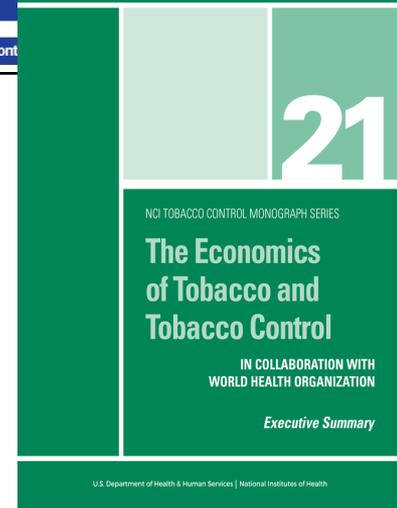
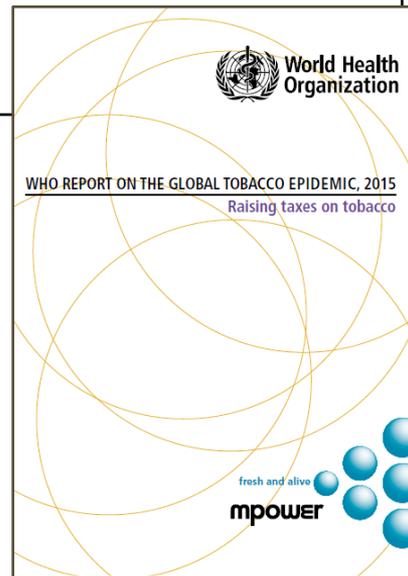
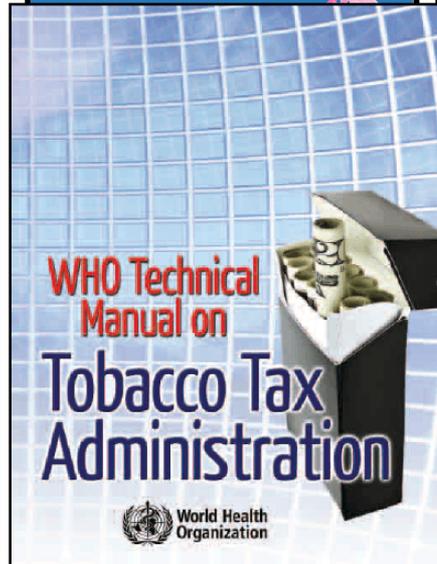
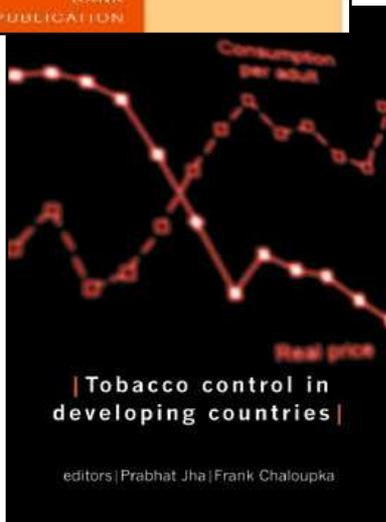
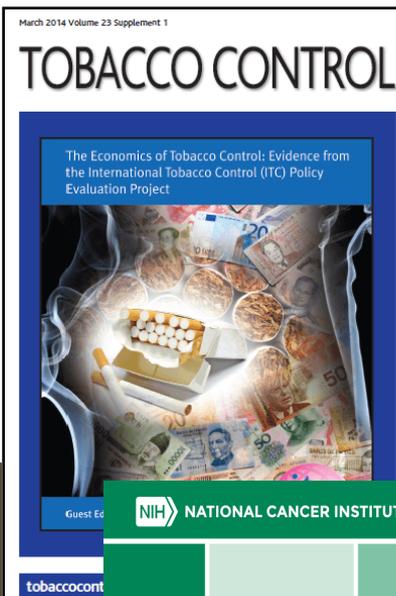
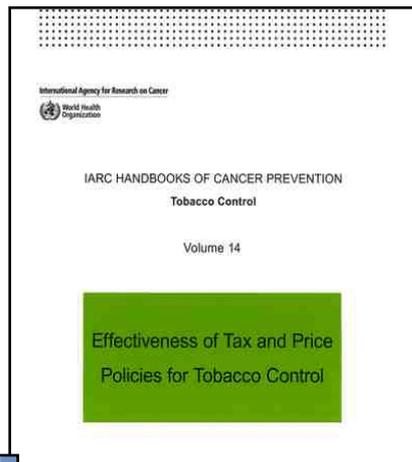
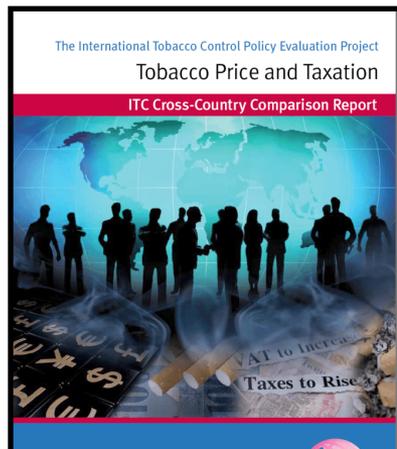
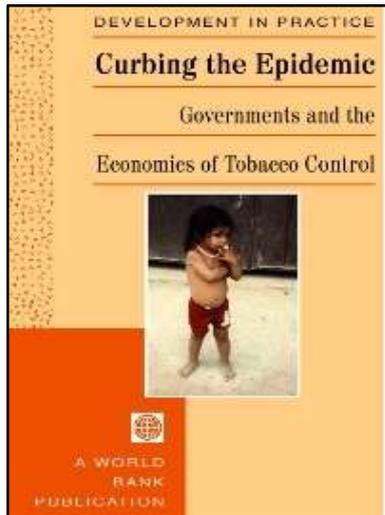


**tobacconomics**

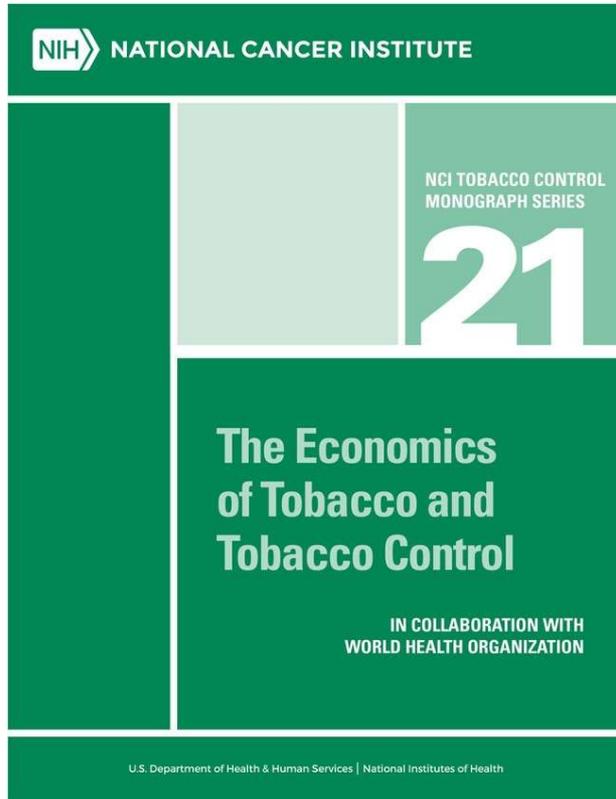
Economic Research Informing Tobacco Control Policy

*Accelerating Progress on Effective Tobacco Tax Policies in Low- and Middle-Income Countries*

Frank Chaloupka, University of Illinois at Chicago  
8<sup>th</sup> European Conference on Tobacco or Health  
22 February 2020, Berlin, Germany



# Effectiveness of Tobacco Taxes



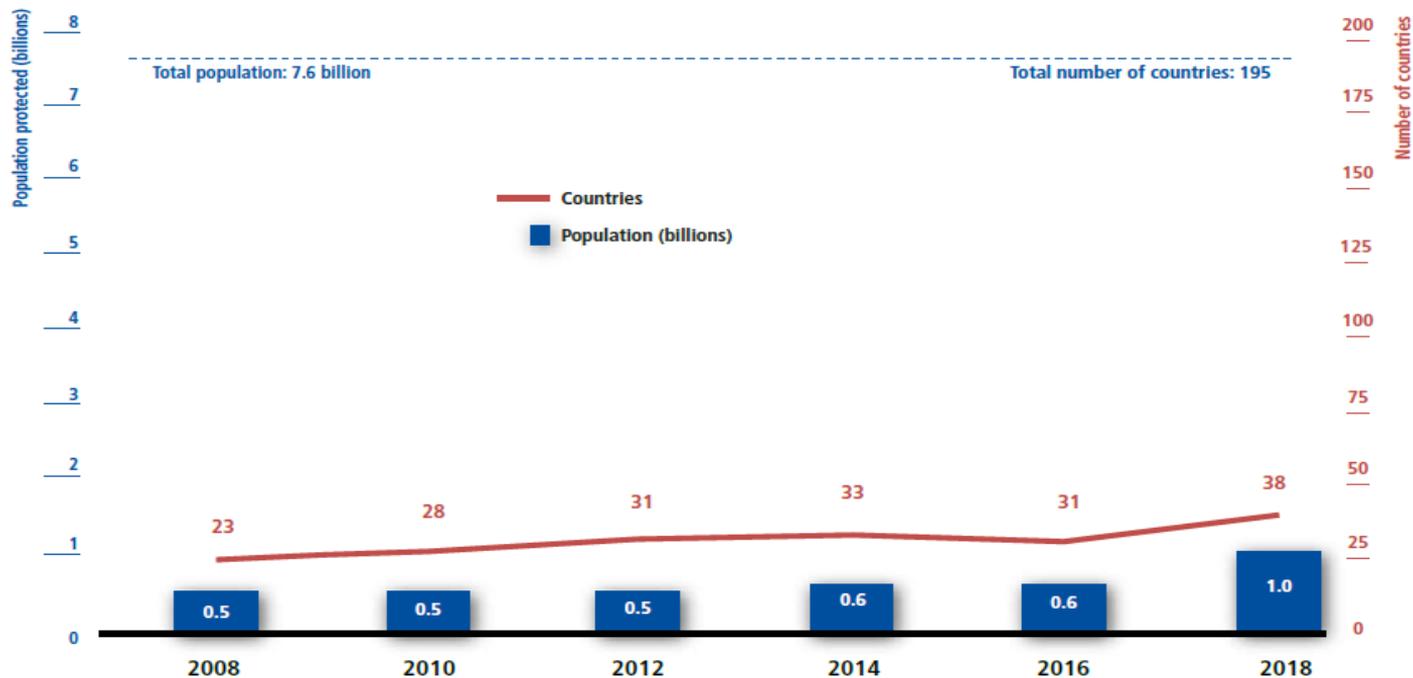
## Chapter 4, Conclusion 1:

A substantial body of research, which has accumulated over many decades and from many countries, shows that **significantly increasing the excise tax and price of tobacco products is the single most consistently effective tool for reducing tobacco use.**



# Global Progress on Tobacco Taxation

PROGRESS IN TOTAL TAX ON CIGARETTES  $\geq 75\%$  OF RETAIL PRICE (2008–2018)



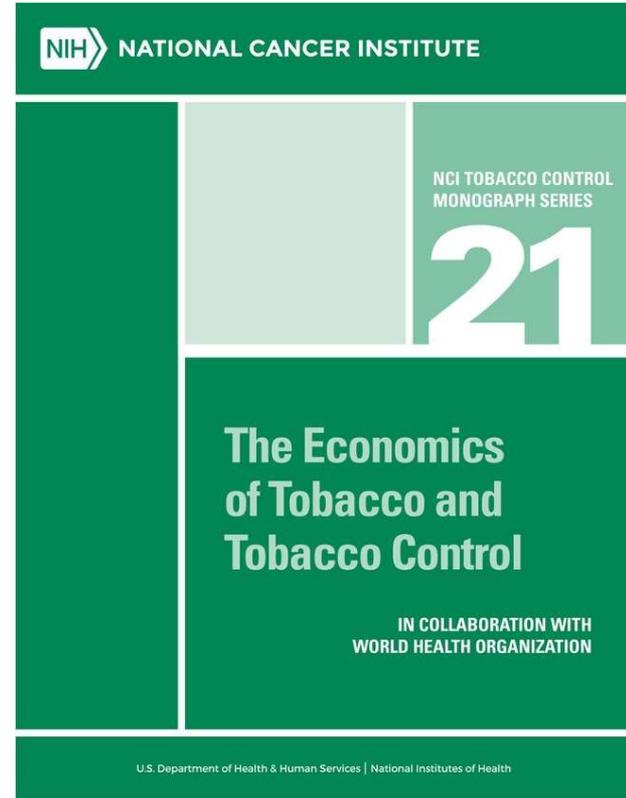
Source: WHO 2019



# Economic Research Needs

## Need for local research on:

- Impact of tax/price on demand for tobacco products
- Economic costs of tobacco use
- Economic impact of tobacco control policies
  - Macroeconomic impacts
  - Illicit trade
  - Distributional effects



# Bloomberg Initiative

## APPLYING THE BLOOMBERG PHILANTHROPIES APPROACH TO **FIGHT GLOBAL TOBACCO USE**

OVERVIEW

PROBLEM

SOLUTION

PROGRESS

GET INVOLVED

SHARE

1

### SPREADING SOLUTIONS

The Bloomberg Initiative to Reduce Tobacco Use works in low- and middle-income countries around the world to promote proven tobacco control policies that are helping to combat the global tobacco epidemic.

2

### MONITORING OUTCOMES

The Bloomberg Initiative emphasizes the implementation of evidence-based policies shown to reduce tobacco use. To track our progress and monitor policy changes, we use high-quality tools and practices.

3

### COORDINATED PARTNERSHIPS

The Bloomberg Initiative works through a global network of partners to support and defend countries implementing comprehensive tobacco control policies. Our partner organizations include: the Campaign for Tobacco-Free Kids, the CDC Foundation, Johns Hopkins Bloomberg School of Public Health, the International Union Against Tuberculosis and Lung Disease, the World Health Organization, Vital Strategies, and the University of Illinois - Chicago. Bloomberg Philanthropies and The Bill and Melinda Gates Foundation joined together to launch the Anti-Tobacco Litigation Fund.



# Primary Project Aim—

Building capacity of think tanks in selected priority countries/regions to provide country-specific evidence in support of tobacco tax reforms and tax increases



# Core Competencies:

**Question 1:** How will consumers and producers respond to tobacco tax increases?

**Methods:** Estimating demand elasticity using household expenditure and other survey data; store scanner data; and/or time series data

**Question 2:** How will a tax increase affect the price of tobacco products and how will this change in price affect government revenues, consumption, and health?

**Methods:** Modeling alternative tax structures/rates on revenues and public health indicators

**Question 3:** What are the health and economic costs (both public and private) of smoking and how can tax increases/reforms address these costs?

**Methods:** Quantifying economic costs (direct and indirect) from primary and secondary data



**Question 4:** How will tax increases/reforms affect the poor and other vulnerable groups?

**Methods:** Measuring distributional impacts of tax increases using household expenditure data

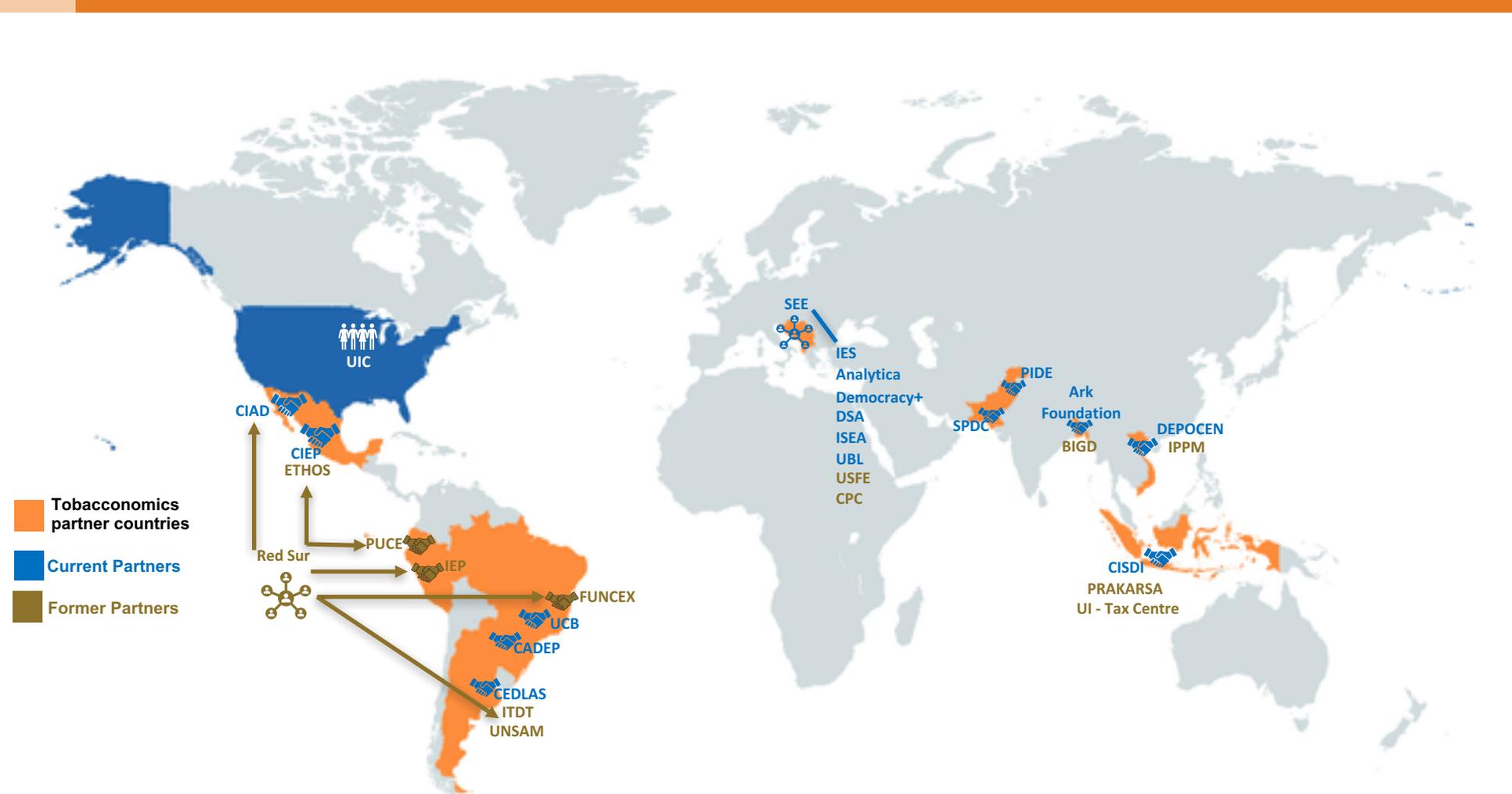
**Question 5:** How will tobacco taxes affect employment and economic growth?

**Methods:** Estimating macroeconomic impacts of tobacco taxes through the supply chain through quasi-experimental designs, Input-Output, Computable General Equilibrium, and other models

**Question 6:** To what extent do tobacco taxes lead to tax avoidance and evasion and what can be done to prevent it?

**Methods:** Quantifying the extent of cross-border shopping in tax evaluation models; quantifying levels of illicit trade and production under-reporting; measuring trends, geographical areas of leakage, etc.





- Tobacconomics partner countries
- Current Partners
- Former Partners

# Southeastern Europe

## Partners:

- Serbia (Lead): Institute of Economic Sciences (IES)
- Albania: Development Solutions Associates (DSA)
- Bosnia and Herzegovina: University of Banja Luka
- Croatia: University of Split
- Kosovo: Democracy Plus
- Montenegro: Institute of Socio-Economic Analysis (ISEA)
- North Macedonia: Analytica

**THE RESPONSIVENESS OF SMOKING PREVALENCE AND CIGARETTE CONSUMPTION TO CHANGES IN PRICE AND INCOME IN NORTH MACEDONIA**

**ACCELERATING PROGRESS ON EFFECTIVE TOBACCO TAX POLICIES IN MONTENEGRO**

**HEALTHIER AND WEALTHIER – WHY TAXING TOBACCO IS IMPORTANT NOT ONLY FOR HEALTH BUT ALSO FOR THE ECONOMY**

**EXCISES ON TOBACCO PRODUCTS - EFFECTIVE INSTRUMENT FOR REDUCING PREVALENCE OF SMOKING**

**THE IMPACT OF TOBACCO TAX POLICY ON DIFFERENT SOCIO-ECONOMIC GROUPS IN BOSNIA AND HERZEGOVINA**

**Impacts of Tobacco Excise Increases on Cigarette Consumption and Government Revenues in Southeastern European Countries**

Regional study  
Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia

2019

# Southeastern Europe

Table 9.6: Elasticities in six SEE countries by income group

		ALB	B&H	KSV	MNE	NMK	SRB
Price	Low	-1.198	-1.411	-0.532	-1.300	-0.446	-1.076
	Middle	0.00	-0.929	-0.630	-1.009	-0.888	-0.631
	High	-0.709	-0.708	0.00	-0.617	-0.278	-0.220
Income	Low	1.728	0.901	0.668	0.514	1.245	1.363
	Middle	1.141	0.782	0.894	0.522	1.124	1.267
	High	0.517	0.735	0.619	0.607	0.583	0.740

Table 9.7: Impact of tax and price increase on consumption (by income group and total)

	ALB <sup>1</sup>	B&H <sup>2</sup>	KSV <sup>1</sup>	MNE <sup>3</sup>	NMK <sup>2</sup>	SRB <sup>1</sup>
Low	-27.1%	-22.1%	-16.3%	-8.7%	-11.6%	-21.6%
Middle	-4.8%	-14.0%	-18.4%	-8.3%	-17.3%	-11.8%
High	-16.4%	-10.3%	1.7%	-5.8%	2.4%	-4.0%
<b>Total</b>	<b>-15.0%</b>	<b>-14.6%</b>	<b>-11.1%</b>	<b>-7.5%</b>	<b>-8.1%</b>	<b>-11.0%</b>

<sup>1</sup> Albania, Kosovo, and Serbia simulate the impact of an excise tax increase which would result in a 25 percent price increase;

<sup>2</sup> B&H and North Macedonia simulate impact of a 25 percent excise tax increase;

<sup>3</sup> Simulation for Montenegro includes both changes in specific and ad valorem excise, resulting in 15.8 percent increase in price

Table 9.8: Impact of tax and price increase on government revenues (by income group and total)

	ALB <sup>1</sup>	B&H <sup>2</sup>	KSV <sup>1</sup>	MNE <sup>3</sup>	NMK <sup>2</sup>	SRB <sup>1</sup>
Low	1.1%	-6.4%	18.9%	9.9%	8.4%	3.5%
Middle	32.1%	3.3%	15.9%	10.5%	1.3%	16.3%
High	15.9%	7.7%	44.4%	13.5%	25.5%	26.7%
<b>Total</b>	<b>17.9%</b>	<b>2.5%</b>	<b>26.2%</b>	<b>11.3%</b>	<b>12.6%</b>	<b>17.4%</b>

<sup>1</sup> Albania, Kosovo, and Serbia simulate the impact of an excise tax increase which would result in a 25 percent price increase; <sup>2</sup> B&H and North Macedonia simulate impact of a 25 excise tax increase; <sup>3</sup> Simulation for Montenegro includes both changes in specific and ad valorem excise, resulting in 15.8 percent increase in price

## Key Research Findings:

- First estimates of price elasticity of cigarette demand in the region, using time-series and household expenditure data
- An excise tax increase would result in a decrease in cigarette consumption across all countries
- Low-income groups would have the most intensive response to a large tax and price increase on tobacco products
- An excise tax increase would result in increased government revenue from tobacco taxation across all countries



# Southeastern Europe



**tobaccotaxation**

Economic Research Informing Tobacco Taxation Policy



INSTITUTE  
OF ECONOMIC  
SCIENCES

COGNOSCERE EST MUTARE



INSTITUT ZA SOCIOEKONOMSKE ANALIZE

**DSA** DEVELOPMENT  
SOLUTIONS  
ASSOCIATES



**DEMOCRACYPLUS**

## New Research:

- Regional survey on tobacco use, representative by country
- Regional analysis of price elasticity of demand
- Country-specific estimates of size of illicit cigarette market
- Econometric analysis of determinants of illicit cigarette use



# Social Policy and Development Centre - Pakistan

## Key Research Findings:

- Reductions in tobacco use resulting from effective tobacco control policies would lead to a net increase in employment in Pakistan
- Pakistan's tobacco industry underreported cigarette production by 47% and 27% in fiscal years 2016-17 and 2017-18, respectively
- Revenue lost due to underreporting including GST is Rs 37 billion
- Revenue lost due to the three-tiered structure was Rs 42.5 billion in the fiscal year 2017-18



# Social Policy and Development Centre - Pakistan



## New Research:

- More comprehensive assessment of macroeconomic impacts of tobacco taxation and tobacco control
- Crowding out analysis of tobacco's impact on household spending
- Survey to assess impact of past tax reforms, including re-introduction of and subsequent elimination of low-tax third tier



# Pakistan Institute of Development Economics - Pakistan

## HIGHER TOBACCO TAXES IN PAKISTAN COULD INCREASE REVENUE & IMPROVE PUBLIC HEALTH

**POLICY BRIEF**

www.pids.org.pk

Based on "Tobacco Taxation and Consumption in Pakistan", Durra Nisbat, Muhammad Nisar, Saad Ahmad Mirza, Muhammad Khalid and Anwar Haseeb, 2018

Revenue generation is important for any country, but for the country like Pakistan, where the tax base is very small, more revenue becomes very crucial. Tobacco taxation increases the country's overall tax revenue and also improves public health. The tobacco industry is one of the largest contributors to the tax revenue in Pakistan, contributing around 1% of the total revenue collected in a fiscal year. The tobacco industry is also a major source of employment in the country. The tobacco industry is also a major source of employment in the country.

On average, the price elasticity of demand for cigarettes in Pakistan is -1.07, meaning that a 10% increase in the price of cigarettes will result in a 10.7% decrease in demand. This finding is significant because it suggests that a 10% increase in the price of cigarettes will result in a 10.7% decrease in demand, which is a significant reduction in the number of smokers.

The results of the study suggest that an increase in cigarette taxes will result in a significant increase in revenue and a significant decrease in the number of smokers. This finding is significant because it suggests that a 10% increase in the price of cigarettes will result in a 10.7% decrease in demand, which is a significant reduction in the number of smokers.

**Tobacco Consumption in Response to Prices**

The study found that the price elasticity of cigarettes in Pakistan is -1.07, meaning that a 10% increase in the price of cigarettes will result in a 10.7% decrease in demand. This finding is significant because it suggests that a 10% increase in the price of cigarettes will result in a 10.7% decrease in demand, which is a significant reduction in the number of smokers.

**The Impact of Increasing Tobacco Taxes is Estimated to be Higher than the Losses to the Poor, a Group that often Lacks Access to Health Care and is Disproportionately Economically as well as Health Care Disadvantaged.**

## ECONOMICS OF TOBACCO TAXATION AND CONSUMPTION IN PAKISTAN

**POLICY BRIEF**

www.pids.org.pk

Based on "Tobacco Taxation and Consumption in Pakistan", Durra Nisbat, Muhammad Nisar, Saad Ahmad Mirza, Muhammad Khalid and Anwar Haseeb, 2018

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**Figure 7: Tobacco Consumption by Income Quintiles across Regions and Provinces**

## Tobacco Use in Pakistan

**POLICY BRIEF**

www.pids.org.pk

Based on "Tobacco Taxation and Consumption in Pakistan", Durra Nisbat, Muhammad Nisar, Saad Ahmad Mirza, Muhammad Khalid and Anwar Haseeb, 2018

Revenue generation is important for any country, but for the country like Pakistan, where the tax base is very small, more revenue becomes very crucial. Tobacco taxation increases the country's overall tax revenue and also improves public health. The tobacco industry is one of the largest contributors to the tax revenue in Pakistan, contributing around 1% of the total revenue collected in a fiscal year. The tobacco industry is also a major source of employment in the country. The tobacco industry is also a major source of employment in the country.

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**Table 1: Tobacco Prevalence across Regions**

Country/Region	Prevalence (%)	Population (Million)	Revenue (Million PKR)
Pakistan	26.16	19.8	81.11
Budget Share	3.9	124	5.07
Urban	27.76	10.26	10.83
Rural	24.56	9.54	7.28

**Table 2: Provincial-Level Tobacco Prevalence across Income Groups in Pakistan**

Province	Income Group	Prevalence (%)	Population (Million)	Revenue (Million PKR)
Punjab	Lowest	27.1	1.62	0.68
	Second	27.1	1.62	0.68
	Third	27.1	1.62	0.68
	Fourth	27.1	1.62	0.68
Sindh	Lowest	27.1	1.62	0.68
	Second	27.1	1.62	0.68
	Third	27.1	1.62	0.68
	Fourth	27.1	1.62	0.68
Balochistan	Lowest	27.1	1.62	0.68
	Second	27.1	1.62	0.68
	Third	27.1	1.62	0.68
	Fourth	27.1	1.62	0.68
Islamabad Capital Territory	Lowest	27.1	1.62	0.68
	Second	27.1	1.62	0.68
	Third	27.1	1.62	0.68
	Fourth	27.1	1.62	0.68

## Key Research Findings:

- Price elasticity of demand for cigarettes in Pakistan is -1.07, a 10% increase in the price will decrease demand by an estimated 10.7%
- Increase in price of PKR 40.95 would reduce the number of adult smokers by 2.4 million, reduce premature deaths by 800,000, discourage 120,000 young smokers
- The total reduction of smokers from proposed reform is 2.6 million people with an additional PKR 13 billion in revenue

# Pakistan Institute of Development Economics - Pakistan



## New Research:

- Original data collection to estimate direct and indirect economic costs of tobacco use in Pakistan
- Estimation of extent of switching between tobacco products in response to changes in relative prices



# Development and Research Policies Center - Vietnam

**THE UNIVERSITY OF CHICAGO**

**DEPOCEN**

**FINAL REPORT**

**Illicit Cigarette Trade Study in Vietnam**

Address: Suite 300, 112 Tong Thon Street, Hanoi Center, Hanoi  
 Phone: +84 4 3913 1117 Fax: +84 4 3913 1414  
 Website: <http://www.depoecen.org>  
 Email: [depoecen@depoecen.org](mailto:depoecen@depoecen.org)

Hanoi, July 2019

**Policy Brief | January 2018**

**DEPOCEN**

The policy brief is based on a research study titled **Illicit Cigarette Trade Study in Vietnam** conducted by the Development and Policy Research Center (DEPOCEN).

**The Illicit Trade in Cigarettes in Vietnam**

Smoking remains a serious public health problem in Vietnam despite the various measures the country has taken to improve its regulatory, supply-side and demand-side policies. The country's tobacco industry is heavily dependent on public subsidies. The country is ranked among those with the highest average tobacco consumption in the world. In 2016, Vietnam's per capita consumption of cigarettes was 16.8 packs per year, up from 15.2 packs in 2015. The country's tobacco industry is heavily dependent on public subsidies. The country is ranked among those with the highest average tobacco consumption in the world. In 2016, Vietnam's per capita consumption of cigarettes was 16.8 packs per year, up from 15.2 packs in 2015.

**Figure 1: Percentage of Illicit Trade in Vietnam in the Year 2012**

Figure 1 shows that in 2012, approximately 20.7% of cigarettes consumed in Vietnam were illicit, while 79.3% were legal.

**tobaeconomics**

**Affordability of Cigarettes in Vietnam**

**Policy Note**  
December 2017

**Why is Affordability Important?**

Violence has represented unprecedented levels of mortality globally since the mid-19th century. In Vietnam, the affordability of tobacco products has increased significantly since the early 2000s. This has led to a significant increase in tobacco consumption, which has in turn led to a significant increase in tobacco-related mortality. This has led to a significant increase in tobacco-related mortality. This has led to a significant increase in tobacco-related mortality.

**Figure 2: Comparison Between Prices of the Illicit and Legal Cigarette Brands in 2017**

Brand	Price (USD)	Price (VND)
SEBS	2.10	1.24
Red	1.02	0.58
Lotus	0.80	0.45
Red	1.75	0.98
Crown	1.00	0.55

**Figure 3: Annual Per Capita GDP Growth**

**Figure 3: Affordability and cigarettes sales in South Africa**

**Figure 4: Decomposition of Relative Income Price in Vietnam**

## Key Research Findings:

- 31% of annual per capita GDP was needed to purchase 100 packs in 1994 vs. 5.2% in 2017; real cigarette prices fell 40% between 1994 and 2007
- Illicit cigarettes accounted for 13.7% of total cigarette consumption in 2017, which is consistently lower than the estimate of 20.7% from a previous study conducted in 2012 using the same methodology which showed a decline in illicit trade despite tobacco tax increases during the five preceding years



# Institute of Public Policy Management - Vietnam

**Table 2. Estimated Consumption, Domestic Tax-Paid Sales, and Illicit Consumption, 2010-2016**

Metric	2010	2016
Estimated consumption	2,712	2,712
Domestic Tax-paid sales <sup>a</sup>	3,986	3,986
Input <sup>b</sup>	22.1	22.1
Illicit consumption (no under-reporting)	(1,267)	(1,267)
Illicit consumption (10% under-reporting)	(1,020)	(1,020)
Illicit consumption (20% under-reporting)	(756)	(756)
Illicit consumption (30% under-reporting)	(603)	(603)
Illicit consumption as share of total consumption (10%)	-37.3%	-37.3%
Illicit consumption as share of total consumption (20%)	-27.8%	-27.8%
Illicit consumption as share of total consumption (30%)	-21.8%	-21.8%

Source: Data for 2010, 2011 and 2012 were derived from Nguyen et al. (2014). The number of cigarettes of 1000<sup>2</sup> was from <http://data.who.int/dashboards/tobacco> and 2016 was revised from the report of F. Nguyen et al. (2016).

The negative values for discrepancies indicate that the number of the number smuggled out of Vietnam, or from 2010 to 2016. The magnitude of the trend. This figure ranges from 326 million to 44.0% of total consumption from 2010 assumed to be 30% (Table 2).

Figure 1 shows the trend in the gap study, the increasing negative gap over time.

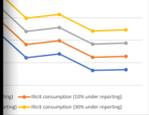


**EMPIRICAL ANALYSIS OF CIGARETTE TAX AVOIDANCE AND EVASION IN VIETNAM**

HIEU THU THI NGUYEN (Chuong Mai University – TMU)  
LONG THANH GIANG (National Economics University – NEU)  
TOAN NGOC PHAM (Institute of Labour Science and Social Affairs – ILSSA)

The Institute of Public Policy Management (IPPM) was founded by the University of Hanoi at Chua Ba (1998). Institute for Health Research and Policy at conduct the research in Vietnam. The report prepared in this document should not be attributed to, nor do they represent the views of, ILO, or the Institute for Health Research and Policy.

**Figure 1. Trend - Different Assumed Scenarios, 2010-2016**



**DISCUSSION**

Vietnam has a negative volume of illicit trade. This in Vietnam, for example, due to not smuggling out of total in Vietnam being smuggled to other countries. (6) between 40 million and 1,207 million packs may be transported to other countries. These figures ranged 16. Since exported cigarettes are not subject to taxes, incentive to undertake their exports, and this is as is that the surveys used suffer from underreporting (or smoking intensity, or both).

and have indicated that this method is a poor method in any given particular year due to challenges with (6) has been utilized to analyze the trend in illicit trade (6) that negative magnitude of illicit trade increased of this result is, illicit trade showed a declining trend

initially manufactured cigarettes were increased from (6) on the tobacco industry narratives, the number of cigarettes smuggled into Vietnam was expected to rise due to the increase. However, our estimation indicates that Vietnam still experienced a net smuggling out in 2016, and that net

## Key Research Findings:

- The tax increase in Vietnam in 2016 on cigarettes from 65% to 70% of wholesale prices did not lead to a net increase in illicit cigarettes trade
- Government has the opportunity to raise taxes on cigarettes to reduce prevalence



# Development and Research Policies Center - Vietnam



## New Research :

- Discrete choice experiment to assess the impact of new specific cigarette tax on smoking behavior and brand choice
- Qualitative examination of tobacco production in Vietnam and supply-side impacts of potential privatization of cigarette production



# BRAC Institute of Governance and Development - Bangladesh



## Key Research Findings:

- Demand for cigarettes and biris in Bangladesh is highly responsive to price, while demand for smokeless tobacco is less price sensitive
- Tobacco tax increases would improve public health while raising government revenues
- Adoption of a uniform specific tax and reducing the number of cigarette tiers would generate more stable and predictable revenues and would be easier to administer



# Ark Foundation- Bangladesh



## New Research:

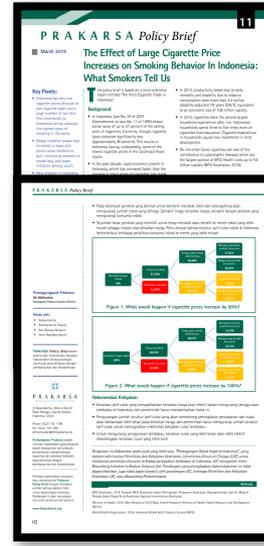
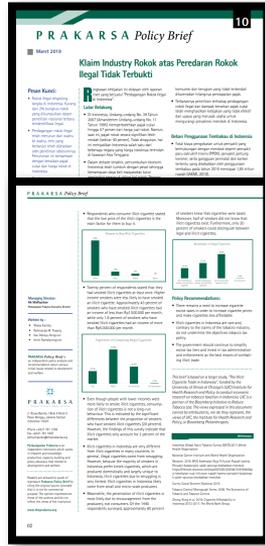
- Estimate price elasticity of demand for tobacco products using GATS data
- Estimate consumer behavioral responses to specific taxes on tobacco through a discrete choice experiment



# Perkumpulan Prakarsa (The Welfare Initiative for Better Societies) - Indonesia

## Key Research Findings:

- The volume of illicit trade cigarettes in Indonesia is less than 2%
- Indonesian households on average spend three to five times more on cigarettes than they spend on education
- If prices of cigarettes were doubled, up to 32% of smokers would try to quit



# Center for Indonesia's Strategic Development Initiatives - Indonesia

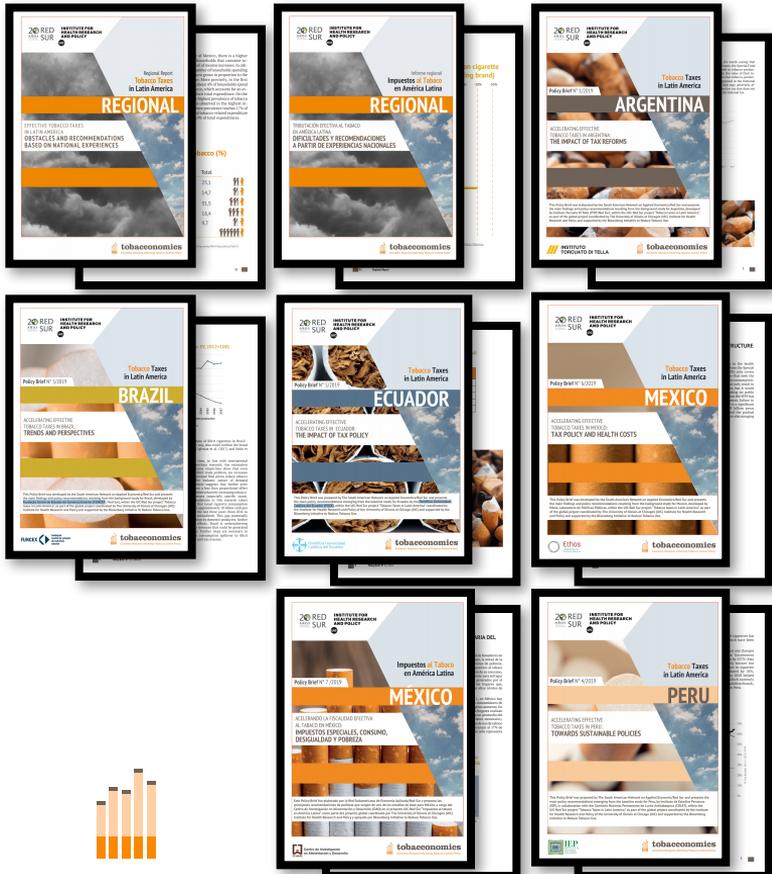


## New Research:

- Estimate the economic costs of smoking in Indonesia
- Examine macroeconomic impacts of tobacco excise tax increases



# The South American Network on Applied Economics/Red Mercosur Network

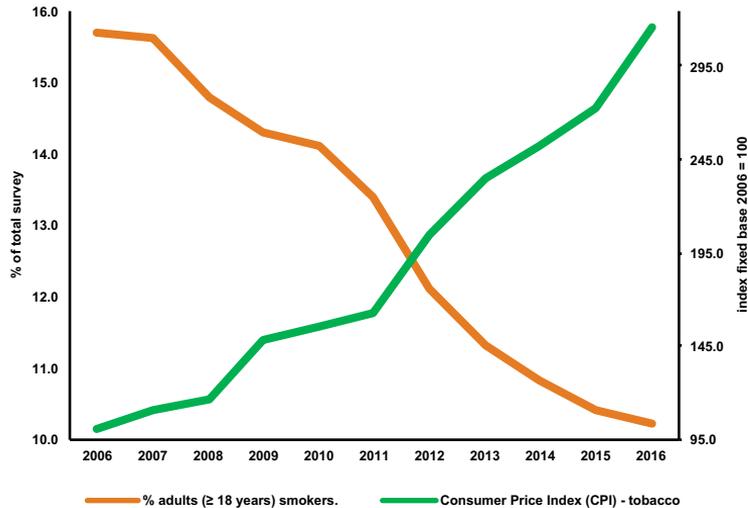


## Partners:

- Argentina: Instituto Torcuato Di Tella (ITDT)
- Argentina: Universidad Nacional de San Martín (UNSAM)
- Brazil: Fundação Centro de Estudos do Comércio Exterior (FUNCEX)
- Ecuador: Pontificia Universidad Católica del Ecuador (PUCE)
- México: Ethos
- México: Centro de Investigación en Alimentación y Desarrollo (CIAD)
- Perú: Instituto de Estudios Peruanos (IEP)

# The South American Network on Applied Economics/Red Mercosur Network

## Adult Smoking Prevalence and Price Brazil, 2006-2016, inflation adjusted



Source: Ribeiro and Pinto, 2019



## Key Research Findings:

- Higher cigarette taxes and prices lead to significant reductions in smoking across the region
- Controlling the supply chain for inputs into cigarette production important for controlling illicit tobacco in Brazil
- Earmarked tobacco tax (FET) revenues for tobacco growing in Argentina largely subsidize tobacco leaf exporting

# Centro de Estudios Distributivos, Laborales y Sociales - Argentina



## New Research:

- Conduct an extended cost-benefit analysis of tobacco tax increases
  - Increasing tobacco prices would have a progressive effect and lower-income groups would benefit the most
  - When prices increase by 20%, average net income increases by about 4% for lower-income groups due to avoided medical expenses and higher productivity and income
- Examine macroeconomic impacts of tobacco excise tax increases



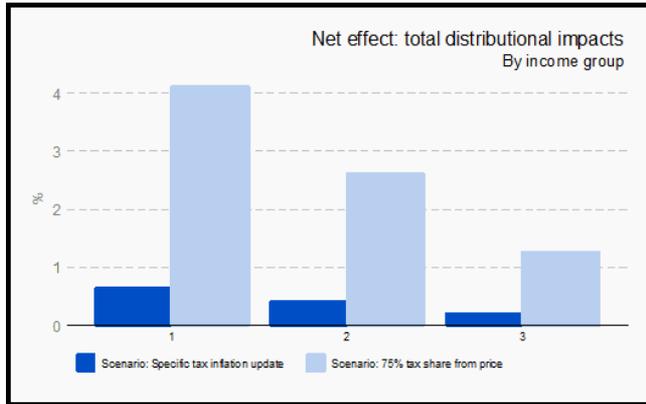
# Universidade Católica de Brasília - Brazil

## New Research:

- Conduct an extended cost-benefit analysis on tobacco excise tax increases
  - Increasing tobacco prices would have a progressive effect and lower-income groups would benefit the most
  - When prices increase by 10%, average net income increases by 4.24% and 5.13 % for low- and middle-income groups respectively
- Simulate impacts of tobacco excise tax increases and propose the best tax rate for a proposed consolidation of tobacco excises into a centralized VAT



# Centro de Investigación Económica y Presupuestaria - México



## New Research:

- Conduct an extended cost-benefit analysis of tobacco excise tax increases
  - Increasing tobacco prices would have a progressive effect and lower-income groups would benefit the most
  - Updating the tax for inflation increases net income by 0.6% for lower-income group
  - Increasing tax to reach the 75% total tax to retail price share, income increases by 4% for lower-income group due to avoided medical expenses and higher productivity
- Create a “Fiscal Simulator” to evaluate the effects of changes in tobacco taxation on the Mexican budget.



# Centro de Investigación en Alimentación y Desarrollo A.C. - México



## New Research:

- Conduct tax-benefit microsimulation model (based on EUROMOD) to simulate alternative tax scenarios
  - Tax increases have a higher impact in reducing consumption and increasing revenue collection. CIAD's results are consistent with CIEP's results.
  - If tobacco excise revenue is earmarked for poverty reduction, it would have a large impact.
- Examine the macroeconomic impacts of tobacco excise tax increases

Table 2. Effect on food poverty: tobacco tax reform of 1.35 pesos per cigarette.

SCENARIO	HOUSEHOLDS		POVERTY
	QUANTITY	%	
No transfer	5,015,133	14.9	-40.1%
Transfer	3,005,440	8.9	

**Note:** Values estimated using 2016 GDP. **Source:** Own work based on LATINMOD and CONEVAL 2016.



# Institute of Peruvian Studies - Peru



## New Research:

- Conduct extended cost-benefit analysis on tobacco excise tax increases
  - Initial findings suggest that increasing tobacco product prices by 10% would increase net income by 2.26% of the lower-income group due to avoided medical expenses and higher productivity and income



# Centro de Análisis y Difusión de la Economía Paraguaya - Paraguay

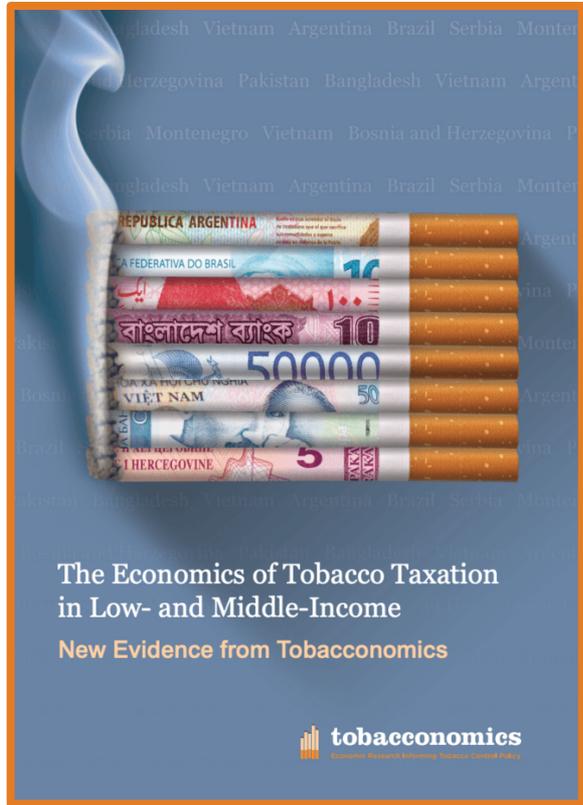


## New Research:

- Analyze the supply chain of tobacco products in Paraguay and its impacts on other countries, especially Brazil
- Estimate price and income elasticities of the demand for tobacco products in Paraguay



# Tobacco Control Supplement (forthcoming)



## Papers:

- Think Tank Capacity Building for Economic Analysis on Tobacco: Experiences and Lessons Learned (Tobacconomics)
- Macroeconomic Impacts of Cigarette Consumption in Pakistan (SPDC)\*
- Impact of Recent Tobacco Tax Reforms in Argentina (ITDT)
- Tobacco Price Elasticity in Bosnia and Herzegovina: Micro Data Analysis (UBL)
- Discrepancies in the Brazilian Tobacco Production Chain: Raw Inputs, International Trade and Legal Cigarette Production (FUNCEX)
- Accelerating Progress on Effective Tobacco Tax Policies in Montenegro (ISEA)
- Estimating the Price Elasticity for Cigarette and Chewing Tobacco: Evidence from Micro-Level Data in Pakistan (PIDE)
- Tobacco Price Elasticity in Serbia: Evidence from a Middle-Income Country with High Prevalence and Low Tobacco Prices (IES)
- Crowding-Out Effect of Tobacco Expenditure in Vietnam (DEPOCEN)

\*Denotes papers that are still pending a final decision



# Summary of the Key Research Findings

- **Price elasticity** of demand for cigarettes ranged from -0.441 (Argentina) to -1.07 (Pakistan) meaning that a 10% increase in prices would reduce consumption between 4.41% to 10.7%
  - With the exception of Mexico, lower-income populations are more sensitive to price increases relative to higher-income groups
- Tax increases are **progressive**: Higher-income groups would bear more of the increased tax burden than lower-income groups
- Increasing excise taxes on tobacco products would **increase government revenues**
- **Tobacco industry's contribution** to economies is small
- **Economic costs** from smoking are significant
- **Estimates of illicit trade** cigarettes lower than estimates for previous years in Indonesia and Vietnam
  - Increasing excise taxes on tobacco products did not increase illicit trade
  - In Pakistan, researchers found that in 2016-17, the tobacco industry underreported cigarette production by up to 47%
- Policy Recommendations:
  - Increase taxes according to WHO's recommendation that tobacco excise taxes comprise at 70% of the final retail price
  - Reduce the number of tax tiers
  - Earmark revenues to finance healthcare and tobacco control programs
  - Invest in track and trace mechanisms



# Second Project Aim—

Develop/disseminate resources on tobacco taxation to build knowledge and support for tobacco tax policy



# Policy Briefs



Policy Brief | October 2018

## Tobacco Taxes & Government Revenues

Increasing Tobacco Taxes Significantly Will Increase Revenues

### Introduction

Tobacco use is the leading cause of preventable

deaths globally. The health burden caused by tobacco is preventable and reducing tobacco consumption is a key public health policy. Tobacco advertising and promotion policies will reduce the health burden caused by tobacco. Tobacco control policies will reduce the health burden caused by tobacco. Tobacco control policies will reduce the health burden caused by tobacco.

increase government health, but development opposes it. Increases in tobacco taxes will reduce the health burden caused by tobacco. This policy brief discusses the impact of tobacco control policies on employment, based on trends and empirical evidence. The discussion is mainly based on the U.S., NCI and WHO 2016 Monograph, "The Economics of Tobacco and Tobacco Control".

Tobacco

### Impact of Tobacco Taxes on Consumption & Revenues



Policy Brief | October 2018

## Tobacco Control Policies and Employment

### Introduction

Tobacco companies commonly argue that because they contribute to the economy by creating jobs, tobacco control policies, such as increasing tobacco taxes, would significantly hurt overall employment and the economy. However, the empirical evidence suggests the opposite. Tobacco control policies do lead to a decline in tobacco consumption and that may eventually cause a small number of jobs to be lost in the tobacco sector. However, the money saved by consumers from not using tobacco products is then spent on goods and services produced in other sectors, resulting in job gains in those sectors of the economy. Governments also spend new revenues from tax increases typically on labor intensive activities, such as services or infrastructure investments. Moreover, employment in the tobacco sector has been declining regardless of tobacco control policies. These declines are driven by the tobacco industry's strategies to use cost-saving capital intensive technologies, consolidation of production and privatization.

This policy brief discusses the impact of tobacco control policies on employment, based on trends and empirical evidence. The discussion is mainly based on the U.S., NCI and WHO 2016 Monograph, "The Economics of Tobacco and Tobacco Control".

### Trends in Tobacco Employment

**Classification of Tobacco Employment Jobs** created by the tobacco industry can be either directly, partially, or indirectly related to the tobacco sector. Jobs directly related to tobacco refer to those in tobacco farming and manufacturing. Those that are partially related to tobacco are jobs in wholesale and retail services. Indirectly related jobs or tobacco-expenditure induced employment include those in other sectors of the economy generated by a multiplier effect of spending the income earned in jobs directly linked to tobacco on other goods and services. Partially and indirectly related jobs are created by all industries, not just the tobacco industry.

### Tobacco Farming and Manufacturing Jobs Limited to a Few Countries

In 2000, 65 percent of worldwide tobacco growing was concentrated in only 5 countries, and by 2016, that share has reached 74 percent (Figure 1). In its 2014 report, the International Labor Organization (ILO) estimated a significant decline in employment in most major tobacco growing countries during the past couple decades.<sup>2</sup> The share of tobacco farming employment in total employment declined for most countries except for India and Zimbabwe (Figure 2). Similarly, more than 80 percent of worldwide tobacco manufacturing jobs were



Khuyến nghị chính sách | Tháng 8, 2018



## Tăng thuế suất thuốc lá ở Việt Nam là chưa đủ: cũng cần cải cách cơ cấu thuế thuốc lá



Policy Brief | August 2018

## Tobacco Taxation Can Reduce Tobacco Consumption and Help Achieve Sustainable Development Goals

### Introduction

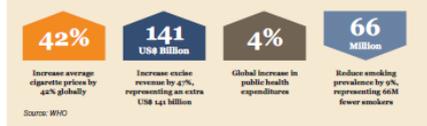
A substantial body of research shows that significantly increasing the taxes and prices of tobacco products is the single most effective way to reduce tobacco use and its devastating health consequences.<sup>1</sup> A tax increase that raises prices by 10% can reduce tobacco consumption on average by 5% in low and middle income countries (LMICs).<sup>2</sup>

Tobacco also poses a threat to development, especially in the LMICs that have the highest rates of tobacco use. The global economic costs from smoking due to medical expenses and lost productivity in 2012 alone totaled over \$1.4 trillion dollars.<sup>3</sup>

Besides the growing recognition of the obvious harmful effects of tobacco on health and healthcare costs and the increased momentum recognizing the harmful effects of

tobacco use on sustainable development. The United Nations (UN) 2030 Agenda for Sustainable Development has set 17 Sustainable Development Goals (SDGs) and 169 related targets. One of those targets focuses specifically on tobacco, and urges "strengthened implementation of the Framework Convention on Tobacco Control (FCTC)". The FCTC is an international treaty created under the auspices of the World Health Organization (WHO). It focuses on reducing the demand and supply of tobacco products. In order to finance the SDGs, the Addis Ababa Action Agenda of the Third International Conference on Financing for Development noted that "price and tax measures on tobacco can be an effective and important means to reduce tobacco consumption and healthcare costs and represent a revenue stream for financing for development in many countries".

Raising tobacco excise tax by 1 International Dollar (about US\$ 0.80) in all countries would:



Tobaeconomics Policy Brief | [www.tobaeconomics.org](http://www.tobaeconomics.org) | @tobaeconomics



Informe Sobre Políticas Públicas | Abril 2019

## Costos económicos del consumo de tabaco

### Introducción

El consumo de tabaco causó más de siete millones de muertes a nivel mundial en 2015 (alrededor de cinco millones de hombres y dos

millones de mujeres). El consumo de tabaco, especialmente en los PIMB. Los niveles actuales de los impuestos al tabaco no alcanzan a cubrir el verdadero costo del consumo de tabaco para las economías nacionales. En la mayoría de los PIMB, la



Policy Brief | October 2019

## 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.<sup>1,2,3,4,5</sup> 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.<sup>6</sup> 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).<sup>7</sup> 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.<sup>8,9</sup> 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.<sup>10-14</sup> The link between tobacco taxes and tobacco use is grounded in the fact 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.<sup>15</sup> 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.<sup>16</sup> However, reaching this target will require substantial tax increases in most countries. According to WHO's Global Report on Tobacco Epidemics, 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.<sup>17</sup> 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.<sup>18</sup>

Tobaeconomics Policy Brief | [www.tobaeconomics.org](http://www.tobaeconomics.org) | @tobaeconomics



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# White Papers

## Why Tobacco Control Doesn't Hurt Farmers

Decoupling Domestic Cigarette Consumption from Leaf Production

Maryam Mirza, German Rodriguez-Iglesias, and Evan Blecher



### Why Tobacco Control Doesn't Hurt Farmers: Decoupling Domestic Cigarette Consumption from Leaf Production

#### Introduction

The supply and demand of tobacco products are linked at the global level. Domestic tobacco control policies therefore, have no impact on domestic leaf production. Although the tobacco industry consistently argues that tobacco control policies to reduce tobacco use will create a "livelihood crisis" among tobacco farmers by reducing demand for tobacco leaf and driving down tobacco leaf prices, the evidence summarized in this policy brief shows that this argument is false.

**Tobacco farming is a part of a large and complex global supply chain** whose structure allows production activities to be distributed between different enterprises and geographically dispersed to locations that best suit their requirements. The global tobacco supply chain centers on a small number of multinational corporations and a large state-owned monopoly in China that perform the manufacturing, marketing, branding, and coordination functions of the "chain". Farmers form the first stage of the tobacco supply chain by providing the main input—unmanufactured tobacco or "tobacco leaf".

**Tobacco farming is highly concentrated in a small group of countries.** Ten countries—China, India, Brazil, United States, Indonesia, Zimbabwe, Zambia, Pakistan, Tanzania, and Argentina—produce approximately 80% of global tobacco leaf.

**In the past two decades, the location of tobacco farming has shifted from high-income countries (HICs) to low- and middle-income countries (LMICs).** As of 2016, more than 90% of the world's tobacco leaf is grown in LMICs, with China, the largest producer, accounting for approximately 40% of global tobacco leaf production.

**In most countries, tobacco leaf is produced for global markets.** The shift in location of farming activities from HICs to a few LMICs is a result of globalization and trade liberalization. Lower labor costs and less regulatory environments mean that production is cheaper in LMICs relative to HICs, which encourages export-oriented production activities, such as tobacco farming. Brazil, Malawi, India, China, and the U.S. are the largest producing countries, and the top five exporters of tobacco leaf. Four of the five largest importing countries—Russian Federation, Germany, Belgium, and the U.S.—are HICs, China being the only LMIC among the top five importers. In 2014, the top ten net exporters of tobacco leaf, mostly LMICs in Africa, accounted for approximately 12% of the global production. The only HIC in this group is Italy. In the same period, the top ten net importers accounted for approximately 7% of global production. Nearly all net importers are HICs, with Indonesia as a notable exception.

## Illicit Trade in Tobacco Products Need Not Hinder Tobacco Tax Policy Reforms and Increases

Hana Ross and Evan Blecher

### Illicit Trade in Tobacco Products Need Not Hinder Tobacco Tax Policy Reforms and Increases

One of the most effective and cost-effective measures to reduce tobacco use is the use of price and tax measures to reduce demand. Higher taxes that lead to higher tobacco product prices have been proven to improve public health, increase government revenue, and reduce the macro economic burden associated with tobacco use. A primary point of opposition to increasing tobacco taxes is the fear that increases in tobacco taxes will result in illicit trade and undermine tobacco control efforts. The policy brief summarizes five key arguments regarding illicit trade:

**1. The tobacco industry uses illicit trade to argue against tax increases, arguing that increases in tobacco taxes will lead to increases in illicit trade, which, in turn, will undermine public health and fiscal policy objectives.**

The tobacco industry publicly expresses concern about the impact illicit trade has on the amount, stability, and predictability of government excise tax revenues. The industry offers its "expertise" to help governments establish "optimal" excise tax rates and structures. However, common industry tactics include (but are not limited to):

- Participating in large-scale tax evasion by orchestrating cigarette smuggling into a country to pressure governments into lower tobacco taxes
- Supplying international brands via illegal channels as a market entry strategy
- Citing the presence of illegal tobacco to demand less stringent tobacco control policies and/or to prevent tobacco tax increases
- Establishing credible front groups to give the impression of widespread independent support for its fight against illicit trade
- Making deals with governments to control illicit trade

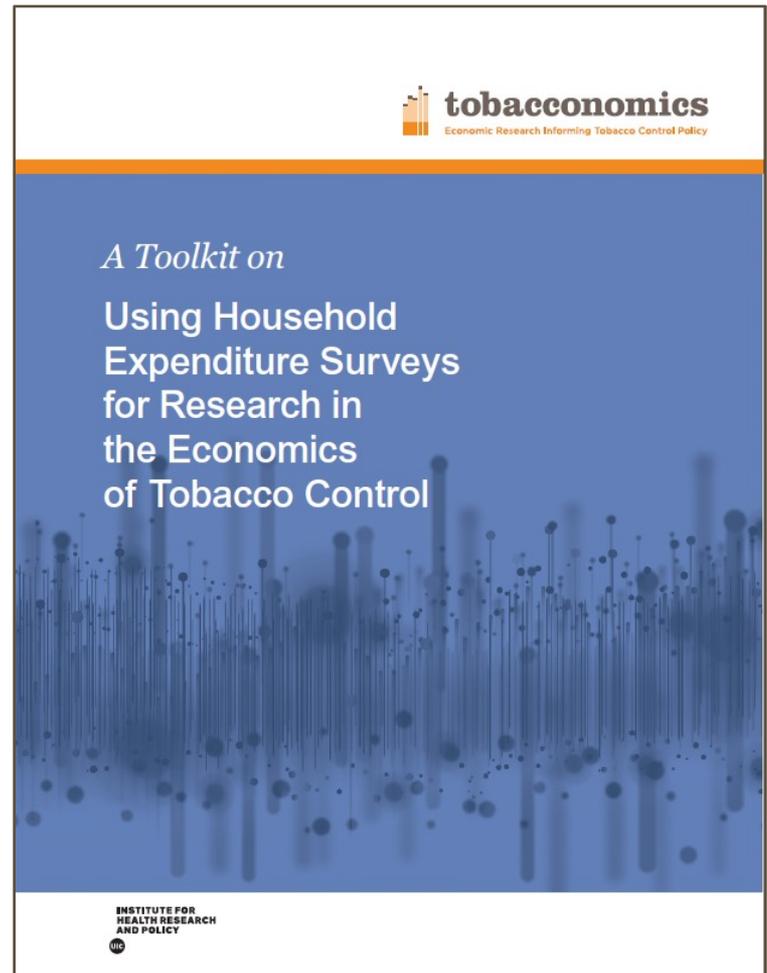
#### What is Illicit Trade?

The WHO FCTC defines Illicit trade as "any practice or conduct prohibited by law and which relates to production, shipment, receipt, possession, distribution, sale or purchase, including any practice or conduct intended to facilitate such activity." Legal methods of circumventing taxes are called tax evasion, as they intend to evade paying all or some tobacco taxes. These include smuggling, counterfeit cigarettes, illicit white cigarettes, and unbranded tobacco. Tax avoidance, on the other hand, occurs through legal mechanisms and may often only be available as a result of poor policy and/or administration. These include cross-border shopping, frontloading, and manipulation of product attributes. It is important to recognize that while there is a distinction between tax evasion and tax avoidance, they are often exploited for the same purpose: to reduce tax liability, and both undermine public health and fiscal policy objectives.

# Tobacconomics Toolkits

- Practical Toolkits on Economic Analysis
  - *Using Household Expenditure Surveys for Research in the Economics of Tobacco Control*
  - *Methods for Measuring Illicit Trade\**
  - *Equity Impact of Tobacco Taxes\**
  - *Evaluating the Effects of Tobacco Tax Increases\**
  - *Modeling the Potential Revenue and Public Health Impacts of Tobacco Tax Increases\**

*\*Forthcoming*



# Third Project Aim—

Strategic engagement with policy makers and tobacco control community to build technical capacity for tobacco tax policy

- UN/ECLAC Annual Fiscal Conference (Santiago, Chile, March 2018 & 2019)
- NCI/CTFK/UIC Economics of Tobacco Control Workshop (Warsaw, Poland, May 2018)
- Vietnam Economists Annual Meeting (Hanoi, Vietnam, June 2018 & 2019)
- AFACT (Bali, Indonesia, September 2018)
- IMF/WB Annual Meetings (Bali, Indonesia, October 2018)
- LACEA (Guayaquil, Ecuador, November 2018)
- Pakistan Society of Development Economists Annual General Meeting (December 2018)
- ENSP (Bucharest, Romania, March 2019)
- ECTOH (Berlin, Germany, February 2020)
- International Economics Association (Bali, Indonesia, July 2020)

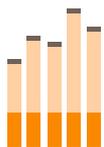


# Future Plans

Creating a new “Institute on Fiscal Policy for Health and Development” at the University of Illinois at Chicago

- Expand geographic scope
- Extend to fiscal policy and other health behaviors and their consequences, including alcohol consumption, cannabis use, diet, and physical activity
- Develop new research agenda around fiscal policy and other challenges to health and development
  - e.g. use of carbon taxes to address climate change





# tobacconomics

Economic Research Informing Tobacco Control Policy

*Thank you!*

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# In Memoriam – Teh-wei Hu - 1937-2020

