

## REVIEW

# Political economy analysis for tobacco control in low- and middle-income countries

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Tobacco is already the world's leading cause of preventable death, claiming over 5 million lives annually, and this toll is rising. Even though effective tobacco control policies are well researched and widely disseminated, they remain largely unimplemented in most low- and middle-income countries (LMICs). For the most part, control attempts by advocates and government regulators have been frustrated by transnational tobacco companies (TTCs) and their supporters. One reason tobacco is so difficult to control is that its political economy has yet to be adequately understood and addressed. We conducted a review of the literature on tobacco control in LMICs using the databases PubMed, EconLit, PsychInfo and AGRICOLA. Among the over 2500 papers and reports we identified, very few explicitly applied political economy analysis to tobacco control in an LMIC setting. The vast majority of papers characterized important aspects of the tobacco epidemic, including who smokes, the effects of smoking on health, the effectiveness of advertising bans, and the activities of TTCs and their allies. But the political and economic dynamics of policy adoption and implementation were not discussed in any but a handful of papers. To help control advocates better understand and manage the process of policy implementation, we identify how political economy analysis would differ from the traditional public health approaches that dominate the literature. We focus on five important problem areas: information problems and the risks of smoking; the roles of domestic producers; multinational corporations and trade disputes in consumption; smuggling; the barriers to raising taxes and establishing spatial restrictions on smoking; and incentive conflicts between government branches. We conclude by discussing the political economy of tobacco and its implications for control strategies.

**Keywords** Political economy, policy implementation, developing countries, middle-income countries**KEY MESSAGES**

- Effective tobacco control policies are well researched and widely disseminated, but they remain largely unimplemented in most low- and middle-income countries (LMICs), in part because the political economy conflicts have yet to be adequately addressed.
- On reviewing the literature on tobacco control in LMICs we found that the vast majority of papers characterized important aspects of the tobacco epidemic, but the political and economic dynamics of policy adoption and implementation were not discussed by any but a handful of authors.
- To help control advocates better understand and manage the process of policy implementation, we sketch out how political economy analysis would differ from the traditional public health approaches that dominate the literature.

## Introduction

Tobacco kills half of its regular users and is the world's leading preventable cause of death—5.4 million lives annually—and by 2015 is expected to account for 10% of all deaths globally (Mathers and Loncar 2006; WHO 2008a). In the twenty-first century, tobacco's toll is expected to reach 1 billion lives unless effective anti-use and quitting campaigns are implemented (Shafey *et al.* 2009). Advocates for tobacco control routinely cite these huge health costs, but meaningful control measures are opposed by the tobacco industry and its allies. According to the World Health Organization (WHO), only 5% of the world's population is protected by even one of the six recommended comprehensive tobacco control interventions (WHO 2008a).

One reason tobacco has not been effectively controlled in low- and middle-income countries (LMICs) is that its political economy remains inadequately understood and addressed. Particularly in these settings, scholars and policy makers have paid insufficient attention to the interactions of politics and economics, and advocates for control have been out-manoeuvred by transnational tobacco companies (TTCs) in many cases (Jha *et al.* 2006a; Jha *et al.* 2006b).

As smoking declines in rich countries, the primary locus of the tobacco epidemic is shifting to LMICs, where TTCs are working to expand markets for their products (Martinez and Grise 1990; Connolly 1992; Mackay 1992; Wagner and Romano 1994; Holzman 1997; Chelala 1998; Mackay and Eriksen 2002). The result of this shift has been a rise in smoking rates in countries targeted by TTCs, despite solid evidence on the dangers of tobacco consumption and the effectiveness of control strategies. In China alone, some 100 million people now living are expected to die from tobacco use (Martinez and Grise 1990; Slama 2008; WHO 2008a).

To support more effective tobacco control globally, this article analyses the existing literature on the political economy of tobacco control in LMICs and then examines five areas of tobacco control where more political economy analysis is needed.

## The MPOWER Report

In 2008 the World Health Organization released its MPOWER package, a state of the art presentation of proven tobacco control strategies and recent statistics on tobacco use and tobacco policies in 179 member countries (WHO 2008a). Twenty-seven countries representing over 85% of the world's smokers are profiled in depth, including consumption and prevalence data, plus details of production, imports and exports for both leaf tobacco and cigarettes.

The MPOWER report, however, provides a static picture of tobacco and its control without explaining how countries made progress or what obstacles remain. More importantly, it includes only passing reference to the difficulties of adopting and implementing the recommended policies and the strategies employed by TTCs to resist them. The challenges of controlling tobacco are evident in the continuing rise in global consumption, despite the historic WHO Framework Convention on Tobacco Control (FCTC) (WHO 2005) and despite legislative progress in many countries (WHO 2008b). Strategies based on political economy are helpful for converting validated control measures into enforceable, effective and implemented national policies, as we discuss below.

## Definitions and methods

### Defining political economy

'Political economy' is hard to define because it concerns relationships between politics and economics that are difficult to specify precisely and have been used in different ways. However, political economy analysis typically concerns the links between wealth and power, politics and economics, and nation states and markets (Hoogvelt 2001). In recent decades, political economy has gained popularity as a sub-field of economics, for instance, because it helps explain and analyse complex processes such as economic reform, the interaction of political institutions and economic outcomes, and corruption, all of which are both political and economic phenomena (Alesina 2007).

For the purposes of this article, we use 'political economy' as an explicit recognition of the importance of both politics and economics in the distribution of resources. Using similar definitions, both the World Bank and the UK's Department for International Development (DFID) have embraced political economy analysis to better understand and manage policy reform and implementation processes (DFID 2009; Fritz *et al.* 2009). The Governance and Social Development Resource Centre, funded by DFID and the Australian Agency for International Development, has supported political economy analysis 'to situate development interventions within an understanding of the prevailing political and economic processes in society' (GSDRC 2006). With respect to tobacco, we are particularly interested in the political and economic dimensions of policy adoption, implementation and enforcement. We use 'political economy' therefore to indicate an analytical approach to explaining important elements of problems in these policy processes of tobacco control.

In health and medical journals, 'political economy' has become increasingly popular in recent decades as a lens to view tobacco control. A PubMed search for the keywords 'political economy tobacco' yielded 130 citations.<sup>1</sup> None were older than 1980, and in the decades of the 1980s, 1990s and 2000s, there were 19, 38 and 73 papers, respectively. The earliest paper retrieved was written by a political scientist, Harvey Sapolsky at MIT (Sapolsky 1980), but in recent years 'political economy' has been embraced—at least as a phrase—by tobacco control scholars trained in other disciplines, including economics, medicine and epidemiology.

### Methods

A literature review was conducted using four databases: PubMed, EconLit, PsycInfo and AGRICOLA. Unpublished literature was sought via requests to experts and Internet searches.

The search found very few publications and reports directly applying political economy analysis to tobacco control in LMICs. The complete literature on tobacco control was too large to review. Therefore, to reduce the results to a manageable subset, we searched for papers on any aspect of tobacco and LMICs. To illustrate this process we provide details of our search in PubMed, the largest database we used. Our initial search for the terms 'tobacco' and 'political economy' yielded only 12 papers. This finding indicated that the literature we sought to analyse was very limited. We then adjusted our terms to identify papers that could be used as inputs into a political economy of tobacco control in LMICs by searching for 'tobacco'

and either 'international' or 'developing' and 'countries'. This strategy returned 2021 papers in English. We then reviewed all citations and abstracts (where available). We retained all papers (about 375) that addressed any economic, political or public health aspect of tobacco. The majority of excluded papers were clinical or laboratory studies.

Including all databases, our search yielded approximately 2500 citations (March 2009), all of which we reviewed. Authors and institutions of particular significance were used as new search terms to expand our results. In total, we obtained 454 papers, reports and books for our analysis.

## Literature review results

Our review of the 454 papers, reports and books showed that many authors (based on institutional affiliations, degrees listed and Internet searches) were trained in epidemiology and other aspects of public health, such as health policy. Less frequently, papers were written by economists. Less numerous still were documents written by professionals outside the health disciplines, such as lawyers and political scientists. Most papers were written by authors with affiliations in academia or government, or at research centres, hospitals or international agencies.

Very few of the papers used political economy analysis. Of all 454 papers identified, only 16 included the keywords 'political' and 'economy' in the title or abstract. (This is an undercount because some publication types were less likely to be abstracted, such as books, book chapters and some grey literature reports.) Of these 16 papers, only six were directly concerned with tobacco control in LMICs (Stebbins 1987; Stebbins 1990; Global Analysis Project Team 2000; Chantornvong and McCargo 2001; Woelk *et al.* 2001; Lawrence and Collin 2004).

To confirm the finding that very few of the papers identified in the search explicitly applied political economy analysis to tobacco control in LMICs, we conducted a full text search for the term 'political economy' in the 403 documents available in electronic format. This subset of 403 represented about 90% of the 454 references in the full sample. The 10% of papers not covered by this methodology included items we reviewed in hard copy or from Google Books, and items not available in full text.

Of the 403 documents available electronically, 48 contained the phrase 'political economy'; these were then analysed to determine how the phrase was used (Table 1). Of the 48, only eight papers used political economy analysis to understand aspects of tobacco control in LMICs. A large plurality (21 papers) did not use political economy at all. In these cases the phrase 'political economy' appeared in a citation to *The Journal of Political Economy*, or to a paper with 'political economy' in its title, and so forth.

## Discussion of literature review

Our literature review suggests four broad conclusions. First, we identified only a few documents that explicitly invoked political economy analysis or topics that directly proposed political strategies for advancing tobacco control. Instead, most of the papers were descriptive: of who smokes, of patterns and trends of use, of health risks, of TTC actions, or of the economic aspects of tobacco and control. Very few focused on the political dimensions of policy adoption, implementation or enforcement, even if many papers contained evidence relevant to these areas.

Second, even when 'political economy' was mentioned, only rarely did the authors employ it formally. More commonly, the term has been used loosely, as an opportunity to state that

**Table 1** Analysis of 48 papers containing the phrase "political economy" (in an electronic search of the full text papers)

No. of papers	Context of "political economy" usage	References
8	Political economy analysis of tobacco control or tobacco and health in (a) low- or middle-income setting(s)	(Stebbins 1987; Stebbins 1990; Stebbins 1991; Stebbins 1994; Global Analysis Project Team 2000; Chantornvong and McCargo 2001; Stebbins 2001; Woelk <i>et al.</i> 2001)
4	Political economy analysis of tobacco control or tobacco and health in (a) developed setting(s)	(Poland 2000; Cohen <i>et al.</i> 2002; Pollack and Jacobson 2003; Hornsby and Hobbs 2007)
4	Political economy theory referenced to explain TTC behaviour, e.g. self-regulating oligopoly, profit-seeking firms, plus works we drew on for political economy theory in general	(Charney 1983; Reich 2002; Mamudu <i>et al.</i> 2008a; Mamudu <i>et al.</i> 2008b)
6	Political economy referenced as a concept, but political economy theory or methods not used	(Tye <i>et al.</i> 1987; Abedian <i>et al.</i> 1998; Shimkhada and Peabody 2003; Vateesatokit 2003; Waitzkin <i>et al.</i> 2005; Otanez <i>et al.</i> 2006)
3	Cite absence of political economy analyses as an important obstacle to tobacco control in low- and middle-income countries	(Jha <i>et al.</i> 2006a; Jha <i>et al.</i> 2006b; Choudhury <i>et al.</i> 2007)
2	Political economy of tobacco production	(Boesen and Mohele 1979; Geist <i>et al.</i> 2009)
21	'Political economy' found but not used substantively, e.g. citation to the <i>Journal of Political Economy</i> , or 'political' and 'economic' are next to each other in a list, or 'political economy' is mentioned in passing	(Ray 1985; Jha 1999; Bettcher <i>et al.</i> 2000; Merriman <i>et al.</i> 2000; Orr 2000; Collin <i>et al.</i> 2002; Nelson 2003; Blanke and da Costa e Silva 2004; Fong <i>et al.</i> 2004; Hozic 2004; Lee <i>et al.</i> 2004; Mpabulungi and Muula 2004; Marshall 2005; Lokshin and Beegle 2006; Masanjala 2006; Blecher 2008; Capella <i>et al.</i> 2008; Goel 2008; MacKenzie and Collin 2008a; Otanez and Glantz 2009; WHO 2009)
48	Total of 48 papers that included the phrase 'political economy' in a full text search of 403 documents available in electronic form.	

politics is an important component of the tobacco control discussion, along with economics and health.

Third, translating the FCTC into tobacco use reductions at the national level is likely to require national-level political economy analyses to better understand barriers to control in specific settings and define strategies to overcome them. This approach could link the international consensus to national manifestations of the tobacco problem and at the same time help define political strategies appropriate to local conditions. This work has yet to be published for LMICs.

Fourth, tobacco control's present and past are well documented, but analyses of future scenarios have focused on projections of health consequences and smoking trends. Many publications have defined optimal tobacco control policies, detailed the state of national tobacco control policies around the world, and examined the strategies TTCs have used to promote their products. A primary feature of this latter literature is that TTCs have continued to prosper under strengthened regulatory frameworks and against a continually growing body of evidence about the harm done by their products. How TTCs have operated in the past is fairly well documented, but how TTCs will try to grow in the future has not been adequately addressed in the literature we identified.

### Topics for a political economy of tobacco control

Some of the highest-profile achievements in tobacco control have relied on political economy analyses, such as the negotiation of the FCTC (D Yach, personal communication). However, the analyses themselves have not been published, in part because doing so could help TTCs defeat future control attempts. Unfortunately, secrecy hinders the dissemination of valuable techniques and approaches among tobacco control advocates, as well.

To address this problem we seek to illuminate how a political economy perspective would differ from those that dominate the public health and medical literatures on tobacco control. Based on the literature review and discussions with experts in tobacco control, we identified five policy areas where additional political economy analysis could make a positive difference in advancing tobacco control policies:

- (1) Information problems concerning citizen knowledge of the dangers of tobacco use;
- (2) The roles of domestic producers, multinational corporations and trade disputes in consumption;
- (3) The use of smuggling to undermine regulation;
- (4) The barriers to raising taxes and establishing spatial restrictions on smoking;
- (5) Incentive conflicts between government branches.

### Information asymmetries and the risks of smoking

If the true costs of tobacco use were universally known and accepted, it is unlikely that completely rational people would choose to smoke. But ignorance of the health consequences of smoking is common among both individual consumers and government policy makers (Jha *et al.* 2006b), and the decision to smoke may not be based on accurate information or rational analysis.

The contest waged between TTCs, regulators, control advocates and others over perceptions of tobacco use and its health effects is complicated and hotly contested, but the dynamics of this struggle were not examined comprehensively in the literature we reviewed. The vast majority of papers were descriptive; these papers contained information and analysis essential for understanding the tobacco epidemic, but did not provide guidance on how to mitigate its toll. For instance, one study surveyed physicians in Hong Kong, finding more than half of them had inadequate knowledge and negative attitudes toward smoking cessation, but the authors did not document the sources of these attitudes or develop remedial strategies (Abdullah *et al.* 2006). A primary motive for other authors was to understand characteristics of smokers; 'predictors' referred to the dominant socio-demographic indicators of smokers, such as gender, income quintile and urban or rural residence, for instance (Jenkins *et al.* 1997). But changing these characteristics is an unrealistic control strategy. Other articles investigated advertising and consumption (Tye *et al.* 1987) and the effects of advertising bans (Blecher 2008; Capella *et al.* 2008), but did not present strategies for managing the politics of implementing such bans.

Much of the literature we reviewed relied primarily on the implicit assumption that providing accurate information would be sufficient to cause smokers to quit, prevent non-smokers from starting, and empower control advocates and regulators. Experience in rich countries has belied the simplicity of this assumption. In the US and the UK, for instance, scientific and medical evidence of smoking's harm emerged in the 1950s, including the carcinogenic properties of tar in 1953 (Wynder *et al.* 1953), Doll and Hill's study linking smoking and mortality in physicians in 1954 (Doll and Hill 1954), and the Surgeon General's designation of smoking as a cause of lung cancer in 1957 (Burney 1957). But in both countries the tobacco industry continued to prosper by recruiting new smokers and forestalling regulation long after their products had been shown harmful by researchers and denounced by medical authorities. Rather than let scientific and medical findings drive popular opinions, the industry defined and promoted a positive culture of smoking that proved more persuasive for several decades.

Similar dynamics have unfolded in LMICs, where smoking is still increasing. However, many scholars analysing tobacco in LMICs have already exposed many of the channels and methods used by TTCs to misrepresent smoking as a positive activity, disguise its risks and undermine regulatory attempts. In this rich literature, some authors have documented TTC attempts to covertly produce scientific controversies intended to forestall regulatory curbs and promote use by obscuring the ill effects of smoking on health (Muggli *et al.* 2001; Bialous and Shatenstein 2002; Assunta *et al.* 2004; Tong and Glantz 2004; Barnoya and Glantz 2006). Authors also revealed TTC attempts to counter or undermine regulatory processes, for instance by obstructing national legislation (Sebrie *et al.* 2005), circumventing advertising restrictions (Neuman *et al.* 2002; Alechnowicz and Chapman 2004; Assunta and Chapman 2004b; Assunta and Chapman 2004c; Assunta and Chapman 2004d; Knight and Chapman 2004; MacKenzie *et al.* 2004a; Bansal *et al.* 2005), ghostwriting ineffective laws (Patel *et al.* 2007), misinforming policy makers (Davis 2008; Muggli *et al.* 2008), subverting anti-smoking programmes to actually promote tobacco use

(Landman *et al.* 2002; Assunta and Chapman 2004a; Sebríe and Glantz 2007b), and interfering with international agencies and their work (Ong and Glantz 2000; WHO 2000; Must 2001; Myers and Wilkenfeld 2001; Gilmore *et al.* 2002; Assunta and Chapman 2006; Mamudu *et al.* 2008a; Mamudu *et al.* 2008b; WHO 2009). Key constituencies have been described, too, including physicians and medical students as sources of health information (Tessier *et al.* 1992; Richmond *et al.* 1998; Piryani and Rizvi 2004; Khan *et al.* 2005; Smith and Leggat 2007a; Smith and Leggat 2007b), and potential smokers targeted by TTCs, especially women (Amos 1996; Brandt 1996; Mackay 1996; Richmond 1997; DeLand *et al.* 2000; Ernster *et al.* 2000; Kaufman and Nichter 2001; Bialous and Shatenstein 2002; Mackay and Amos 2003; Morrow and Barraclough 2003a; Morrow and Barraclough 2003b; Alechnowicz and Chapman 2004; Bansal *et al.* 2005; Toll and Ling 2005; Lee *et al.* 2009) and children (Warren *et al.* 2000; Bialous and Shatenstein 2002; Chapman 2004; Bansal *et al.* 2005; Wen *et al.* 2005a; Warren *et al.* 2006; Braun *et al.* 2008; Warren *et al.* 2008).

Political economy analysis is helpful for understanding the forces that shape opinions regarding tobacco and smoking because it can focus on information asymmetries; it can also move beyond description to suggest strategies for addressing public perceptions of tobacco and smoking. Important dynamics include how information is produced, disseminated and consumed, whose opinions matter most, and ultimately which group succeeds in establishing its culture of tobacco. Much of the literature cited above would be an essential input into this exercise.

### Domestic producers, TTCs and trade disputes

TTCs and the countries that support them have used trade disputes and trade liberalization to open new markets for their products (Shepherd 1985; Chaloupka and Laixuthai 1996; Dickinson 2000; Vateesatokit 2003; Lambert *et al.* 2004; Shaffer *et al.* 2005; Zeigler 2006; Lee *et al.* 2008). Typically, markets have been closed to tobacco imports to protect a national monopoly, which is sometimes government-owned. In the past, the US has used Section 301 of the 1974 Trade Act to impose sanctions on governments unwilling to accept tobacco imports, and more recently cases have been pursued through the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization. This alliance has reflected the economic power of the industry to influence the trade policy of the US government. Many opposing governments have been forced to modify their policies to accept tobacco imports as a result, including Japan, Korea and Taiwan. In each case smoking rates climbed dramatically following the arrival of TTCs (Chaloupka and Laixuthai 1996; Lambert *et al.* 2004; Park *et al.* 2004; Wen *et al.* 2005b). At the national level, many actors oppose liberalization for tobacco imports, including national tobacco monopolies and national authorities in finance and health. These actors are powerful domestically, but they have been defeated by TTCs and the rich country governments that support them in every case yet adjudicated.

The success of TTCs at entering and dominating new markets in many cases reflects a triumph of international political economy forces over domestic political economy forces. In these examples, TTCs and the governments that support them have expressed

their power through the authority of international trade agreements, which has dominated the authority of national governments even in their own domestic affairs. An important exception to this pattern has been Thailand, where the government, control advocates and international collaborators were able to delay TTC entry and enact effective regulatory barriers before they arrived. Thai control advocates made extensive use of political economy analyses to understand and control the international and domestic forces at play. Although Thailand was forced to open its market to imported tobacco, the GATT ruled that Thailand could regulate however it wished as long as domestic and imported tobacco companies were treated equally. Thailand has maintained its strict tobacco control laws, with the support of the domestic tobacco industry, which hoped to limit the marketing power of TTCs. As elsewhere, smoking has increased since TTCs entered the market, but in Thailand the increase has been smaller and its effects have been mitigated somewhat by a 2% excise tax designed to fund health promotion (Chaloupka and Laixuthai 1996; Vateesatokit 1997; Global Analysis Project Team 2000; Chantornvong *et al.* 2000; Chantornvong and McCargo 2001; Vateesatokit 2003).

Political economy analysis can help control advocates understand how TTCs gain access to closed or restricted markets and can identify relevant stakeholders to form powerful coalitions. In the US, for instance, the litigation that led to the Master Settlement Agreement was initiated by a wide variety of plaintiffs, including private individuals, non-profit organizations and third-party payers seeking to recover health care costs (Douglas *et al.* 2006). Although tobacco litigation is most common in the US, this strategy can be applied elsewhere (Gostin 2007). Thailand's success in establishing high tobacco taxes and strict advertising curbs also was due largely to the influence of non-government organizations (NGOs) and activists. We did not find examples of progress in tobacco control in settings where these groups were not mobilized.

### The use of smuggling to undermine regulation

Cigarette smuggling is a large and extremely profitable enterprise in which TTCs are 'complicit' (Collin *et al.* 2004). Illicit cigarettes account for about 11% of the global trade and represent lost government tax revenues between US\$40 and US\$50 billion annually (Framework Convention Alliance 2007). Smuggling is a highly profitable endeavour tacitly encouraged by TTCs to promote consumption by making their products available at prices and in quantities that would not exist otherwise. Smuggling also creates political pressure to open markets as smokers develop tastes for imported products and as middlemen and retailers become accustomed to increased sales and profits. At the same time, smuggling limits tax revenues by undercutting the legal tobacco trade, which weakens governmental ability to mount control efforts and makes TTC philanthropy and sponsorship harder to resist. TTCs have typically blamed smuggling on criminals, but research and industry documents have conclusively shown that these companies have considered smuggling an important distribution channel and have incorporated responsibilities related to it in their management structures (Shepherd 1985; Joossens 1998; Yamey 2000; Campaign for Tobacco-Free Kids 2001a; Bialous and Shatenstein 2002; Collin *et al.* 2004; MacKenzie *et al.* 2004a; Wen *et al.* 2005b; Armendares and Reynales Shigematsu 2006a;

Armendares and Reynales Shigematsu 2006b; Lee and Collin 2006; Novotny 2006; Wen *et al.* 2006; LeGresley *et al.* 2008; Nakkash and Lee 2008; West *et al.* 2008).

Although many features of smuggling are well understood, effective interventions against it have not been implemented. Political economy analysis could help explore the challenges of using international action to contain smuggling and hold TTCs responsible for their products through improved tracking and tax enforcement. Negotiating such mechanisms could follow a process similar to that employed to implement the FCTC, where political economy analysis helped to identify stakeholders, build coalitions, and predict and prepare for TTC responses.

### Raising taxes and establishing spatial smoking restrictions

Political economy analysis can help explain the challenges in adopting and implementing control strategies such as raising taxes on cigarettes and establishing spatial restrictions on smoking, both of which are recommended in the MPOWER Report (WHO 2008a). The World Bank's *Curbing the Epidemic* argues for spatial restrictions to reduce opportunities to smoke and for raising taxes on tobacco as a means to reduce consumption, especially among young smokers who are more price sensitive. Across smokers in all LMICs, the World Bank estimates that a 10% rise in price will cause an 8% decrease in demand. Increased taxation of tobacco is also frequently recommended by the International Monetary Fund as part of economic stabilization programmes (Jha 1999).

The primary opposition to both taxation and spatial restrictions is TTCs and economically interested allies. The predominant strategy for opposing spatial restrictions is through misinformation to disguise the dangers of environmental tobacco smoke, by clouding the debate with sponsored research and by claiming that spatial restrictions will cause economic harm to affected businesses, such as bars and restaurants (Muggli *et al.* 2001). Attempts to raise taxes have been countered by TTC lobbying efforts suggesting that increased taxes cause economic harm (Armendares and Reynales Shigematsu 2006a), and through smuggling, some of which has occurred under TTCs' direct or indirect control (Collin *et al.* 2004). Political economy analysis could examine the challenges of effectively organizing proponents of spatial restrictions against the opposition from tobacco companies by identifying the relevant stakeholders and assessing different political strategies. Potential proponents include non-smokers, who are not a political force in most LMICs, as well as health NGOs, physicians, scientists and national health authorities. But in many LMICs these groups often are not effectively mobilized to press their case.

### Intra-governmental incentive conflicts

Political economy analysis can help explain conflicts among government agencies and how these conflicts can favour the tobacco industry. Some ministries, such as finance, are likely to support the industry because of the tax revenues it generates, and are likely to have substantial political power. Other ministries, such as health, are likely to oppose tobacco for the death, disability and related illness costs that it causes, but these social sector ministries often lack political leverage in the government. In the US this conflict led to domestic control

policies when advocates were able to demonstrate the harmfulness of tobacco and mobilize allies in society. But the government has remained supportive of TTC expansion internationally because economic benefits accrue to the US while the resultant smoking imposes costs elsewhere (Mackay 1994). One feature of this problem is that tobacco's economic benefits begin immediately (for farmers, producers and tax revenues), while the health costs take years to express themselves (and in other countries, when tobacco is exported); for example, in China, the largest producer of tobacco leaf, health costs are expected to outweigh economic benefits only in the future (Hu *et al.* 2006). Further complexity comes from the asymmetric power of ministries of finance and health, which do not easily engage in dialogue on tobacco policy or other matters of relevance to both.

As in other areas of this analysis, we find that intra-governmental conflicts are often based on mistaken information, which is frequently supplied by the tobacco industry as a means of promoting and protecting their interests. This mis-information exacerbates the policy differences between tax authorities, which tend to view tobacco consumption as a benefit due to increasing tax revenues, and health authorities, which view tobacco consumption as a harm due to the rising costs of providing care for tobacco-related disease and disability. Tax and health policies need not be in conflict, and many authors have studied how to balance them (Abedian *et al.* 1998; Chaloupka and Corbett 1998; Jha 1999; Warner 2000; Armendares and Reynales Shigematsu 2006a). Successful examples include inter-ministerial co-operation in Bhutan (Ugen 2003), Thailand (Vateesatokit 1997; Vateesatokit 2003) and Nepal (Karki 2002; Sussman *et al.* 2007) where NGOs have played a large role (Efroymsen 2007), rapid progress in Sri Lanka following the establishment of the National Authority on Smoking and Alcohol in 2006 (Parliament of the Democratic Socialist Republic of Sri Lanka 2006; CDC 2008), and strong legislation in India (Reddy and Gupta 2004).

## Conclusion

The political economy of tobacco is complicated by the transnational character of its dominant firms, the uneven distribution of the industry's costs and benefits, the magnitudes of the economic benefits and health costs of cigarettes, and the diversity of actors with interests in the tobacco trade. Understanding how TTCs operate at the global level and within national boundaries is essential to tobacco control policy, especially in the growing markets of the LMICs. Recent studies of TTCs have expanded our knowledge about how the tobacco industry operates and the challenges of tobacco control policy, largely because millions of pages of internal industry documents have been made public by the Tobacco Master Settlement Agreement, reached in the United States in November 1998. But much more research could be done, especially in the realm of political economy.

Some medical and public health experts have approached tobacco as if it could be addressed by the usual set of technical tools in epidemiology and economics. But tobacco control is complicated by the powerful political economy forces created by the production and sale of cigarettes. In many LMICs, the slow

progress toward control in some areas and the complete failure in others testifies to the power of these forces. Political economy analysis can help strategies to promote policy adoption and implementation. In particular, implementing the FCTC at the national level likely will require political economy analysis. International agencies, foundations, pharmaceutical companies with tobacco-related products and NGOs with relevant experience are potential sources of external financing for these analyses. Domestic sources include medical or hospital associations, groups exposed to the ill effects of tobacco through employment and businesses that may be threatened by TTCs' activities. We examined five areas of tobacco control policy where political economy analysis has contributions to make. Such analyses can shed light on TTC actions, reveal the underlying conflicts that promote tobacco use, and suggest political strategies to help design and implement more effective controls on tobacco.

Beyond tobacco, both the problems we raise and the solutions we propose in this article are applicable to other industries of public health importance. Alcohol, pharmaceuticals and food, for instance, all create similar political-economic conflicts. Powerful transnational firms are rewarded through higher revenues for increasing the consumption of their products, which also benefits a large array of producers, distributors and tax authorities. But deriving benefits from these products means avoiding overconsumption and its deleterious health consequences. As with tobacco, the economic benefits are concentrated in the industry and its related players, while the health costs are exacted from individuals, who tend to be unorganized politically and unaware of the larger consequences of their aggregate behaviour.

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## Conflict of interest

We declare that we have no conflicts of interest.

## Endnote

<sup>1</sup> Includes papers published by 31 December 2009.

## References

Abdullah A, Rahman A, Suen C *et al.* 2006. Investigation of Hong Kong doctors' current knowledge, beliefs, attitudes, confidence and practices: implications for the treatment of tobacco dependency. *Journal of the Chinese Medical Association* **69**: 461–71.

- Abedian I, Merwe RVD, Wilkins N, Jha P (eds). 1998. *The Economics of Tobacco Control: Towards an optimal policy mix*. Cape Town, South Africa: University of Cape Town. Online at: <https://hdl-bnc.idrc.ca/dspace/bitstream/123456789/26321/1/118634.pdf>, accessed 29 May 2009.
- Alechnowicz K, Chapman S. 2004. The Philippine tobacco industry: "the strongest tobacco lobby in Asia". *Tobacco Control* **13**: ii71–8.
- Alesina AF. 2007. Program Report: Political Economy. *NBER Reporter* **3**: 1–5.
- Amos A. 1996. Women and smoking. *British Medical Bulletin* **52**: 74–89.
- Armendares P, Reynales Shigematsu L. 2006a. Fiscal policy and tobacco control: a unique opportunity to benefit public health and the public treasury. *Salud Pública de México* **48**: S167–72.
- Armendares P, Reynales Shigematsu L. 2006b. Expansion of the tobacco industry and smuggling: challenges for public health in developing countries. *Salud Pública de México* **48**: S183–9.
- Assunta M, Chapman S. 2004a. Industry sponsored youth smoking prevention programme in Malaysia: a case study in duplicity. *Tobacco Control* **13**: ii37–42.
- Assunta M, Chapman S. 2004b. A mire of highly subjective and ineffective voluntary guidelines: tobacco industry efforts to thwart tobacco control in Malaysia. *Tobacco Control* **13**: ii43–50.
- Assunta M, Chapman S. 2004c. "The world's most hostile environment": how the tobacco industry circumvented Singapore's advertising ban. *Tobacco Control* **13**: ii51–57.
- Assunta M, Chapman S. 2004d. The tobacco industry's accounts of refining indirect tobacco advertising in Malaysia. *Tobacco Control* **13**: ii63–70.
- Assunta M, Chapman S. 2006. Health treaty dilution: a case study of Japan's influence on the language of the WHO Framework Convention on Tobacco Control. *Journal of Epidemiology and Community Health* **60**: 751–6.
- Assunta M, Fields N, Knight J, Chapman S. 2004. "Care and feeding": the Asian environmental tobacco smoke consultants programme. *Tobacco Control* **13**: ii4–12.
- Bansal R, John S, Ling PM. 2005. Cigarette advertising in Mumbai, India: targeting different socioeconomic groups, women, and youth. *Tobacco Control* **14**: 201–6.
- Barnoya J, Glantz SA. 2006. The tobacco industry's worldwide ETS consultants project: European and Asian components. *European Journal of Public Health* **16**: 69–77.
- Bettcher D, Yach D, Guindon G. 2000. Global trade and health: key linkages and future challenges. *Bulletin of the World Health Organization* **78**: 521–34.
- Bialous SA, Shatenstein S. 2002. Profits Over People: Tobacco Industry Activities to Market Cigarettes and Undermine Public Health in Latin America and the Caribbean. Washington, DC: PAHO. Online at: <http://repositories.cdlib.org/tc/reports/LA2/>, accessed 24 April 2012.
- Blanke DD, Da Costa E, Silva V (eds). 2004. *Tobacco Control Legislation: An Introductory Guide*. Geneva: World Health Organization.
- Blecher E. 2008. The impact of tobacco advertising bans on consumption in developing countries. *Journal of Health Economics* **27**: 930–42.
- Boesen J, Mohele A. 1979. *The "Success Story" of Peasant Tobacco Production in Tanzania: The Political Economy of a Commodity Producing Peasantry*. Uppsala: Scandinavian Institute of African Studies.
- Brandt A. 1996. Recruiting women smokers: the engineering of consent. *Journal of the American Medical Women's Association* **51**: 63–6.
- Braun S, Mejia R, Ling PM, Perez-Stable EJ. 2008. Tobacco industry targeting youth in Argentina. *Tobacco Control* **17**: 111–7.

- Burney LE. 1957. Excessive cigarette smoking. *Public Health Reports* **72**: 786.
- Campaign for Tobacco-Free Kids. 2001a. Illegal pathways to illegal profits. Washington, DC. Online at: <http://www.tobaccofreekids.org/campaign/global/framework/docs/Smuggling.pdf>, accessed 14 July 2009.
- Capella ML, Taylor CR, Webster C. 2008. The effect of cigarette advertising bans on consumption. *Journal of Advertising* **37**: 7–18.
- CDC. 2008. Tobacco use among 13–15 year olds in Sri Lanka, 1999–2007. *MMWR: Morbidity & Mortality Weekly Report* **57**: 545–9.
- Chaloupka F, Corbett M. 1998. Trade policy and tobacco: towards an optimal policy mix. In: Abedian L, Van Der Merwe R, Wilkins N, Jha P (eds). *The Economics of Tobacco Control: Towards an Optimal Policy Mix*. Cape Town, South Africa: Applied Fiscal Research Centre, University of Cape Town.
- Chaloupka FJ, Laixuthai A. 1996. U.S. Trade Policy and Cigarette Smoking in Asia. NBER Working Paper No. 5543. Cambridge, MA: National Bureau of Economic Research.
- Chantornvong S, Collin J, Dodgson R *et al.* 2000. Political economy of tobacco control in low-income and middle-income countries: lessons from Thailand and Zimbabwe. *Bulletin of the World Health Organization* **78**: 913–9.
- Chantornvong S, McCargo D. 2001. Political economy of tobacco control in Thailand. *Tobacco Control* **10**: 48–54.
- Chapman S. 2004. “The contemporary, irreverent brand of youth with an independent streak”: BAT’s youth promotions in Myanmar. *Tobacco Control* **13**: 93–4.
- Charney JI. 1983. Transnational corporations and developing public international law. *Duke Law Journal* **1983**: 748–88.
- Chelala C. 1998. Tobacco corporations step up invasion of developing countries. *The Lancet* **351**: 889.
- Choudhury K, Hanifi SMA, Mahmood SS, Bhuiya A. 2007. Sociodemographic characteristics of tobacco consumers in a rural area of Bangladesh. *Journal of Health, Population and Nutrition* **25**: 456–64.
- Cohen JE, De Guia NA, Ashley MJ *et al.* 2002. Predictors of Canadian legislators’ support for tobacco control policies. *Social Science & Medicine* **55**: 1069–76.
- Collin J, Lee K, Bissell K. 2002. The framework convention on tobacco control: the politics of global health governance. *Third World Quarterly* **23**: 265–82.
- Collin J, Legresley E, Mackenzie R, Lawrence S, Lee K. 2004. Complicity in contraband: British American Tobacco and cigarette smuggling in Asia. *Tobacco Control* **13**: ii104–11.
- Connolly G. 1992. Worldwide expansion of transnational tobacco industry. *Journal of the National Cancer Institute, Monographs* (12):29–35.
- Davis RM. 2008. British American Tobacco ghost-wrote reports on tobacco advertising bans by the International Advertising Association and J J Boddewyn. *Tobacco Control* **17**: 211–4.
- Deland K, Lewis K, Taylor AL. 2000. Developing a public policy response to the tobacco industry’s targeting of women and girls: the role of the WHO Framework Convention on Tobacco Control. *Journal of the American Medical Women’s Association* **55**: 316–20.
- DFID. 2009. Political Economy Analysis How To Note. A DFID Practice Note. London: Department for International Development.
- Dickinson JA. 2000. US has placed tobacco imports to China high on priority list for liberalisation. *British Medical Journal* **321**: 1413.
- Doll R, Hill AB. 1954. The mortality of doctors in relation to their smoking habits. *British Medical Journal* **1**: 1451–5.
- Douglas CE, Davis RM, Beasley JK. 2006. Epidemiology of the third wave of tobacco litigation in the United States, 1994–2005. *Tobacco Control* **15**: iv9–16.
- Efroymson D. 2007. HealthBridge’s South-to-South Tobacco Control Program: Lessons Learned. Ottawa: HealthBridge. Online at: <http://www.healthbridge.ca/assets/images/pdf/Tobacco/lessons%20learned.pdf>, accessed 11 May 2009.
- Ernster V, Kaufman N, Nichter M, Samet J, Yoon S-Y. 2000. Women and tobacco: moving from policy to action. *Bulletin of the World Health Organization* **78**: 891–901.
- Fong GT, Hammond D, Laux FL *et al.* 2004. The near-universal experience of regret among smokers in four countries: findings from the International Tobacco Control Policy Evaluation Survey. *Nicotine & Tobacco Research* **6**: 341–51.
- Framework Convention Alliance. 2007. How big was the global illicit tobacco trade problem in 2006? Prepared for the Second Session of the Conference of the Parties to the WHO FCTC. Bangkok, Thailand. Online at: <http://www.fctc.org/dmdocuments/fca-2007-cop-illicit-trade-how-big-in-2006-en.pdf>, accessed 24 April 2012.
- Fritz V, Kaiser K, Levy B. 2009. *Problem-Driven Governance and Political Economy Analysis*. Washington, DC: World Bank.
- Geist HJ, Chang K-T, Etges V, Abdallah JM. 2009. Tobacco growers at the crossroads: towards a comparison of diversification and ecosystem impacts. *Land Use Policy* **26**: 1066–79.
- George H. 1898. *The Science of Political Economy*. New York: Doubleday & McClure. Reprinted in 2006 by Cosimo, Inc., New York.
- Gilmore A, Nolte E, McKee M, Collin J. 2002. Continuing influence of tobacco industry in Germany. *The Lancet* **360**: 1255.
- Global Analysis Project Team. 2000. Political economy of tobacco control in low-income and middle-income countries: lessons from Thailand and Zimbabwe. *Bulletin of the World Health Organization* **78**: 913–9.
- Goel RK. 2008. Cigarette smuggling: price vs. nonprice incentives. *Applied Economics Letters* **15**: 587–92.
- Gostin LO. 2007. The ‘tobacco wars’—global litigation strategies. *Journal of the American Medical Association* **298**: 2537–9.
- GSDRC. 2006. Political Economy Analysis. Birmingham: Governance and Social Development Resource Centre, University of Birmingham. Online at: <http://www.gsdrc.org/go/topic-guides/political-economy-analysis>, accessed 24 April 2012.
- Holzman D. 1997. Tobacco abroad: infiltrating foreign markets. *Environmental Health Perspectives* **105**: 178–83.
- Hoogvelt A. 2001. *Globalization and the Postcolonial World: The New Political Economy of Development*. Baltimore, MD: Johns Hopkins.
- Hornsby R, Hobbs D. 2007. A zone of ambiguity: the political economy of cigarette bootlegging. *British Journal of Criminology* **47**: 551–71.
- Hozic AA. 2004. Between the cracks: Balkan cigarette smuggling. *Problems of Post-Communism* **51**: 35–44.
- Hu T-W, Mao Z, Ong M *et al.* 2006. China at the crossroads: the economics of tobacco and health. *Tobacco Control* **15**: i37–41.
- Jenkins CN, Dai PX, Ngoc DH *et al.* 1997. Tobacco use in Vietnam. Prevalence, predictors, and the role of the transnational tobacco corporations. *Journal of the American Medical Association* **277**: 1726–31.
- Jha P. 1999. Curbing the epidemic. Washington, DC: World Bank. Online at: [http://www1.worldbank.org/tobacco/reports\\_pdf.asp](http://www1.worldbank.org/tobacco/reports_pdf.asp), accessed 16 March 2009.
- Jha P, Chaloupka FJ, Corrao M, Jacob B. 2006a. Reducing the burden of smoking world-wide: effectiveness of interventions and their coverage. *Drug and Alcohol Review* **25**: 597–609.

- Jha P, Chaloupka FJ, Moore J *et al.* 2006b. Tobacco addiction. In: Jamison DT, Breman JG, Measham AR *et al.* (eds). *Disease Control Priorities in Developing Countries*. Washington, DC: World Bank.
- Joossens L. 1998. Tobacco smuggling: an optimal policy approach. In: Abedian L, Van Der Merwe R, Wilkins N, Jha P (eds). *The Economics of Tobacco Control: Towards an Optimal Policy Mix*. Cape Town, South Africa: Applied Fiscal Research Centre, University of Cape Town.
- Karki YB. 2002. Review and situation analysis for comprehensive national tobacco control in Nepal. New Delhi: WHO/SEARO. Online at: [www.searo.who.int/LinkFiles/NMH\\_CNTNepal.pdf](http://www.searo.who.int/LinkFiles/NMH_CNTNepal.pdf), accessed 24 April 2012.
- Kaufman N, Nichter M. 2001. The marketing of tobacco to women: global perspectives. In: Samet J, Yoon S (eds). *Women and the Tobacco Epidemic*. Geneva: World Health Organization.
- Khan F, Husain S, Laeeq A *et al.* 2005. Smoking prevalence, knowledge and attitudes among medical students in Karachi, Pakistan. *Eastern Mediterranean Health Journal* **11**: 952–8.
- Knight J, Chapman S. 2004. “Asian yuppies...are always looking for something new and different”: creating a tobacco culture among young Asians. *Tobacco Control* **13**: ii22–29.
- Lambert A, Sargent JD, Glantz SA, Ling PM. 2004. How Philip Morris unlocked the Japanese cigarette market: lessons for global tobacco control. *Tobacco Control* **13**: 379–87.
- Landman A, Ling PM, Glantz SA. 2002. Tobacco industry youth smoking prevention programs: protecting the industry and hurting tobacco control. *American Journal of Public Health* **92**: 917–30.
- Lawrence S, Collin J. 2004. Competing with kreteks: transnational tobacco companies, globalisation, and Indonesia. *Tobacco Control* **13**: ii96–103.
- Lee J-M, Hwang T-C, Ye C-Y, Chen S-H. 2004. The effect of cigarette price increase on the cigarette consumption in Taiwan: evidence from the National Health Interview Surveys on cigarette consumption. *BMC Public Health* **4**: 61.
- Lee K, Carpenter C, Challa C *et al.* 2009. The strategic targeting of females by transnational tobacco companies in South Korea following trade liberalisation. *Globalization and Health* **5**: 2.
- Lee K, Collin J. 2006. “Key to the future”: British American Tobacco and cigarette smuggling in China. *PLoS Medicine* **3**: e228.
- Lee K, Kinh H, Mackenzie R *et al.* 2008. Gaining access to Vietnam’s cigarette market: British American Tobacco’s strategy to enter ‘a huge market which will become enormous’. *Global Public Health* **3**: 1–25.
- Legresley E, Lee K, Muggli ME *et al.* 2008. British American Tobacco and the “insidious impact of illicit trade” in cigarettes across Africa. *Tobacco Control* **17**: 339–46.
- Lokshin M, Beegle K. 2006. Foregone earnings from smoking: evidence for a developing country. Policy Research Working Paper 4018. Washington, DC: World Bank.
- Mackay J. 1992. US tobacco export to Third World: Third World War. *Journal of the National Cancer Institute, Monographs* **1225–8**.
- Mackay J. 1994. The tobacco problem: commercial profit versus health – the conflict of interests in developing countries. *Preventive Medicine* **23**: 535–8.
- Mackay J. 1996. Women and tobacco: international issues. *Journal of the American Medical Women’s Association* **51**: 48–51.
- Mackay J, Amos A. 2003. Women and tobacco. *Respirology* **8**: 123–30.
- Mackay J, Eriksen M. 2002. The Tobacco Atlas. Geneva: World Health Organization. Online at: [http://www.who.int/tobacco/statistics/tobacco\\_atlas/en/](http://www.who.int/tobacco/statistics/tobacco_atlas/en/), accessed 28 April 2009.
- Mackenzie R, Collin J. 2008a. “A good personal scientific relationship”: Philip Morris scientists and the Chulabhorn Research Institute, Bangkok. *PLoS Medicine* **5**: e238.
- Mackenzie R, Collin J, Sopharo C, Sopheap Y. 2004a. “Almost a role model of what we would like to do everywhere”: British American Tobacco in Cambodia. *Tobacco Control* **13**: ii112–17.
- Mamudu HM, Hammond R, Glantz S. 2008a. Tobacco industry attempts to counter the World Bank report curbing the epidemic and obstruct the WHO framework convention on tobacco control. *Social Science & Medicine* **67**: 1690–9.
- Mamudu HM, Hammond R, Glantz SA. 2008b. Project Cerberus: tobacco industry strategy to create an alternative to the Framework Convention on Tobacco Control. *American Journal of Public Health* **98**: 1630–42.
- Marshall M. 2005. Carolina in the Carolines: a survey of patterns and meanings of smoking on a Micronesian Island. *Medical Anthropology Quarterly* **19**: 365–82.
- Martinez D, Grise V. 1990. With U.S. sale down, tobacco industry looks abroad. *Farmline – U.S. Department of Agriculture, Economic Research Service* **11**: 18–20.
- Masanjala WH. 2006. Cash crop liberalization and poverty alleviation in Africa: evidence from Malawi. *Agricultural Economics* **35**: 231–40.
- Mathers CD, Loncar D. 2006. Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Medicine* **3**: e442.
- Merriman D, Yurekli A, Chaloupka FJ. 2000. How big is the worldwide cigarette smuggling problem? In: Jha P, Chaloupka F (eds). *Tobacco Control in Developing Countries*. Washington, DC: Oxford University Press for the World Bank.
- Morrow M, Barraclough S. 2003a. Tobacco control and gender in Southeast Asia. Part I: Malaysia and the Philippines. *Health Promotion International* **18**: 255–64.
- Morrow M, Barraclough S. 2003b. Tobacco control and gender in south-east Asia. Part II: Singapore and Vietnam. *Health Promotion International* **18**: 373–80.
- Mpabulungi L, Muula AS. 2004. Tobacco use among High School Students in Kampala, Uganda: questionnaire study. *Croatian Medical Journal* **45**: 80–3.
- Muggli ME, Forster JL, Hurt RD, Repace JL. 2001. The smoke you don’t see: uncovering tobacco industry scientific strategies aimed against environmental tobacco smoke policies. *American Journal of Public Health* **91**: 1419–23.
- Muggli ME, Lee K, Quan G, Ebbert JO, Hurt RD. 2008. Efforts to reprioritise the agenda in China: British American Tobacco’s efforts to influence public policy on secondhand smoke in China. *PLoS Medicine* **5**: e251.
- Must E. 2001. International Tobacco Growers’ Association—ITGA uncovered: unravelling the spin – the truth behind the claims. Ottawa: PATH Canada.
- Myers ML, Wilkenfeld JP. 2001. The Worldwide Tobacco Treaty. *Journal of the American Medical Association* **286**: 2736.
- Nakkash R, Lee K. 2008. Smuggling as the “key to a combined market”: British American Tobacco in Lebanon. *Tobacco Control* **17**: 324–31.
- Nelson JP. 2003. Youth smoking prevalence in developing countries: effect of advertising bans. *Applied Economics Letters* **10**: 805–11.
- Neuman M, Bitton A, Glantz S. 2002. Tobacco industry strategies for influencing European Community tobacco advertising legislation. *The Lancet* **359**: 1323–30.
- Novotny TE. 2006. The “ultimate prize” for big tobacco: opening the Chinese cigarette market by cigarette smuggling. *PLoS Medicine* **3**: e279–0969.

- Ong EK, Glantz SA. 2000. Tobacco industry efforts subverting International Agency for Research on Cancer's second-hand smoke study. *The Lancet* **355**: 1253–9.
- Orr A. 2000. 'Green Gold'?: Burley Tobacco, smallholder agriculture, and poverty alleviation in Malawi. *World Development* **28**: 347–63.
- Otanez M, Glantz S. 2009. Trafficking in tobacco farm culture: tobacco companies' use of video imagery to undermine health policy. *Visual Anthropology Review* **25**: 1–24.
- Otanez MG, Muggli ME, Hurt RD, Glantz SA. 2006. Eliminating child labour in Malawi: a British American Tobacco corporate responsibility project to sidestep tobacco labour exploitation. *Tobacco Control* **15**: 224–30.
- Park K, Kim D, Park D, Lee S. 2004. Tobacco control in Korea. *Medical Law* **23**: 759–80.
- Parliament of the Democratic Socialist Republic of Sri Lanka. 2006. National Authority on Tobacco and Alcohol Act (Act 27 of 2006). Online at: [http://www.documents.gov.lk/Acts/2006/National%20Authority%20on%20Tobacco%20and%20Alcohol%20Act%20No.%2027/Act%20No.%2027%20\(E\).pdf](http://www.documents.gov.lk/Acts/2006/National%20Authority%20on%20Tobacco%20and%20Alcohol%20Act%20No.%2027/Act%20No.%2027%20(E).pdf), accessed 29 May 2009.
- Patel P, Collin J, Gilmore AB. 2007. "The law was actually drafted by us but the Government is to be congratulated on its wise actions": British American Tobacco and public policy in Kenya. *Tobacco Control* **16**: e1.
- Piryani R, Rizvi N. 2004. Smoking habits amongst house physicians working at Jinnah Postgraduate Medical Center, Karachi, Pakistan. *Tropical Doctor* **34**: 44–5.
- Poland BD. 2000. The 'considerate' smoker in public space: the micro-politics and political economy of 'doing the right thing'. *Health & Place* **6**: 1–14.
- Pollack HA, Jacobson PD. 2003. Political economy of youth smoking regulation. *Addiction* **98**: 123–38.
- Ray R. 1985. A dynamic analysis of expenditure patterns in rural India. *Journal of Development Economics* **19**: 283–97.
- Reddy KS, Gupta PC. 2004. Report on Tobacco Control in India. New Delhi: Ministry of Family Health and Welfare, Government of India.
- Reich M. 2002. The politics of reforming health policies. *IUHPE – Promotion & Education* **9**: 138–42.
- Richmond R. 1997. How women and youth are targeted by the tobacco industry. *Monaldi Archives for Chest Disease* **52**: 384–9.
- Richmond RL, Debono DS, Larcos D, Kehoe L. 1998. Worldwide survey of education on tobacco in medical schools. *Tobacco Control* **7**: 247–52.
- Sapolsky HM. 1980. The political obstacles to the control of cigarette smoking in the United States. *Journal of Health Politics Policy and Law* **5**: 277–90.
- Sebrié EM, Barnoya J, Perez-Stable EJ, Glantz SA. 2005. Tobacco industry successfully prevented tobacco control legislation in Argentina. *Tobacco Control* **14**: e2.
- Sebrié EM, Glantz SA. 2007b. Attempts to undermine tobacco control: tobacco industry "youth smoking prevention" programs to undermine meaningful tobacco control in Latin America. *American Journal of Public Health* **97**: 1357–67.
- Shafey O, Eriksen M, Ross H, Mackay J. 2009. *The Tobacco Atlas, 3rd Edition*. Atlanta, GA: American Cancer Society.
- Shaffer ER, Brenner JE, Houston TP. 2005. International trade agreements: a threat to tobacco control policy. *Tobacco Control* **14**: ii19–25.
- Shepherd PL. 1985. Transnational corporations and the international cigarette industry. In: Newfarmer RS (ed). *Profits, Progress, and Poverty*. Notre Dame, IN: University of Notre Dame Press.
- Shimkhada R, Peabody J W. 2003. Tobacco control in India. *Bulletin of the World Health Organization* **81**: 48–52.
- Slama K. 2008. Global perspective on tobacco control. Part I. The global state of the tobacco epidemic. *The International Journal of Tuberculosis and Lung Disease* **12**: 3–7.
- Smith D, Leggat P. 2007a. An international review of tobacco smoking among medical students. *Journal of Postgraduate Medicine* **53**: 55–62.
- Smith D, Leggat P. 2007b. An international review of tobacco smoking in the medical profession: 1974–2004. *BMC Public Health* **7**: 115.
- Stebbins KR. 1987. Tobacco or health in the Third World: a political economy perspective with emphasis on Mexico. *International Journal of Health Services* **17**: 521–36.
- Stebbins KR. 1990. Transnational tobacco companies and health in underdeveloped countries: recommendations for avoiding a smoking epidemic. *Social Science & Medicine* **30**: 227–35.
- Stebbins KR. 1991. Tobacco, politics and economics: implications for global health. *Social Science & Medicine* **33**: 1317–26.
- Stebbins KR. 1994. Making a killing south of the border: transnational cigarette companies in Mexico and Guatemala. *Social Science & Medicine* **38**: 105–15.
- Stebbins KR. 2001. Going like gangbusters: transnational tobacco companies "making a killing" in South America. *Medical Anthropology Quarterly* **15**: 147–70.
- Sussman S, Pokhrel P, Black D *et al.* 2007. Tobacco control in developing countries: Tanzania, Nepal, China, and Thailand as examples. *Nicotine & Tobacco Research* **9**: 447–57.
- Tessier J, Fréour P, Belougne D *et al.* 1992. Smoking habits and attitudes of medical students towards smoking and antismoking campaigns in nine Asian countries. *International Journal of Epidemiology* **21**: 298–304.
- Toll BA, Ling PM. 2005. The Virginia Slims identity crisis: an inside look at tobacco industry marketing to women. *Tobacco Control* **14**: 172–80.
- Tong EK, Glantz SA. 2004. ARTIST (Asian regional tobacco industry scientist team): Philip Morris' attempt to exert a scientific and regulatory agenda on Asia. *Tobacco Control* **13**: ii118–24.
- Tye JB, Warner KE, Stanton AG. 1987. Tobacco advertising and consumption: evidence of a causal relationship. *Journal of Public Health Policy* **8**: 492–508.
- Ugen S. 2003. Bhutan: the world's most advanced tobacco control nation? *Tobacco Control* **12**: 431–3.
- Vateesatokit P. 1997. Tobacco control in Thailand. *Mahidol Journal* **4**: 81.
- Vateesatokit P. 2003. Tailoring tobacco control efforts to the country: the example of Thailand. In: De Beyer J, Brigden LW (eds). *Tobacco Control Policy*. Washington, DC: World Bank and Research for International Tobacco Control.
- Wagner S, Romano RM. 1994. Tobacco and the developing world: an old threat poses even bigger problems. *Journal of the National Cancer Institute* **86**: 1752.
- Waitzkin H, Jasso-Aguilar R, Landwehr A, Mountain C. 2005. Global trade, public health, and health services: stakeholders' constructions of the key issues. *Social Science & Medicine* **61**: 893–906.
- Warner KE. 2000. The economics of tobacco: myths and realities. *Tobacco Control* **9**: 78–89.
- Warren C, Jones N, Peruga A *et al.* 2008. Global youth tobacco surveillance, 2000–2007. *MMWR Surveillance Summaries* **57**: 1–28.
- Warren CW, Jones NR, Eriksen MP, Asma S. 2006. Patterns of global tobacco use in young people and implications for future chronic disease burden in adults. *The Lancet* **367**: 749–53.
- Warren CW, Riley L, Asma S *et al.* 2000. Tobacco use by youth: a surveillance report from the Global Youth Tobacco Survey project. *Bulletin of the World Health Organization* **78**: 868–76.

- Wen CP, Chen T, Tsai Y-Y *et al.* 2005a. Are marketing campaigns in Taiwan by foreign tobacco companies targeting young smokers? *Tobacco Control* **14**: i38–44.
- Wen CP, Cheng TY, Eriksen MP, Tsai SP, Hsu CC. 2005b. The impact of the cigarette market opening in Taiwan. *Tobacco Control* **14**: i4–9.
- Wen CP, Peterson RA, Cheng TYD *et al.* 2006. Paradoxical increase in cigarette smuggling after the market opening in Taiwan. *Tobacco Control* **15**: 160–5.
- West R, Townsend J, Joossens L, Arnott D, Lewis S. 2008. Why combating tobacco smuggling is a priority. *British Medical Journal* **337**: a1933.
- WHO. 2000. Tobacco industry strategies to undermine tobacco control activities at the World Health Organization. Geneva: WHO. Online at: [http://www.who.int/entity/tobacco/en/who\\_inquiry.pdf](http://www.who.int/entity/tobacco/en/who_inquiry.pdf), accessed 24 April 2012.
- WHO. 2005. WHO Framework Convention on Tobacco Control. Geneva: WHO. Online at: <http://www.who.int/fctc/en/index.html>, accessed 24 April 2012.
- WHO. 2008a. *WHO Report on the Global Tobacco Epidemic, 2008: The MPOWER Package*. Geneva: WHO. Online at: [http://www.who.int/entity/tobacco/mpower/gtcr\\_download/en/index.html](http://www.who.int/entity/tobacco/mpower/gtcr_download/en/index.html), accessed 24 April 2012.
- WHO. 2008b. Reports of the Parties received by the Convention Secretariat and progress made internationally in implementation of the Convention (Decision FCTC/COP1/(14)). Geneva: WHO. Online at: [http://www.who.int/fctc/reporting/summary\\_analysis/en/index.html](http://www.who.int/fctc/reporting/summary_analysis/en/index.html), accessed 24 April 2012.
- WHO. 2009. *Tobacco industry interference with tobacco control*. Geneva: WHO. Online at: <http://www.who.int/entity/tobacco/resources/publications/Tobacco%20Industry%20Interference-FINAL.pdf>, accessed 14 March 2009.
- Woelk G, Mtisi S, Vaughan JP. 2001. Prospects for tobacco control in Zimbabwe: a historical perspective. *Health Policy* **57**: 179–92.
- Wynder EL, Graham EA, Croninger AB. 1953. Experimental production of carcinoma with cigarette tar. *Cancer Research* **13**: 855–64.
- Yamey G. 2000. British tobacco company denies “orchestrating smuggling”. *British Medical Journal* **320**: 531.
- Zeigler DW. 2006. International trade agreements challenge tobacco and alcohol control policies. *Drug and Alcohol Review* **25**: 567–79.