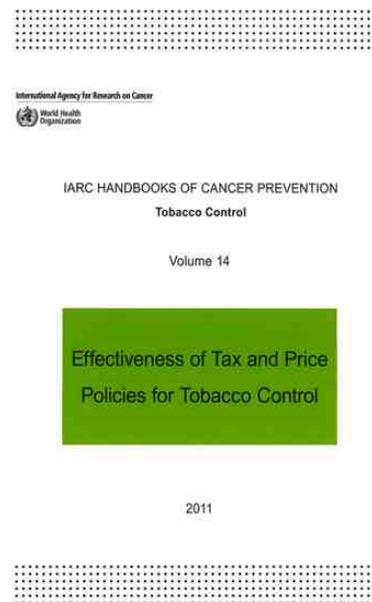
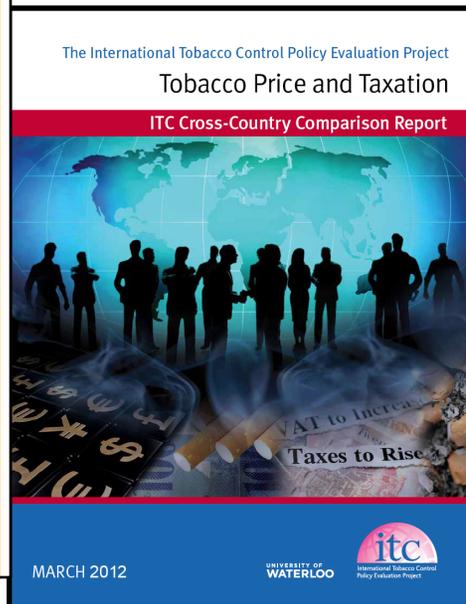
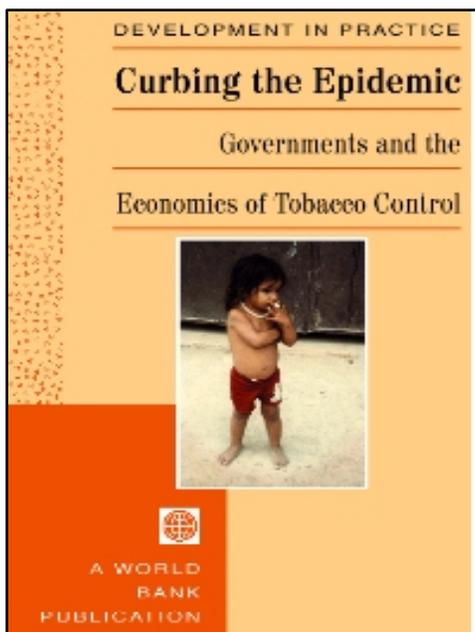


**tobacconomics**

Economic Research Informing Tobacco Control Policy

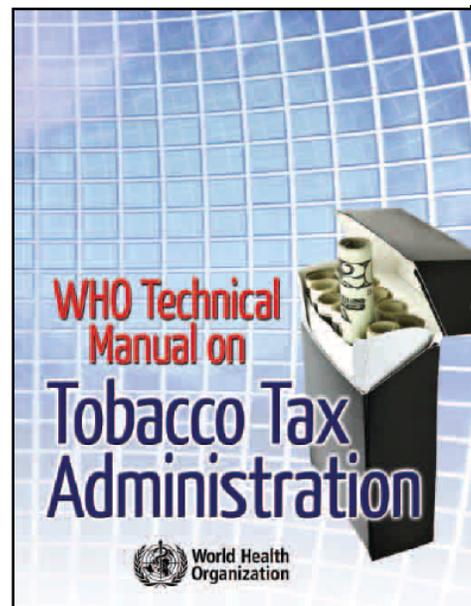
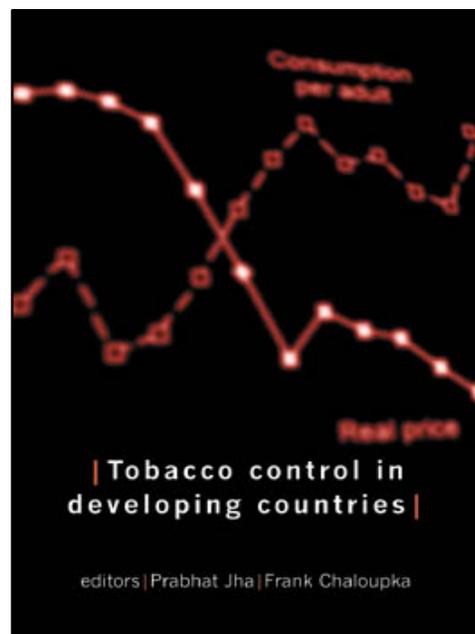
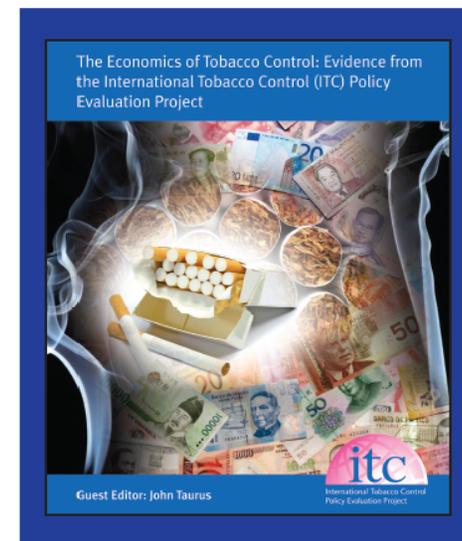
# Generating Revenue & Cutting Costs – The Health & Economic Benefits of Tobacco Control

Frank J. Chaloupka, University of Illinois at Chicago  
Ministerial Leadership in Health  
Harvard University, 19 April 2016



March 2014 Volume 23 Supplement 1

# TOBACCO CONTROL



tobaccocontrol.bmj.com

BMJ

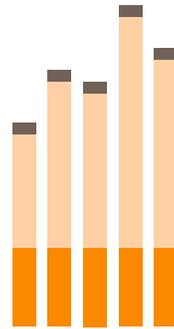


### Guidelines for implementation of Article 6

Price and tax measures to reduce the demand for tobacco

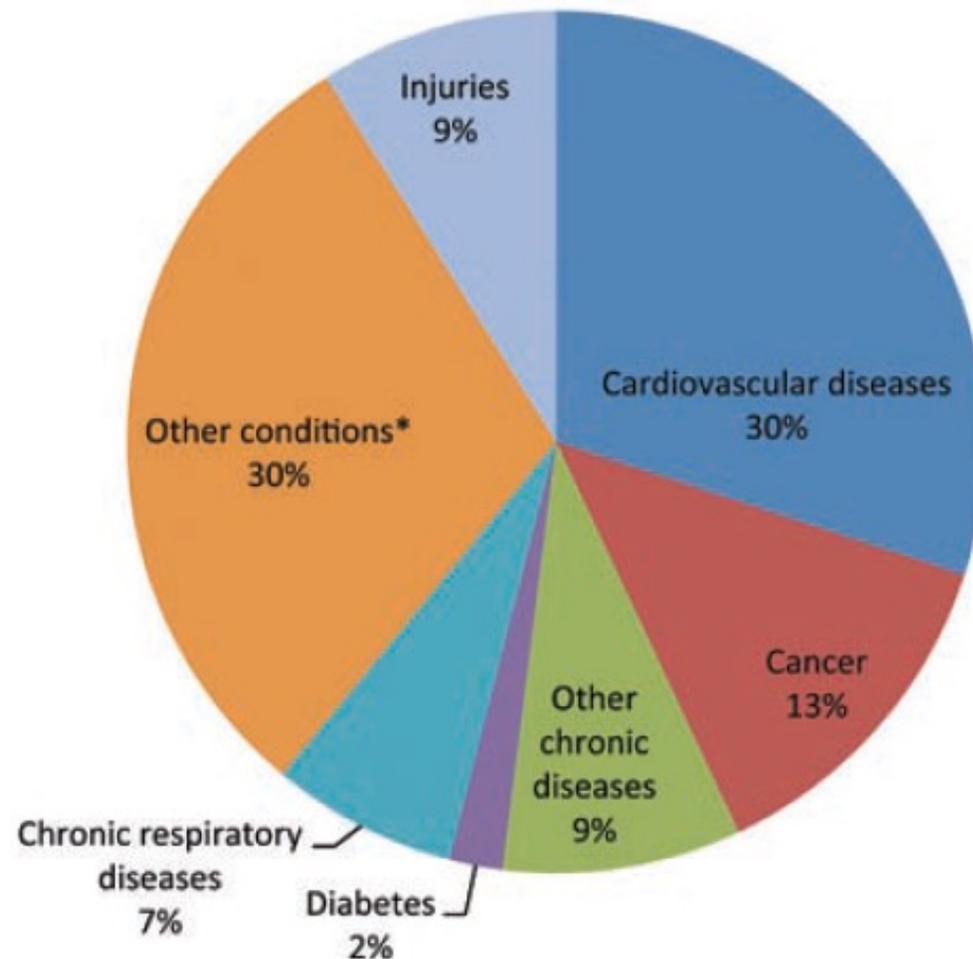
Adopted by the Conference of the Parties at its sixth session (decision FCTC/COP6(5))

Online version available at [http://www.who.int/fctc/treaty\\_instruments/Guidelines\\_article\\_6.pdf](http://www.who.int/fctc/treaty_instruments/Guidelines_article_6.pdf)



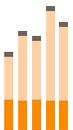
# Health & Economic Consequences of Tobacco Use

# Leading Causes of Death Globally



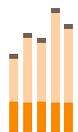
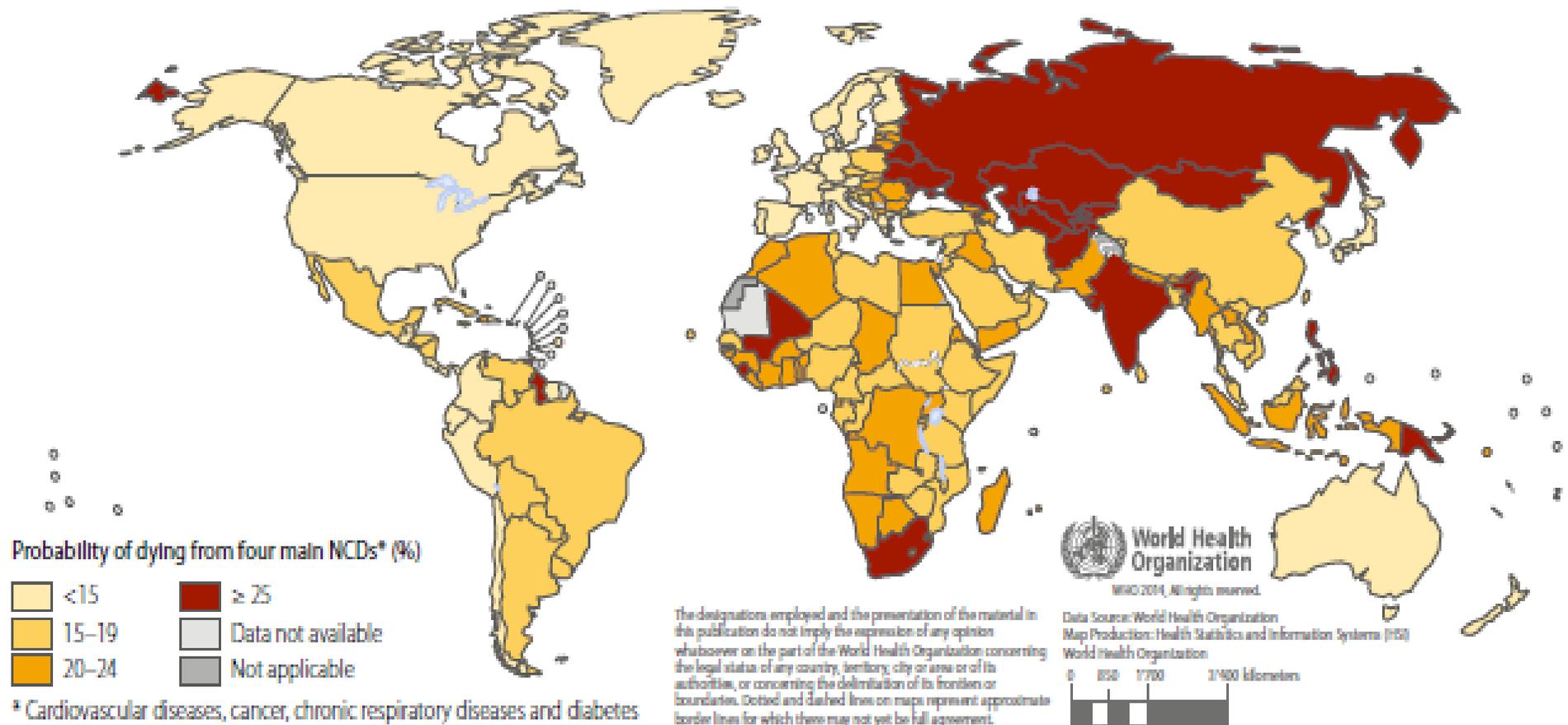
Source: World Economic Forum & Harvard School of Public Health, 2011

Other Conditions include communicable diseases, maternal/perinatal conditions, and nutritional deficiencies



# NCD Risks

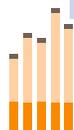
**Fig. 1.5a** Probability of dying from the four main noncommunicable diseases between the ages of 30 and 70 years, comparable estimates, 2012



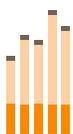
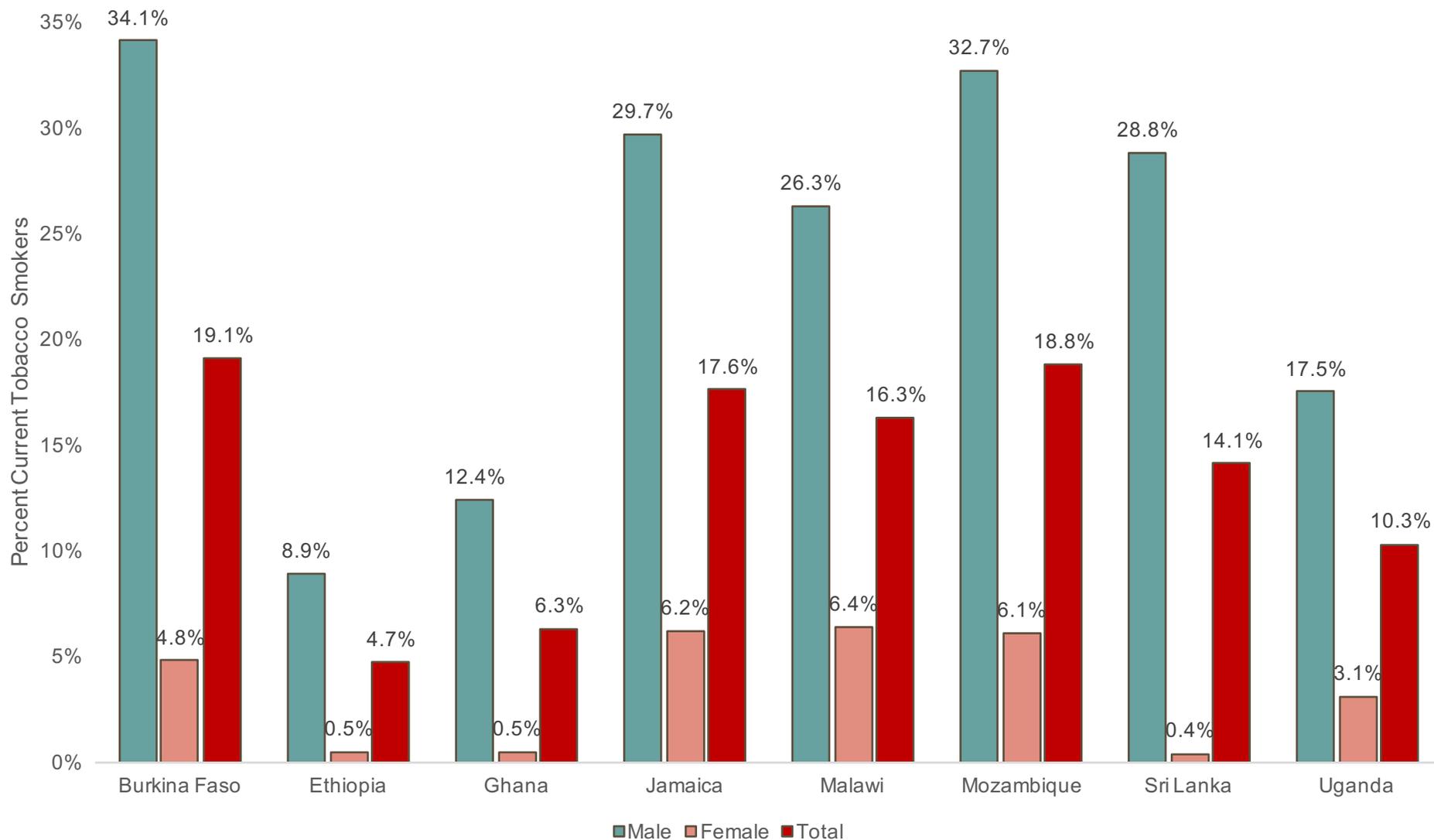
# NCDs: Major Risk Factors

Major NCD	Major modifiable causative Risk Factors			
	Tobacco Use	Unhealthy Diet	Physical Inactivity	Harmful Use of Alcohol
Heart Disease & Stroke	✓	✓	✓	✓
Diabetes	✓	✓	✓	✓
Cancer	✓	✓	✓	✓
Chronic Lung Disease	✓			

Source: WHO, 2010; Mackay, 2012

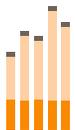


# Prevalence of Current Tobacco Smoking, 2013

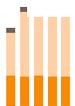
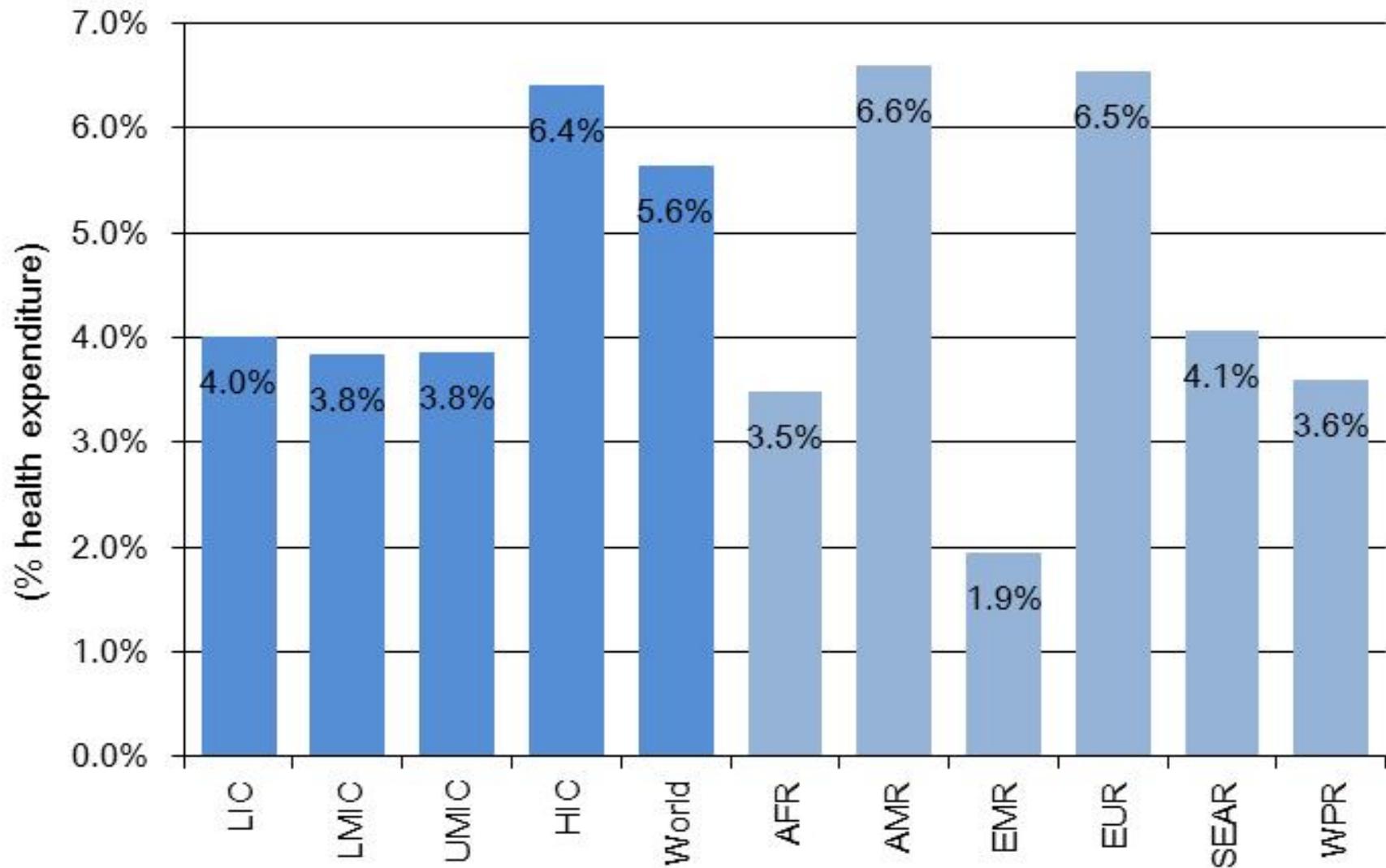


# Economic Consequences of NCDs

- Large economic burden from NCDs:
  - Considerable, growing health care costs from treating NCDs
  - Significant lost productivity
  - Cause of poverty
  - Account for much of socioeconomic inequalities in health

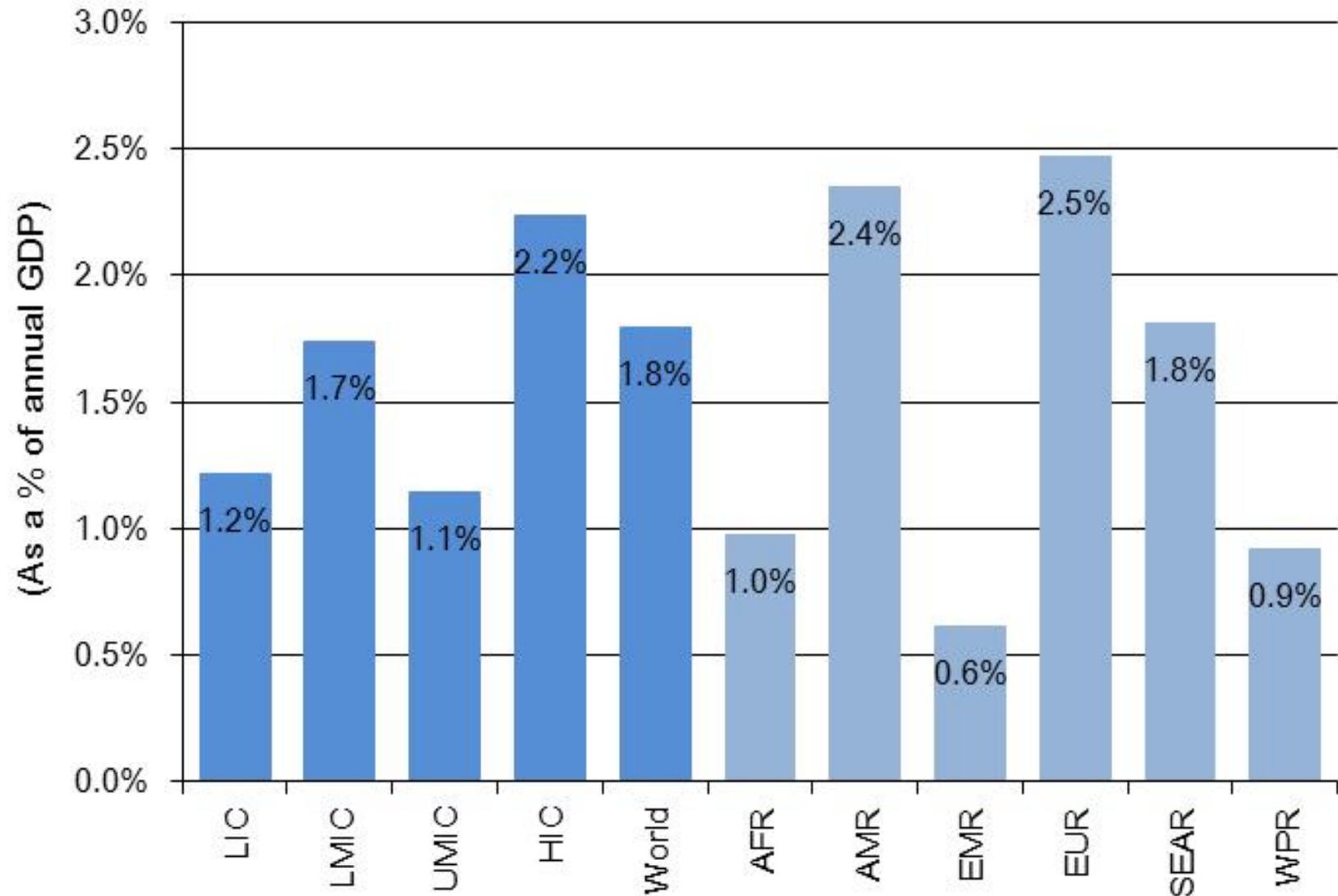


# Smoking-Attributable Spending as Share of Total Health Expenditures, 2012, by Income Group and WHO Region

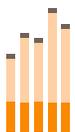


Source: Goodchild, et al., forthcoming

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

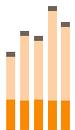


Source: Goodchild, et al., forthcoming



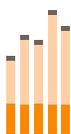
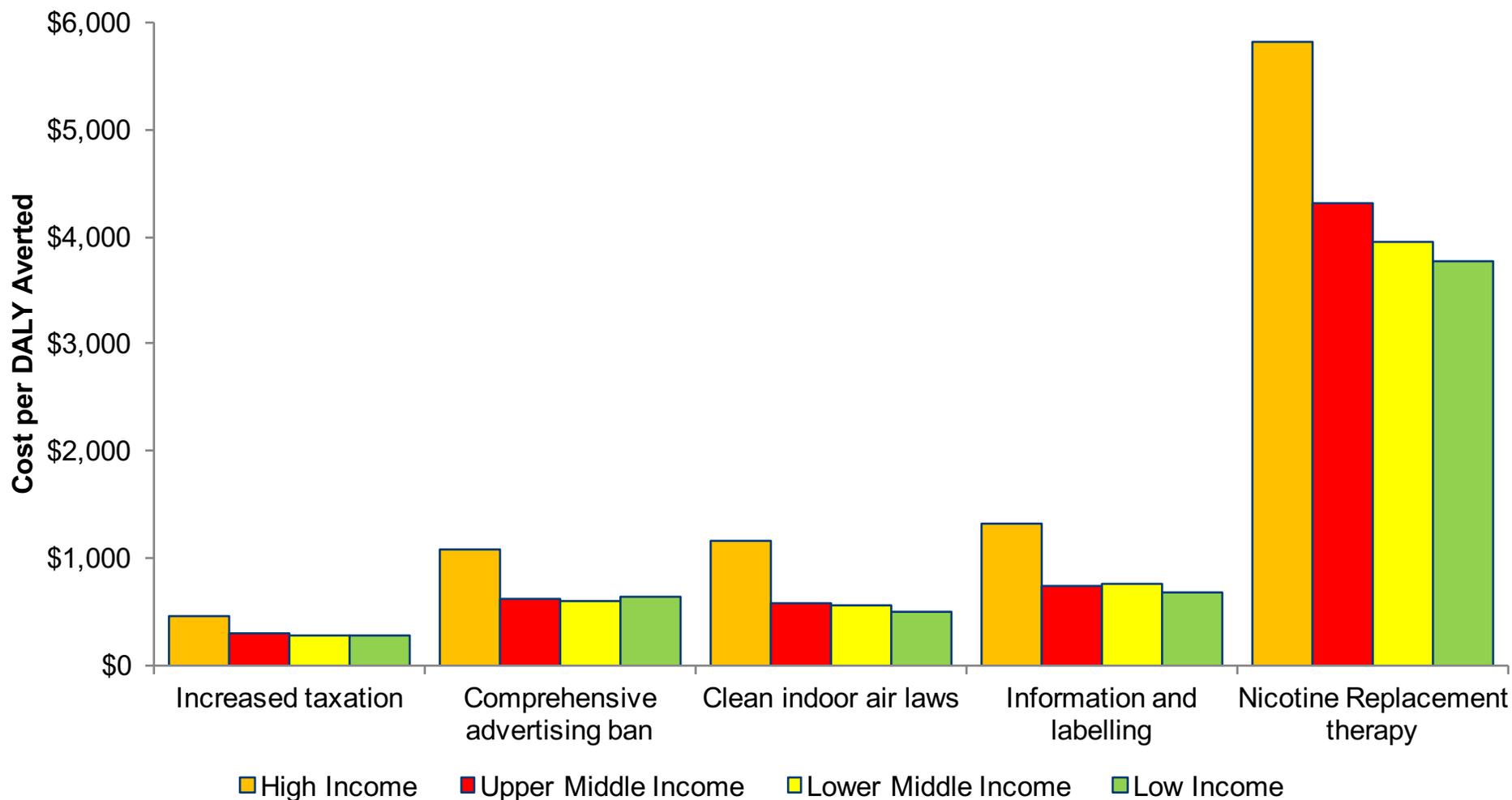
# Tobacco Control

- Evidence-based interventions that address demand for and supply of tobacco
- MPOWER – most effective and cost-effective strategies:
  - Monitor
  - Protect
  - Offer
  - Warn
  - Enforce
  - Raise

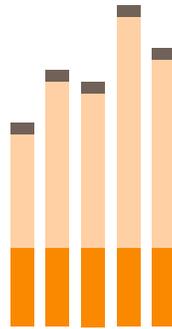


# Key Tobacco Control Policies

## Cost-Effectiveness



Source: WHO, unpublished data

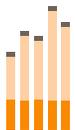


# Tobacco Taxation

# Tobacco Taxation

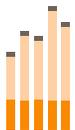
*“... We [] have a package of six policy measures, known as MPOWER, that can help countries implement the provisions in the Convention. All six measures have a proven ability to reduce tobacco use in any resource setting. **But tobacco taxes are by far the most effective.**”*

Director General Dr. Margaret Chan, WHO



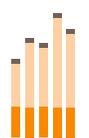
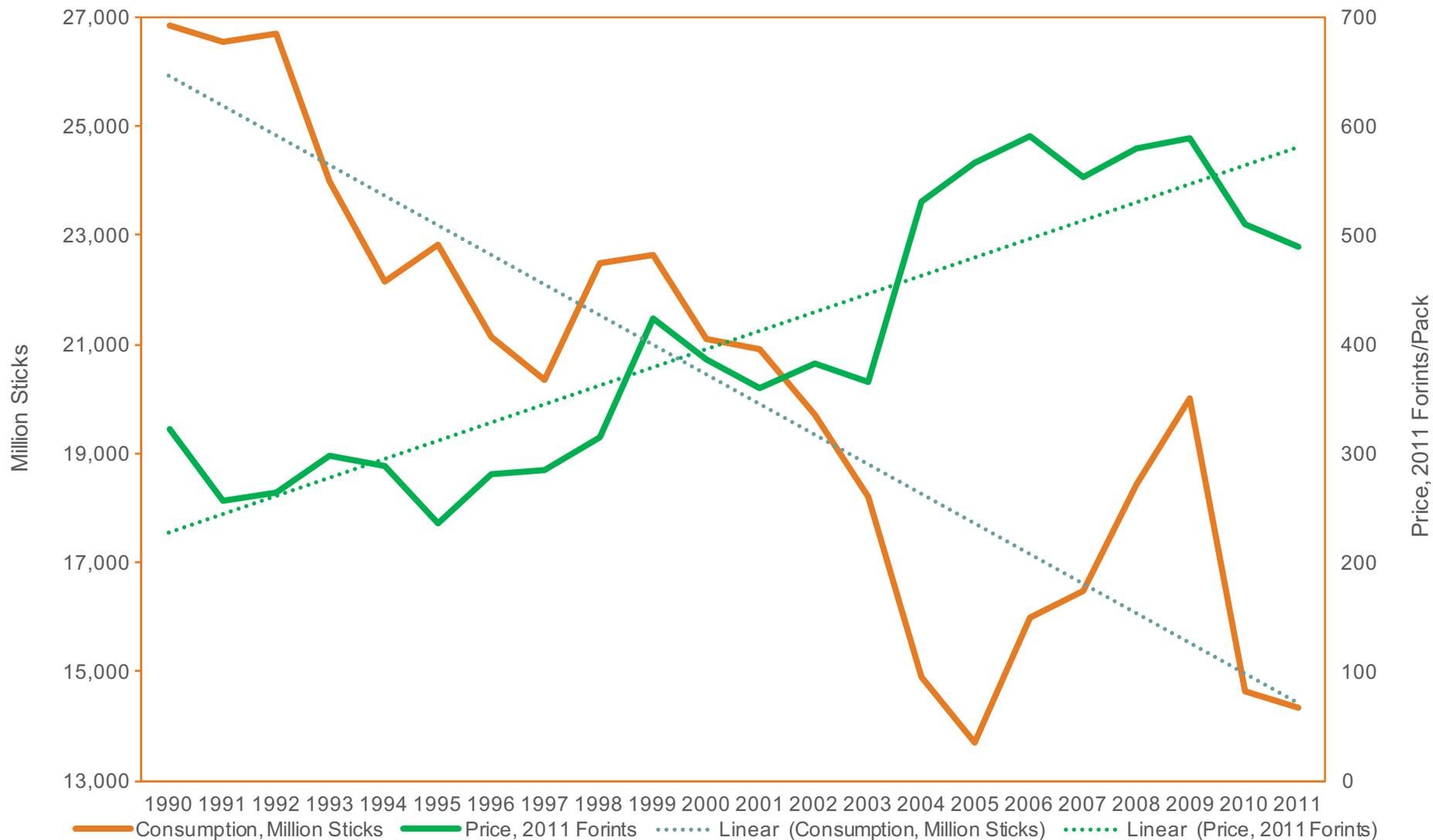
# Tobacco Taxes & Tobacco Use

Increases in tobacco excise taxes that increase prices result in a decline in overall tobacco use.



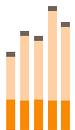
# Cigarette Price & Consumption

## Hungary, 1990-2011, Inflation Adjusted



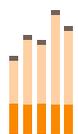
# Tobacco Taxes and LMICs

The demand for tobacco products in lower-income countries is at least as responsive to price as is the demand for tobacco products in high-income countries.



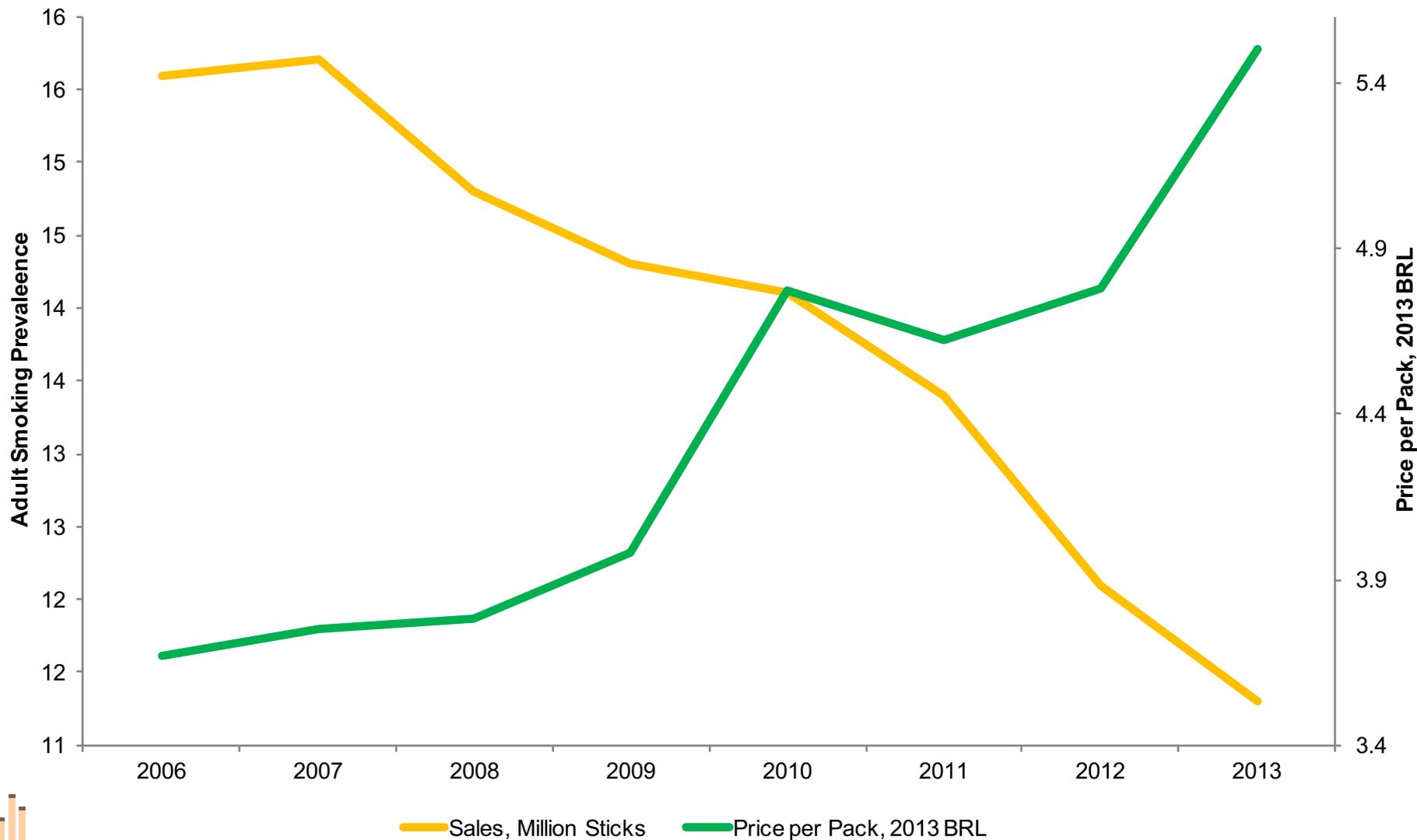
# Tobacco Taxes and Prevalence of Tobacco Use

Increases in tobacco excise taxes that increase prices reduce the prevalence of adult tobacco use.



# Adult Prevalence & Price, Brazil

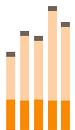
## Adult Smoking Prevalence and Cigarette Price Brazil, Inflation Adjusted, 2006-2013



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

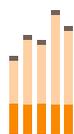
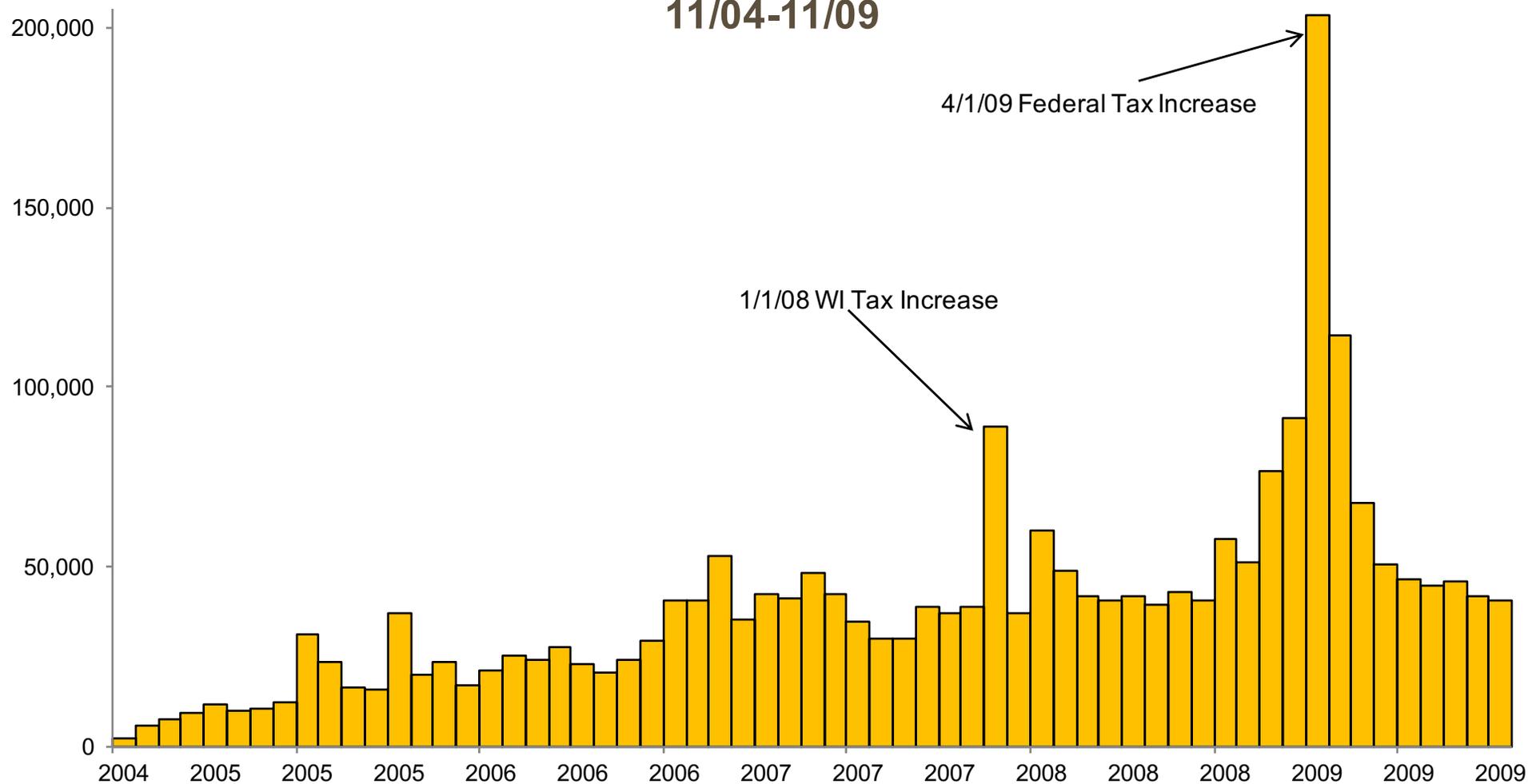
# Tobacco Taxes and Cessation

Increases in tobacco excise taxes that increase prices induce current tobacco users to quit.

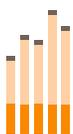
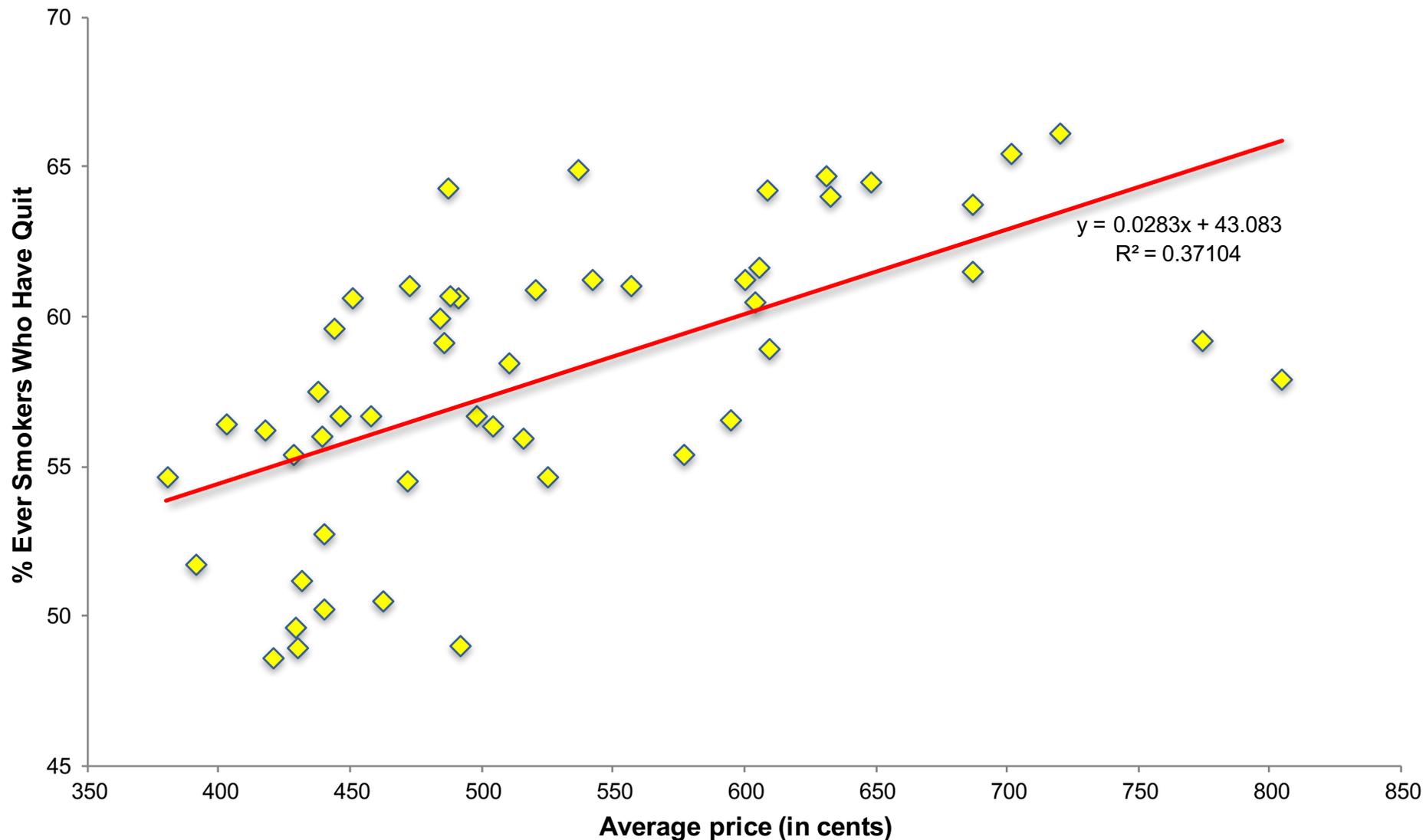


# Taxes, Prices & Smoking Cessation

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



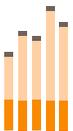
# Cigarette Prices and Cessation US States & DC, 2009



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

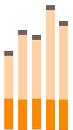
# Tobacco Taxes and Youth Tobacco Use

Increases in tobacco excise taxes that increase prices reduce the initiation and uptake of tobacco use among young people, with a greater impact on the transition to regular use.

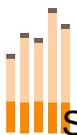
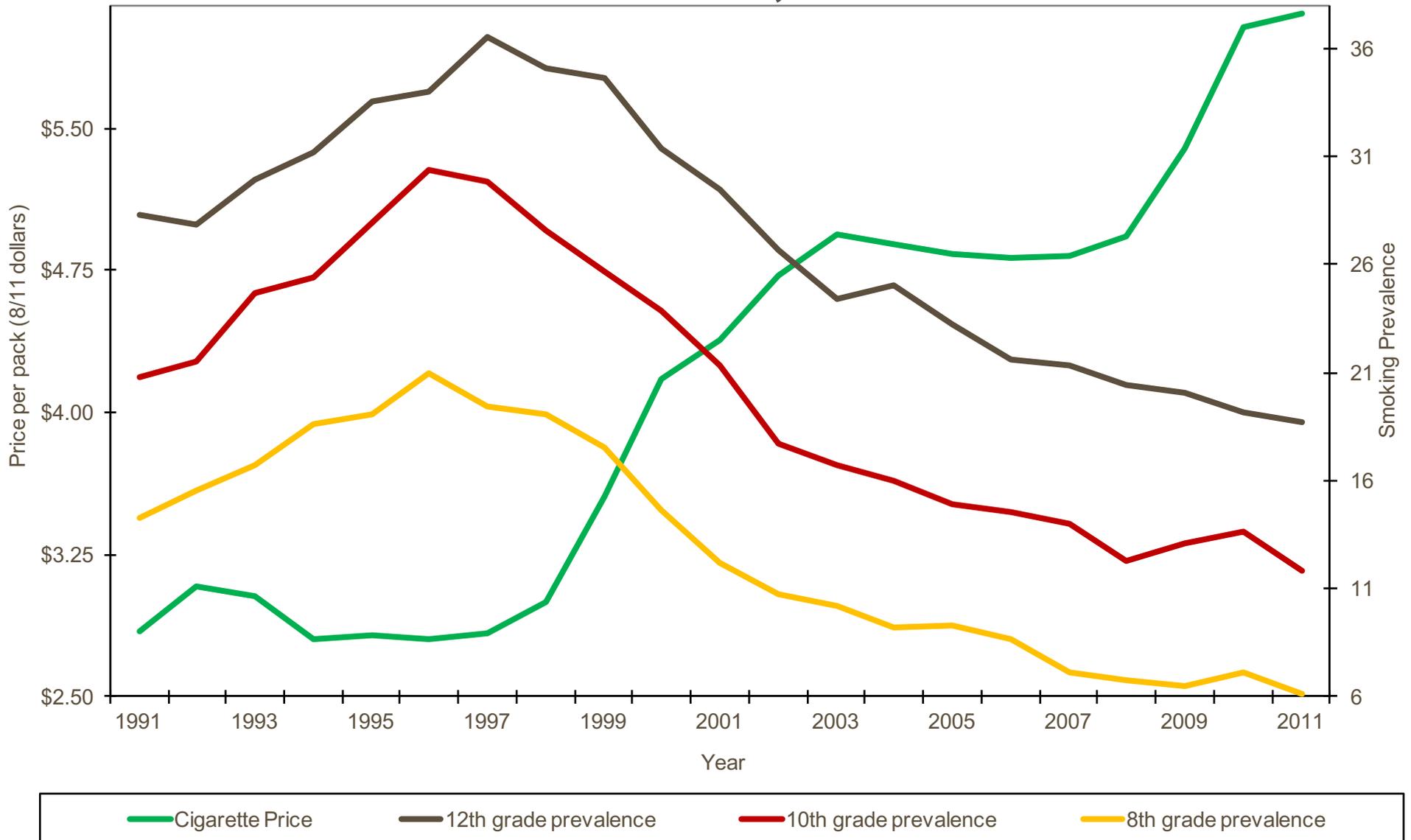


# Tobacco Taxes and Youth Tobacco Use

Tobacco use among young people responds more to changes in tobacco product taxes and prices than does tobacco use among adults.



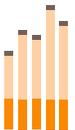
# Cigarette Price and Youth Smoking Prevalence United States, 1991-2011



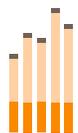
Source: MTF, *Tax Burden on Tobacco*, 2011, and author's calculations

# Tobacco Taxes and Low-Income Populations

In many countries, tobacco use among lower-income populations is more responsive to tax and price increases than is tobacco use among higher-income populations.

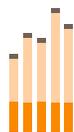


# Who Pays & Who Benefits Turkey, 25% Tax Increase



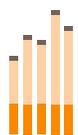
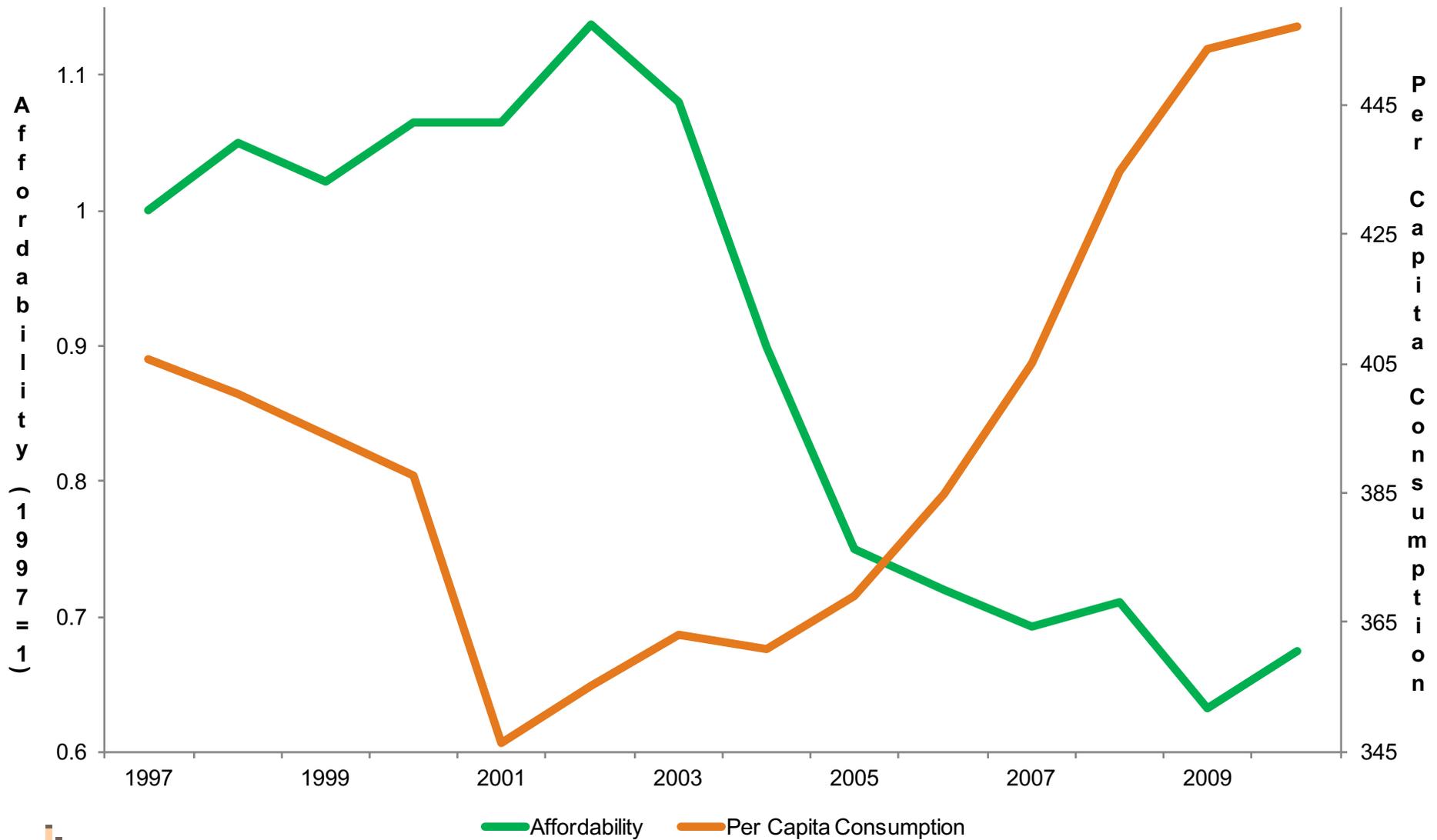
# Tobacco Taxes & Affordability

To achieve public health goals, tobacco tax and price increases need to reduce the affordability of tobacco products.



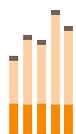
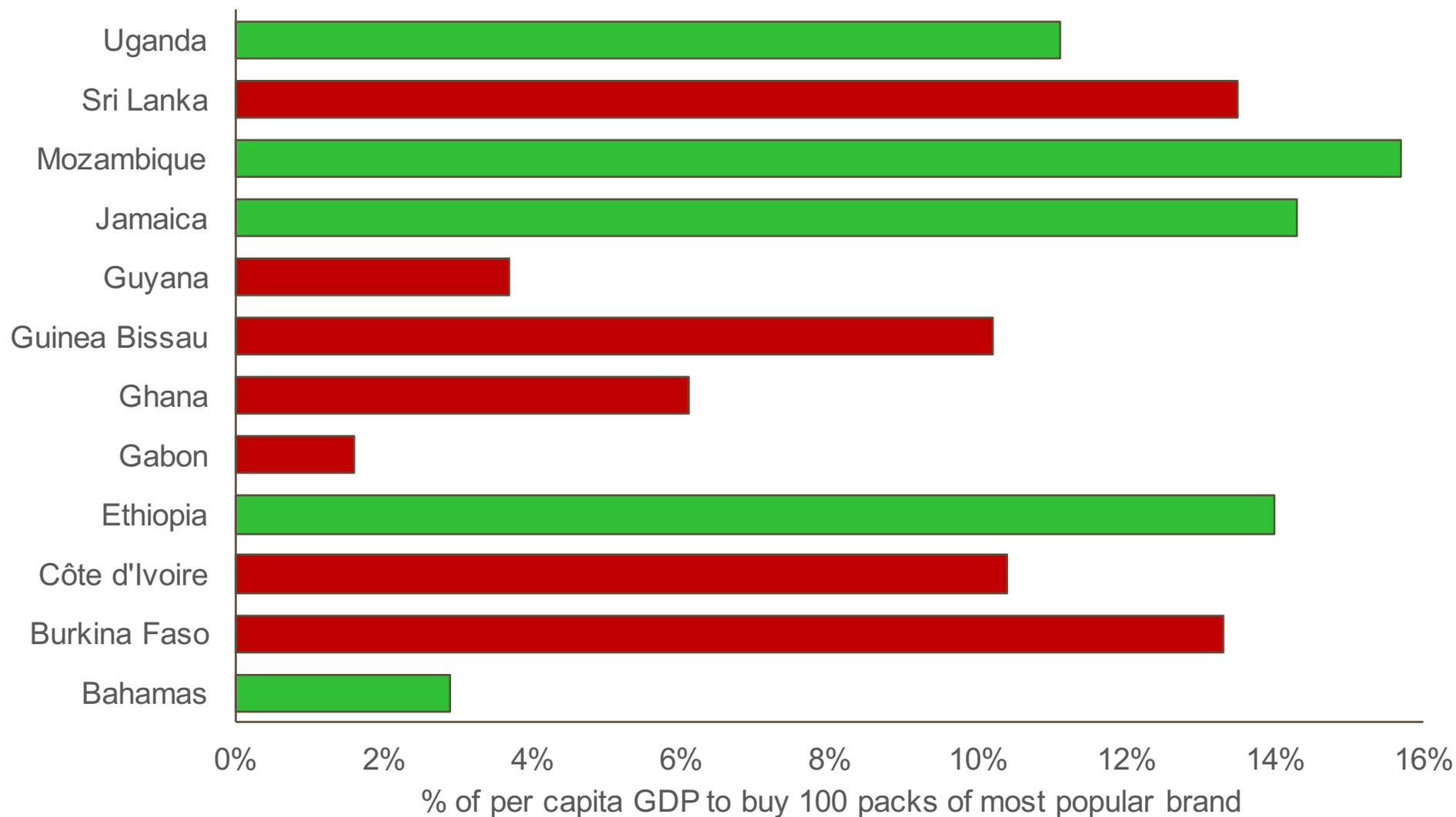
# Affordability and Tobacco Use

## Bangladesh, 1997-2010



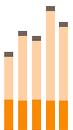
Source: Euromonitor, 2011

# Cigarette Affordability, 2014 and Change, 2008-2014

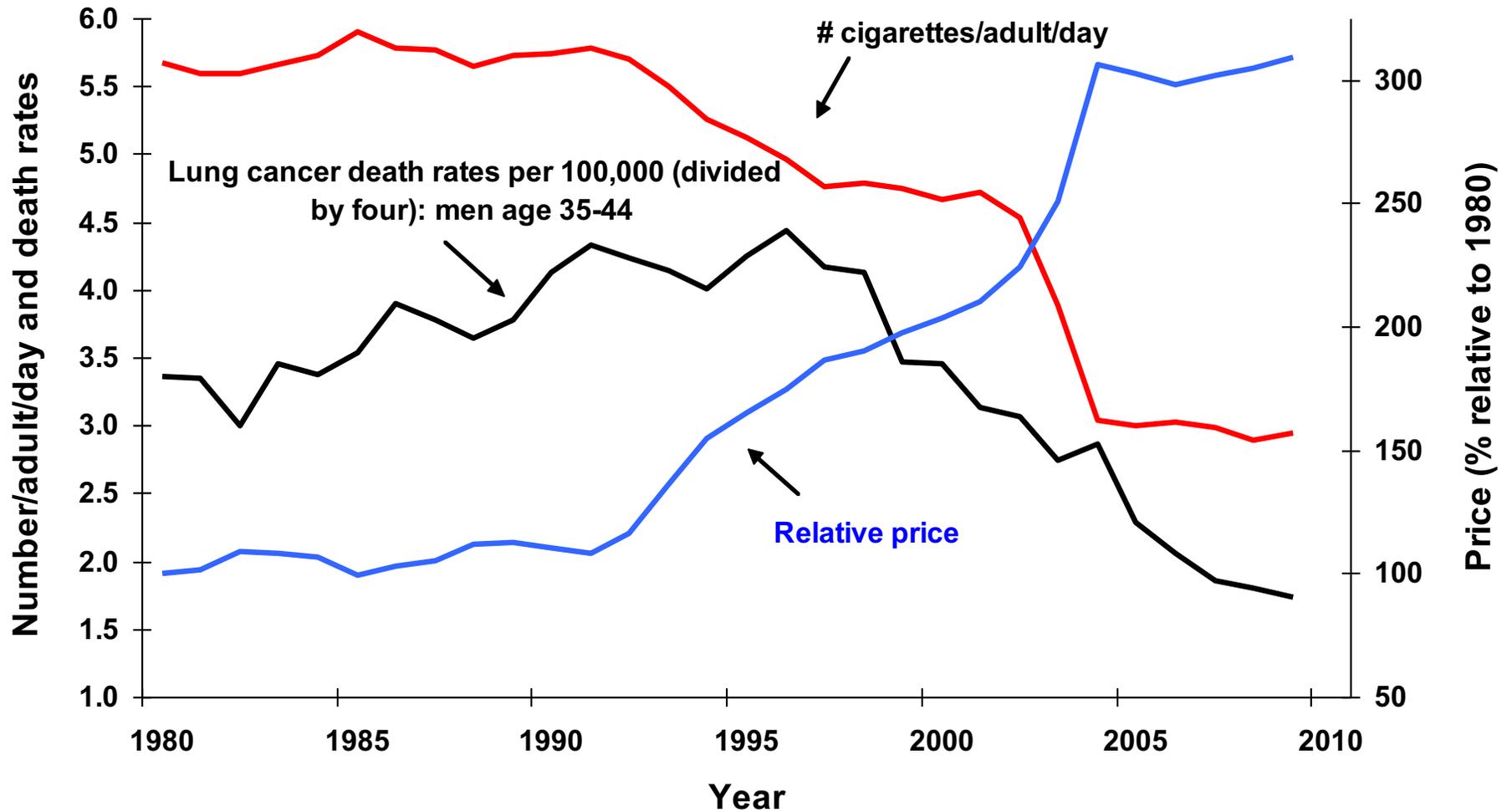


# Tobacco Taxes and Population Health

Tobacco tax increases that  
increase prices improve  
population health

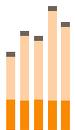


# France: smoking, tax and male lung cancer, 1980-2010



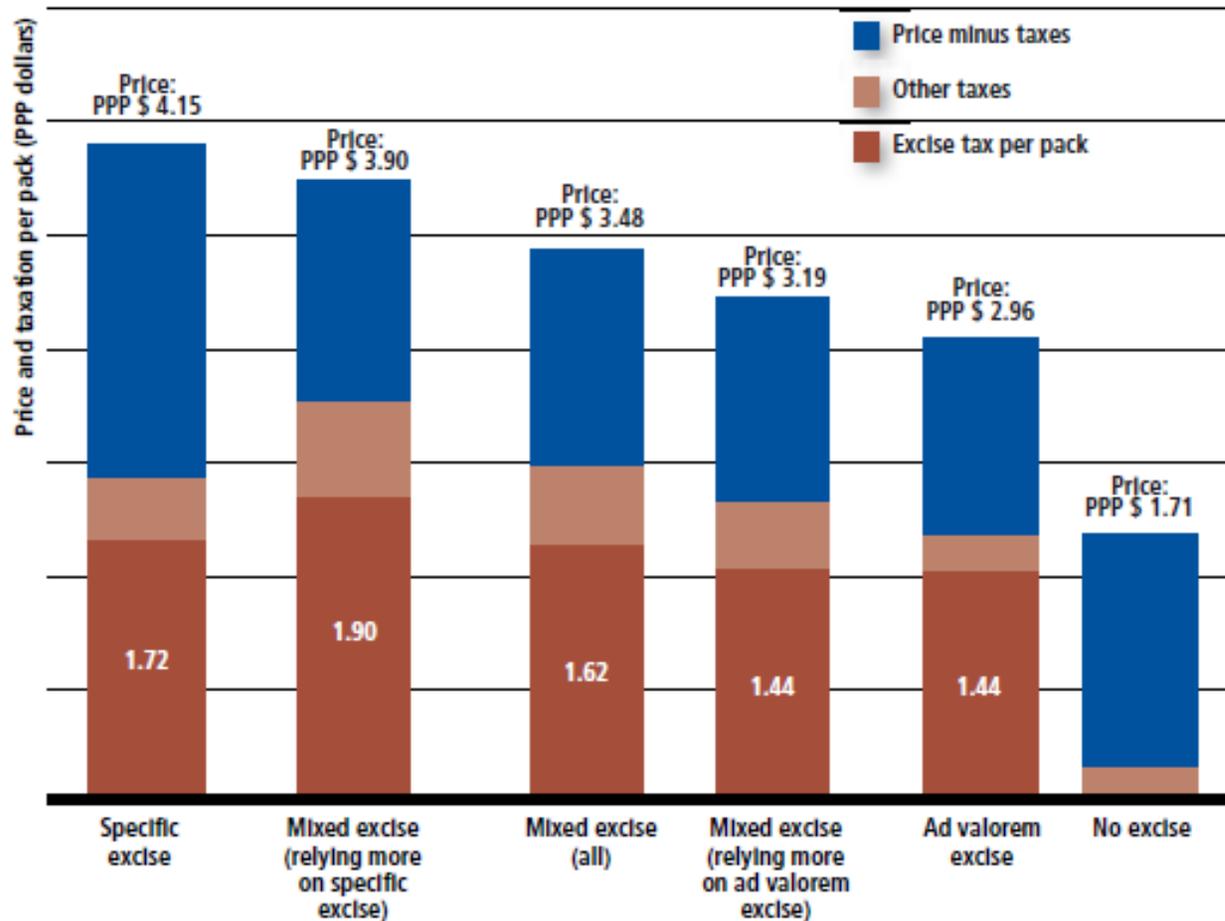
# Tobacco Tax Structure

Higher and more uniform specific tobacco excise taxes result in higher tobacco product prices and increase the effectiveness of taxation policies in reducing tobacco use.

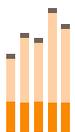


# Excise tax structure: Specific and mixed relying more on the specific component tend to lead to higher prices

WEIGHTED AVERAGE PRICES AND TAXES PER PACK BY TAX STRUCTURE

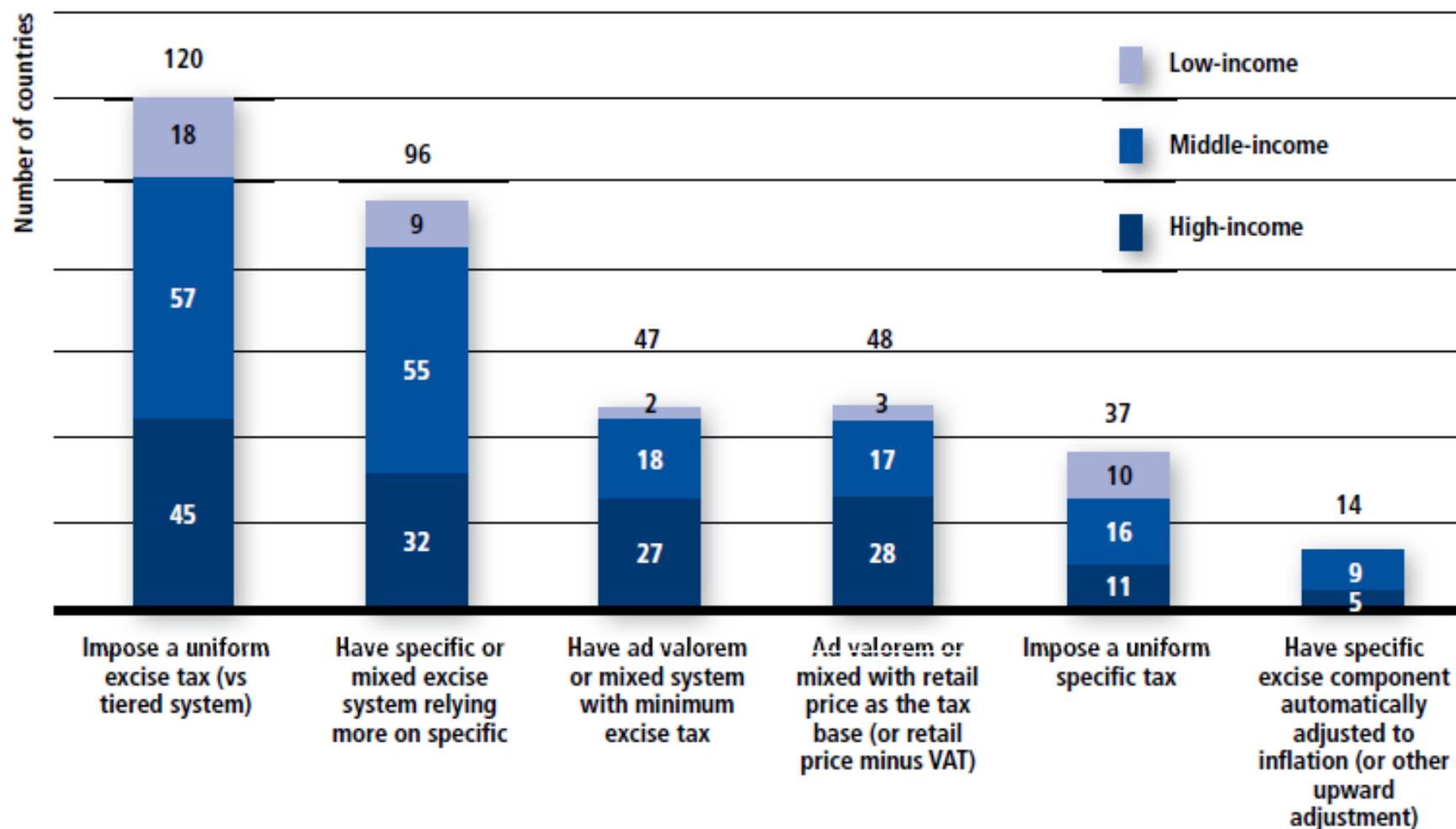


Note: Averages are weighted by WHO estimates of number of current cigarette smokers in each country. Prices are expressed in Purchasing Power Parity (PPP) adjusted dollars or international dollars to account for differences in the purchasing power across countries. Based on 53 high-income, 98 middle-income and 29 low-income countries with data on price of most sold brand, excise and other taxes, and PPP conversion factors.



# Types of Cigarette Excise Taxes, 2014

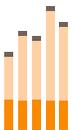
TOBACCO TAX STRUCTURES. NUMBER OF COUNTRIES APPLYING SELECTED CHARACTERISTICS



Source: WHO 2015

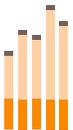
# Summary of Tax Structures

	Specific	Uniform	Price	Excise Share	Total Tax Share
Bahamas	Ad Valorem	Tiered	\$9.41	42.9%	42.9%
Burkina Faso	Ad Valorem	Tiered	\$2.21	17.0%	32.2%
Côte d'Ivoire	Ad Valorem	Uniform	\$2.17	15.2%	26.1%
Ethiopia	Ad Valorem	Uniform	\$1.91	13.9%	18.8%
Gabon	Ad Valorem	Uniform	\$3.21	19.6%	34.8%
Ghana	Ad Valorem	---	\$2.29	13.2%	28.3%
Guinea Bissau	Ad Valorem	Uniform	\$1.40	3.3%	19.1%
Guyana	Specific	Uniform	\$3.11	11.4%	25.2%
Jamaica	Specific	Uniform	\$13.00	26.3%	42.9%
Malawi	Specific	Tiered	\$7.43	14.5%	20.7%
Mozambique	Mixed/Specific	Tiered	\$1.76	16.3%	30.9%
Sri Lanka	Specific	Tiered	\$9.24	63.1%	73.8%

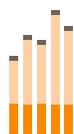
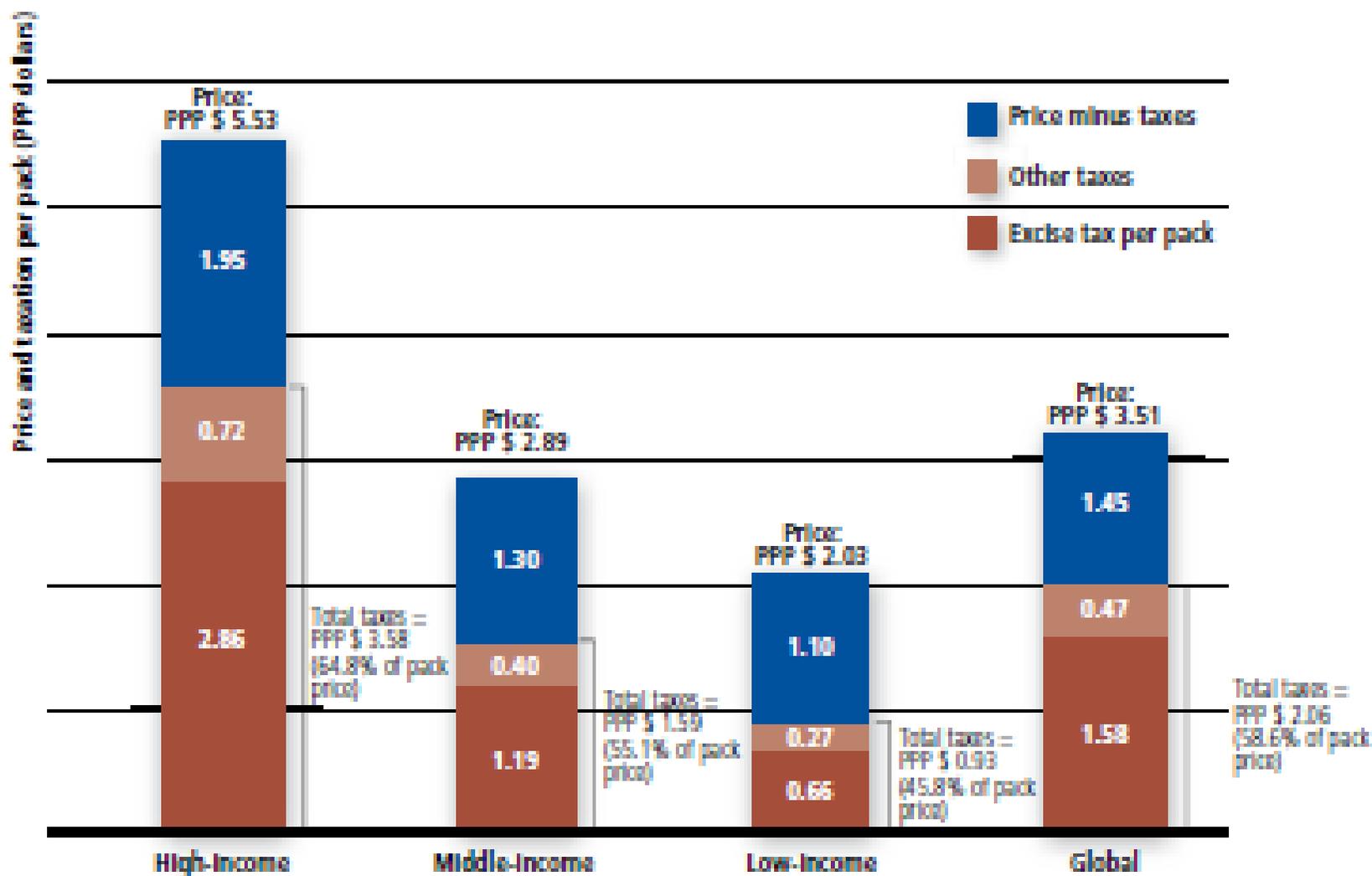


# Tobacco Tax Levels

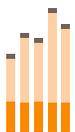
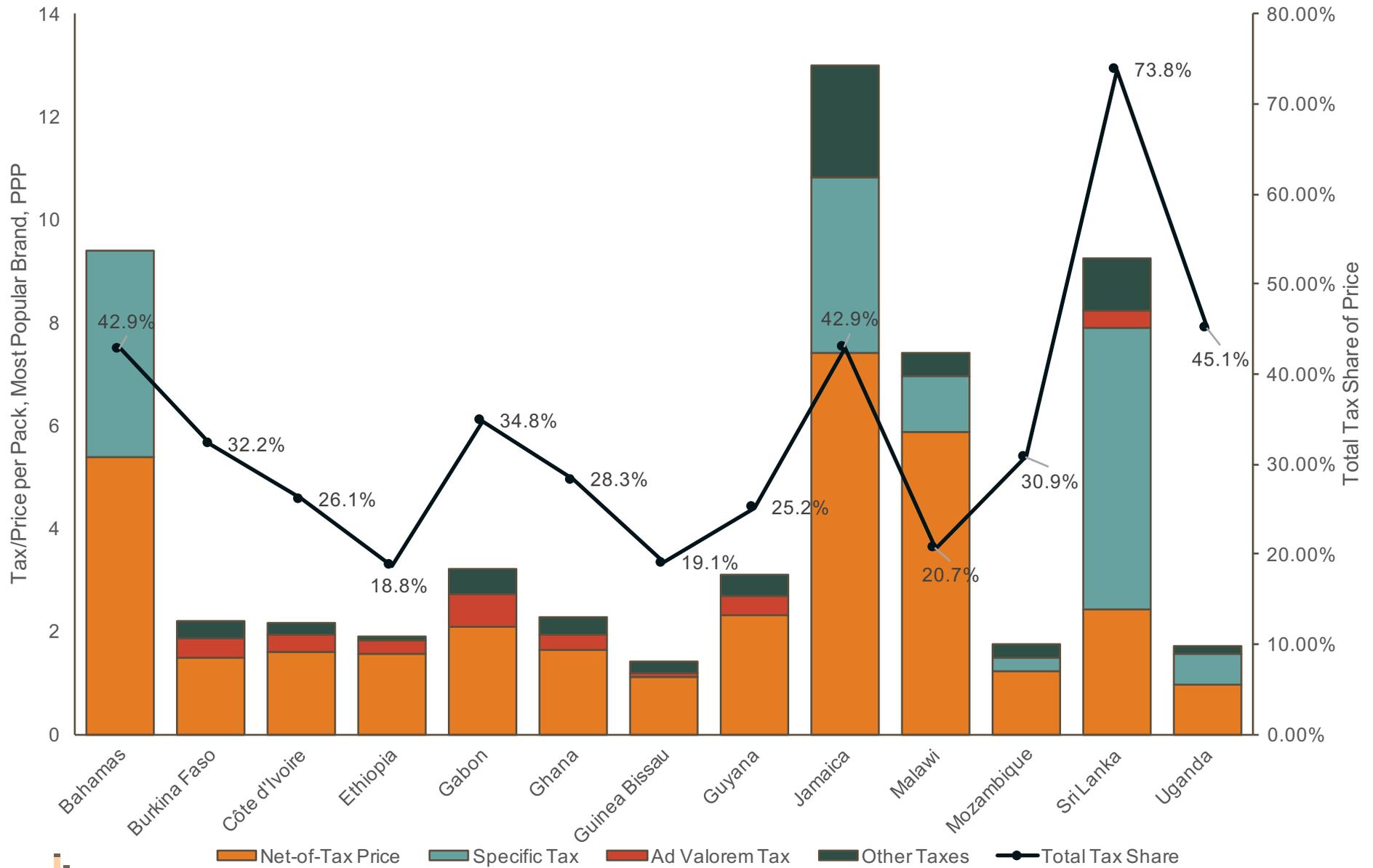
- WHO “Best Practice”: set tobacco excise tax levels so that they account for at least 70 percent of the retail prices for tobacco products
  - Update of World Bank ‘yardstick’ of any taxes accounting for 2/3 to 4/5 of retail prices
  - Well above where most countries are currently
  - Further increases in countries that do reach this target



# Weighted average Price of the Most Sold Brand & Taxes per Pack

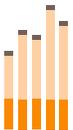


# Cigarette Taxes & Prices, 2014

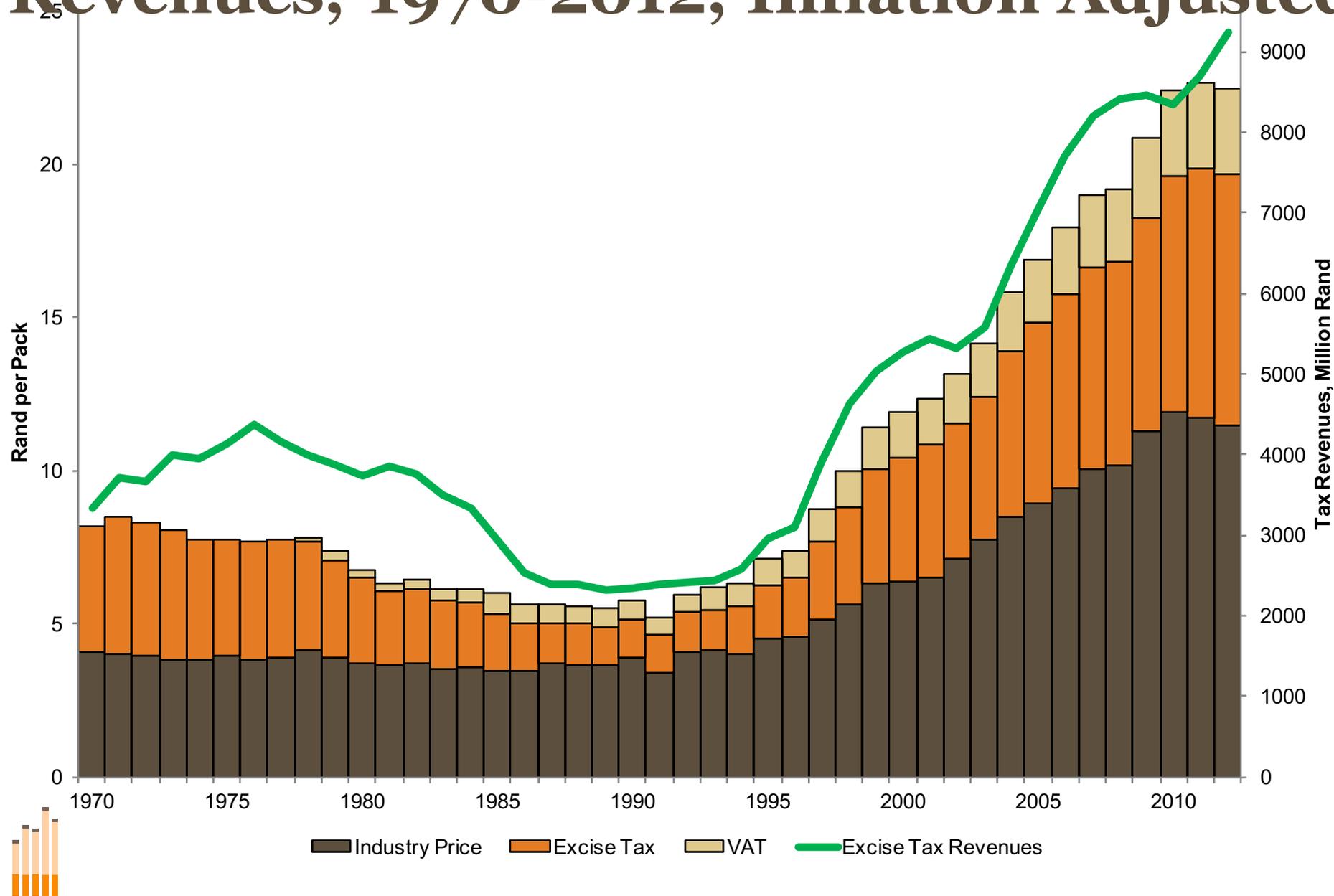


# Tobacco Taxes and Tobacco Tax Revenues

Tobacco tax increases increase tobacco tax revenues.

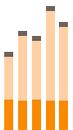


# South Africa - Taxes, Prices, and Tax Revenues, 1970-2012, Inflation Adjusted

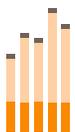


# Earmarking Tobacco Tax Revenues

- Using a portion of tobacco tax revenues to support other tobacco control and/or health promotion efforts
  - Increases the health impact of tobacco tax increases
  - Increases public support for tax increases
    - Including among many smokers



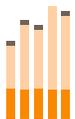
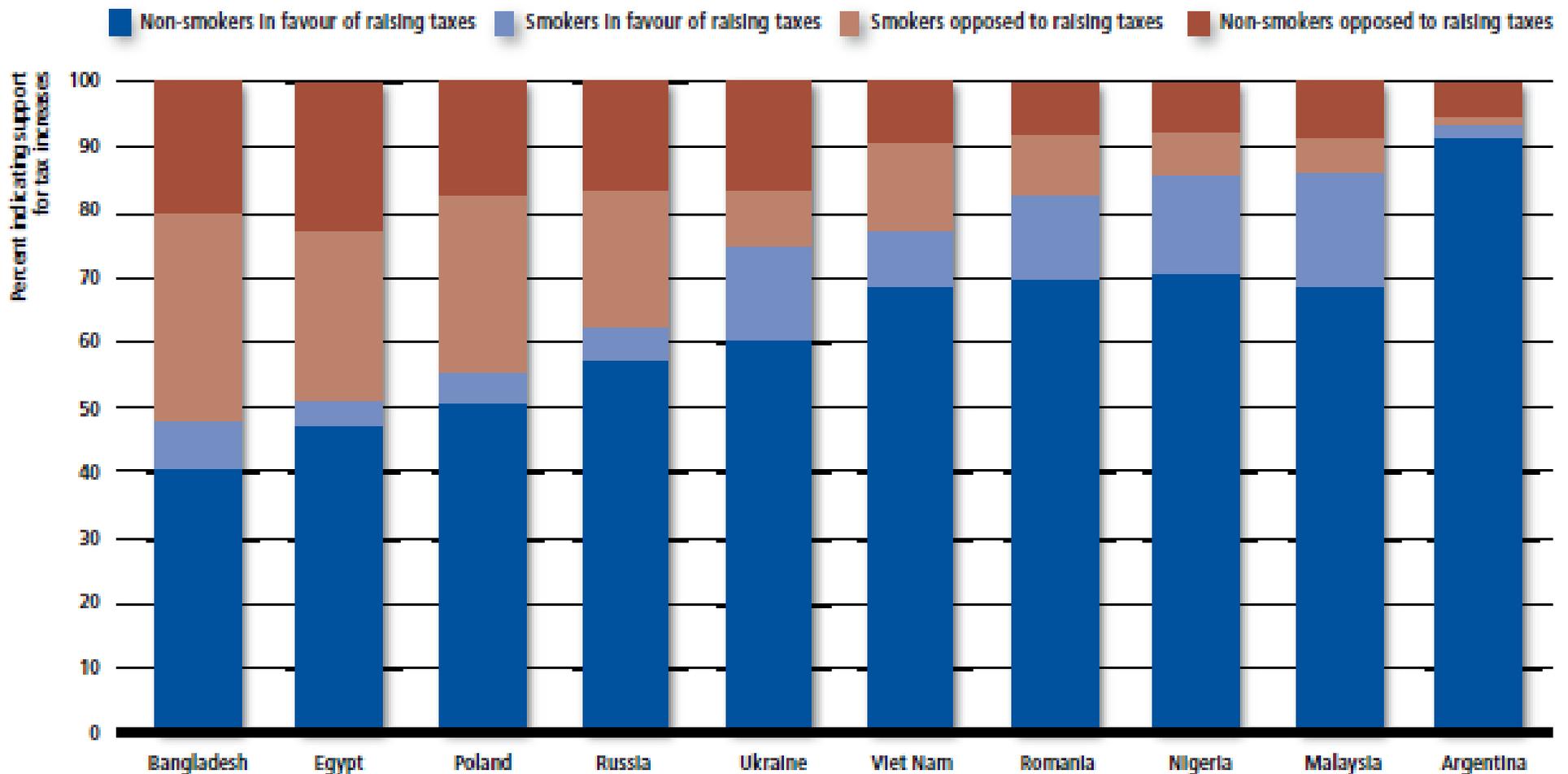
# State Tobacco Control Program Funding and Youth Smoking Prevalence, United States, 1991-2009



Source: ImpacTeen Project, UIC; YRBS

# Support for Earmarked Taxes

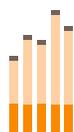
## BROAD SUPPORT FOR CIGARETTE TAXES THAT IMPROVE HEALTH PROGRAMMES



Source: WHO 2015

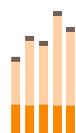
# Earmarked Tobacco Taxes

COUNTRY	REPORTED USE OF EARMARKED TOBACCO TAXES
Algeria	6 dinars per pack of cigarettes go to the emergency fund and medical care activities, 2 dinars per pack go to cancer control
Argentina	Additional emergency tax of 7% of retail price to finance social and/or health programmes of the Rural Change Program and the Social-Agricultural Programmes
Bangladesh	Additional excise of 1% of the retail price goes to the Ministry of Health
Cabo Verde	All excise tax revenues are used for sports and health
Colombia	16% of the specific excise tax on tobacco products is used for sports while all revenues from ad valorem excise go to health
Comoros	Part of the 5% of tax on tobacco goes to Ministry of Sports and the hospital emergencies section
Congo	Specific excise tax per pack (40 XOF): half goes to health insurance and half to sports
Costa Rica	All revenues from the specific excise tax are used to fund programmes for the prevention and treatment of diseases related to tobacco use, cancer treatment, harmful use of alcohol, and sports
Côte d'Ivoire	An extra tax of 5% goes to the AIDS solidarity fund and another 2% extra tax goes to sports
Egypt	An extra tax of 10 piasters per pack is used to fund student health insurance
El Salvador	35% of revenues from taxes on tobacco, alcohol and firearms, ammunition and explosives (or a minimum of US\$ 20 million per year) fund the FOSALUD (solidarity fund for health)
Guatemala	All revenues from the ad valorem excise tax on tobacco are used for health programmes
Iceland	At least 0.9% of gross tobacco sales is allocated to tobacco control
India	Specific amount for all tobacco products (varies by product), except bids, goes to the Health Cessation Fund and an amount levied on bids goes to the Bidi Workers' Welfare Fund, which also includes medical care to workers involved in the bidi industry
Indonesia	10% surcharge imposed on tobacco excise; at least 50% of its proceeds are allocated for health programmes and law enforcement at the regional level. 2% of tobacco tax revenues are allocated to regional governments of which a proportion should be used for health
Iran (Islamic Republic of)	Up to 2% of taxes collected on tobacco products are used to support tobacco control activities



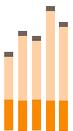
# Earmarked Tobacco Taxes

Jamaica	20% of the Special Consumption Tax (SCT) on tobacco and another 5% of the SCT on all products including tobacco go to the National Health Fund
Madagascar	6 ariary per pack to fund the National Fund for the Promotion and Development of Youth, Sports and Recreation
Mongolia	A proportion of tobacco (2%) and alcohol (1%) excise tax revenues is allocated to the Health Promotion Foundation
Nepal	All tobacco tax revenues go to the Health Tax Fund, financing mainly prevention and treatment of noncommunicable diseases
Panama	50% of tobacco tax revenues collected go to National Institute of Oncology, the Ministry of Health for cessation services and Customs to fight illicit trade in tobacco products. The Ministry of Health also funds regional activities on tobacco control through the money received
Philippines	Following the tax increase in 2012, about 80% of incremental revenues will be allocated for universal health care while 20% will be allocated nationwide for medical assistance and health facility enhancement programmes
Poland	0.5% of the excise duty levied funds a programme to reduce tobacco product consumption
Republic of Korea	An amount of 354 won per pack goes to the Health Promotion Fund which finances health promotion research and projects
Romania	10 euros per 1,000 cigarettes and 13 euros per kilogram of loose tobacco are dedicated for health. Additionally, 1% of the budget from the excise on cigarettes is used to finance sports
Switzerland	0.26 francs per pack of cigarettes goes to the Tobacco Prevention Fund
Thailand	Surcharge of 2% on tobacco and alcohol excise goes to ThaiHealth Fund
The former Yugoslav Republic of Macedonia	Amount of 0.053 denars per piece (cigarette) allocated to fund drugs for rare diseases
United States of America	Varies by state. Amount per pack funds different types of activities, mainly health activities



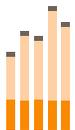
# Tax Avoidance & Tax Evasion

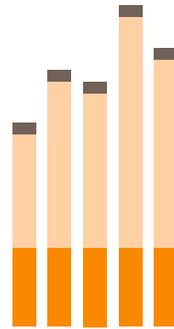
Tax avoidance and tax evasion reduce, but do not eliminate, the public health and revenue impact of tobacco tax increases.



# Combating Illicit Tobacco Trade

- Illicit trade protocol to the WHO FCTC
  - Currently in process of being signed/ratified:
    - Gabon, Sri Lanka have ratified; Burkina Faso, Côte d'Ivoire, Ghana and Guinea Bissau have signed
  - Provisions calling for:
    - Strong tax administration
      - Prominent, high-tech tax stamps and other pack markings
      - Licensing of manufacturers, exporters, distributors, retailers
      - Unique identification codes on packages
    - Better enforcement
      - Increased resources; Focus on large scale smuggling
    - Swift, severe penalties
    - Multilateral/intersectoral cooperation

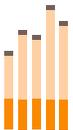




# Summary

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- Considerable health and economic consequences from tobacco use
- Tobacco control has positive economic impact
  - Healthier, more productive labor force, reduced costs
- Tobacco control interventions are cost-effective
- Sizable tobacco tax increases most effective and cost-effective option for reducing tobacco use and its consequences
  - Improve public health while raising revenues



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**For more information:**

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