

**tobacconomics**

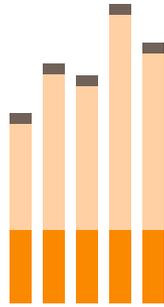
Economic Research Informing Tobacco Control Policy

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

Frank J. Chaloupka, University of Illinois at Chicago

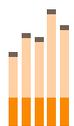
12<sup>th</sup> Asia Pacific Conference on Tobacco or Health

13 September 2018, Bali, Indonesia



# Impact of Tobacco Tax Increases

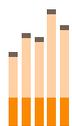
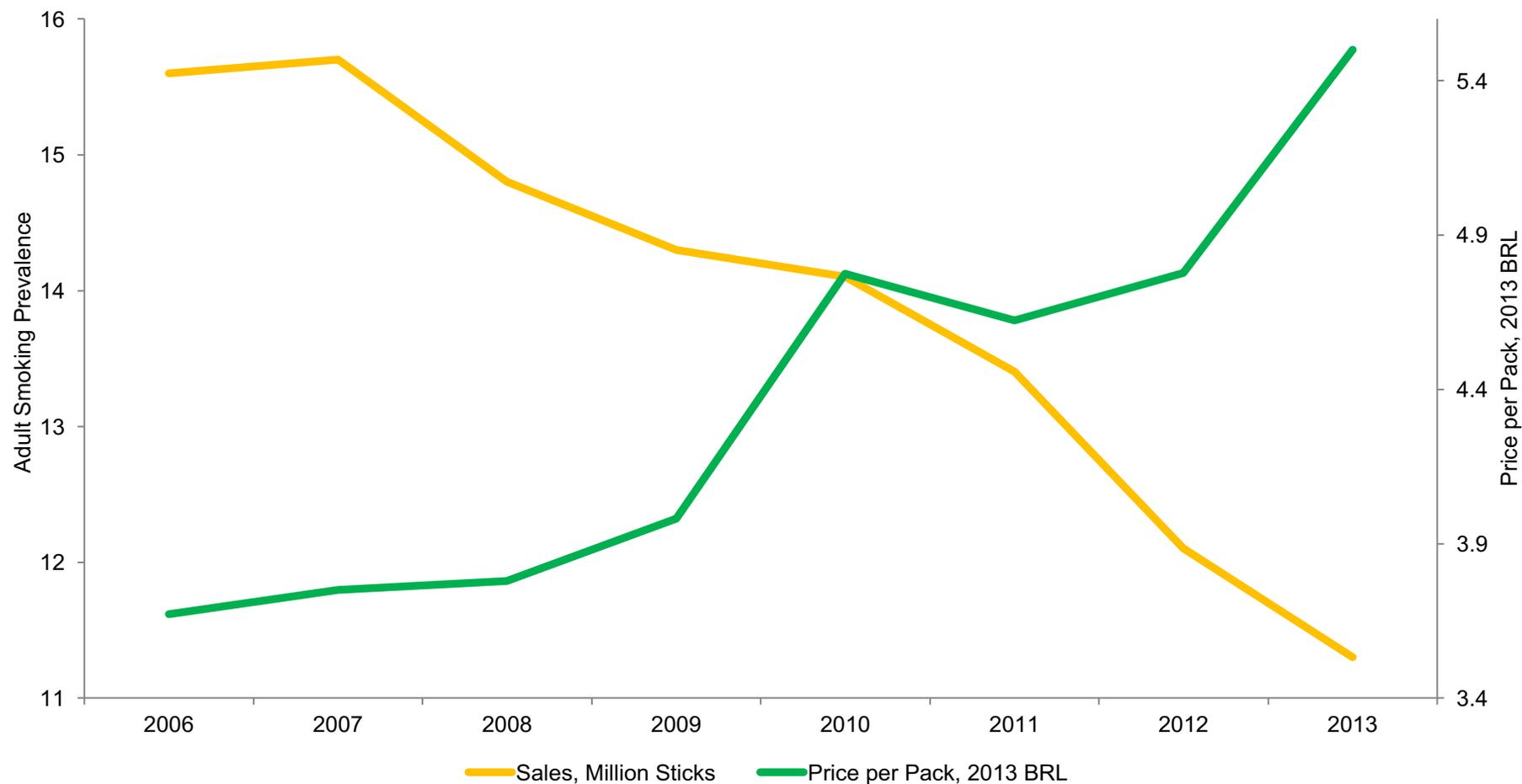
# Cigarette Sales and Cigarette Prices Philippines, 2002-2016, Inflation Adjusted



Sources: Euromonitor, World Bank, and Authors' Calculations

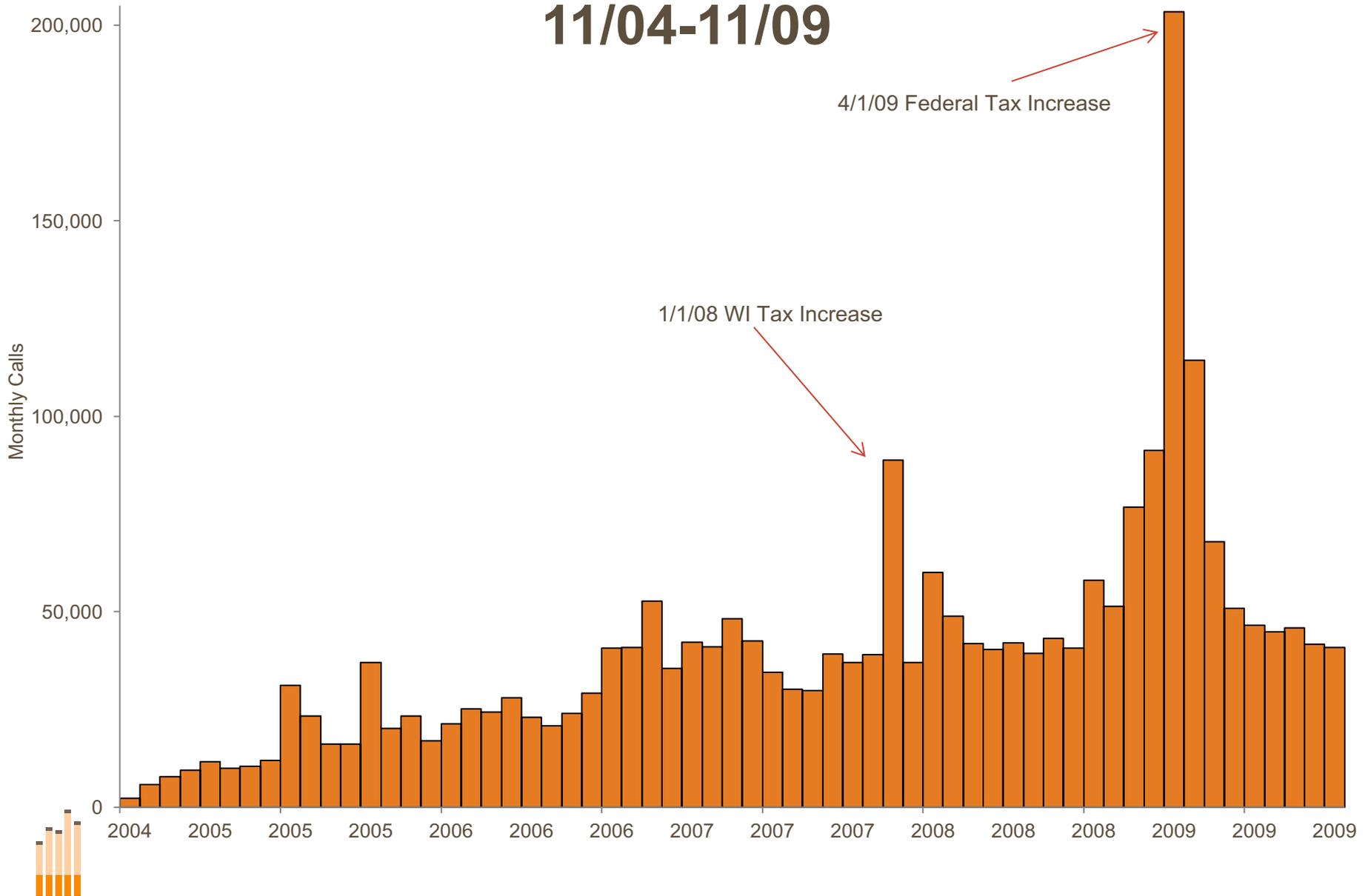
# Adult Smoking Prevalence & Price

## Brazil, Inflation Adjusted, 2006-2013

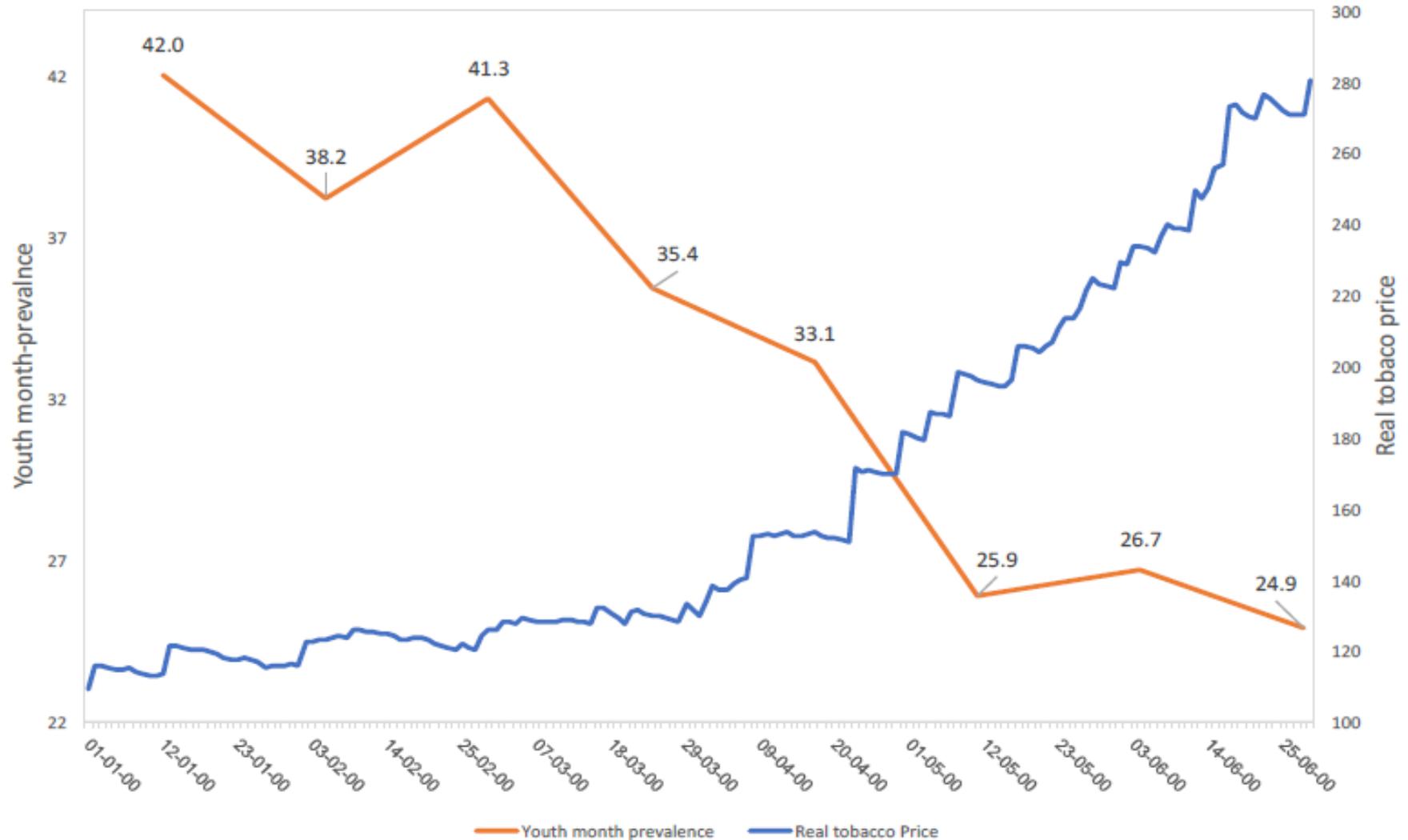


Sources: Ministry of Health, Brazil; EIU; World Bank

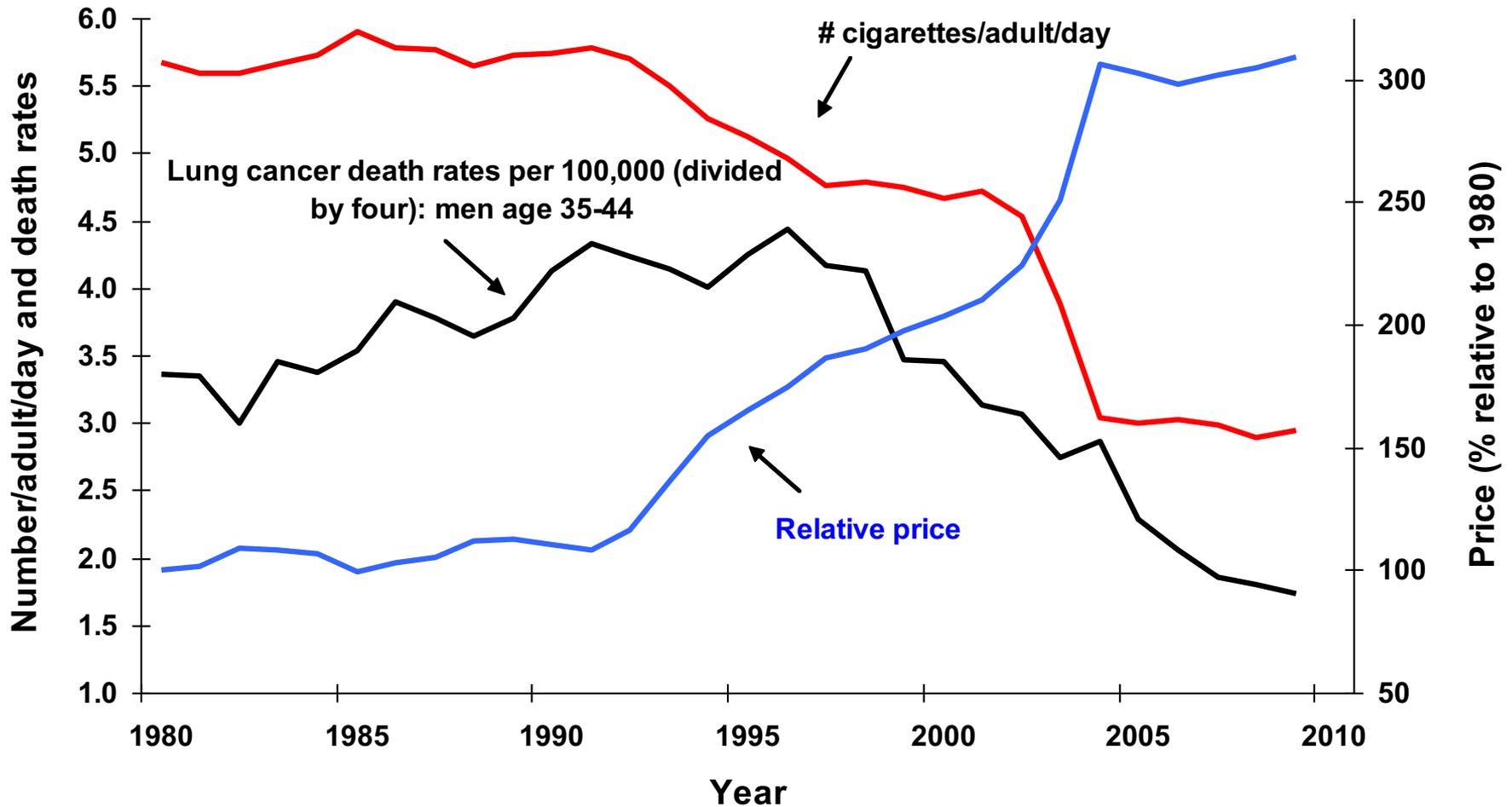
# Monthly Quit Line Calls, United States 11/04-11/09



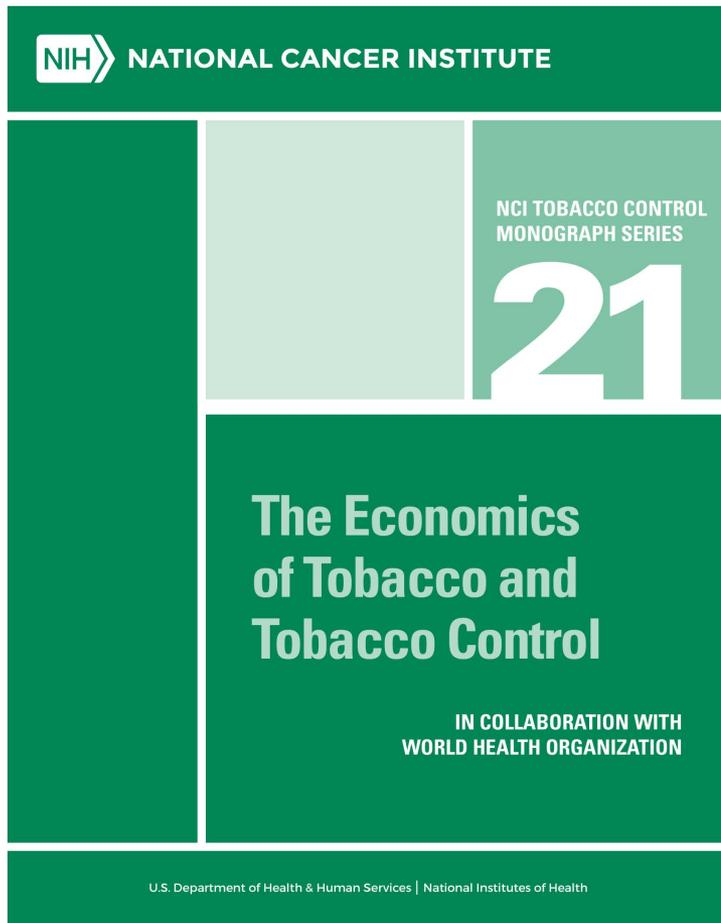
# Cigarette Price & Youth Smoking Prevalence Chile, 2000-2015



# Price, Consumption & Lung Cancer, France



# Effectiveness of Tobacco Taxes



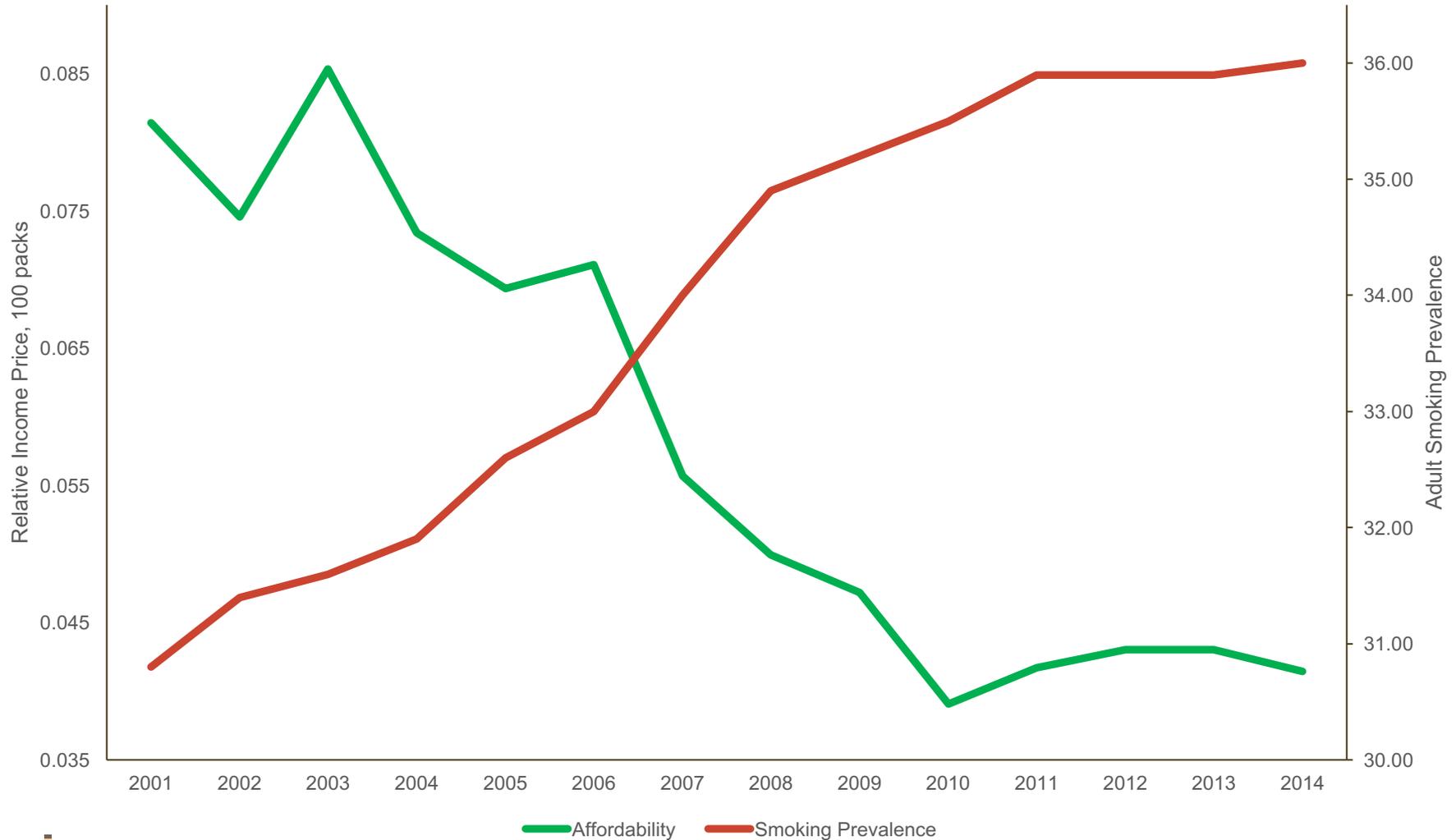
Chapter 4, Conclusion 1:

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.**

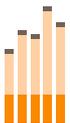


# Affordability & Tobacco Use

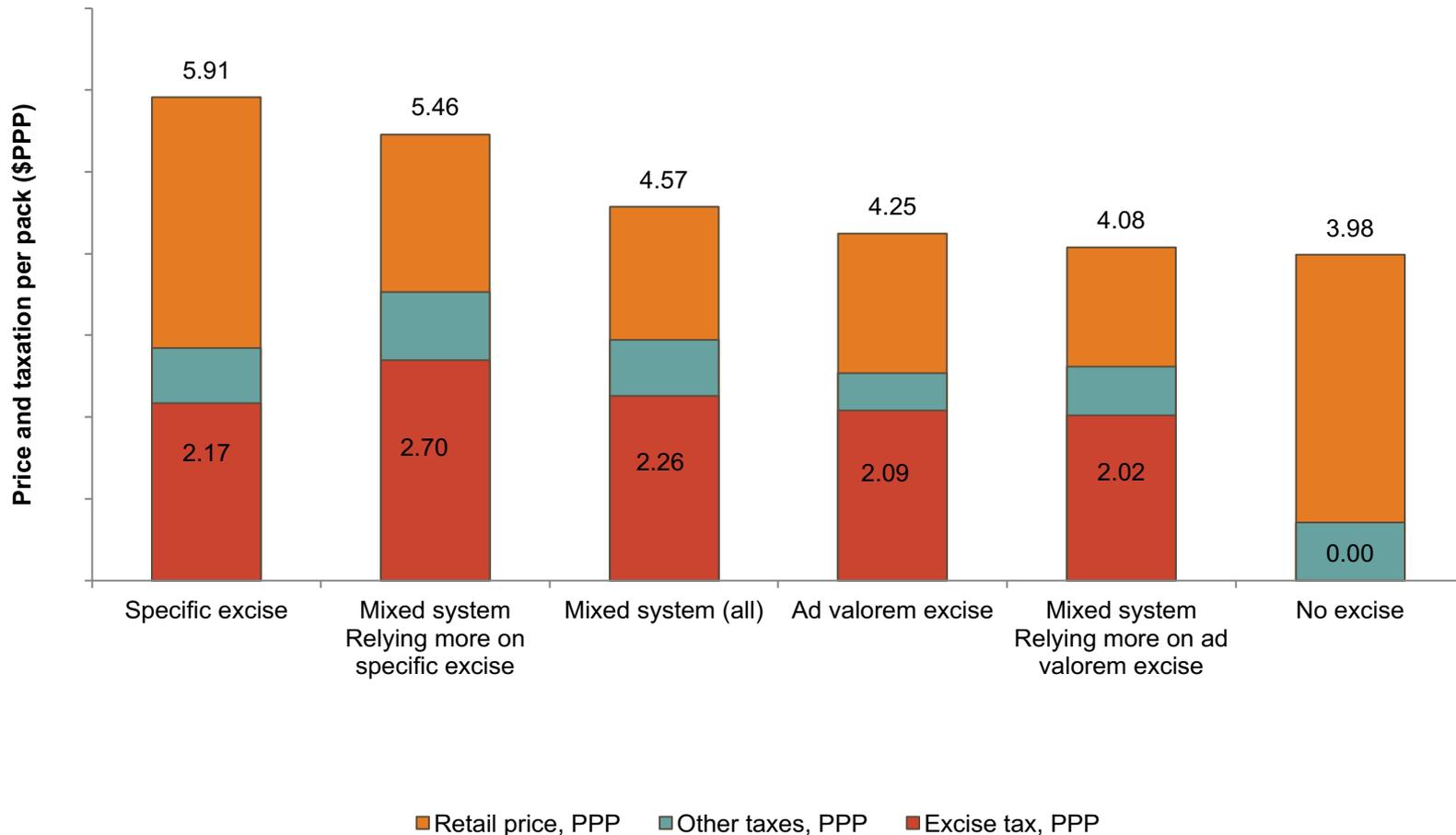
## Adult Smoking Prevalence, Indonesia, 2001-2014



Sources: Euromonitor, EIU, World Bank

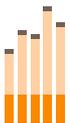


# Excise Tax Structure Important



Source: WHO 2017 GTCR data; unpublished figure.

Notes: Averages are weighted by WHO estimates of number of current cigarette smokers ages 15+ in each country in 2015; Prices are expressed in Purchasing Power Parity (PPP) adjusted dollars or international dollars to account for differences in the purchasing power across countries. Based on prices as of July 2016 for 53 high-income, 100 middle-income and 27 low-income countries with data on prices of most sold brand, excise and other taxes, and PPP conversion factors.



# Excise Tax Structure Important



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Citation  
Tools



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metrics



Alerts

Research paper

## Association between tax structure and cigarette consumption: findings from the International Tobacco Control Policy Evaluation (ITC) Project

Ce Shang<sup>1</sup>, Hye Myung Lee<sup>2</sup>, Frank J Chaloupka<sup>1, 2</sup>, Geoffrey T Fong<sup>3, 4</sup>, Mary Thompson<sup>5</sup>, Richard J O'Connor<sup>6</sup>

[Author affiliations +](#)

### Abstract

**Background** Recent studies show that greater price variability and more opportunities for tax avoidance are associated with tax structures that depart from a specific uniform one. These findings indicate that tax structures other than a specific uniform one may lead to more cigarette consumption.

**Objective** This paper aims to examine how cigarette tax structure is associated with cigarette consumption.

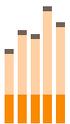
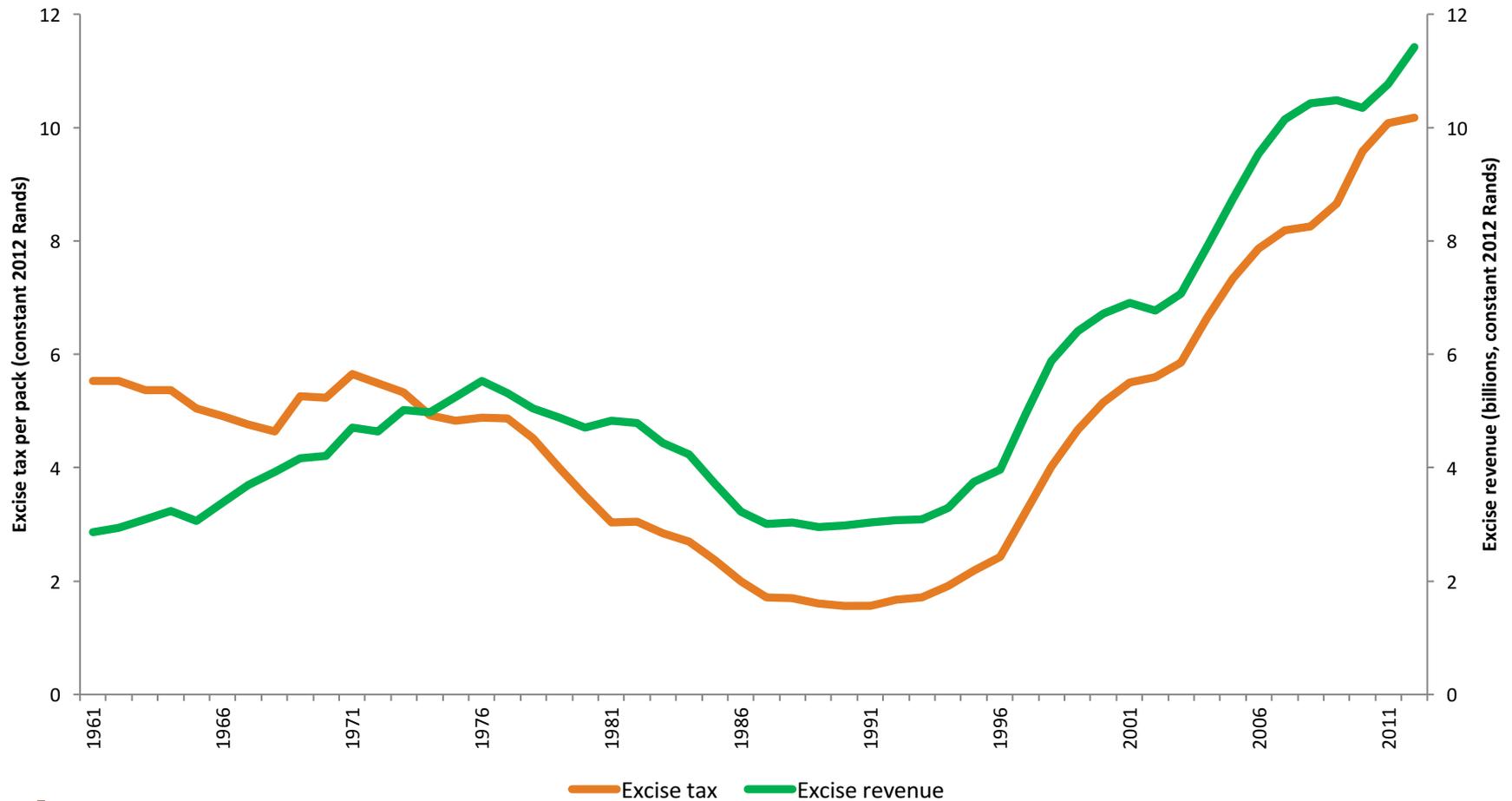
**Methods** We used survey data taken from the International Tobacco Control Policy Evaluation Project in 17 countries to conduct the analysis. Self-reported cigarette consumption was aggregated to average measures for each surveyed country and wave. The effect of tax structures on cigarette consumption was estimated using generalised estimating equations after adjusting for sociodemographic characteristics, average taxes and year fixed effects.

**Findings** Our study provides important empirical evidence of a relationship between tax structure and cigarette consumption. We find that a change from a specific to an ad valorem structure is associated with a 6%–11% higher cigarette consumption. In addition, a change from uniform to tiered structure is associated with a 34%–65% higher cigarette consumption. The results are consistent with existing evidence and suggest that a uniform and specific tax structure is the most effective tax structure for reducing tobacco consumption.

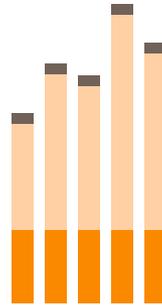


# Taxes & Tax Revenues, South Africa

## Excise Tax per Pack and Excise Tax Revenue South Africa, Inflation Adjusted, 1961-2012



Sources: Blecher & Van Walbeek, 2014



# Economic Impact of Tobacco Control

-

## Dispelling the Myths

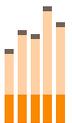
# Oppositional Arguments

- Massive job losses as tobacco use falls in response to higher tobacco taxes and other tobacco control policies
- Poor adversely affected by higher tobacco taxes
- Increased tax avoidance and tax evasion in response to higher taxes
  - Increasingly used against other tobacco control policies



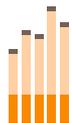
# Tobacco Control & Employment

- Tobacco control will lead to decreased consumption of tobacco products
  - Small loss of jobs in tobacco sector
- Money not spent on tobacco products will be spent on other goods and services
  - Gains in jobs in other sectors
- Increase in tobacco tax revenues will be spent by government
  - Additional job gains in other sectors
- Net increase in jobs in most countries

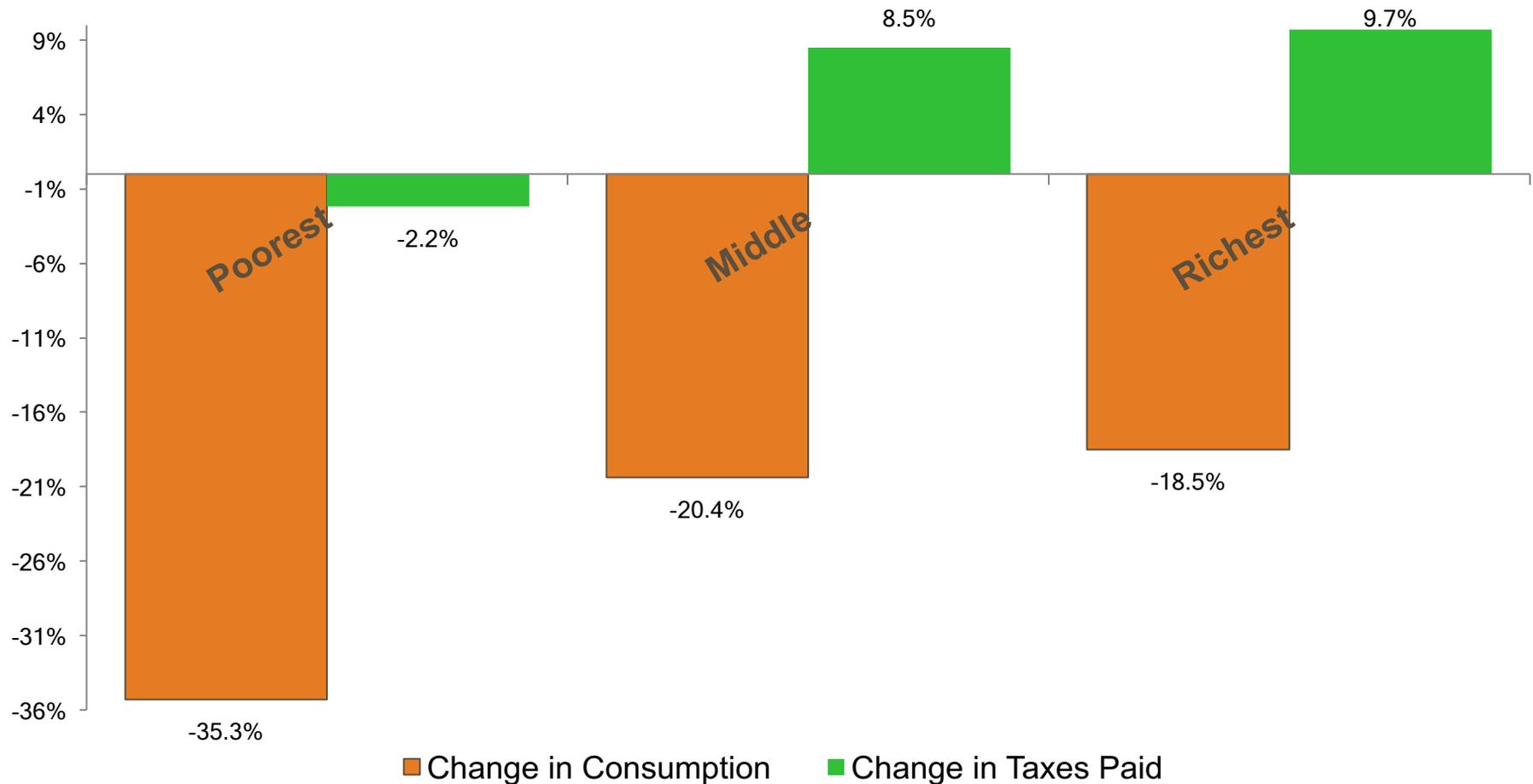


# Impact on the Poor

- Concerns about the regressivity of higher tobacco taxes
  - Tobacco taxes are regressive, but tax increases can be progressive
    - Greater price sensitivity of poor – relatively large reductions in tobacco use among lowest income populations, small reductions among higher income populations
    - Health benefits that result from tax increase are progressive



# Who Pays & Who Benefits Turkey - 25% Tax Increase



Source: Adapted from Önder & Yürekli, 2014

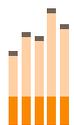
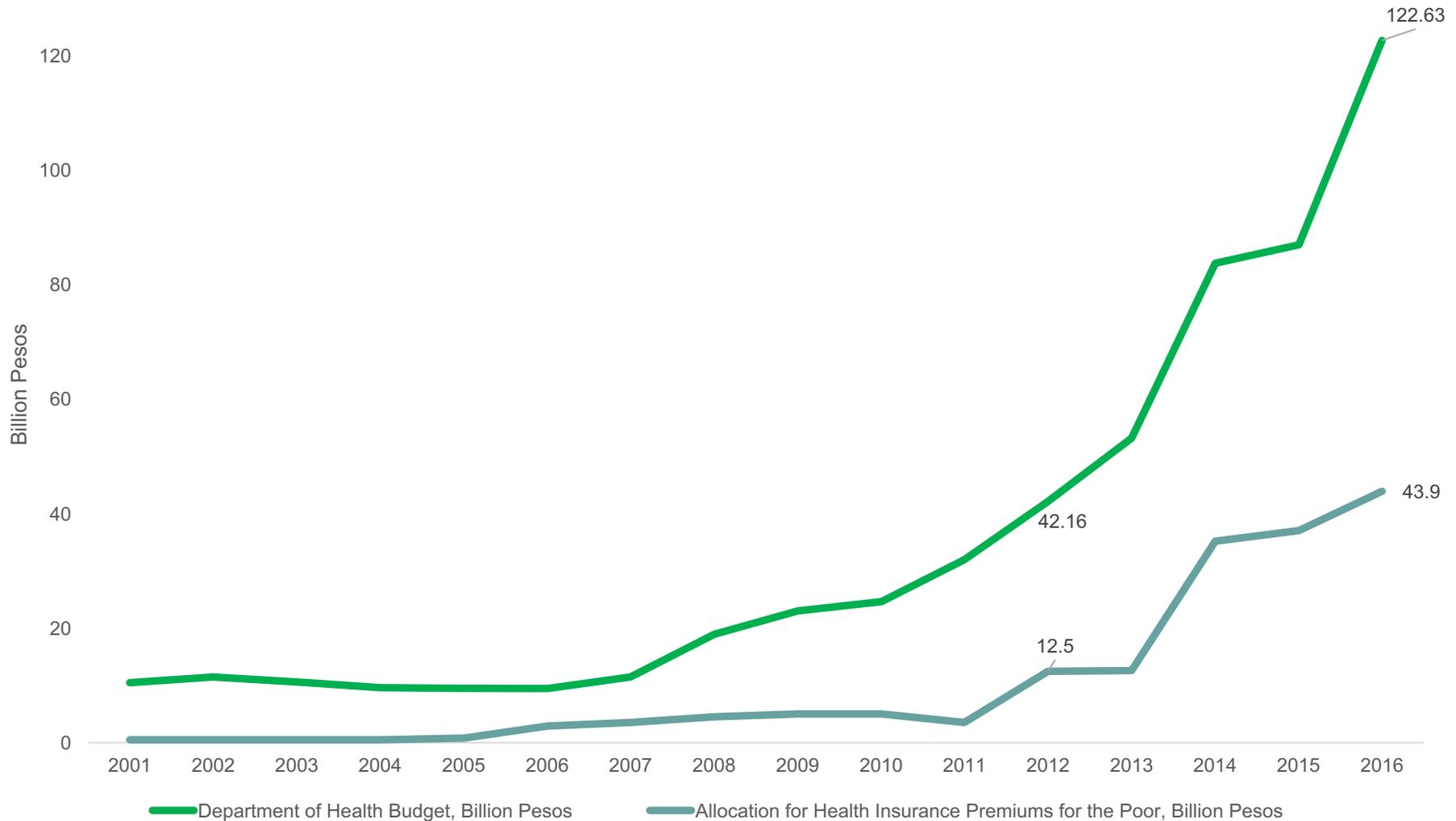
# Impact of Tobacco Taxes on the Poor

Also depends on use of new tax revenues:

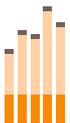
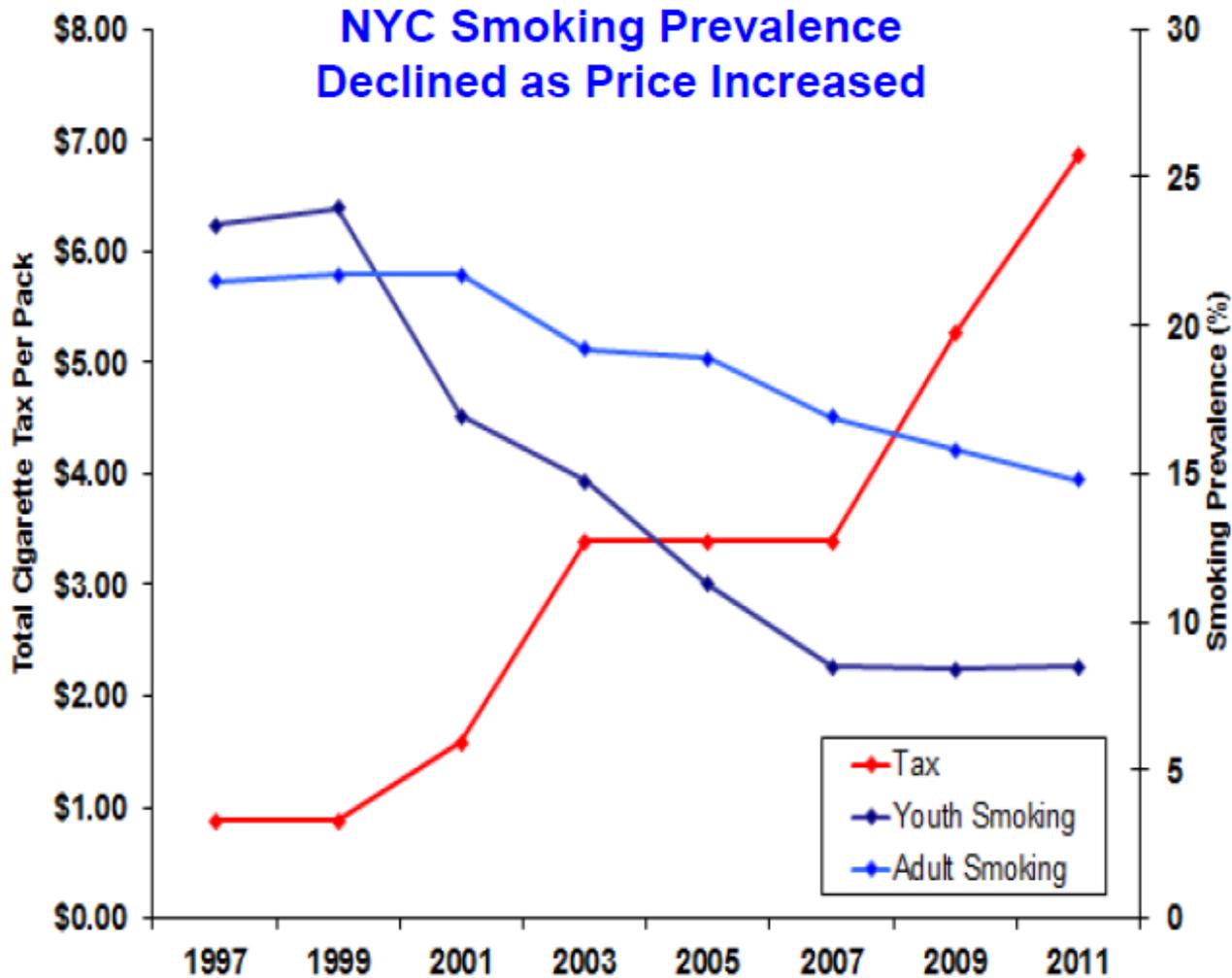
- Greater public support for tobacco tax increases when revenues are used for tobacco control and/or other health programs
- Net financial impact on low income households can be positive when taxes are used to support programs targeting the poor
- Concerns about regressivity offset by use of revenues for programs directed to poor



# Incremental Revenues for Health and the Poor Philippines, 2001-2016



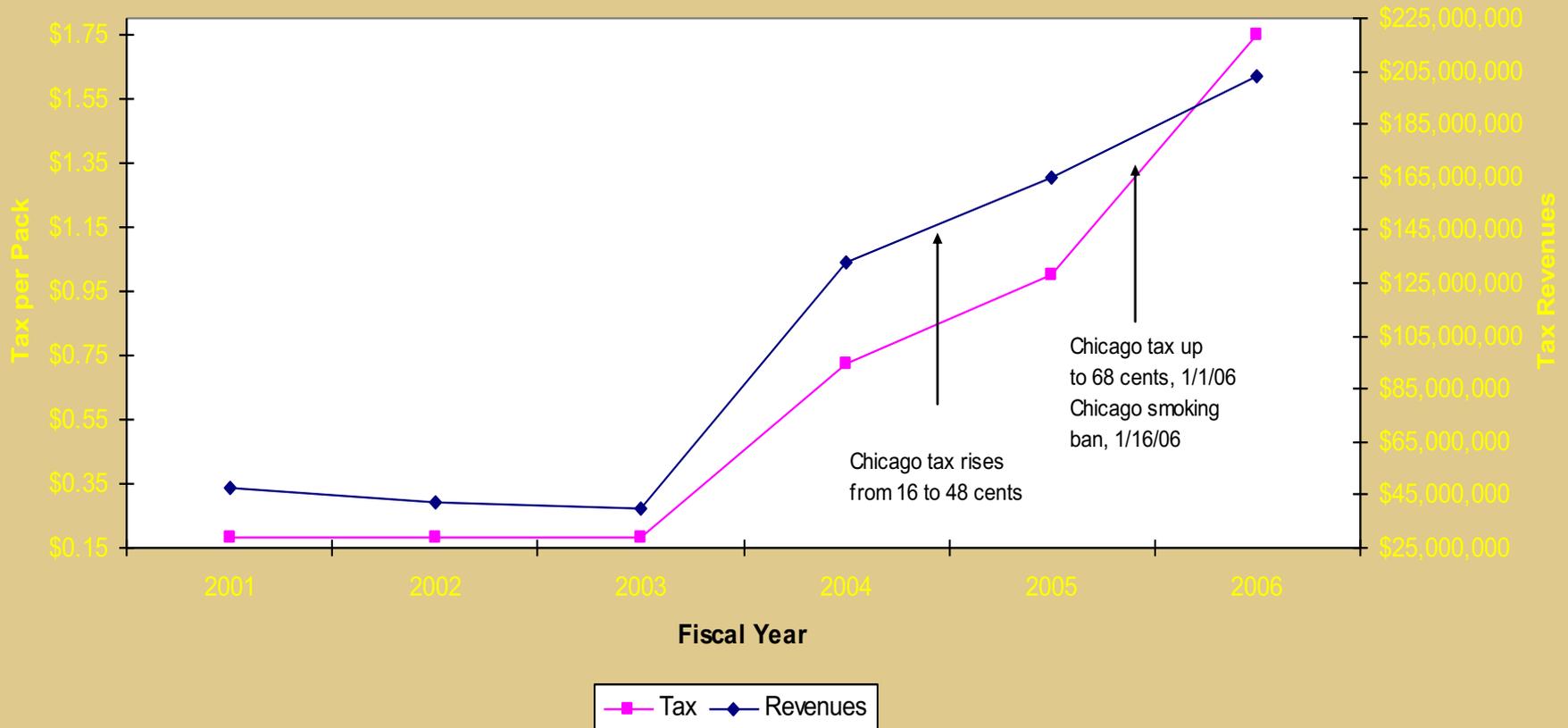
# Tax Avoidance & Evasion Do NOT Eliminate Health Impact of Higher Taxes



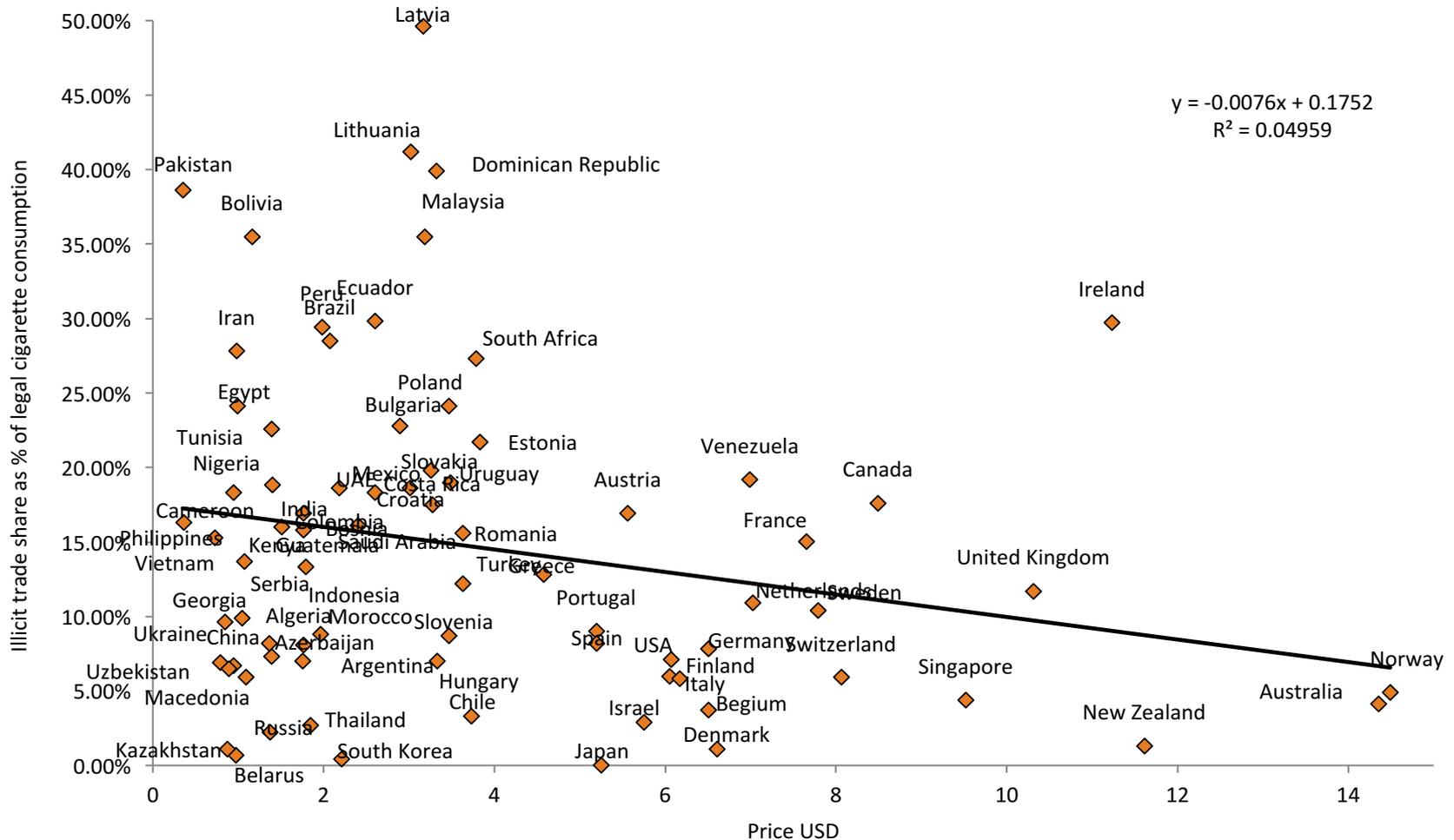
# Tax Avoidance & Evasion

## Do NOT Eliminate Revenue Impact of Higher Taxes

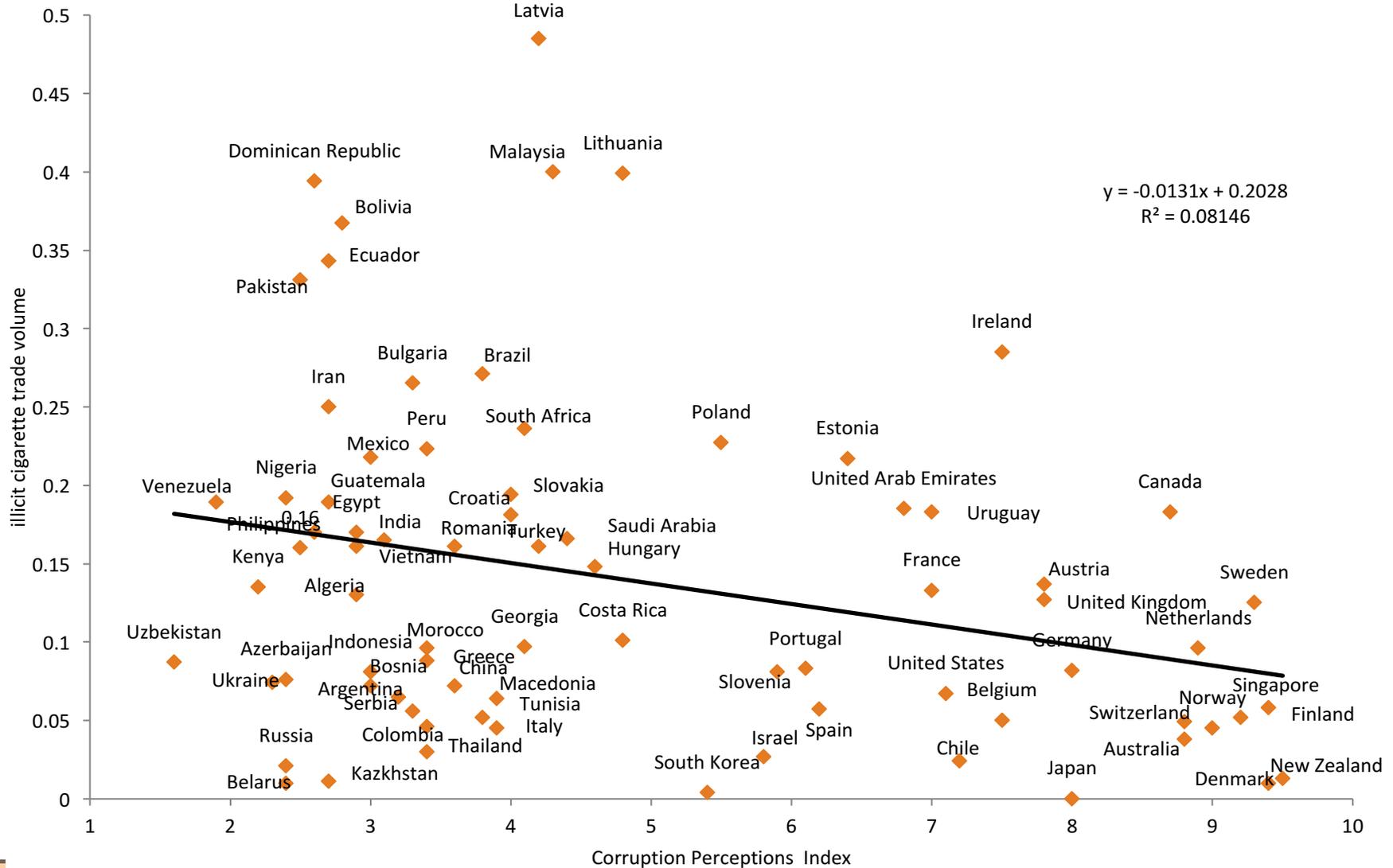
### Cook County Cigarette Tax and Tax Revenues - FY01-FY06



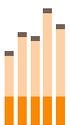
# Illicit Cigarette Market Share & Cigarette Prices, 2012



# Smuggling and Corruption, 2011

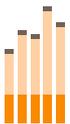


Sources: Euromonitor, Transparency International



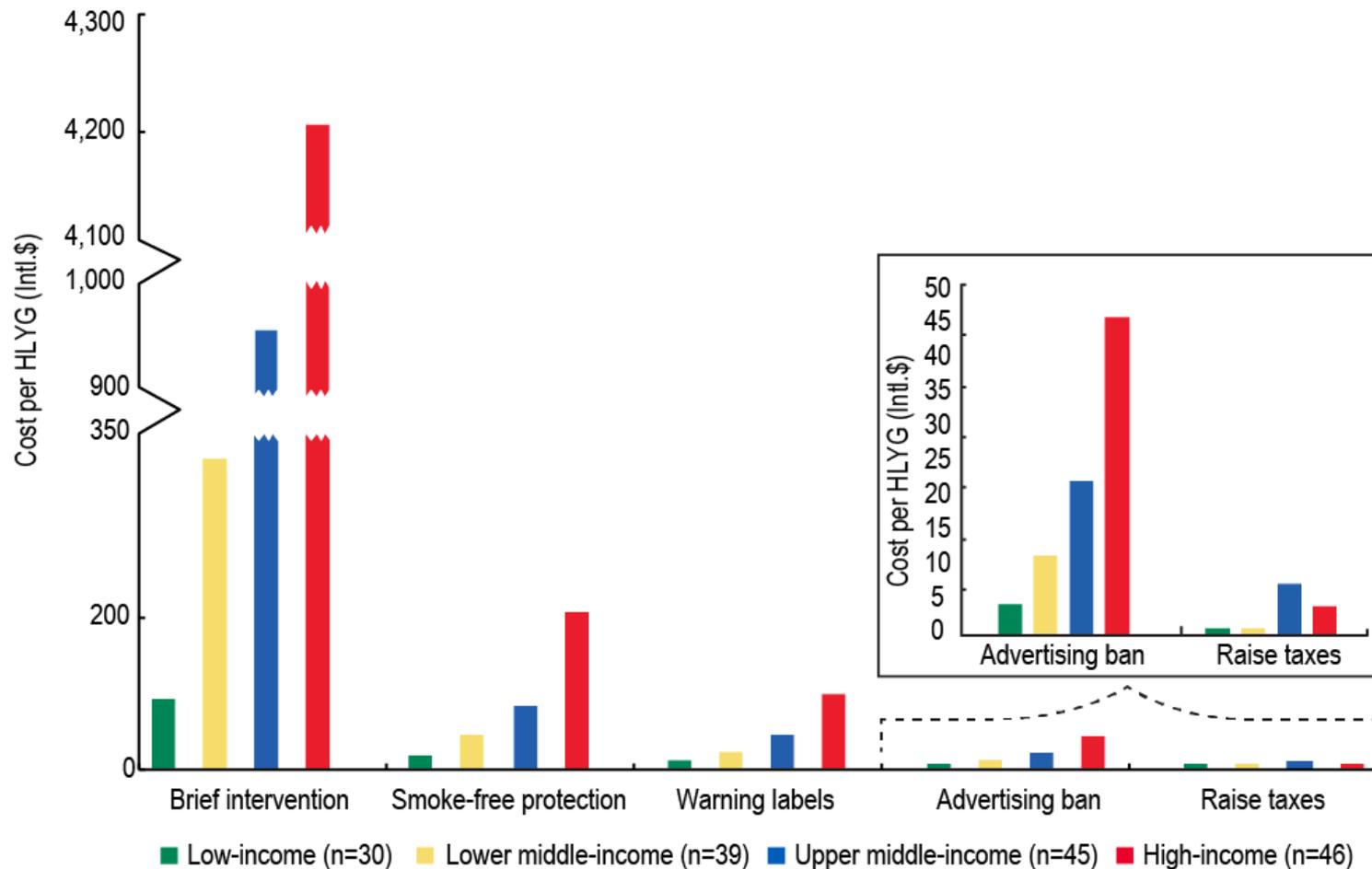
# Combating Illicit Tobacco Trade

- Illicit trade protocol to the WHO FCTC
  - Adopted November 2012; enter into force September 2018
  - Strong tax administration
    - Prominent, high-tech tax stamps and other pack markings
    - Licensing of manufacturers, exporters, distributors, retailers
    - Export bonds
    - Unique identification codes on packages
  - Better enforcement
    - Increased resources
    - Focus on large scale smuggling
  - Swift, severe penalties
  - Multilateral/intersectoral cooperation

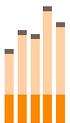


# Key Tobacco Control Policies

## Cost-Effectiveness



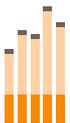
Notes: HLYG = healthy life-year gained. Country income group classification based on World Bank Analytical Classifications for 2014. Source: NCI & WHO, 2016



# Economic Impact of Tobacco Control

Tobacco tax increases and other effective tobacco control measures make good economic sense:

- Not just long-term public health, but near-term health and economic benefits
- Higher taxes and stronger tobacco control measures will not harm economies
- Substantial impact in reducing health care costs, improving productivity, and fostering economic development.



# TOBACCO CONTROL

DEVELOPMENT IN PRACTICE

## Curbing the Epidemic

Governments and the Economies of Tobacco Control



A WORLD BANK PUBLICATION

The International Tobacco Control Policy Evaluation Project

## Tobacco Price and Taxation

ITC Cross-Country Comparison Report



MARCH 2012

UNIVERSITY OF WATERLOO

itc International Tobacco Control Policy Evaluation Project



International Agency for Research on Cancer  
World Health Organization

IARC HANDBOOKS OF CANCER PREVENTION  
Tobacco Control

Volume 14

Effectiveness of Tax and Price Policies for Tobacco Control

2011



The Economics of Tobacco Control: Evidence from the International Tobacco Control (ITC) Policy Evaluation Project

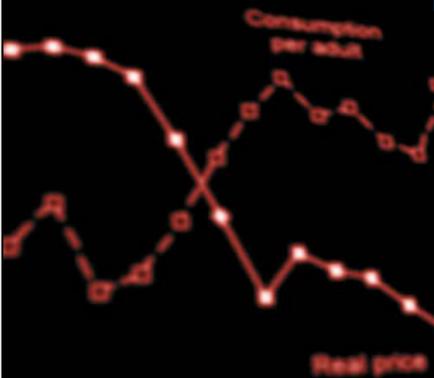


Guest Editor: John Taurus

itc International Tobacco Control Policy Evaluation Project

tobaccocontrol.bmj.com

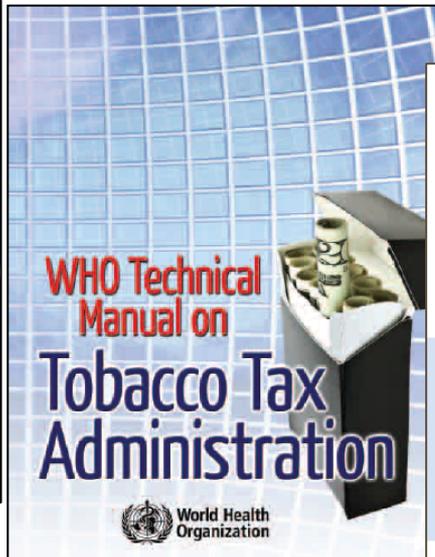
BMJ



Real GDP

## Tobacco control in developing countries

editors | Prabhat Jha | Frank Chaloupka



## WHO Technical Manual on Tobacco Tax Administration

World Health Organization

### The Economics of Tobacco and Tobacco Taxation in Bangladesh

Abul Barkat  
Human Development Research Centre, Dhaka

Nigar Nargis  
Human Development Research Centre, Dhaka

Md. Shahnewaz Khan  
Human Development Research Centre, Dhaka

Sharmina Bashir  
Human Development Research Centre, Dhaka

Ashraf Uddin Chowdhury  
Human Development Research Centre, Dhaka

Mashfiqur Rahman  
Human Development Research Centre, Dhaka

Ananda Kumar PK  
Human Development Research Centre, Dhaka

Frank J. Chaloupka  
University of Illinois at Chicago

Taxing all cigarette brands at a specific tax rate of 34 taka per 10 sticks (70% of retail price) could lead nearly 7 million current smokers to quit and prevent 7 million youth from initiating smoking, preventing 4 million premature deaths and raising additional excise revenues of 15.1 billion taka (US\$ 200 million).

Further, taxing all bids at a specific tax rate of 4.95 taka per pack (40% of average prices) could lead 3.4 million adult bidi smokers to quit and prevent 3.5 million youth from initiating bidi smoking, preventing 2.5 million premature deaths and raising additional excise revenues of 7.2 billion taka (US\$ 87.5 million).

One of a series of reports on tobacco taxation funded by Bloomberg Philanthropies and the Bill and Melinda Gates Foundation as part of the Bloomberg Initiative to Reduce Tobacco Use.

NIH NATIONAL CANCER INSTITUTE

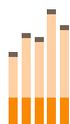
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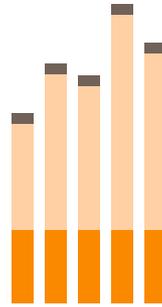
NCI TOBACCO CONTROL MONOGRAPH SERIES

## The Economics of Tobacco and Tobacco Control

IN COLLABORATION WITH WORLD HEALTH ORGANIZATION

Executive Summary





# **Bloomberg Initiative to Reduce Tobacco Use & UIC/Tobacconomics**

PUBLIC HEALTH

# TOBACCO CONTROL

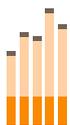
- OVERVIEW
- PROBLEM
- SOLUTION
- PROGRESS
- GET INVOLVED
- SHARE

IF LEFT UNCHECKED, TOBACCO USE WILL KILL ONE BILLION PEOPLE THIS CENTURY



Bloomberg Philanthropies has committed nearly \$1 billion since 2007 to combat tobacco use worldwide.

The **Bloomberg Initiative to Reduce Tobacco Use** aims to reduce the global demand for tobacco through a comprehensive, proven approach that combines policy change with increased public awareness. Key strategies of this approach include creating smoke-free public places, banning tobacco advertising, increasing tax on tobacco products, requiring graphic pack warnings and supporting hard-hitting mass media campaigns.



## Effective tobacco control measures gain momentum



Monitor tobacco use and prevention policies



Protect people from tobacco smoke



Offer help to quit tobacco use



Warn about the dangers of tobacco



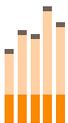
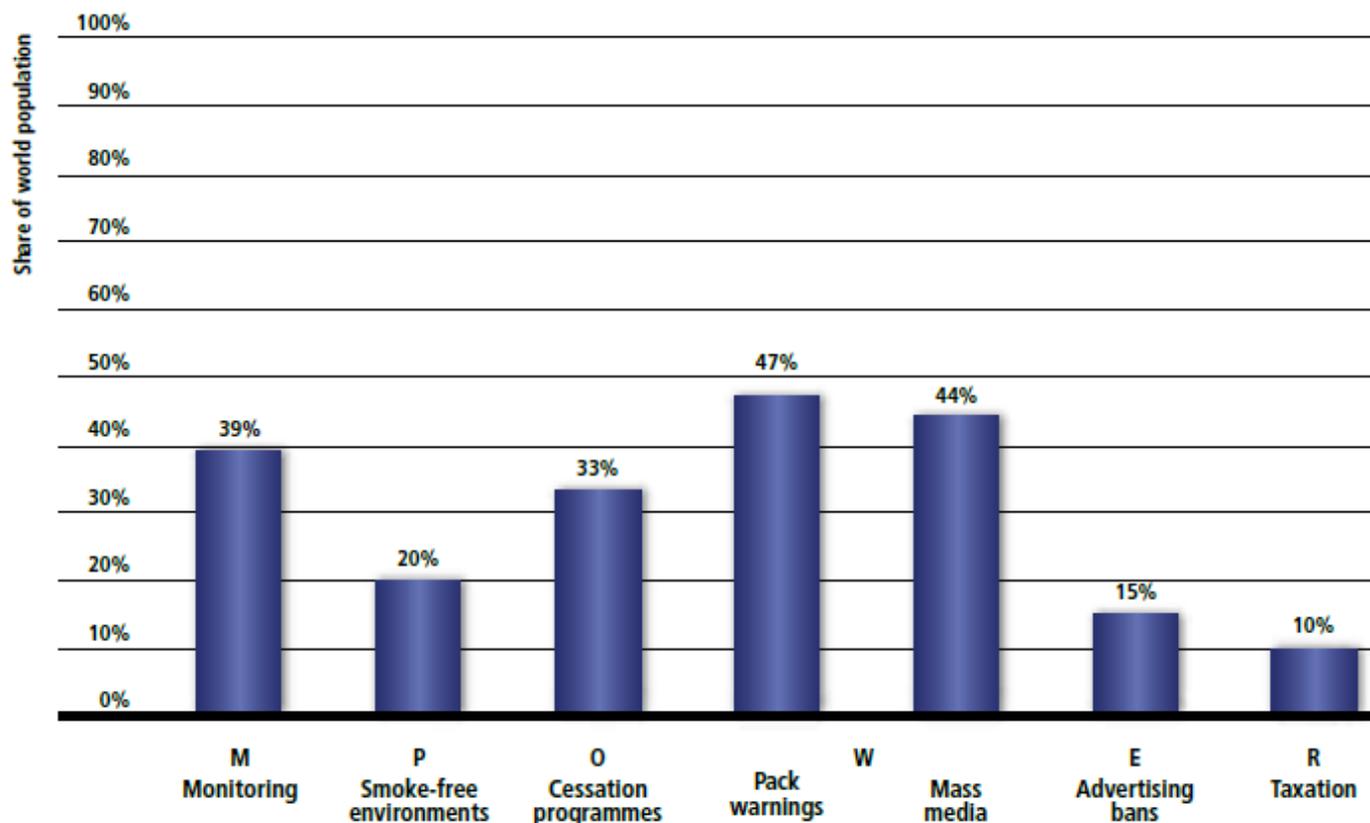
Enforce bans on tobacco advertising, promotion and sponsorship



Raise taxes on tobacco

# Nearly two thirds of countries – comprising 63% of the world's population – have now at least one MPOWER measure in place at the highest level of achievement.

SHARE OF THE WORLD POPULATION COVERED BY SELECTED TOBACCO CONTROL POLICIES, 2016



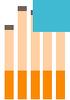
# Bloomberg Initiative – UIC

- Build capacity of ‘think tanks’ in selected priority countries and regions to provide local evidence to support tobacco tax reforms and tax increases
- High-level engagement with decision makers to build technical capacity and political support for tobacco tax policy
- Develop/disseminate resources (policy briefs, white papers, etc) on tobacco taxation to build knowledge and support for tobacco tax policy





# Technical Assistance



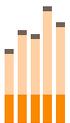
# South-East Europe

- Institute of Economic Sciences, Serbia
  - Development Solutions Associates, Albania
  - Entrepreneurship and Technology Transfer Center, and the Faculty of Economics – Center for Project Management and Entrepreneurship, University of Banja Luka, Bosnia & Herzegovina
  - Faculty of Economics, Business and Tourism, University of Split, Croatia
  - Center for Political Courage, Kosovo
  - Analytica, Macedonia
  - Institute for Socio-Economic Analyses, Montenegro



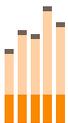
**tobaccotaxation**

Economic Research Informing Tobacco Taxation Policy



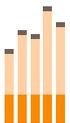
# Latin America

- Red Sudamerica de Economia Aplicada, Uruguay
  - iDeAS, Universidad Nacional de San Martin, Argentina
  - Instituto Torcuato di Tella, Argentina
  - Fundação Centro de Estudos do Comércio Exterior, Brazil
  - Instituto de Investigaciones Económicas, Pontificia Universidad Católica del Ecuador, Ecuador
  - Centro de Investigación en Alimentación and Desarrollo, Mexico
  - Ethos, Laboratorio de Políticas Públicas, Mexico
  - Instituto de Estudios Peruanos, Peru



# Asia Pacific Region

- Perkumpulan Prakarsa, Indonesia
- Tax Centre, University of Indonesia
- Development and Policies Research Center (DEPOCEN), Vietnam
- Institute of Public Policy & Management, National Economics University, Vietnam
- Pakistan Institute of Development Economics, Pakistan
- Social Policy and Development Centre, Pakistan
- BRAC Institute for Governance and Development, Bangladesh



# High Level Engagement



ANNUAL MEETINGS  
2018 **Indonesia**  
INTERNATIONAL MONETARY FUND  
WORLD BANK GROUP



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## Coming Soon: 2018 Annual Meetings - Bali, Indonesia

Online registration for the Annual Meetings of the International Monetary Fund (IMF) and the World Bank Group (WBG) is now open.

[Click here to register](#)



ANNUAL MEETINGS  
2018 **Indonesia**  
INTERNATIONAL MONETARY FUND  
WORLD BANK GROUP

## Day 4 - Friday, October 12, 2018

### Jakarta A

Early Learning in Deprived Context

9:00 am –  
10:30 am

Yayasan Sayangi Tunas Cilik -  
Save the Children Indonesia

### Jakarta B

Inequality in Asia and the  
International Financial  
Institutions (Launching of the  
report on inequality in Asia)  
Asian Peoples Movement on  
Debt & Development with  
Fight Inequality Alliance

### Bandung

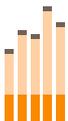
Financing Climate Change  
Without Contributing to Debt  
Crises?

Debt Justice Norway with  
Erlassjahr, Jubilee Debt  
Campaign UK

### Surabaya

Sin-Tax Policy Reform: Policy  
Tools to Improve Health  
Behaviors and Increase  
Financing SDG 3

Perkumpulan PRAKARSA  
with Health Policy Center -  
University of Illinois at  
Chicago



# Resource Hub



Economic Research Informing Tobacco Control Policy

Policy Brief | February 2018

## Tobacco & Poverty

*Tobacco Use Makes the Poor Poorer; Tobacco Tax Increases Can Change That*

### Introduction

Tobacco use is the world's preventable diseases and a disproportionate amount of disability caused by addicted poor and uneducated people. While public health efforts instrumental in reducing tobacco use, a growing number of consumer behaviors, especially point to opportunities for reductions in global tobacco

This brief looks at the impact of tobacco taxation on the poor. The findings in this brief are a comprehensive report from the Cancer Institute (NCI) and the World Health Organization (WHO) on the tobacco and tobacco control and middle-income countries.

### Global Impacts of Tobacco

Approximately 21% of population aged 15 and above (about 35% of males and 21% of females) are current tobacco users. Tobacco is a highly addictive substance that causes a vast majority of users to smoke cigarettes, including 4.5% of girls.

Tobacco use is estimated to cause 5 million deaths among persons aged 15 and above worldwide. This represents 10% of all deaths from noncommunicable diseases.

Tobacconomics Policy Brief | [www.tobacconomics.org](#)



Policy Brief | April 2018

## Tobacco Products Are Becoming Increasingly Affordable in Bangladesh

### Introduction

Increasing the price of tobacco products through higher taxes is widely recognized as a key policy for reducing tobacco use. However, one key challenge, how to ensure the affordability of tobacco products for low-income consumers, is often overlooked. Affordability is the price of products in relation to the income of users. So even if prices go up via increasing taxes, but to increase to a level that is above the rate of inflation, the price of tobacco products increases. This strategy would make products less affordable over time, leading to increased tobacco consumption and preventable public health.

This Policy Brief is based on a recently published research paper that analyzes affordability trends of cigarettes, cigars, and smokeless tobacco products in Bangladesh, a country that graduated from low to middle-income status in 2015.<sup>1</sup>

### Methods

The data for this study came from the nationally-representative Bangladesh Household Income and Expenditure Survey (BHIES) 2010.

Tobacconomics Policy Brief | [www.tobacconomics.org](#)



Economic Research Informing Tobacco Control Policy

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, there is a noticeable international movement 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)."<sup>4</sup> 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:

**42%**  
Increase average cigarette prices by 42% globally

Source: WHO

**141**  
US\$ Billion  
Increase excise revenue by 47%, representing an extra US\$ 141 billion

**4%**  
Global increase in public health expenditures

**66**  
Million  
Reduce smoking prevalence by 9%, representing 66M fewer smokers

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### Indonesia Tobacco Tax Policy Options

The tobacco excise tax is established in the Excise Law 11/1995 and amended in Law 39/2007. The tobacco excise tax law sets a maximum excise tax at 57% of the 'retail sales price', with the law allowing for ministerial regulations to further define the base price. The Ministry of Finance (MoF) has the authority to establish the tobacco excise tax structure and rates within this maximum tax rate.

The current Indonesian tobacco excise tax is a multi-tiered specific tax. The MoF applies an excise tax rate based on the HJE, a government set retail price. The 57% cap applies to each tier, based on a ruling by the constitutional court.



Economic Research Informing Tobacco Control Policy

## Estimating a Laffer Model for Tobacco Excise Tax in Indonesia

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Policy Brief | Ministry of Finance



Economic Research Informing Tobacco Control Policy

Draft | Julio 2018

## Estructura Impositiva del Tabaco en Argentina

### Estructura Impositiva de los Cigarrillos

Los impuestos a los productos de tabaco se distinguen entre impuestos generales al consumo (Impuesto al Valor Agregado - IVA) e impuestos especiales (Impuesto Adicional de Emergencia - IAE, Fondo Especial del Tabaco - FET) e Impuesto Interno - II). Los cuatro impuestos son recaudados a nivel federal. Tanto el monto recaudado en concepto de IVA como el II es distribuido de acuerdo con el Régimen de Coparticipación, que reparte los ingresos recaudados a los Gobiernos Provinciales y Federal. El IAE y el FET poseen mecanismos de asignación específica de recursos.

La estructura tributaria sobre el consumo de cigarrillos en Argentina es muy compleja. El origen de los tributos que gravan la actividad a nivel nacional es disímil, difuso, la denominación no está armonizada y las bases imponibles difieren significativamente. Pareciera ser que el esquema está diseñado para evitar la doble tributación. La única excepción clara a esta regla es el Impuesto Adicional de Emergencia.

Llamemos PVC al precio de venta al consumidor final de un paquete de 20 unidades, a continuación, se describen cada uno de los tributos.

#### a) Impuesto Adicional de Emergencia

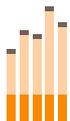
El Impuesto Adicional de Emergencia (IAE) fue creado por la ley 24.625 sancionada el 28 de diciembre de 1995. El artículo 1 de la norma original establece,

"Crea un impuesto adicional de emergencia del VEINTIUNO POR CIENTO (21%) sobre el precio final de venta de cada paquete de cigarrillos vendido en el territorio nacional."

Como la base imponible es el precio de venta final, el IAE produce una doble tributación pues el monto se calcula también sobre otros tributos. En cambio, la ley establece que este tributo no forma parte de la base imponible de Impuestos Internos, Impuesto al Valor Agregado, ni Fondo Especial del Tabaco. Su cómputo responde entonces a la expresión,

$$IAE = t_{IAE} PVC$$

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