

KN3. Tobacco Excise Taxes and Tobacco Leaf Farming— Key Considerations¹

The purpose of this note is to provide policy makers with an overview of relevant issues and feasible policy choices in setting tobacco excise taxes,² with a specific focus on how tobacco excises impact factors such as growth and domestic demand for tobacco leaf. It is one in a series of knowledge notes responding to specific questions around health taxes and key issues raised during health tax reforms.

SUMMARY

Although tobacco is commercially grown in over 90 countries worldwide, the number of producing countries is declining. Global tobacco control measures have played a role in reducing demand for tobacco. Notably, the 182 parties to the World Health Organization (WHO) Framework Convention on Tobacco Control (WHO 2003) committed to using tax policies as a way to protect present and future generations from the health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke while also promoting economically viable alternatives for tobacco workers, growers and sellers.

While tobacco leaf production is declining, this production is also shifting from developed to developing countries. Linked to these trends, the prices that farmers are paid for the sale of their crops appear to be mostly stagnant and even trending downwards. To this end, concerns are often raised in tobacco producing countries about the impact of tobacco excise taxes on livelihoods and the economy overall, which can limit momentum behind tobacco tax reform.

In practice, the role that excise taxes play in contributing to these dynamics are not well founded:

- The connection between local tobacco excises on domestic consumption and tobacco growing is marginal in the many countries where most or all the tobacco produced is exported and therefore not liable for excise tax, e.g., Malawi. Nonetheless, in five tobacco producing countries in 2020, the value of tobacco grown for the domestic market is significant (>1/2 percent of GDP); in another six countries the value of tobacco grown destined for the domestic market is above 0.2 percent GDP and below 0.5 percent of GDP. In these settings, tobacco excises may reduce demand for domestic production over time, and efforts are needed to support farmers' transition out of tobacco.
- In more than 70 countries the macroeconomic benefit of tobacco growing is very small (less than 0.2 percent of gross domestic product, or GDP). Further, unprocessed tobacco leaf production is not a large source of tax revenue on its own, given that farmers and leaf-buying corporations typically face low tax rates and often benefit from tax exemptions.
- Given the small size of tobacco-growing sectors relative to the overall agriculture sector and the broader economy, tobacco employment is correspondingly a small fraction of the labor force in tobacco growing countries globally, with the outliers mostly in Africa. Where the agricultural labor force is large, however, even small fractions are large in terms of absolute numbers of farmers. For instance, there are over half a million tobacco farmers in Indonesia that rely on tobacco for a portion of household income but this represents just 0.4 percent of total employment (Lencucha et al. 2022).
- Research suggests that farmers typically have dynamic on-farm and off-farm economic lives, meaning that they have options for substitution. Governments, subnational governments, and development partners can accelerate the transition away from tobacco cultivation by identifying viable alternative crops, improving agricultural extension services and the bargaining power of farmers selling to agro-industries, providing financial incentives for nontobacco crops, and improving rural infrastructure to improve productivity and promote access to markets.

There are several other relevant considerations for tobacco-growing countries. Research suggests that tobacco farmers in most low- and middle-income countries are not prosperous, certainly not more so than their neighbors who grow other crops.

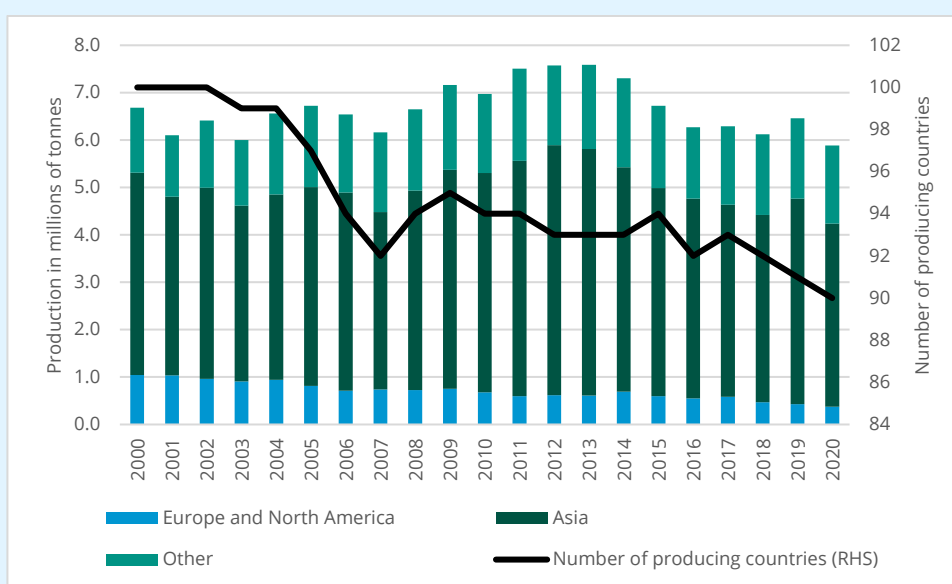
¹ This note was prepared by Jeff Drope (University of Illinois Chicago- Tobacconomics), Chris Lane, Daniel Prinz, Evan Blecher, Ceren Ozer, and Danielle Bloom with contributions from Hana Ross (all World Bank). The authors wish to thank peer reviewers Kapembwa Namuyemba (Principal Budget Analyst- Ministry of Finance, Zambia), Richard Record, Edson Araujo, and Leonardo Rocha (all World Bank). Thanks also go to Prof. Fastone Goma (Director - Centre for Primary Care Research, Zambia) for inputs and Grieve Chelwa (Director of Research, Institute on Race, Power and Political Economy, The New School, New York) for early discussions.

In many countries, smallholder farmers—tobacco or otherwise—consistently use household or child labor as a low-cost alternative to hiring adult workers and to a greater extent than nontobacco farming households. There is also mounting evidence that tobacco cultivation is one of the most environmentally devastating crops and can have negative health effects for tobacco farmers. The relationship between growing tobacco and other factors, such as food security, is more complex. The relative poverty of tobacco farmers underlines the importance of providing economically viable alternatives to tobacco growing.

GLOBAL TRENDS IN SUPPLY, DEMAND, AND PRICES FOR TOBACCO LEAF

Due in large part to global tobacco control measures, global demand for tobacco leaf and cigarette consumption have been steadily decreasing for nearly a decade.² Though use of other non-combustible tobacco-derived products like electronic cigarettes and heated tobacco products are increasing in popularity in some countries, they use far less leaf, with some products now using synthetic nicotine.³ This decline is mirrored in data on tobacco-leaf production, which peaked in 2013 (Figure 1), suggesting that a reduction in demand leads to a reduction in supply.

Figure 1 // Global Production of Tobacco, 2000–2020



Source: FAOSTAT. Food and Agriculture Data, <https://www.fao.org/faostat/en/#home>, accessed 12/12/22.

Tobacco is widely cultivated in low-, middle-, and high-income countries, with around 90 countries producing commercial tobacco in 2020.⁴ Brazil, China, India, and the United States account for three-quarters of global production by value.

While tobacco cultivation is declining in most high-income countries, such as Canada and the United States, as well as across Europe, it is still rising in some lower-middle-income countries, including Lao People’s Democratic Republic, Mozambique, and Zimbabwe. In many of these countries, there is a notable increase in tobacco industry engagement as the industry seeks to recruit more farmers to grow tobacco leaf—usually under contracts. Governments often support this engagement with encouragement and economic incentives, as they seek to increase agricultural exports (Lencucha et al. 2016).

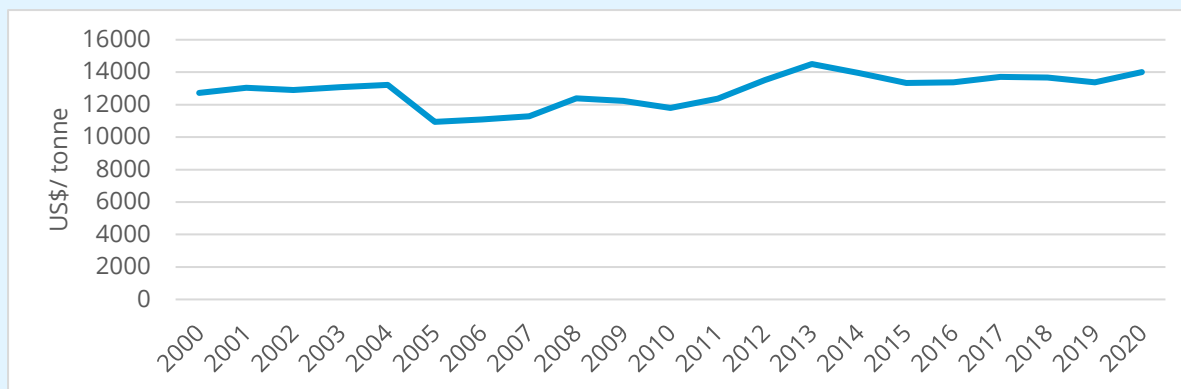
The prices that farmers are paid for the sale of their crops appear to be mostly stagnant and even trending downward since 2013 (Figure 2). Farmers are overwhelmingly “price takers” in that they must accept the prevailing global price or, more typically, a local price that is lower than the global price (Hu and Lee 2015). However, there is a lack of systematic research on historical pricing structures and price variation across countries. Looking at pricing structures is an important avenue for future research as it will help explain farmers’ livelihoods when combined with yields and costs.

² GlobalData. Tobacco sales database.

³ The Tobacco Atlas (website). Vital Strategies and Tobacconomics at the University of Illinois Chicago, accessed February 21, 2023, www.tobaccoatlas.org.

⁴ FAOSTAT. Food and Agriculture Data, <https://www.fao.org/faostat/en/#home>, accessed 12/12/22.

Figure 2 // **Producer Price of US Unfinished Tobacco, 2000–2020**

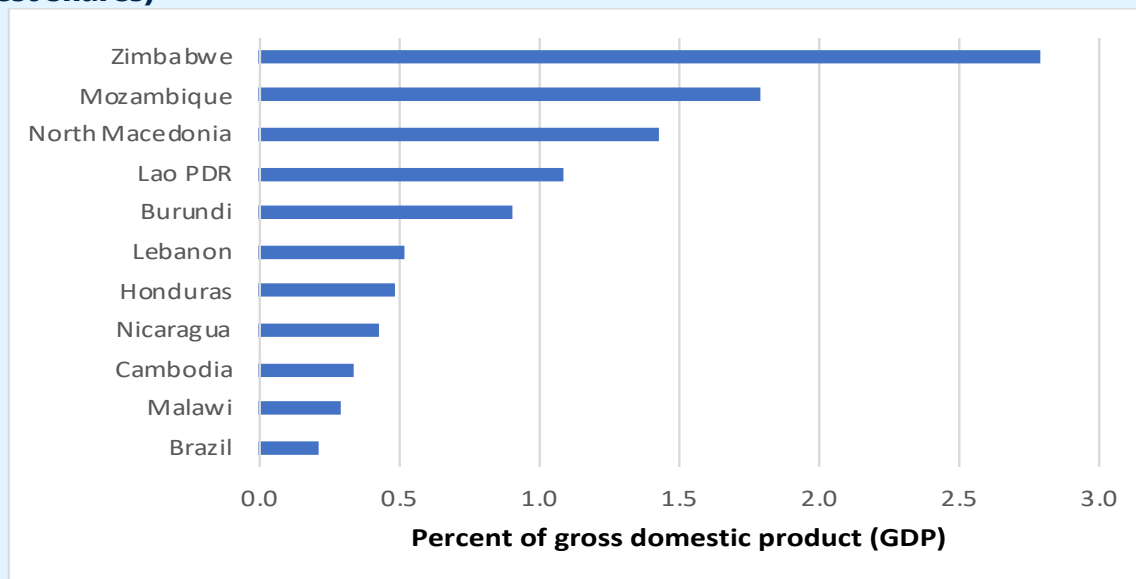


Source: FAOSTAT. Food and Agriculture Data, <https://www.fao.org/faostat/en/#home>, accessed 02/22/23.

MACROECONOMIC CONTRIBUTION OF THE TOBACCO SECTOR

In most countries, the overall contribution of tobacco growing (gross value of unfinished tobacco) to GDP is small. This contribution is small even in large tobacco-producing countries, such as Brazil and Indonesia. It is significantly less than one-half percent of GDP in all but a handful of countries—namely, Burundi, Lao PDR, Lebanon, Mozambique, North Macedonia, and Zimbabwe (Figure 3).

Figure 3 // **Gross Value of Unfinished Tobacco as a Percentage of Gross Domestic Product, 2020 (Highest Shares)**



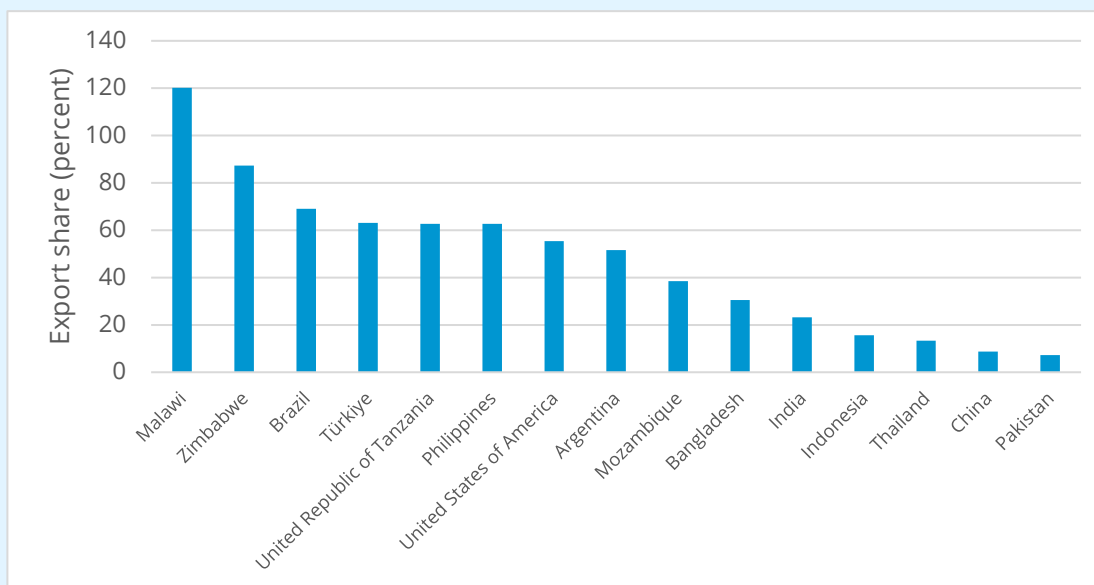
Note: Gross domestic product is in 2020 U.S. dollars; production value is in current U.S. dollars.

Sources: FAOSTAT. Food and Agriculture Data, <https://www.fao.org/faostat/en/#home>, accessed 12/12/22, World Development Indicators, <https://databank.worldbank.org/reports.aspx?source=World-Development-indicators> accessed 12/12/2022. Data for Malawi not consistent with exports data which is significantly higher.

THE NEXUS BETWEEN EXCISE TAXES AND PRODUCTION

Though tobacco companies and some governments argue that domestic taxation of the sale of manufactured tobacco products undermines tobacco growing, the connection between the two is often limited (Tobacconomics 2021). One important disconnect is that many of the largest tobacco leaf-producing countries export the majority of their crop (Figure 4). For example, the share of production exported is 87 percent in Zimbabwe, 86 percent in North Macedonia, and 84 percent in Lebanon. In Mozambique, however, just 38 percent of the crop is exported. Given the high propensity to export in countries where tobacco leaf is an important crop, domestic health taxes should not greatly affect demand or production.

Figure 4 // Tobacco Export as a Share of Tobacco Production in Major Producing Countries, 2020



Note: Major producers are defined as countries where production exceeded 50,000 tons in 2020, exports may include production from previous year or re-exports raising export share above 100 percent.

Source: FAOSTAT. Food and Agriculture Data, <https://www.fao.org/faostat/en/#home>, accessed 12/12/22.

The countries where tobacco farmers may be significantly exposed to domestic taxes are those where most production is destined for the domestic market, and where tobacco production is a non-trivial share of total output (GDP). Our analysis suggests that there are five countries where tobacco taxes could have a significant effect on farmers' livelihoods (where production of at least 1/2 percent of GDP is destined for domestic market) specifically: Burundi, Mozambique, Lao PDR, Venezuela, and Yemen. In another six countries tobacco production for the domestic market is between 0.2 and 0.5 percent of GDP—See Annex 1 for detailed calculations), It would be particularly important to consider mitigating measures for tobacco farmers when domestic tobacco taxes are raised in these countries (see below). In the remaining 74 countries the value of tobacco sold in the domestic market is not a significant economic activity i.e., below 0.2 percent of GDP and tobacco farmers' welfare concerns are correspondingly lower.

Tobacco companies and governments in tobacco-producing countries frequently cite the importance of tobacco production as a significant generator of foreign exchange. However, this is not relevant to domestic health taxes, which are not levied on exports. Furthermore, leaf production does not typically attract significant foreign direct investment because it is inexpensive for tobacco companies to set up leaf-buying operations. The main infrastructure is not capital intensive and mostly comprises land management, leaf transportation, light processing, and storage.

TOBACCO-SECTOR TAX PAYMENTS

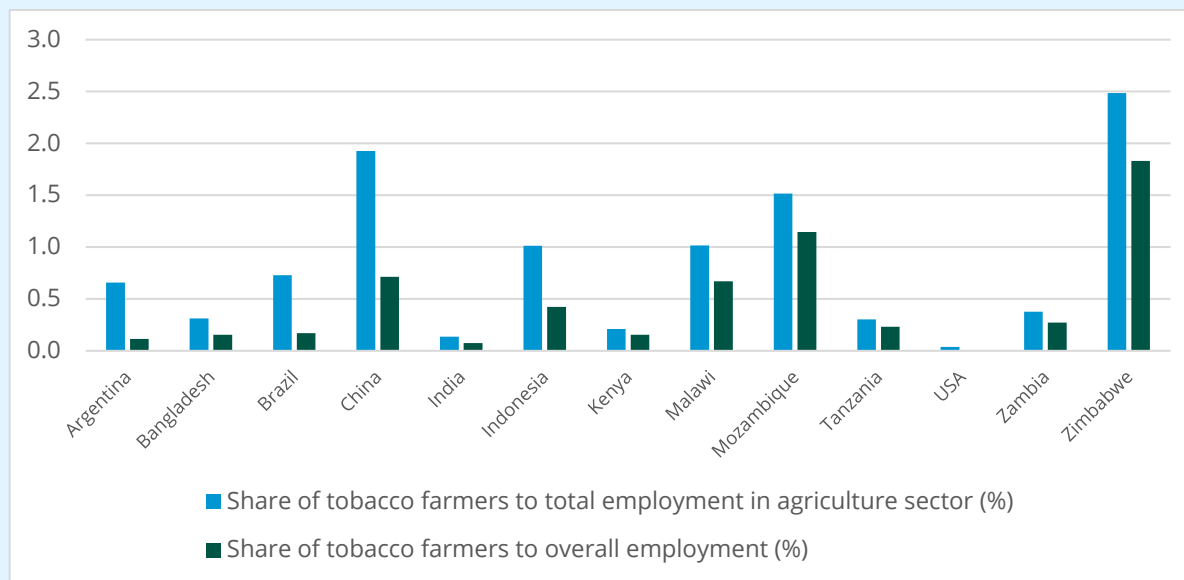
Tobacco leaf production is not a large source of tax revenue for most governments. Unprocessed tobacco leaf is rarely subject to the excise tax that is levied on manufactured tobacco products, and exports are also not generally subject to taxes. For example, in Kenya, leaf exports are not subject to taxes. When the leaf is sold domestically, it is subject to value-added tax like any other commodity. Firms in the supply chain are subject to corporate tax, though the amounts of taxes collected through this mechanism are not transparent, which is the case in most countries, particularly lower-middle-income countries. Furthermore, many leaf-buying corporations are taxed at very low rates. In Malawi, purchases of tobacco leaf are subject to a small tobacco levy of 0.2 percent.⁵ In Zambia, no import duty or value-added tax is payable for agro-processing companies in economic zones, including tobacco-sector companies. These companies also receive full or partial exemptions from profits tax for 10 years as an incentive to keep tobacco leaf companies operating in these countries, with job creation as the central justification (Lencucha et al. 2016).

⁵ "Malawi, Corporate - Other taxes." Worldwide Tax Summaries Online, PwC, last reviewed July 21, 2022, <https://taxsummaries.pwc.com/malawi/corporate/other-taxes>.

IMPACT OF TOBACCO GROWING AND EMPLOYMENT

Policy makers who are considering tobacco excise tax increases in countries with tobacco production are presented with counter-arguments such as tobacco growing creates jobs and if the demand for tobacco leaf were to diminish, the jobs would disappear. However, even in large tobacco-producing countries, the share of workers in the tobacco-farming sector is small, with a few exceptions (Figure 5). Countries where tobacco-farming employment is above 1 percent of the workforce (Mozambique and Zimbabwe, for example) export a significant share of production, so domestic excises will only affect demand and employment for production that is not exported.

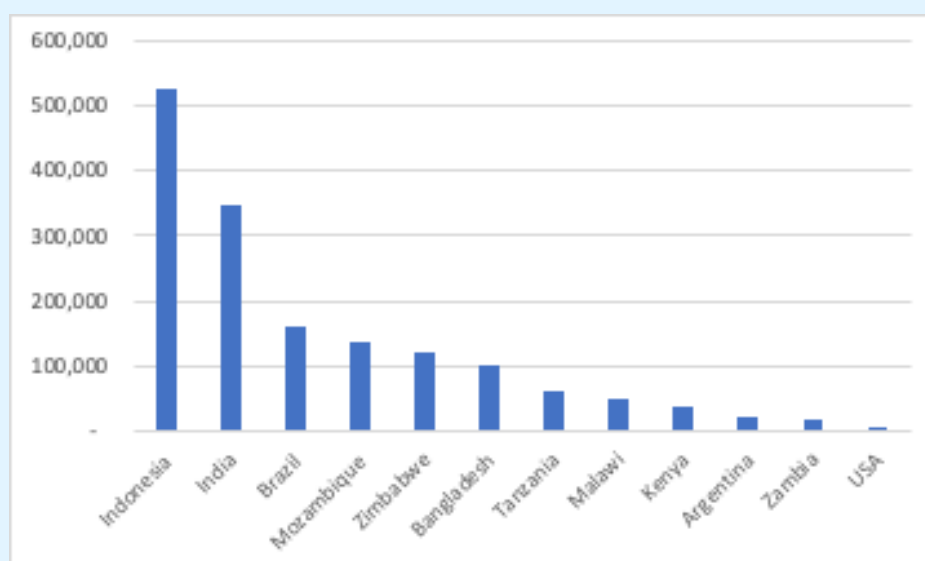
Figure 5 // Tobacco-Sector Employment, 2020 or Latest Available Data



Source: (Lencucha et al. 2022).

While the above holds true, it is still important to note that even small shares of the workforce in tobacco production can correspond to a large absolute number of workers and livelihoods, posing a political and economic challenge to policy makers seeking to reduce tobacco consumption (Figure 6).

Figure 6 // Number of Tobacco Farmers in Large Tobacco-Producing Countries, 2020 or Latest Available Data



Note: This figure excludes China, which has 4.597 million tobacco farmers.

Source: (Lencucha et al. 2022).

VIABLE ALTERNATIVES TO TOBACCO GROWING

Research from several major tobacco-growing regions suggests that these farmers have dynamic on-farm (that is, other crops) and off-farm (for example, nonagricultural wage labor or small business ownership) economic lives (Chavez et al. 2016; Sahadewo et al. 2021).

Most tobacco farmers in tobacco-growing countries grow other crops—many in surplus to sell on the open market. This includes staple food crops, such as maize (South Africa) and wheat (North Macedonia), but also other food crops, such as green vegetables (Zambia) and groundnuts (Malawi).

Many tobacco farmers or nontobacco farmers in tobacco-growing regions also pursue off-farm economic activities, such as paid work in nearby towns, and/or entrepreneurial endeavors, such as small businesses (for example, fish farming; retail; or transportation, such as motorcycle taxi; among others). Farmers who spend less time tending their crops simply have more time to commit to these other endeavors. The data consistently show that these farmers are making a better overall livelihood through these economic activities. Survey data in Indonesia show that former tobacco-farming households' average total incomes were 30 percent higher than current tobacco household's total income and reflected widespread poverty among Indonesian tobacco farmers (Drope et al 2017). A World Bank study on employment in Indonesia's tobacco sector also found that a significant excise tax increase on cigarettes would lead to a decrease of less than 0.5 percent in employment in the tobacco sector and that a small portion of the new tax revenue generated could be allocated to help farmers transition to other viable livelihoods (World Bank Group 2018). Similarly, in the Philippines 15 percent of incremental tobacco excise revenue is allocated to tobacco farmers and to local government units in tobacco-growing areas, demonstrating the use of compensatory mechanisms linked to tobacco tax revenue (WHO 2016).

That being said, alternative livelihoods programs for tobacco farmers have been scarce, and the few that have emerged have suffered from well-documented fatal flaws. For example, in the late 2000s, a set of programs in Kenya introduced bamboo as an alternative crop. The most important lesson learned was that the programs failed to establish a strong market mechanism for the farmers to sell their crop. Long-term negative impacts resulted when farmers struggled to sell the bamboo (Kibwage, Netondo, and Magati 2014; Magati et al. 2012). A new joint program of the World Health Organization, the World Food Programme, and the Food and Agriculture Organization is aiming to address this core issue by ensuring that markets exist for farmers to sell their crops, in this case with a focus on beans (FAO 2022).

GOVERNMENT ACTIONS TO SUPPORT TOBACCO GROWING ALTERNATIVES

Research suggests that a considerable number of farmers are shifting gradually away from tobacco, where the conditions are favorable to do so. For instance, some farmers now move in and out of tobacco cultivation, occasionally wagering that tobacco yields and prices will be high, very often based on crude weather predictions. This transition may be more feasible in countries which are undergoing a broader shift of income-generating opportunities out of agriculture into manufacturing and services, supported by a business-friendly investment environment, investment in human capital and economic infrastructure. To this end, there are a number of actions that governments can take to engender successful shifting away from tobacco growing:

Invest in marketplaces.

Research in Sub-Saharan Africa and South Asia suggests that many tobacco farmers grow tobacco because they feel relatively assured of its economic viability and a guaranteed market for the crop (Appau et al. 2019; Appau et al. 2020; Rahman et al. 2020). Where there are accessible markets to sell other nontobacco goods, the probability of successfully shifting is greatly enhanced. Accordingly, in some tobacco-growing countries, governments use overseas development assistance to invest in marketplaces that connect farmers to buyers of their crops, which is a best practice (USAID 2022).

Improve supply and value chains for other products.

Governments can also improve the supply and value chains for other products to incentivize farmers to shift (Wineman, Chilora, and Jayne 2022). For example, working closely with the Migori county government in Kenya, the European Union recently supported the introduction of a sweet potato processing plant in this major tobacco-growing region. Many farmers there have begun to grow this crop and appear to be making more money doing so (Kenya News Agency 2022).

Expand extension services.

Farmers' education is another opportunity for governments to assist in directly shifting away from tobacco growing. Many farmers report that they grow tobacco because it is all they know how to do well. Further, they receive extension services directly from the tobacco companies (Appau et al. 2019; Appau et al. 2020). To address this issue, governments can consider expanding extension services for farmers to learn how to better grow other locally suitable crops (Swanson 2008).

Support rural credit schemes.

Farmers also consistently cite lack of credit as a reason they choose to grow tobacco, and the contracts with leaf-buying companies provide a form of credit. Governments have recognized this widespread crisis of lack of access to credit in rural settings (Mpuga 2010); some governments are actively supporting rural credit schemes in providing more options to farmers beyond tobacco contracts (de Almeida 2014).

Ensure access to information and related technological infrastructure.

Beyond skills, farmers often lack up-to-date information about key components of successful agriculture. For example, information about prices, buyers, and weather/climate helps farmers make better planting decisions. Research in Kenya demonstrates that farmers with access to mobile phones that have reliable coverage are much more likely to shift away from tobacco, have more diverse economic portfolios, and have better overall economic livelihoods (Li et al. 2019). Governments can help farmers get pertinent market and weather/climate information by ensuring reliable mobile phone coverage and creating local platforms on which key information is posted and shared.

OTHER CONSIDERATIONS

Besides the impacts listed above, several other notable considerations around domestic tobacco production warrant mentioning.

Welfare of tobacco farmers.

Large tobacco-purchasing companies have helped shift leaf cultivation increasingly to lower-middle-income countries, where labor and land costs are lower. Broadly, the research suggests that tobacco farmers in most lower-middle-income countries are not prosperous, certainly not more so than their neighbors growing other crops, with tobacco farmers more likely to be in a debt cycle with tobacco companies (Chavez et al. 2016; Drope et al. 2017; Magati et al. 2018; Makoka et al. 2016; Rahman et al. 2020; Sahadewo et al. 2020; Talukder et al. 2020). Research consistently demonstrates that farmers pay a premium for advances given to them by leaf-buying companies under contractual relationships, including for inputs like fertilizer and agricultural chemicals (Goma et al. 2019; Magati et al. 2018; Makoka et al. 2017). Further, there are consistent reports across countries that payments to farmers are delayed or do not come at all (Omondi 2014). Few countries have safeguards in place to protect farmers.

Environmental effects.

There is mounting evidence that tobacco cultivation is one of the most environmentally devastating crops, with implications for multiple parts of fragile ecosystems. There continues to be massive deforestation from clearing land to cultivate more tobacco and process the leaf (Geist 1999). Evidence shows that this deforestation contributes to devastating soil erosion and even desertification (Ngwira and Watanabe 2019), leading to further land clearing. Chemical overuse in tobacco farming causes serious harm to watersheds and leach into the groundwater (Hussain et al. 2020). Intense tobacco cultivation over time also inevitably leads to acute soil depletion (Geist 2018; Moula et al. 2018). Further, tobacco farming and leaf-curing techniques lead to higher greenhouse gas emissions than most other crops (Zafeiridou, Hopkinson, and Voulvoulis 2018).

Health effects.

Though chemical use is widespread, protective gear is uncommon. While there is limited research on this topic, tobacco farmers in most countries—including children who participate in these activities—are exposed to dangerous chemicals (Arcury and Quandt 2006).⁶ Tobacco farmers are also exposed to high doses of nicotine when handling or breathing in tobacco leaf, causing a well-documented form of acute nicotine poisoning called Green Tobacco Sickness (McBride et al 1998). Some studies have collected data on Green Tobacco Sickness symptoms, such as severe chronic nausea, and reported that tobacco farmers are far likelier than others to report such symptoms.

Child labor.

Generally, household labor for agricultural production is more common when profit margins are low. In many countries, smallholder tobacco farmers consistently use child labor as a low-cost alternative to hiring outside adult workers, and to a greater extent than nontobacco farming households (as tobacco cultivation is more labor intensive). In the case of tobacco specifically, farmers consistently report that they do not have sufficient cash to hire adult workers. Research from multiple countries has generated consistent findings about this issue, including in Indonesia (Human Rights Watch 2018), Kenya (Magati

⁶ Exposure to pesticides may also be a factor for growing other crops

et al. 2022), Malawi (Makoka et al. 2016a; Xia and Deininger 2019), Philippines (Chavez et al. 2016), and Zambia (Goma et al. 2019).

Tobacco growing and food security.

The relationship between growing tobacco and food security is complex. There is evidence that when there is a good season for tobacco—with high yields and prices— tobacco-farming households are food secure because they use the revenues from selling tobacco leaf to buy food. However, when the tobacco season is poor, tobacco farming households are likely to lack sufficient food because they have not allocated enough land and labor to growing their own food (Edet 2022). More rigorous research is needed in this area.

POLICY CONSIDERATIONS

Several conclusions and good practices emerge from country experiences in managing tobacco taxes in tobacco producing countries:

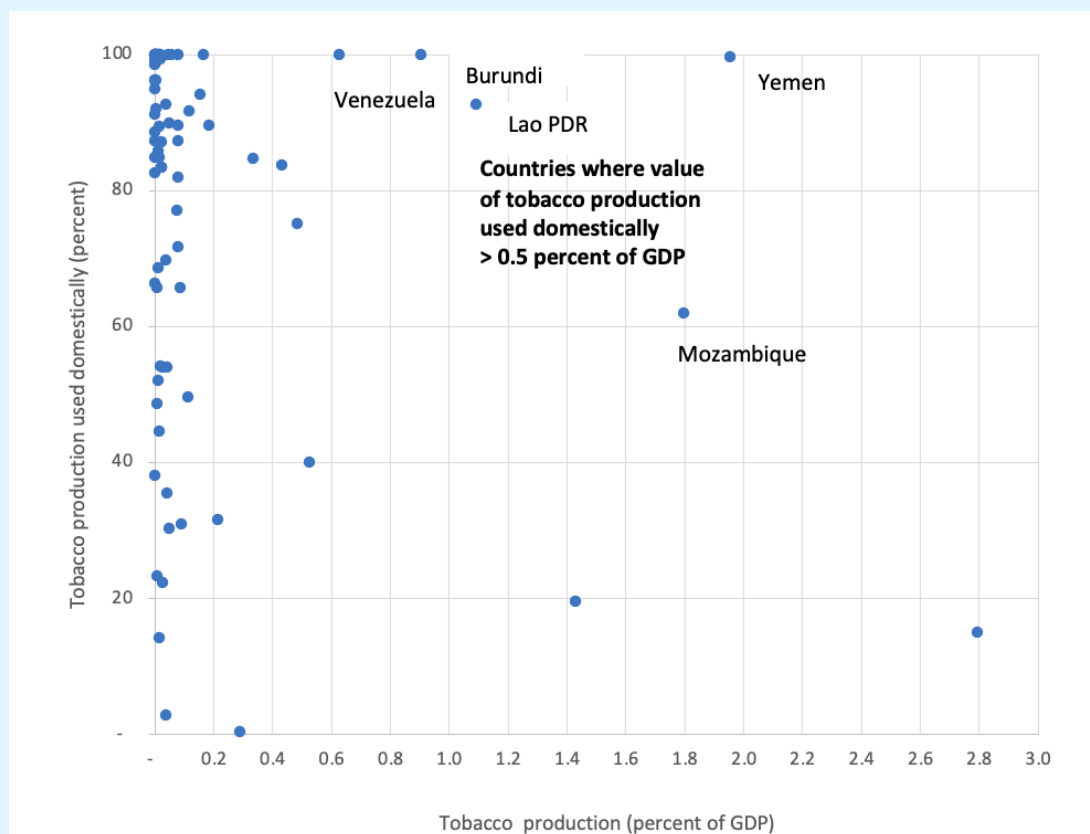
- Global tobacco production is declining at least in part due to tobacco control measures, and prices are stagnant. Production is migrating to low cost, low-income producing countries although it remains geographically dispersed;
- In most tobacco producing countries, the value of tobacco production destined for local use and thus subject to domestic excise taxes is small (less than 1/2 percent of GDP);
- In five countries – Burundi, Mozambique, , PDR Lao, Venezuela, and Yemen – tobacco farmers are more significantly exposed to domestic excise taxes as the value of tobacco production used domestically is greater than ½ percent of GDP and it would be particularly important to provide mitigating measures for tobacco farmers when domestic tobacco taxes are raised;
- Measures that governments can take to incentivize farmers to shift to other crops include: investment in market places to connect farmers to markets, expanding extension services, enhancing access to rural credit, and improving supply and value chains for other products;
- The benefits from shifting out of tobacco growing include improved household economic welfare, better health, and a lower incidence of child labor usage.

ANNEX: TOBACCO TAXES, PRODUCTION, AND CONSUMPTION

To illustrate which countries' tobacco farmers are significantly exposed to domestic tobacco taxes we use production value and export data disseminated by the Food and Agriculture Organization. We assess tobacco farmers to be significantly exposed to domestic tobacco taxes if the value of tobacco production not exported and used domestically is greater than 1/2 percent of GDP.

Five countries are above the threshold of ½ percent of GDP (Annex Figure 1). This group includes countries where tobacco production is a relatively large share of GDP (Mozambique and Yemen) even though some production may be exported as well as countries where production is a smaller share of GDP, and even quite small in absolute terms, but almost no production is exported and all is used domestically (Burundi, Lao PDR and Venezuela).

Annex Figure 1 // Tobacco production, 2020



Note: the data for Malawian tobacco production (0.3 percent of GDP) is not consistent with data for Malawi tobacco exports (approximately 3 percent of GDP).

Sources: FAOSTAT and World Bank World Development Indicators.

While the choice of threshold is somewhat arbitrary, lowering it to 0.2 percent of GDP would add another six countries to those in the significantly exposed list and a large majority of tobacco producing countries would only be marginally affected by domestic tobacco taxes. The six countries with the value of tobacco production used domestically being between 0.2 and 0.5 percent of GDP are Cambodia, Nicaragua, Honduras, Lebanon, North Macedonia and Zimbabwe and of these only North Macedonia and Zimbabwe produce more than ten thousand tonnes of tobacco per year (Annex Figure 2).

Annex Figure 2 // Global Dependence on Value of Tobacco Production Used Domestically, 2020



Sources: FAOSTAT and World Bank World Development Indicators.

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