-0.03
P80/P20 ratio	2.64	+0.00	+0.00
20 <sup>th</sup> quantile consumption	15,960	-0.44	+5.33
40 <sup>th</sup> quantile consumption	21,870	-5.31	+24.69
50 <sup>th</sup> quantile consumption (median)	24,928	-14.09	-14.09
60 <sup>th</sup> quantile consumption	28,884	-18.66	+0.00
80 <sup>th</sup> quantile consumption	42,150	-45.21	+4.62

Notes: government revenues and expenditures are in ETB millions, and quantile-specific consumption estimates are in ETB.

Source: authors' elaboration based on simulations using ETMOD v3.0.

The VAT increase on alcohol consumption is a policy intervention that has the potential to generate significant revenue for the government. According to the modelling results, increasing the VAT on alcohol consumption from 15% to 25% in the 2022 policy regime could generate approximately 3.5 billion ETB (ca. USD 63 million) in revenue for the government annually. This amount is greater than the combined spending of the current school feeding and uniform programmes in government-owned schools located in Addis Ababa. The VAT increase does not significantly increase the poverty rate (an additional 0.15 percentage points).

In addition to the revenue benefits, the reform slightly reduces inequality. The simulation results suggest that the tax increase disproportionately affects high-income households who consume more alcohol in absolute terms.

## A win-win policy alternative for public health and education

Increasing the VAT on alcoholic beverages is a policy with several positive outcomes for Ethiopia. It could reduce alcohol consumption and social harms in society. While slightly increasing the national poverty rate, this can be offset by earmarking resources for pro-poor programmes, such as after-school support, which would reduce the poverty rate among households whose children attend public schools by 0.13 percentage points. This presents a revenue-neutral policy option for improving public health and education. Besides alcoholic beverages, Ethiopia could consider imposing higher consumption taxes on other harmful substances, such as khat and cigarettes, to increase revenues, and consider reinvesting the additional funds in critical social transfer programmes.

## Policy recommendations

- Consider increasing the VAT on alcoholic beverages and other harmful items to discourage their consumption and generate tax revenue
- Earmark additional revenue to fund education programmes, such as an 'after-school support' programme, which could have positive and long-term effects on the livelihoods of vulnerable members of society
- Inter-ministerial harmonization in designing and implementing policy alternatives, such as taxing the harms and reinvesting in critical social transfer constitutes a win-win policy strategy

This note was produced using [ETMOD](#), the tax-benefit microsimulation model for Ethiopia. The note was initiated at the ETMOD Retreat in May 2023. The retreat was a capacity development initiative and a part of the activities of the [SOUTHMOD project](#).