

# The Economic Cost of Smoking in Russia

Russian male smokers earn 14.8% less than non-smokers

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Tobacco smoking is widely prevalent in Russia. About 50 million Russians between the ages of 18 to 65 smoke, and each year 375,000 Russians die of smoking-related illnesses. According to the World Health Organization, Russia has the world's fourth-highest rate of smoking. The last decade witnessed a sharp increase in the number of smokers, especially among the female and younger populations. Russia is the third-largest market for tobacco in the world, with smokers spending up to US\$6 billion on tobacco products. Along with alcohol consumption, smoking is a leading public health problem, and together they contribute to Russia's declining life span.

In recent years, the Russian anti-smoking movement, assisted by the government in its effort to reverse or slow population decline, has made some progress in controlling tobacco commerce and consumption. As a result, the Russian Parliament has ratified several decrees and laws restricting smoking in public places and banning tobacco advertisements on television and radio. However, smoking is still on the margins of Russia's policy agenda. Russia has not joined the Framework Convention on Tobacco Control that 167 countries had signed and 57 national parliaments had endorsed by February 2005.

## Economic Losses Ignored

The anti-smoking debate in Russia has focused mostly on the adverse effects of smoking on health, and not so much on the costs that smokers impose on the economy through the reduction in their productivity. But such costs could play an important role in the anti-smoking policy debate in Russia.

Our study provides the first empirical estimates of the economic losses stemming from the negative effect smoking has on wages in Russia. The analysis is based on data from the Living Standards Survey conducted in the Tomsk region of Russia in 2006. While the survey is not intended to represent the nation as a

whole, it provides information on a typical Russian region. The Tomsk region has a population of about 1.1 million people, many of whom live in urban areas. Large industrial enterprises and research centers in the region provide employment for the majority of the workforce; the share of the public sector in total employment is high.

## 30 to 35-Year-olds Most Likely to Smoke

In our sample of over 2,500 respondents, 61% of males and 14% of females categorized themselves as smokers. The incidence of smoking is higher among the male rural population and female urban dwellers (see Table). The prevalence of smoking increases sharply with age, peaking at 30-35 years. The lower proportion of old-age smokers in the sample could be explained by higher attrition rates in that group. Accumulated over a lifetime, the negative effects of smoking could lead to earlier exit from the labor market or even death. For both genders the prevalence of smoking declines with education. More than two-thirds of men and about 25% of women with high school diplomas smoke. Those proportions drop significantly for individuals with university degrees or higher.

On average, non-smoking men earn more than smokers: 10,732 rubles per month (about US\$400 at the exchange rate of RUR27/US\$1) vs. 8,992 rubles (US\$330), respectively, thus enjoying about a 19%

unadjusted wage premium over smokers. The wage premium of non-smoking women was quite a bit lower at 6%, which translated to an approximately US\$15 "bonus".

## Why Lower Wages?

Several theories explain the lower wages associated with smoking. Health effects of smoking are arguably the most frequently noted link; smoking causes various morbidities, which could therefore result in lower labor productivity. A second, partially health-related explanation, is the higher costs to employers of hiring a smoker relative to a non-smoker (for example, due to healthcare costs induced by smoking). Even if smokers are equally productive or do not incur more costs in employment, discrimination against smokers in the workplace may result in lower earnings for those who smoke. Finally, smoking could be correlated with lower earnings because of the differences in preferences over present and future consumption between smokers and non-smokers.

Prevalence of Smoking and Simulated Wage Losses

	Prevalence of Smoking by Region, Age and Education Groups (Mean)			Simulated Wage Losses from Smoking (%) by Gender	
	Men	Women	Total	Men	Women
Tomsk	55.1	18.6	35.0	-19.7	-4.1
Other Urban	55.7	14.4	33.5	-23.2	12.1
Rural	65.6	11.9	38.0	-9.7	-6.0
Age groups					
25-30	60.3	17.7	39.2	-17.5	9.2
35-40	64.7	15.4	36.6	-11.9	-10.9
45-50	60.0	12.3	33.0	-14.9	0.4
55-60	51.2	9.4	29.9		
Education					
Secondary general or less	72.5	26.8	56.1	5.2	-16.4
University and higher	43.6	8.8	22.7	-19.3	3.6
Total	61.1	13.9	36.2	<b>-14.8</b>	<b>-0.6</b>

## Losses up to 2% of GDP

Individuals who choose to smoke may be different from non-smokers in some unobserved dimensions that are negatively correlated with wages. The challenge for our empirical strategy is to estimate the effect of smoking on wages controlling for such unobserved factors. The results of our estimations demonstrate that smoking indeed has an adverse effect on the wages of smokers. Controlling for observed individual characteristics, such as age, level of education, health status, and household composition, we find that the smoking wage differential amounts to about 10.9% for males and about 3.8% for females. Taking into account differences in both observable and unobservable characteristics, our estimations show that men earn about 14.8% less if they smoke. No such effect of smoking on wages is found for women in this estimation. The estimates of the negative effect of smoking on wages in Russia are larger than the estimates for Germany and the U.S., where workers lose 4% to 8% of their wages because of smoking.

The deleterious impact of smoking on wages is greater for younger men: the wages of smoking men aged 25-35 are almost 18% lower than wages of non-smokers of the same age group. The negative impact of smoking on wages is also larger for men and women with higher educational attainment.

Aggregating the individual wage losses from smoking at the regional level, we can conclude that Tomsk region loses a considerable share of its revenue just from the reduction in productivity due to smoking. On average, a male smoker loses about 1,125 rubles per month due to smoking, and a loss in wages for a smoking woman is about 29 rubles per month. Taking into account that there are 154,000 men and 33,000 women in the total work force who smoke, the Tomsk region loses 2.1 billion rubles or 2.0% of the regional GDP per year.

Obviously, the state would lose taxes if people reduce their cigarette consumption. However, the tobacco duties existing in Russia are among the lowest in the world. Tobacco companies pay only 65 rubles per 1000 cigarettes plus 8% on

the sale price of cigarettes. If an individual who smokes a pack of cigarettes per day quit smoking, the losses in taxes for the state would be at least 10 times lower than the individual's losses in earnings.

We can conclude that the economic cost of smoking represents an important component of the burden smokers impose on Russian society. The arguments presented here could be used in the anti-smoking debate because they show that Russia bears an immediate loss from smoking, as opposed to the long-term health-based losses that lie beyond the decision horizon of most policymakers.

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## Smoking in Albania

In Albania, 60% of adult males and 18% of females smoked in 2002 and the number of smokers has been increasing rapidly over the last decade. Anti-smoking policies are high on the country's agenda. In January 2006, the government submitted a new draft law on tobacco and smoking that outlawed sales of cigarettes to minors younger than 18, and presented stricter rules for the tobacco industry regarding the sale and advertising of tobacco products.

Data from the fourth round of the Albania Living Standard Monitoring Survey allowed us to estimate forgone earnings from smoking for working Albanian men (the proportion of female smokers in the sample was too small). We find that the incidence of smoking is similar among the urban and rural male populations in Albania. The prevalence of current smokers is close to 50% among the least educated males and declines for better-educated men. Only 25% of men with a university degree smoke. The propensity to smoke varies by religion: the highest proportion of smokers (36%) is among Albanian Muslims, including Bektashi. Albanian Christians smoke at a rate of about 30%.

The incidence of smoking increases with the age of the respondents. Less than 20% of 25 year old men classified themselves as current smokers. The proportion of smokers increases sharply for older age groups peaking at about 35% for men 38 years old and older.

On average, non-smokers earned about 26,300 lek per month relative to 24,290 lek per month for smokers (8.3% difference). Wages of non-smokers are higher than wages of

smokers for all age groups with the largest gap in wages observed for workers between the ages of 35 and 50.

When controlling for productive human capital characteristics, such as education and knowledge of English, Italian and Greek, etc. we find a stronger dependence between wages and these characteristics for non-smokers than for smokers. This supports the idea that smokers and non-smokers have different preferences over present and future consumption.

For working Albanian men aged 25 to 60, our analysis shows that the wages of smokers are significantly lower than the wages of individuals who never smoked. Consistent with other studies for developed countries, the wage penalty differs depending on how the observed and unobserved traits of smokers and non-smokers are addressed. A simple comparison of mean wages produces the 8% difference, as shown above. When taking into account observable personal characteristics, we find that the negative wage effect of smoking is reduced to 4%. However, considering both the differences in observable and unobservable characteristics of smokers and nonsmokers, the wage penalty for smoking becomes much larger: smokers experience wage reductions of 21-28%. This indeed provides strong evidence for the potential policy relevance of tobacco control initiatives for developing countries such as Albania.

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*Source: "Forgone earnings from smoking: Evidence for a developing country" by Michael Lokshin and Kathleen Beegle, both from the Development Economics Research Group, the World Bank.* **BT**