

The Efficacy of Chinese News Coverage of Tobacco Control: A Comparison of the Media Agenda and the Policy Agenda

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This study examines the news coverage of tobacco control in China between 2010 and 2012 and compares it with the China Tobacco Control Program (2012–2015), a recent national policy initiative. The study finds that the relative salience of second-level tobacco control issues in the media have a moderate positive association with the policy agenda. However, the news coverage of tobacco control was more consistent with the agenda of anti-tobacco control forces than with the agenda of pro-control forces. The implications of the findings are discussed.

Keywords: tobacco control, China, news coverage, media advocacy, antismoking

China is the world's largest manufacturer and consumer of tobacco products, and the tax on tobacco products comprises nearly 10% of the revenue of the Chinese government. However, the health toll due to tobacco is equally immense; about 1 million Chinese die from smoking annually, and this figure is estimated to increase to 2.2 million by 2020 if smoking rates remain the same (T. Hu, 2008). Additionally, 740 million people have reported exposure to secondhand smoke (Ministry of Health of China, 2012). Improved individual health often results from governmental health promotion policy initiatives such as tobacco control legislation, because such initiatives help create a context that is favorable to healthy lifestyles (World Health Organization, 2009).

Over the past two decades, China has issued several national and local tobacco control laws and regulations. However, a nationwide, unified tobacco control law has long been overdue, and the enforcement of existing laws and regulations has been ineffective. The ambitiousness of the task has not deterred tobacco control advocates such as Chinese health officials and activists (hereafter referred to as pro-control forces) from actively using media advocacy to further policy changes that are conducive to improved tobacco control. Media advocacy includes cultivating and educating journalists, creating

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newsworthy events, and using paid advertising in the mass media (Wallack & Dorfman, 1996). However, China also has strong opponents to tobacco control (referred to as anti-control forces), which are primarily represented by the State Tobacco Monopoly Administration (STMA), whose mission is to strengthen and develop the Chinese tobacco industry. Ironically, the STMA is also part of China's tobacco control policy-making body and is often accused of thwarting China's tobacco control efforts (Ding, 2012). In other words, although the STMA must commit itself to tobacco control, its actual control efforts are destined to have ulterior motives. No previous studies have examined how the media coverage of tobacco control in China is associated with changes in tobacco policy. Therefore, the purpose of this study is to analyze to what extent the pro-control forces' agenda was associated with the media coverage of tobacco control and to assess the relationship between the media agenda and the public policy agenda, thus unveiling the dynamics of media-policy interactions in China's tobacco control.

In this study, the public policy agenda was operationalized as the relative salience of second-level tobacco control issues in the China Tobacco Control Program (2012–2015) (hereafter referred to as the outcome policy agenda).² The program is China's most recent national-level policy initiative and was established on December 26, 2012. Second-level tobacco control issues such as public education and bans on tobacco advertising represent the various approaches and aspects of tobacco control that can affect the outcome of tobacco control efforts and thus the revenues of the tobacco industry. Therefore, this study approaches the topic of tobacco control policy from the policy agenda perspective by examining issue attributes (approaches to tobacco control) instead of issue objects (tobacco control), which most previous studies have investigated (see Edwards & Wood, 1999; Walgrave & De Swert, 2004).

Literature Review

Agenda Setting and Public Policy

According to Lippmann (1922), ordinary people have a limited ability to understand the world around them, and mass media, which selectively cover a tiny portion of countless daily occurrences, play an important role in constructing people's perceived social reality. During the 1968 U.S. presidential election, McCombs and Shaw (1972), who were inspired by Lippman's idea, found that salient media coverage of social, political, and economic issue objects (called the media agenda) influenced laypeople's perceptions of the salience of those issues (called the public agenda); they called this effect "agenda setting." Using public agenda as the outcome variable, this line of research is similarly called public agenda setting. Scholars have extended agenda-setting research beyond the initial focus on the issue object to how the media influence the perceived prominence of the attributes of certain issue objects—namely, second-level agenda setting (McCombs & Reynolds, 2002).

² In the public policy arena, tobacco control itself is a first-level issue relative to foreign policy, environmental protection, and so on. Under tobacco control are several second-level issues such as bans on tobacco advertisements and smoke-free public places. Different second-level issues have different functions in tobacco control. The program is available at http://www.aqsiq.gov.cn/xxgk_13386/jhgh/gh/201212/t20121221_335194.htm.

Agenda-setting research has expanded from examining the media's cognitive effects on individuals to studying the effects on media content (media agenda setting) and public policy (policy agenda setting). Media agenda setting examines the structural and individual factors that influence the characteristics of media content. Shoemaker and Reese (1996) proposed five layers of factors affecting media content: the ideology and social norms of a society, social institutions external to the media (e.g., public relations), the characteristics of a media organization (e.g., ownership and organizational culture), journalistic routines (e.g., news values), and the personal traits of individual media practitioners (e.g., gender and political attitudes).

Policy agenda setting has received attention from both communication researchers and political scientists (Dearing & Rogers, 1996). Selective coverage of political, social, and economic issues can narrow the topics that policy makers notice and influence their positions on certain issues (Kingdon, 2003). Policy agenda-setting research has focused on the media's influence on foreign policy, sometimes dubbed the "CNN effect." For example, the instantaneous, live, and graphic coverage of humanitarian crises in Africa have motivated U.S. leaders to reorder the priorities of their foreign policy agenda. Additionally, a positive association between the media agenda and the public policy agenda has been found for issues such as environmental protection and criminal justice (e.g., Soroka, 2002, 2003). Most of this research has found that, although the media agenda did influence the policy agenda, the strength of the relationship varied.

In their review of the research on policy agenda setting, Walgrave and Van Aelst (2006) concluded that the effects of policy agenda setting are contingent upon media input and political context variables. Media input variables include the type of issues covered by media (e.g., obtrusive vs. unobtrusive), the type of media that cover the issue (e.g., television vs. newspapers), and the nature of media coverage (e.g., negative vs. positive) (Walgrave & Van Aelst, 2006). Political context variables include the timing of media coverage, institutional rules, the internal functioning of political actors, the political actors' positions in the political hierarchy, and the personal traits of political actors.

There are two competing hypotheses regarding how the media agenda translates into the policy agenda. Some argue that the reordering of public policy items is a direct result of media coverage. In this theory, politicians are primed to take action on issues that are intensively covered by media (Livingston, 1997), which is similar to the classical stimulus-response public agenda-setting model. Slightly different from the direct influence argument, some maintain that the media agenda influences the policy agenda via the public agenda (Rogers & Dearing, 1988). This stance suggests that politicians actively use media coverage as a symbolic resource to show public support when debating policy issues with their colleagues (Cook et al., 1983; Davis, 2007; Livingston, 1997). In other words, the policy agenda-setting process is not purely linear but has circular characteristics (Dearing & Rogers, 1996). On many issues, politicians and journalists collaborate to influence the policy agenda, which is mutually beneficial (Cook et al., 1983; Davis, 2007).

Agenda Setting and China

Political and media freedom is a crucial assumption of agenda-setting theory (whether public or policy agenda setting). Originally tested in the United States, agenda-setting theory has received empirical support in other countries, including Germany, Italy, and Japan (Weaver, McCombs, & Shaw, 2004). However, in China, the agenda-setting hypothesis is often not confirmed, which can be attributed to the country's different political and media systems (H. Liu, 2008). In democratic countries, media are largely independent from the government. In contrast, Chinese media have been subject to heavy influence from the government and have had less freedom. In many cases, the Chinese government has first decided to implement a policy and then required subsidiary media outlets to promote the policy.

However, since the economic and political reforms of the late 1970s, the media sector has undergone market-oriented reforms, and the Chinese government's control over media has been reduced. Specifically, the Chinese government does not directly intervene in the editorial process except for politically sensitive issues that may threaten social stability and the legitimacy of the Communist Party of China. Although the Chinese government has been sluggish in passing and enforcing tobacco control-related laws and regulations, tobacco control is not a sensitive issue, and thus the Chinese government does not intervene in the reporting on tobacco control. Moreover, in the past two decades, the Chinese government has been more responsive to public opinion and media coverage when establishing new policies (Hassid, 2015; Wang, 2008). Therefore, the issue of tobacco control provides an opportunity to examine the interplay between political systems and media-policy interactions.

News Coverage and Tobacco Control Policy

In the late 1980s, health promotion began to shift in focus from individual behavioral change to policy change because of the importance of an environment favorable to healthy lifestyles in maintaining individuals' well-being (Wallack & Dorfman, 1996). The tobacco control literature suggests that tobacco control policies such as higher taxes and clean air laws, if implemented well, can greatly reduce the smoking rate (Levy, Chaloupka, & Gitchell, 2004). This paradigm shift in health promotion also required changes in the use of communication tools in public health. Although media were initially used as a public education tool targeting individuals, public health experts called for media to actively participate in the public health policy decision-making process and to advance the policy debate to benefit the general public (Wallack & Dorfman, 1996).

Although much of the previous research on media coverage of tobacco control has been descriptive or focused on its effects on individuals, studies have not investigated its influence on policy change. Niederdeppe, Farrelly, and Wenter (2007) discovered that between 1998 and 2001, media advocacy initiatives contributed to the passage of tobacco product placement ordinances in 23 Florida counties. Additionally, Sato (2003) found that the media coverage of tobacco control issues in Japan positively predicted the Japanese government's administrative policy making between 1945 and 1990.

Media Advocacy and Tobacco Control Policy in China

Since 1979, China has made gradual progress on tobacco control policy. In 1979, the Ministries of Health, Agriculture, Finance, and Light Industry jointly issued the first official tobacco control regulation in China. In 1992, the People's Republic of China Tobacco Monopoly Law became effective, which was China's first antismoking law and banned smoking on public transport and in public places, required cigarette manufacturers to print tar levels and warnings on cigarette packages, and prohibited tobacco product advertisements in the mass media. In 2005, China ratified the Framework Convention on Tobacco Control, which represented the nation's first global tobacco control effort and was a milestone in the development of tobacco control policy in China. In addition to these policy initiatives at the national level, authorities in 154 Chinese cities and towns—including Beijing, Shanghai, Guangzhou, and Hangzhou—have issued regulations that prohibited smoking in public areas in the past decade.³

The Ministry of Health of China and local health departments are the state agencies that have consistently advanced tobacco control policy initiatives and lobbied other state departments (Ngok & Chen, 2008). Additionally, state health authorities have launched media programs to educate the general public about the hazards of smoking to secure public support and to exert pressure on policy makers. These programs included large-scale media campaigns with specific themes, news conferences, seminars open to journalists, media workshops, and awards for excellence in tobacco control news coverage ("The Plan for China Tobacco Control Media Campaign 2011–2012," 2012).

Chinese national and local health departments are not the only entities advocating tobacco control. Chinese domestic nongovernmental organizations with strong governmental background, including the Chinese Association on Tobacco Control, also have been actively lobbying other state departments (Ngok & Chen, 2008). Additionally, other nongovernmental organizations (NGOs) often partner with state health agencies and play crucial roles in tobacco control (Xu, 2011), including media advocacy activities. These NGOs, especially international ones, provide technical expertise and funding to Chinese tobacco control initiatives (Ngok & Chen, 2008).

Despite this progress, Chinese tobacco control legislation and tobacco regulations lag behind their Western counterparts in two key aspects: lack of a national law specific to tobacco control and inefficient enforcement of existing laws and regulations. These factors can be attributed to the Chinese government's dilemma of balancing economic interests and public health. The Chinese tobacco industry contributes more than 240 billion yuan in taxation annually (D. Hu, Mao, Shi, & Chen, 2008) and provides numerous job opportunities; this economic input helps explain why the Chinese government has failed to implement an efficient tobacco control policy. It also explains why China has strong anti-tobacco control forces that hinder the effectiveness of China's tobacco control efforts. The STMA plays an active role in China's anti-tobacco control efforts.

³ For a complete review of past tobacco control policy initiatives in China, please refer to T. Hu (2008).

With the exception of the two governmental sectors with clear positions on tobacco control described previously, the other state departments have generally been reluctant and double-sided (Ngok & Chen, 2008). The National Development and Reform Commission used to coordinate the tobacco control efforts in China and balanced the different interests in this campaign (Ngok & Chen, 2008); recently, its role has been replaced by the Ministry of Industry and Information Technology. Its attitudes toward tobacco control exert a greater influence on the success of tobacco control efforts because it can directly influence local governments and the STMA (Ngok & Chen, 2008). However, because of their missions, the two state departments focus more on the economic aspects of tobacco than on the health of the Chinese people.

Despite being lax on tobacco control, China continued its battle against smoking in the policy arena and unveiled in December 2012 a comprehensive tobacco control program: the China Tobacco Control Program (2012–2015). The program was jointly issued by eight government agencies, including the Ministry of Health and the STMA. According to the program, China planned to further the smoke-free public place initiative, enhance public education campaigns, improve a tobacco monitoring system, facilitate access to smoking cessation services, and prohibit advertisements and sponsorships related to tobacco products. However, the program did not state that China would introduce graphic warnings on cigarette packages, which is common in other parts of the world, and it did not indicate that the tax on cigarettes was going to increase.

Although a few previous studies have examined the patterns of news coverage of tobacco control, the effectiveness of media advocacy initiatives in shaping the news coverage on policy change has not been examined. Using the World Health Organization's MPOWER framework, Gao, Chapman, Sun, Fu, and Zheng (2012) analyzed newspaper articles that were published between 2010 and 2012 and found that one out of every four articles focused on secondhand smoke and warned about the dangers of active smoking, and 10% covered prevention and cessation programs and campaigns. Two other studies (He, Shen, Yin, Xu, & Lan, 2013; Y. Liu et al., 2010) found similar patterns. However, it is unknown to what extent these pro-control news items are compatible with the policy agenda.

Research Questions

This study examines the patterns of news coverage of second-level tobacco control issues from the perspective of tobacco control public policy. Regarding this topic, we propose the following research question:

RQ1: How did the Chinese news media cover the second-level issues of tobacco control in the period leading up to the China Tobacco Control Program (2012–2015)?

Previous research has suggested a positive association between media and public policy agendas, and the Chinese senior leadership has emphasized that the government sectors should be responsive to the public's opinion (Tang, 2005). In addition to media advocacy, lobbying activities by pro-control and anti-control forces can directly influence China's tobacco control policy agenda as well as the media agenda. To examine how the media interact with the outcome policy agenda, the pro-control and anti-

control forces' direct associations should be monitored. Accordingly, the following two research questions were proposed:

RQ2: To what extent were the pro- and anti-tobacco control agendas each associated with the Chinese antismoking media agenda?

RQ3: Controlling for the pro-tobacco control and anti-tobacco control forces' direct associations, to what extent was the Chinese antismoking media agenda positively associated with the outcome tobacco control policy agenda of the Chinese government?

Method

Sampling Strategies

This study analyzed the tobacco control news coverage between 2010 and 2012; these dates were selected because the China Tobacco Control Program (2012–2015) began preparation in April 2010, and the final version of the program was announced on December 26, 2012 ("Larger Warning Labels on Cigarette Packages," 2012). The three-year period witnessed an intensive debate over how tobacco control should proceed in China between the tobacco industry, pro-control government sectors, pro-tobacco government institutions, not-for-profit advocacy groups, media organizations, and the general public ("Larger Warning Labels on Cigarette Packages," 2012).

To collect the sample, we used the news search engine of China's largest Internet search portal, Baidu. The news search engine only indexes influential Chinese online news portals that have a constant stream of users. The study did not use national newspaper databases because, increasingly, people in China (including officials) only read news articles online (Cui, 2015). We used six Chinese keywords—"tobacco control" (烟草控制), the abbreviated form of "tobacco control" in Chinese (控烟), "antismoking" (禁烟), "no smoking" (无烟), "tobacco" (烟草), and "smoking cessation" (戒烟)—to search for news articles about tobacco control and the tobacco industry. The news articles included hard news, feature stories, opinion pieces, and popular science articles. News articles containing any of the six keywords were included in the sampling frame. After the keyword search, we removed the articles that mentioned the term but were not concerned with tobacco control or the tobacco industry. The final sampling frame consisted of 3,657 stories from 2010, 6,485 from 2011, and 6,429 from 2012. Because previous research has suggested that the news coverage of tobacco control in China exhibits periodicity (Gao et al., 2012),⁴ simple random sampling was abandoned because it increases sampling errors. Using stratified sampling with "day" as the strata, we sampled roughly 10% of the units from the sampling frame, resulting in 376 news stories from 2010, 686 from 2011, and 688 from 2012.⁵

⁴ Chinese media coverage of tobacco control intensifies in May every year because tobacco control institutions organize activities and media advocacy initiatives around World No Tobacco Day on May 31.

⁵ On many days, the number of stories is not equal to 10 or 20 or 30. Thus, because 10% of stories were sampled on a single day, we needed to do rounding when deciding the actual number of stories sampled.

Similar to other studies, this study content-analyzed variables such as whether the news story was about tobacco control and the type and origin of the article. If a news story was about the corporate social responsibility activities of tobacco companies, the development of the tobacco industry, or policies that supported the development of the tobacco industry, it was not coded as a news article on tobacco control. The articles were placed into five categories: hard news, feature stories, opinion pieces, popular science articles, and other content that did not fit into the preceding four categories. The origin of the article was determined by whether a news story appeared in state-run media, market-oriented popular press, health publications, or some other source. State-run media consisted of both national and local sources, including wire services. The market-oriented popular press included tabloids, business publications, and online news portals.

Media Agenda

Media agenda refers to the relative salience of the second-level tobacco control issues in media coverage. Operationally, we measured the percentages of the news stories that reported on a second-level tobacco control issue relative to the total number of tobacco control articles. Based on the eight content categories used in the study by Gao et al. (2012), the related second-level issues outlined in the China Tobacco Control Program (2012–2015) and advice from a group of tobacco control practitioners in China, we coded 17 second-level issue items. Gao et al. (2012) derived their second-level issue coding scheme primarily from the framework of the World Health Organization's MPOWER antismoking policy framework.⁶ However, the tobacco control issues in each country have unique characteristics. Although Gao et al. (2012) did incorporate local factors, their efforts to tailor to the setting were not sufficient. In this study, we added several important "Chinese local" second-level tobacco control issues. The 17 second-level issues and their operational definitions can be found in Table 1. A single news article can contain more than one second-level tobacco control issue.

Table 1. Tobacco Control Second-Level Issues.

Second-level issues	Operational definitions
Tobacco monitoring system	Systematic and continuous monitoring of tobacco use and tobacco companies, including establishment of such systems
Prevalence of tobacco	Tobacco use patterns among the Chinese population

Therefore, the final number of the sample for each year, which is obtained using stratified sampling, is not exactly the same as a simple random sampling.

⁶ MPOWER is an acronym for the World Health Organization's six recommended measures of tobacco control: (1) monitor tobacco use and prevention policies; (2) protect people from tobacco smoke; (3) offer help to quit tobacco use; (4) warn about the dangers of tobacco; (5) enforce bans on tobacco advertising, promotion, and sponsorship; and (6) raise taxes on tobacco.

Smoke-free public places	Establishment of smoke-free areas, public reactions, and enforcement
Smoking cessation assistance	Offering help (including telephone hotlines and consultations) for smokers to quit
Smoking hazards	Risks and dangers of smoking, including the types of diseases caused by smoking
Tobacco control legislation at national level	Tobacco control laws and regulations by the central government, including discussion on those that should be established but have not been yet
Tobacco control legislation at local level	Tobacco control laws and regulations by local governments, including those that should be passed but have not been yet
Enforcement of tobacco control laws and regulations	How the government enforces tobacco control laws and regulations already passed or their effectiveness
Pack warnings	Content and sizes of cigarette pack warnings
Bans on advertising, marketing, and sponsorship	Prohibitions of tobacco companies' use of advertising, marketing, and corporate social responsibility activities to promote cigarette sales and corporate images, including traps of low-tar cigarettes
Taxation	Raising taxes on tobacco products
Bans on smoking scenes in entertainment	Prohibitions of smoking scenes in movies, television dramas, and news programs
Youth access	Hazards of young people smoking and its prevalence among this group of people
Tobacco control regulatory bodies and stakeholders	Institutional participants in the tobacco control campaign, such as discussion of whether STMA should be a tobacco control policy maker
Tobacco industry transformation	Encouraging tobacco farmers and companies to switch to alternative businesses
Public education and communication campaigns	Activities to raise people's awareness of hazards of smoking and change their behaviors or articles that emphasize the importance of such activities
International tobacco control efforts and campaign	Tobacco control efforts and their effectiveness in foreign countries and China's role in the global antismoking campaign

Outcome Policy Agenda

Outcome policy agenda refers to the relative importance of the second-level tobacco control issues in the China Tobacco Control Program (2012–2015). The researchers chose the program as the indicator of the outcome policy agenda because it is China's most recent comprehensive tobacco control policy program and outlines the tobacco control plan for three years. The text of the program can thus impart the relative salience of second-level issues. For instance, the program merely requires tobacco manufacturers to enlarge the size of their warning messages without forcing them to include graphics to illustrate smoking hazards (a common practice in many countries), which did not meet the demands of tobacco control practitioners. This indicates that the Chinese government did not consider these requirements to be as serious as including smoking scenes in entertainment.

To ensure the validity of policy interpretation, we invited eight senior tobacco control practitioners in China who had at least five years of tobacco control experience to rate the importance of tobacco control issues described in the program. Three of the practitioners were from state tobacco control authorities in China, three worked for Chinese domestic antismoking organizations, and two worked for international tobacco control organizations that had an established presence in China. Although the number of participants was small, the eight respondents represented most of the influential tobacco control authorities and organizations that have been active in policy promotion at the national level.

Participants were asked to evaluate the 17 second-level tobacco control issues based on their institutional perspective, which was specified in the consent page.⁷ They were asked to rate each item on a 7-point scale (1 = least important, and 7 = most important). Additionally, for each of the 17 items, the standard deviations among the eight evaluators were assessed; they ranged from 0.83 to 1.45, meaning that participants' viewpoints were not drastically different.

Anti-Control Forces' Policy Agenda

We initially planned to interview individuals who represented the anti-control forces about their agendas, but they were not available. As an alternative, we tallied the number of national tobacco control laws and regulations for each second-level issue that had been installed in the past two decades. Chinese tobacco control practitioners and activists have long been unsatisfied with the existing tobacco control policies because the tobacco control lawmaking process emphasizes the interests of the tobacco industry more than the concerns of the tobacco control practitioners (Ding, 2012). Although the existing Chinese tobacco control policies restricted tobacco use, sales, and marketing activities, they had still not prevented the Chinese smoking population from growing, thus maintaining the interests of the tobacco industry. The policies undeniably reflected the viewpoints of pro-control forces, but in the context of this study (which was conducted before the new framework), the existing policies were largely fruitless and were the focus

⁷ Although no official numbers of tobacco control institutions are available, we checked media coverage and past attendee lists of tobacco control media advocacy workshops to decide which institution to invite. Eleven invitations were sent out, 10 people responded, and eight were used in analysis because two questionnaires were incomplete.

of the pro-control forces' efforts because they obstructed Chinese tobacco control from being successful. For instance, the transformation of the tobacco industry was not part of the existing regulations but was called for by activists. The existing policies exhibited the anti-control forces' notions of tobacco control, but the pro-control forces believed that industry transformation could reduce the government's reliance on the tobacco industry as a major financial source and thus sought to change this practice. Therefore, given that the existing laws helped the tobacco industry maintain its profits and were strongly opposed by the pro-control forces, the policy agenda of the anti-control forces was approximated in this study by the existing laws and regulations.

Because the outcome policy agenda was national, this study did not include local-level agendas. To ensure that all the major tobacco control policies were included, we used three sources of information for verification. The first was a compilation of past laws and regulations that was developed by a senior Ministry of Health official (Xinhua Li, 2004); this document ensured the inclusion of the important laws and regulations that were drafted before 2004. The second source was a list of the laws and regulations that was compiled by the China Tobacco Control Resource Center, a tobacco control website operated by NGOs and funded by the Bill and Melinda Gates Foundation. This source was primarily used to complement the first source. Moreover, we searched the websites of the eight ministries that were involved in drafting the program. A total of 26 laws and regulations were found between 1987 and 2011. We then evaluated whether each law or regulation mentioned a particular second-level issue. Two researchers coded all 26 items together and reached every coding decision after discussion.

Pro-Control Forces' Policy Agenda

To measure the policy agenda of the pro-control forces, we interviewed the three tobacco control practitioners at the state tobacco control authorities and the three practitioners at the domestic NGOs. We excluded the practitioners at the international NGOs because they could not directly influence the tobacco control policy agenda in China (Ngok & Chen, 2008). We asked, "How important do you think the following tobacco items should be to the Chinese government?" The responses were measured on a 7-point scale, with 1 = the least important and 7 = the most important. The 17 issue items that the tobacco control practitioners evaluated corresponded to the categories of media content identified and those used to evaluate the outcome policy agenda.

The survey of tobacco control practitioners was conducted after the outcome policy agenda was announced in late 2012. This timing raises concerns about the validity of the measure, because the media coverage between 2010 and 2012 may have influenced the practitioners' perceptions of issue salience, and thus the measures in this study could not reflect their actual thoughts before the policy debate. However, previous research (e.g., Cook et al., 1983) has suggested that interest group elites do not change their perceptions of issue salience after exposure to media content because they are committed to and knowledgeable about the issue. Additionally, the practitioners in Chinese state tobacco control authorities are not politicians per se; rather, they are trained professionals in medical disciplines and thus comparable to interest group elites.

Intercoder Reliability

Ten percent of the news stories in the sample were randomly selected to train two graduate student coders and to calculate intercoder reliability.⁸ Scott's pi, which controls for chance agreement, was calculated for all the variables. All the variables in the study achieved an agreement of .90 and above, with the exception of the public education and communication campaign (.88), the international tobacco control efforts and campaigns (.89), and the prevalence of tobacco (.85) items.

Statistical Analysis

To answer RQ1, we calculated the percentage of news stories that contained any of the 17 second-level tobacco issues. Only the news articles coded as "tobacco control" were used to answer the research questions. To examine the association between the media agenda and the policy agendas, we performed Spearman's rank correlation analysis, which does not assume a normal distribution. The unit of analysis for RQ2 and RQ3 was a single second-level issue. Because the sample size was only 17, which greatly reduced the statistical power, the analysis focused on the magnitude of the coefficient (effect size) instead of the statistical significance.

Results

Descriptive Statistics

Of the 1,750 articles that mentioned any of the six keywords, 76.5% ($N = 1,338$) were related to tobacco control, and the remaining 23.4% discussed the tobacco industry, such as the philanthropic activities of tobacco manufacturers. Of the tobacco control news items, 72% originated from the market-oriented popular press, 18% were published by the national or local state-run press,⁹ and news stories from the health media accounted for 6% of the total. Regarding the type of article, 53% of the tobacco control news items were hard news, 19% were feature stories, 14% were opinion articles, and 9% were popular science pieces.

RQ1: How did the Chinese news media cover the second-level issues of tobacco control in the period leading up to the China Tobacco Control Program (2012–2015)?

The third column from the left in Table 2 displays the percentages of news stories that covered a second-level tobacco control issue. Between 2010 and 2012, the most salient second-level issues of tobacco control were smoke-free public places and smoking hazards, both of which exceeded 40%. The five issues that received a moderate level of coverage (ranging from 12% to 19%) included tobacco control legislation at the local level, the enforcement of tobacco control laws and regulations, smoking cessation assistance, youth access to tobacco products, and public education and communication campaigns.

⁸ The pretested items were still used in the analysis, but their final coding reflected the latest version of the code book and coding instructions revised after discussion.

⁹ We attempted to examine the difference in the second-level policy agenda between state and commercial media, but they are largely the same, with a correlation of .96. To save space, these data are not presented.

According to Table 2, the 10 issues that received the least amount of media coverage (less than 10%) included pack warnings, taxation, and tobacco industry transformation, which are critical to the success of tobacco control.

Table 2. Comparison of Second-Level Tobacco Control Issue Salience Between Media Agenda and Policy Agendas in China.

Second-level issue items	Issue salience			
	Anti-control agenda	Pro-control agenda	Media agenda	Outcome policy agenda
	Frequency (Rank)	Rating (Rank)	% (Rank) ^a	Rating (Rank) ^b
Smoke-free public places	11 (2)	6.33 (2)	45.29 (1)	3.86 (4)
Smoking hazards	15 (1)	5.67 (8)	43.20 (2)	4.00 (2)
Tobacco control legislation at the local level	1 (12)	5.67 (8)	19.28 (3)	4.00 (2)
Enforcement of tobacco control laws and regulations	5 (6)	6.17 (3)	18.83 (4)	2.29 (12)
Smoking cessation assistance	3 (9)	4.83 (17)	13.38 (5)	3.00 (9)
Youth access	9 (4)	5.33 (14)	13.00 (6)	3.14 (8)
Public education and communication campaigns	10 (3)	6.50 (1)	12.18 (7)	4.14 (1)
Prevalence of tobacco	4 (7)	5.33 (14)	8.82 (8)	3.71 (5)
International tobacco control efforts and campaign	2 (10)	5.83 (5)	7.92 (9)	3.43 (7)
Tobacco control legislation at the national level	0 (15)	6.00 (4)	5.53 (10)	2.14 (14)
Tobacco monitoring system	1 (12)	5.67 (8)	5.31 (11)	2.29 (13)
Pack warnings	0 (15)	5.33 (14)	4.48 (12)	1.57 (17)
Taxation	1 (12)	5.67 (8)	4.19 (13)	2.00 (15)
Tobacco control regulatory bodies and stakeholders	2 (10)	5.83 (5)	3.29 (14)	2.71 (11)
Bans on advertising, marketing, and sponsorship	9 (4)	5.67 (8)	2.02 (15)	3.00 (10)
Bans on smoking scenes in entertainment	4 (7)	5.50 (13)	1.64 (16)	3.57 (6)
Tobacco industry transformation	0 (15)	5.83 (5)	0.67 (17)	1.86 (16)

^a Media agenda applies only to coverage of tobacco control ($N = 1,338$). A single news story can fall into more than one issue topic, so the percentages for second-level issues do not add up to 100%.

^b Issue salience of policy agenda ranges from 1 to 7, with 1 = the least serious and 7 = the most serious.

RQ2: To what extent were the pro- and anti-tobacco control agendas each associated with the Chinese antismoking media agenda?

Table 3 displays the zero-order Spearman rank correlation coefficients for the anti-control, pro-control, media, and outcome policy agendas. The pro-control forces' agenda had a very small correlation with the media policy agenda.¹⁰ In contrast, the anti-control forces' agenda (the existing tobacco control policy agenda) had a strong correlation with the outcome policy agenda and the media agenda. The magnitude of the association with the anti-control forces agenda was almost five times the association with the pro-control forces.

Table 3. Zero-Order Spearman Correlation Coefficients for Media, Policy, Anti-Tobacco Control, and Pro-Tobacco Control Agendas in China.

	Policy agenda	Anti-control agenda ^a	Pro-control agenda
Media agenda	0.58**	0.51**	0.12
Policy agenda		0.72*	0.10
Anti-control agenda			0.12

Note. The partial Spearman's rho coefficient for the association between media agenda and policy agenda, after controlling anti-control and pro-control agendas' association, is .35, $p = .20$.

^a Because the Chinese tobacco control practitioners, excluding those who represent the interests of the tobacco industry, are unsatisfied with the existing tobacco control agenda, this study used the existing tobacco control agenda to approximate the agenda of anti-control forces.

* $p < .001$. ** $p < .05$.

RQ3: Controlling for the pro-tobacco control and anti-tobacco control forces' direct associations, to what extent was the Chinese antismoking media agenda positively associated with the outcome tobacco control policy agenda of the Chinese government?

The data shown in Table 3 suggest that the media agenda was positively associated with the outcome policy agenda, which was statistically significant at the level of .01. The association was strong, with a Spearman's rank correlation coefficient of .58. In comparison with the zero-order correlation, after controlling for the direct association of the anti-control and pro-control forces' agendas, the partial correlation decreased to .35 (see notes to Table 3), which suggests a moderate level of association. However, the coefficient was not statistically significant.

¹⁰ According to Cohen (1992), a correlation coefficient greater than 0.5 is large, 0.5 to 0.3 is moderate, 0.3 to 0.1 is small, and anything smaller than 0.1 is insubstantial.

Discussion

Generally, the results suggest that the news coverage of tobacco control was far more extensive than was coverage of the Chinese tobacco industry's activities. The market-oriented press contributed most of the news items, and the state-run media made a smaller contribution. This suggests that tobacco control practitioners should work more closely with state-run media reporters and editors, because Chinese government officials monitor these sources of media more closely. In contrast to previous studies (e.g., Gao et al., 2012), this study describes the patterns of Chinese media coverage of tobacco control from the policy-making perspective.

Ineffective Media Advocacy

One of this study's most important findings is that the association between the anti-control forces' and media agendas was much stronger than that of the pro-control forces. This suggests that the media advocacy activities of the pro-control forces were not effective and that the news coverage tended to reflect the anti-tobacco control agenda in China. The model proposed by Shoemaker and Reese (1996) provides a useful discussion framework. At the individual level, Chinese reporters are unlikely to side with the tobacco industry, because the indisputable hazards of smoking would lead to a cooperative relationship with industry being perceived as politically incorrect. Furthermore, Chinese reporters work in a culture of celebrity journalists (Liang, 2014) and thus might find tobacco control to be less appealing. Tobacco control has been a recurring topic in news coverage, which lowers the chances of its coverage resulting in award-winning projects and personal recognition. Thus, Chinese reporters might devote more time to researching newly emerging health topics other than tobacco control.

At the media routine level, tobacco control lacks news value in China. Media generally focus on events of conflict, while the anti-control forces in China commonly keep a low profile and avoid open debate and confrontation with pro-control forces for many key second-level tobacco issues such as tax hikes (Xin Li, 2012; Shang, 2012, August 23; Yan, 2014, July 4). This lack of conflict partly explains the Chinese media's lack of coverage of second-level issues such as taxation (see Table 2).

At the organizational level, in an era in which the institutional media are losing audiences and revenues (Cui, 2015), most media members are unlikely to invest extensive resources in tobacco control coverage because it lacks the eye-catching qualities of other stories. This further affects the editors' serious interest in tobacco control; although the Chinese media have covered tobacco control, they tend to cover only familiar topics, which requires fewer resources.

At the social institutional level, anti- and pro-control forces' media advocacy efforts should be influential. However, it is safe to assume that anti-control forces had limited capacity in providing salient messages to the media. As mentioned above, the political incorrectness of obstructing tobacco control efforts has largely prevented anti-control forces from exerting meaningful pressure on the media agenda. However, in this study, the anti-control forces seem to have a clear strategy. As explained earlier, anti-control forces have routinely avoided creating newsworthy events by maintaining a low profile, thus downplaying the salience of several key issues in the media. On the other hand, the pro-control forces

surveyed in the study, such as tobacco control practitioners, did not have a clear media advocacy strategy. The average importance of each item as rated by pro-control forces was 5.71 with a standard deviation of 0.40; in other words, pro-control forces believed that every issue was critical, which was highly likely to translate into their communications with media members. Accordingly, Chinese journalists may have been unclear about what topic should be the primary focus at a given stage and continued covering the topics that they used to cover. Alternatively, the priorities of the pro-control forces may have been too complex or sophisticated to cover. As shown in Table 2, the importance of educational campaigns, international tobacco control efforts, legislation at the national level, taxation, tobacco control regulatory bodies, and stakeholders, bans on advertising, and industry transformation in the media's agenda was less than the pro-control forces' expectations. Topics such as taxation, tobacco control regulatory bodies, and industry transformation, although critical to the success of tobacco control, are very technical and require knowledge of economics. It is possible that the pro-control forces failed to present these topics to journalists in an easily understandable way. Thus, journalists may have reverted to the topics that they found easier to understand, such as smoke-free public places and smoking hazards.

At the cultural and societal level, although it is well acknowledged in China that smoking is harmful to one's health, tobacco continues to play a significant role in Chinese culture. For instance, during occasions such as the Chinese New Year, cigarettes are important gifts, and many heroes in Chinese history are well known to be chain smokers (Yang, Wang, Wu, Yang, & Wan, 2015). The Chinese tobacco industry actively promotes this culture by, for example, establishing tobacco museums (Yang et al., 2015). An average Chinese media member, who is immersed in this culture, may not find smoking inappropriate or problematic and thus may lack the motivation to cover tobacco control, let alone the motivation to initiate in-depth investigation into the lesser-known areas such as taxation, marketing hype, and industry transformation.

In summary, these structural factors explain why the Chinese media created a media agenda that was favorable to the interests of the anti-control forces.

Media Coverage as Symbolic Resources

The data from this study and the nature of tobacco control as a policy issue in China support the notion that politicians use media coverage as a symbolic resource when debating policy issues with their colleagues (Davis, 2007; Livingston, 1997) more than the simple stimulus-response model. First, each of the second-level tobacco control issues was unlikely to be foreign to the pro- and anti-control policy makers, because each issue was not a new proposal; thus, unlike international news, the tobacco coverage was unlikely to prime policy makers. Second, the policy-making committee of the China Tobacco Control Program was composed of both anti- and pro-control forces; policy makers thus needed to compromise with their colleagues. Third, there were strong correlations between the anti-control forces' agenda, the media agenda, and the outcome policy agenda; however, the correlation was stronger for the anti-control forces' agenda than for the media agenda (see Table 3). This suggests that the stances of the anti-control forces were determined beforehand and that they may have used the news coverage in negotiation because of the sizable correlation coefficient between the media and outcome policy agendas. Fourth, in a country with more than 300 million smokers (Zhang, 2014, January 8), news coverage was

unlikely to be an important source of pressure that could lead anti-control forces to relinquish their positions; that is, the public agenda was unlikely to be a mediator between the media and outcome policy agendas.

However, given the media advocacy efforts explained above, the mechanism suggested by this study exhibited differences in the media-policy relationship compared with other settings. In the West, the relationship is based on mutual interests between politicians and journalists, and politicians use media coverage as a symbolic resource, which represents an active process. In contrast, this study revealed a passive process. Anti-control forces in China prevented newsworthy events by maintaining a low public profile, while pro-control forces used media advocacy ineffectively, resulting in a media agenda that favored the interests of the anti-control forces in the ensuing policy debate.

Political Systems and Media-Policy Interactions

This study highlights the importance of political and media systems in shaping media-policy interactions. Traditionally, Chinese political elites negotiated with one another in closed-door meetings. However, with the gradual liberation of China, the policy-making process has allowed competing opinions, which is, to some extent, comparable to the process in the West. By reviewing the Chinese tobacco control media advocacy activities and combining three sources of data, this study effectively demonstrates that, during China's tobacco control policy-making process, pro-control forces attempted to use media to promote their policy framework, but the anti-control forces were the ones who were able to take advantage of the media coverage.

The failure of the pro-control forces reveals the influence of the macro-level context on media-policy interactions. As Cook et al. (1983) and Davis (2007) found, mutual interests-based collaboration between policy initiators and the media plays a key role in media-policy interactions, which is precisely what the Chinese tobacco control practitioners were lacking. As discussed above, the lack of association between the pro-control forces' and media agendas can be attributed to Chinese practitioners' inability to provide the appropriate messages to members of the media. However, the individual practitioners should not be blamed. China did not employ the practice of modern public relations until 1978, which is when economic reforms began. Additionally, it was only after the early 2000s when the nonprofit sectors in China began to initiate the concepts of strategic planning and two-way interactions. Before that, publicity dominated the field. As the Chinese public relations field continues to mature and becomes increasingly professional, Chinese tobacco control practitioners begin to compare their own media advocacy strategies with other fields such as business sectors and reflect upon their capabilities.

Limitations and Future Research

This study is not without limitations. The survey of the tobacco control practitioners was conducted after the outcome policy agenda was announced, which raises concerns about the validity of the measurements and causality. Although tobacco control practitioners are generally unlikely to be influenced by the media and other sources, this possibility cannot be excluded; thus, we avoided the use

of causal language in this article. In the future, scholars who are interested in policy-media interactions should plan ahead to ensure that the timing of the study meets the requirements to establish causality.

Because individuals from the anti-control forces were not available for the interviews, their tobacco control agenda was only measured indirectly. Although this measurement has validity, readers should bear in mind that it is an estimation because the existing laws and regulations result from the efforts of both anti- and pro-control forces. Additionally, scholars should be careful about using this estimation to replicate these study designs. Because tobacco control researchers often find it difficult to have face-to-face conversations with anti-control forces, scholars should seek more innovative and precise methods to measure their agendas.

References

- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*(1), 155–159.
- Cook, F. L., Tyler, T. R., Goetz, E. G., Gordon, M. T., Protess, D., Leff, D. R., & Molotch, H. L. (1983). Media and agenda setting: Effects on the public, interest group leaders, policy makers, and policy. *Public Opinion Quarterly*, *47*(1), 16–35. doi:10.1086/268764
- Cui, B. (Ed.). (2015). *Media blue book: China's media industry development report 2015*. Beijing, China: Social Literature Publishing House.
- Davis, A. (2007). Investigating journalist influences on political issue agendas at Westminster. *Political Communication*, *24*(2), 181–199. doi:10.1080/10584600701313033
- Dearing, J. W., & Rogers, E. (1996). *Agenda-setting*. Los Angeles, CA: SAGE Publications.
- Ding, H. (2012). *Tobacco control NGOs urge STMA to change*. Retrieved from http://finance.cnr.cn/dujia/201205/t20120524_509696345.shtml
- Edwards, G. C., & Wood, B. D. (1999). Who influences whom? The president, congress, and the media. *The American Political Science Review*, *93*(2), 327–344. DOI:10.2307/2585399
- Gao, J., Chapman, S., Sun, S., Fu, H., & Zheng, P. (2012). The growth in newspaper coverage of tobacco control in China, 2000–2010. *BMC Public Health*, *12*, 160. doi:10.1186/1471-2458-12-160
- Hassid, J. (2015). Chinese government responsiveness to Internet opinion: Promising but dangerous. *Journal of Current Chinese Affairs*, *44*(2), 39–68. Retrieved from <http://dx.doi.org/10.2139/ssrn.2308813>
- He, S., Shen, Q., Yin, X., Xu, L., & Lan, X. (2013). Newspaper coverage of tobacco issues: An analysis of print news in Chinese cities, 2008–2011. *Tobacco Control*. doi:10.1136/tobaccocontrol-2012-050545

- Hu, D., Mao, Z., Shi, J., & Chen, W. (2008). *China's tobacco taxation and its economic impacts*. Retrieved from http://ctfkirc.hfwebdev.com/files/pdfs/zh/China_Tobacco_Economics_full_zh.pdf
- Hu, T. (Ed.). (2008). *Tobacco control policy analysis in China: Economics and health*. Hackensack, NJ: World Scientific.
- Kingdon, J. W. (2003). *Agendas, alternatives, and public policies*. New York, NY: Longman.
- Larger warning labels on cigarette packages. (2012, December 26). *Beijing Times*. Retrieved from http://news.ifeng.com/mainland/detail_2012_12/26/20523122_0.shtml
- Levy, D. T., Chaloupka, F., & Gitchell, J. (2004). The effects of tobacco control policies on smoking rates: A tobacco control scorecard. *Journal of Public Health Management and Practice, 10*(4), 338–353.
- Li, X. (2004, May). *An introduction to Chinese tobacco control laws and regulations*. Paper presented at the Forum of WHO Framework Convention on Tobacco Control, Beijing, China.
- Li, X. (2012, April 13). Tobacco awards in dispute, tobacco institute keep silent. *China Broadcast Net*. Retrieved from http://news.xinhuanet.com/fortune/2012-04/13/c_122971956.htm
- Liang, Y. (2014). *A reflection on the culture of celebrity journalist in China* (Master's thesis). Shaanxi Normal University, Xi'an, China.
- Lippmann, W. (1922). *Public opinion*. Minneapolis, MN: Filiquarian Publishing.
- Liu, H. (2008). *Mass communication theory: Paradigms and perspectives*. Beijing, China: Renmin University of China Press.
- Liu, Y., Jiang, L., Xiao, H., Liu, Q., Li, B., & Xu, W. (2010). Newspaper coverage about smoking in leading Chinese newspapers in past nine years. *Tobacco Control, 19*(4), 345–346. doi:10.1136/tc.2009.034793
- Livingston, S. (1997). *Clarifying the CNN effect: An examination of media effects according to type of military intervention* (Research Paper R-18). Retrieved from <http://xa.yimg.com/kq/groups/22525834/1583922025/name/1997ClarifyingtheCNNEffect-Livingston.pdf>
- McCombs, M. E., & Reynolds, A. (2002). News influence on our pictures of the world. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp. 1–18). Mahwah, NJ: Lawrence Erlbaum.
- McCombs, M. E., & Shaw, D. L. (1972). The agenda-setting function of mass media. *Public Opinion*

- Quarterly*, 36(2), 176–187. doi:10.1086/267990
- Ministry of Health of China. (2012, May 30). *China's report of smoking hazards*. Retrieved from <http://www.moh.gov.cn/cmsresources/mohfybjysqwss/cmsrsdocument/doc15013.pdf>
- Ngok, K., & Chen, Z. (2008). The development and limitations of China's tobacco control policy: A reluctant tobacco control movement. *Public Management Research*(6), 137–150.
- Niederdeppe, J., Farrelly, M. C., & Wenter, D. (2007). Media advocacy, tobacco control policy change and teen smoking in Florida. *Tobacco Control*, 16(1), 47–52. doi:10.1136/tc.2005.015289
- The plan for China tobacco control media campaign 2011–2012. (2012, May 9). *Sina Health*. Retrieved from <http://health.sina.com.cn/news/2012-05-09/153830203.shtml>
- Rogers, E., & Dearing, J. W. (1988). Agenda setting research: Where has it been, where is it going? In J. A. Anderson (Ed.), *Communication yearbook 11* (pp. 555–594). New York, NY: Routledge.
- Sato, H. (2003). Agenda setting for smoking control in Japan, 1945–1990: Influence of the mass media on national health policy making. *Journal of Health Communication*, 8(1), 23–40. doi:10.1080/10810730305731
- Shang, X. (2012, August 23). Shanghai authorities approve tobacco museum. *Beijing Times*. Retrieved from <http://sports.qq.com/a/20120823/000071.htm>
- Shoemaker, P. J., & Reese, S. D. (1996). *Mediating the message: Theories of influences on mass media content*. New York, NY: Longman.
- Soroka, S. N. (2002). Issue attributes and agenda-setting by media, the public, and policymakers in Canada. *International Journal of Public Opinion Research*, 14(3), 264–285. doi:10.1093/ijpor/14.3.264
- Soroka, S. N. (2003). Media, public opinion, and foreign policy. *International Journal of Press/Politics*, 8(1), 27–48. doi:10.1177/1081180x02238783
- Tang, W. (2005). *Public opinion and political change in China*. Stanford, CA: Stanford University Press.
- Walgrave, S., & De Swert, K. (2004). The making of the (issues of the) Vlaams Blok. *Political Communication*, 21(4), 479–500. doi:10.1080/10584600490522743
- Walgrave, S., & Van Aelst, P. (2006). The contingency of the mass media's political agenda setting power: Toward a preliminary theory. *Journal of Communication*, 56(1), 88–109. doi:10.1111/j.1460-2466.2006.00005.x

- Wallack, L., & Dorfman, L. (1996). Media advocacy: A strategy for advancing policy and promoting health. *Health Education & Behavior, 23*(3), 293–317. doi:10.1177/109019819602300303
- Wang, S. (2008). Changing models of China's policy agenda setting. *Modern China, 34*(1), 56–87. doi:10.1177/0097700407308169
- Weaver, D., McCombs, M., & Shaw, D. L. (2004). Agenda-setting research: Issues, attributes, and influences. In L. L. Kaid (Ed.), *Handbook of political communication research* (pp. 257–282). Mahwah, NJ: Lawrence Erlbaum.
- World Health Organization. (2009). *Milestones in health promotion: Statements from global conferences*. Retrieved from http://www.who.int/healthpromotion/Milestones_Health_Promotion_05022010.pdf
- Xu, G. (2011, April). *The role NGOs play in China's tobacco control*. Paper presented at the 15th China National Conference of Tobacco Control, Beijing, China.
- Yan, D. (2014, July 4). Pro-control and anti-control forces battle against each other. *Southern Weekly*. Retrieved from <http://www.infzm.com/content/101983>
- Yang, G., Wang, Y., Wu, Y., Yang, J., & Wan, X. (2015). The road to effective tobacco control in China. *The Lancet, 385*(9972), 1019–1028. doi:10.1016/S0140-6736(15)60174-X
- Zhang, L. (2014, January 8). China has more than 300 million smokers. *Beijing Morning Post*. Retrieved from <http://news.sohu.com/20140108/n393118140.shtml>