

**tobacconomics**

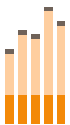
Economic Research Informing Tobacco Control Policy

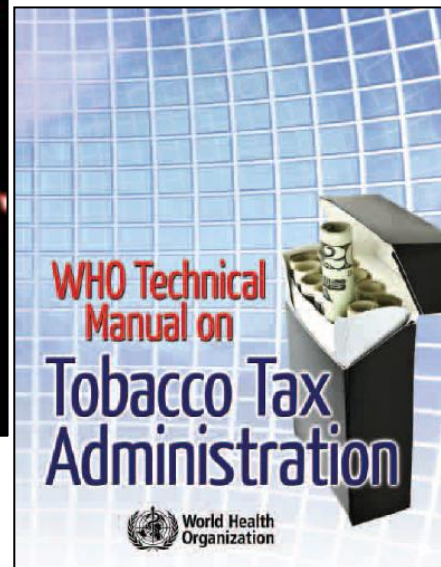
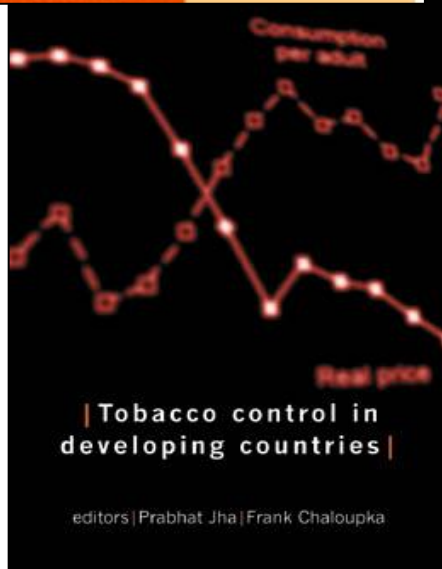
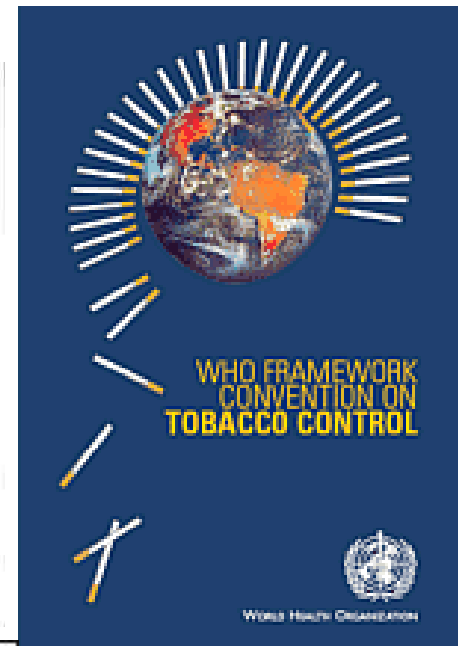
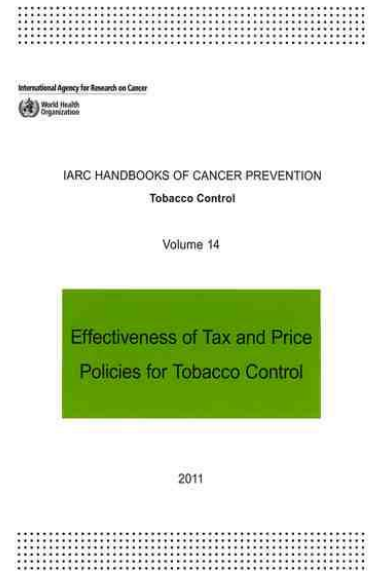
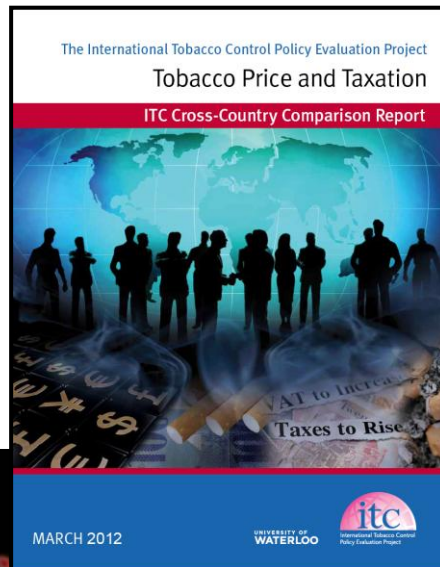
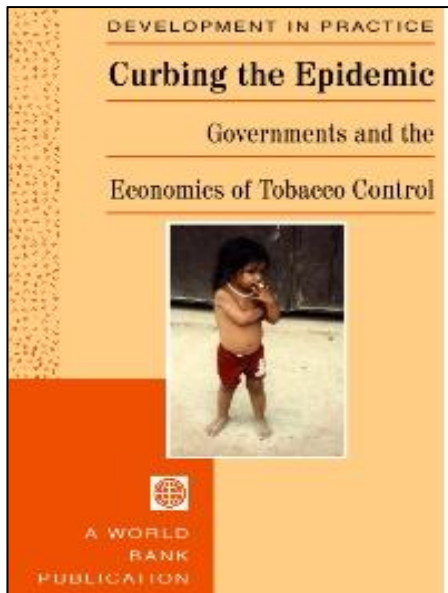
# The Economics of Tobacco Control – Lessons Learned from International Experiences

Frank J. Chaloupka, University of Illinois at Chicago  
Building Capacity for Tobacco Research in Romania  
Tîrgu-Mureş, Romania, 20 October 2014

# Overview

- Myths & Facts on the economic impact of tobacco tax increases and tobacco control policies
  - Impact on Tobacco Use
  - Impact on Revenues
  - Effects on the Poor
  - Impact on the Economy
  - Illicit Trade
- Research Needs





A Prioritized Research Agenda for Prevention and Control of Noncommunicable Diseases

Geneva, October 2010



### 1. Research priorities: tobacco control

K. Srinath Reddy<sup>1</sup>, Frank J. Chaloupka<sup>2</sup>, Monika Arora<sup>3</sup>,  
Rajmohan Panda<sup>4</sup>, Mamu Raj Mathu<sup>5</sup>, Jonathan Szustek<sup>6</sup>, Douglas Bettcher et al.<sup>10</sup>

<sup>1</sup> Public Health Foundation of India, India

<sup>2</sup> University of Illinois at Chicago, Chicago, United States of America

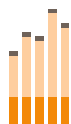
<sup>3</sup> Tobacco Control and Health Promotion, Public Health Foundation of India

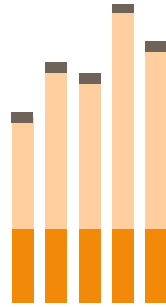
<sup>4</sup> Public Health Specialist, Public Health Foundation of India

<sup>5</sup> Research Fellow, Public Health Foundation of India

<sup>6</sup> Department of Preventive Medicine, Keck School of Medicine, Institute for Global Health, University of Southern California, Los Angeles, United States of America

<sup>10</sup> Tobacco Free Initiative, World Health Organization, Geneva, Switzerland





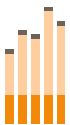
# Tobacco Tax Increases & Tobacco Use

# Taxes and Tobacco Use

New Zimbabwe press – 1 June, 2014

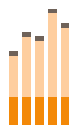
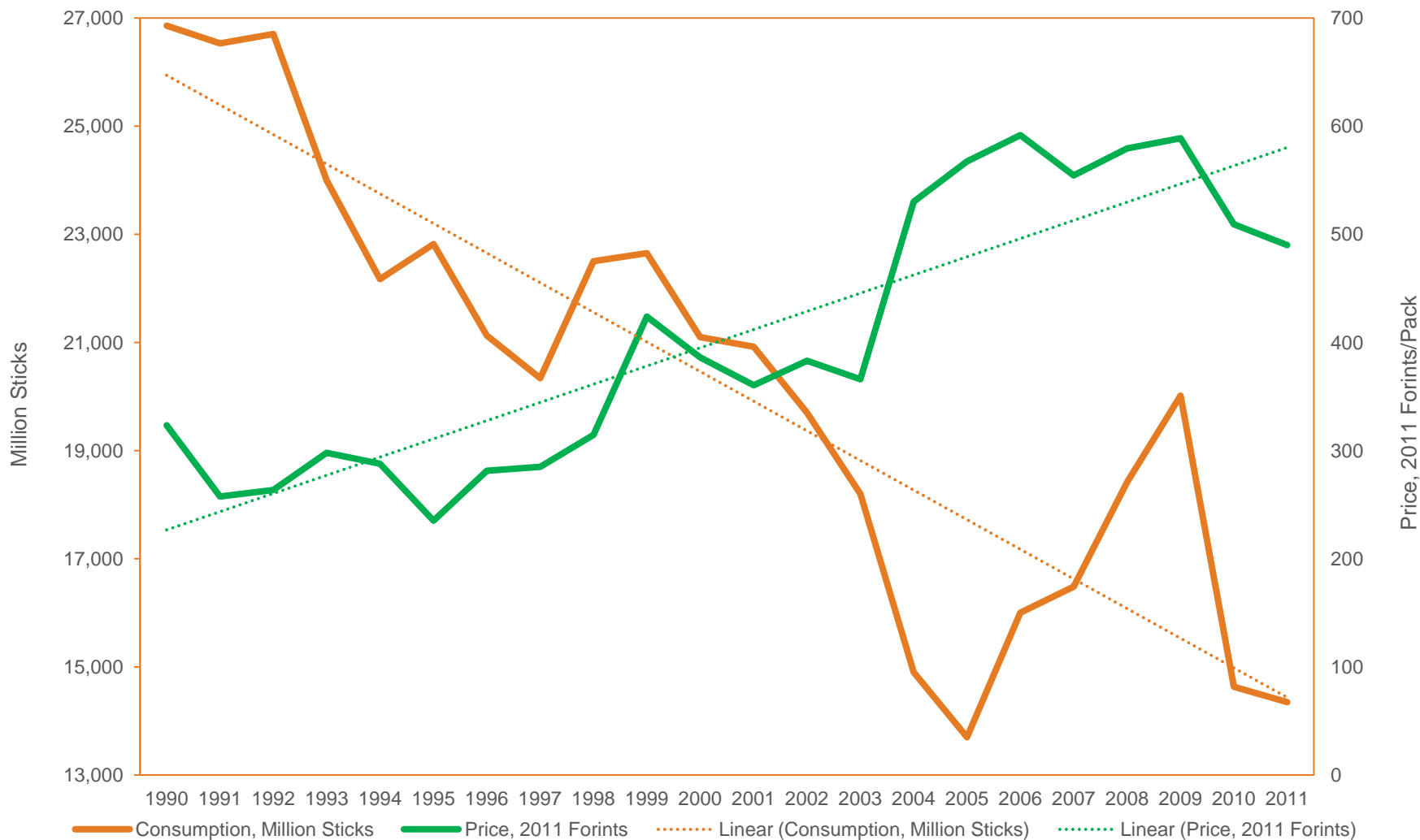
“In a statement marking World No Tobacco Day, BAT Zimbabwe said it does not believe that an increase in taxes on tobacco products would result in decreased consumption, instead, smokers may continue to look for cheaper, often illicit products.”

“Often, with an increase in taxes on tobacco products, a knee-jerk reaction for consumers under severe economic pressure is to unwittingly purchase cheaper cigarette brands in order to save money.”



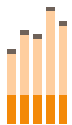
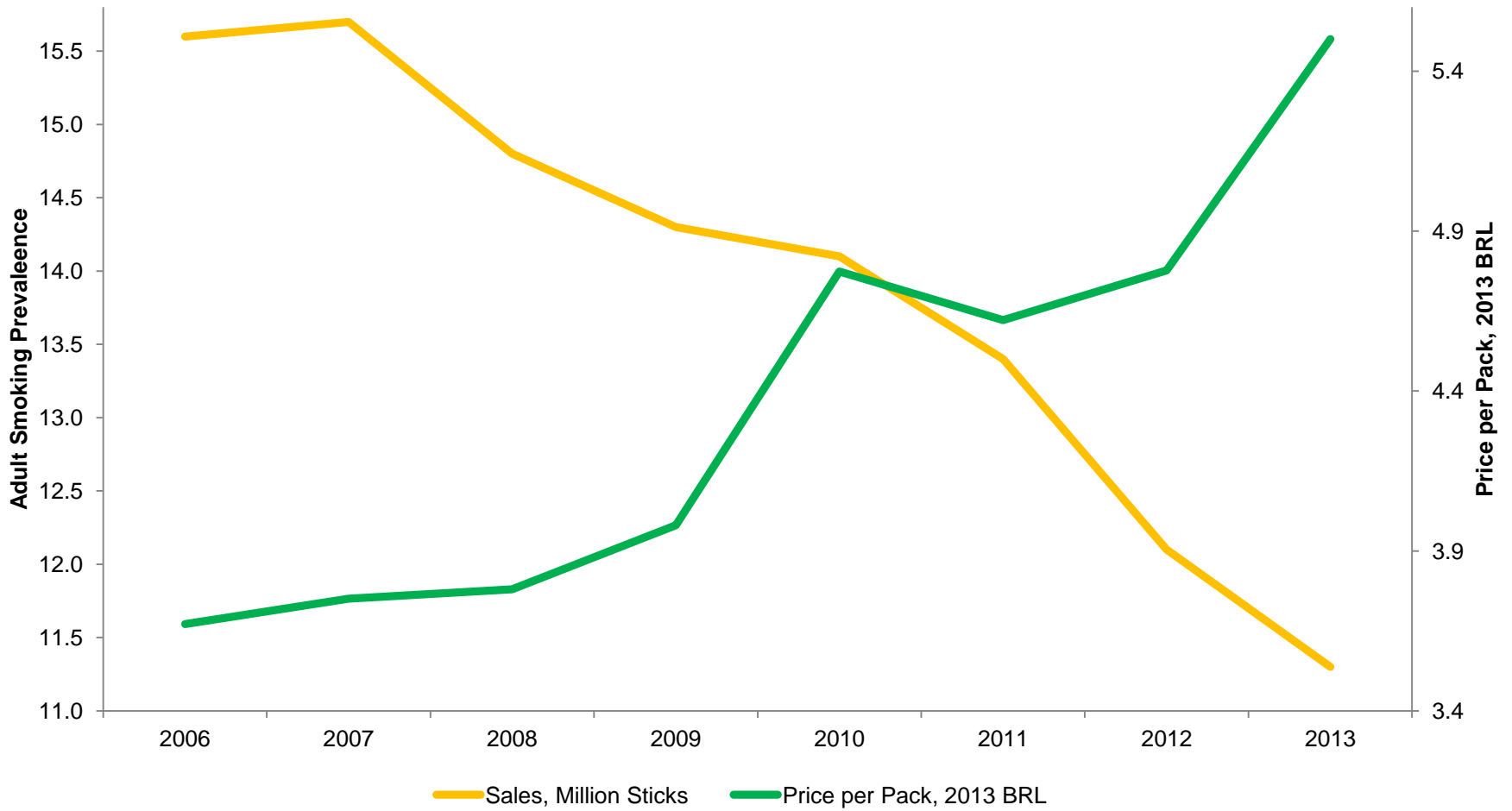
# Cigarette Price & Consumption

## Hungary, 1990-2011, Inflation Adjusted



# Adult Prevalence & Price, Brazil

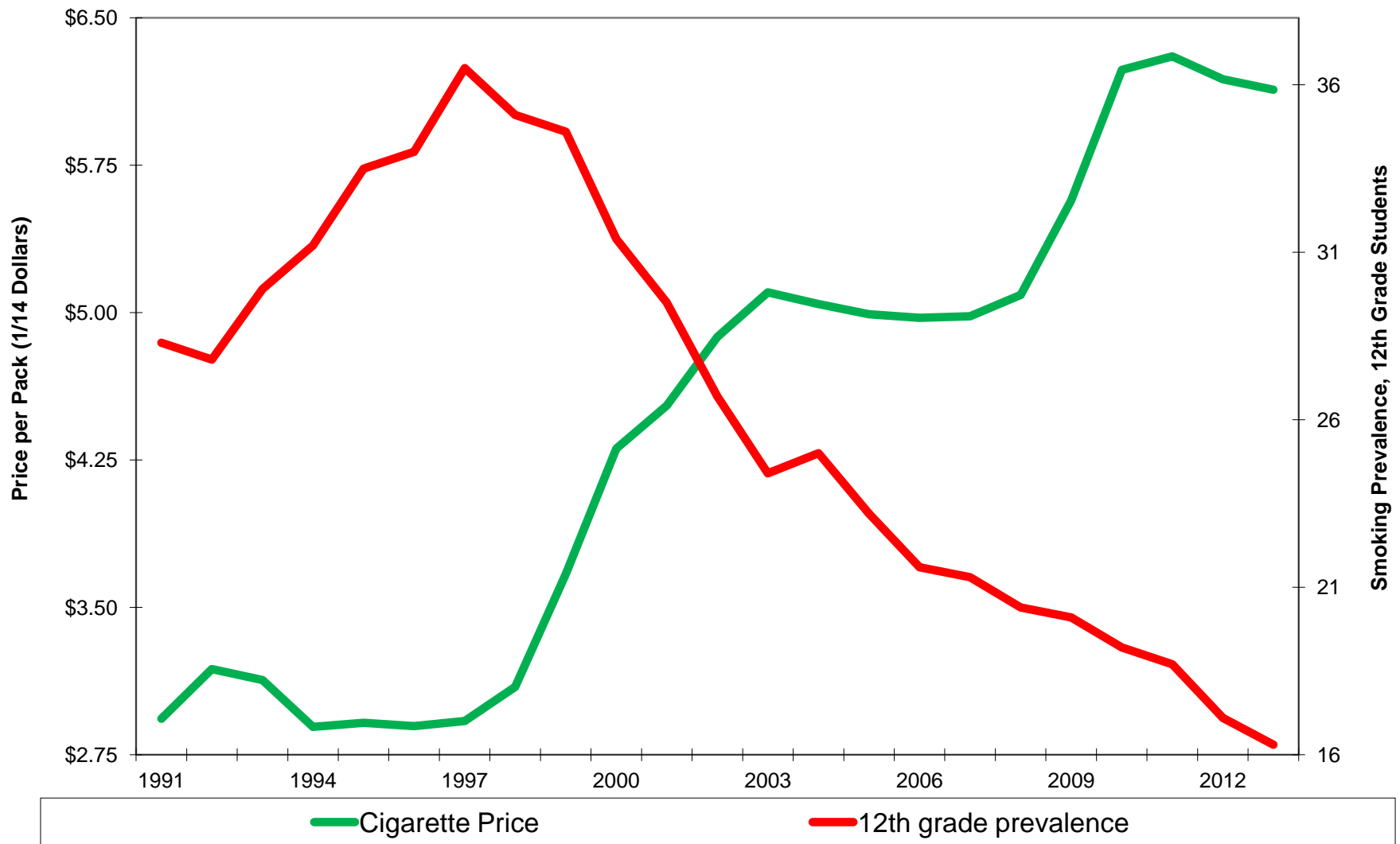
## Adult Smoking Prevalence and Cigarette Price Brazil, Inflation Adjusted, 2006-2013



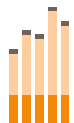
Sources: Ministry of Health, Brazil; EIU; World Bank

# Cigarette Price & Youth Smoking Prevalence

## High School Seniors, United States, 1991-2013

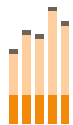
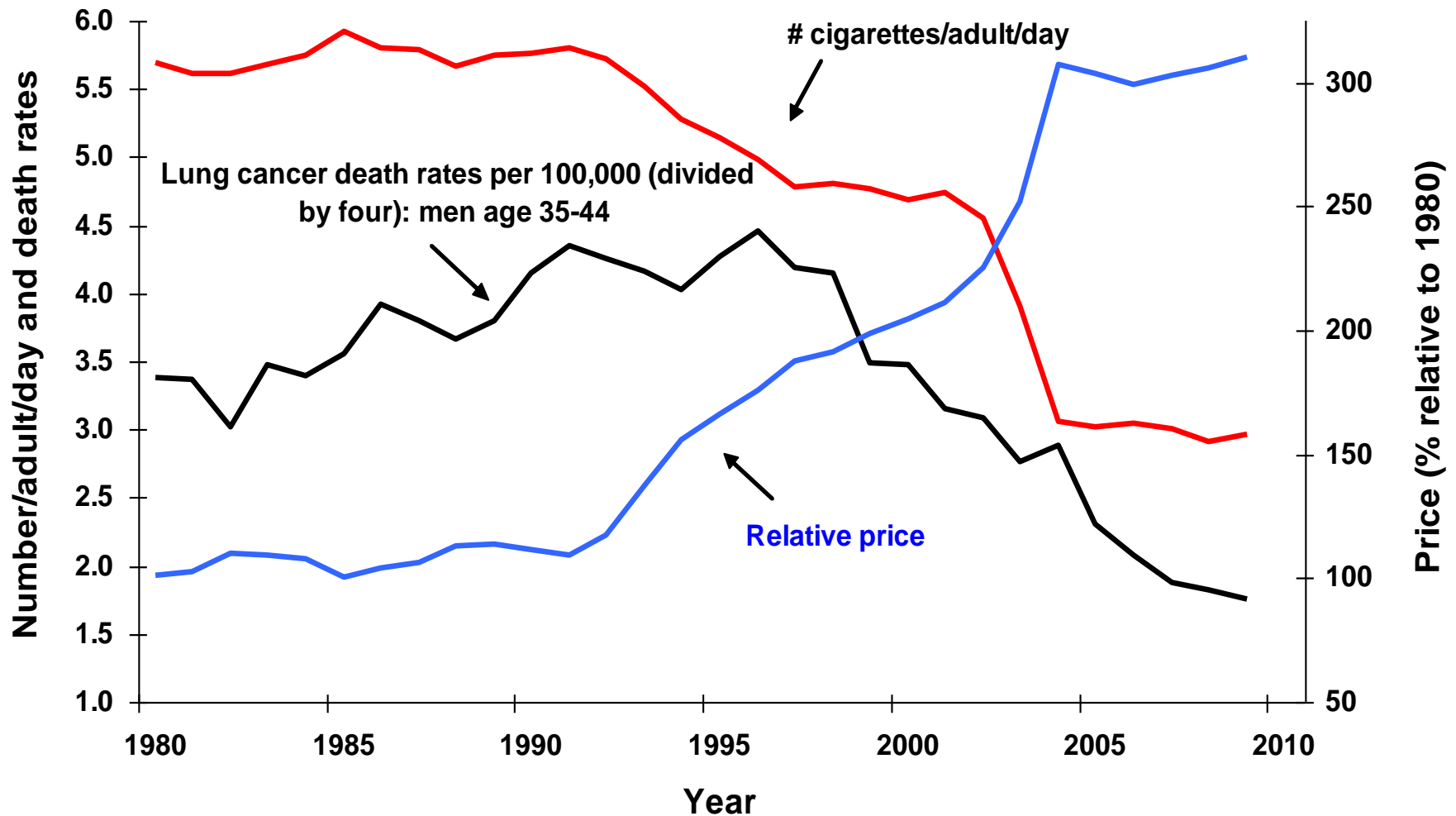


Sources: *Tax Burden on Tobacco*, BLS, MTF, and author's calculations



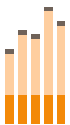


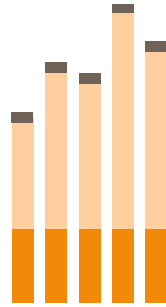
# Price, Consumption & Lung Cancer France, 1980-2010



# Tobacco Control Policies & Tobacco Use

- Same argument made about many other tobacco control policies
  - Smoke-free air policies
  - Comprehensive tobacco advertising, promotion and sponsorship bans
  - Graphic health warning labels
  - Tobacco product display bans
  - Plain/standardized packaging policies
  - And more.....





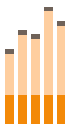
# Revenue Impact of Tobacco Tax Increases and Tobacco Control Policies

# Taxes and Revenues

By *J Scott Moody*, 4/2/08, from an [AP story](#):

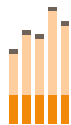
AUGUSTA — “A coalition of health groups today urged lawmakers to increase the cigarette tax by a \$1 per pack, saying the increase will encourage more people to quit smoking and generate more money for health programs.

Translation: ***Fewer people smoking equals more cigarette tax revenue? Someone needs a math lesson.***”



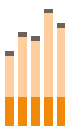
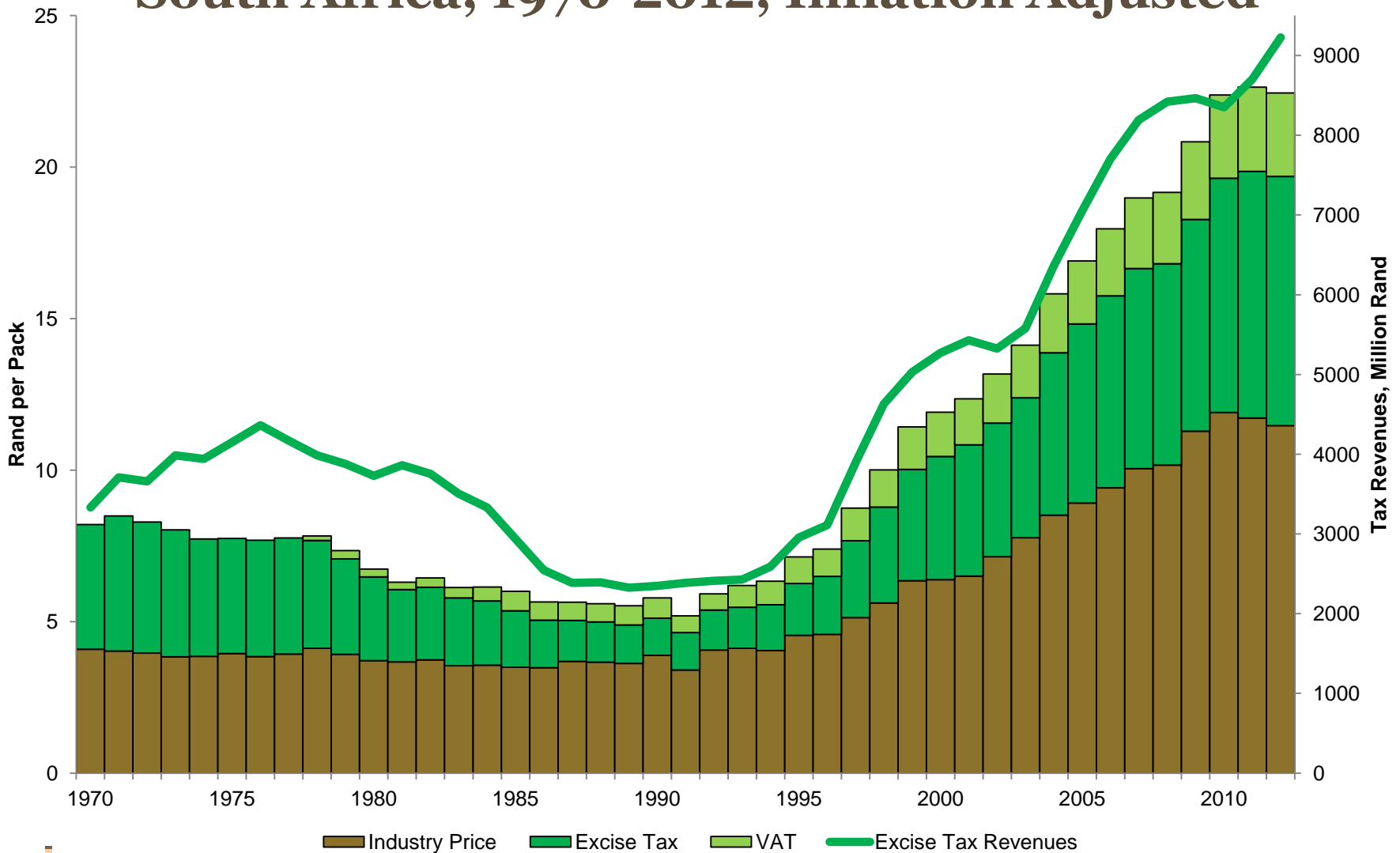
# Tobacco Taxes & Tax Revenues

- Myth: increases in tobacco taxes will lead to lower tobacco tax revenues given reductions in tobacco use
- Fact: tobacco tax increases lead to increased tax revenues
  - Tobacco taxes account for a fraction of tobacco prices
    - Increase in tax leads to smaller increase in price
  - Reductions in tobacco use less than proportionate to price increase



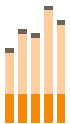
# Taxes, Prices, and Tax Revenues

## South Africa, 1970-2012, Inflation Adjusted

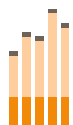
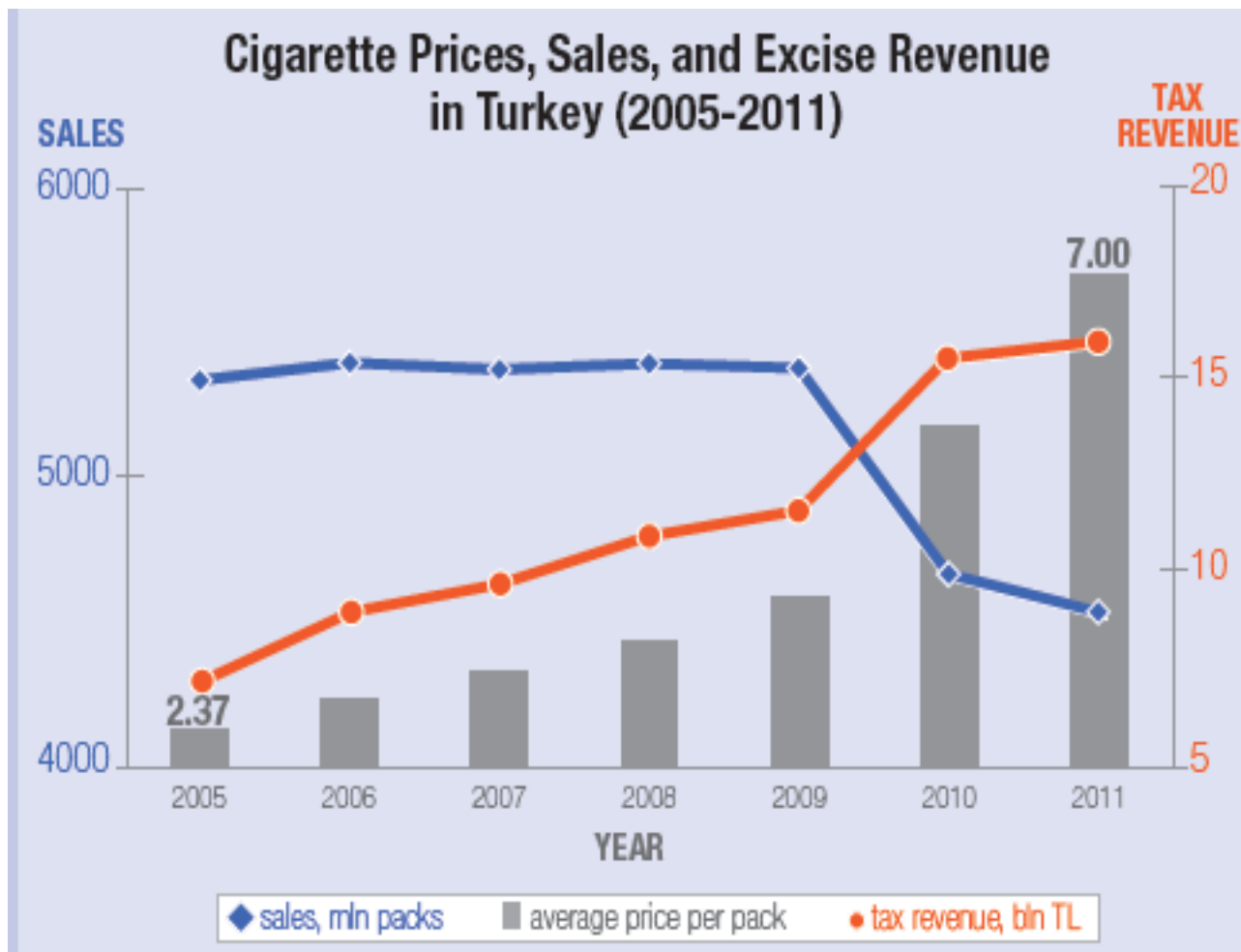


# Tobacco Control Policies & Tobacco Tax Revenues

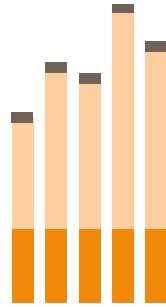
- Fact: Stronger tobacco control policies will lead to lower tobacco tax revenues given reductions in tobacco use, when not accompanied by tobacco tax increases
- *If concerned about revenue impact of tobacco control policies, include significant tobacco tax increases as part of a comprehensive tobacco control strategy*



# Turkey





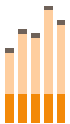


# Tobacco Control & Poverty

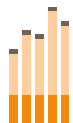
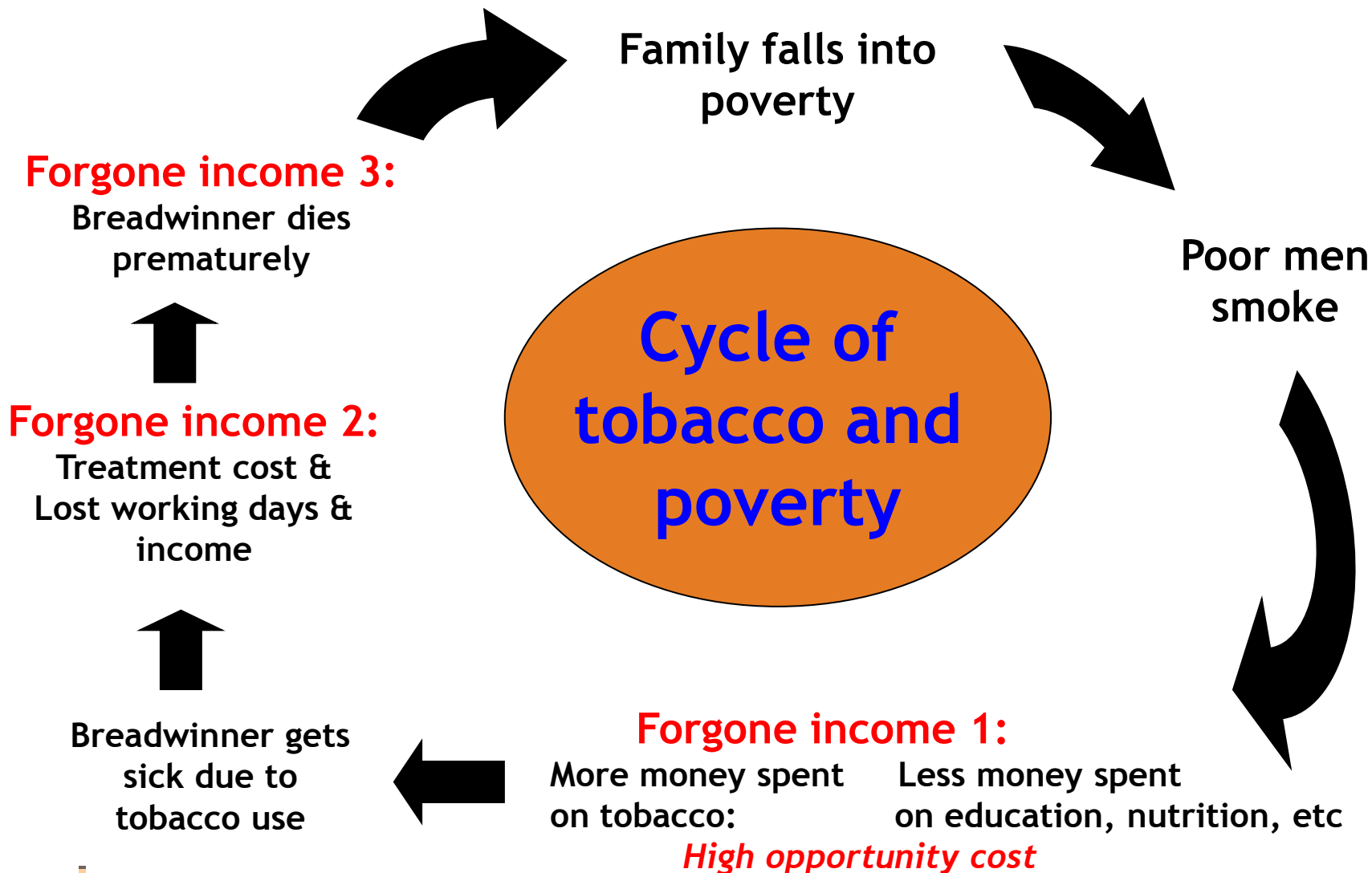
# Impact of Tobacco Taxes on the Poor

July 23, 2010 – San Francisco Examiner

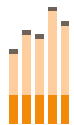
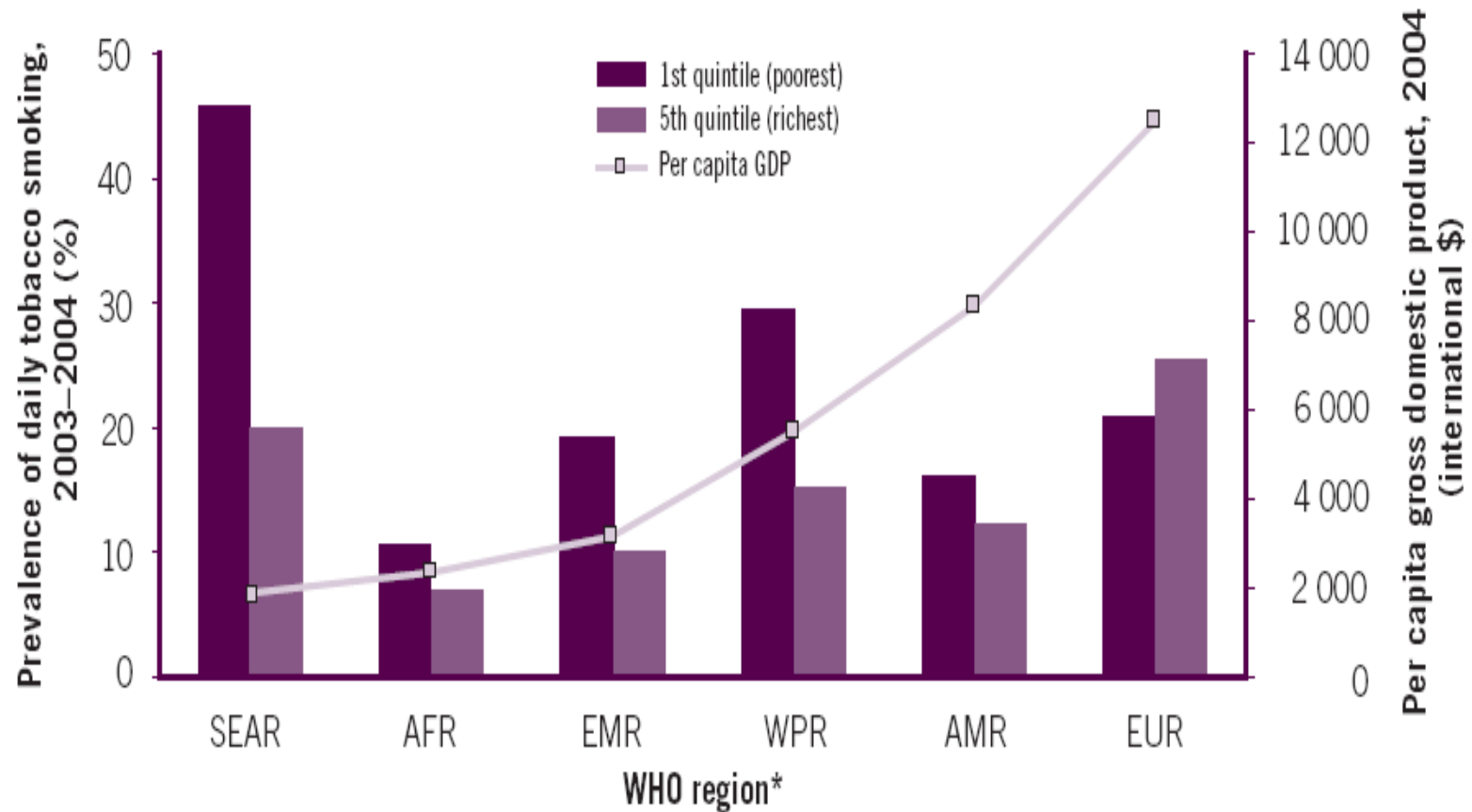
- “Democrats are relying more heavily in their midterm 2010 election message that Republicans care nothing about the poor. Conveniently absent from this analysis is Republican opposition to President Barack Obama’s cigarette tax increase..... **While higher cigarette taxes do discourage smoking, they are highly regressive.** Analyzing a slightly less severe proposal in 2007, the Tax Foundation noted that **‘no other tax hurts the poor more than the cigarette tax.’** Peyton R. Miller, special to the Examiner.



# Tobacco and Poverty



# Daily Tobacco Smoking Among Adults Aged 18 Years and Older, by Income Quintile and WHO Region

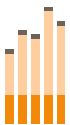


# Poverty and Tobacco Use

Burdens of poverty are compounded by tobacco use

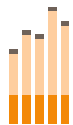
- Responsible for impoverishment of over 50 million in China and over 15 million in India
- Crowding out of other spending:
  - Bangladesh: tobacco money spent equivalent to:
    - Males = 1402 calories of rice per day
    - Females = 770 calories of rice per day

Sources: Hu, et al., 2008; John, et al., 2011; Efrogmson, et al., 2001

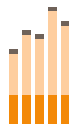
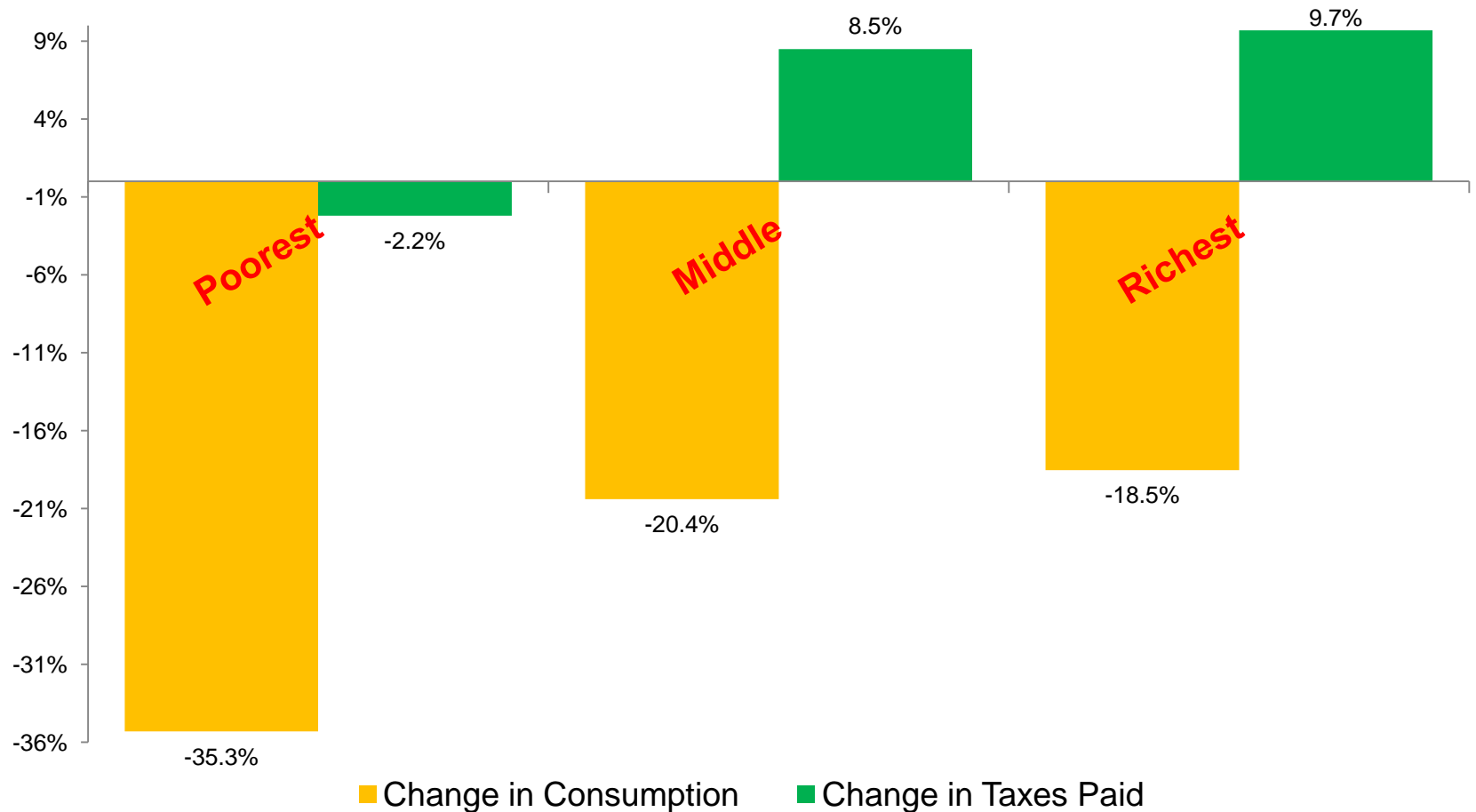


# Tobacco Taxes & the Poor

- Myth: tobacco tax increases harm the poor
- Fact: tobacco tax increases can be progressive
  - Tobacco use among low-income populations more responsive to price
    - Pay smaller share of tax increase
    - Receive greater share of health benefits from higher tax



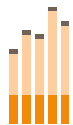
# Who Pays & Who Benefits Turkey, 25% Tax Increase



Source: Adapted from Önder & Yürekli, 2014

# Impact of Tobacco Taxes on the Poor

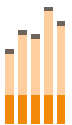
- Also need to consider overall fiscal system
  - Key issue is what's done with the revenues generated by the tax
  - Greater public support for tobacco tax increases when revenues are used for tobacco control and/or other health programs
  - Net financial impact on low income households can be positive when taxes are used to support programs targeting the poor
  - Concerns about regressivity offset by use of revenues for programs directed to poor

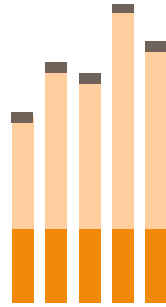




# Tobacco Control Policies & Disparities

- Increasing evidence on effectiveness of key tobacco control policies in reducing disparities in tobacco use and consequences
  - Comprehensive tobacco advertising, promotion and sponsorship bans
  - Graphic health warning labels





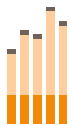
# Tobacco Control & the Economy

# Impact of Tobacco Control on Jobs

March 9, 2009 – Vanguard, AllAfrica.com - Nigeria Anti-Tobacco Bill – 400,000 Jobs on the Line

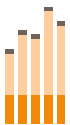
“if passed into law, The National Tobacco Bill which is currently on the floor of the National Assembly will lead to at least 400,000 Nigerians being thrown into the unemployment market.”

“This was the view expressed by the Chairman, Senate Committee on Industries, Senator Kamorudeen Adedbu, while speaking with reporters recently in Iselyn, Oyo State, while speaking at the 2008 Farmers Productivity Day Award Ceremony.”



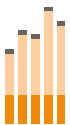
# Tobacco Control & Employment

- Myth: tobacco control will result in significant job losses as tobacco use falls
- Fact: tobacco control results in net increase in jobs in most countries



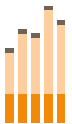
# Tobacco-Related Employment

- Very small share of employment ***dependent*** on tobacco growing and manufacturing in most countries
  - Economic presence does not imply economic dependence
  - Employment in tobacco manufacturing falling over time in response to tobacco industry shift to more capital intensive production technologies.
  - Can use revenues from tobacco taxes to help those in tobacco growing/manufacturing shift to other sustainable livelihoods



# Impact of Tobacco Control on Jobs

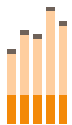
- Tobacco tax increases will lead to decreased consumption of tobacco products
  - Small loss of jobs in tobacco sector
- Money not spent on tobacco products will be spent on other goods and services
  - Gains in jobs in other sectors
- Increase in tobacco tax revenues will be spent by government
  -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



# Impact on Businesses

2014 – ReynoldsAmerican.com

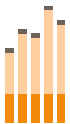
- The negative impact of cigarette tax increases often affects retailers the most. According to the National Association of Convenience Stores (NACS), cigarettes are responsible for nearly 36 percent of in-store sales and generated more than 17 percent of gross profit dollars in 2010. They are the number one category of products sold in convenience stores, generating more than \$2.9 billion in annual sales.
- **"The retail and wholesale community clearly understands the negative impact cigarette taxes have on their business and the jobs they provide,"** said Rob Stowe, executive vice president of trade marketing at R.J. Reynolds. "That's why it's important that trade partners build and maintain relationships with elected officials across the country to ensure that their voice is being heard."



# Impact on Businesses

- Recent research from U.S.:
  - Positive association between state cigarette tax and number of convenience stores
    - “overshifting” of cigarette tax in retail price
    - Substitution of spending on cigarettes to spending on other products
    - \$1.00 tax increase associated with increase of 11 stores per million population
  - No impact of smoke-free policies
  - Robust to alternative specifications and empirical methods

Source: Huang & Chaloupka, 2013





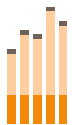
# Economic Impact of Smoke-Free Policies

July 19, 2009 – The Sofia Echo – Turkey Bans Smoking in Bars, Cafes, and Restaurants

- **The ban, in a country where smoking traditionally has been ubiquitous and is famed for its tobacco, sparked ire among owners of restaurants and bars.**

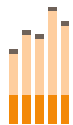
On July 15, tea and coffeehouse owners gathered in the centre of the Aegean port city of Izmir, western Turkey, to smoke water pipes in protest at the forthcoming ban.

**Customers would be driven away by the smoking ban, the BBC quoted Istanbul café owner Selahattin Nar as saying.**



# Economic Impact of SFA Policies

- Characteristics of a good study
  - Uses objective data on business activity or population-based, representative samples
  - Includes appropriate control group
  - Includes sufficiently long period before and after the policy change
  - Accounts for other factors that affect outcomes of interest
  - Uses appropriate statistical methods
  - Also useful to pay attention to funding of study



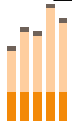
# Summary of Studies as of 1/31/08

Type of data	Methodological quality	Peer reviewed?	Reported a negative impact?		Total
			No	Yes	
Official reports of sales, employment or related measures (n=86)	Meet criteria for methodologically sound studies (n=49)	<i>Yes (n =21)</i>	20	1	<b>49</b>
		No (n=28)	27	1	
		<i>Total for studies meeting all four criteria (n=49)</i>	<b>47</b>	<b>2</b>	
	Met some of but not all criteria for methodologically sound studies (n=37)	<i>Yes (n=3)</i>	3	0	<b>37</b>
		No (n=34)	15	19	
		<i>Total for studies meeting some of criteria (n=37)</i>	<b>18</b>	<b>19</b>	
		<b>Subtotal</b>	<b>65</b>	<b>21</b>	<b>86</b>



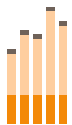
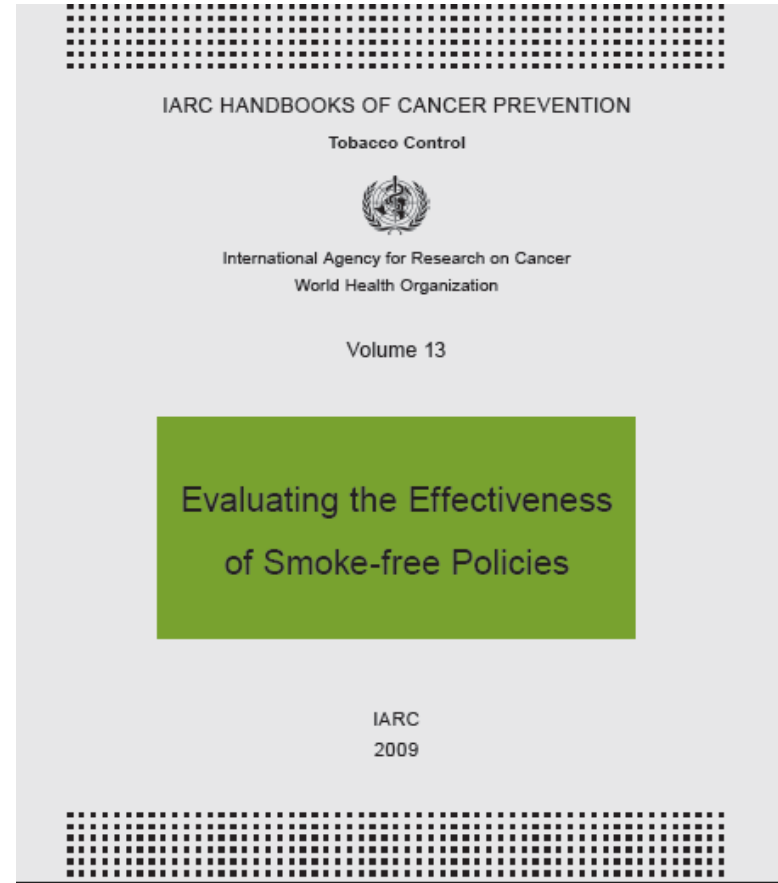
# Summary of Studies as of 1/31/08

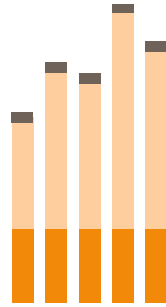
Type of data	Methodological quality	Peer reviewed?	Reported a negative impact?		Total
			No	Yes	
Survey data (n=79)	Patron/consumer surveys (n=34)	<i>Yes (n=9 )</i>	8	1	<b>34</b>
		No (n= 25)	19	6	
		<i>Total consumer</i>	<b>27</b>	<b>7</b>	
	Owner/Manager surveys (n=45)	<i>Yes (n=10 )</i>	9	1	<b>45</b>
No (n= 35)		10	25		
		<i>Total owner/manager (n=45)</i>	<b>19</b>	<b>26</b>	
		<b>Subtotal</b>	<b>46</b>	<b>33</b>	<b>79</b>



# Sufficient Evidence that:

Smoke-free policies do not cause a decline in the business activity of the restaurant and bar industry.

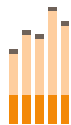




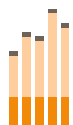
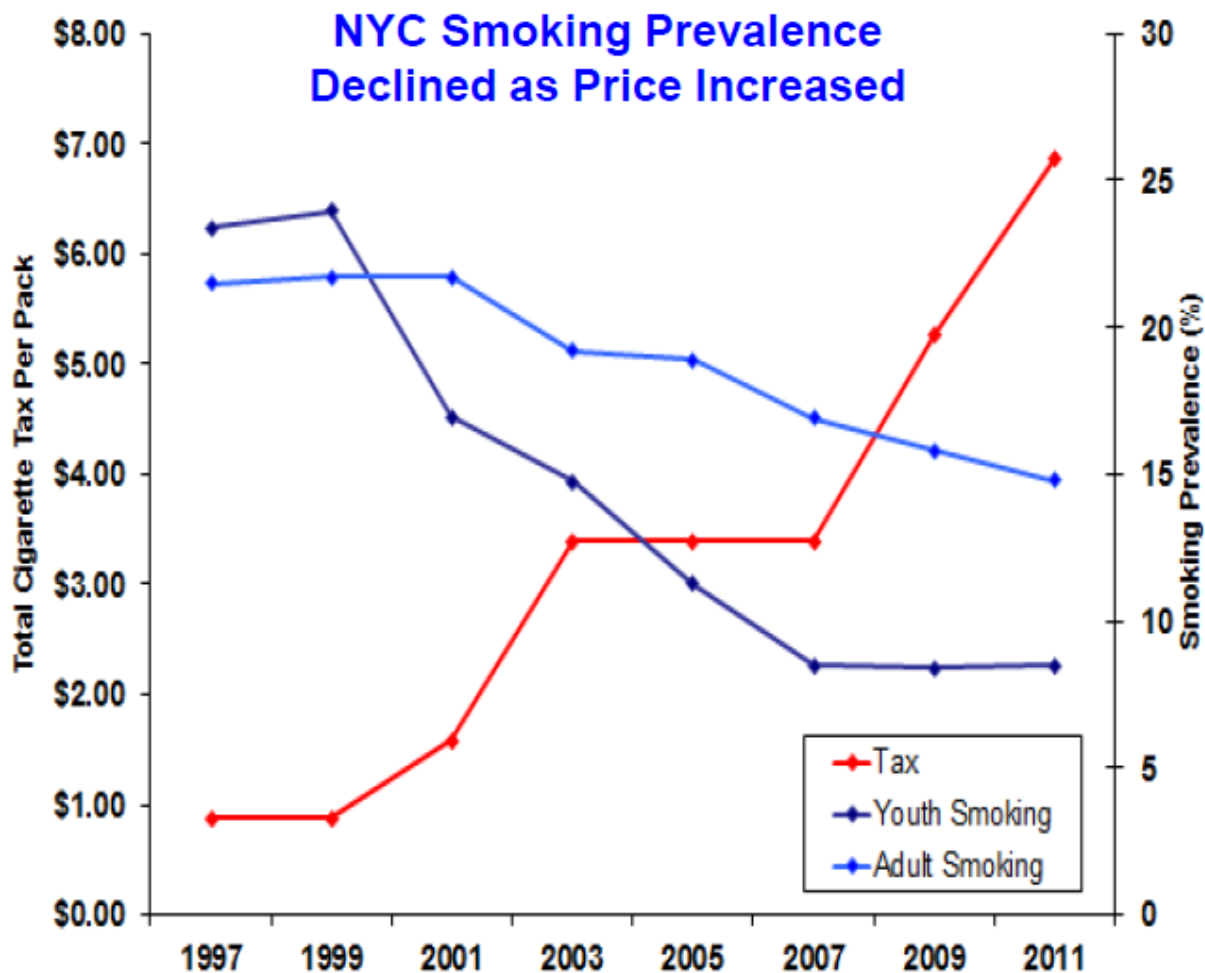
# Tobacco Control & Illicit Trade

# Tobacco Control & Illicit Trade

- Myth: tobacco tax increases and other tobacco control policies will lead to increases in illicit trade, eliminating the public health and revenue benefits of higher taxes
- Fact: tobacco use falls and tax revenues increase following tax increases even in the presence of illicit tobacco trade
- Fact: no evidence that other tobacco control policies lead to increase in illicit trade



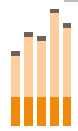
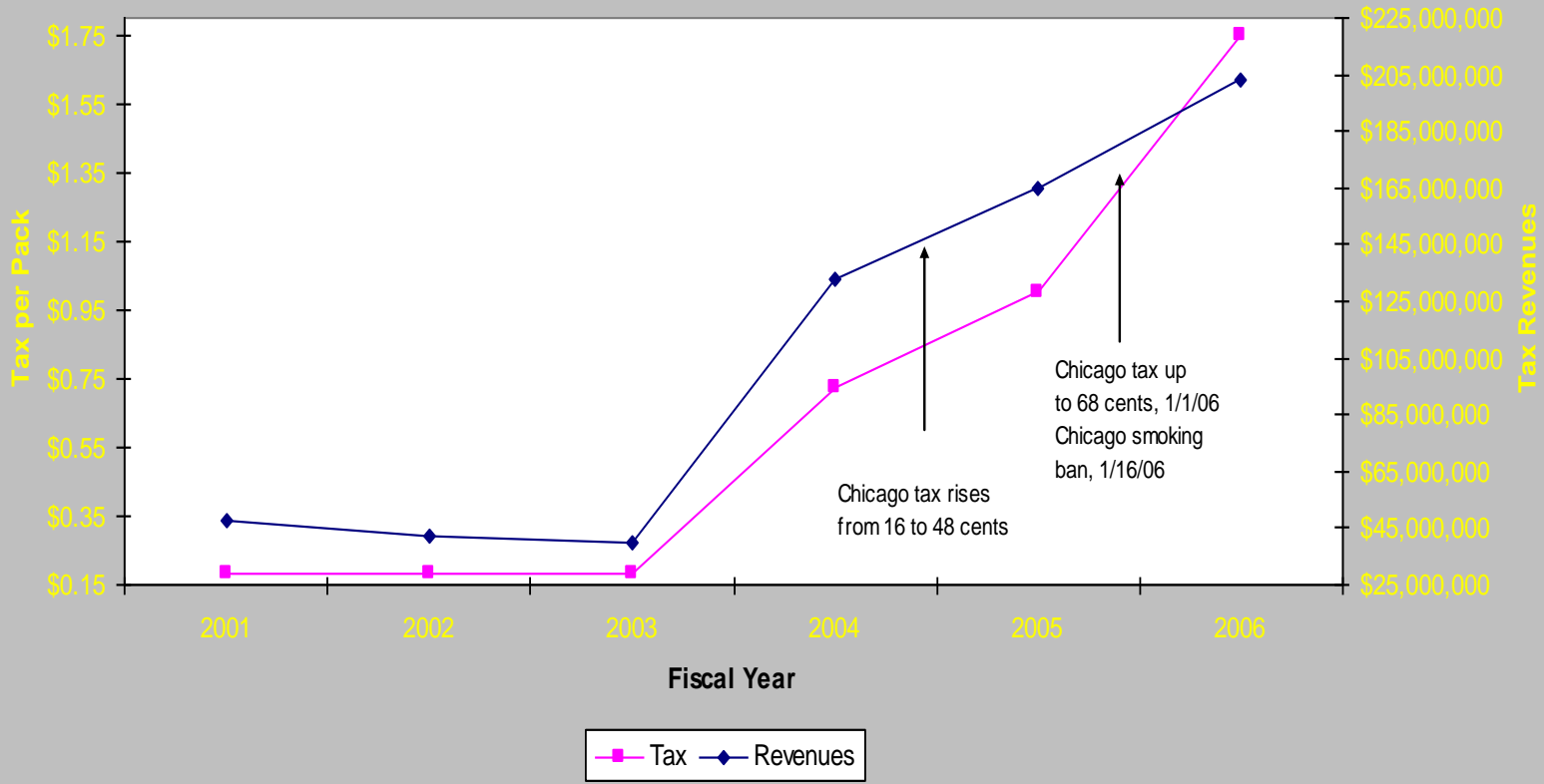
# Tax Avoidance & Evasion Do NOT Eliminate Health Impact of Higher Taxes





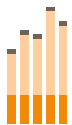
# Tax Avoidance & Evasion Do NOT Eliminate Revenue Impact of Higher Taxes

Cook County Cigarette Tax and Tax Revenues - FY01-FY06

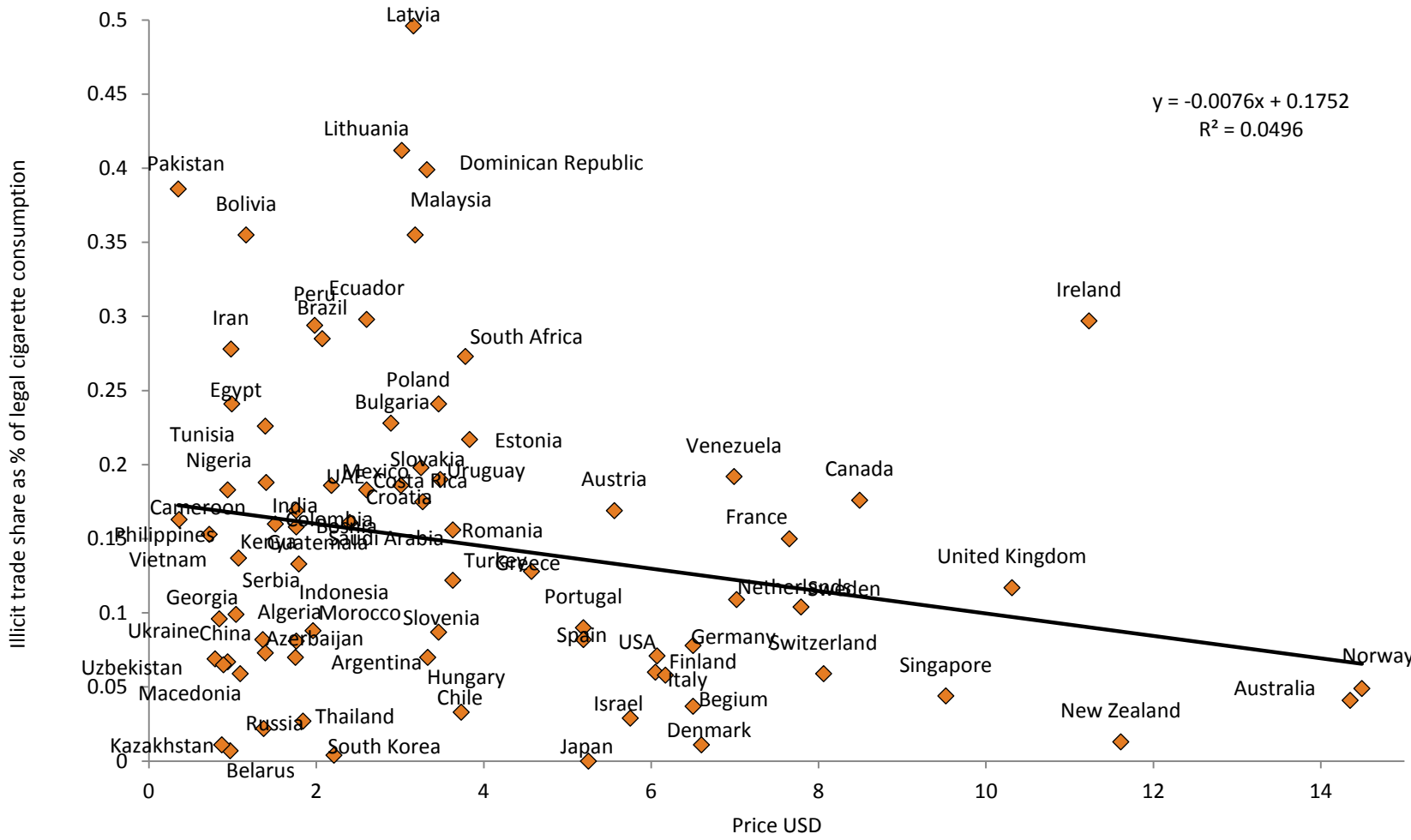


# Tobacco Taxes & Illicit Trade

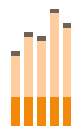
- Fact: other factors more important than tobacco taxes and tobacco control policies in explaining illicit trade



# Illicit Cigarette Market Share & Cigarette Prices, 2012

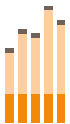


Sources: Euromonitor, WHO

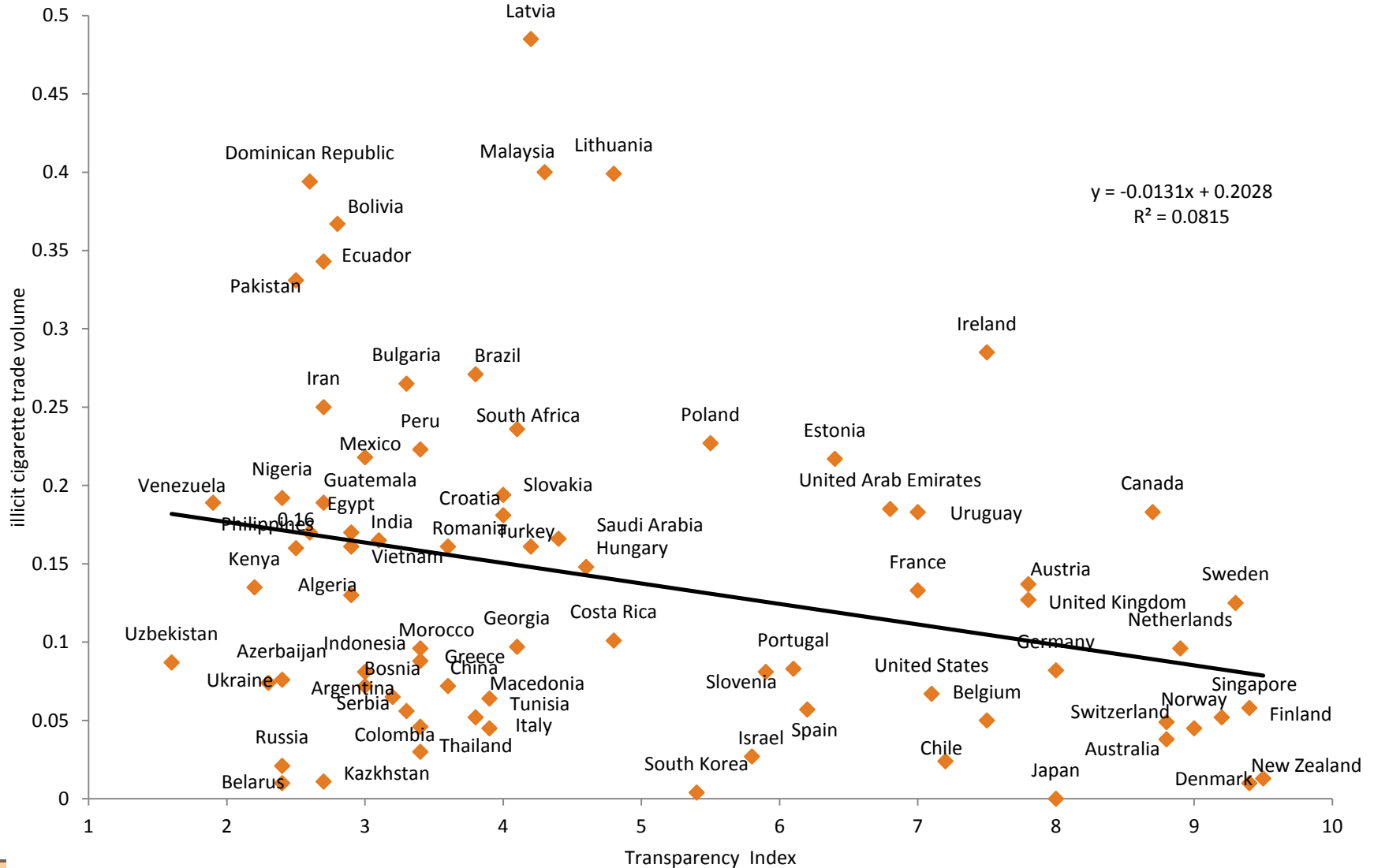


# Determinants of Illicit Tobacco

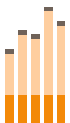
- Corruption
- Weak tax administration
  - Absence of tax stamps; weak or non-existent physical controls; unlicensed manufacturers, distributors, retailers; weak customs authorities
- Poor enforcement
  - Limited resources for border patrols, customs authorities, etc; low penalties



# Smuggling and Corruption, 2011

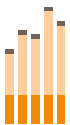


Sources: Euromonitor, Transparency International



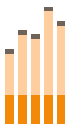
# Determinants of Illicit Tobacco

- Presence of informal distribution channels
  - e.g. Street vendors, unlicensed distributors
- Presence of criminal networks
  - e.g. Organized crime, terrorist organizations
- Access to cheaper sources
  - e.g. duty free, cross border

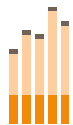
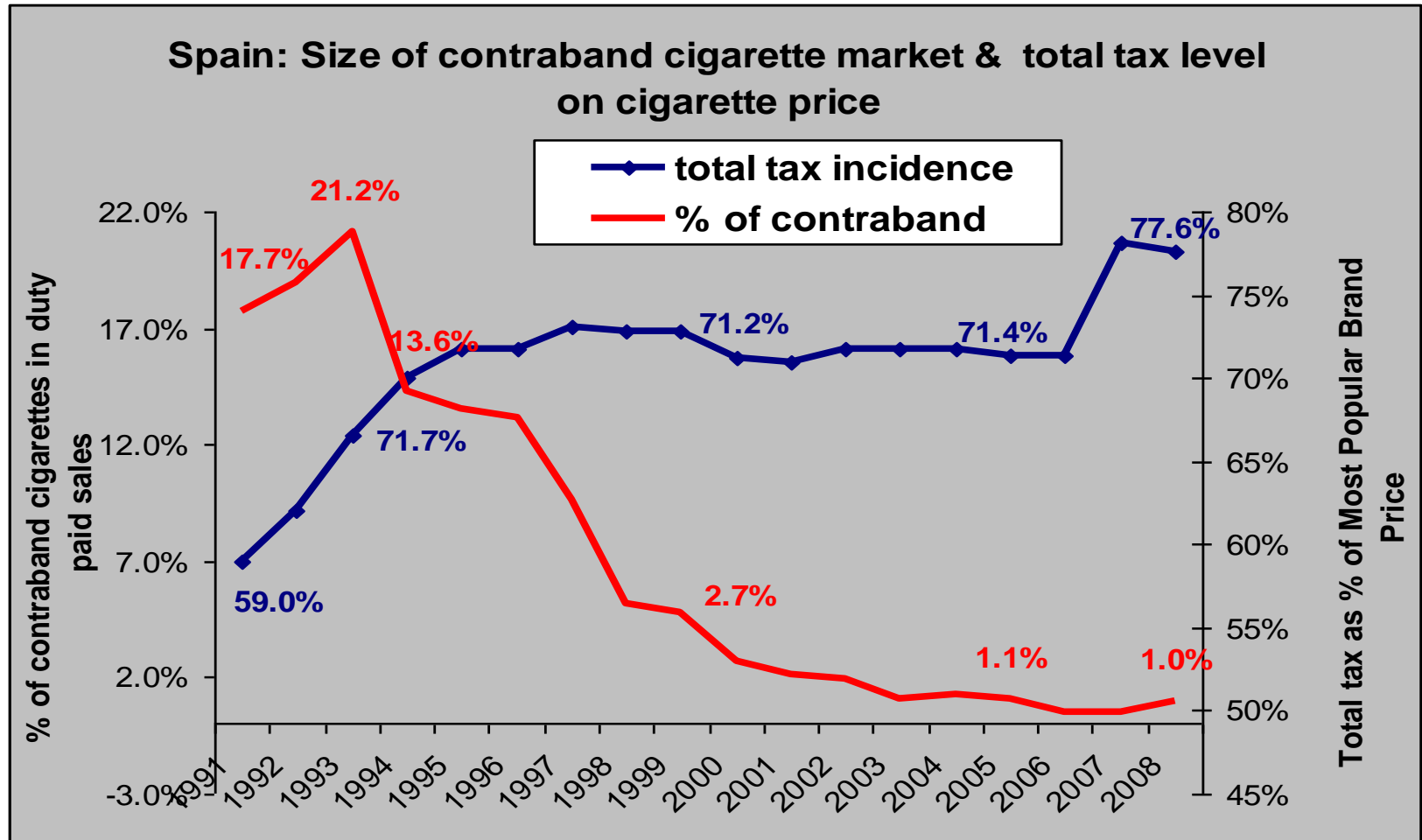


# Controlling Illicit Tobacco Trade

- Fact: there exist effective interventions to reduce illicit trade in tobacco products



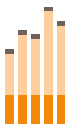
# Cigarette Taxes and Illicit Cigarette Market, Spain 1991-2008

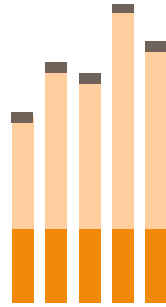




# Combating Illicit Tobacco Trade

- Illicit trade protocol to the WHO FCTC
  - Adopted November 2012; currently in process of being signed/ratified; 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



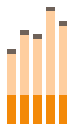


# Summary & Research Needs

# Economic Impact of Tobacco Control

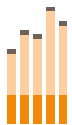
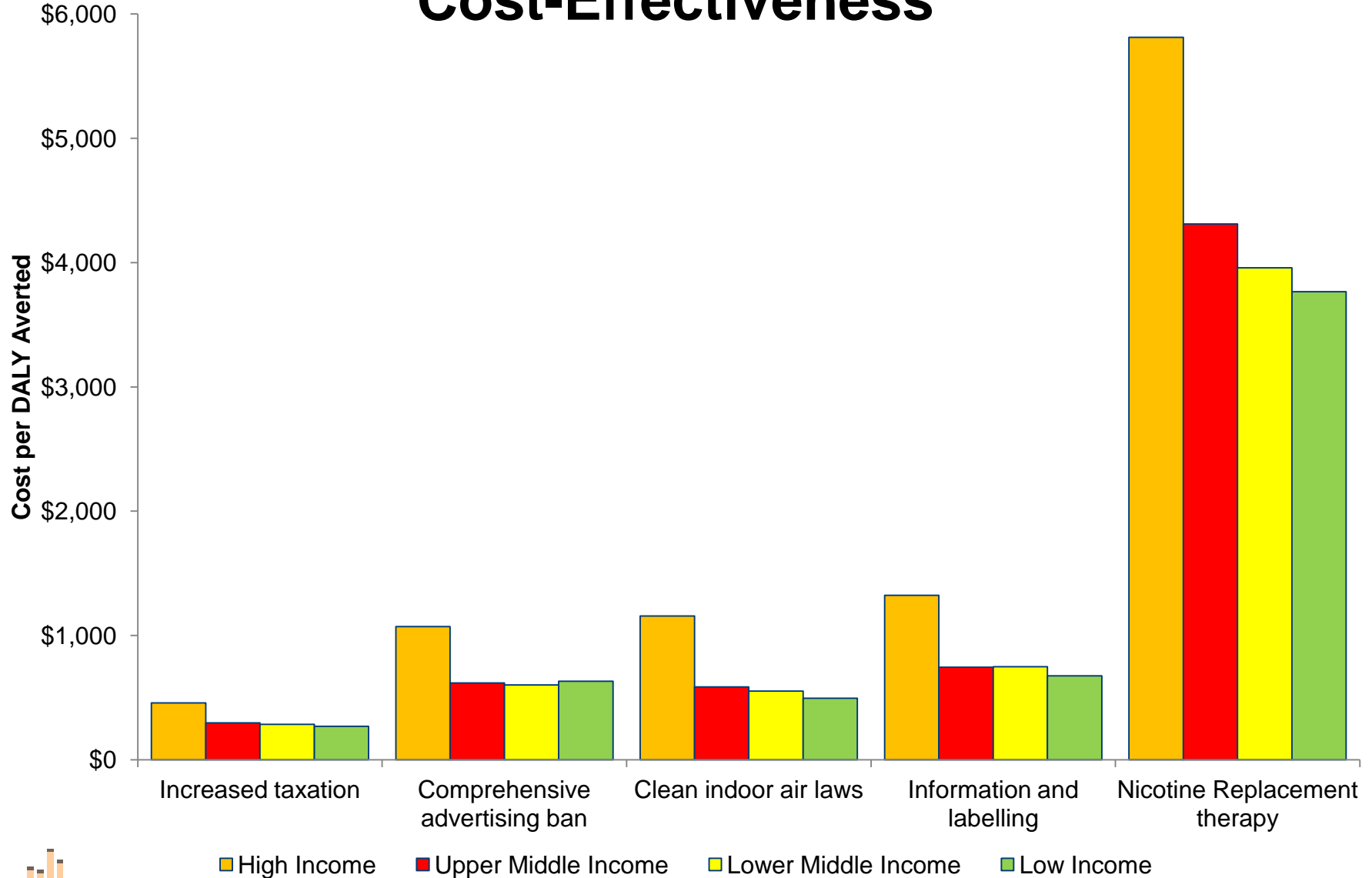
Effective tobacco control makes good economic sense:

- 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.



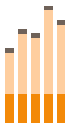
# Key Tobacco Control Policies

## Cost-Effectiveness



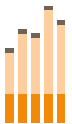
# Research Needs

- Country-specific estimates of the impact of tax/price and income on tobacco use
  - In order to determine tax and price increases needed to achieve public health objectives
  - To project impact of tax increases on tobacco tax revenues
  - To understand impact on vulnerable populations (poor, young people, women)
  - To determine substitutability/complementarity of use of alternative tobacco products
  - Need to account for changes in affordability in countries



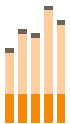
# Research Needs

- Research to assess employment impact of tobacco control policies:
  - Small loss of jobs in tobacco sector vs. gains in jobs in other sectors from changes in consumer, government spending
- Research on economic impact of smoke-free policies in LMICs
- Research on broader economic impact of tobacco control policies
  - Increased productivity, longer lives, economic development



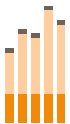
# Research Needs

- Research to determine role of tobacco use in causing poverty
- Evaluate the impact of spending on tobacco crowding out other spending, particularly among the poor
- Determine the differential impact of tobacco taxes and tobacco control policies on the poor
- Assess the health and net financial impact of tobacco tax increases on the poor



# Research Needs

- Extent of tax avoidance/evasion
  - Industry estimates generally overstate extent of problem
- Determinants of illicit trade
  - Role of tax/price differentials, tobacco control policies
  - Role of other factors – corruption, weak tax administration, criminal networks, etc.
- Impact of interventions to curb tax avoidance/evasion
  - Implementation of WHO FCTC Illicit Trade protocol





# For more information:

**Tobacconomics:**

**<http://www.tobacconomics.org>**

**@tobacconomics**

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