

Tobacco Taxes and Tobacco Use: Global Evidence

Frank J. Chaloupka

Chair, WHO Collaborating Centre on the
Economics of Tobacco & Tobacco Control

Distinguished Professor, UIC

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IARC HANDBOOKS OF CANCER PREVENTION
Tobacco Control

Volume 14

Effectiveness of Tax and Price
Policies for Tobacco Control

2011

Outline of Handbook volume 14

- **Chapter 1:** Introduction
- **Chapter 2:** Overview of Tobacco Taxation
- **Chapter 3:** Industry Pricing Strategies and Other Pricing Policies
- **Chapter 4:** Tax, Price and Aggregate Demand for Tobacco
- **Chapter 5:** Tax, Price and Adult Tobacco Use
- **Chapter 6:** Tax Price and Tobacco Use Among Young People
- **Chapter 7:** Tax, Price and Tobacco Use among the Poor
- **Chapter 8:** Tax Avoidance and Tax Evasion
- **Chapter 9:** Economic and Health Impact of Tobacco Taxation
- **Chapter 10: Summary** (Working Group of Experts)
- **Chapter 11: Evaluation** (Working Group of Experts)
- **Chapter 12: Recommendations** for Research (Working Group of Experts)

Handbook 14 Working Group

- **Collaborators:** F. Chaloupka, Chair (USA), N. Nargis (Bangladesh), L. Joossens (Belgium), L. Nguyen (Finland), L. Clancy, L. Currie (Ireland), S. Gallus, C. La Vecchia (Italy), F. Godfrey (Luxembourg), C. Van Walbeek (South Africa), E. Fernandez (Spain), S. Delipalla, AM Perucic (Switzerland), Z. Onder (Turkey), A. Gilmore, (United Kingdom), E. Blecher, TW Hu, D. Levy, H. Ross, J. Tauras (USA)
- **Invited Specialist:** Frank van Driessche, (Belgium)
- **Contributing but unable to attend the meeting:** R. Iglesias (Brazil), M. Pekurinen (Finland), A. Yurekli (Switzerland), K. Smith (United Kingdom)
- **Acknowledgement:** funded by the European Commission Seventh Framework Programme for the Pricing Policies and Control of Tobacco in Europe (PPACTE) project

Preparation

- Working Group Members search the scientific literature and prepare preliminary working drafts following the outline
- Studies published (or accepted for publication) in the openly available scientific literature are the main source of evidence for the review and evaluation
- Peer-reviewed government agency reports that are widely available can be considered
- Unpublished reports that are in their final form and publicly available, can be exceptionally included if their inclusion is pertinent to making an evaluation
- Volume 14 includes work published up to the week of the Handbook Meeting in May 2010 (May 17-22).

Evaluation Criteria

- **Sufficient evidence**: An association has been observed in studies in which chance, bias and confounding can be ruled out with reasonable confidence. The association is highly likely to be causal.
- **Strong evidence**: There is consistent evidence of an association but evidence of causality is limited by the fact that chance, bias or confounding have not been ruled out with reasonable confidence. However, explanations other than causality are unlikely.
- **Limited evidence**: There is some evidence of association between the intervention under consideration and a given effect, but alternative explanations are possible.

Evaluation Criteria

- **Inadequate/No Evidence**: There are no available methodologically sound studies showing an association; the available studies are of insufficient quality, consistency or statistical power to permit a conclusion regarding the presence or absence of a causal association between the intervention and a given effect. Alternatively, this category is used when no studies are available
- **Evidence of No Effect**: Methodologically sound studies consistently demonstrate the lack of an association between the intervention under consideration and a given effect.

Evaluation Statements

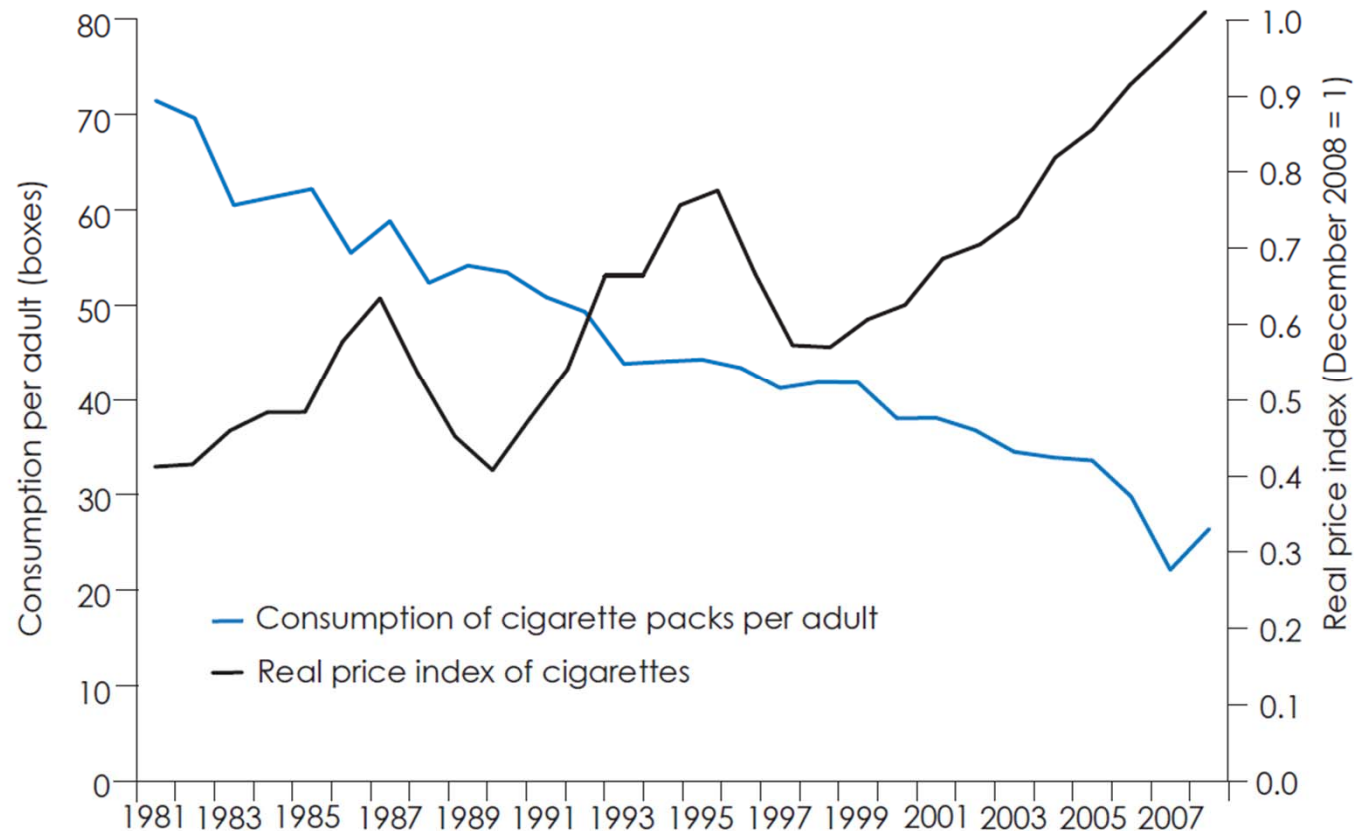
Sufficient Evidence that:

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

Taxes, Prices and Tobacco Use

Mexico

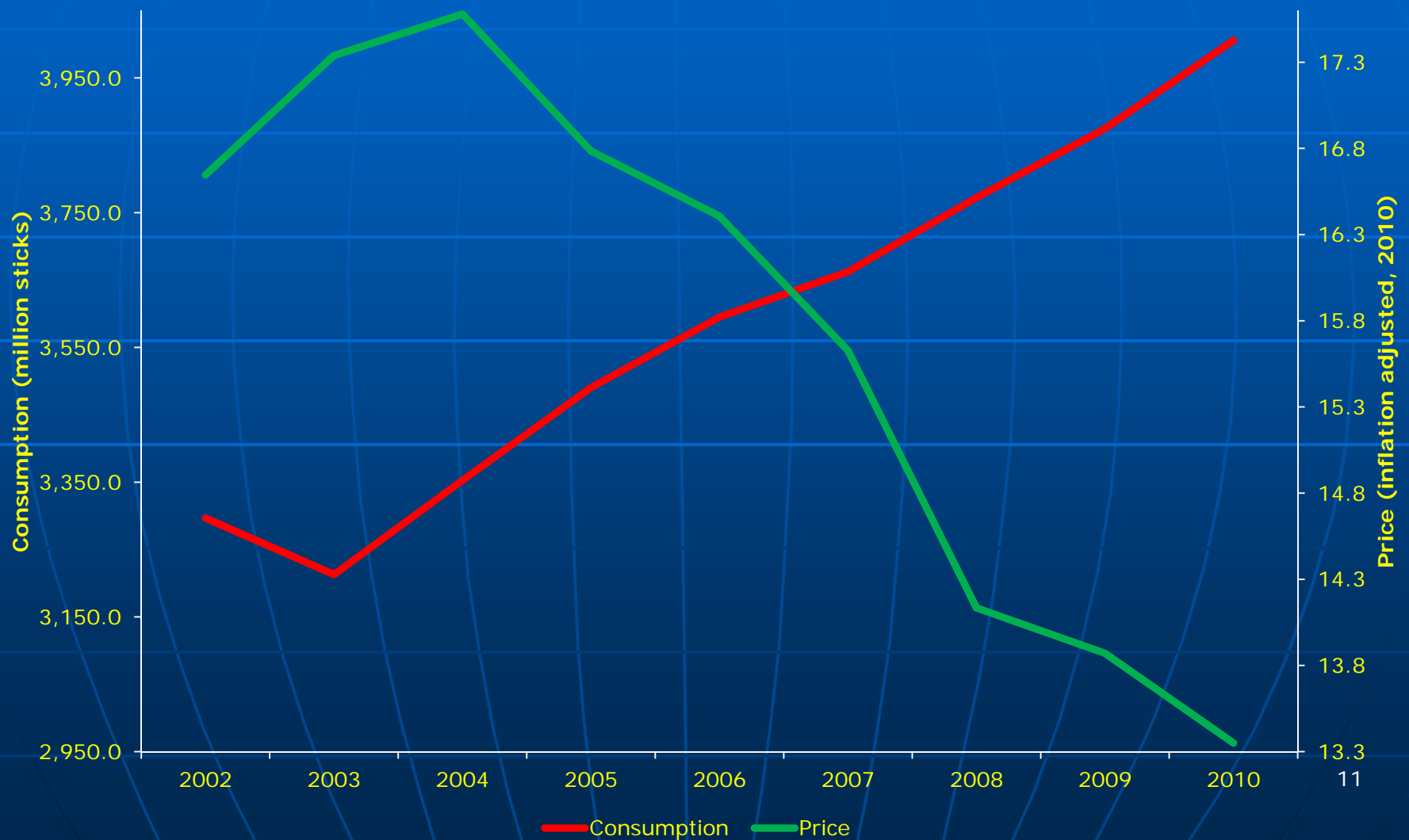
Graph 2.1: Cigarette consumption and real price, 1981-2008



Source: Waters, et al., 2010

Taxes, Prices and Tobacco Use

Cigarette Prices and Cigarette Consumption, Guatemala, Inflation Adjusted, 2002-2010



Sufficient Evidence that:

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

Cigarette Prices and Adult Smoking Prevalence, United States, 1970-2010

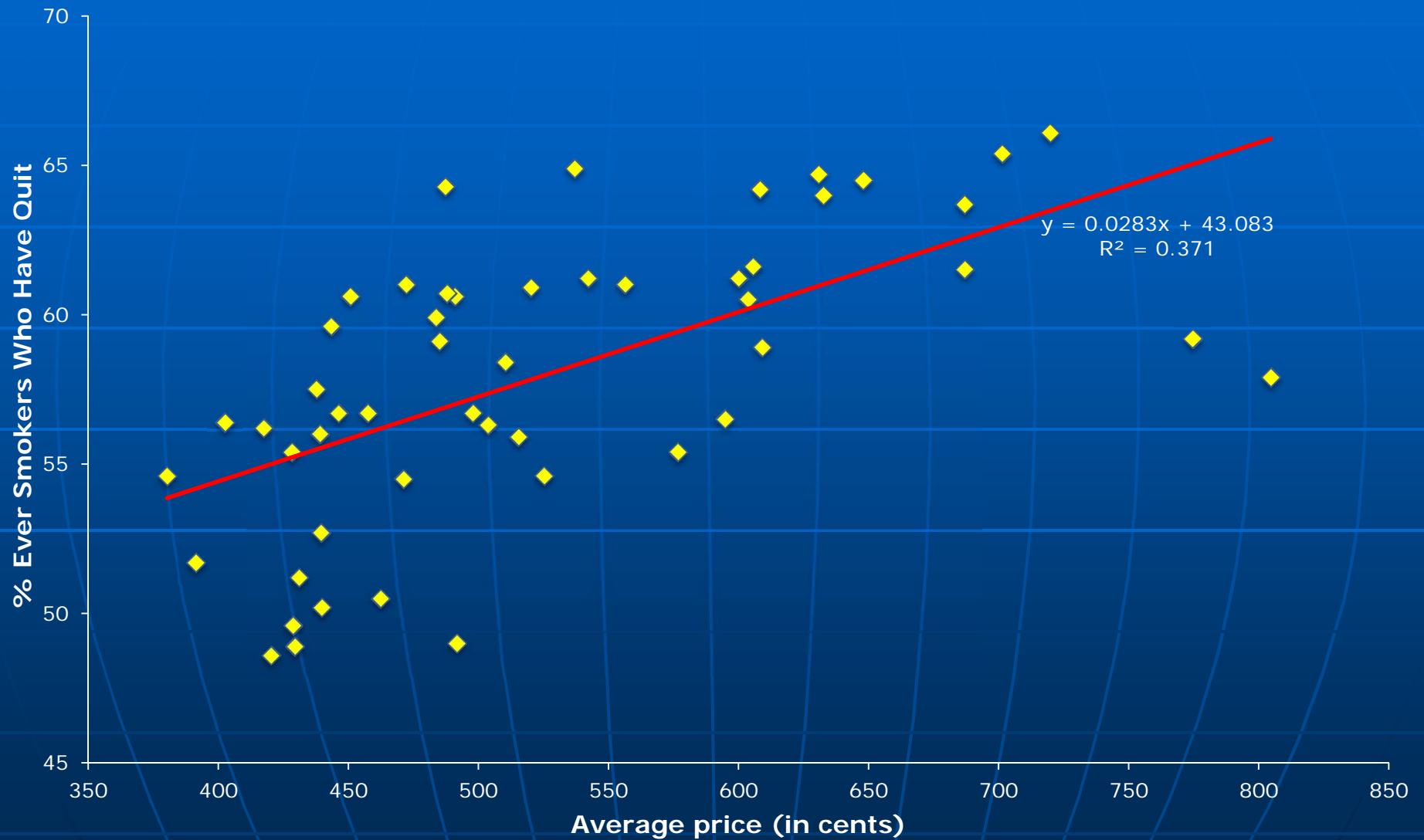


Source: *Tax Burden on Tobacco*, 2011, National Health Interview Survey, and author's calculations

Sufficient Evidence that:

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

Cigarette Prices and Cessation US States & DC, 2009

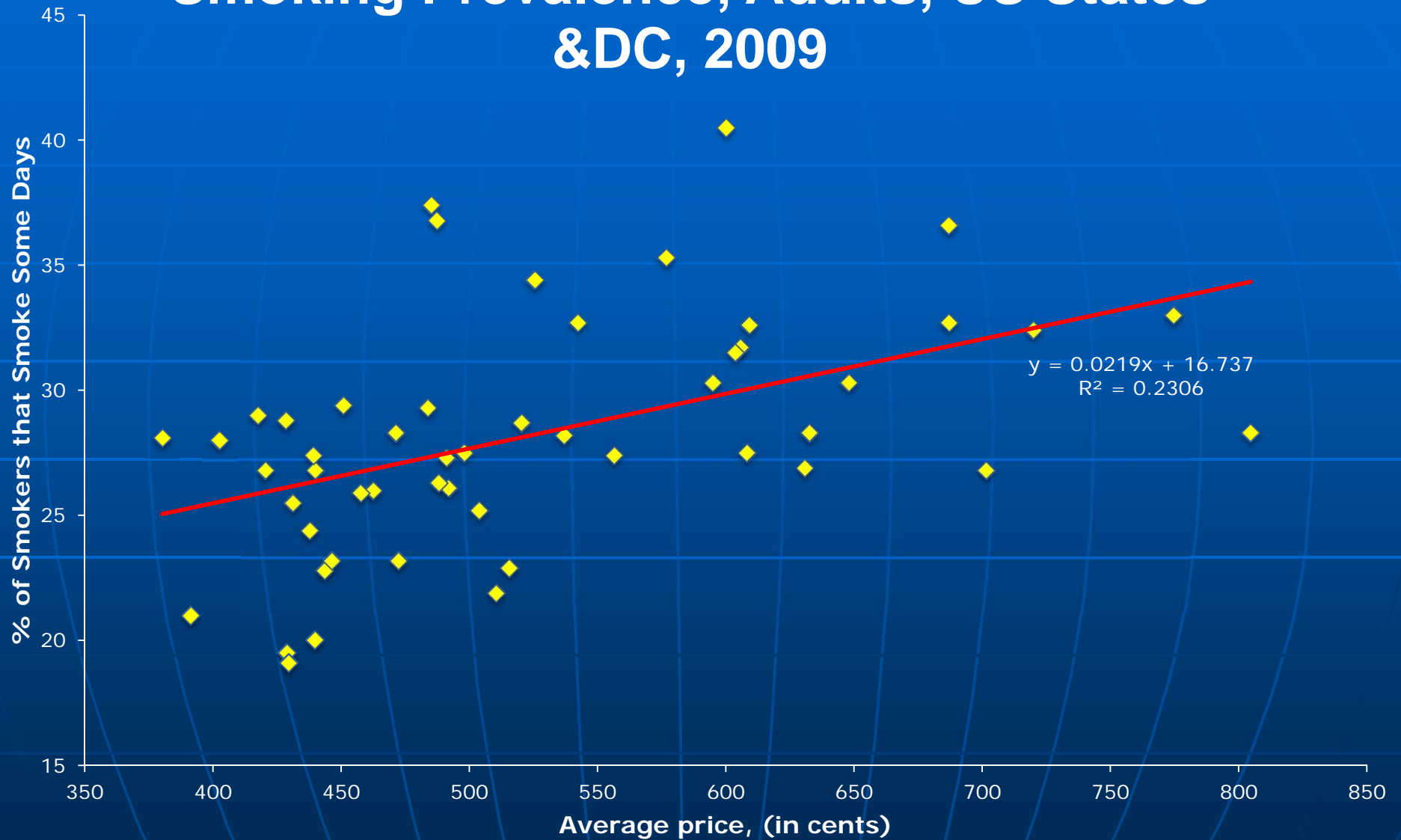


Source: BRFSS, *Tax Burden on Tobacco*, 2010, and author's calculations

Sufficient Evidence that:

Increases in tobacco excise taxes that increase prices lower the consumption of tobacco products among continuing users.

Cigarette Price and Less than Daily Smoking Prevalence, Adults, US States & DC, 2009



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

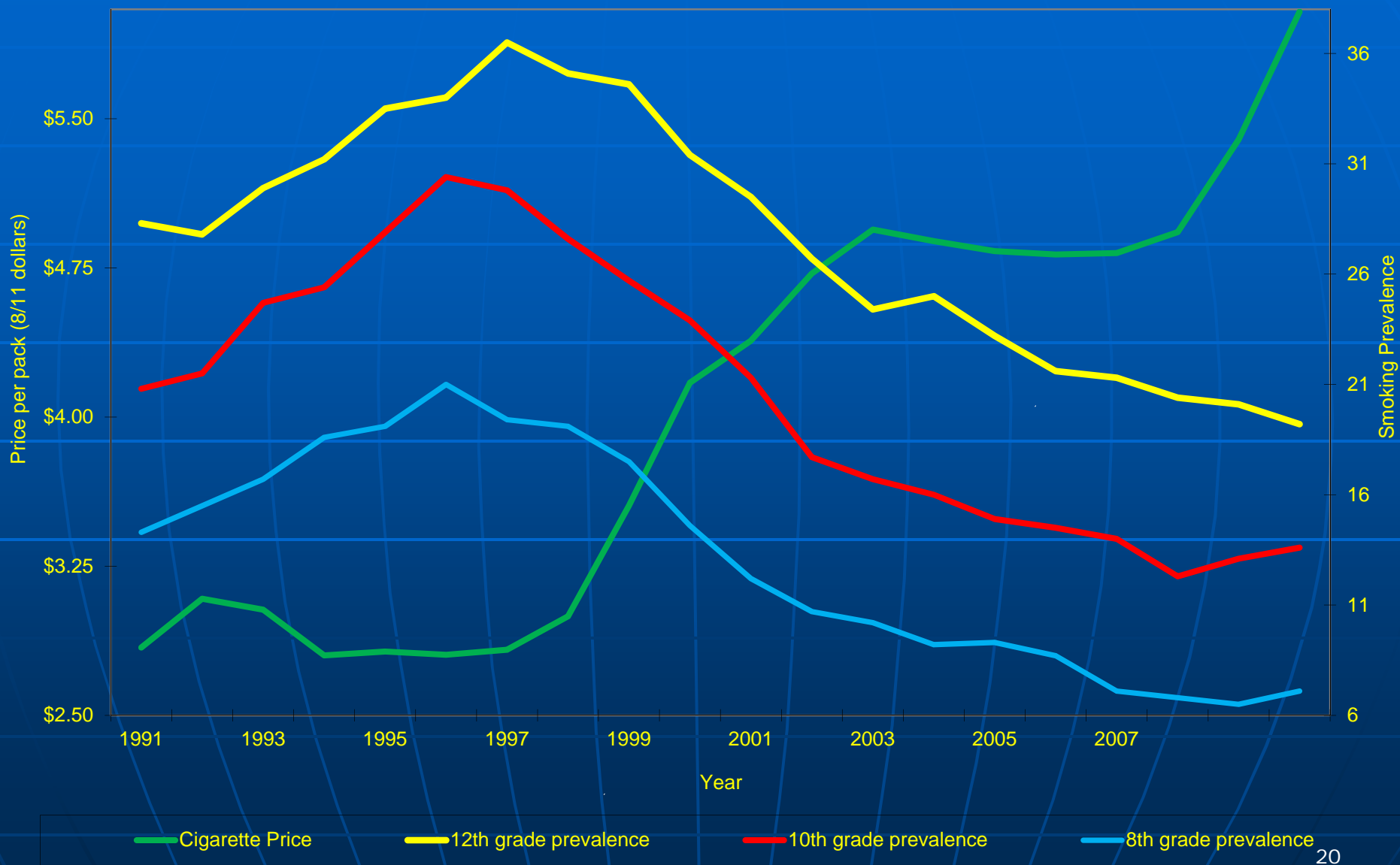
Sufficient Evidence that:

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.

Sufficient Evidence that:

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, 1991-2010



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

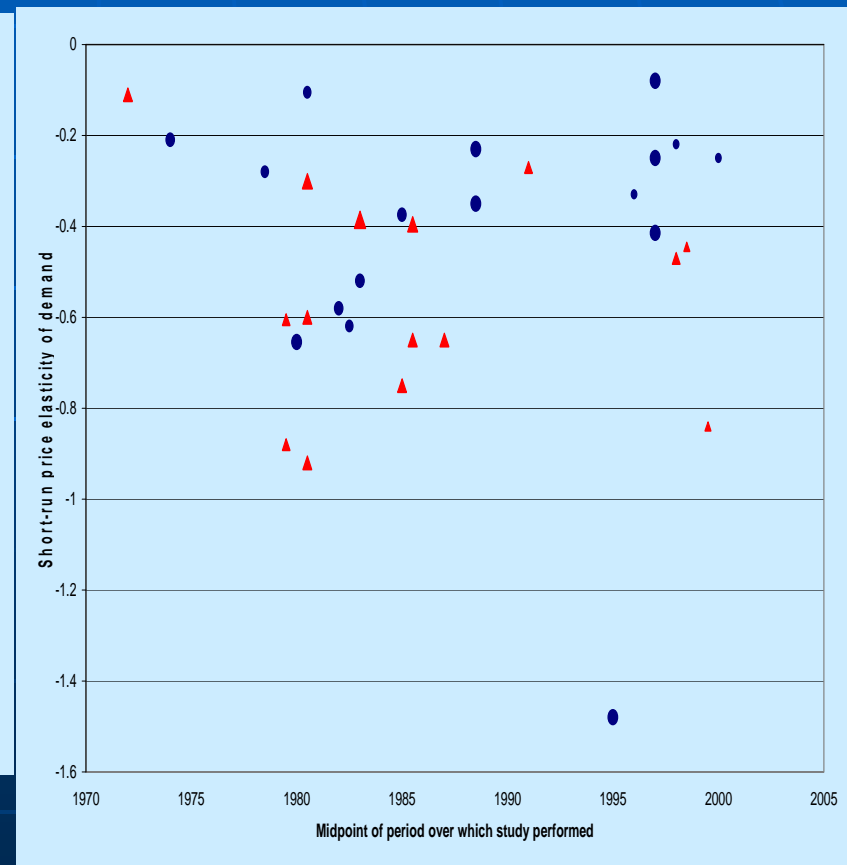
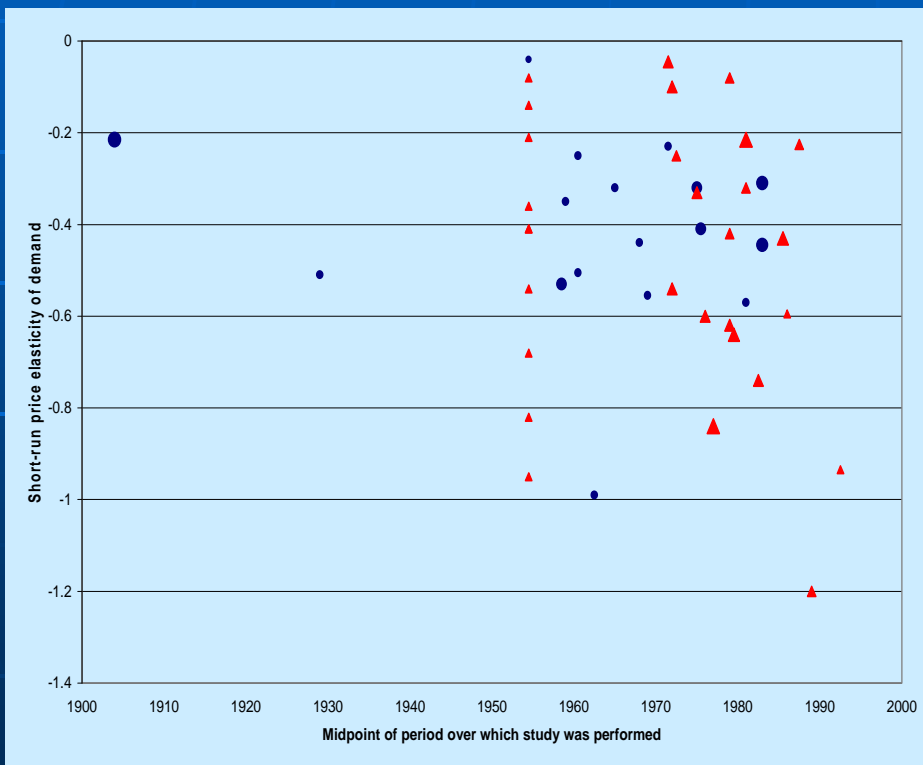
Limited Evidence that:

The demand for tobacco products in low-income countries is more responsive to price than is the demand for tobacco products in high-income countries.

Elasticity Estimates

Aggregate Demand Studies

High-Income, Non-US Low/Middle-Income



Source: IARC Handbook 14, forthcoming

Strong Evidence that:

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

Limited Evidence that:

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

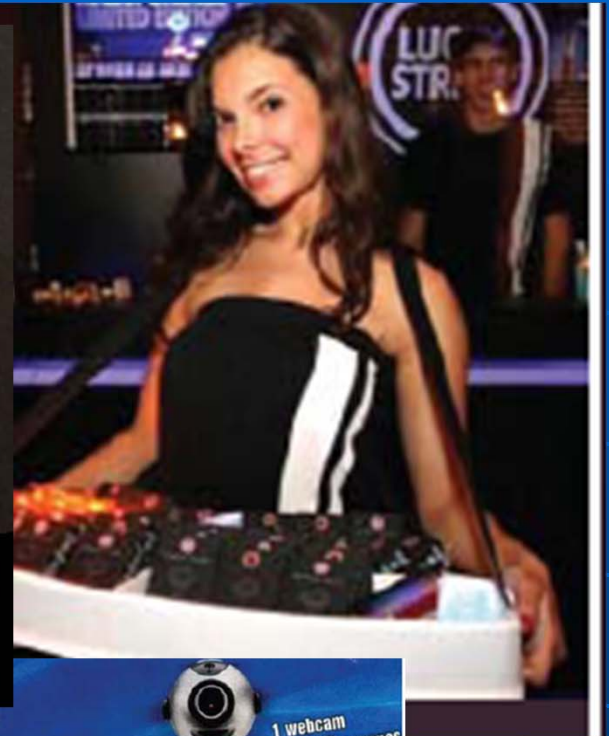
Strong Evidence that:

Changes in the relative prices of tobacco products lead to some substitution to the products for which the relative prices have fallen.

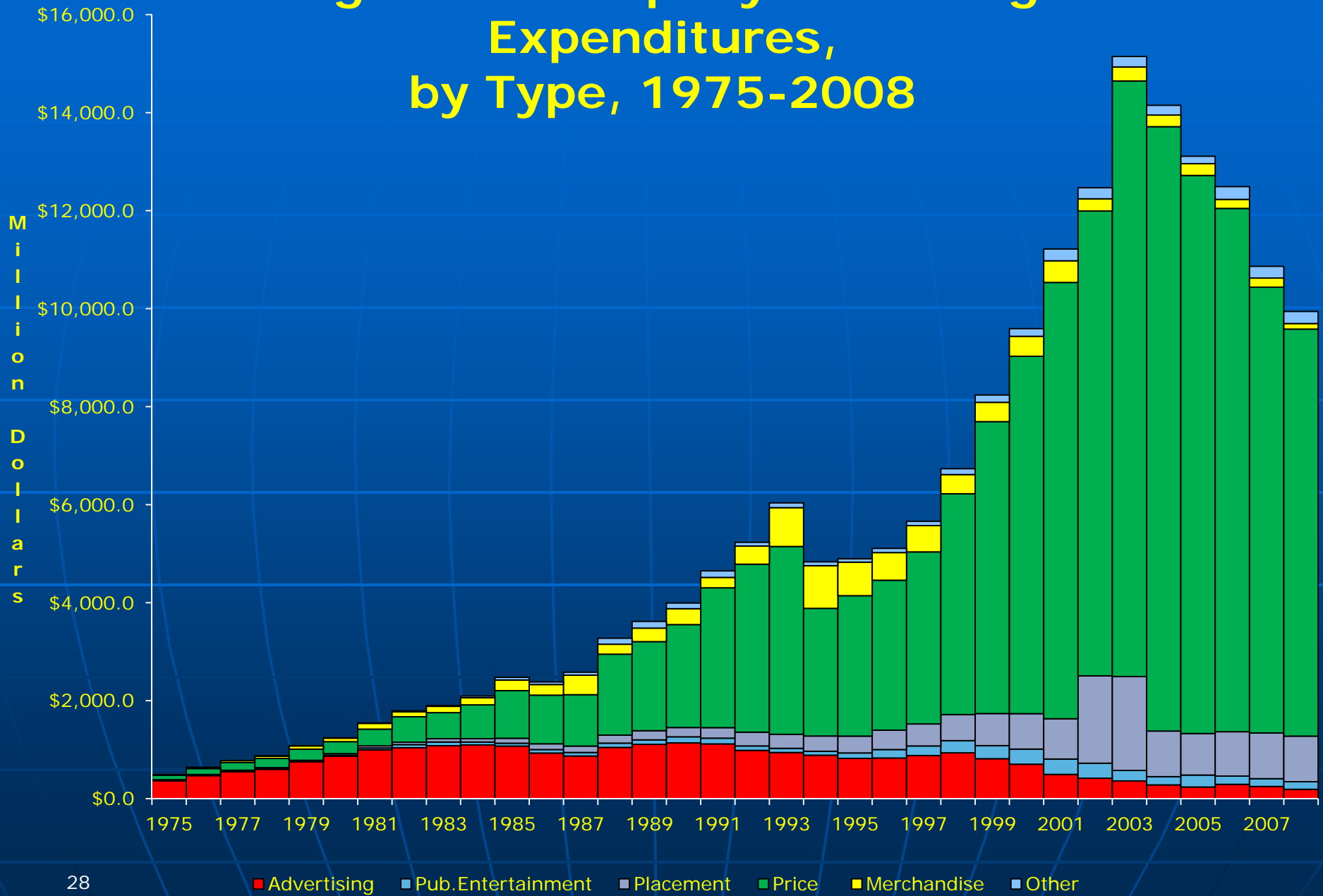
Sufficient Evidence that:

Tobacco industry price discounting strategies, price-reducing marketing activities, and lobbying efforts mitigate the impact of tobacco excise tax increases.

Price-Reducing Marketing:



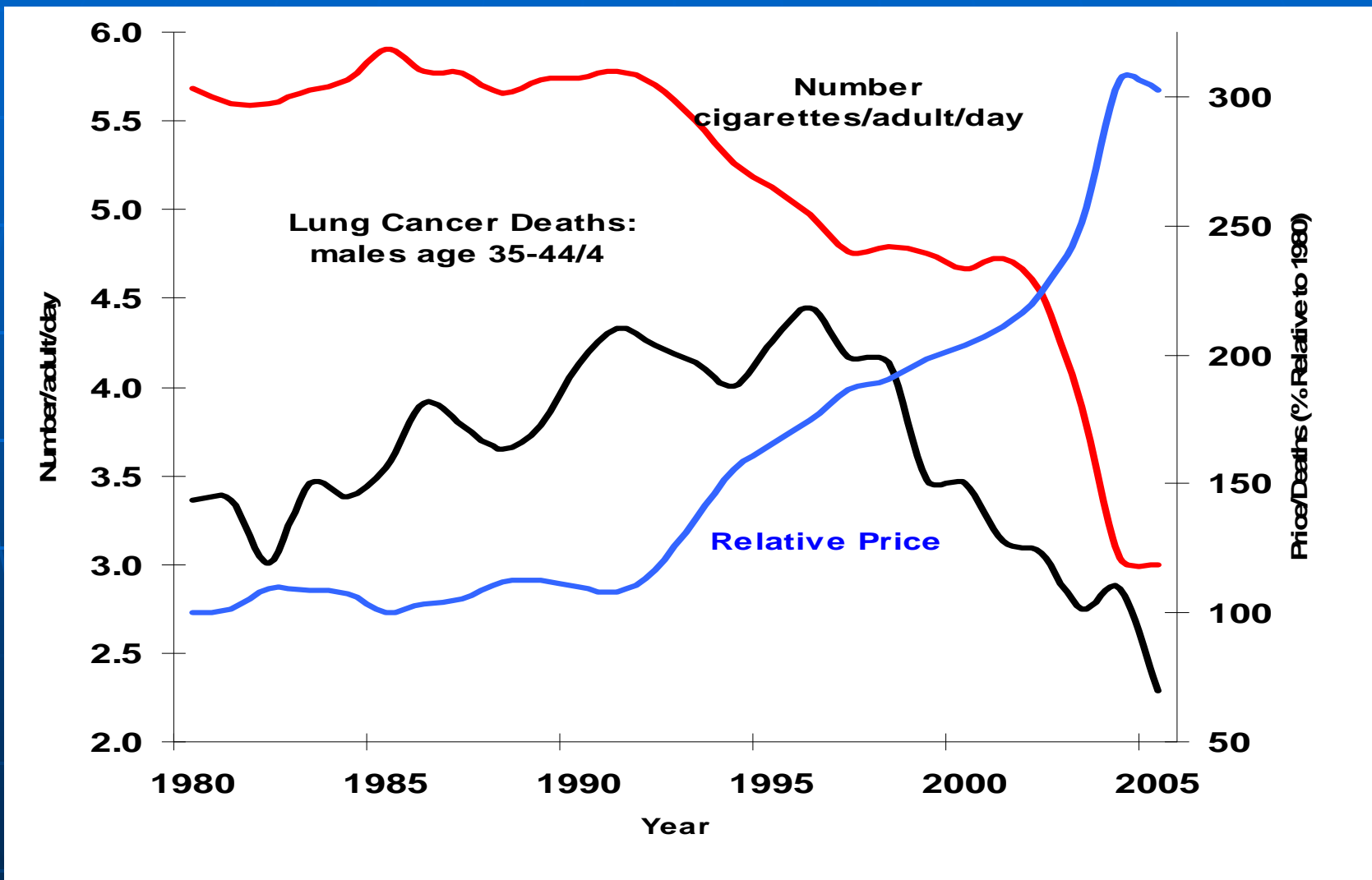
Cigarette Company Marketing Expenditures, by Type, 1975-2008



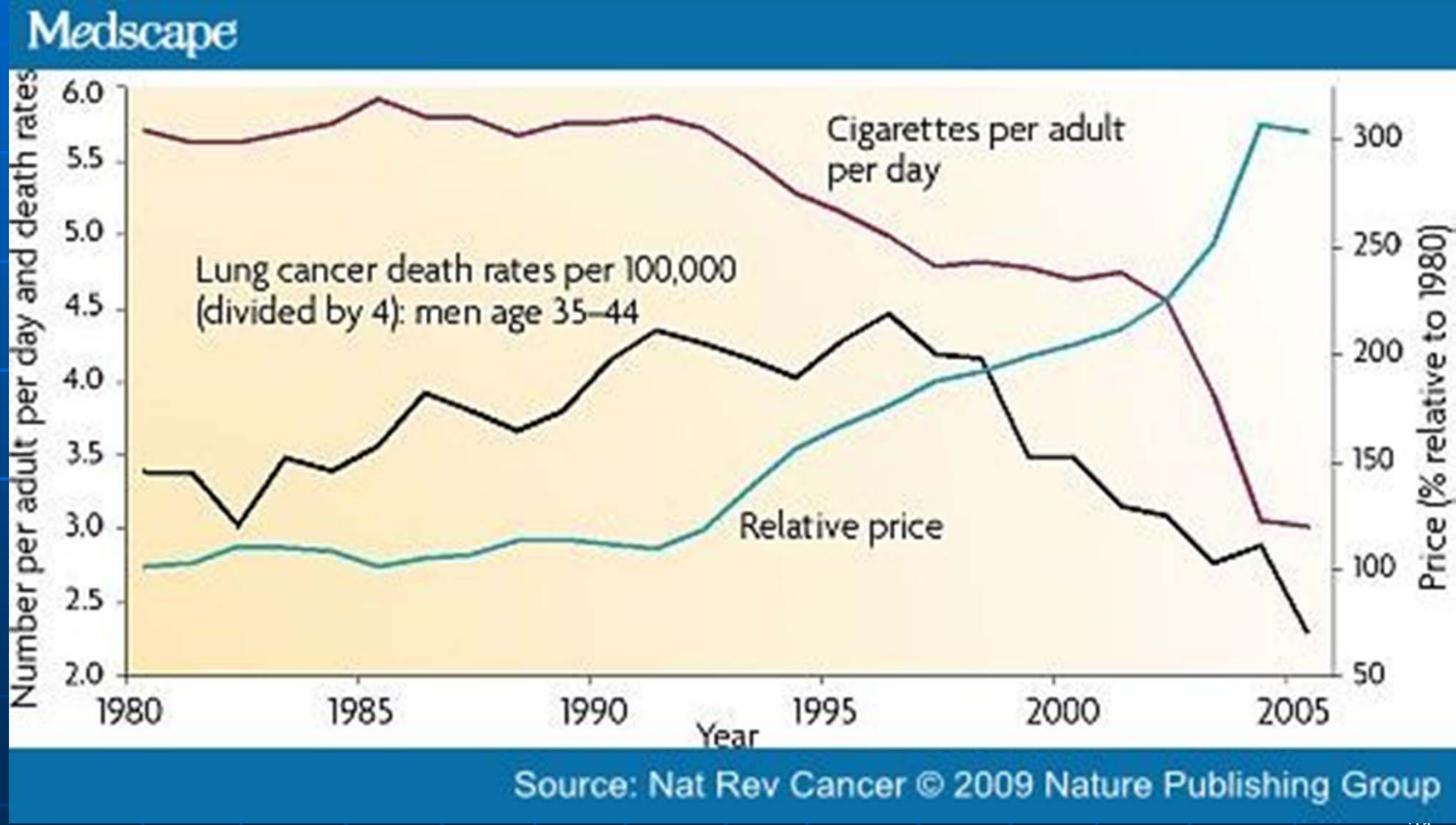
Sufficient Evidence that:

Tobacco tax increases that increase
prices improve population health

France: smoking, tax and male lung cancer, 1980-2000



Taxes, Prices and Health: US, 1980-2005



Sufficient Evidence that:

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.

Cigarette Taxation Globally

Income Group	Excise System on Cigarettes			No Excise	Total countries *
	Only specific	Only ad valorem	Both specific and ad valorem		
High	11	2	25	7	45
Upper Middle	16	11	9	6	42
Lower Middle	18	19	12	3	52
Low	10	28	2	3	43
By Region					
AFRO	14	29	1	2	46
AMRO	13	16	2	3	34
EMRO	1	7	5	7	20
EURO	10	3	36	0	49
SEARO	3	2	2	1	8
WPRO	14	3	2	6	25
All Countries	55	60	48	19	182

* Countries for which data are available

Source: WHO calculations using WHO GTCR 2009 data

Sufficient Evidence that:

Tobacco tax increases increase tobacco tax revenues.

Federal Cigarette Tax and Tax Revenues Inflation Adjusted, 1955-2010

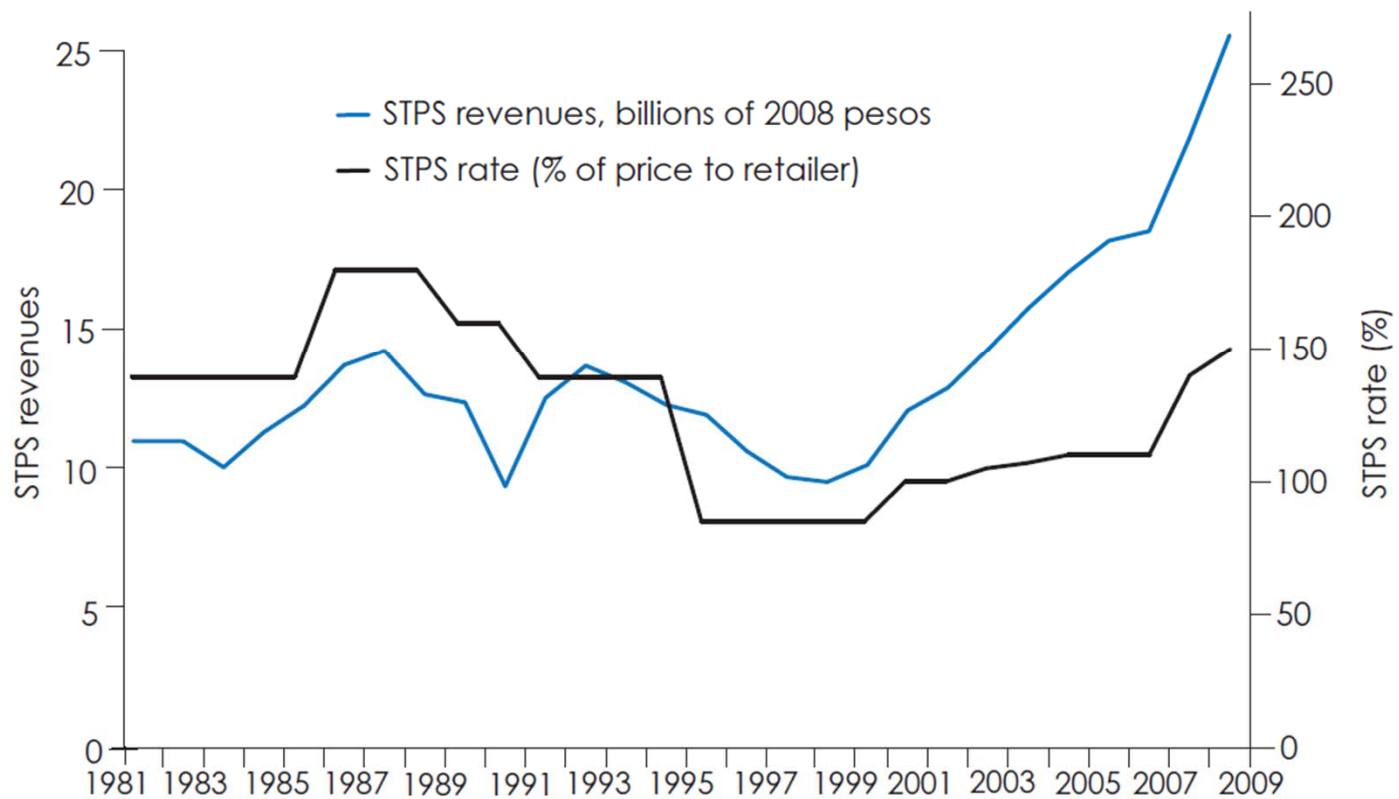


Source: *Tax Burden on Tobacco*, 2011, and author's calculations

Tobacco Taxes and Revenues

Mexico

Graph 7.2: Tax revenue from the STPS and the STPS rate, 1981-2008



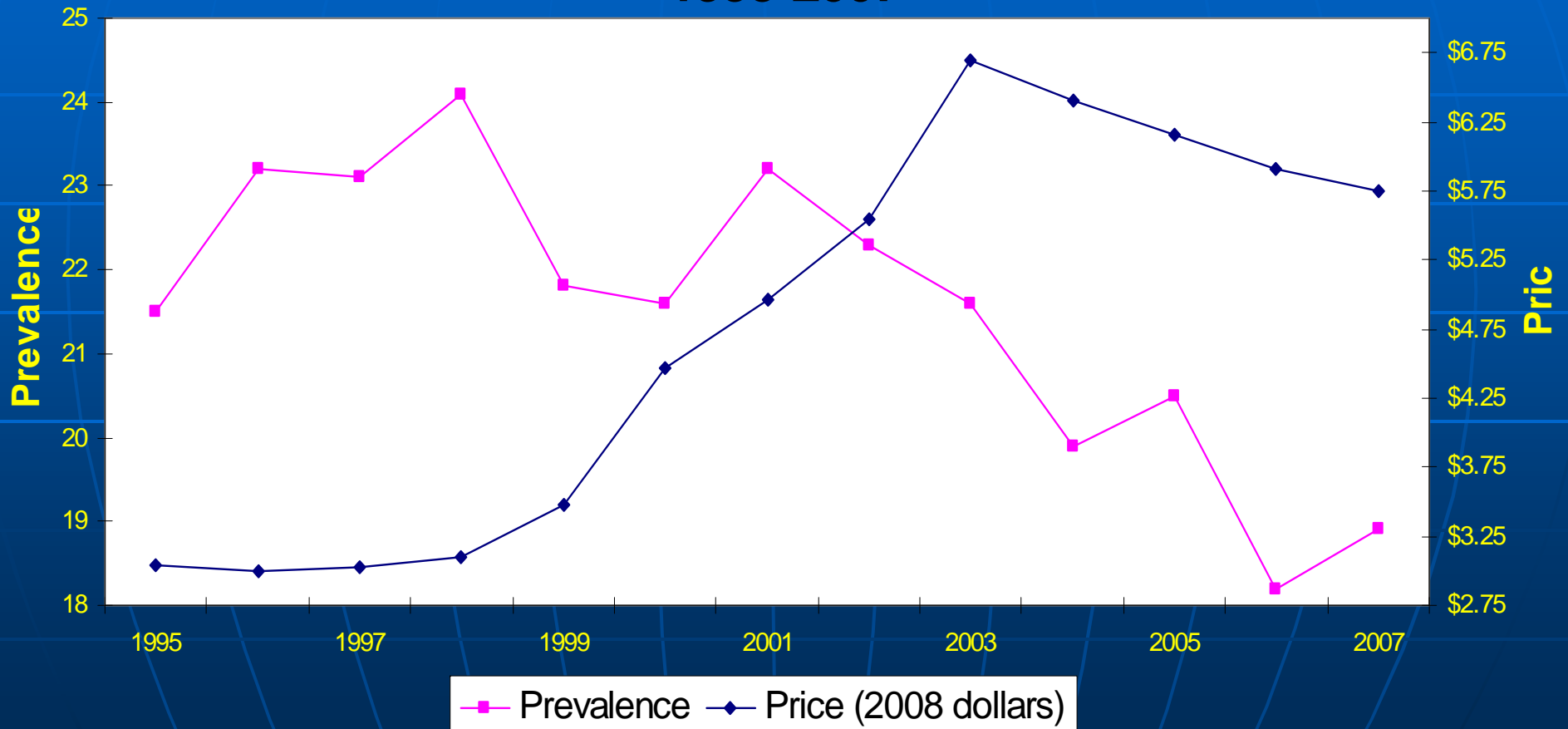
Source: Waters, et al., 2010

Sufficient Evidence that:

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

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

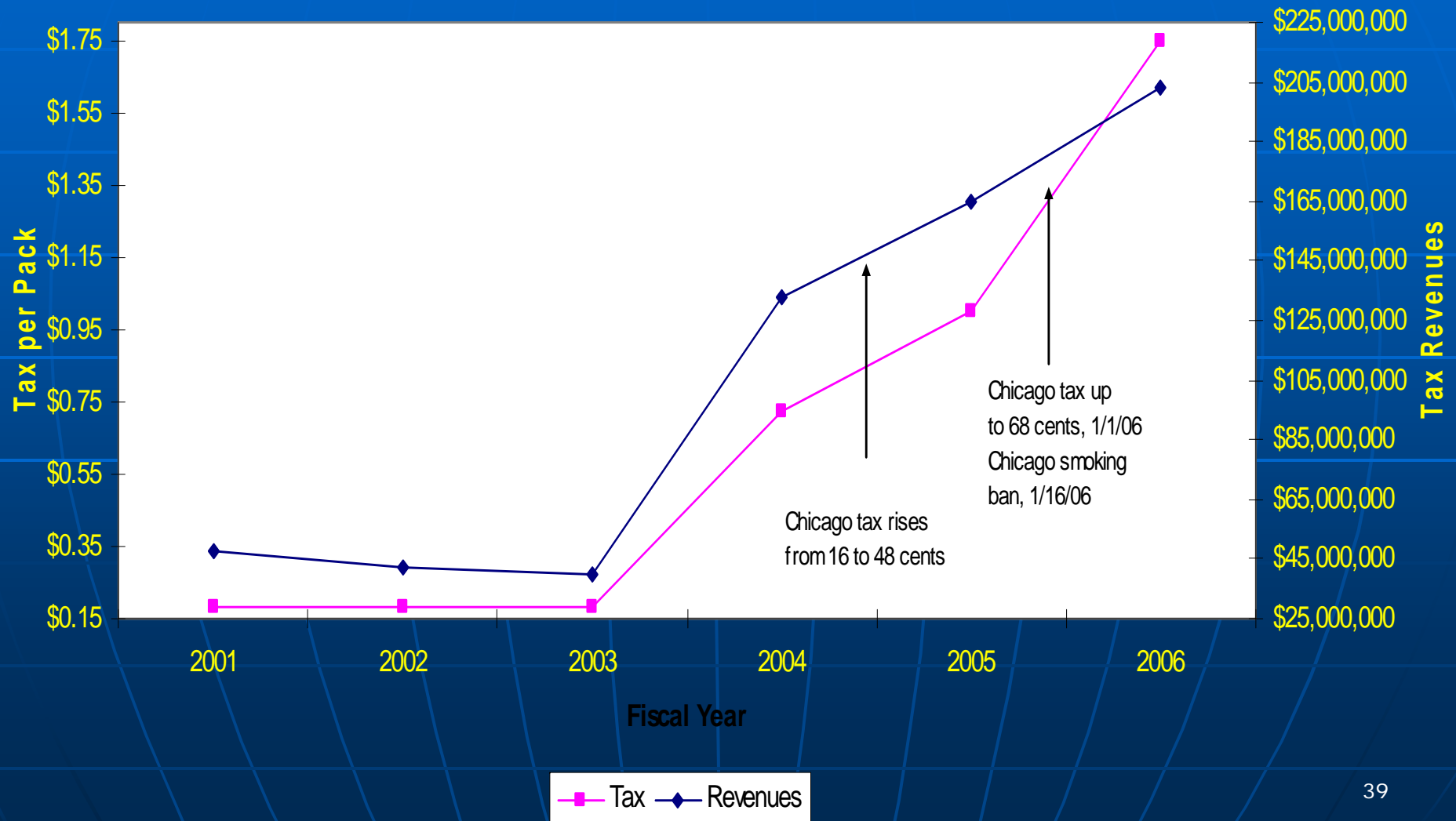
Cigarette Prices and Adult Prevalence, New York, 1995-2007



Source: Tax Burden on Tobacco, 2008 and BRFSS

Tax Increases and Tax Avoidance

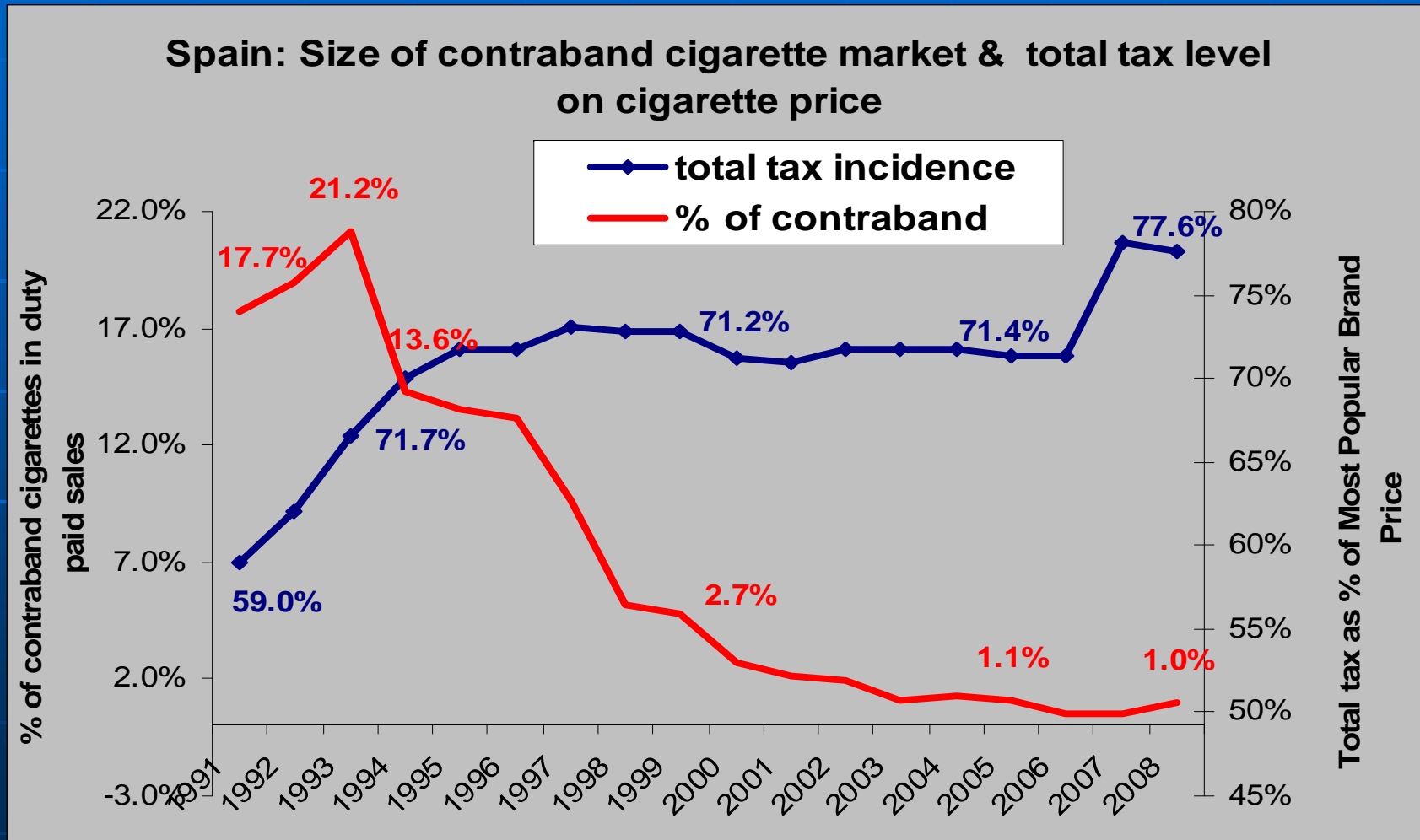
Cook County Cigarette Tax and Tax Revenues - FY01-FY06



Strong Evidence that:

A coordinated set of interventions that includes international collaborations, strengthened tax administration, increased enforcement, and swift, severe penalties reduces illicit trade in tobacco products

Cigarette tax and illegal cigarette market, Spain 1991-2008



Strong Evidence that:

Tobacco tax increases do not increase unemployment.

Recommendations

WG14 Recommendations

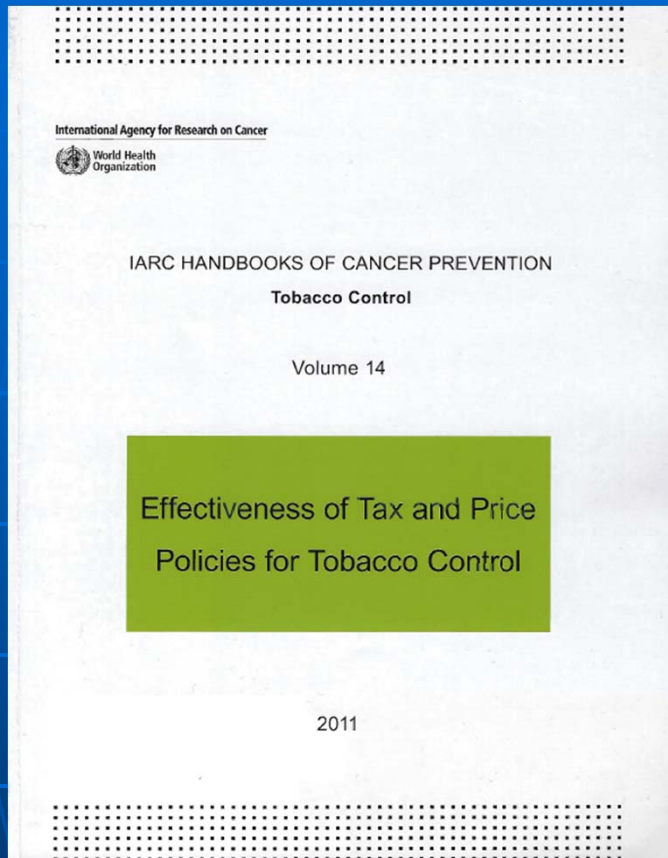
In order to improve public health by reducing tobacco use, governments should adopt relatively simple tobacco excise tax structures that emphasize specific taxes and that include regular tax increases that outpace growth in general price levels and incomes.

WG14 Recommendations

Governments should use tobacco tax revenues to fund comprehensive tobacco control programs and other health promotion activities, given that such programs lead to further reductions in tobacco use and improvements in population health.

WG14 Recommendations

A multi-national surveillance and monitoring system should be implemented that regularly collects data on tobacco use among adults and young people, tobacco product taxes and prices, price-reducing marketing and lobbying efforts of tobacco companies, tax avoidance and evasion, and tax administration and enforcement activities.



TC **Effectiveness of tax and price policies in tobacco control**
Frank J Chaloupka, Kurt Stralf and Maria E Leon
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Notes

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fjc@uic.edu