



Policy Note: Impact of price-related measures and non-price regulation on tobacco consumption¹

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Key Messages

Tobacco taxation is the single most cost-effective tobacco control policy to reduce consumption. Although regulations that do not operate through prices are also very effective, tax increases further reduce tobacco consumption and have relatively low administrative costs. In Latin America, tax increases that raise the price of cigarettes by 20% reduce the prevalence of tobacco use by about 5%, while advertising bans do so by about 4%. In turn, the latter cost between 6 and 18 times more than raising taxes.

The simultaneous implementation of price-related measures and non-price policies oriented to increase awareness of the hazards of tobacco use can significantly reduce smoking. There is unequivocal evidence that price-related measures and non-price regulations have a signaling effect, and discourage tobacco consumption, which promotes a healthier, more productive population.

Increasing tobacco taxes in Argentina can effectively increase revenues and reduce health costs. Increasing the ad valorem rate of the internal tobacco tax from 70% to 75% would increase tax collection by about 10% (that is an increase of 0.05% of GDP). This increase is contemplated within the internal tax law and only depends on the approval of the Ministry of Economy.



Context

The economic costs of tobacco consumption are substantial and include significant health care costs as well as the loss of human capital that results from tobacco-attributable morbidity and mortality. Tobacco consumption causes more than 8 million deaths each year and costs the global economy at least US\$ 1.4 trillion each year (WHO, 2021). More than 7 million of those deaths are caused by direct tobacco use while around 1.2 million are the result of non-smokers being exposed to second-hand smoke (WHO, 2019).

To reduce these costs, governments all around the world have implemented a comprehensive range of tobacco control measures. On the one hand, governments have adopted regulations that affect tobacco prices and discourage tobacco consumption (i.e., price-related measures). Vast worldwide evidence shows that tax increases that effectively increase tobacco retail prices make them less affordable (WHO, 2021), and generate large reductions in smoking prevalence and premature mortality (Ferrante et al., 2007). On the other hand, governments have adopted regulations that discourage tobacco use by mechanisms other than price (i.e., non-price regulations). For example, legislation on promoting smoke-free spaces, media campaigns, marketing bans, health warnings, and cessation treatment policies, among many others, embodied in the World Health Organization's (WHO) MPOWER framework. MPOWER is a policy package intended to assist in the country-level implementation of effective interventions to reduce the demand for tobacco. The six evidence-based components of MPOWER are: Monitor tobacco use and prevention policies; Protect people from tobacco smoke; Offer help to quit tobacco use; Warn about the dangers of tobacco; Enforce bans on tobacco advertising, promotion, and sponsorship; and Raise taxes on tobacco. The WHO indicates that as of 2020, 69% of the world's population (5.3 billion people) are now covered by at least one MPOWER components, triple the number of countries with at least one MPOWER measure since 2007 (WHO, 2021).

The MPOWER framework is consistent with the world's first international public health treaty under the auspices of the WHO, the Framework Convention on Tobacco Control (FCTC). The FCTC was developed in response to the globalization of the tobacco epidemic and was opened for signature on 16 June to 22 June 2003 in Geneva, and thereafter at the United Nations Headquarters in New York, the Depositary of the treaty, from 30 June 2003 to 29 June 2004. Argentina signed the agreement on September 25, 2003 but is one of the few countries that has not yet ratified it. In any case, Argentina like any other country can still accede to the treaty even if it cannot ratify it as it could before signing closed.

In recent years, Argentina has introduced different types of tobacco control policies. Despite the evidence that tobacco tax increases are highly effective, Argentina has shown progress as well as setbacks in the implementation of tobacco control measures. This policy note provides a short narrative review of relevant scientific evidence (i.e., peer reviewed in reputable scientific journals) to



condense the state of the art on the effects of price-related measures and non-price regulations on tobacco consumption and health outcomes including recent evidence from Argentina.

Price-related regulations on tobacco consumption

Public policies can influence tobacco retail prices by multiple channels such as setting tobacco taxes, regulating prices and limiting price related marketing. For example, minimum prices may be used for public health purposes to prevent low cost selling from existing firms and to prevent new firms coming into the market with lower priced offers (IARC, 2011). Higher tobacco taxes that effectively increase tobacco retail prices make them less affordable (WHO, 2021), and can generate large reductions in smoking prevalence and premature mortality (Ferrante et al., 2007).

Worldwide evidence shows that tax increases reduce tobacco use. Higher taxes induce higher prices that discourage tobacco consumption through two mechanisms: i) by affecting the decision to smoke or not, leading current users to quit and deterring initiation (i.e., smoking participation); and ii) by affecting the decision on the number of cigarettes consumed (i.e., smoking intensity). Tax hikes that effectively increase tobacco products' retail prices make them less affordable, given that purchasing the same amount of these products requires a higher share of a constant individual income. As tobacco consumption is price inelastic (i.e., consumption decrease is proportionally less than the price increase), higher taxation also increases fiscal revenues.

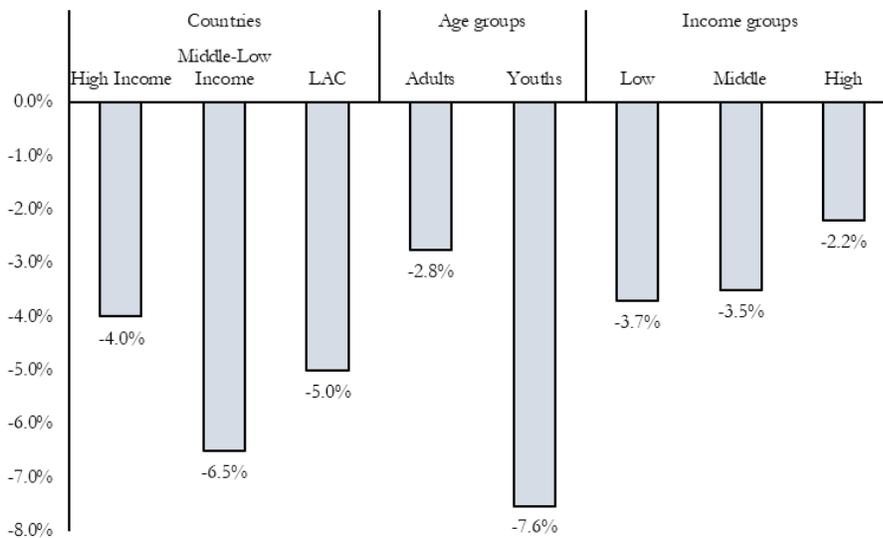
Demand for tobacco products in low- and middle-income countries (LMICs) is at least as responsive and often more responsive to price than it is in high income countries (HICs). For example, Selvaraj et al. (2015) indicate that LMIC figures show a reduction in tobacco consumption that ranges from 5% to 10% for every 10-% increase in price. NCI-WHO (2016) indicates that most estimates support reductions between 2% and 8%. When reviewing 32 studies for Latin American countries including Argentina, Guindon et al. (2015) show that a 10-% increase in cigarette prices would reduce consumption by 5%. However, some studies support higher reductions. Paraje et al. (2020) find an 8% reduction for El Salvador; Chavez (2016) a 9% reduction for Ecuador; and Gonzalez-Rozada and Ramos-Carbajales (2016) a 7% reduction for Peru. Chaloupka et al. (2012), based on more than 100 studies, note that most studies from HICs indicate a 4-% decrease in tobacco consumption for every 10-% increase in price (**Figure 1**). Levy et al. (2018) suggest that 2% of the decrease is attributed to reduced prevalence and 2% to the reduced quantity of cigarettes consumed.

Lower income groups are usually more price responsive than higher income groups (Farrelly et al., 2001; Colman and Remler, 2008; NCI and WHO, 2016; Verguet et al., 2020). For example, one study found that for every 10-% increase in price, tobacco consumption decreases by 3.7, 3.5, and 2.2% among low-, middle-, and high-income groups, respectively (Colman and Remler, 2008). In addition, young people are usually more responsive than older adults to changes in prices of tobacco products



(Kostova et al., 2011; Nikaj and Chaloupka, 2014; Kostova et al., 2014; Verguet et al., 2020). Based on a systematic review of more than 80 published studies Wilson et al. (2012) found that the decrease in smoking prevalence can reach up to 14% for every 10% increase in price among youths. Among adults, in the same study, the decrease can reach up to 4.5%. The larger effect for youths is consistent with prior evidence that young people are more price sensitive due to lower levels of disposable income (Joseph and Chaloupka, 2013). Bafunno et al. (2020) reviewed 21 articles - published between 2014 and 2019 - from Argentina, Switzerland, Europe, UK, USA, New Zealand, and Australia. The review confirmed that raising tobacco taxes is significantly related to a reduction in smoking among young and older adults and among those with lower educational levels.

Figure 1. % changes in tobacco consumption for every 10% increase in price. Heterogeneous response by income and age groups.



Source: Own elaboration based on Chaloupka et al. (2012); Guindon et al. (2015); Colman and Remler (2008); and Wilson et al. (2012).

Non-price regulations on tobacco consumption

Tobacco control measures that do not operate through prices include promoting smoke-free air laws (e.g., banning smoking in public places); educating people about the dangers of smoking through mass media campaigns or through health warnings, plain packaging; marketing bans (e.g., banning advertising, promotion, and sponsorship of tobacco products); and cessation treatment policies, among many others (Wilson et al, 2012; Levy et al., 2018). Systematic literature reviews indicate they can be useful tools to discourage tobacco consumption.

With regards to smoke-free laws, Wilson et al. (2012) found strong positive evidence when quantifying their impact since their effectiveness depends on the comprehensiveness of legislation, level of enforcement, public support, and degree of prior legislation in place. Bans that cover worksites,



restaurants, and bars are associated with a short-term relative reduction in smoking prevalence of 10% (Levy et al., 2018). These measures make youth and young adults less likely to start smoking due to several factors, including lower visibility of people who smoke, fewer opportunities to smoke alone or with others, and reduced social acceptance of smoking. Therefore, smoking bans also have the potential to influence social norms and can increase the adoption of voluntary smoke-free rules in homes. This can further protect nonsmokers—especially those most vulnerable who are exposed to secondhand smoke in the home, such as children.² Cornelsen et al. (2014), in a review of around 40 studies from the United States, Germany, Ireland, Norway, Australia, Canada, South Africa, Argentina, and Mexico, did not find substantial changes in employment or absolute sales in the bar and restaurant sector associated with the smoking bans. However, the authors indicate that bans could possibly cause changes in consumer preferences towards different establishments depending on the venues' policies regarding smoking.

Many studies (e.g., Wilson et al., 2012; Di Franza et al., 2006) demonstrate the central role of tobacco marketing (i.e., advertising, promotion, and sponsorship) on smoking initiation. Advertising increases positive images of tobacco, distorts the utility of tobacco use, increases curiosity about tobacco use, and influences normative beliefs and perceptions of tobacco use prevalence, all predictive of future smoking experimentation. Thus, comprehensive bans are the only effective way to eliminate exposure to tobacco marketing. Evidence suggests that banning advertising and sponsorship of tobacco products is associated with a short-term relative reduction in smoking prevalence of 4% (Levy et al., 2018).

Positive effects are also attributable to educating people about the dangers of smoking through mass media campaigns (Wilson et al., 2012). The association between high exposure to mass media anti-smoking campaigns and increased knowledge of smoke related harms is evident, provided that these campaigns are sustained over time (Bafunno et al., 2020). These measures are associated with a short-term relative reduction in smoking prevalence of 8% (Levy et al., 2018), while the odds of being a smoker 1 to 6 years after the start of an intervention ranged from 0.6 to 0.9 (Wilson et al., 2012). Differences observed in the impact of mass media campaigns are likely due, in part, to differences in content, tone, and reach. Although it is not clear which types of messages work best, behavioral research has suggested that adult audiences are most likely to respond to graphic depictions of the health consequences of smoking, and that youth audiences are more likely to respond to messages about tobacco industry deception and manipulation. Conversely, messages focusing on smoking as an adult choice, commonly used in tobacco industry-sponsored campaigns, have been shown to be ineffective or even increase youth tobacco use (Wilson et al., 2012).

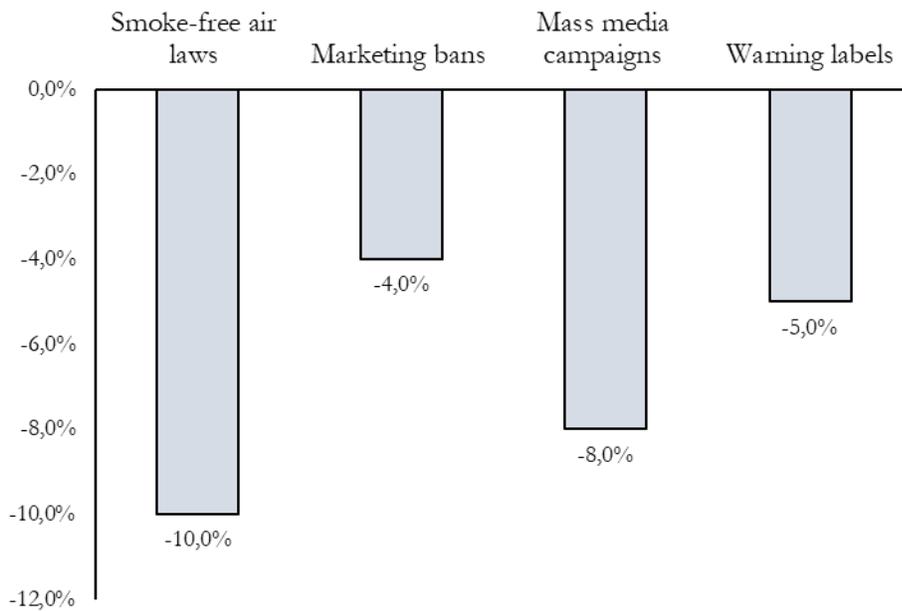
Educating people about the dangers of smoking through health warning labels is another effective measure against tobacco consumption. Several reviews of studies reported that pictorial warning labels were associated with reductions in adult smoking prevalence (Levy et al., 2018). Replacing small text

² See National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health (2014).



warnings with large (at least 50% of the pack) graphic warnings contribute to a 5-% short-term relative reduction in smoking prevalence and a 10-% long-term reduction through greater cessation and reduced initiation. Plain packaging— i.e., the removal of all branding and promotions from tobacco products— may further enhance the effectiveness of health warnings. Bonfrer et al., (2020), show that plain packaging legislation implemented in Australia reduced cigarette sales by around 7.5-%. For Latin American countries, Alcaraz et al. (2020b) indicate that pictorial health warnings covering 50 to 80% of cigarette packs reduce prevalence by 6% in the long run. Alcaraz et al. (2020b) also predict that plain packaging plus pictorial health warnings on more than 80% of packs would double the aforementioned reduction in prevalence. **Figure 2** summarizes the differential impact of non-price regulations on smoking prevalence.

Figure 2. Differential impact of non-price measures on smoking prevalence. In terms of the %age reduction in smoking prevalence.



Source: Own elaboration based on Levy et al. (2018).

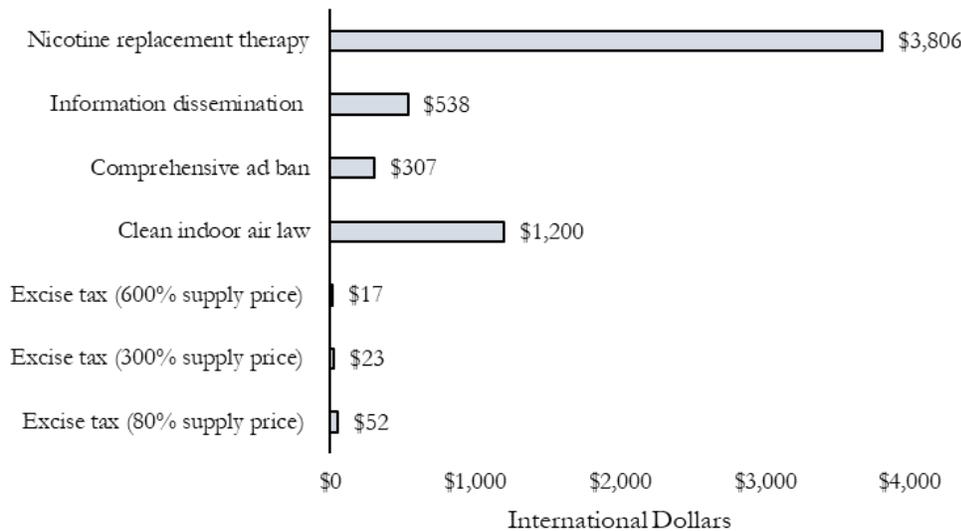
Cost-effectiveness of price-related measures and non-price regulation on tobacco products

Increasing tobacco taxes is the most cost-effective regulation to achieve reductions in tobacco consumption. NCI-WHO (2016) indicates that the costs of higher tobacco taxes per averted Disability-Adjusted Life Year (DALY) is the lowest among the entire menu of tobacco control policies. This is true for all countries, whether they are grouped by income level or geographic region. Ranson et al. (2002) indicate that the cost of increasing tobacco taxes ranges from US\$ 3 to US\$ 70 per Disability-Adjusted Life Year (DALY) averted in LMICs, while the cost of a package of non-price interventions ranges from US\$ 36 to US\$ 710 per DALY averted. The same conclusion is reinforced



by Chisholm et al. (2006) who argue that for the sub-region of the Americas the average cost of higher taxes - per averted DALY - is between US\$ 17 and US\$ 52 (**Figure 3**). The cost of non-price measures is in the range of US\$ 307 (e.g., comprehensive ad ban) and US\$ 3,806 (e.g., nicotine replacement therapy). As previously stated, for Latin American countries the reduction in total consumption is 5% for every 10% increase in prices (Guindon et al., 2015). In addition, half of this reduction is associated with a drop in prevalence (Levy et al., 2018). Therefore, raising tobacco taxes so that prices increase by 20% reduces tobacco prevalence by about 5% while marketing bans reduce it by about 4%. However, marketing bans cost between 6 and 18 times more than raising taxes. Additionally, reductions in consumption and prevalence due to marketing bans can only be obtained once, while tobacco tax increases can be implemented multiple times.

Figure 3. Cost-effectiveness of interventions for reducing the burden of tobacco use. Average cost per averted DALY. Americas sub-region. International dollars (PPP).



Source: Own elaboration based on Chisholm et al. (2006).

Evidence from Argentina

In Argentina, tobacco consumption causes 14% of total deaths in the country, and more than 225 thousand cases of lung disease, cancer, and heart disease each year. In total, there are about 45 thousand deaths per year attributable to smoking. Additionally, 7.6% of annual public spending on health is allocated to medical care for diseases related to tobacco use (IECS, 2021). To put this cost in context, Argentina allocates approximately 8% of the national budget to health spending (i.e., 615 billion pesos in 2021).



In recent years the government has implemented different tobacco control policies. In June 2011, the National Law 26,687 for tobacco control was passed. The law requires the inclusion of health warnings and images about the harmful consequences of tobacco consumption. Health centers, universities, government buildings, restaurants, bars and pubs and public transport are declared 100% smoke-free spaces. Despite this law, 21.8% of workers are still exposed to secondhand tobacco smoke and 21.5% of people were exposed to smoke in bars and restaurants, according to the National Survey of Factors of Risk (NSRS) 2018. In its article 5, the law prohibits the advertising, promotion and sponsorship of products made with tobacco, directly or indirectly, through any means of dissemination or communication.³ This is a package of policies based on the international standards contained in the WHO FCTC.⁴ Despite the fact that the WHO FCTC includes tobacco taxes as a key tobacco control intervention, the national law only implemented non-price measures. In May 2016, the ad valorem rate of the specific tax on tobacco was increased from 60% to 75%.⁵ As a consequence, the excise tax share of retail price went from 63.15% in April 2016 to 76.02% in May 2016.⁶

Since 2011, tobacco consumption in Argentina (i.e., total cigarette sales) has diminished. To put this in context, between 2007.q1 and 2011.q3 the average quarterly consumption was 530 million packs. This fell to 510 million between 2011.q4 and 2016.q1, indicating an average reduction in tobacco consumption of 3.8%. During 2016.q2 and 2018.q3 average consumption was 445 million, representing an average reduction of 12.7% (**Figure 4**). Considering the population over 15 years old, the average quarterly consumption was 17.4 packs per person between 2007.q1 and 2011.q3, and 16.3 packs per person between 2011.q4 and 2016.q1. During 2016.q2 and 2018.q3 average consumption was 13.5 packs per person.

³ Since the mid-2000s, many Latin American countries have adopted these types of regulations. As highlighted by Barrenechea et al. (2019), in 2006 Uruguay became the first country in the region to adopt smoke-free environments as a national policy. Another six countries soon followed— Colombia and Panama in 2008, Peru in 2010, Brazil and Venezuela in 2011, and Costa Rica in 2012.

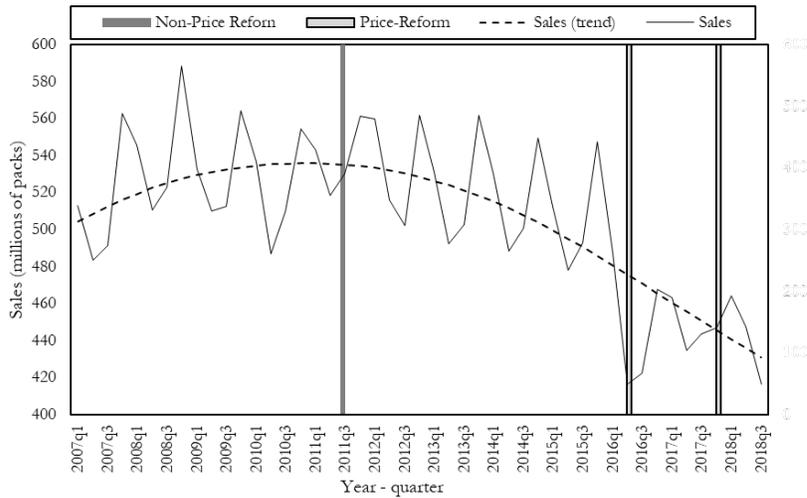
⁴ As mentioned in the Context, Argentina signed the agreement on September 25, 2003 but is one of the few countries that has not yet ratified it. In any case Argentina, like any other country, can still accede to the treaty even if it cannot ratify it as it could before signing closed.

⁵ In December 2017, an additional reform set a 70 percent rate on the excise tax and established a minimum tax of 28 pesos per pack of 20 units. Given that this reform is not fully in place due to judicial interference by small tobacco companies, we do not consider it in this study.

⁶ WHO's guide on best practices recommends that total taxes on tobacco products should be at least 75 percent of the retail price (WHO, 2015). Total taxes include excise taxes, VAT (or sales taxes), import duties (when applicable) and other indirect taxes (where applicable). However, as WHO (2021) states, it is preferable to focus on excise taxes, since they are the component that most influences the relative price of tobacco. The WHO (2010) technical manual on tobacco tax administration recommended making excise taxes account for at least a 70 percent share of excise taxes in the retail price of tobacco products. See also the guidelines for implementation of Article 6 of the WHO Framework Convention on Tobacco Control.



Figure 4. Tobacco Consumption in Argentina. Total cigarette sales. Evolution 2007-2018.

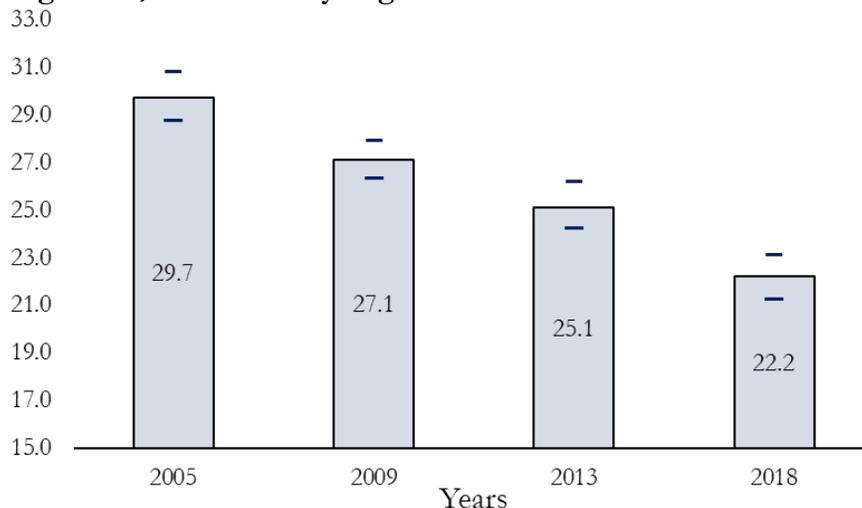


Source: Own elaboration based on data from the Ministry of Agriculture of Argentina. Note: sales trend is calculated by applying the Hodrick-Prescott filter.

Tobacco prevalence decreased while the government implemented more restrictive tobacco control policies. According to the latest NSRS, in 2018 the prevalence of cigarette consumption in the adult population (18 years and over) was 22.2%, 7.5%age points below the prevalence registered in 2005 by the same survey (**Figure 5**). When considering individual characteristics, the prevalence in 2018 was 26.1% for men and 18.6% for women. In 2009 those figures were 32.4% and 22.4%, respectively. The lowest prevalence was observed across the two age extremes. For example, individuals under 25 years old presented a prevalence of 20.5% in 2018, while in 2009 it was 28.8%. In terms of educational levels, populations who had not completed their secondary level had a higher prevalence (26.1%) than those who had completed secondary or higher educational levels (20.1%).



Figure 5. Prevalence of cigarette smoking in the adult population (18 years and over). Argentina, 2005-2018. By %age.



Source: Own elaboration based on data from the National Ministry of Health. National Survey of Risk Factors 2005, 2009, 2013 and 2018.

In Argentina the most consumed tobacco product is cigarettes. Evidence on the effectiveness of increasing cigarette taxes is conclusive. For each 10-% increase in cigarette prices, cigarette consumption decreases between 3.8 and 4.41% (Rodríguez-Iglesias et al. 2017 and Berlinski and González-Rozada 2018).⁷ A reduction in consumption would save lives and generate economic improvements due to lower health costs and higher fiscal revenues. Alcaraz et al. (2020a), for example, suggest that higher taxes that achieve a 50-% increase in the price of cigarettes would prevent 27,496 deaths; 43,505 heart events; 12,691 new cancers; and 660,323 years of life lost due to premature death and disease over the next 10 years.⁸ Increasing the ad valorem rate of the internal tobacco tax from 70% to 75% would increase cigarette prices by 18% and reduce consumption by about 12%. In addition, tax collection would be increased by approximately 10% (CEDLAS, 2022). Increasing the ad valorem rate of the specific tax on tobacco by 5%age points is contemplated in the national tax legislation and requires only the approval of the Ministry of Economy to be implemented.

Also, increasing tobacco taxes has a progressive impact among vulnerable groups. Cruces et al. (2020, 2022) show that sensitivities to changes in cigarette prices differ significantly among individuals by income level and age groups. A 10% increase in cigarette prices would decrease consumption by 8.5% (4.4%) amongst the poorest (richest) smokers. In addition, with the same price increase, young people aged 15-25 would decrease consumption by 7.7% while amongst older individuals (65+) the reduction in consumption would be 4.5%. These differential reductions in tobacco consumption have relevant

⁷ Similar findings for Argentina are provided by Gonzalez-Rozada (2006); Martinez et al. (2015); Gonzalez-Rozada (2019); and Gonzalez-Rozada (2020).

⁸ Healthy life-years lost averted are those that would have been lost because of premature mortality or quality of life losses. See Alcaraz et al. (2020a).



implications in terms of the distributional incidence of tobacco taxes. As less well-off individuals reduce their relative consumption more, they bear a relatively lower tax burden. Thus, at a population level, raising tobacco excise taxes is not a regressive policy as is often believed. Gonzalez-Rozada and Montamat (2019) examined the role of tobacco prices on smoking onset and quitting by using data from the Global Adult Tobacco Survey (GATS), reporting that an increase of 10% in real cigarette prices is expected to delay smoking onset by almost 2.5 years. Delaying initiation almost certainly reduces initiation given the likelihood of initiation falls with age after a certain point. Specifically, male teenagers have the highest risk of picking up a smoking habit around the age of 19 while for females the highest risk is around 21 years old. The hazard of initiating the addiction increases sharply around the age of 13 for both men and women and falls after the age of 19 for men and 21 for women. Best practices on tobacco taxation (WHO, 2010) recommend allocating new tax revenues to helping lower-income smokers quit. Countries that implemented this kind of policies show increasing quit rates and make the policy even more progressive at a population level.

A usual critique of tobacco tax increases is the supposed detrimental effects on employment because of reduced tobacco sales. Contrary to this argument, Cruces et al. (2021) shows substantial increases in tobacco taxes can even increase aggregate employment in the medium term. Results from a computable general equilibrium model for Argentina show that a simulated substantial increase in tobacco taxation induces a zero-net change in overall employment in the economy. Increased tobacco taxes may shift jobs from tobacco-related sectors to other sectors of the economy, but the overall impact on the total number of jobs is negligible.

Non-fiscal policies are also highly effective in Argentina. Several studies reviewed the benefits of the full implementation and enforcement of Law 26,687. For example, Konfino et al. (2014) suggested that 7,500 coronary heart disease deaths, 16,900 myocardial infarctions and 4,300 strokes could be avoided with the full implementation of this law. Alcaraz et al. (2020b) evaluate the 10-year potential impact of current legislation related to cigarette packaging and warnings and expected effects of moving to a higher level of strategies implementing plain cigarette packaging on health and cost outcomes. Argentina currently has health warnings covering 40% of the pack surface. These warning policies could avert 11,024 deaths and 44,710 disease events over a period of 10 years. However, a recent study estimates that if Argentina implemented a plain packaging regulation and increased health warnings to 80% of the pack, all previous figures would be doubled (Alcaraz et al., 2020b).

The current smoke-free air legislation is already producing health and economic benefits: it could avert a total of 19,261 deaths and 78,112 disease events - cardio and cerebrovascular events, chronic obstructive pulmonary disease, and cancer, over a period of 10 years, which would save more than 10% of the national health budget in medical cost (Bardach et al., 2017). Restrictions on tobacco



marketing currently in place in Argentina could avert a total of 1,378 deaths and 5,589 disease events over a period of 10 years which would also save substantial medical costs (García Martí et al., 2017).⁹

Conclusion and policy implications

The consensus on the effects of tobacco control policies supports two main conclusions. First, price-related measures and non-price regulations are effective in reducing tobacco consumption. Secondly, the costs of higher tobacco taxes per healthy life-year gained is the lowest among the entire gamut of tobacco control policies.

The impact of a new intervention depends on the existing tobacco control environment and on whether any other policies are simultaneously implemented (e.g., policies on how additional revenues from raising tobacco taxes may fund other tobacco control interventions). Many studies have demonstrated the effectiveness of multicomponent tobacco control programs (Wilson et al., 2012). The effect sizes for demand reduction policies indicate the potential for substantial reductions in smoking prevalence, by as much as 60% (Levy et al, 2018). Thus, a comprehensive tobacco control intervention that affects awareness of the hazards of tobacco use; social norms and rules of behavior; tobacco addiction treatment; and availability of tobacco products can significantly reduce smoking prevalence as well as modify smoking behavior.

These conclusions should lead policymakers to consider jointly implementing measures that regulate the consumption of tobacco in smoke-free spaces and discourage it via price-related measures. Tobacco control strategies should act differently at different levels and on specific target groups. For example, raising taxes is a highly cost-effective measure and has a more pronounced effect on the poorest and youngest individuals, given their higher price elasticity of demand. This also improves equity. Tobacco tax revenues could be used in awareness raising, and in information and prevention programs, especially targeted to school-aged children. Mass media campaigns should focus differentially on adult audiences who are most likely to respond to graphic depictions of the health consequences of smoking, and on youth audiences that are more likely to respond to messages about tobacco industry deception and manipulation. Using the entire battery of available policies to discourage tobacco consumption, considering the cost effectiveness of each one and their

⁹ Additionally, Argentina implemented subnational legislation on smoke free environments (for example, at the provincial or municipal level). For this reason, some provinces have smoke-free policies and others do not. As of 2005, provinces have developed provincial legislation. Each provincial law varies with some having certain exceptions that weaken it. Barrenechea et al. (2019) identify factors related to behavioral changes in smokers over 18 years of age following implementation of provincial policies for smoke-free spaces in Argentina, revealing that residents of provinces that do not have smoke-free legislation were 40 percent less likely to consider quitting smoking than people who live in provinces with such legislation. In provinces without smoke-free spaces, males over 65 years old are even less likely to think about quitting smoking.



complementarity, is an effective strategy to reduce tobacco consumption and its high cost to public health and the economy.

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