

# The Economics of Tobacco and Tobacco Control Beyond Taxation



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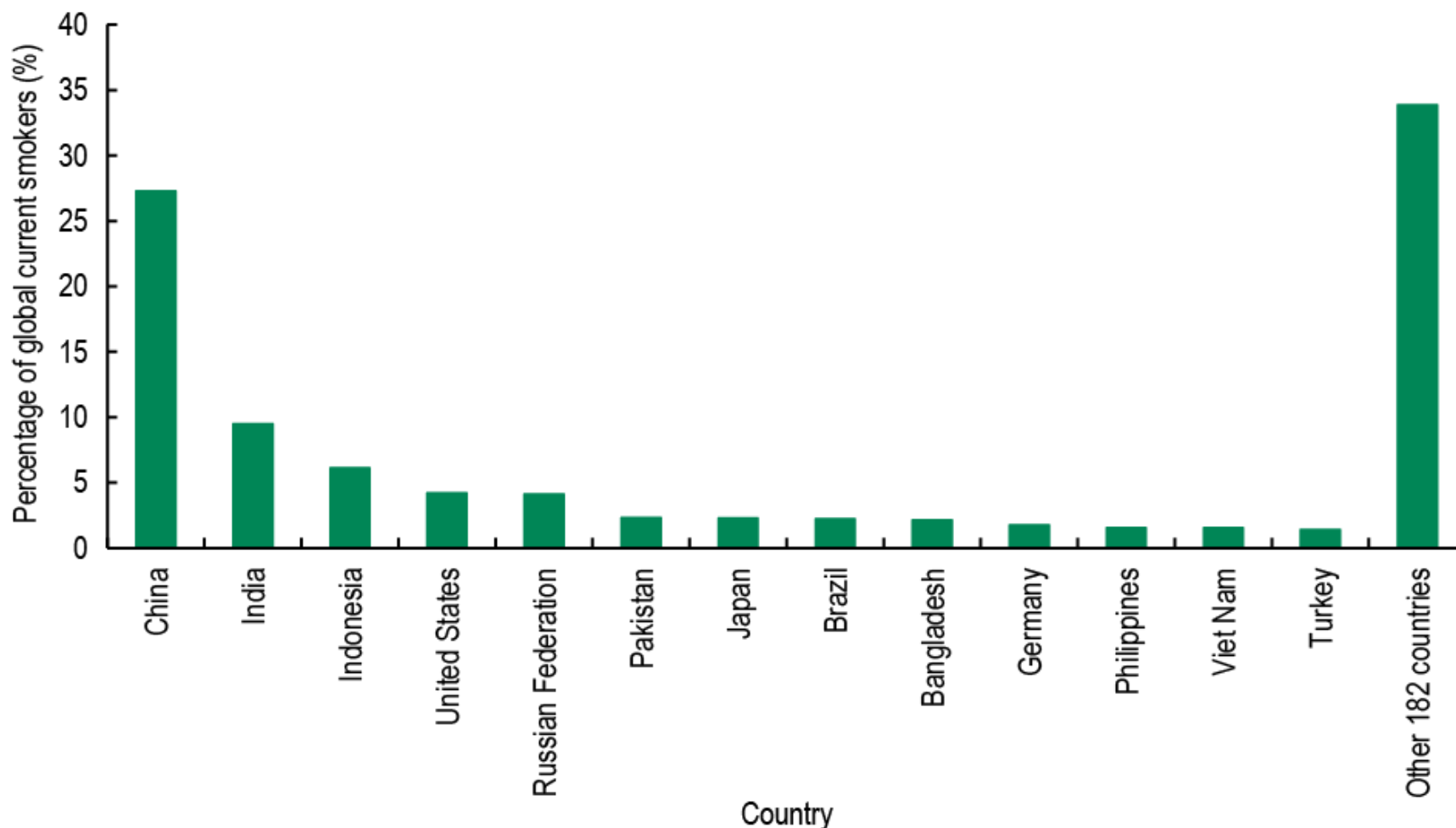


**World Health  
Organization**

# Major Conclusions

1. The global health and economic burden of tobacco use is enormous and is increasingly borne by LMICs.
  - About 1.1 billion smokers globally
    - Including 25 million youth
  - 4 of 5 smokers are in LMICs
  - Another almost 360 million smokeless tobacco users
    - Including 13 million youth
  - Around 6 million premature deaths a year caused by smoking
    - Including ~600,000 from secondhand smoke

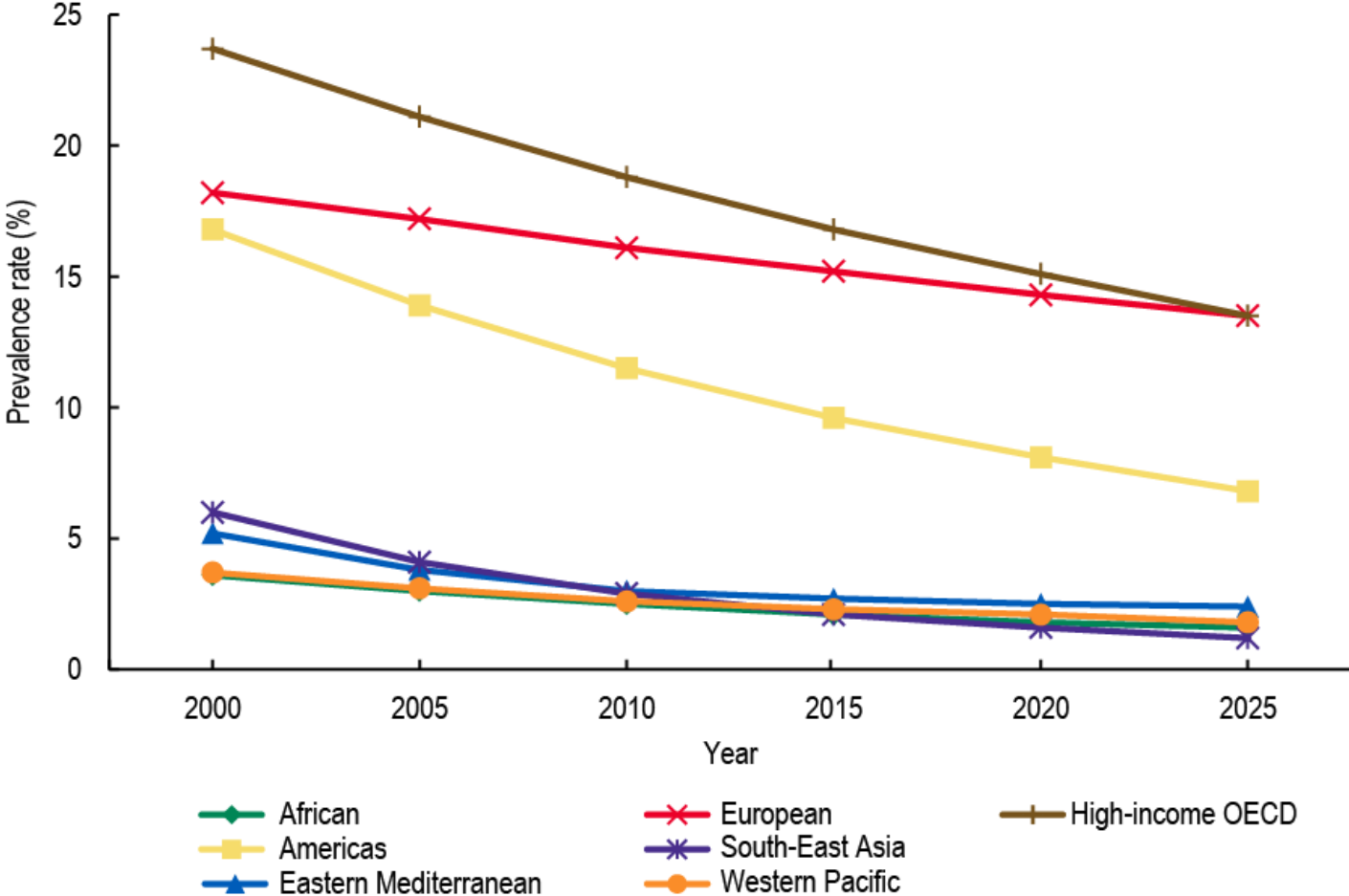
# Figure 2.3. Percentage of Global Current Tobacco Smokers Age 15 Years and Over, by Country, 2013



Note: Data for the United States and Japan only include cigarette smokers.

Source: World Health Organization 2015

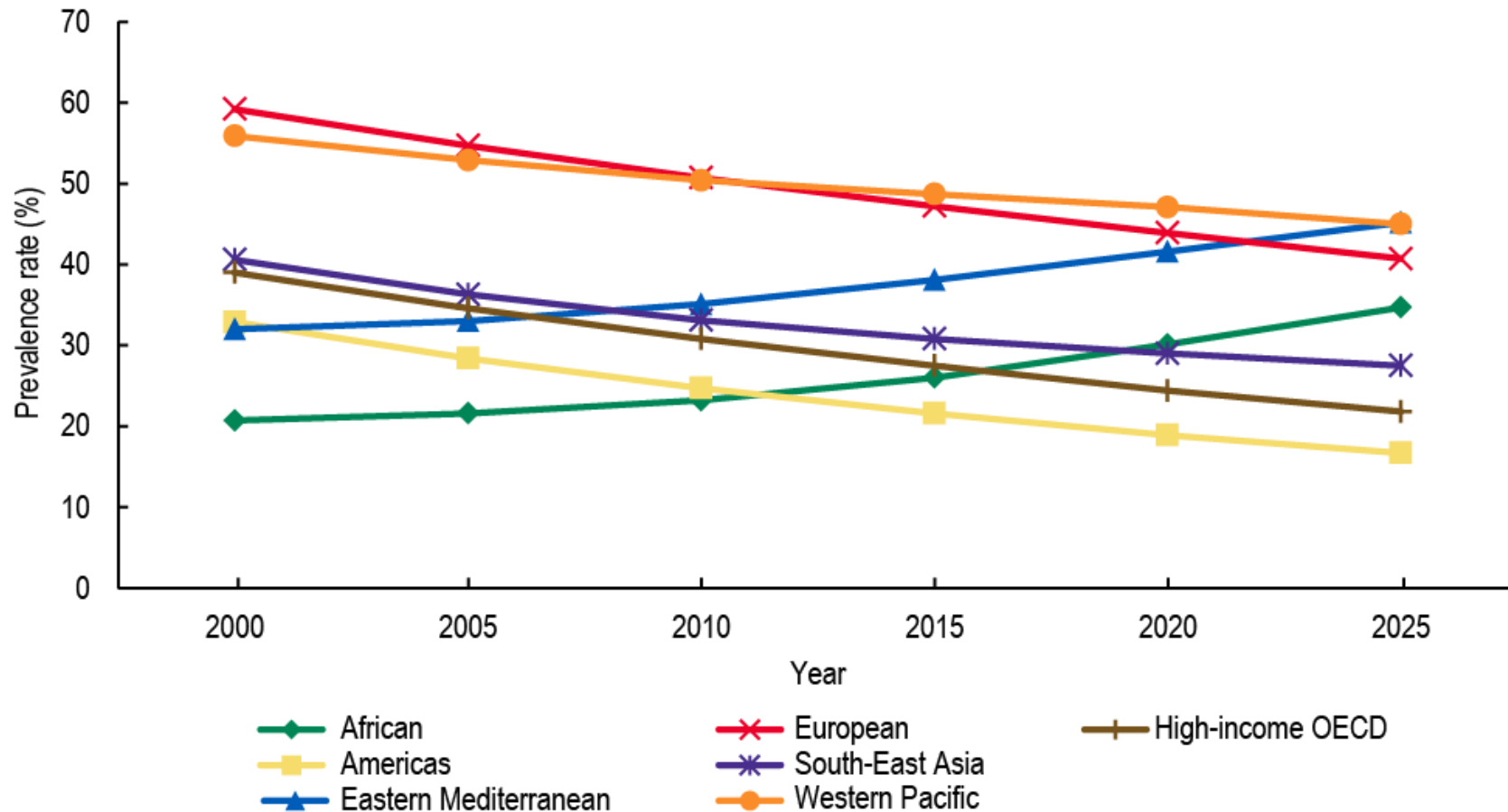
# Figure 2.2. Estimated and Projected Prevalence Rates for Tobacco Smoking, by WHO Region, Females, 2000–2025



Notes: WHO = World Health Organization. High-income OECD countries = countries defined as high-income by the Organisation for Economic Co-operation and Development. High-income OECD countries are excluded from their respective regions. Projections are shown for the years 2015, 2020, and 2025.

Source: Based on data from World Health Organization 2015.

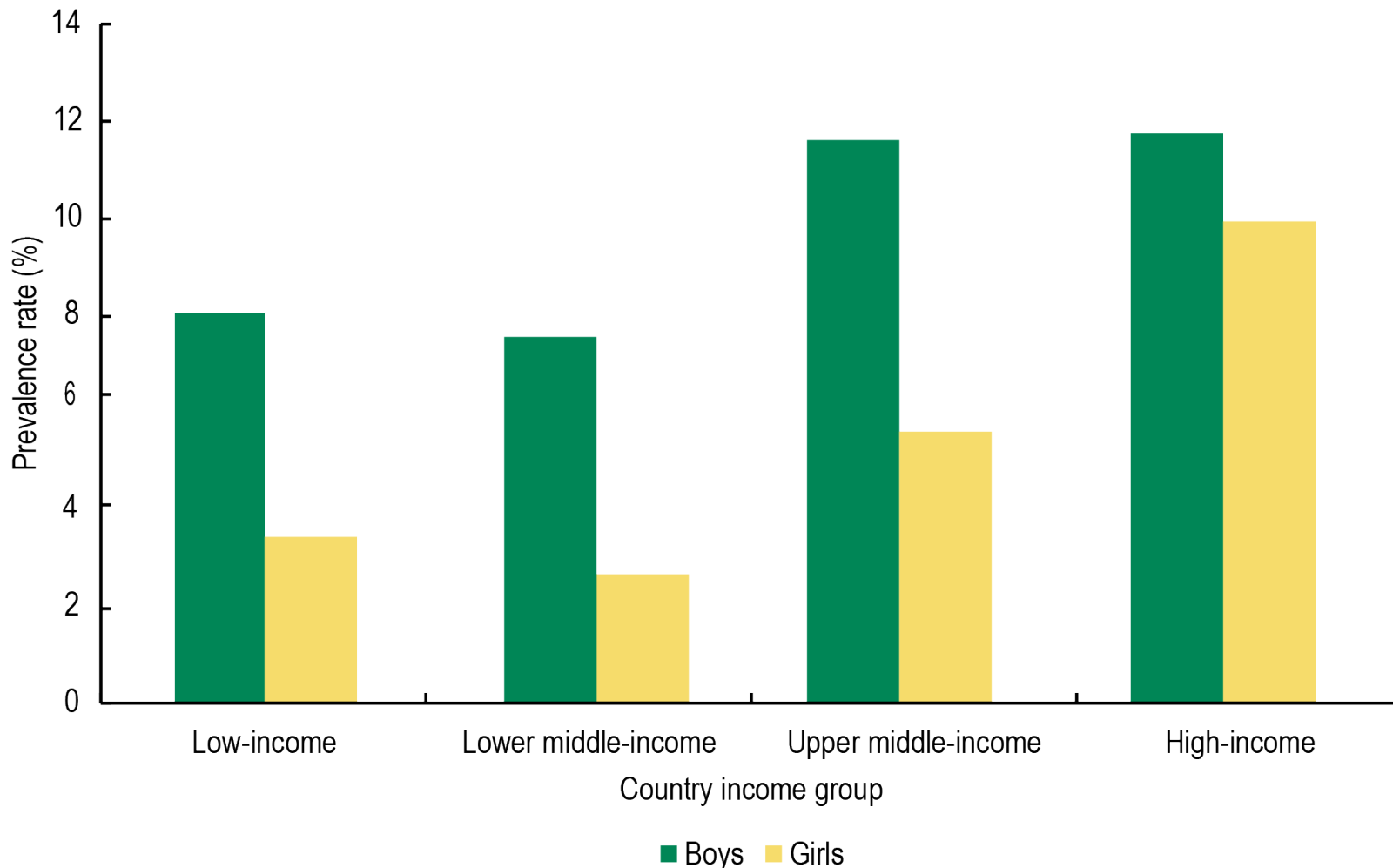
## Figure 2.1. Estimated and Projected Prevalence Rates for Tobacco Smoking, by WHO Region, Males, 2000–2025



Notes: WHO = World Health Organization. High-income OECD countries = countries defined as high-income by the Organisation for Economic Co-operation and Development. High-income OECD countries are excluded from their respective regions. Projections are shown for the years 2015, 2020, and 2025.

Source: Based on data from World Health Organization 2015

# Figure 2.8. Prevalence of Current Cigarette Smoking Among Youth, by Country Income Group, 2007–2014



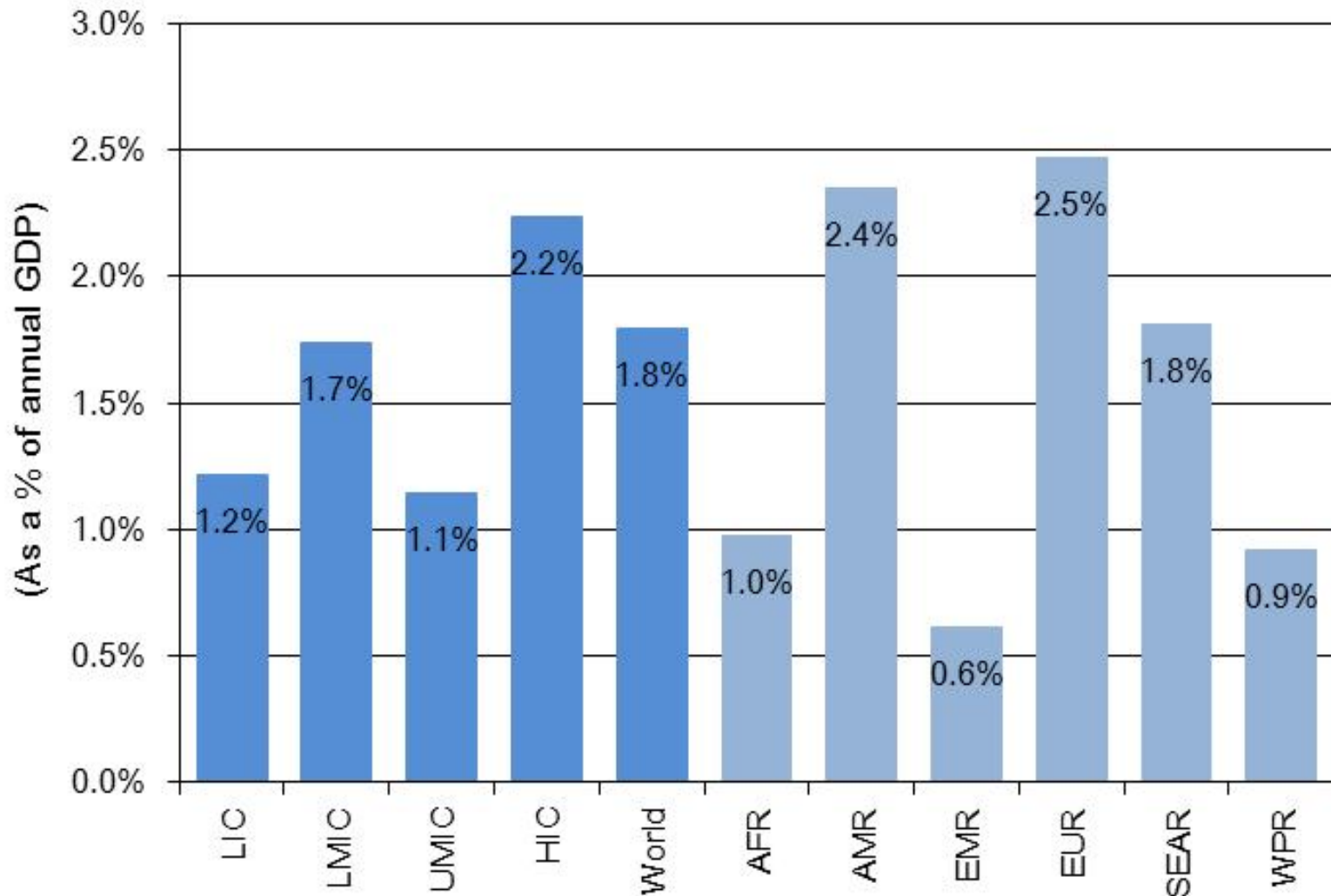
*Notes:* Country income group classification based on World Bank Analytical Classifications for 2014. The number of users was calculated by applying the prevalence rates to the United Nations–provided population estimates for the year 2010.

*Sources:* Global Youth Tobacco Survey 2007–2014. Health Behaviour in School-Aged Children 2013–2014.

# Major Conclusions

2. Failures in the markets for tobacco products provide an economic rationale for governments to intervene in these markets.
  - Imperfect and asymmetric information about the health and economic consequences of tobacco use
  - Complicated by poor understanding of addiction, time inconsistency of preference and most uptake during adolescence
  - Financial and health externalities

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



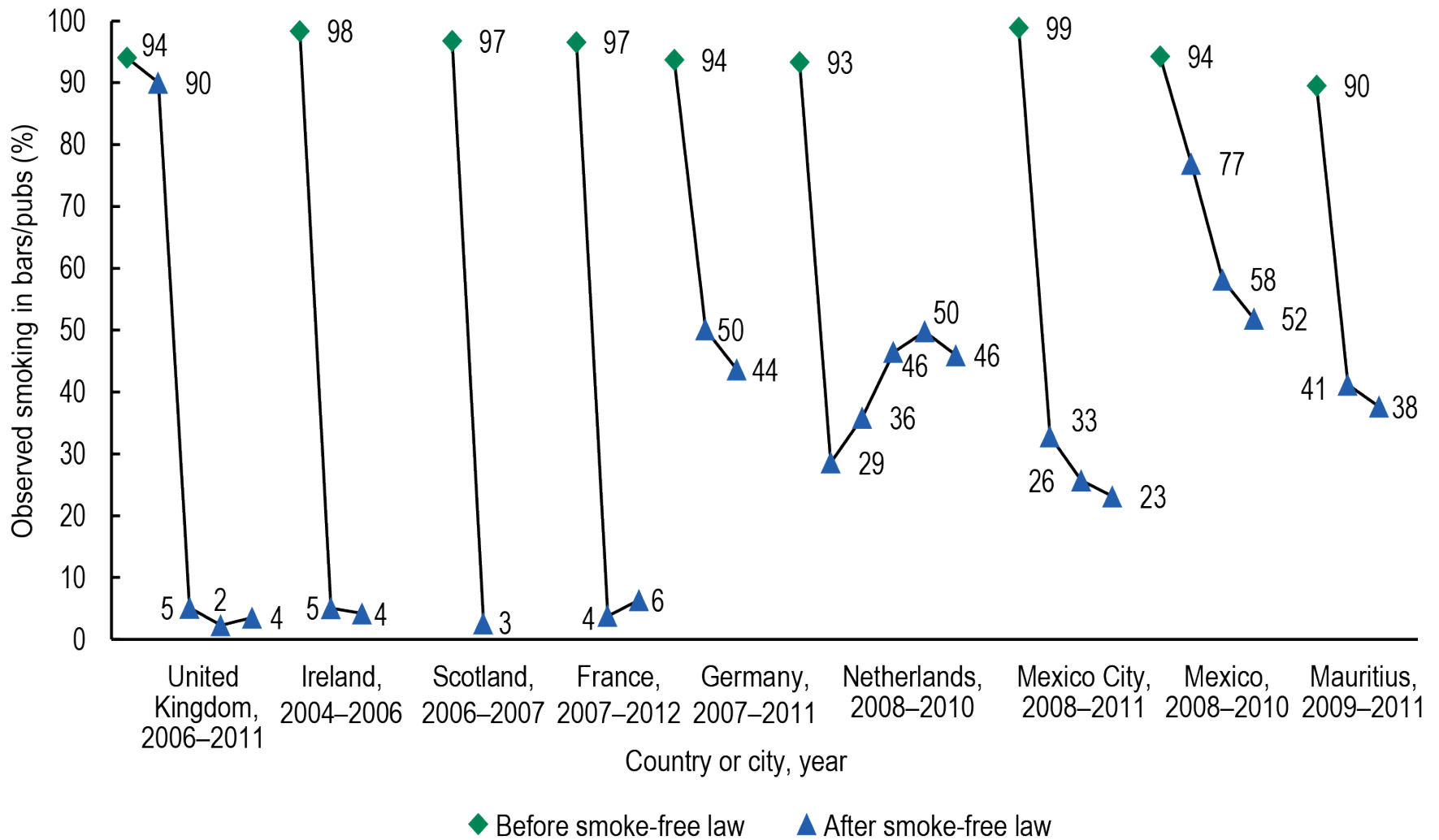
Source: Goodchild, et al., 2017



# Major Conclusions

3. Effective policy and programmatic interventions are available to reduce the demand for tobacco products and the death, disease, and economic costs that result from their use, but these interventions are underutilized.

# Figure 6.5. Prevalence of Observed Smoking in Bars/Pubs Before and After Smoking Bans



Source: Fong 2011

# Chapter 6. The Impact of Smoke-Free Policies

1. Comprehensive smoke-free policies reduce exposure to secondhand smoke; compliance with these policies is generally high, and public support for them is strong.
2. Comprehensive smoke-free policies in workplaces reduce active smoking behaviors including cigarette consumption and smoking prevalence.
3. Overall, rigorous empirical studies (largely from high-income countries) using objective economic indicators find that smoke-free policies do not have negative economic consequences for businesses, including restaurants and bars, with a small positive effect being observed in some cases. Findings from the limited existing research conducted in low- and middle-income countries are generally consistent with those from high-income countries.

**Table 7.1 Summary of Regression Results of the Updated Analysis of Tobacco Advertising Bans, 1990–2013**

Variables	Per capita adult tobacco consumption	
	All countries Model 1 $\beta$ (SE)	Low- and middle-income countries Model 1a $\beta$ (SE)
Income (ln)	0.538 (0.041)*	0.403 (0.048)*
Price		
Minimum (ln)	-0.151 (0.014)*	-0.148 (0.019)*
Advertising ban		
Limited (ln)	-0.013 (0.028)	-0.093 (0.067)
Comprehensive (ln)	-0.117 (0.020)*	-0.283 (0.030)*
n	1,511	785
R <sup>2</sup>	0.923	0.927

\*Statistically significant at the 0.01 level.

Notes: Country-fixed effects, year-fixed effects, and a constant are included in the model with all countries, while only country-fixed effects are included in the model with low- to middle-income countries. No variables were statistically significant at the 0.05 or 0.10 level.

Sources: Based on data from ERC Group 1990–2013<sup>32</sup> and Economist Intelligence Unit 1990–2013.<sup>33</sup>

# Chapter 7. The Impact of Tobacco Industry Marketing Communications on Tobacco Use

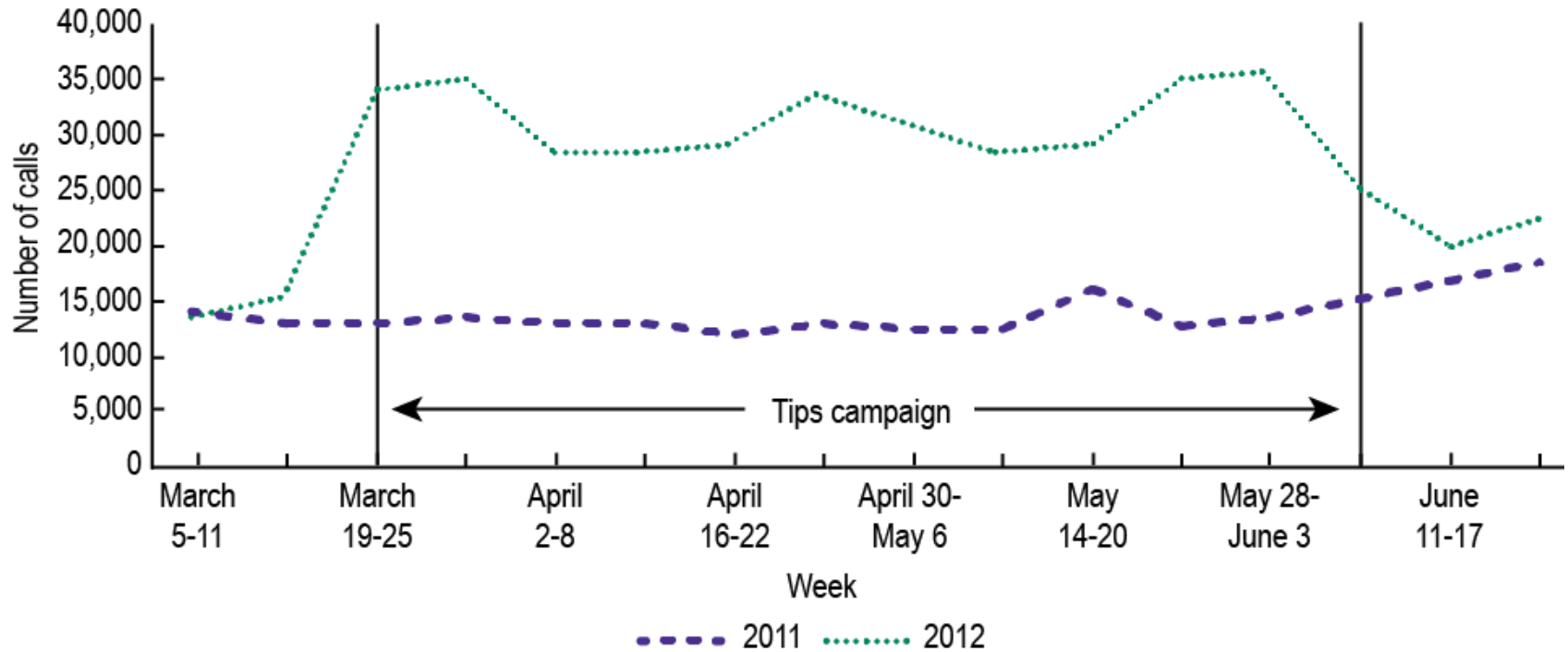
2. The weight of the evidence from multiple types of studies done by researchers from a variety of disciplines and using data from many countries indicates that a causal relationship exists between tobacco company marketing activities and tobacco use, including the uptake and continuation of tobacco use among young people.
3. In high-income countries, comprehensive policies to ban the marketing activities of tobacco companies are effective in reducing tobacco use, but partial marketing bans have little or no effect.
4. Comprehensive policies to ban the marketing activities of tobacco companies leads to larger reductions in tobacco use in low- and middle-income countries than in high-income countries.

**Figure 8.3** Advertisements From the Tips From Former Smokers Campaign (CDC) and the Real Cost Campaign (FDA)



Sources: Centers for Disease Control and Prevention 2015<sup>176</sup> and Food and Drug Administration 2014.<sup>79</sup>

# Figure 8.1. Number of Weekly Telephone Calls to the National Quitline Portal Around the Airing of the Centers for Disease Control and Prevention's Tips From Former Smokers Campaign



Notes: The Tips campaign ran from March 19 to June 10, 2012. Data for May 30 to June 19, 2011, were imputed using straight-line regression.

Source: Centers for Disease Control and Prevention 2012





احترس التدخين يدمر الصحة ويسبب أوفلا  
الآثار المدمرة للتدخين تصيب المدخن وغير المدخن



يسبب  
التدخين  
أمراض  
القلب  
والشرايين

**SMOKING CAUSES  
BLINDNESS**  
Health Authority Warning



Quitline  
131 848

Smoking causes irreversible damage to the back of the eye. This is known as macular degeneration. Central vision is lost, blindness may follow.

**WARNING:**  
TOBACCO SMOKE CAN KILL BABIES  
QUIT: 1800-438-2000

CAN quit smoking. Call **Quitline 131 848**, talk to doctor or pharmacist, or visit [www.quitnow.info.au](http://www.quitnow.info.au)



**SMOKING CAN ACCELERATE  
AGEING OF SKIN**

TAR : mg      NICOTINE : mg



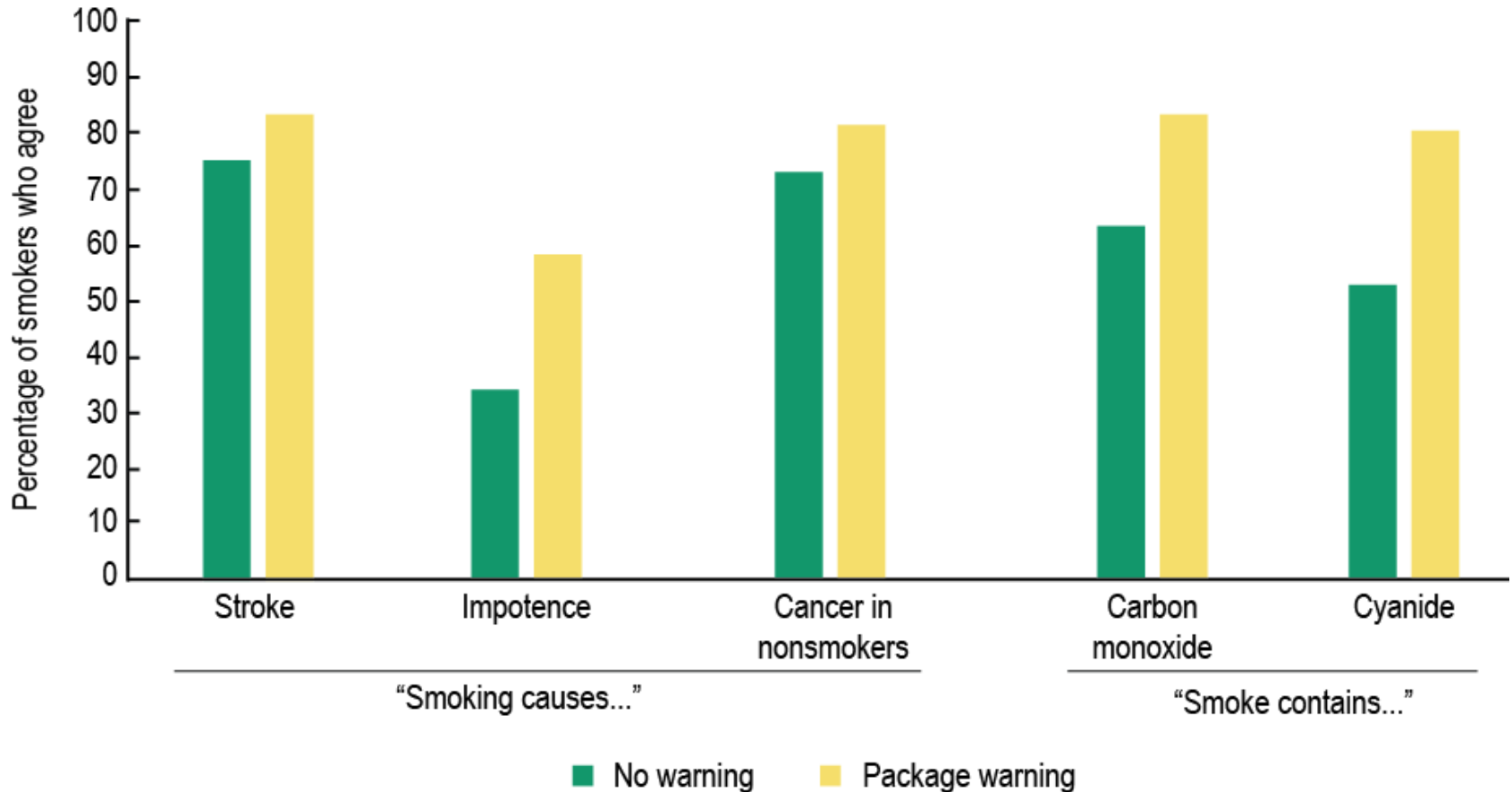
Smokers die younger



مواجهه با خود سیگار، قلیان و مواد  
دخانی مصرف شده توسط والدین  
و اطرافیان باعث ایجاد و تشدید  
بیماریهای تنفسی، آسم و عفونت  
کوش میانی می شود



# Figure 8.6. Knowledge About the Harms of Tobacco Use: Comparison of Countries With and Without Health Warning Labels on Particular Topics



Sources: World Health Organization 2011, based on data from Hammond et al. 2006

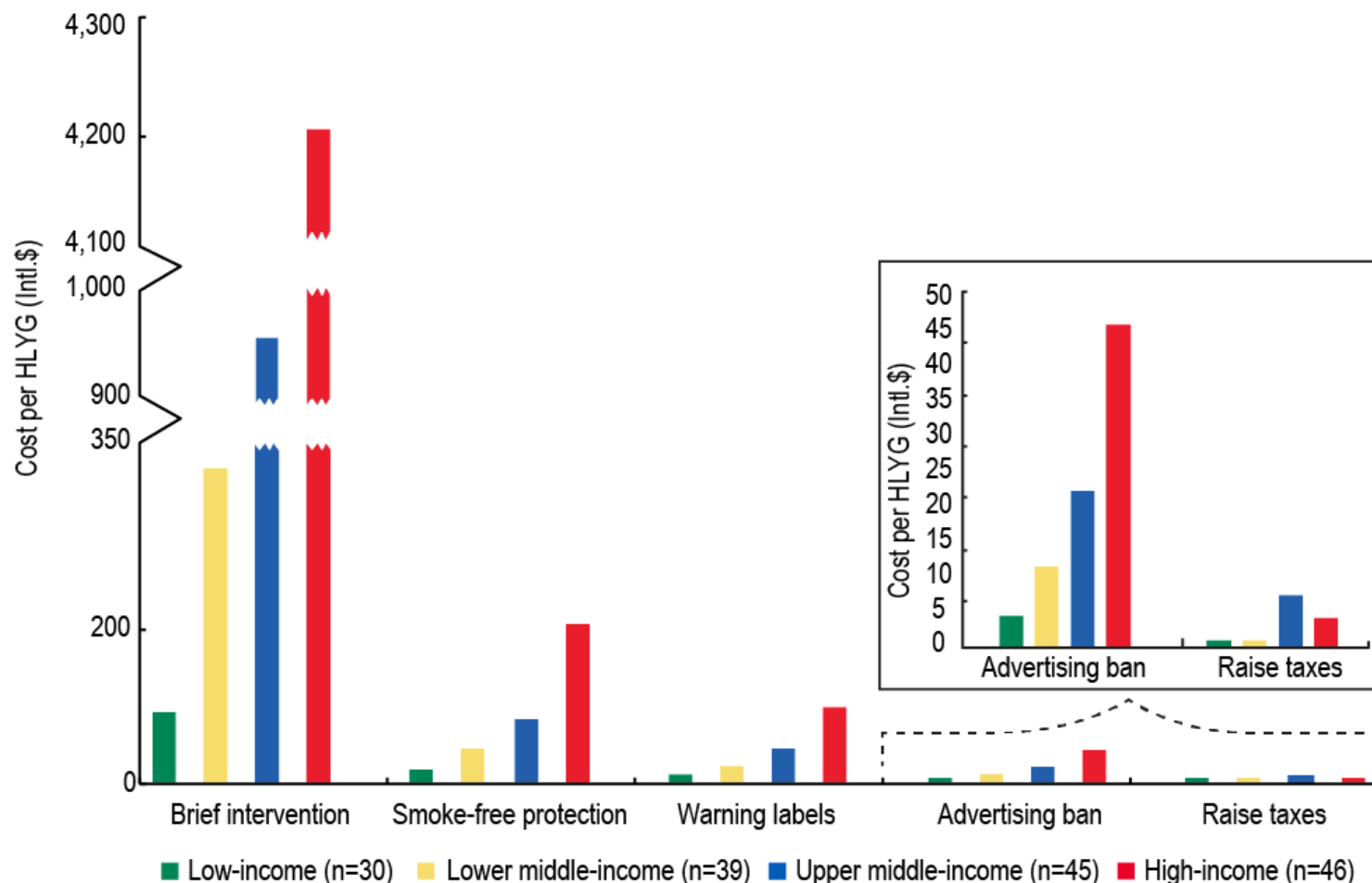
# Chapter 8. The Impact of Information on the Demand for Tobacco Products

3. Well-designed and -implemented anti-tobacco mass media campaigns are effective in improving understanding about the health consequences of tobacco use, building support for tobacco control policies, strengthening social norms against tobacco use, and reducing tobacco consumption among youth and adults.
5. Large pictorial health warning labels on tobacco packages are effective in increasing smokers' knowledge, stimulating their interest in quitting, and reducing smoking prevalence. These warnings may be an especially effective tool to inform children and youth and low literacy populations about the health consequences of smoking.

# Major Conclusions

4. Policies and programs that work to reduce the demand for tobacco products are highly cost-effective.

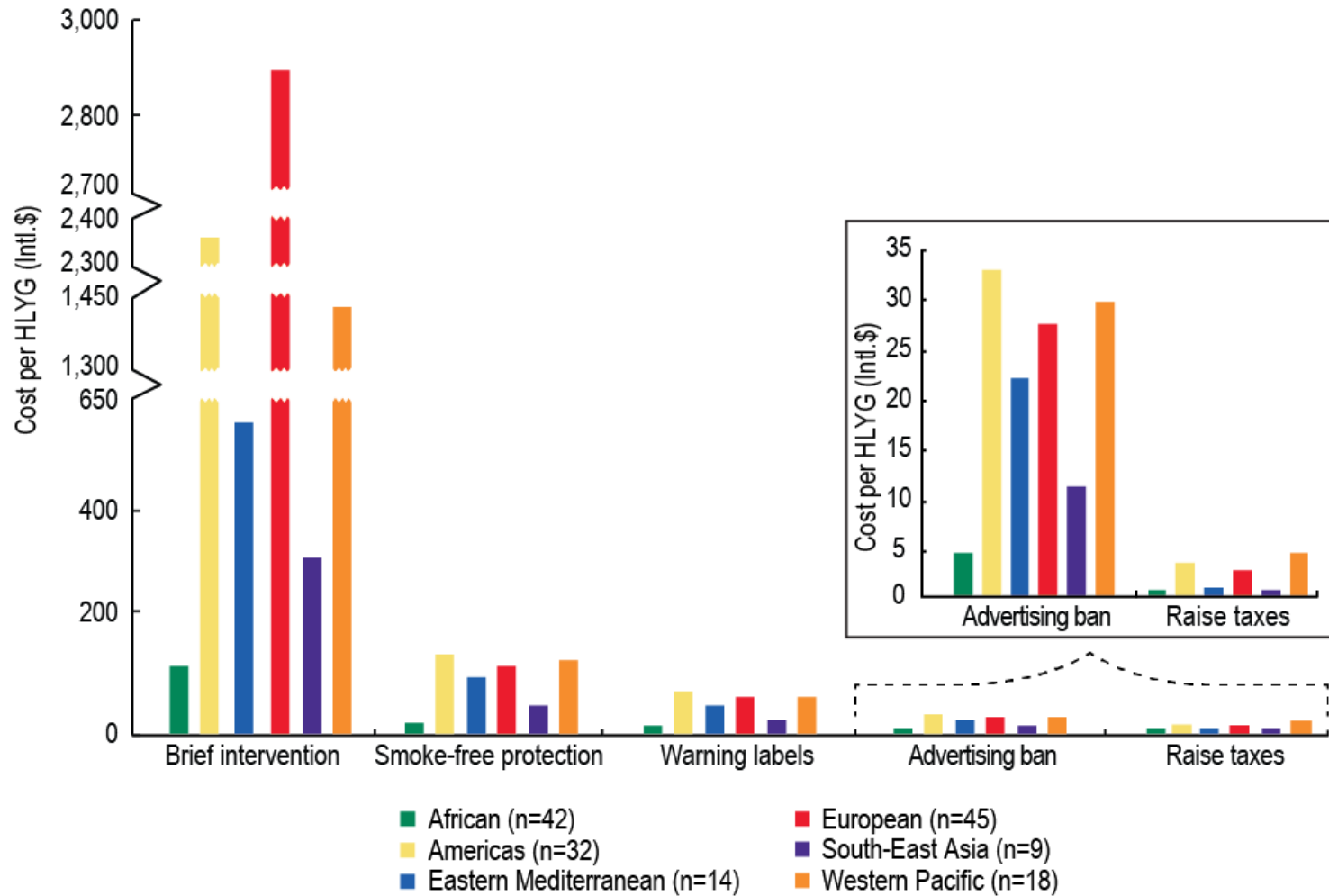
# Figure 17.2. Tobacco Control Policies and Cost Per Healthy Life-Year Gained, by Country Income Group



Notes: HLYG = healthy life-year gained. Country income group classification based on World Bank Analytical Classifications for 2014.

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

# Figure 17.3. Tobacco Control Policies and Cost Per Healthy Life-Year Gained, by WHO Region



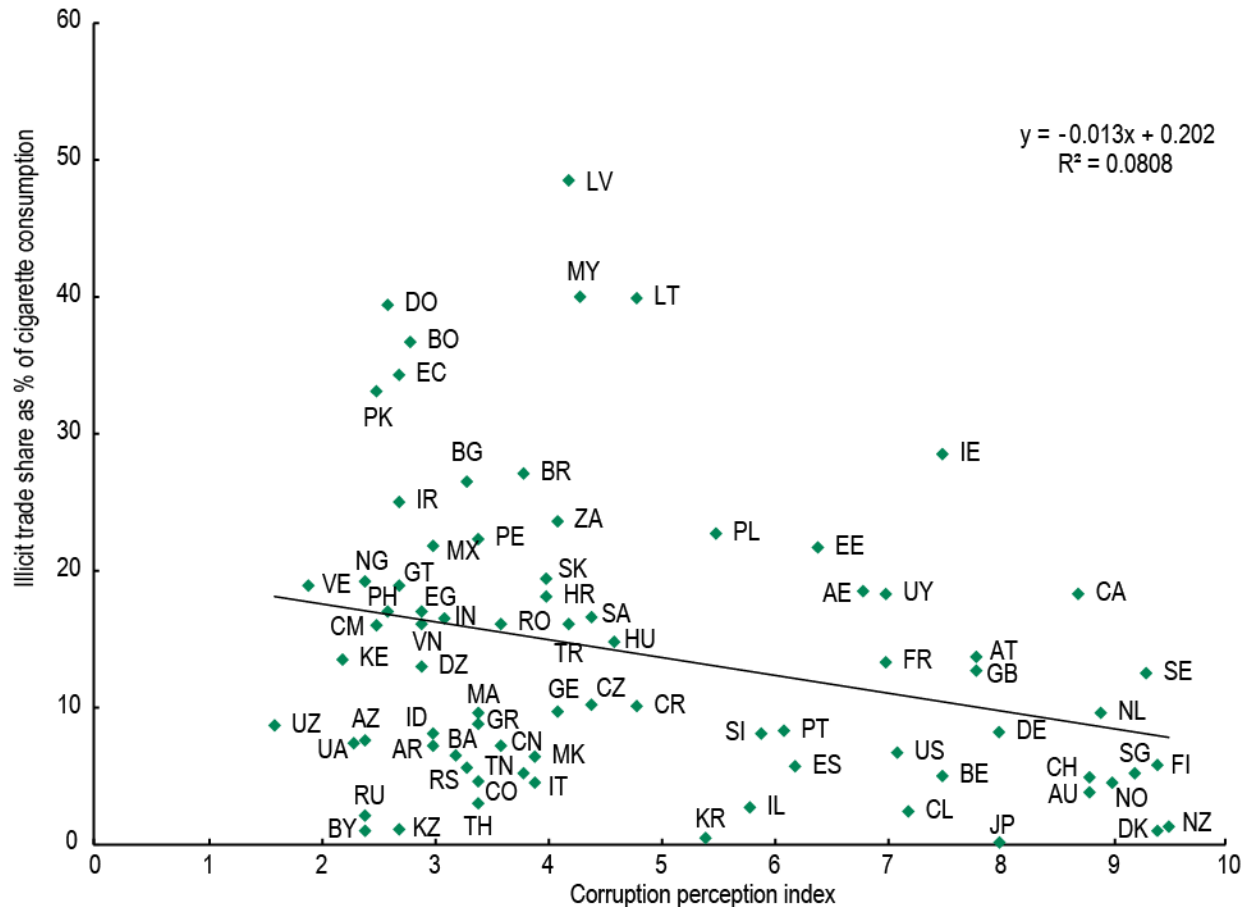
Note: HLYG = healthy life-year gained.

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

# Major Conclusions

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.

# Figure 14.10. Share of Illicit Trade Versus Corruption, by Country, 2011



Note: Lower scores on the corruption perception index indicate higher levels of corruption.

Sources: Euromonitor International 2011 and Transparency International 2011

**Figure 14.12. Illicit Cigarette Market Share and Percentage of Most Popular Price Category Accounted for by Taxes, Italy, 1991–2010**



Note: MPPC = most popular price category of cigarettes.

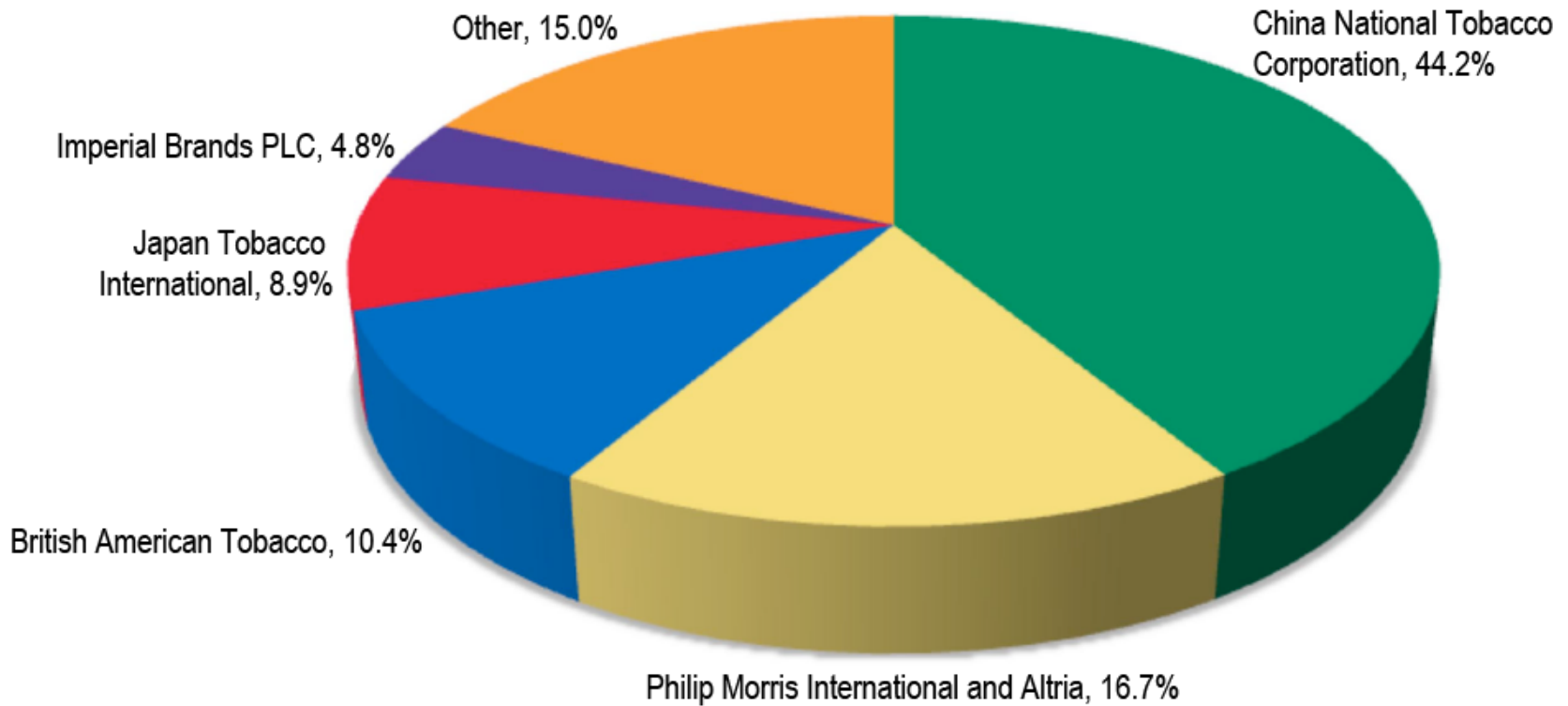
Sources: European Commission 1991–2002 and ERC Group 2011



# Major Conclusions (continued)

6. The market power of tobacco companies has increased in recent years, creating new challenges for tobacco control efforts.

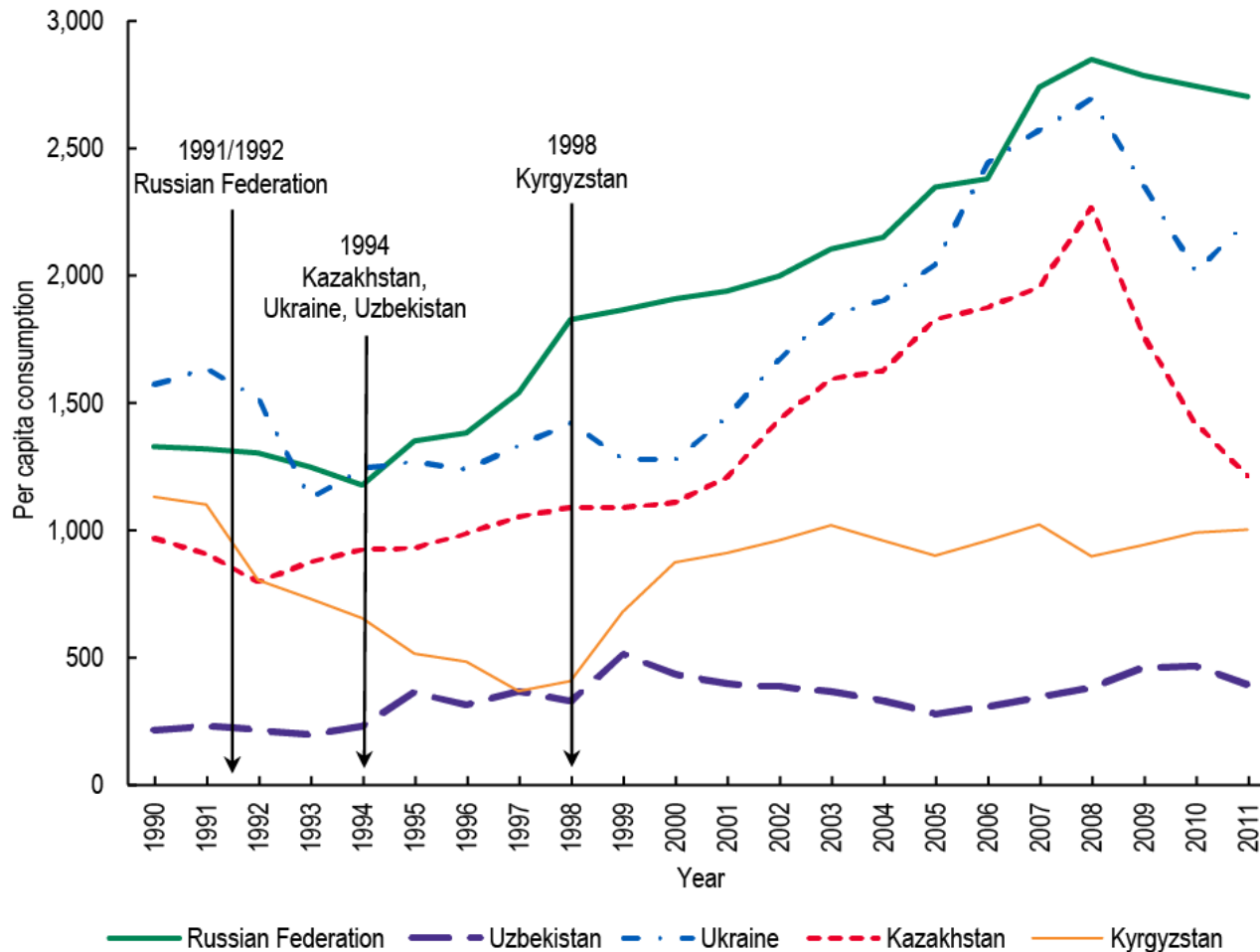
# Figure 12.2. Global Cigarette Market Share Distribution, 2014



Note: Philip Morris International includes Philip Morris USA.

Source: Euromonitor International 2016

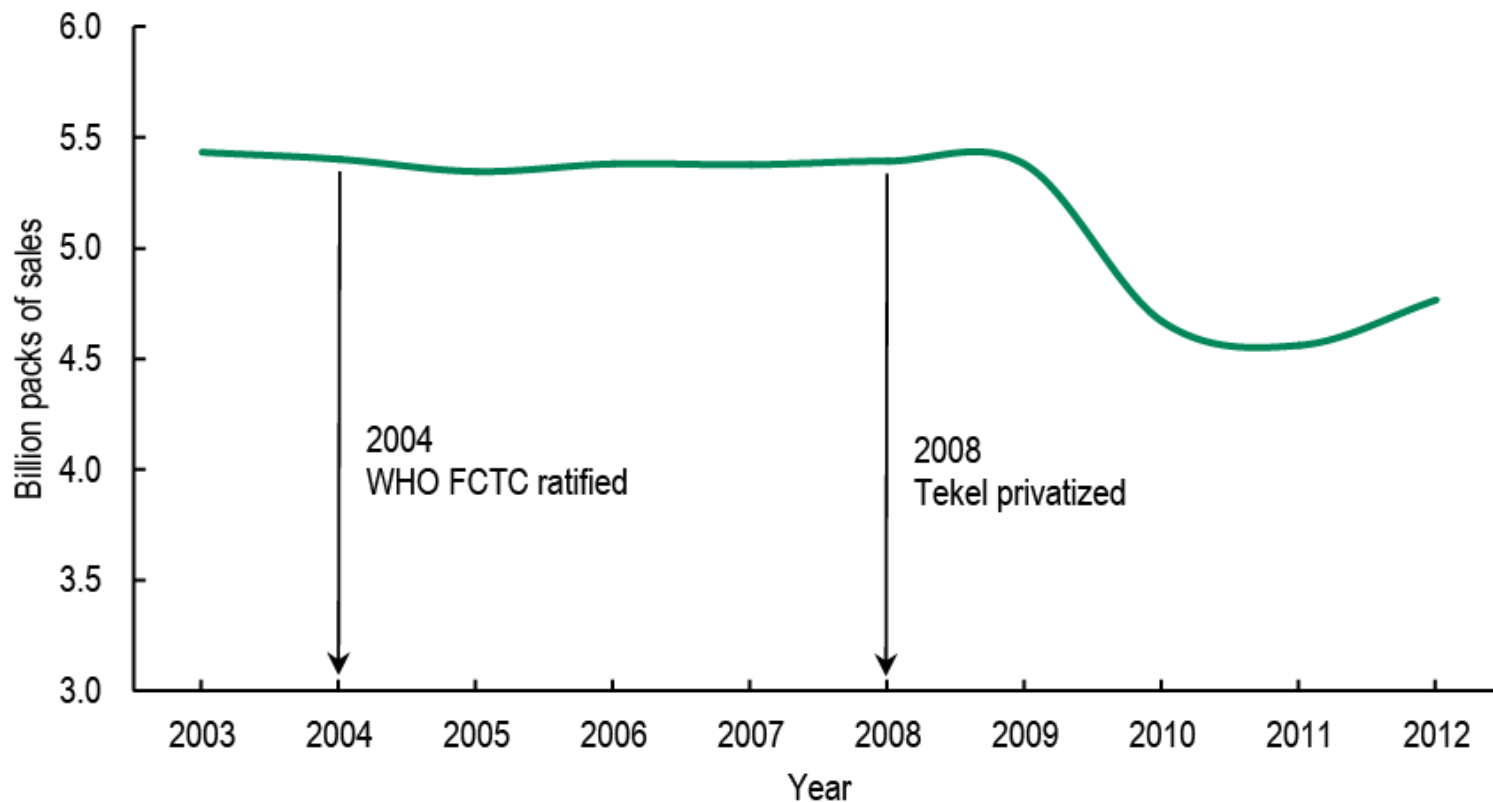
# Figure 12.3. Per Capita Consumption of Cigarettes in Selected Countries of the Former Soviet Union, and Year When Privatized Cigarette Production Began, 1990–2011



Note: Multinational tobacco companies (MTCs) entered the market in Ukraine in 1992, but production did not start until 1994. Similarly, negotiations between MTCs and Kyrgyzstan began in 1994, but the MTC did not start production until 1998.

Source: ERC Group 2011

# Figure 12.6. Sales of Packs of Cigarettes Before and After Privatization of Tekel in Turkey, 2003–2012



Notes: Sales refers to sales of cigarettes made by all producers, including multinational tobacco companies and Tekel. WHO FCTC = World Health Organization Framework Convention on Tobacco Control.

Source: Euromonitor International 2016

# Chapter 12. Tobacco Manufacturing Privatization and Foreign Direct Investment and Their Impact on Public Health

4. Increasingly, the tobacco industry is using trade and investment treaties to challenge innovative tobacco control policies. The tobacco industry also uses the threat of litigation, with its attendant costs, and lobbying campaigns to deter governments from advancing tobacco control policies, especially in low- and middle-income countries.

Figure 8.7 An Example of Australia's Plain Packaging, Showing Requirements for the Front and Back of the Cigarette Pack

### CIGARETTE PACK – FRONT

**BRAND AND VARIANT NAME:**

- horizontal and centred
- no larger than maximum sizes
- in Lucida Sans font
- in Pantone Cool Gray 2C colour
- in specified capitalisation

**MEASUREMENT MARK:**

- no larger than required size
- in Lucida Sans font
- in Pantone Cool Gray 2C colour

**NOTE:**

- The graphic and warning statement must:
- cover at least 75% of the front
  - join will between

Figure 8.7 (continued)

### CIGARETTE PACK – BACK

**NOTE:**

- The warning statement, graphic and explanatory message must:
- cover at least 90% of the back surface
  - join without space between them

**PACK FORMAT:**

- made of rigid cardboard
- no embellishments
- flip top lid

**OTHER MARKINGS:**

- name and address, country of manufacture, contact number, alphanumeric code
- in Lucida Sans font
- no larger than 10 points in size
- in specified colours

**BAR CODE:**

- rectangular
- black and white, or Pantone 449C and white

**PACK SURFACE:**

- colour is Pantone 448C (a drab dark brown)
- matt finish

**BRAND AND VARIANT NAME:**

- centred below health warning
- no larger than maximum sizes
- in Lucida Sans font
- in Pantone Cool Gray 2C colour
- in specified capitalisation

**GRAPI:**

- not (
- extra surf

**MEASURE:**

- no larger required
- in Lucida
- in Pantone 2C color

- WA:**
- b
  - o
  - t
  - t
  - n
  - h
  - w
  - b

**PACK FORMAT:**

- made of rigid cardboard
- no embellishments
- flip top lid

**INFORMATION MESSAGE:**

- background extends to edges of surface
- text fills background
- in Helvetica font
- in specified size, capitalisation and weighting
- black text on yellow background

**PACK SURFACE:**

- colour is Pantone 448C (a drab dark brown)
- matt finish

**BRAND AND VARIANT NAME:**

- horizontal and centred
- no larger than maximum sizes
- in Lucida Sans font
- in Pantone Cool Gray 2C colour
- in specified capitalisation

**FIRE RISK STATEMENT:**

- below health warning
- no larger than 10 points in size
- in upper case Lucida Sans font
- in Pantone Cool Gray 2C colour

**WARNING STATEMENT:**

- background fills area above fold line of lid – extends to edges of surface
- text fills background
- in bold upper case Helvetica font
- white text on red background

**GRAPHIC:**

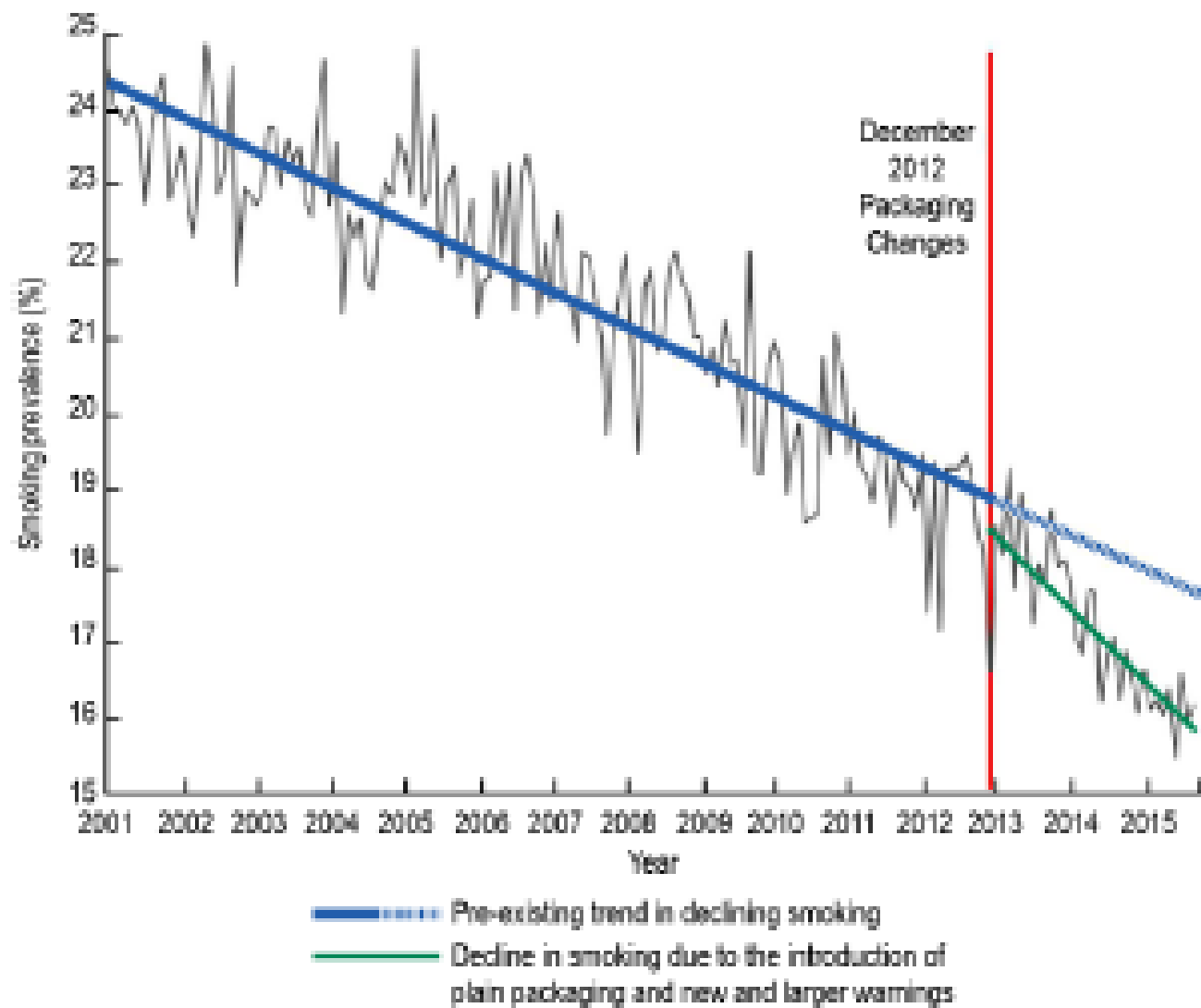
- not distorted
- extends to edges of surface
- includes Outline logo

**EXPLANATORY MESSAGE:**

- background extends to edges of surface
- text fills background
- in Helvetica font
- in specified capitalisation and weighting
- white text on black background

© Commonwealth of Australia. Reprinted with permission. Source: Australian Government 2014.<sup>119</sup>

**Figure 8.8 Overall Monthly Smoking Prevalence, Australia, January 2001–September 2015**



Note: The law took effect in December 2012.

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Source: Australian Government 2015.<sup>100,101</sup>

# Chapter 13. Licit Trade in Tobacco Products

5. Recent World Trade Organization decisions involving challenges to domestic tobacco control policies suggest that governments can address public health concerns associated with increased liberalization of trade in tobacco leaf and tobacco products by adopting and implementing effective tobacco control policies and programs that apply evenly to domestic and foreign tobacco growers and manufacturers.



# Major Conclusions (continued)

7. Tobacco control does not harm economies.

# Chapter 15. Employment Impact of Tobacco Control

1. The number of jobs that depend on tobacco—tobacco growing, manufacturing and distribution—is low and has been falling in most countries.
2. Adoption of new production technologies and improved production techniques, together with the shift from state to private ownership in many countries, has reduced employment in both the tobacco-farming and -manufacturing sectors.
3. In nearly all countries, national tobacco control policies will have either no effect or a net positive effect on overall employment because any tobacco-related job losses will be offset by job gains in other sectors.
4. In the few countries that depend heavily on tobacco leaf exports, global tobacco control policies could lead to job losses, but these losses are expected to be small, gradual, and unlikely to affect the current generation of tobacco farmers in these countries.

# Major Conclusions (continued)

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

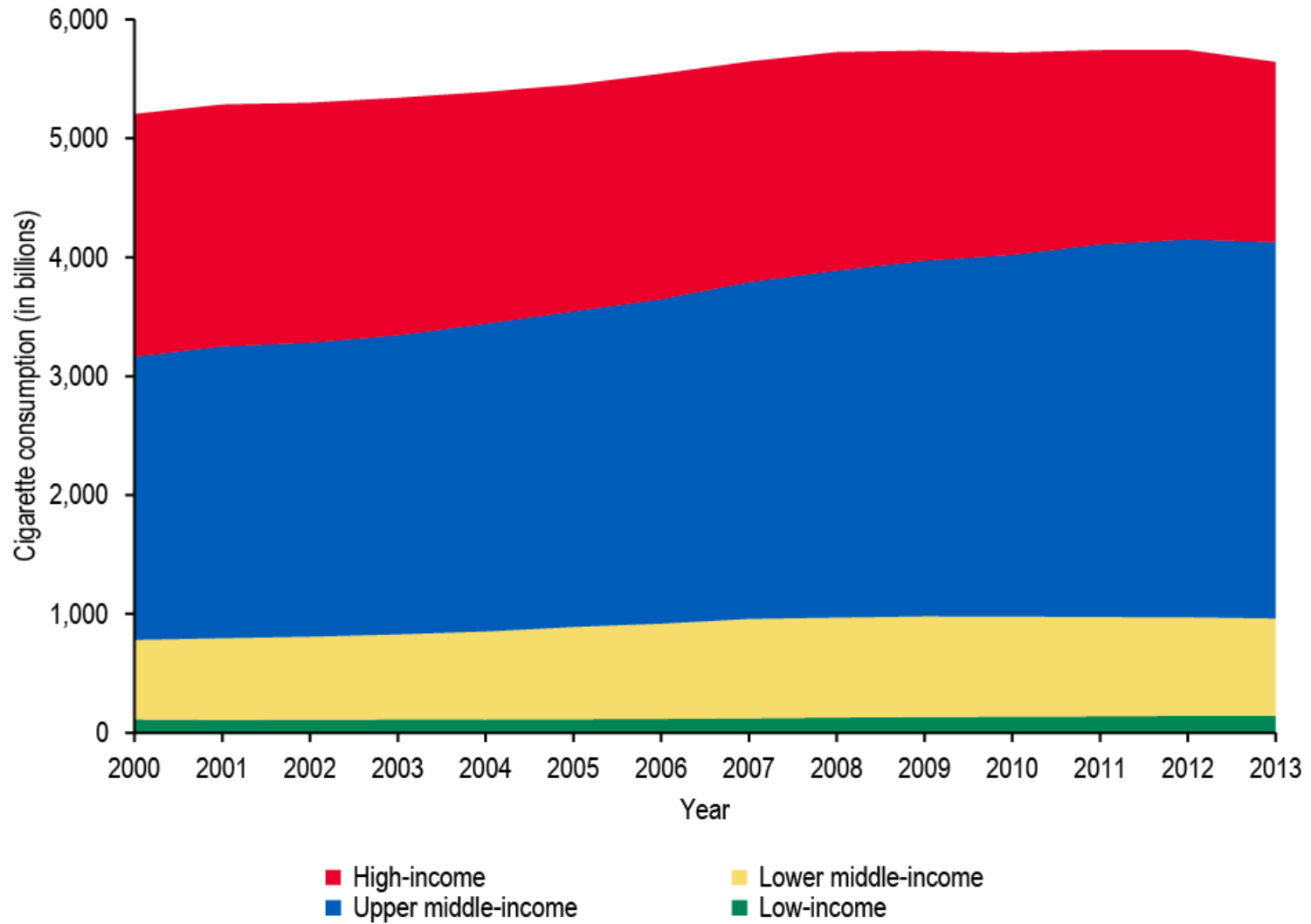
# Chapter 16. The Impact of Tobacco Use and Tobacco Control Measures on Poverty and Development

1. Tobacco use and its consequences have become increasingly concentrated in low- and middle-income countries and, within most countries, among lower socioeconomic status populations.
2. Tobacco use in poor households exacerbates poverty by increasing health care costs, reducing incomes, and decreasing productivity, as well as diverting limited family resources from basic needs.
3. By reducing tobacco use among the poor, tobacco control policies can help break the cyclical relationship between tobacco use and poverty.
4. Tobacco control efforts that are integrated with other public health and development policies can improve the overall health of the poor and can help achieve the Sustainable Development Goals.
5. Lower income populations often respond more to tobacco tax and price increases than higher income populations. As a result, significant tobacco tax and price increases can help reduce the health disparities resulting from tobacco use.

# Major Conclusions (continued)

9. Progress is now being made in controlling the global tobacco epidemic, but concerted efforts will be required to ensure that progress is maintained or accelerated.

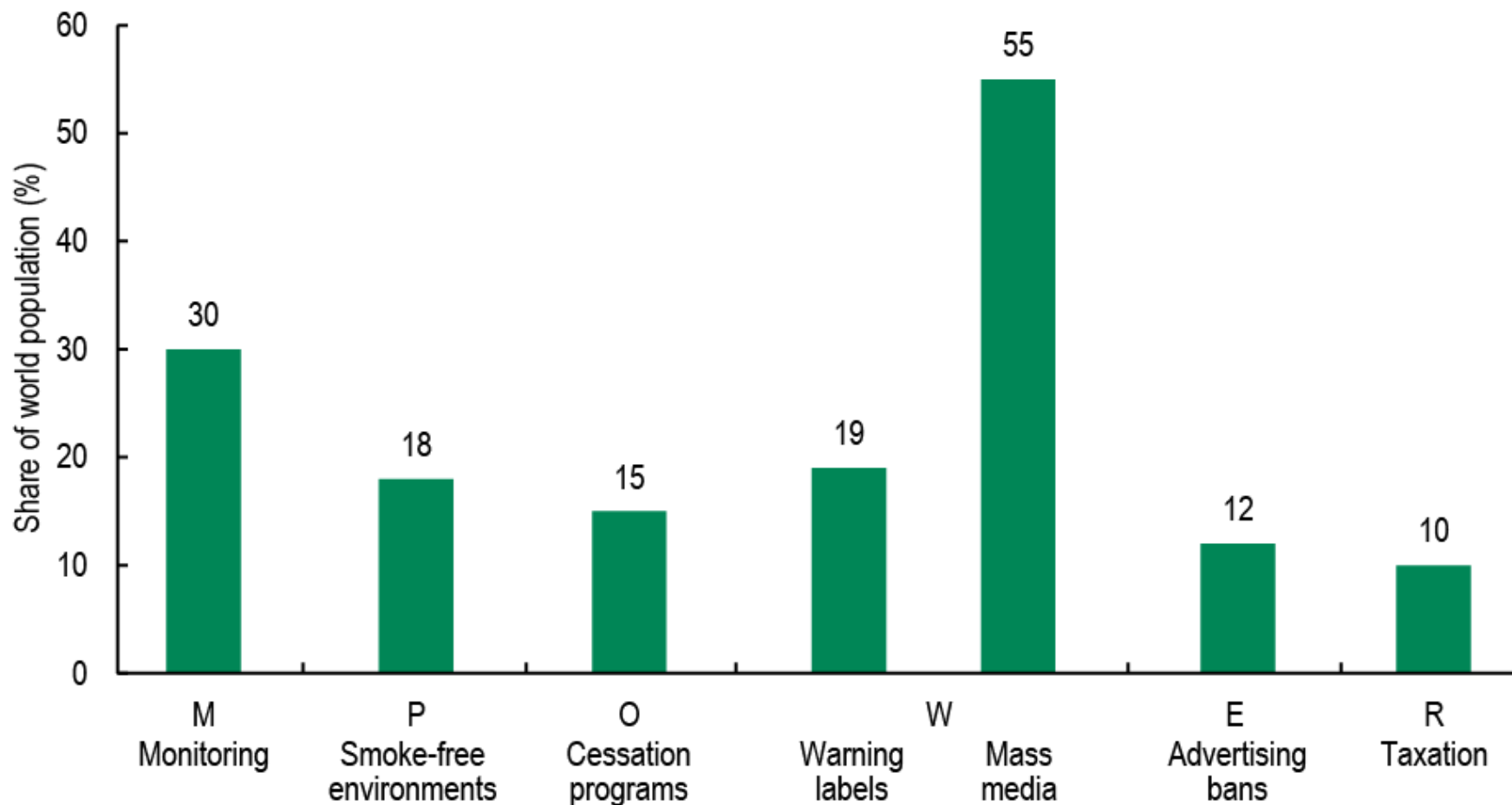
**Figure 2.10. Global Consumption of Cigarette Sticks (in Billions), by Country Income Group, 2000–2013**



Note: Country income group classification based on World Bank Analytical Classifications for 2013.

Source: Euromonitor International 2016

# Figure 17.1. Share of the World Population Covered by Selected Tobacco Control Policies, 2014

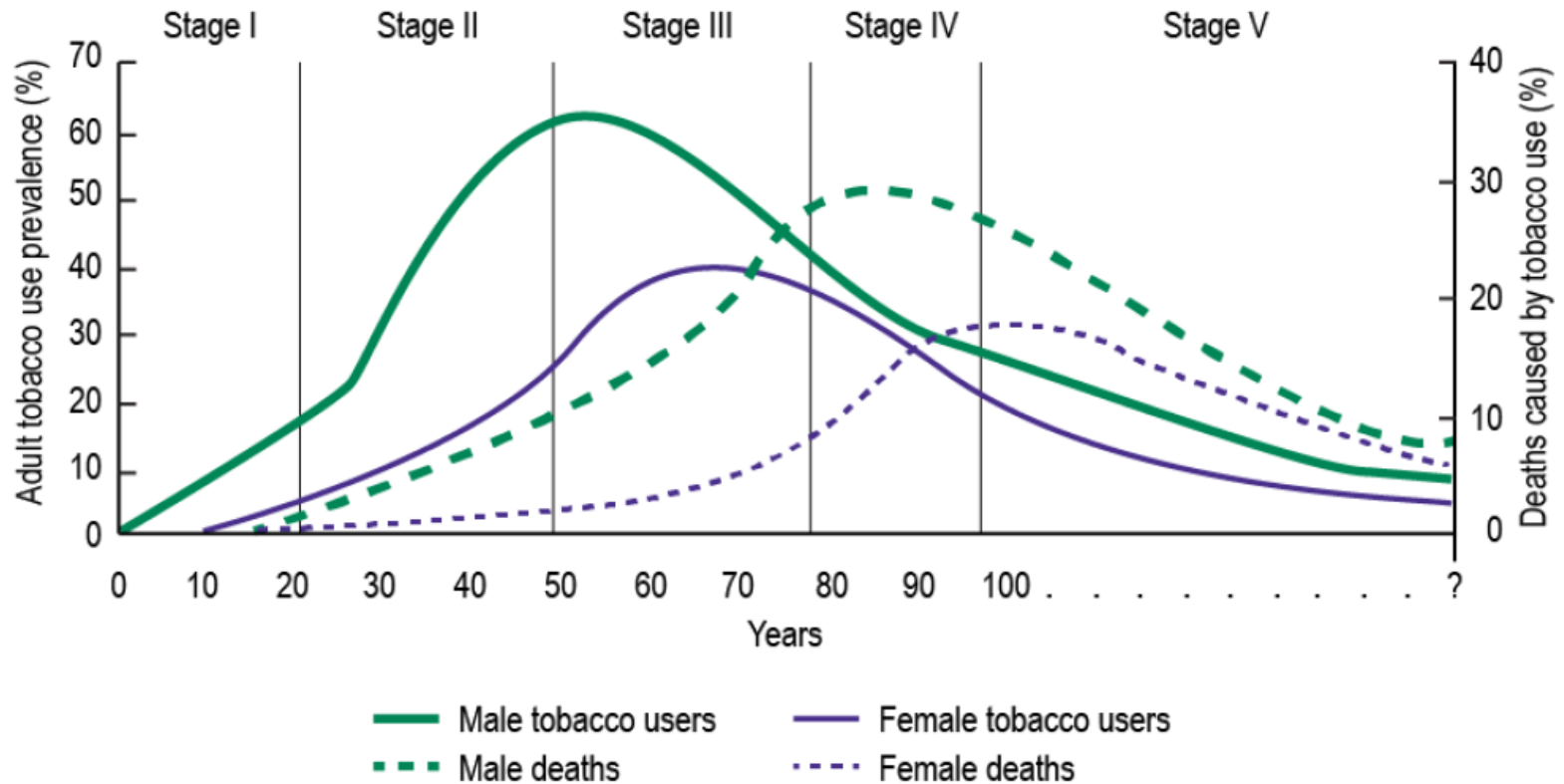


Note: The tobacco control policies depicted here correspond to the highest level of achievement at the national level. For the definitions of these highest categories, refer to the *WHO Report on the Global Tobacco Epidemic, 2015: Raising Taxes on Tobacco*.

Source: World Health Organization 2015

# The science is clear; the time for action is now.

Figure 17.4 A New Model of the Tobacco Epidemic



Source: Adapted from Lopez et al. 1994.<sup>61</sup>

Adapted with permission from BMJ Publishing Group Ltd., from "A descriptive model of the cigarette epidemic in developed countries," Lopez A, Collishaw N, Piha T, volume 3(3), p. 246.





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# The Economics of Tobacco and Tobacco Control

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