

Large Tax Increases Are the Most Effective Policy for Reducing Tobacco Use

Introduction

Excise taxes are widely considered a key policy tool in reducing tobacco use.^{1,2,3,4,5} Many studies from across the world show that tax increases reduce overall tobacco use, lead current users to quit, prevent youth from taking up tobacco, and reduce health and economic consequences.² Because increased excise taxes increase the price of tobacco products, that makes them less *affordable*; with income and other factors remaining constant, purchasing the same amount of tobacco products requires more money, and thus an increase in the price leads to a drop in tobacco use.

These findings have led to the recommendation for higher tobacco taxes as a core policy provision by the World Health Organization Framework Convention on Tobacco Control (WHO FCTC).⁶ Tobacco taxes and tax increases on tobacco products, however, are low in many countries, particularly in low- and middle-income countries (LMICs). Moreover, many LMICs have experienced rapid economic growth in the past two decades, and the increased purchasing power of users has kept cigarettes affordable, despite the tax-induced increase in prices.^{7,8,9} Increased affordability of cigarettes contributes to increases in consumption.

This brief recommends that ‘large’ increases in taxes that reduce the affordability of tobacco products are required to have a significant impact on tobacco use. A ‘large’ tax increase implies a change that translates into a significant price increase, at the very least, larger than the sum of inflation and per capita income growth.

Impact of Taxes on Tobacco Consumption

Tobacco is the leading cause of preventable death in the world, killing approximately eight million people annually.

It is widely recognized that the most effective policy tool in reducing tobacco use is excise tax.^{1,2,3,4,5} The link between tobacco taxes and tobacco use is grounded in the idea that price is one of the key determinants of tobacco use. Tax increases lead to an increase in the retail price of cigarettes (other factors remaining equal), which subsequently reduces consumption. A large body of literature has examined the impact of prices on tobacco use.^{2,5} Evidence indicates that increases in taxes, which are passed on to consumers through price increases, have been found to reduce smoking prevalence as well as the initiation of smoking, and as a result, have decreased tobacco-related morbidity and mortality.

Though progress has been made in recent years, excise taxes are low in many countries, particularly in LMICs. WHO recommends raising excise taxes to account for at least 70% of the retail price of a tobacco product as a best practice.¹⁰ However, reaching this target will require substantial tax increases in most countries. According to WHO’s Global Report on Tobacco Epidemic, as of 2018, approximately 178 countries levy some form of excise tax on cigarettes. Only two LMICs (Argentina and Egypt) levy cigarette excise taxes that represent 70% of the retail price of the most sold brand.¹¹ Excise tax in most LMICs accounts for less than 50% share of the price of a pack of the most sold brand of cigarettes, and nine LMICs do not levy any excise tax.¹¹

Affordability of Tobacco Products

When the real (inflation-adjusted) price of tobacco decreases, or if the real price does not increase in line with the growth in income, this contributes to an increase in consumption. Increasing the excise tax is generally associated with increases in the price of tobacco. But just having a high tax share in price, or a high price, is not sufficient in reducing tobacco use. Increases in tax rates are effective if they reduce the ‘affordability’ of tobacco products.¹² The concept of affordability incorporates the simultaneous effect of price and income on an individual’s decision to purchase a product. Economists commonly measure cigarette affordability at the country level by calculating the percentage of per capita GDP required to purchase 100 packs of cigarettes, called the Relative Income Price (RIP).^{8,9,12} A higher RIP indicates that more income is needed to buy a pack of cigarettes, meaning cigarettes are less affordable, and vice versa. As a simple example, RIP will rise as a result of an increase in price if the increase in price is greater than the increase in income (all other factors remaining constant).

Figure 1 illustrates that from 2008 to 2018, a rise in tobacco prices has not translated to a proportionate rise in the RIP of cigarettes in many countries. The figure shows the average annual growth rate of the price of the most sold brand and the annual growth rate in the RIP for high-income countries (HICs) and LMICs. In the 98 countries shown, almost all those that have seen an increase in affordability are LMICs. For example, despite the growth in cigarette prices in Indonesia and Vietnam, cigarettes have become more affordable because these countries have experienced extraordinary growth in incomes in recent years. As a result, cigarettes in this group of LMICs are becoming more expensive, but they are not necessarily becoming less affordable.

Go Big, Go Fast

To trigger a decrease in consumption through an increase in excise taxes, the magnitude and frequency of increases are important. For

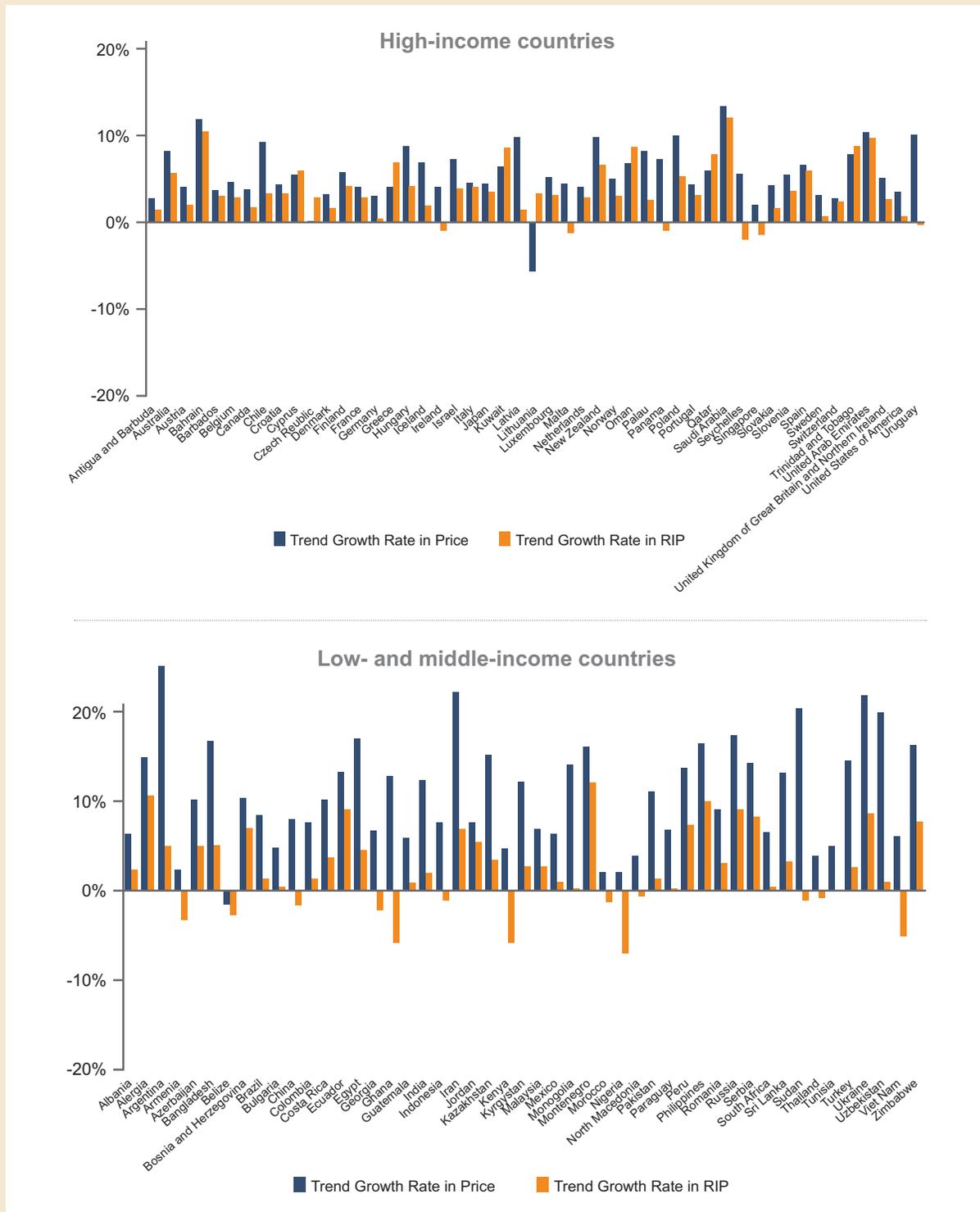
example, beginning in 1984, Australia increased the excise and customs duty on tobacco biannually to match the inflation rate. An analysis of the impact of this policy on smoking prevalence shows that the inflation-adjusted excise and customs duty was not associated with a decrease in smoking prevalence but it may have been a deterrent to an increase.¹³ In contrast, in recent years, Australia has implemented big increases in the tobacco excise tax as a key approach to reduce smoking prevalence – a 25% increase in 2010, and 12.5% annual increases from 2013 to 2017. These sharp increases in taxes resulted in immediate reductions in smoking prevalence as well as sustained effects.¹⁴ Evidence on comparable policies from across the world (examples below) indicates that a tax increase that creates a price shock results in a disproportionately large effect on consumption and public health.

A similar message has been echoed by the World Bank (2017), emphasizing the importance of excise taxes as a powerful measure to save lives, reduce poverty, and increase national financial resources.¹⁵ The report states that a key lesson learned regarding tobacco tax reform is to “Go Big, Go Fast.” Governments should focus on health gains that result from reduced tobacco use and sharply increase the excise tax on tobacco products to prevent illness and premature deaths due to tobacco consumption.

It is also important to note that the type of excise tax – specific or ad valorem – has different implications for tobacco use. For example, the impact of an increase in specific tax can be reduced by changing product characteristics such as the size of the pack. Similarly, ad valorem taxes require strong administration and widen the gap between cheap and expensive cigarettes. Therefore, the relative effects of the two types of taxes must be considered when introducing large tax increases.

Figure 1

Average annual percentage change in price and RIP, 2008 to 2018



Source: WHO Report on Global Epidemic 2019 – MPOWER Database; World Bank – WDI
 Notes: Countries have been identified as HICs and LMICs based on World Bank 2019 classification.

Large Increases in Tobacco Taxes Have Worked

Several other countries have also successfully implemented substantial increases in taxes and reduced cigarette consumption. For example, between 2008 and 2015, the average excise rate for cigarettes in Ukraine increased ten-fold, from 29 UAH to 304 UAH, per 1,000 cigarettes.¹⁶ These changes led to a major hike in cigarette prices; the price of a 20-stick Marlboro pack rose from 5 UAH in 2008 to 20.91 UAH in 2015.¹⁷ During the same period, cigarette sales and daily smoking prevalence fell by 40% and 28%, respectively.¹⁶

Similarly, in 2012 the Philippines adopted its landmark Sin Tax Reform Act, which substantially raised taxes on nearly all cigarettes sold in the Philippines. In the lowest price brands, taxes rose from 2.72 pesos per pack in 2012 to 30 pesos per pack in 2017.^{18,19} The share of excise tax on the most sold brand increased from 18.23% to 51.85%.¹¹ These changes considerably raised the prices of cigarettes in the country; the price of a 20-stick Marlboro pack rose from 30 pesos in 2012 to 55 pesos in 2016.¹⁷ The RIP increased by 109% during this period. Thus, buying a pack of cigarettes in 2016 required more than double the resources (in the form of per capita GDP) than in 2012. This increase translates into a significant decrease in the affordability of cigarettes. Global Adult Tobacco Surveys (GATS)²⁰ carried out in 2009 and 2015, show that smoking prevalence fell from 29.7% to 23.8%.

Conclusion

Increases in excise taxes that significantly reduce the affordability of tobacco products are the most effective policy to reduce tobacco use. Affordability incorporates the simultaneous effect of price and income on consumers' purchasing decisions. Income and purchasing power in LMICs are rising, which makes tobacco products more affordable, increasing consumption. The rising affordability necessitates increasing excise taxes in such a way to ensure that cigarette prices rise more steeply than the sum of inflation and growth in per capita income. In this regard, the magnitude and frequency of tax increases is extremely important. The Australian example shows that adjustments that merely keep cigarette prices in line with inflation may not achieve the desired reductions in smoking prevalence. However, frequent large increases that sharply increase the price of cigarettes and make them significantly less affordable can effectively reduce smoking prevalence. Countries such as Ukraine and the Philippines have successfully implemented large tax increases – which markedly reduced the affordability of cigarettes – and have experienced a sustained reduction in cigarette consumption.

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Suggested Citation

Mirza M. Large Tax Increases Are the Most Effective Policy for Reducing Tobacco Use. Tobacconomics Policy Brief. Chicago, IL: Tobacconomics, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2019. www.tobacconomics.org

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This publication is funded by Bloomberg Philanthropies.

About Tobacconomics

Tobacconomics is a collaboration of leading researchers who have been studying the economics of tobacco control policy for nearly 30 years. The team is dedicated to helping researchers, advocates and policymakers access the latest and best research about what is working—or not working—to curb tobacco consumption and the impact it has on our economy. As a program of the University of Illinois at Chicago, Tobacconomics is not affiliated with any tobacco manufacturer. Visit www.tobacconomics.org or follow us on Twitter www.twitter.com/tobacconomics.