

**tobacconomics**

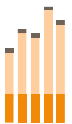
Economic Research Informing Tobacco Control Policy

# Tobacco Taxation: The Global Evidence

Frank J. Chaloupka, University of Illinois at Chicago  
Workshop on Tobacco Economics in Southeastern Europe  
Belgrade, Serbia, 11 December 2018

# Overview

- Economic costs of tobacco use
- Impact of tobacco taxes on tobacco use
- “Best Practices” in tobacco taxation
- Myths & Facts on economic “costs” of tobacco control
- Cost-effectiveness of tobacco control




# TOBACCO CONTROL

DEVELOPMENT IN PRACTICE

## Curbing the Epidemic

Governments and the  
Economics 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

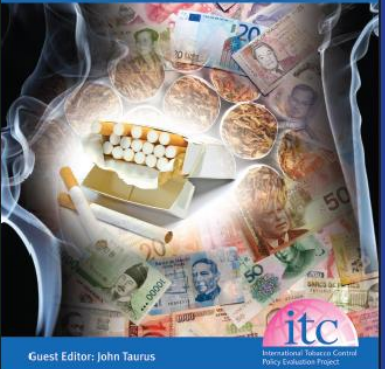
IARC HANDBOOKS OF CANCER PREVENTION  
Tobacco Control

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



**Tobacco control in developing countries**

editors | Prabhat Jha | Frank Chaloupka

WHO Technical Manual on  
**Tobacco Tax Administration**



World Health Organization

World Health Organization

WHO REPORT ON THE GLOBAL TOBACCO EPIDEMIC, 2015  
Raising taxes on tobacco

fresh and alive  
mpower

NIH NATIONAL CANCER INSTITUTE

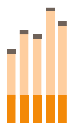
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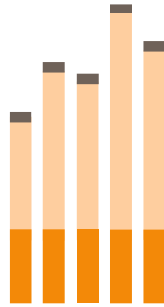
NCI TOBACCO CONTROL MONOGRAPH SERIES

**The Economics of Tobacco and Tobacco Control**

IN COLLABORATION WITH  
WORLD HEALTH ORGANIZATION

Executive Summary

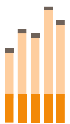




# Economic Costs of Tobacco Use

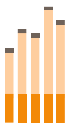
# Categories of Costs

- Direct costs: reduction in actual resources
  - Direct health care costs
    - e.g. hospital, out-patient, drugs, etc.
  - Other direct costs
    - e.g. transportation to clinic, family members' time providing care
- Indirect costs: reduction in potential resources
  - Lost productivity due to morbidity and premature mortality

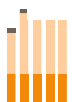
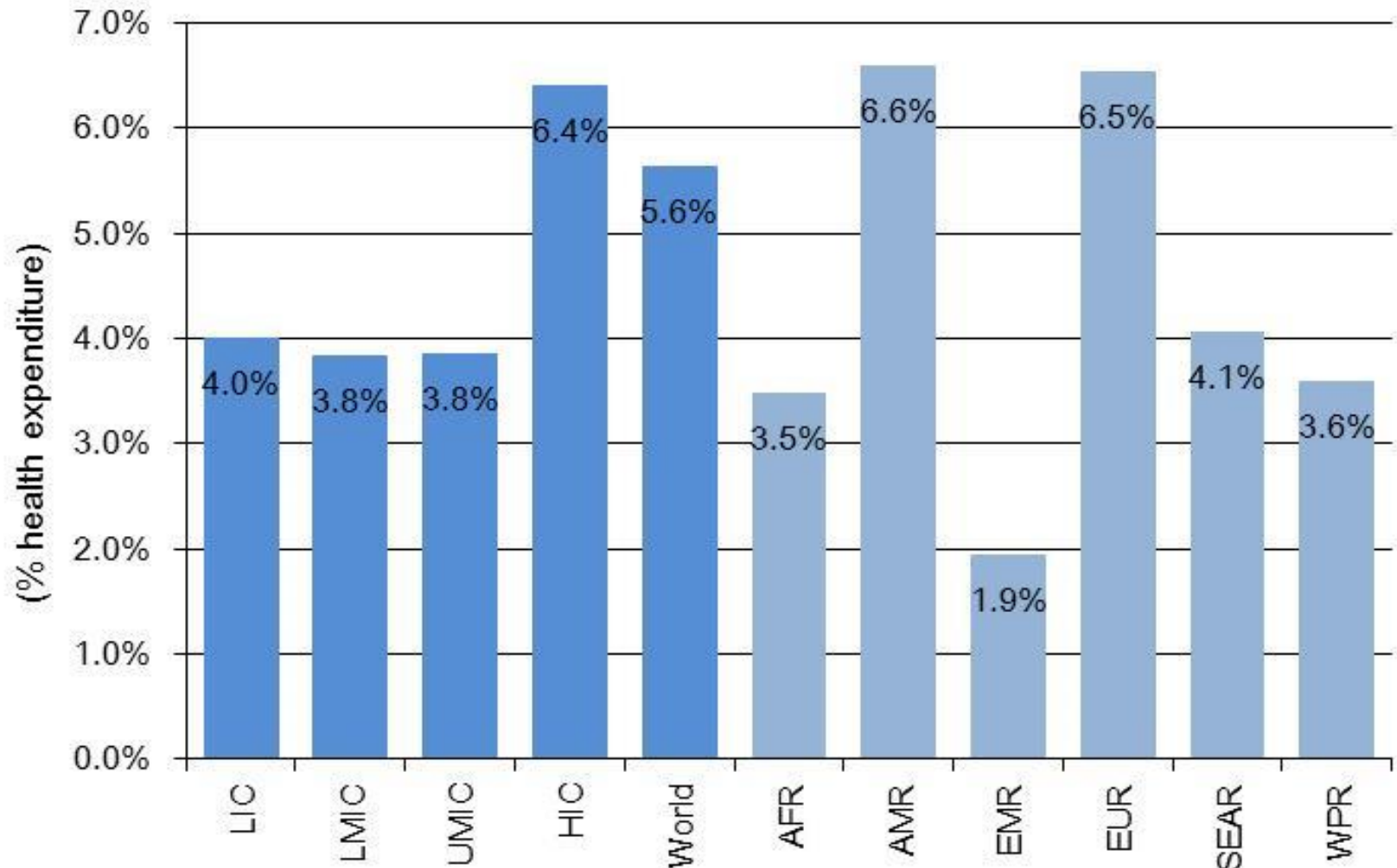


# Categories of Costs

- External costs
  - costs that tobacco users impose on others (e.g., costs related to secondhand smoke)
- Internal costs
  - costs paid for by tobacco users as a result of tobacco use (e.g., out of pocket costs for health care to treat diseases caused by smoking)
- “Internalities”
  - internal costs resulting from information failures in the market that can be thought of as external costs

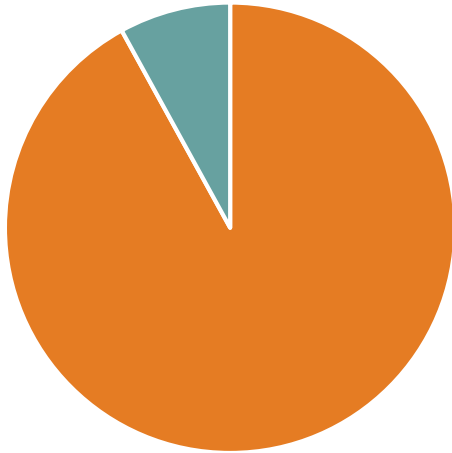


# Smoking-Attributable Spending as Share of Total Health Expenditures, 2012, by Income Group and WHO Region

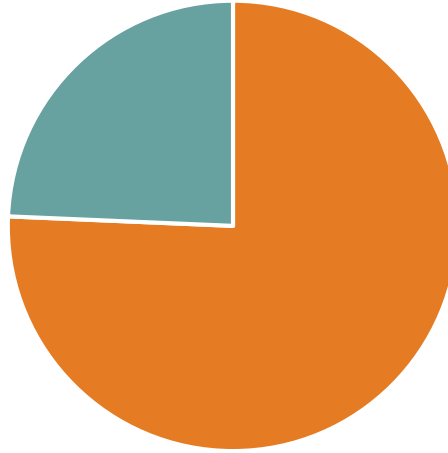


# Tobacco Tax Revenues as Share of Health Costs from Tobacco

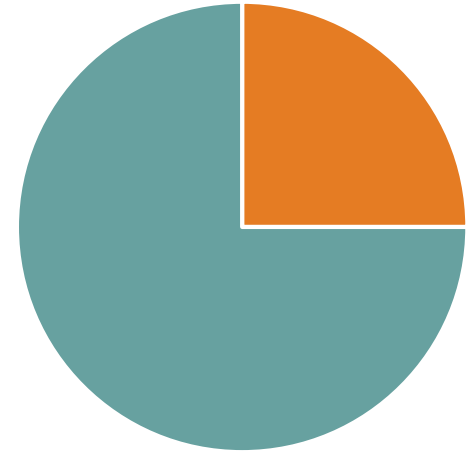
Bolivia



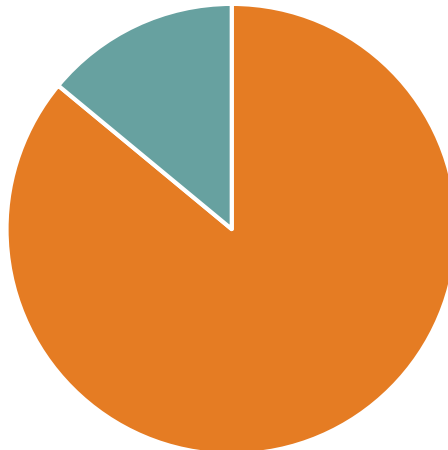
United States



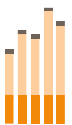
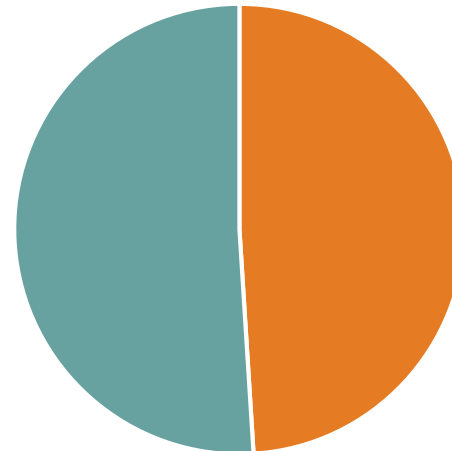
Chile



Peru

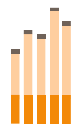
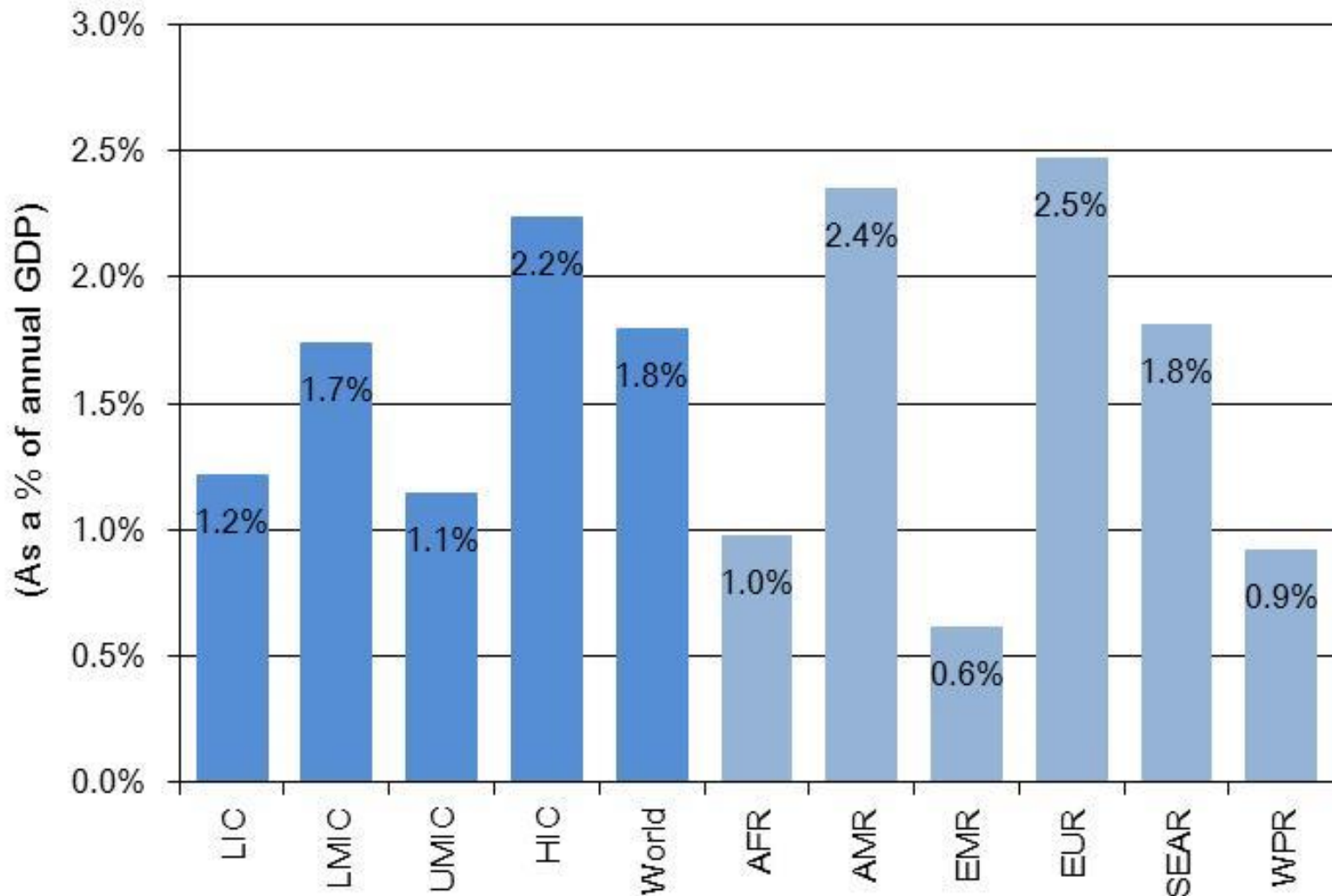


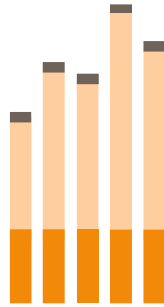
Mexico





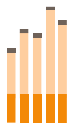
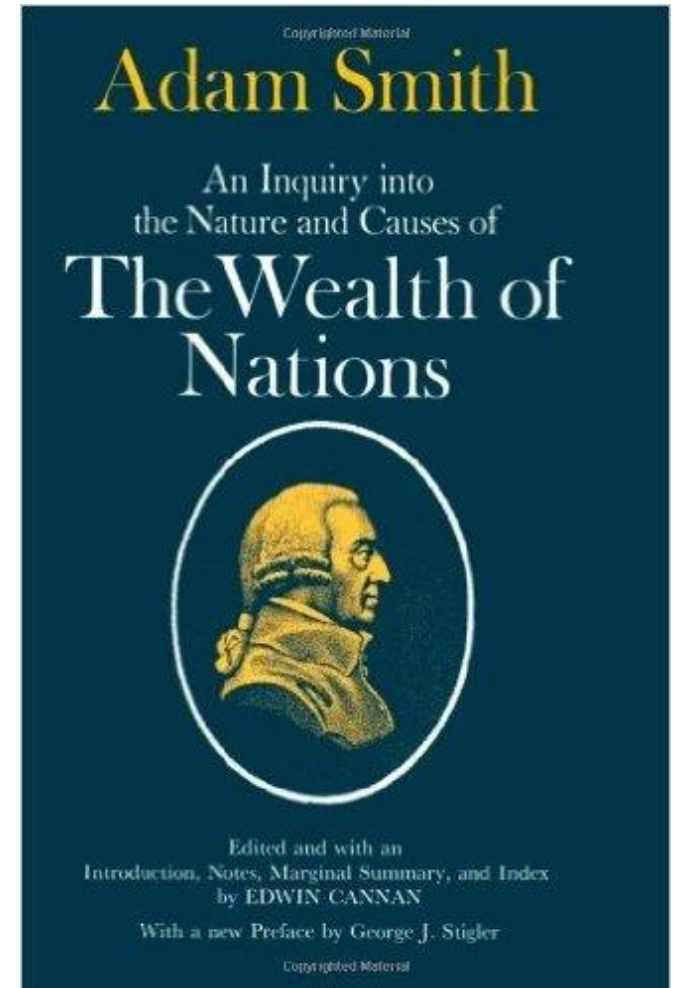
# Economic Costs of Smoking-Attributable Diseases as Share of GDP, 2012, by Income Group and WHO Region





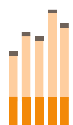
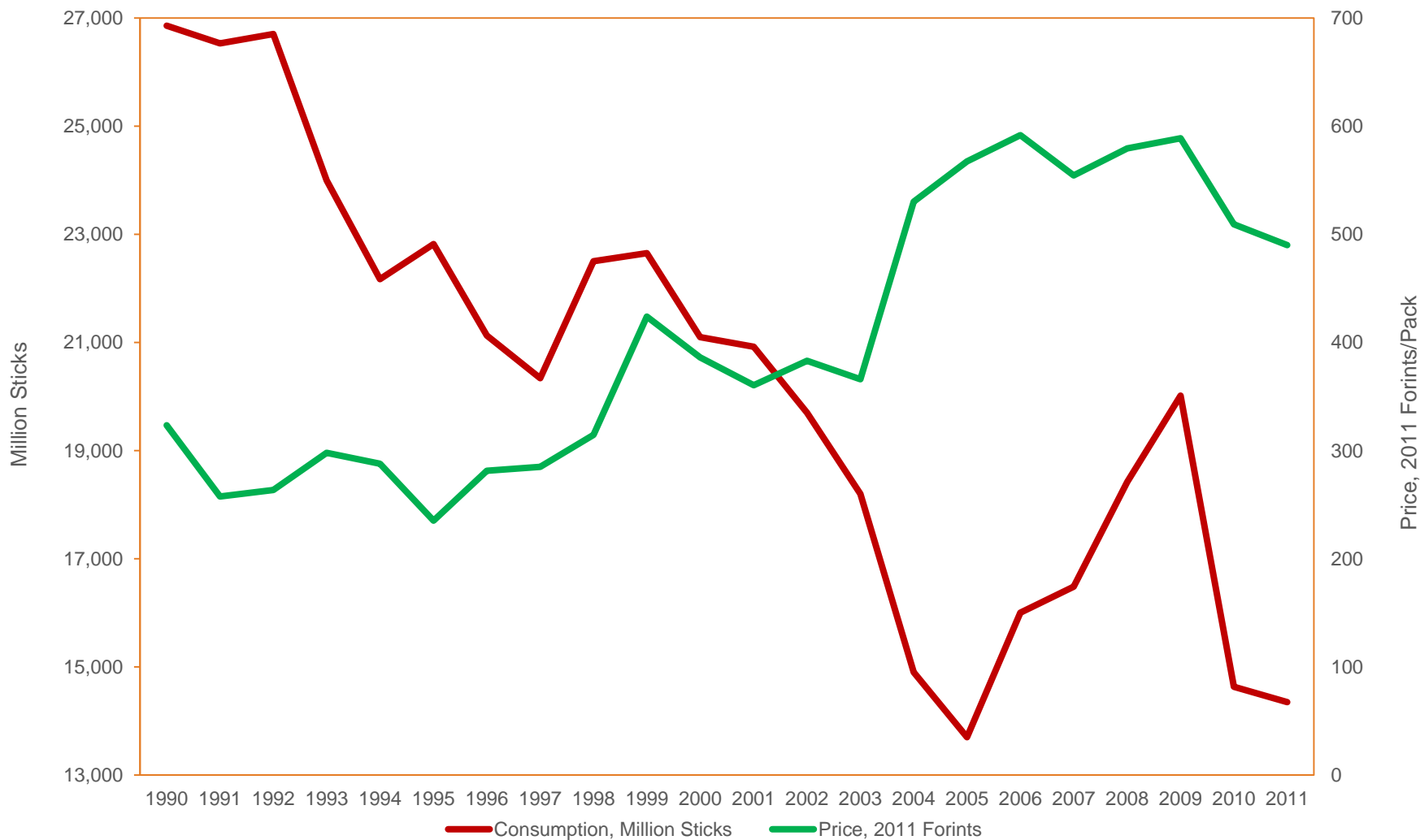
# Impact of Tobacco Taxes & Prices on Tobacco Use

**" Sugar, rum, and tobacco, are commodities which are no where necessaries of life, which are become objects of almost universal consumption, and which are therefore **extremely proper subjects of taxation.****



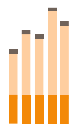
# Cigarette Price & Consumption

## Hungary, 1990-2011, Inflation Adjusted

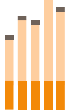
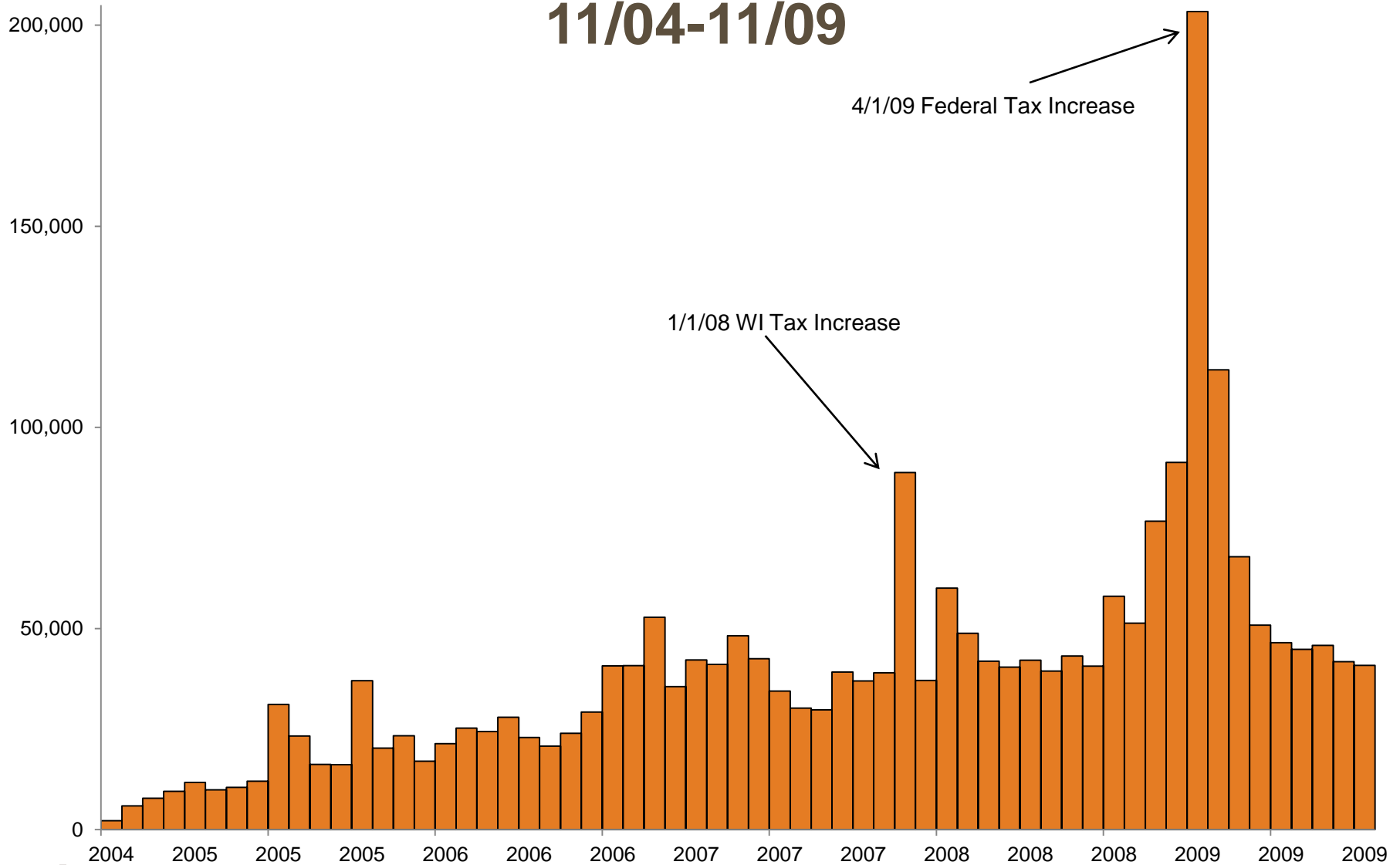


# Adult Smoking Prevalence & Price

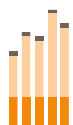
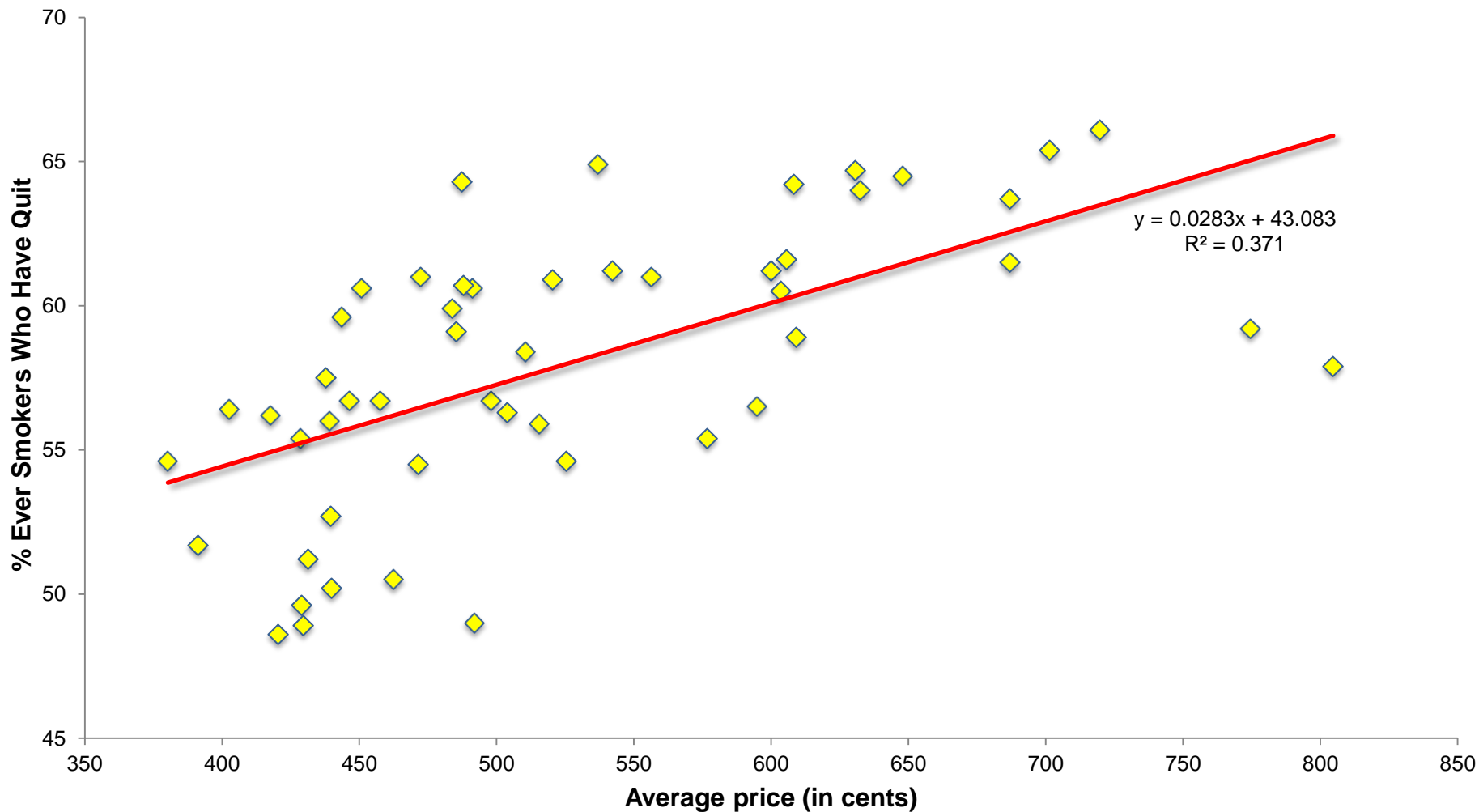
Brazil, Inflation Adjusted, 2006-2013



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



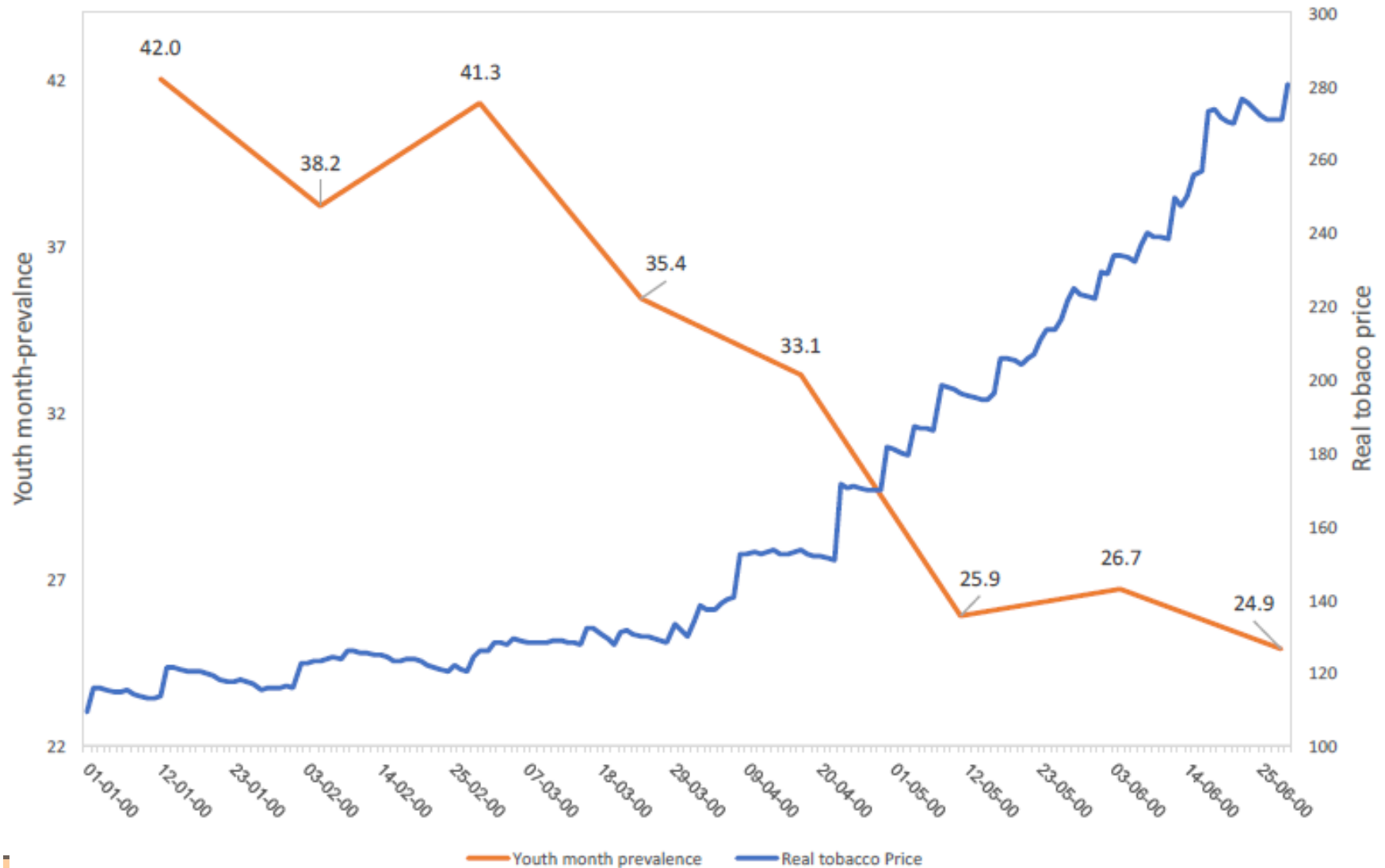
# Cigarette Prices and Cessation US States, 2009



Source: BRFSS, *Tax Burden on Tobacco*, 2010, and author's calculations

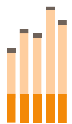
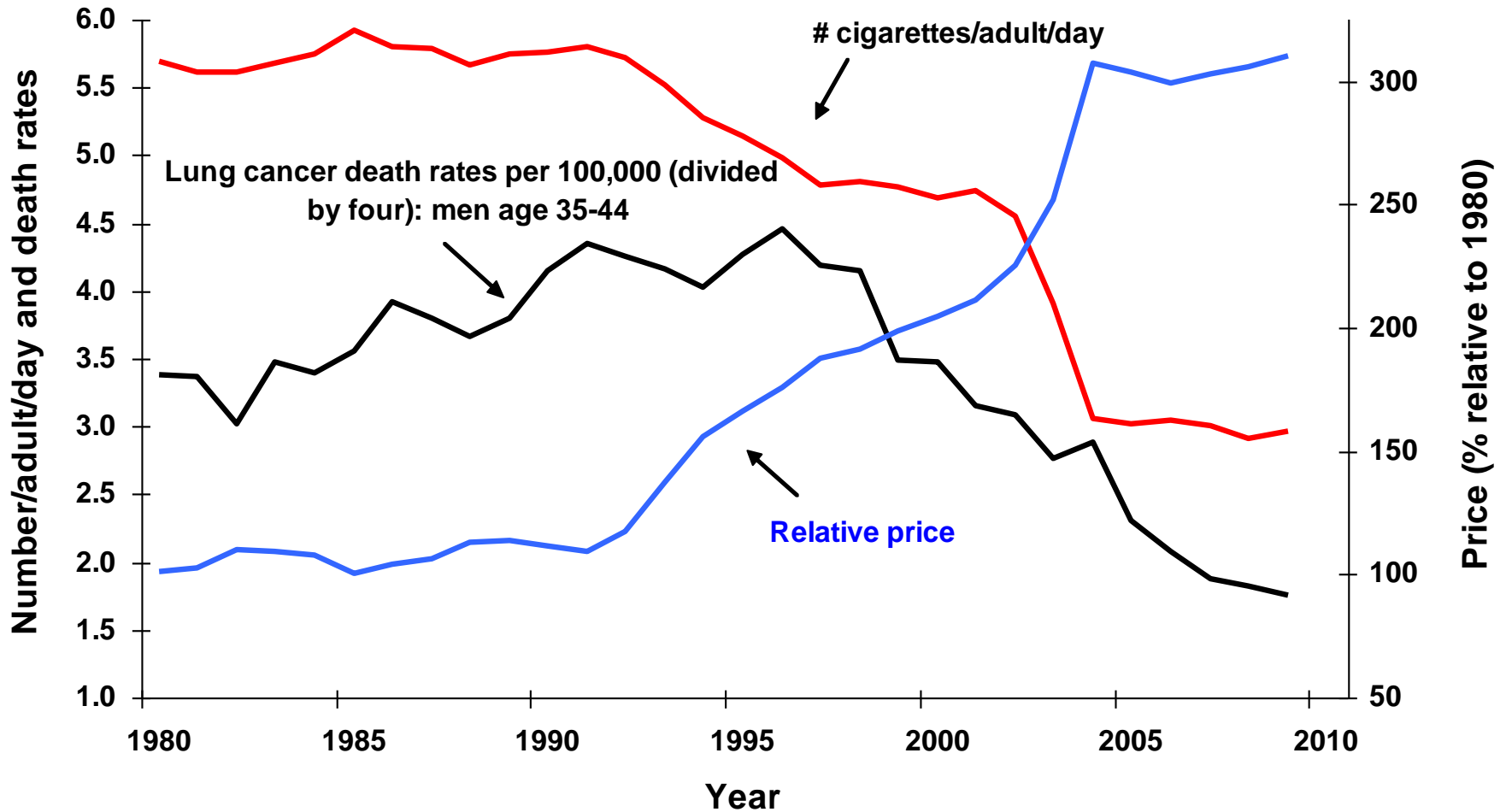
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# Cigarette Price & Youth Smoking Prevalence Chile, 2000-2015

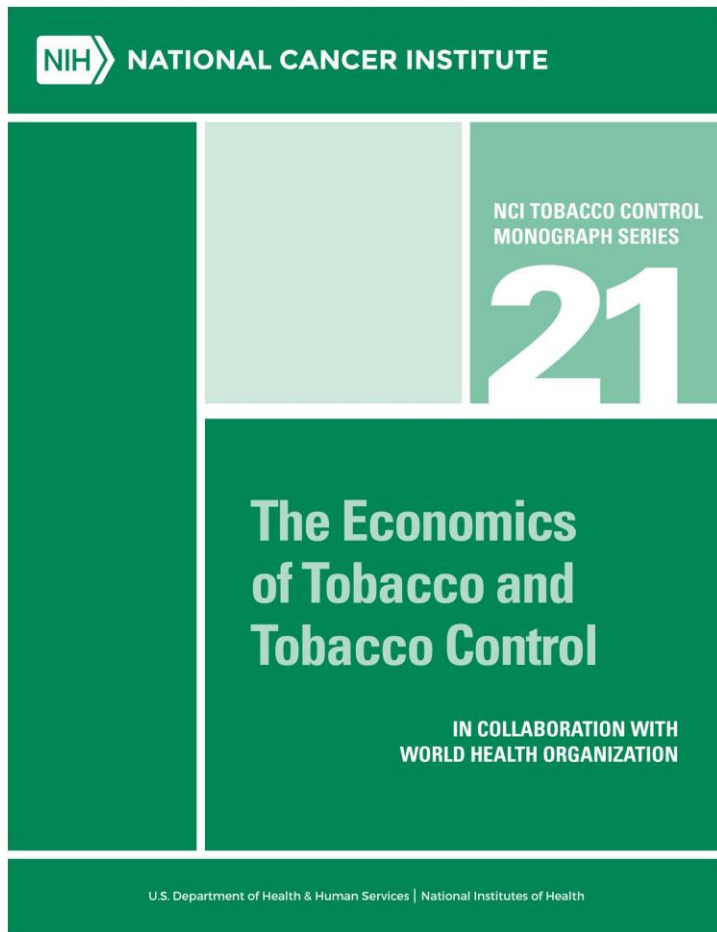




# Price, Consumption & Lung Cancer, France

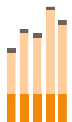


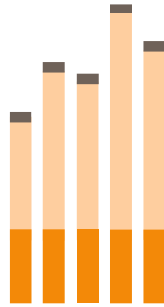
# Effectiveness of Tobacco Taxes



Chapter 4, Conclusion 1:

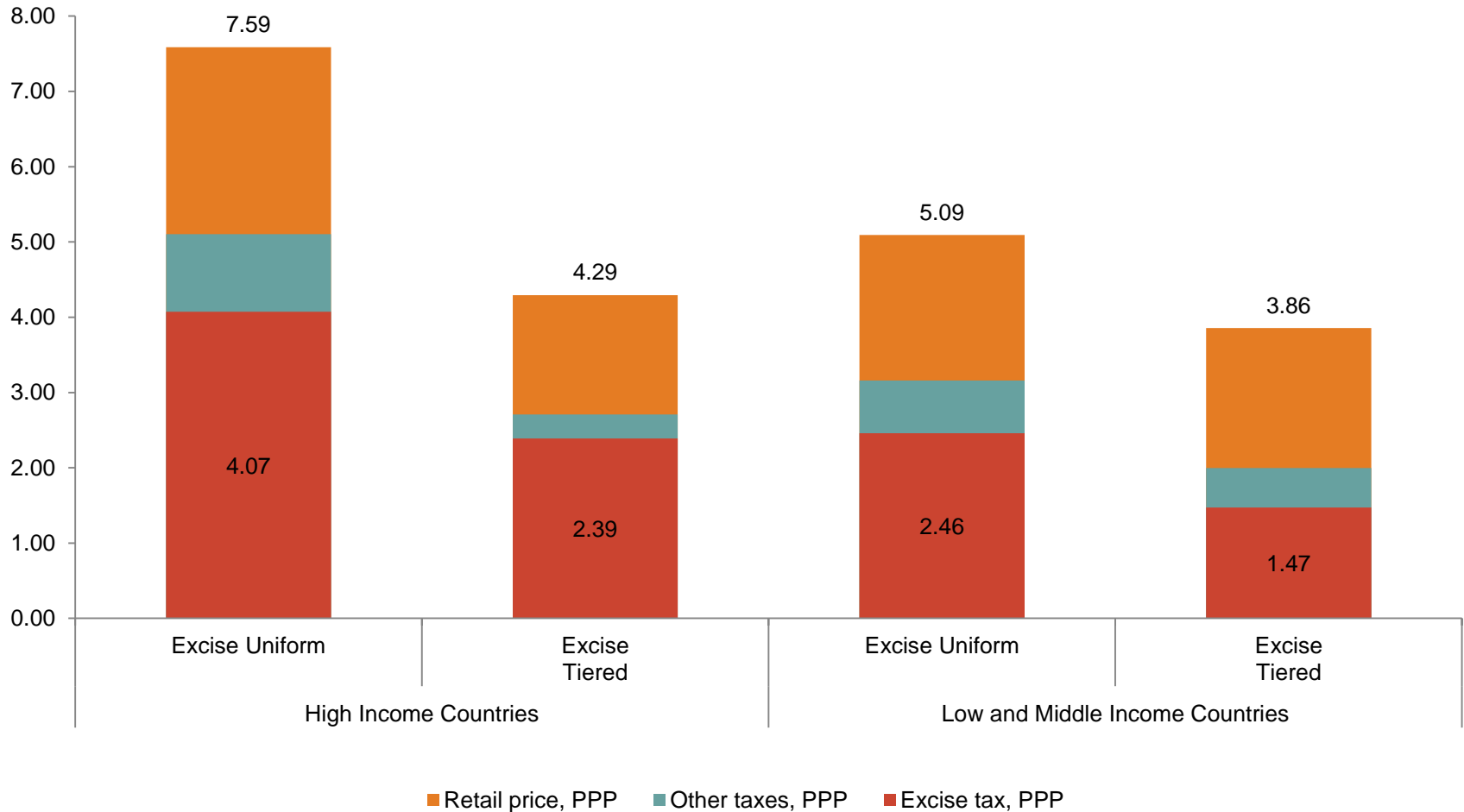
A substantial body of research, which has accumulated over many decades and from many countries, shows that **significantly increasing the excise tax and price of tobacco products is the single most consistently effective tool for reducing tobacco use.**





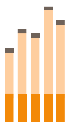
# Best Practices in Tobacco Taxation

# Excise Tax Structure: Uniform taxes more effective than tiered taxes

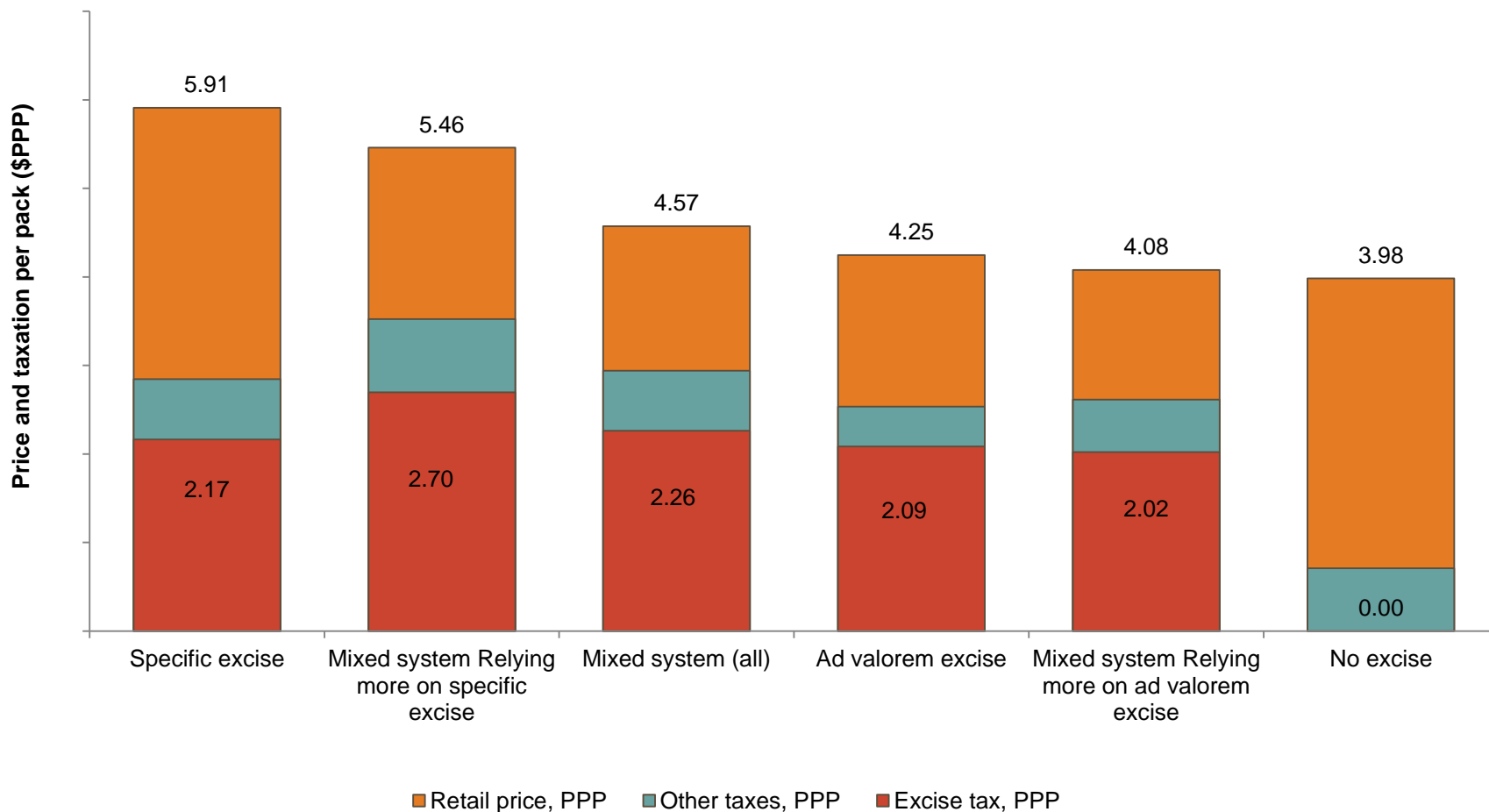


Source: WHO 2017 GTCR data; unpublished figure.

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.

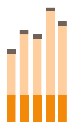


# Excise Tax Structure: Specific taxes lead to higher prices

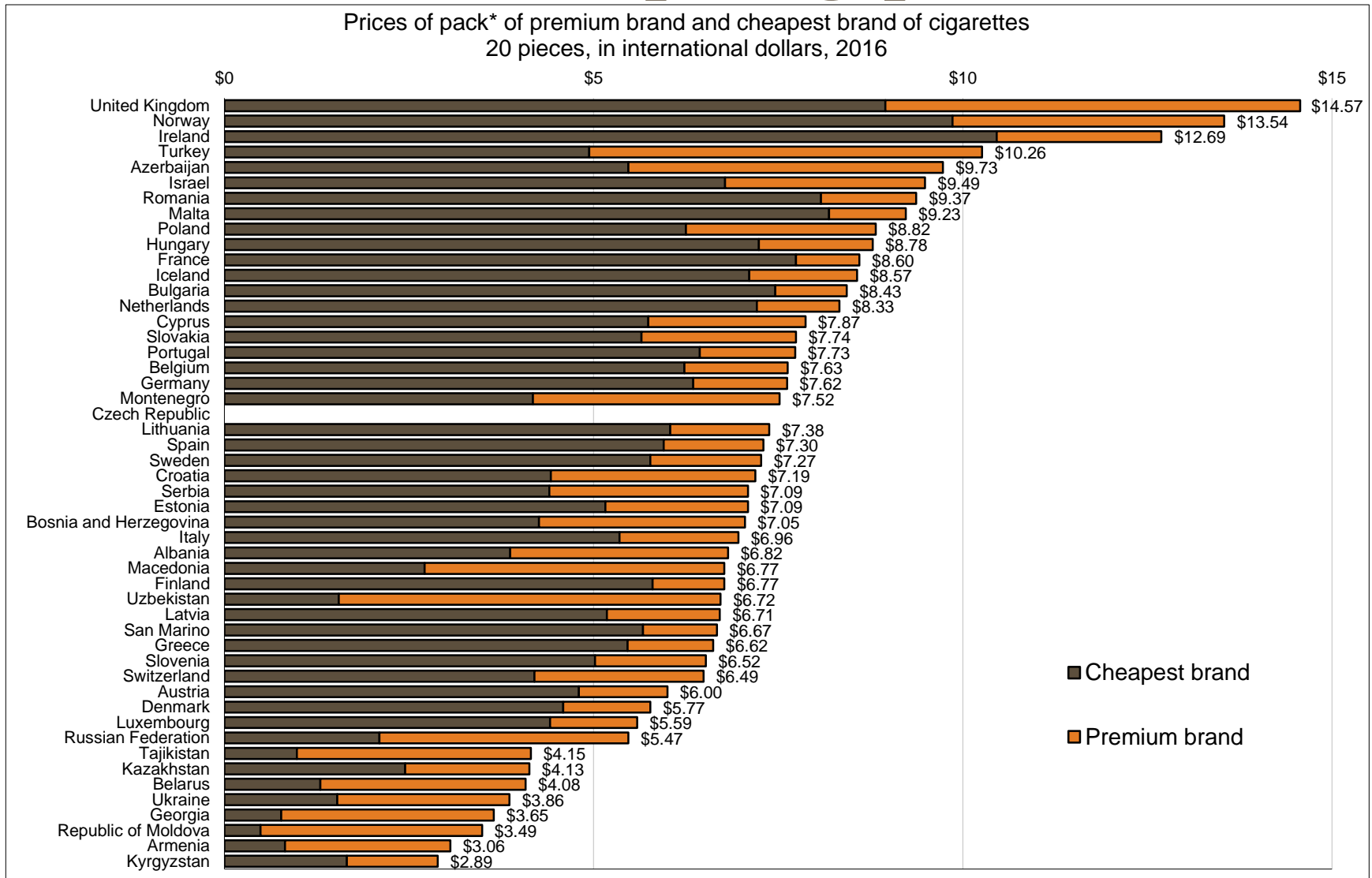


Source: WHO 2017 GTCR data; unpublished figure.

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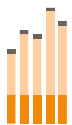
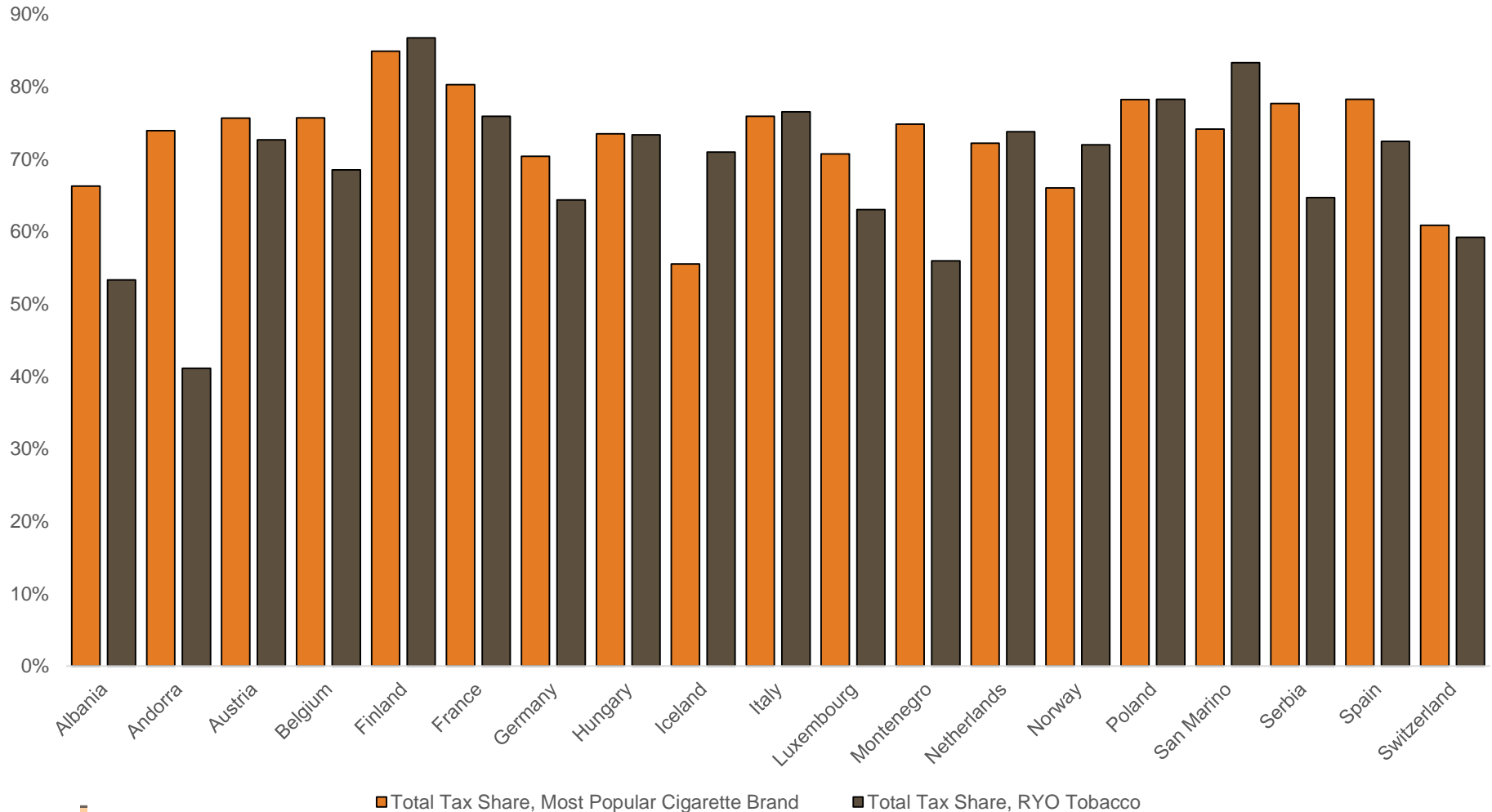
# Excise Tax Structure: Specific, uniform taxes reduce price gaps



Notes: Data on cheapest or both premium and cheapest brands not reported/not available for: Monaco and Turkmenistan:

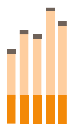
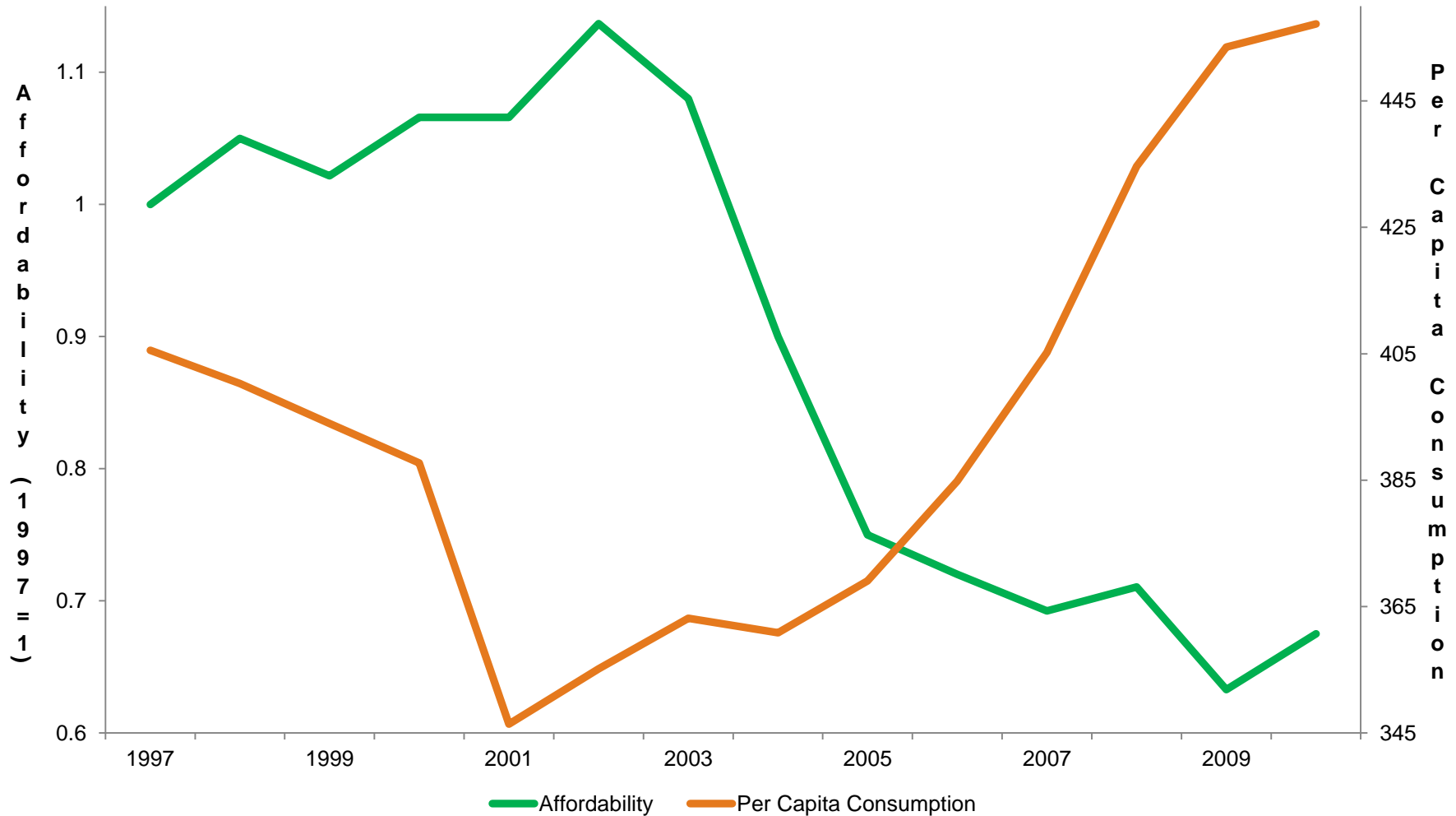
# Cigarette & RYO Taxes as Percent of Price

## European Region, 2016



# Affordability and Tobacco Use

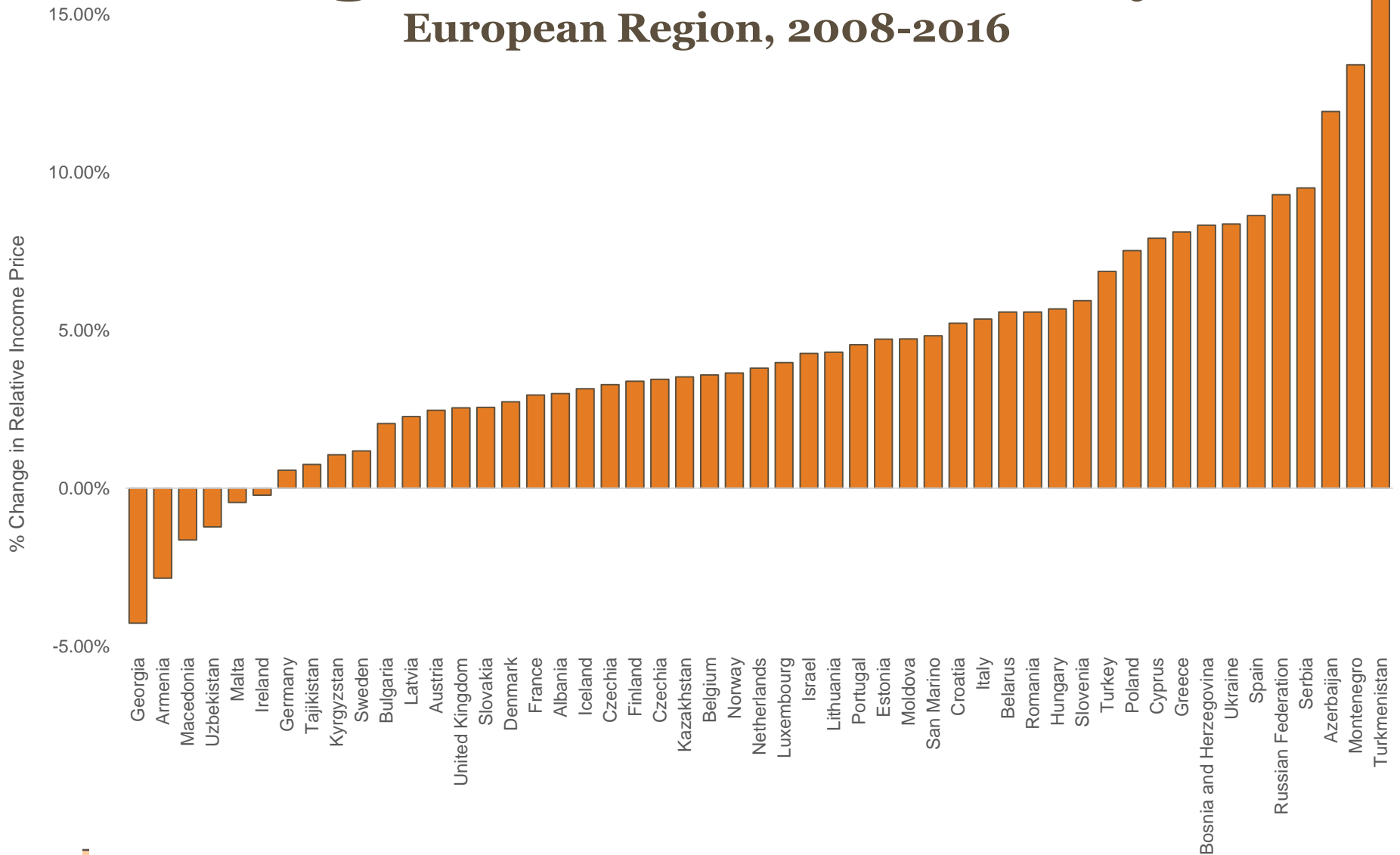
## Cigarette Sales, Bangladesh, 1997-2010





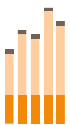
# Cigarette Affordability

European Region, 2008-2016



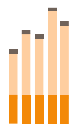
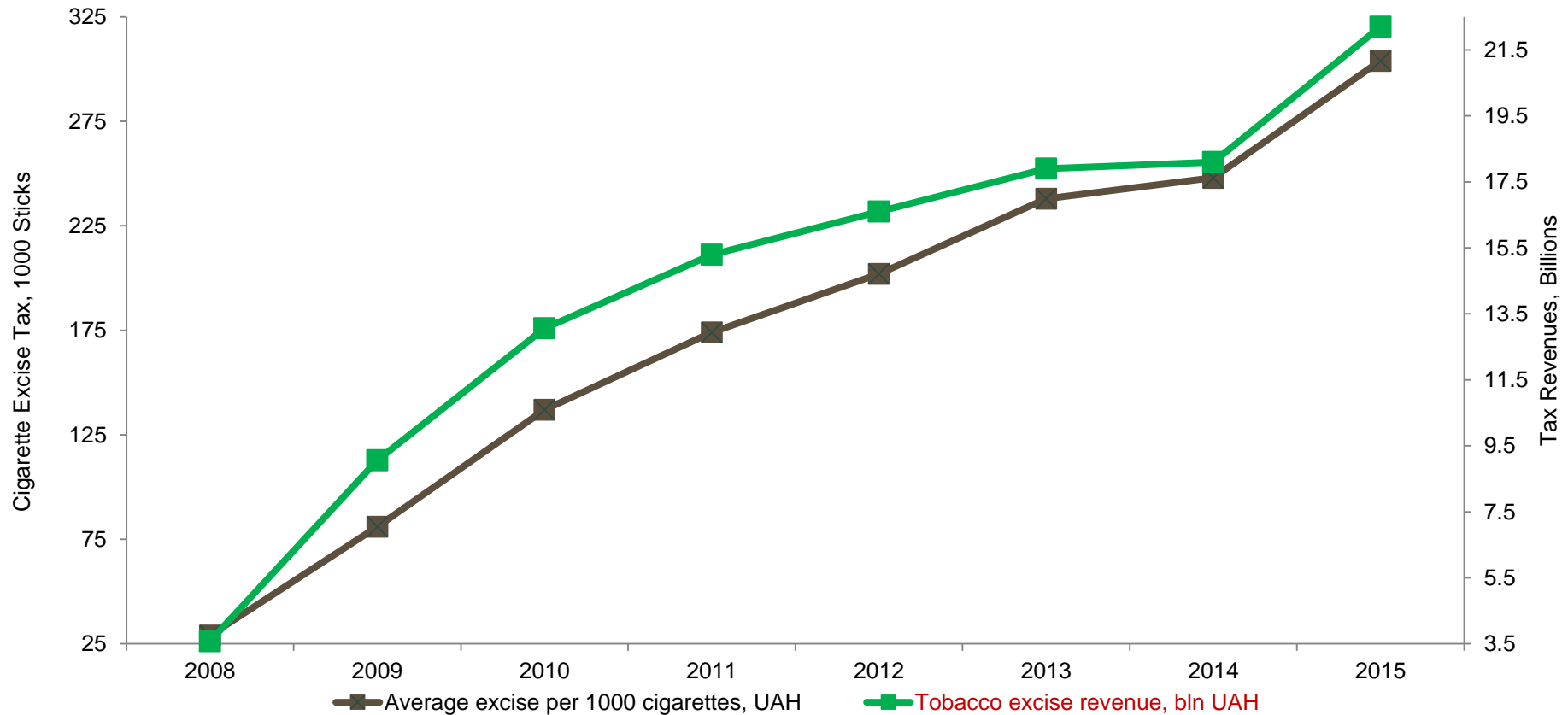
Notes: Relative income price is the percentage of annual per capita GDP required to buy 100 packs of most popular brand of cigarettes.

Source: WHO 2017



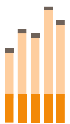
# Cigarette Tax and Tax Revenues Ukraine: 2008-2015

Average excise rate for cigarettes – increased 10-fold  
Cigarette Tax Revenue – increased 6-fold



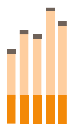
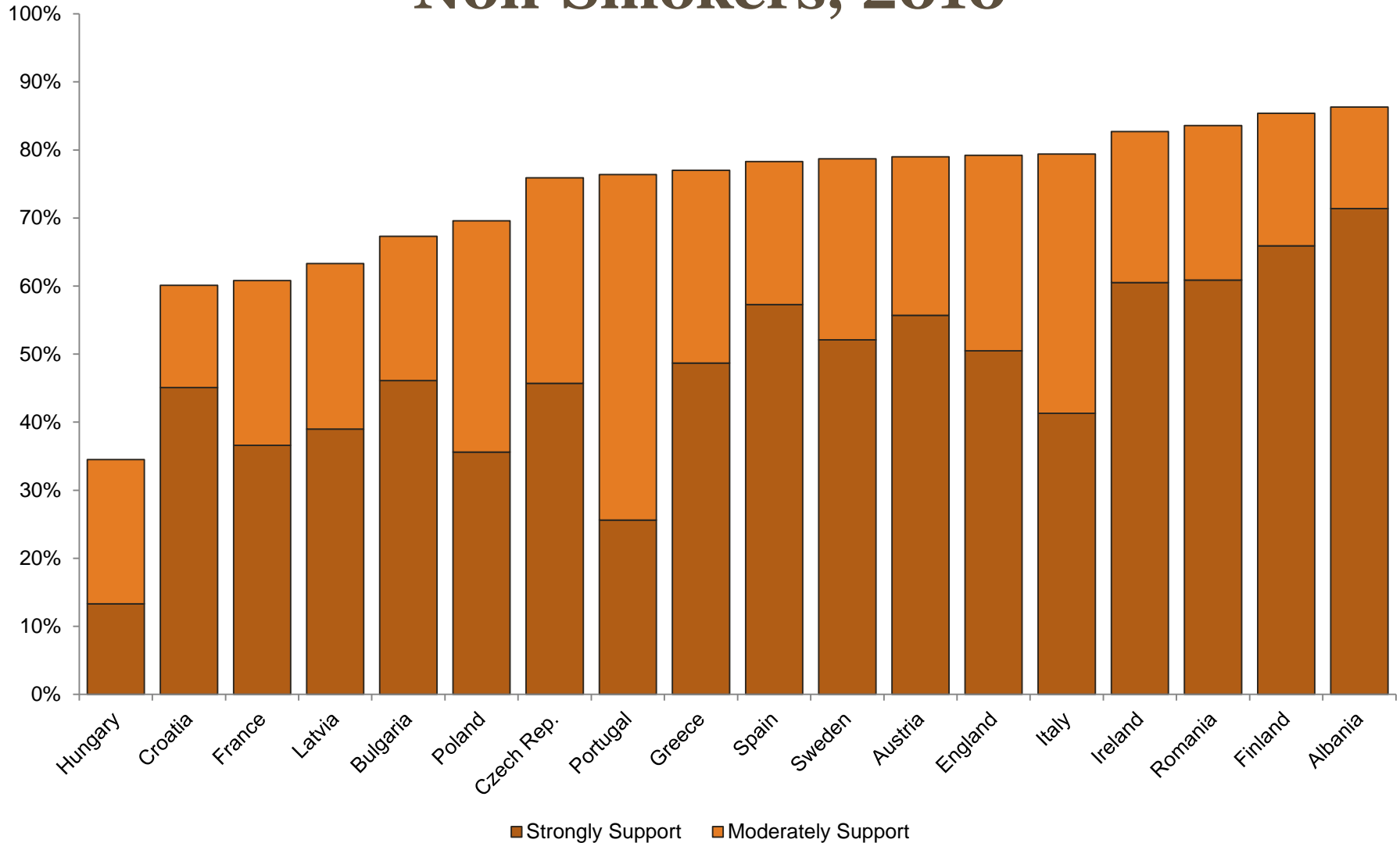
# Tobacco Taxes Popular

- Tobacco Excise Tax Increases:
  - Generally supported by the public
    - Including significant number of smokers
  - More support when framed in terms of impact on youth tobacco use
  - More support when some of new revenues are used to support tobacco control and/or other health-related activities
  - Greater support than for other revenue sources



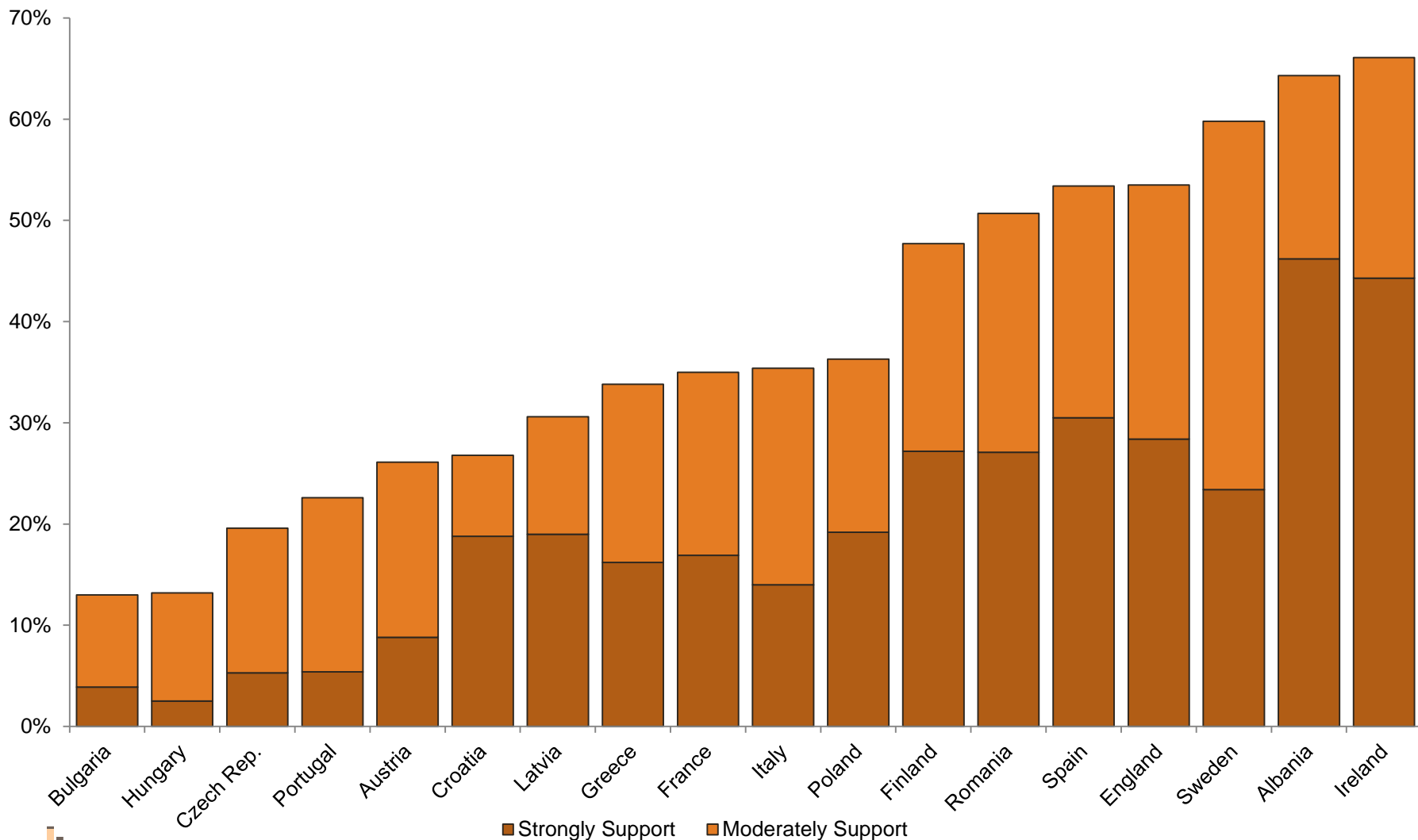
# Support for 20% Price Increase

## Non-Smokers, 2010

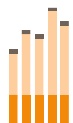
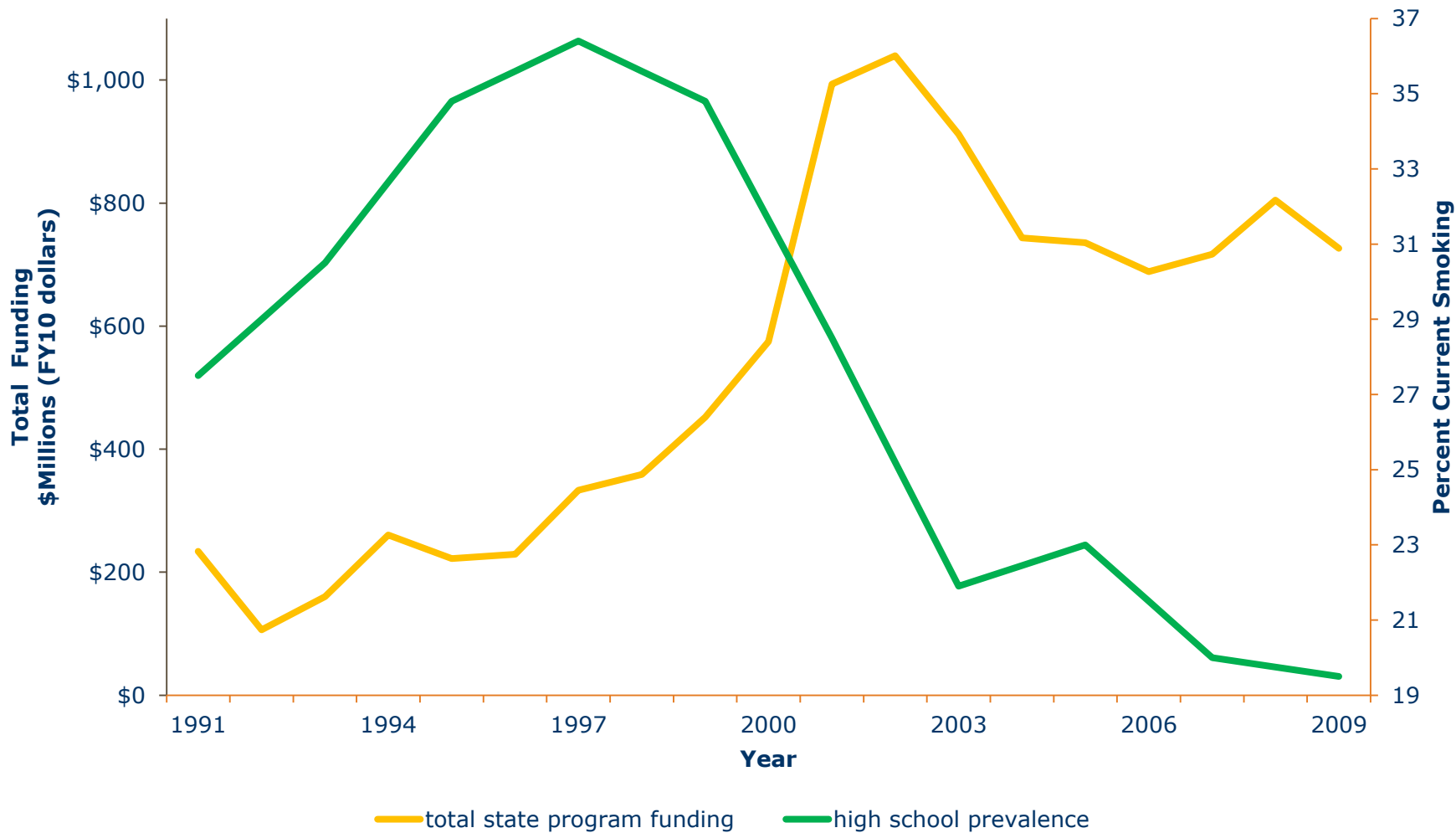


# Support for 20% Price Increase

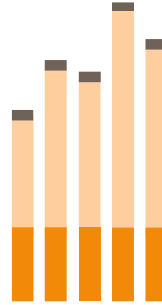
## Current Smokers, 2010



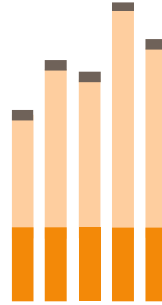
# State Tobacco Control Program Funding and Youth Smoking Prevalence, United States, 1991-2009



Source: ImpacTeen Project, UIC; YRBS



# Oppositional Arguments



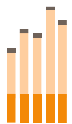
# Impact on the Economy



# Tobacco Control and Jobs

Industry-sponsored studies highlight economic contribution of tobacco, but only tell part of story:

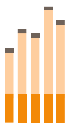
- Focus on the gross impact:
  - Tax increases, other tobacco control policies reduce tobacco consumption
  - Results in loss of some jobs dependent on tobacco production
- Ignore the net impact:
  - Money not spent on tobacco products will be spent on other goods and services
  - New/increased tax revenues spent by government
    - ***Offsetting job gains in other sectors***



# Tobacco Taxes and Jobs

Concerns about job losses in tobacco sector have been addressed using new tax revenues:

- Turkey, Philippines among countries that have allocated tobacco tax revenues to helping tobacco farmers and/or those employed in tobacco manufacturing make transition to other livelihoods
  - Crop substitution programs, retraining programs

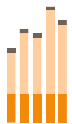
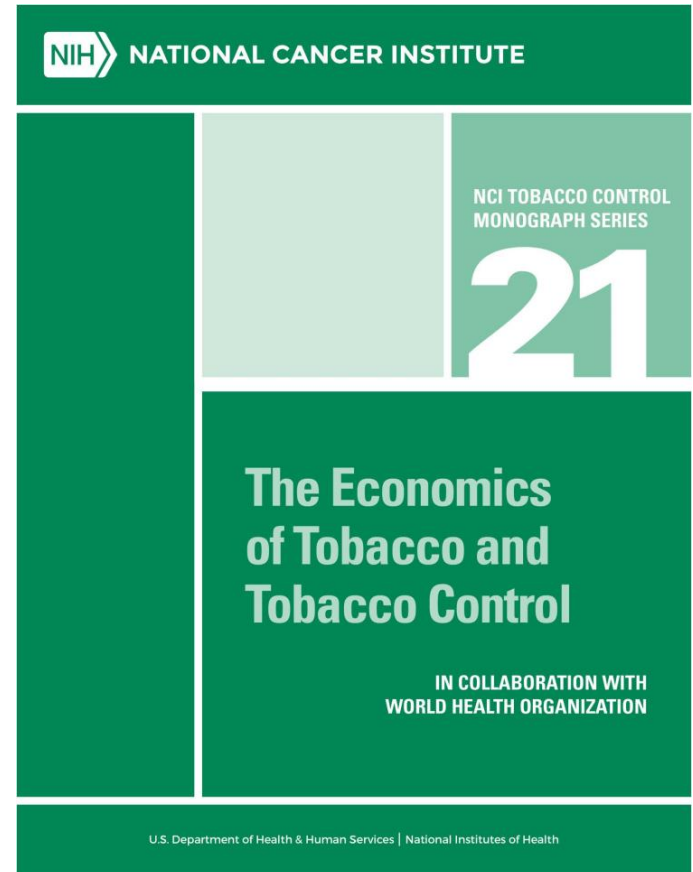


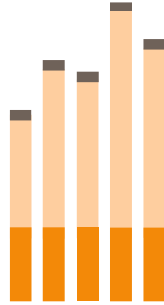
# Economic Impact of Tobacco Control

Major Conclusion

#7:

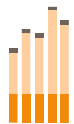
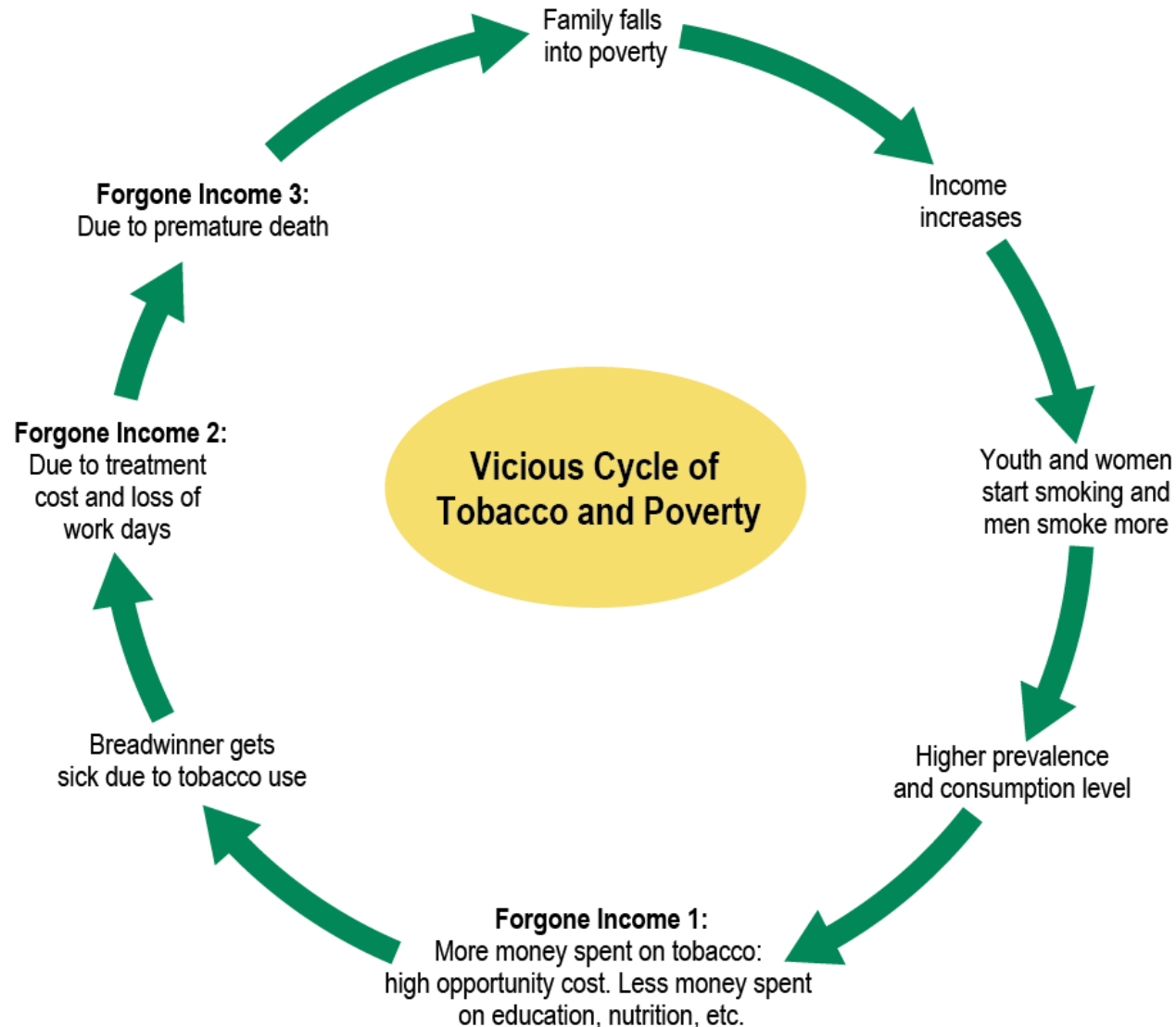
Tobacco control  
does not harm  
economies.





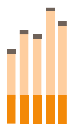
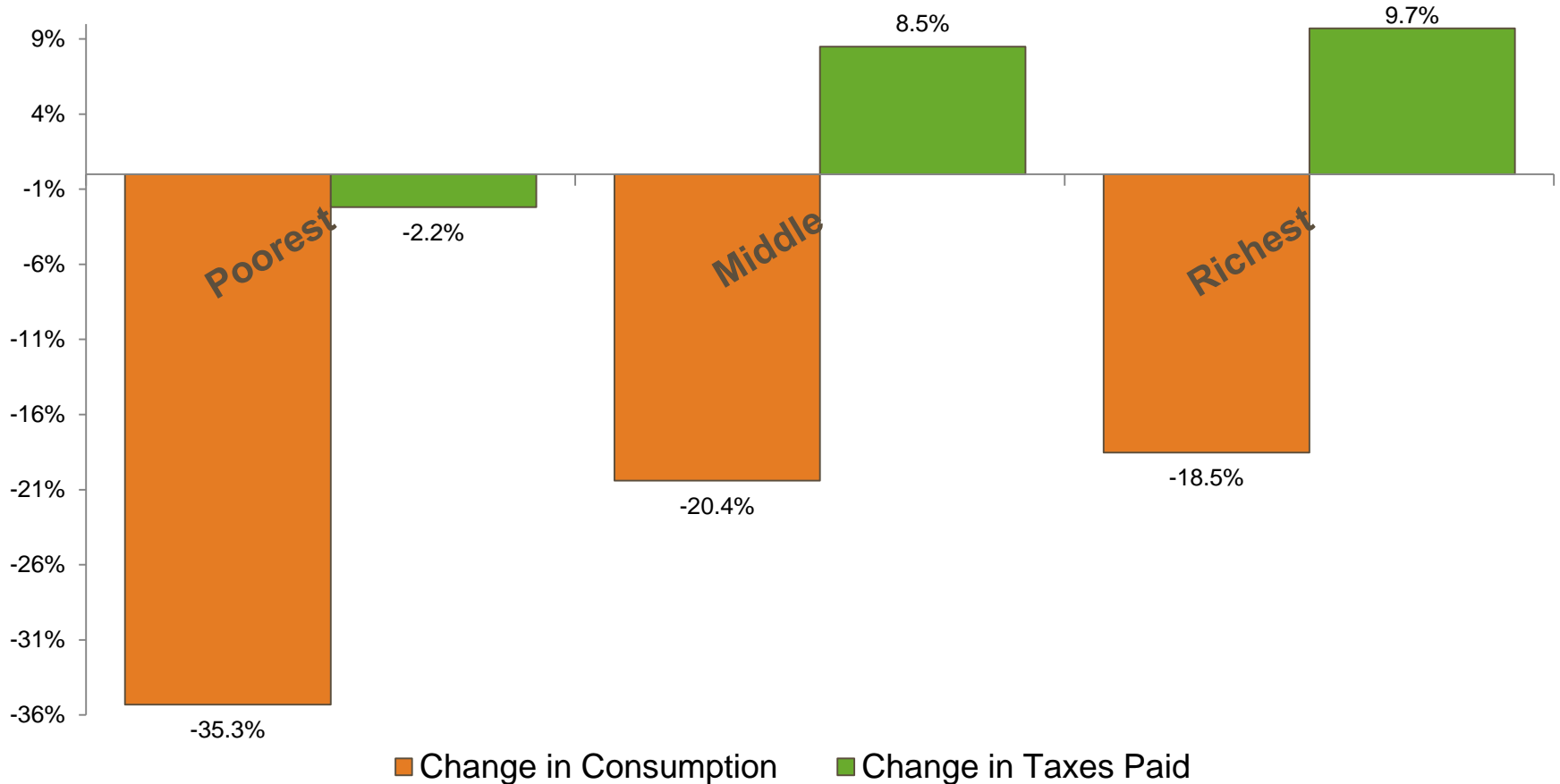
# Impact on the Poor

# Tobacco & Poverty



Source: NCI & WHO 2016

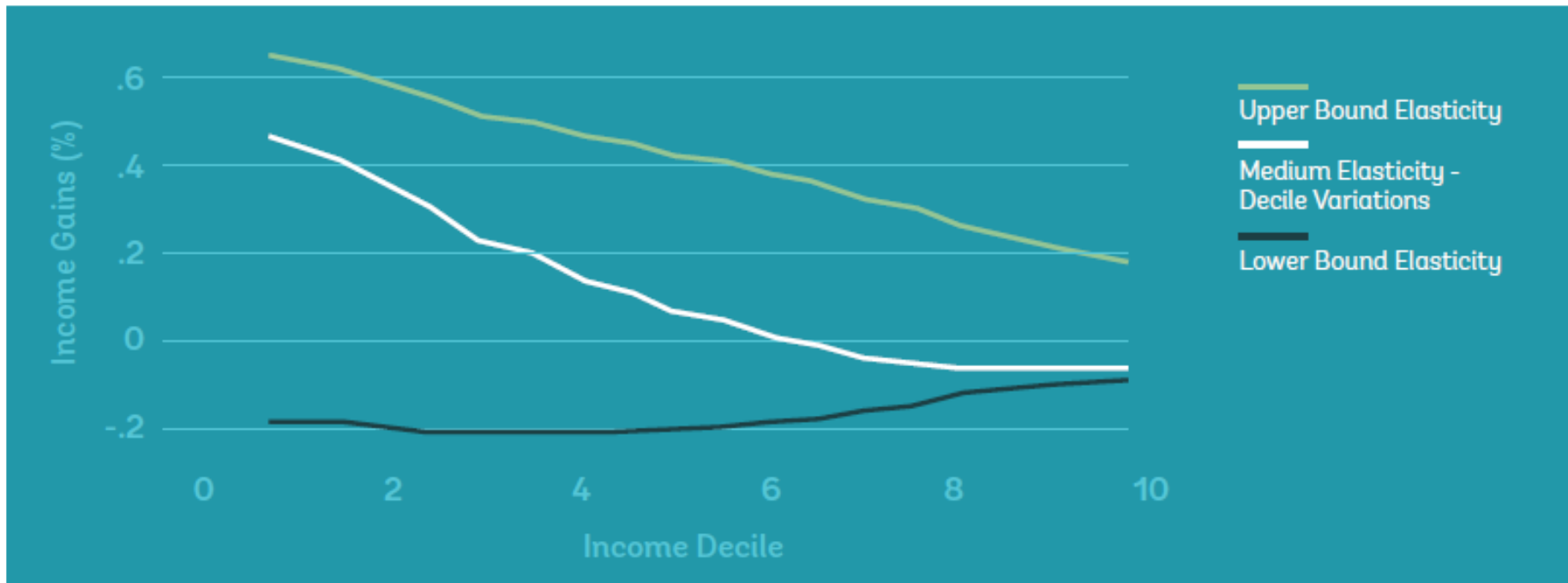
# Who Pays & Who Benefits Turkey, 25% Tax Increase



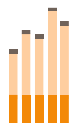
Source: Adapted from Önder & Yürekli, 2014

# Who Pays & Who Benefits Chile, 25% Tax Increase

Figure 6: Total Income Effect: Direct and Indirect Effect of Taxes  
(tobacco price increase, medical expenditure and working years gained)



Source: Author's estimation using a price shock of 25%

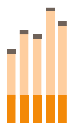


Source: Fuchs, et al., 2017

# Impact on the Poor

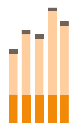
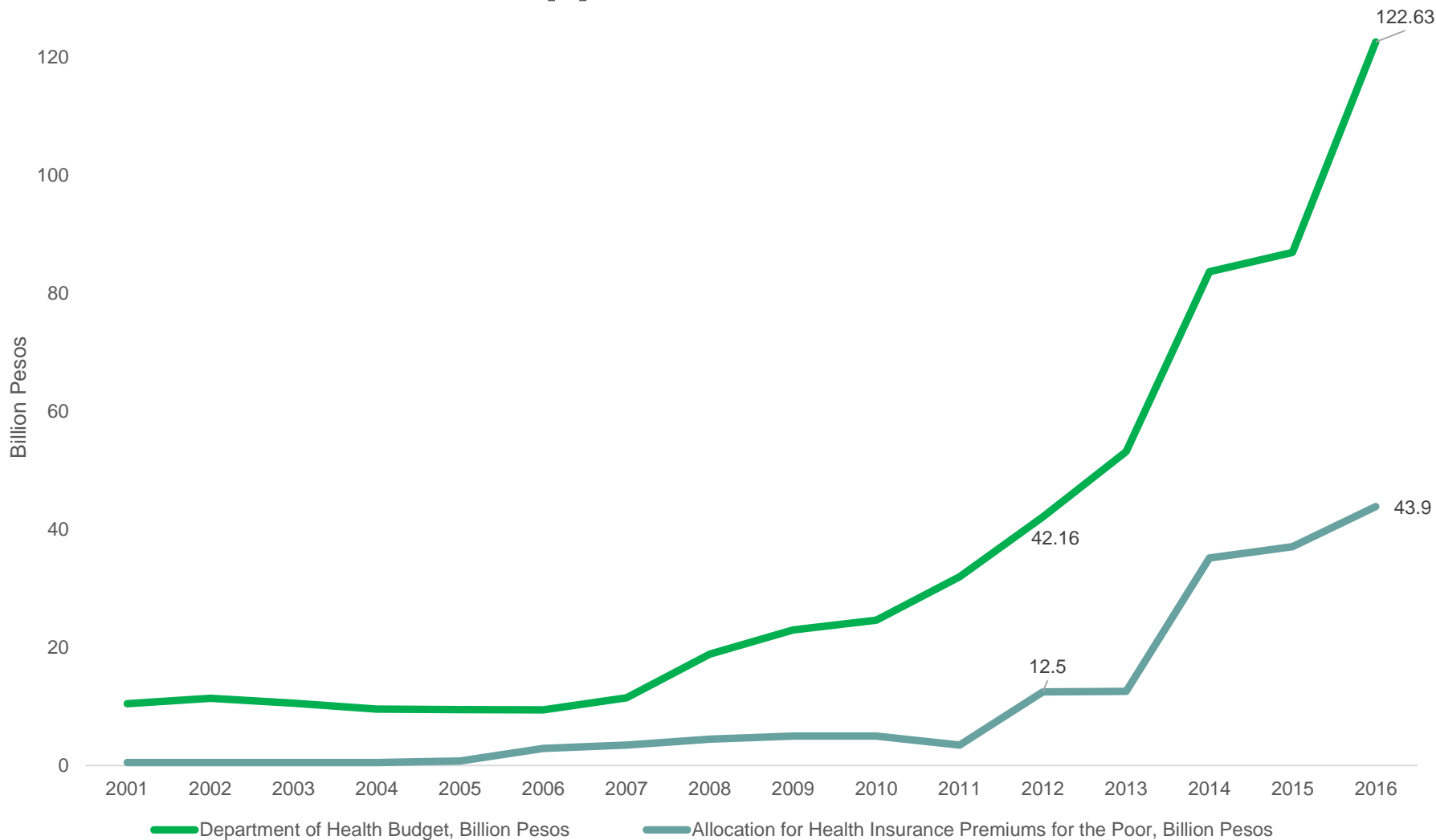
## Need to consider overall fiscal system

- Key issue with taxes is what's done with the revenues generated by the tax
- 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

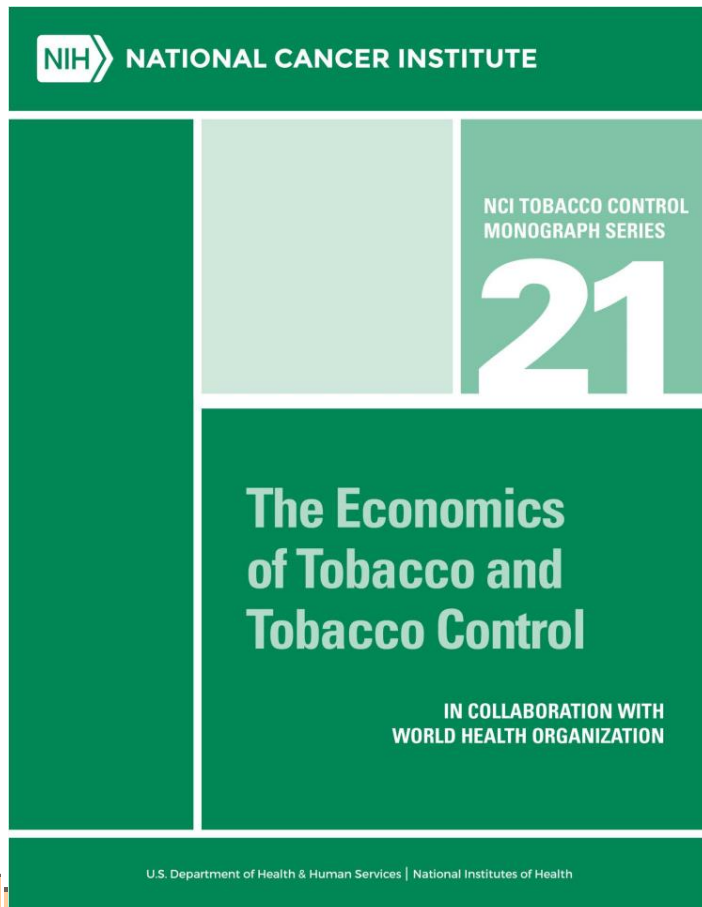




# Incremental Revenues for Health and the Poor Philippines, 2001-2016

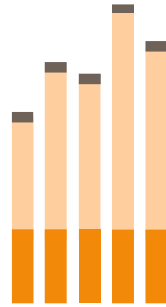


# Impact of Tobacco Control on the Poor



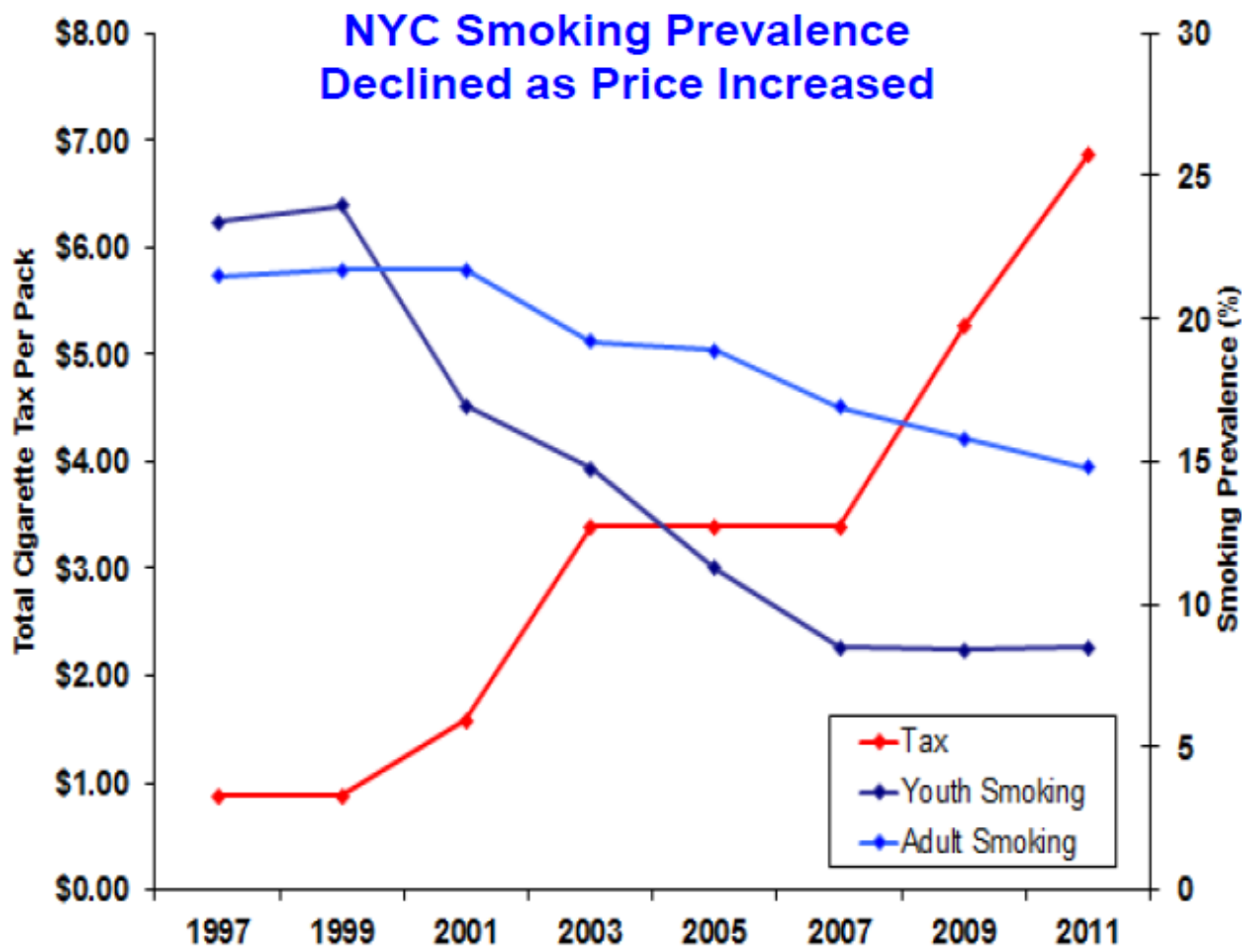
Major Conclusion  
#8:

Tobacco control reduces the disproportionate burden that tobacco use imposes on the poor.

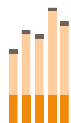


# Tax Avoidance & Evasion

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

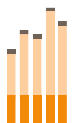
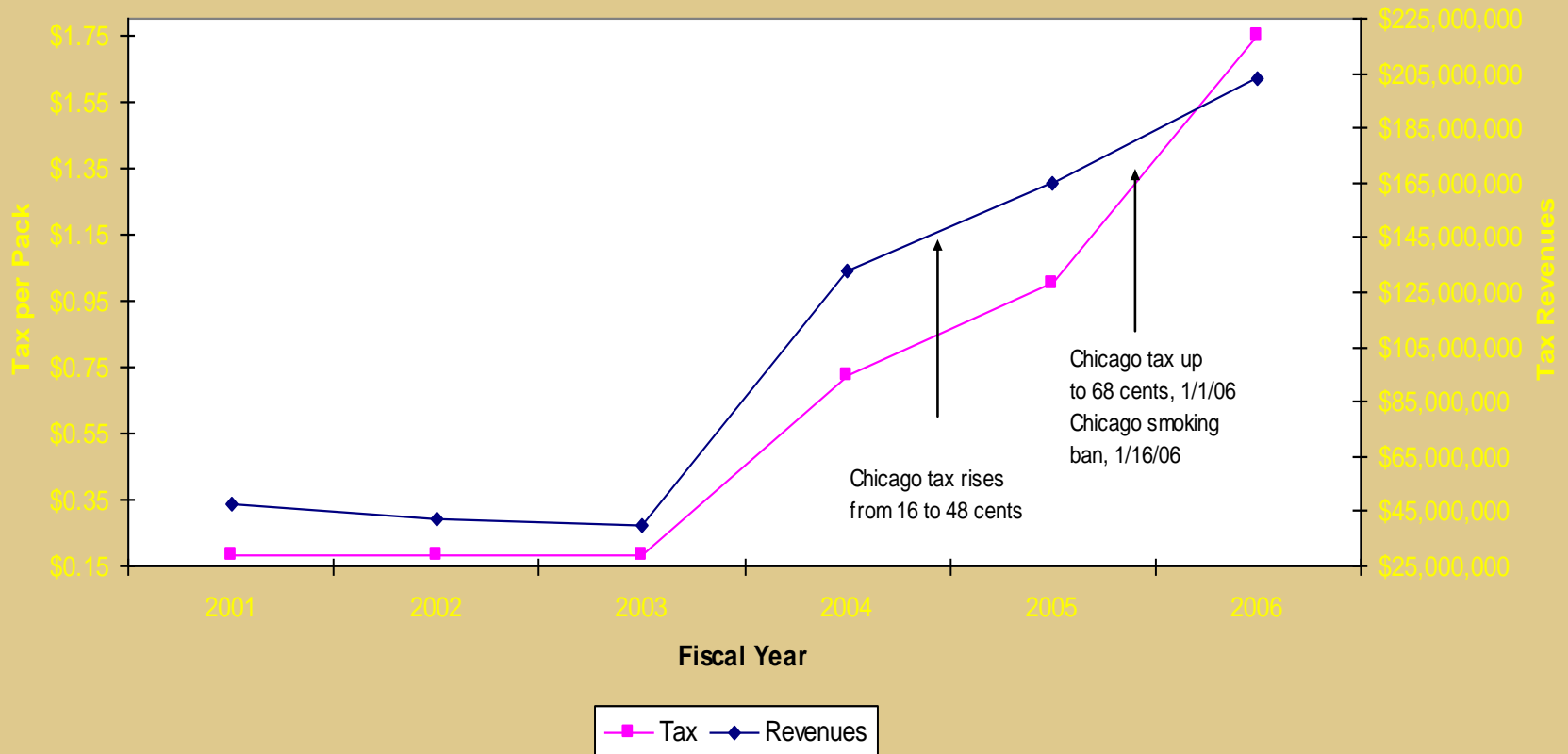


Source: Schroth, 2014

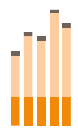
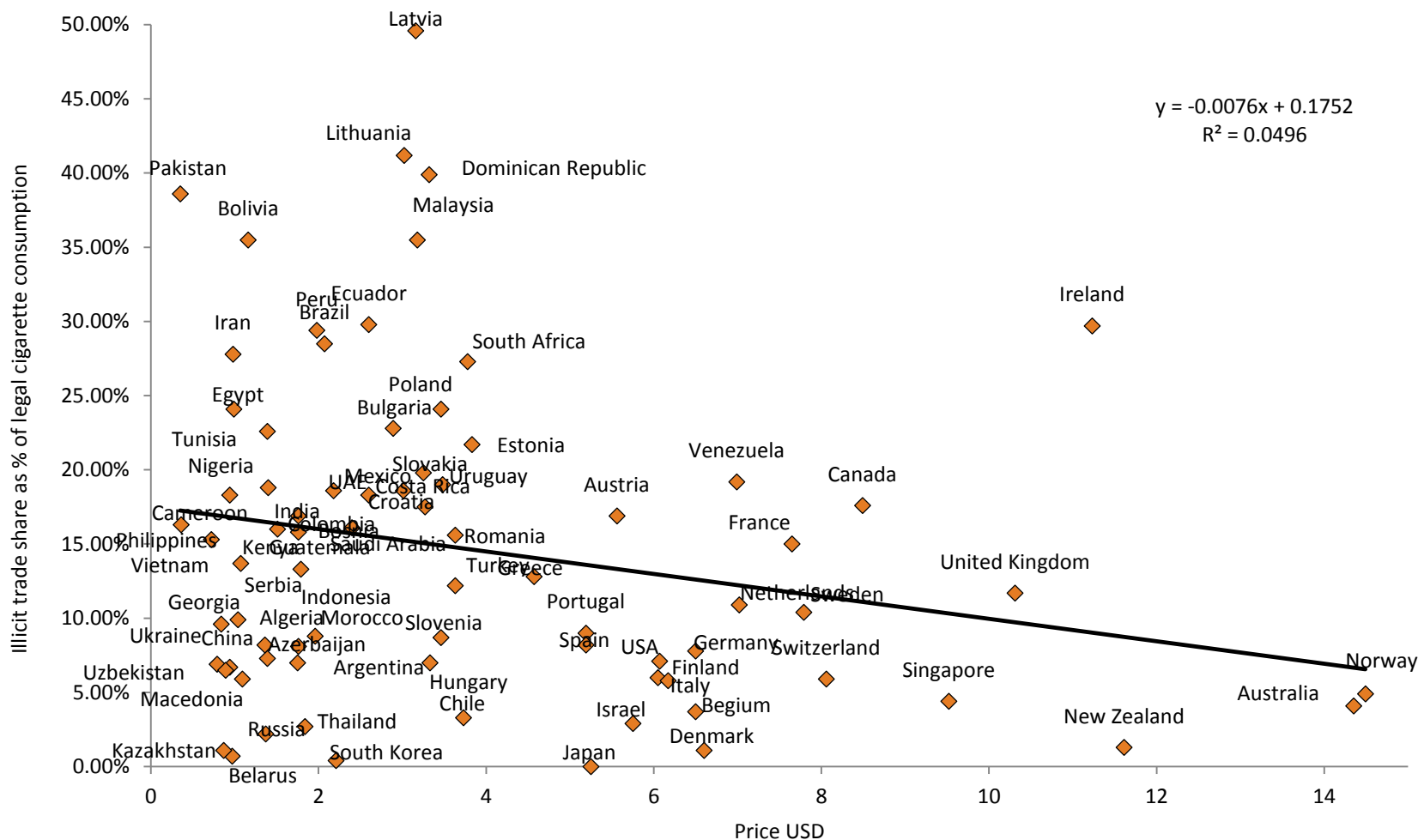


# Tax Avoidance & Evasion Do NOT Eliminate Revenue Impact of Higher Taxes

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



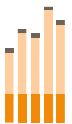
# Illicit Cigarette Market Share & Cigarette Prices, 2012



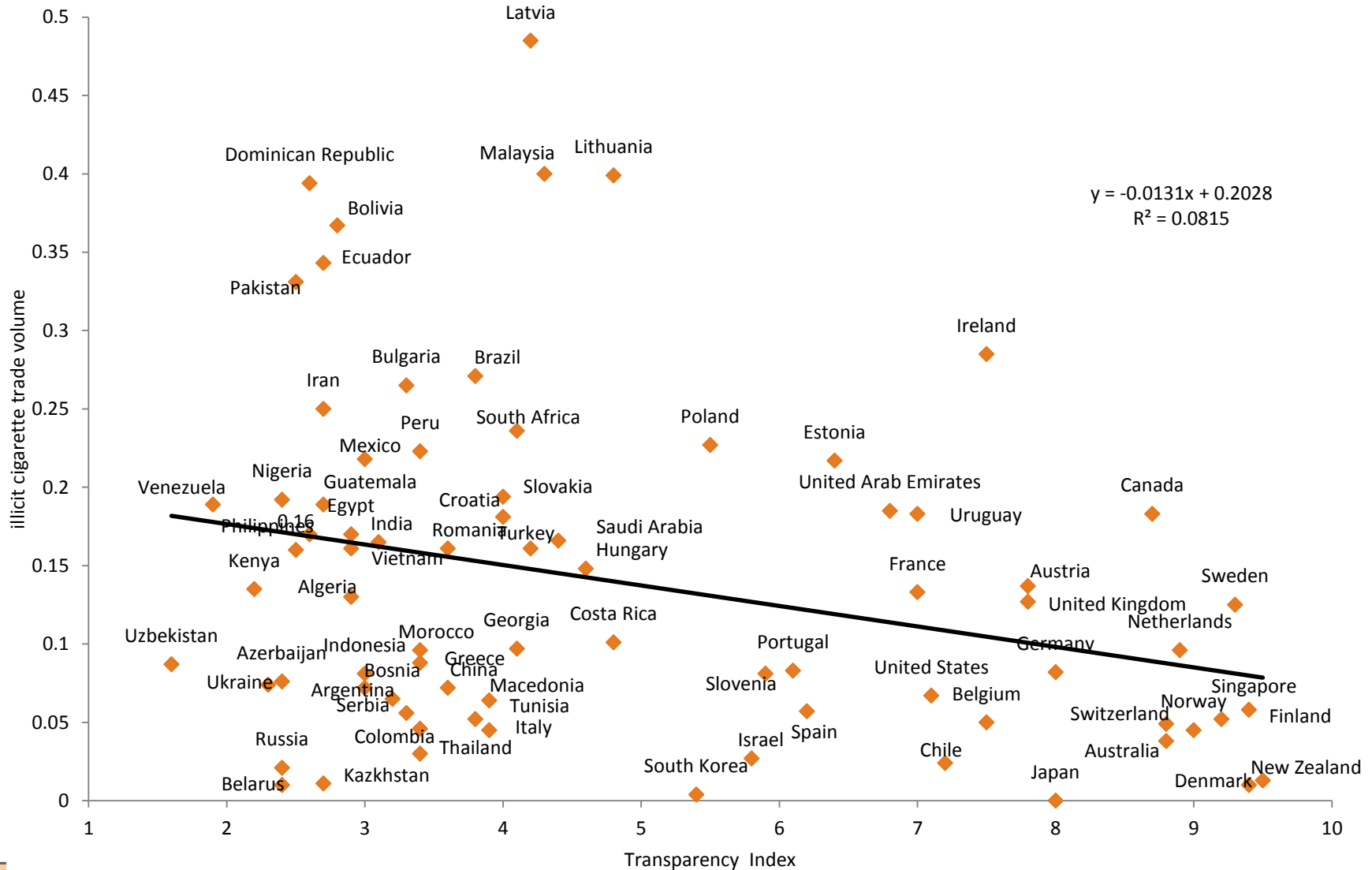
# Drivers of Illicit Tobacco

- Corruption
- Weak tax administration
- Poor enforcement
- Presence of informal distribution networks
- Presence of criminal networks
- Access to cheaper sources

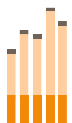
Sources: NRC/IOM 2015; NCI/WHO 2016



# Smuggling and Corruption, 2011

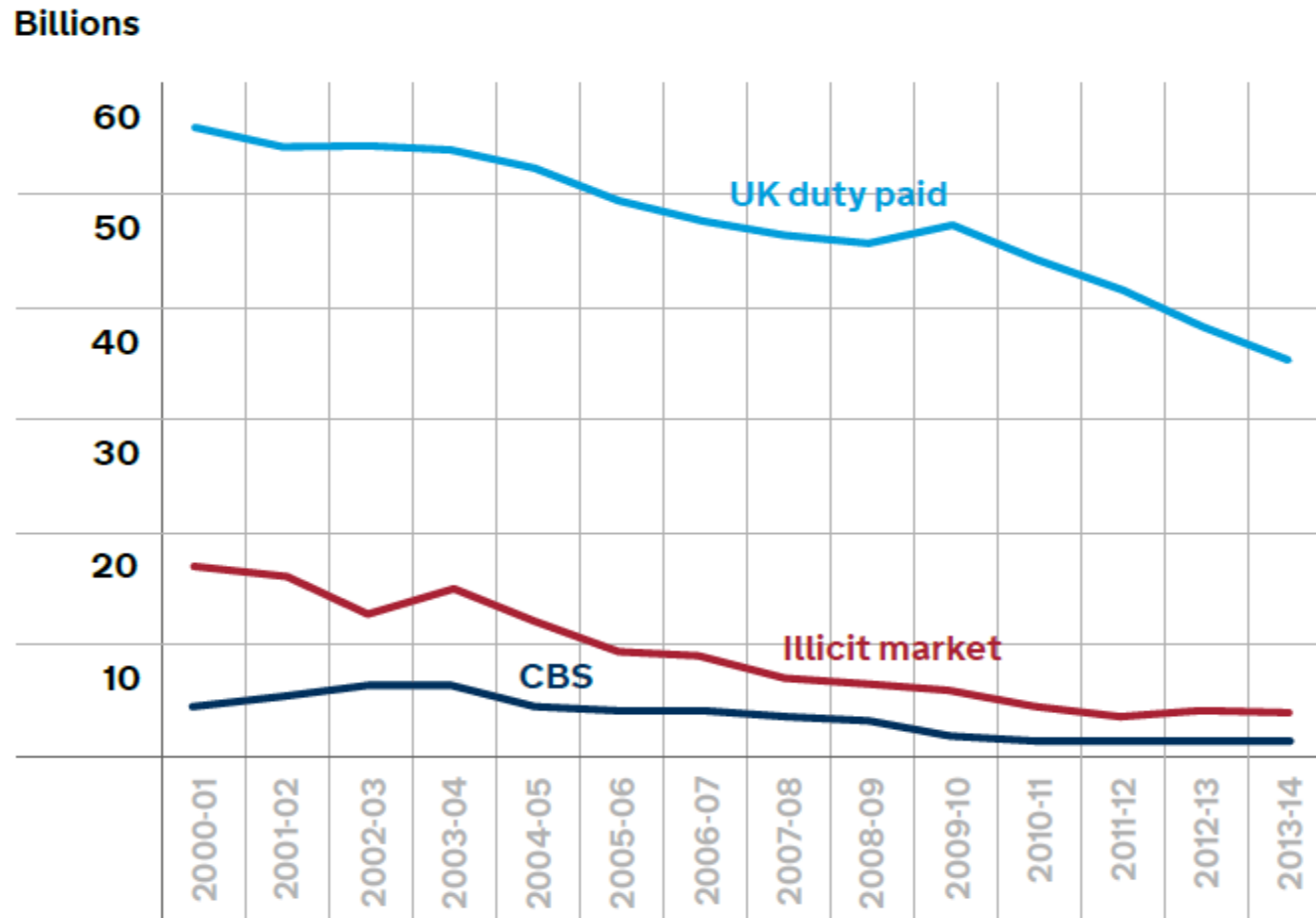


Source: NCI/WHO, 2016

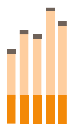




# Estimated Volumes of Cigarettes Consumed in the U.K. Duty paid, illicit, and cross-border shopping, 2000-01 – 2013-14

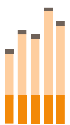


Source: HM Revenue & Customs, 2014

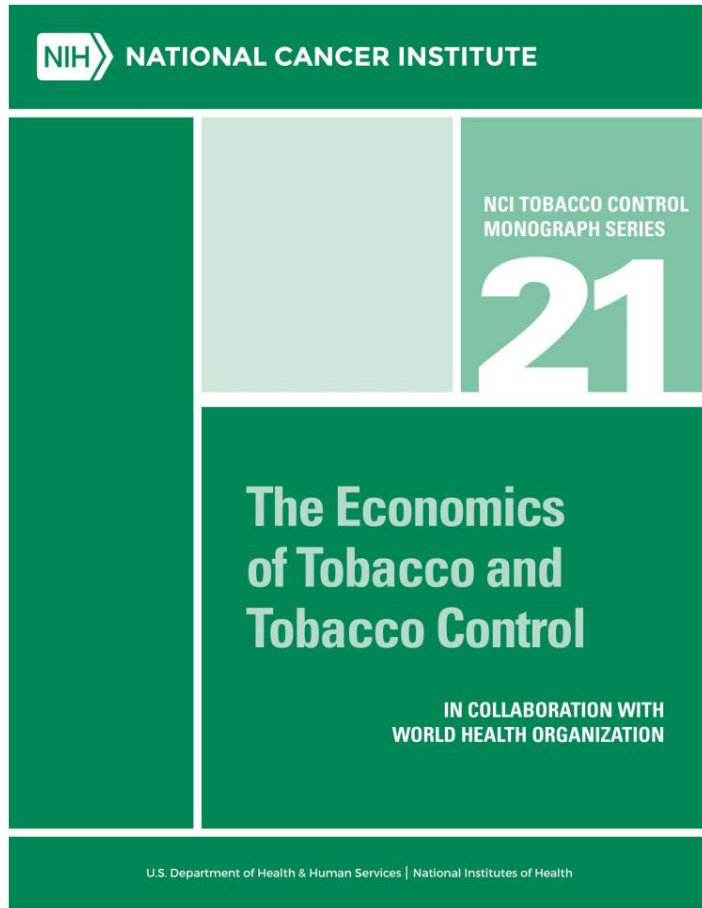


# Combating Illicit Tobacco Trade

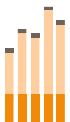
- Illicit trade protocol to the WHO FCTC
  - Adopted November 2012; entered into force September 2018; provisions calling for:
    - Strong tax administration
      - Prominent, high-tech tax stamps and other pack markings
      - Licensing of manufacturers, exporters, distributors, retailers
      -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

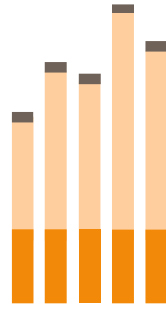


# Control of Illicit Tobacco Trade



Major Conclusion #5:  
Control of illicit trade in tobacco products, now the subject of its own international treaty, is the key supply-side policy to reduce tobacco use and its health and economic consequences.



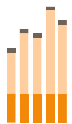


# Summary

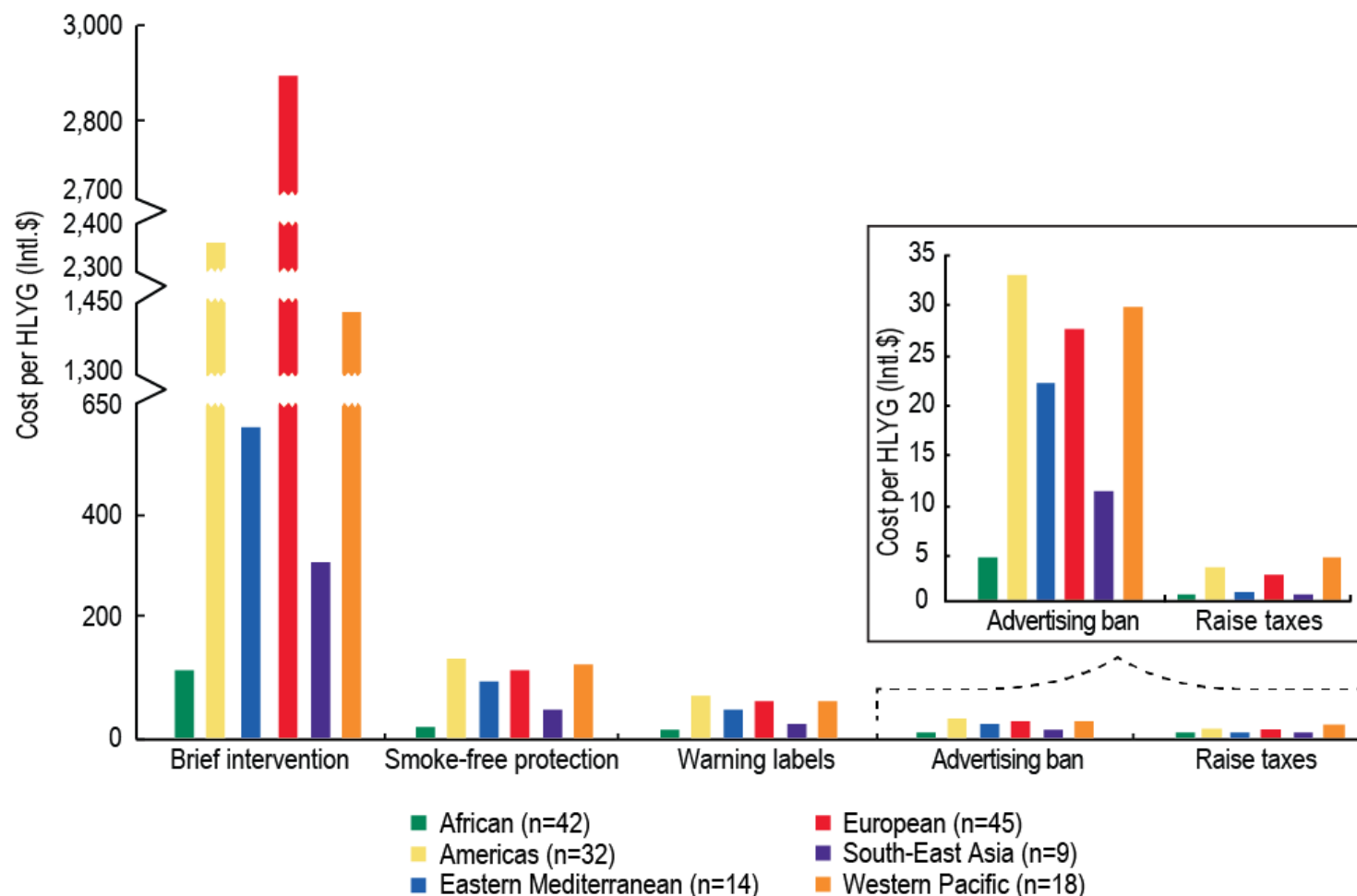
# Economic Impact of Tobacco Control

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
- Tobacco control will not harm economies
- Substantial impact in reducing health care costs, improving productivity, and fostering economic development.



# Tobacco Control Policies and Cost Per Healthy Life-Year Gained, by WHO Region

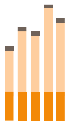


Note: HLYG = healthy life-year gained.

Source: Based on calculations from World Health Organization CHOICE model, 2016.

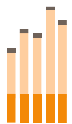
# Economic Research Priorities

- Country specific research on impact of tax/price on tobacco use in LMICs
- Research on the economic costs and benefits of tobacco taxation and tobacco control
- Research on the interrelationships between tobacco use, poverty, and tobacco control
- Other:
  - In small number of highly tobacco-dependent countries, research on economically viable alternatives to tobacco growing and manufacturing
  - In HICs, research to assess changes in price elasticity of tobacco products over time and at different tax/price levels



# 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
- Strategic 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





# UIC Bloomberg Initiative Partners



# THANK YOU!

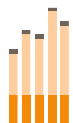
For more information:

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**tobacconomics**

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>i</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>ii</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>iii</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).” 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:



Source: WHO