

Prevalence of Daily Smoking and Initiation in Latin America

Key Findings



Increasing cigarette prices would reduce daily smoking prevalence across the population in Latin America.



An increase of 10 percent in cigarette prices would delay smoking initiation by one year and four months in Mexico, by almost two and a half years in Brazil, and by five months in Argentina, which is conducive to reducing smoking prevalence.



Evidence from Argentina, Brazil, and Mexico shows that increasing cigarette prices through excise tax increases would delay the age of daily smoking initiation.



In Brazil and Argentina, daily smoking prevalence decreases with wealth, which means that daily smoking is associated with being poor. In contrast, daily smoking prevalence in Mexico increases with wealth, meaning that richer individuals smoke daily, on average, more than poorer ones.

Context

There is abundant evidence documenting the negative consequences of smoking. Over the last decades public smoking bans, taxation, and tobacco control campaigns induced a decline in smoking prevalence in three major economies in Latin America: Argentina, Brazil, and Mexico.

Argentina implemented effective policies to reduce tobacco consumption, and smoking prevalence decreased over the past 15 years: from 34 percent in 2000 to almost 29 percent in 2010, stabilizing around 24 percent between 2018 and 2020. Brazil has also seen progress in reducing smoking prevalence: from 24 percent in 2000 to 13 percent in 2020. In Mexico, as a result of tobacco control efforts, smoking

prevalence at the national level has declined from 28 percent in the 1990s to 17 percent in 2017.

Despite the development of tobacco control policies over the years,¹ prevalence declines have stalled in recent years in all three countries. Daily smoking prevalence ranges from eight percent in Mexico to almost 17 percent in Argentina. When considering a broader measure of prevalence by including the occasional smokers with the daily smokers, smoking prevalence jumps to around 17 percent in Mexico, which is larger than the prevalence figure in Brazil of 15 percent. However, the highest value occurs in Argentina, where prevalence of occasional and daily smoking is around 23 percent. This means there is room for improvement in tobacco control policies in these countries.

¹ For a discussion of recent progress of tobacco control policies across the region, see the country reports.

Impact of a tax increase on smoking prevalence

The relationship between smoking and wealth is not the same in each of the countries in this analysis. In Brazil and Argentina, daily smoking prevalence decreases with wealth, which means that daily smoking is associated with being poor. In contrast, daily smoking prevalence in Mexico increases with wealth, meaning that richer individuals smoke daily, on average, more than poorer ones.

The price of a 20-cigarette pack, measured in US\$ using the purchasing power parity (PPP) of 2019, is around \$8 in Argentina (\$7.73) and Mexico

(\$8.58), but less than half that value in Brazil (\$3.45).

In all three Latin American countries an increase in cigarette prices is associated with a decrease in daily smoking prevalence. Specifically, if prices increase by 10 percent, prevalence is reduced 4.1 percent in Mexico, by 2.6 percent in Brazil, and by 1.1 percent in Argentina.

Table 1 summarizes the effects of a 10-percent price increase on cigarette consumption among daily smokers. An increase in cigarette retail prices would induce a reduction in daily prevalence regardless of age, gender, or wealth.

Table 1

Sensitivity of prevalence to a 10% price increase among daily smokers

| Percent reduction in prevalence caused by a 10% price increase | | | |
|--|--------|--------|-----------|
| Categories | Mexico | Brazil | Argentina |
| Gender | | | |
| Men | -3.5% | -2.4% | -1.0% |
| Women | -4.6% | -2.8% | -1.1% |
| Age | | | |
| 18-24 years old (*) | -4.3% | -2.9% | -1.1% |
| 25-44 years old | -4.0% | -2.7% | -1.0% |
| 45-64 years old | -3.9% | -2.4% | -1.0% |
| more than 65 years old | -4.4% | -3.0% | -1.3% |
| Wealth quartiles | | | |
| Q1 (poorest) | -4.4% | -2.5% | -1.0% |
| Q2 | -4.1% | -2.6% | -1.1% |
| Q3 | -3.9% | -2.7% | -1.1% |
| Q4 (richest) | -3.7% | -2.7% | -1.1% |

Source: Authors' elaboration based on the Global Adult Tobacco Survey (GATS) 2015 for Mexico, the National Health Survey (Pesquisa Nacional de Saúde, PNS) 2013 for Brazil, and the National Risk Factors Survey (Encuesta Nacional de Factores de Riesgo, ENFR) 2018 for Argentina. (*) The first age category for Mexico includes individuals aged between 15 and 24.

Impact of a tax increase on smoking onset

The reported average age of daily smoking initiation is similar in the three countries, between seventeen 17 and 18 years old. In general, there is a positive risk of smoking around age 12, although

young girls in Mexico start slightly later (see Figure 1). In all countries, the risk is highest at age 17, and it decreases to very low levels in a person's late 20s.

In all cases, men are at a higher risk of smoking than women, but this risk varies by country.

Regarding the age of maximum risk, in Argentina and Mexico male teenagers between the ages of 16 and 17 have the highest risk of picking up a smoking habit, while for women this risk is highest at around 17 years old. However, when considering the age of earliest risk, in Mexico boys start smoking earlier than girls, at the age of 10, whereas girls start at

around 13 years old. Meanwhile, in Argentina young girls are at risk slightly earlier than boys. In Brazil, teenagers of both genders start at the same age, but the risk for female teenagers peaks earlier, with the highest risk at 16 for young men and 17 for young women.

Figure 1
Daily smoking initiation pattern, by gender and by country

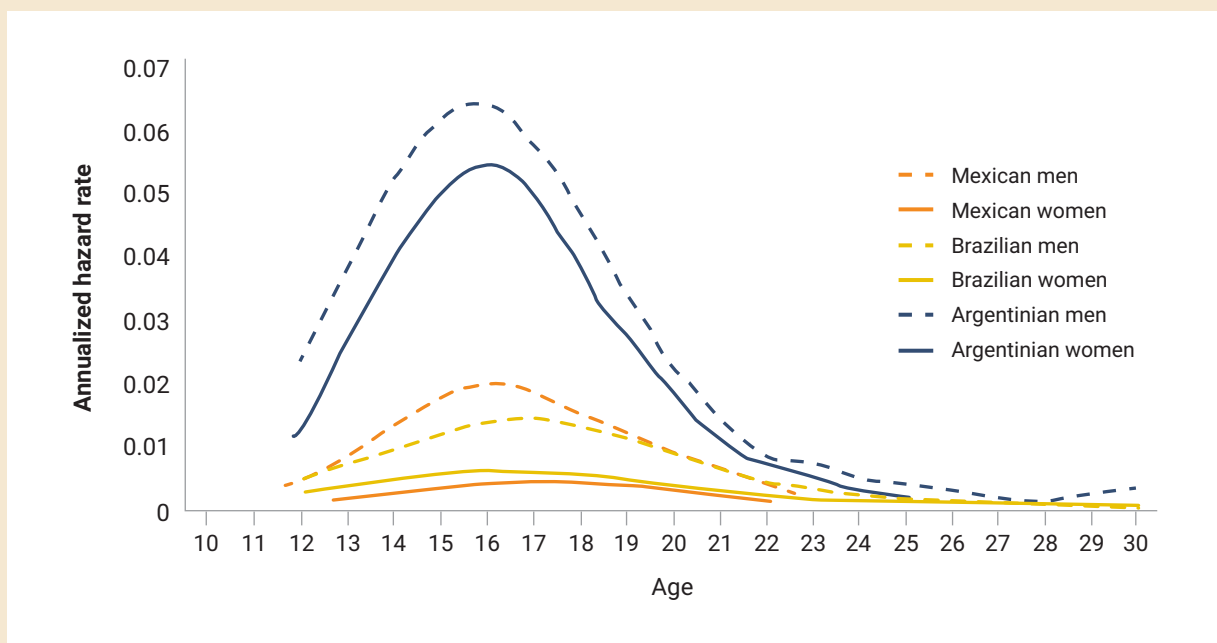


Table 2
Mean smoking starting age and months of delay

| Categories | Mexico | | Brazil | | Argentina | |
|---------------------------|--------|---------------------|--------|-----------------------|-----------|------------|
| | Age | Delay | Age | Delay | Age | Delay |
| Aggregate | 18 | 1 year and 4 months | 17 | 2 years and 6 months | 18 | 4.2 months |
| Men | 18 | 1 year and 1 month | 17 | 2 years and 5 months | 18 | 4 months |
| Women | 20 | 1 year and 9 months | 18 | 2 years and 10 months | 20 | 5 months |
| Lowest quartile of wealth | 18 | 1 year and 4 months | 18 | 2 years and 9 months | 18 | 4.4 months |
| Other quartiles of wealth | 18 | 1 year and 3 months | 18 | 2 years and 9 months | 18 | 4.4 months |

Source: Authors' elaboration based on the Global Adult Tobacco Survey (GATS) 2015 for Mexico, the National Health Survey (Pesquisa Nacional de Saúde, PNS) 2013 for Brazil and the National Risk Factors Survey (Encuesta Nacional de Factores de Riesgo, ENFR) 2018 for Argentina. Each "age" column refers to the average starting age for each group in each country. Each "delay" column refers to the average delay in onset in each group caused by a 10-percent increase in price.

Increases in excise taxes that lead to increased cigarette prices also delay the starting age of daily smoking. Research consistently shows that delays in initiation lead to a lower probability of regular smoking, ultimately reducing smoking prevalence and improving health outcomes in the long term. An increase of 10 percent in prices is expected to delay the daily smoking initiation age by one year and four months in Mexico, by around two years and six months in Brazil, and by five months in Argentina. In all three cases the sample used to estimate the smoking onset price elasticity includes young people less than 35 years old. This finding is of particular importance, because it shows that they are very sensitive to increasing cigarette prices.

Conclusion and Policy Recommendations

In this policy brief, the authors estimate the impact of increasing cigarette prices on daily smoking prevalence and on the age of starting smoking in

Argentina, Brazil, and Mexico. The empirical evidence presented suggests that an increase in cigarette prices would decrease daily smoking prevalence and delay the starting age of smoking in all three countries.

The addictive nature of tobacco products is at the center of many health problems, and adolescence is a key phase in which addiction might develop. The evidence presented in this brief suggests that increases in cigarette prices are, on average in these three countries, linked to a delay in the development of the habit of daily smoking. These delays in initiation are known to mitigate the probability that an individual will become a regular smoker, which, in turn, is expected to improve health outcomes over the life course. A policy of increasing excise taxes with the objective of increasing cigarette prices could be very effective to delay smoking initiation and ultimately lead to healthier population.

Citation

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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's working—or not working—to curb tobacco consumption and its economic impacts. As a program of the University of Illinois Chicago, Tobacconomics is not affiliated with any tobacco manufacturer. Visit www.tobacconomics.org or follow us on Twitter www.twitter.com/tobacconomics.