The International Tobacco Control Policy Evaluation Project

ITC China Project Report

FINDINGS FROM THE WAVE 1 TO 3 SURVEYS (2006-2009)

DECEMBER 2012

Promoting Evidence-Based Strategies to Fight the Global Tobacco Epidemic

CHINESE CENTER FOR DISEASE CONTROL AND PREVENTION

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International Tobacco Control
Policy Evaluation Project

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Findings from the wave 1 to 3 surveys (2006–2009)

作者：加拿大滑铁卢大学　中国疾病预防控制中心控烟办公室

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Message

In 2005, the World Health Organization published a landmark report, Preventing Chronic Diseases: A Vital Investment. In that report, which detailed the present and future threat of chronic diseases—in low- and middle-income countries as well as in high-income countries, I wrote that, "Like so many developing and developed countries around the world, China is facing significant health challenges, not just with infectious diseases but now with the double burden of chronic disease."

The focus of any effort to reduce chronic diseases must include strong measures to reduce tobacco use, because tobacco is the major single contributor to chronic diseases—throughout the world and in our country, where it is responsible for more than a million deaths a year. In 2005, our country took an important step toward making a commitment to increase our efforts to battle the tobacco epidemic with the ratification of the WHO Framework Convention on Tobacco Control (FCTC).

The FCTC requires Parties to establish progressively a national system for the epidemiological surveillance of tobacco consumption and related social, economic, and health indicators. In our country, the International Tobacco Control Policy Evaluation Project (ITC China Project) is an important research project of the tobacco control surveillance system. This report summarizes major findings from the ITC China Project between 2006 and 2009 and provides clear evidence that our tobacco control efforts so far have not been fruitful. For example, it is well-known that implementing large, pictorial warnings as described in the FCTC Guidelines can not only increase smokers' awareness of smoking-related diseases, but also increase their motivation to quit. To date, at least 63 countries and jurisdictions have implemented pictorial warning labels on cigarette packs, including many developing countries such as Thailand, Brazil, and Uruguay. A few Chinese-speaking jurisdictions, including Singapore, Taiwan, the Hong Kong Special Administrative Region and the Macau Special Administrative Region, have adopted or will adopt pictorial warning labels as well. In Australia, plain packaging will be used to avoid deceptive information, although the tobacco industry sued the Australian government. However, China has not adopted pictorial warning labels. ITC China Survey results show that the introduction of revised text health warnings in October 2008 had at best a minimal effect on smokers' perceptions and behaviours. As a result, too many Chinese smokers are not aware of the specific health consequences of smoking and secondhand smoke exposure. For example, awareness among Chinese male smokers that secondhand smoke can cause lung cancer in non-smokers was only 72%, the lowest of 8 low- and middle- income countries and the fourth-lowest of all 16 ITC countries. Even fewer Chinese smokers (27%) know that smoking causes stroke.

100% smoking bans in indoor public places, indoor workplaces, and public transport can significantly reduce exposure to secondhand smoke and protect people's health. Today, more and more countries and jurisdictions have implemented comprehensive smoke-free legislation in places mentioned above. In contrast, our country has no national level 100% smoke-free legislation — 72% of Chinese non-smokers are exposed to secondhand smoke in at least one day in a typical week. Results from the ITC China Survey also indicate that partial bans on indoor smoking in public places cannot protect the public from secondhand smoke exposure. In 2009, more than 90% of respondents in 5 cities noticed smoking in restaurants. In comparison, in some other ITC countries where comprehensive smoke-free laws have been well enforced, the proportion of smokers who notice smoking in restaurants is lower than 5%. It is worth noting that support for 100% smoke-free workplaces and indoor public places is increasing among the Chinese public. For example, support for 100% smoke-free workplaces among smokers in Yinchuan increased from 56% in 2006 to 80% in 2009, which suggests that a 100% smoke-free policy in indoor public places and workplaces is likely to be supported and complied with by the public—even by smokers.

Increasing the prices and taxes of cigarettes is among the most effective tobacco control measures recommended by the FCTC; however, cigarette prices in our country are very low. The ITC China Survey found that 50% of the Chinese urban smokers spent 6 Yuan or less on a pack (20 sticks) of cigarettes and the expenditure on cigarettes is lower than 1.4% of smokers' income. Cigarette prices are too low to control tobacco consumption. Tobacco advertising is not comprehensively banned in China either. In 2009, 39% of the Chinese smokers noticed tobacco ads in the past six months.

China's commitment to tobacco control will determine not only whether we can effectively control non-communicable diseases in our country, but also whether the global tobacco epidemic can be curbed. To assess our progress, we need high quality surveillance data. I believe that ITC China Survey data will provide a strong evidence base for the implementation of effective tobacco control policies in the future, and with the support of this evidence base to monitor our progress, tobacco control in China will succeed.

Wang Longde
Former Vice-Minister of Health
People's Republic of China

ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

Message

China is the largest tobacco producer and consumer in the world. Tobacco use has resulted in serious loss to the public health of China. Studies have suggested that in 2005, the death toll attributable to tobacco use was more than 1 million in China, and the figure will exceed 2 million by 2020 and 3 million by 2030 if the current tobacco use pattern persists. To curb the tobacco epidemic, China signed the World Health Organization Framework Convention on Tobacco Control (FCTC) in 2003. The FCTC was ratified by the Standing Committee of the National People's Congress in August 2005, and took effect in January 2006. This is a milestone in the field of tobacco control in China, and showed the world that China, as a responsible country, is determined to protect people's health.

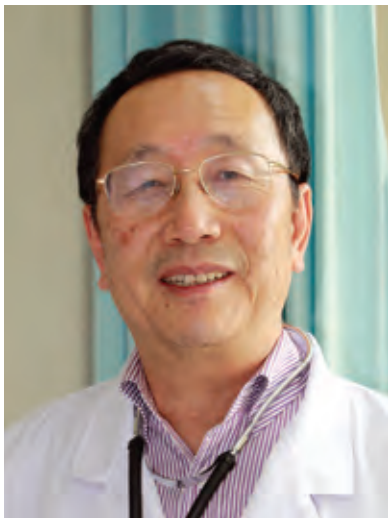
It has been seven years since the FCTC took effect in our country. Although China has made some progress in tobacco control, there are still huge gaps between the WHO FCTC requirements and the current situation in China. In recent years, the current smoking rate among Chinese adult males has remained high, and cigarette production and sales continue to increase. In 2011, cigarette production in China was 2,447.4 billion sticks, an increase of about 47% compared to the year 2000, and 37% higher compared to the year 2003, when China signed the FCTC.

Monitoring and evaluation are an important aspect of tobacco control as well as a basic requirement of the FCTC. The International Tobacco Control Policy Evaluation Project (the ITC Project) is an important tobacco control monitoring and evaluation study conducted in China and 21 other countries throughout the world. This report, compiled and published by the ITC China team, analyzed and evaluated tobacco control in China between 2006 and 2009, including smoke-free policies, health warnings on cigarette packages, the ban on tobacco advertising, tobacco promotion and sponsorship, tobacco product content monitoring and disclosure, etc. The results show that various local initiatives in China to implement partial smoke-free public places have not led to any real reduction in smoking prevalence in key public areas; the health warnings introduced in October 2008 do not meet FCTC Article 11 Guidelines and are not effective; and the tax increase in 2009 has not resulted in an increase in retail price and has had no effect on tobacco control. These findings have very important policy implications for China as they provide guidance to develop more effective tobacco control policies and to better implement the FCTC.

Tobacco control is a global effort which cuts across all nations, ethnicities, languages, skin color, regions, and cultures. To date, 176 countries have ratified, approved, confirmed or joined the FCTC, making it an international treaty that has obtained the most extensive acceptance in the shortest time in history. In September 2011, the United Nations held a summit meeting with participation by nation sovereigns and government heads to discuss the prevention and control of non-communicable diseases. The summit meeting recognized that tobacco use was among the four common modifiable risk factors for non-communicable diseases, and called for better implementation by States Parties to the World Health Organization Framework Convention on Tobacco Control (FCTC). In March 2011, the twelfth Five Year Plan outline for national economic and social development of the People's Republic of China approved by the People's Congress proposed that China should promote a comprehensive smoking ban in public places. Accordingly, the Ministry of Health released the "Detailed Implementation Rules for Public Place Sanitary Administration Regulation", which bans smoking comprehensively in 28 public places. These actions obtained domestic and international support. With the progress of tobacco control in China, there will be more tobacco control policies, interventions, and laws.

This ITC China Project Report will contribute to China's tobacco control effort by providing robust scientific evidence to inform more effective tobacco control policies. I appreciate the ITC China team, headed by Professors Yuan Jiang and Geoffrey Fong, for their hard work and dedication towards promoting tobacco control in China.

Dr. Wang Ke'an
Director
Think Tank Research Center for Health Development
Beijing, China



Message

Smoking is a major risk factor of cardiovascular diseases (CVD): approximately 10% of CVD is caused by smoking. As a cardiologist, I have seen many patients with heart disease caused by smoking, some of whom are very young. This is destructive to their family, as well as a burden to the society. Research shows that people who smoke die about ten years earlier than those who do not. I believe that the best doctors are those who prevent people from falling ill. This is why I consider tobacco control to be the most significant and effective strategy for reducing chronic disease in China.

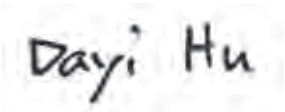
In January 2006, the WHO Framework Convention on Tobacco Control (FCTC) took effect in China. Although there have been some achievements, tobacco control in China has encountered many difficulties compared with other countries. Graphic warnings on cigarette packages have not been adopted in our country. Smoking at indoor public places and workplaces is very common. The public does not have proper perceptions about smoking and there is low awareness of the harms of secondhand smoke.

In my many years of work in tobacco control, I have learned that research evidence is essential to promoting tobacco control policy. The government, media, and the public need to understand the seriousness of the tobacco problem and how evidence-based approaches to tobacco control can lead to truly effective policies to reduce tobacco use. Unfortunately, our country does not have a well-established tobacco prevalence surveillance system. This leads to a lack of scientific data for evaluation, upon which a great deal of tobacco control policies should be based.

The ITC Project is unique in the world in its primary focus on evaluating the effectiveness of tobacco control policies. The ITC Project employs rigorous research and sampling methods, and its findings have helped guide tobacco control policies across the more than 20 countries that have conducted ITC Surveys. Since 2006, the ITC Project has completed three extensive survey waves in China, and this report summarizes its major findings.

This ITC report provides clear evidence of the unsatisfying current situation of tobacco control policy implementation and offers some suggestions for improvement. For example, the ITC findings show clearly that cigarette prices in China are too low to restrain people from buying cigarettes. Increasing cigarette taxes so that price increases will both reduce cigarette consumption and increase government tax revenue; this would create a win-win situation for both the economy and for public health. Therefore, I suggest that the government enforce effective cigarette price and tax policies according to the WHO FCTC.

I hope that policymakers will pay attention to this report's important findings and proposals. In so doing, tobacco control efforts in our country could move forward more progressively to protect people's health.



Dayi Hu, MD FACC, FESC
Chief, Heart Center, People's Hospital of Peking University
President, Chinese Society of Cardiology (CSC)

Message

China has more than 300 million smokers, and 740 million non-smokers, including 180 million children, who are exposed to secondhand smoke in at least one day in a typical week. Smoking causes lung cancer, heart disease, stroke, chronic obstructive pulmonary disease, and many other diseases. Similarly, thousands of studies have proved that secondhand smoke exposure causes many diseases in adults and children such as lung cancer, heart disease, and sudden infant death syndrome.

Tobacco use is the leading cause of death in China, accounting for more than one million deaths annually, that is, two deaths per minute. During the one hour you spend to read this report, 120 Chinese will leave this world because of smoking-attributable diseases. Statistics are without feelings, but if your classmates, friends, and relatives are included in this death toll, this statistic will be full of pain, tears, memory, and regret. If the current trends in tobacco use continue, the effects of the current health reform will be severely restricted by the increase in tobacco-related chronic diseases, and the achievements of the national economic reform will be restrained, let alone the health and well-being of Chinese people.

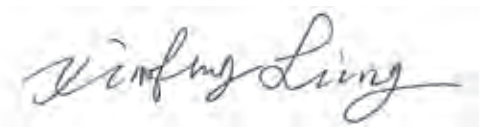
A primary objective of the Chinese Center for Disease Control and Prevention (China CDC) is to strengthen tobacco control and to lower the incidence and morbidity of chronic diseases, which has very important public health implications. In 2006, we began a partnership with the International Tobacco Control Policy Evaluation Project (the ITC Project), which has allowed us to examine patterns of tobacco use and to evaluate the impact of tobacco control policies in China over time. The ITC China Survey is a prospective longitudinal study of a nationally representative sample of adult smokers and non-smokers (18 years of age or older) in Mainland China. Data were collected using face-to-face interviews across 7 cities in 2006 (Wave 1), 2007 to 2008 (Wave 2), and 2009 (Wave 3).

Findings from the ITC China Survey highlight the need to strengthen tobacco control efforts in our country. Partial smoke-free bans have been ineffective in reducing public exposure to secondhand smoke in key public spaces. In 2009, more than 87% of smokers reported that they observed smoking in restaurants. Chinese smokers need more support for cessation. In 2009, 22% of male smokers in China had made a quit attempt in the last year — the second lowest rate of quit attempts among male smokers in 8 low- and middle-income countries and the third lowest rate among male smokers in all 19 ITC countries. Improvements in the provision and accessibility of cessation services in primary health care settings are needed in order to help current smokers to quit successfully.

Current tax and price policies are also not as strong as they could be, and the high affordability of cigarettes is a major barrier to reducing tobacco use. Results from the ITC China Survey show that cigarettes have become increasingly affordable from 2007 to 2010. The availability of many low-priced brands allows smokers to switch to these less expensive brands instead of trying to quit. Indeed, compared to 17 other ITC countries, China has the lowest percentage of smokers who mention the price of cigarettes as a reason to quit smoking.

Findings from the ITC China Survey also provide clear evidence that the text-only warnings on cigarette packages that were introduced in October 2008 were not more effective than the warnings that preceded them. The newer warnings were generally unnoticed by smokers, did not stop smokers from having a cigarette, and did not motivate smokers to quit. The text-only warnings have also had a limited impact on encouraging smokers to consider the health effects of smoking. In 2009, only 8% of smokers reported that the current health warnings made them think about the health risks of smoking 'a lot'. Many Chinese smokers also still lack the knowledge that smoking causes non-communicable diseases such as stroke among smokers and heart attack among non-smokers due to secondhand smoke. In order to increase smokers' awareness of the health risks of tobacco use and to increase their motivation to quit, it would be beneficial to implement large, pictorial warnings on cigarette packaging, as many other countries have already done.

Although the FCTC took effect in China in 2005, stronger tobacco control policies are urgently needed in China. This report provides strong evidence that strengthening existing policies on smoke-free public places, price and taxation, health warnings, and cessation support would lead to strong advances in reducing smoking and smoking-related diseases in our country.



Xiaofeng Liang, MD, MPH
Deputy Director-General
Chinese Center for Disease Control and Prevention (China CDC)

“In the end, the choices China makes will determine, in important ways, its chances—its chances for a healthy population and workforce and its chances for saving face in the global public health community by leading the world in implementing the treaty it has ratified, rather than trying to weaken it.”

Ruth E. Malone
Professor, Department of Social and Behavioral Sciences
University of California at San Francisco

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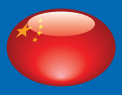
“The ITC results show that the health warnings introduced in October 2008 do not meet the FCTC Article 11 Guidelines and are not effective.”

Dr. Wang Ke’an
Former President of the Chinese Academy of Preventive Medicine
Director of Think Tank Research Center for Health Development



ITC POLICY EVALUATION PROJECT

The International Tobacco Control Policy Evaluation Project (the ITC Project) is a multi-country prospective cohort study designed to measure the psychosocial and behavioural impact of key policies of the WHO Framework Convention on Tobacco Control (FCTC).

This report presents results of the ITC China Survey – a face-to-face longitudinal survey of smokers and non-smokers – which was conducted three times between April 2006 and October 2009 in seven cities in Mainland China. In Wave 1, the seven cities were Beijing, Changsha, Guangzhou, Shanghai, Shenyang, Yinchuan, and Zhengzhou. Zhengzhou was replaced at Wave 3 by Kunming and data collected from Zhengzhou were excluded from the analyses. In each city at each of the three waves of the survey, the respondents were a random sample of approximately 800 adult smokers and 200 adult non-smokers.

As a Party to the WHO Framework Convention on Tobacco Control (FCTC) (signed in 2003 and ratified in 2005), China has committed to preventing and reducing tobacco consumption through strong evidence-based policies, as defined in the FCTC treaty text and in the FCTC Guidelines developed and adopted by the FCTC Conference of the Parties.

This report presents the ITC China Survey findings on the attitudes and behaviours of smokers and non-smokers and the impact of tobacco control policies in China to assist policymakers in implementing effective tobacco control policies in Mainland China.

ITC China Survey Team

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ITC China Project Report

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BACKGROUND

The ITC Project Surveys

The International Tobacco Control Policy Evaluation Project (the ITC Project) is the first-ever international cohort study of tobacco use. Its overall objective is to measure the psychosocial and behavioural impact of key national level policies of the WHO Framework Convention on Tobacco Control (FCTC). The ITC Project is a collaborative effort with international health organizations, researchers, and policymakers in more than 20 countries (see back cover) so far, inhabited by more than 50% of the world's population, 60% of the world's smokers, and 70% of the world's tobacco users. In each country, the ITC Project is conducting longitudinal cohort surveys to assess the impact and identify the determinants of effective tobacco control policies in each of the following areas:

- **Health warning labels and package descriptors**
- **Pricing and taxation of tobacco products**
- **Tobacco advertising and promotion**
- **Smoke-free legislation**
- **Education and support for cessation**

All ITC surveys are developed using the same conceptual framework and methods, and the survey questions, which include more than 150 questions directly relating to policy impact, are designed to be identical or functionally equivalent across all ITC countries in order to allow strong cross-country comparisons. The ITC Project aims to provide an evidence base to guide policies enacted under the FCTC, and to systematically evaluate the effectiveness of these legislative efforts.

The ITC China Survey

In 2006, researchers from the Office of Tobacco Control, Chinese Center for Disease Control and Prevention (China CDC) partnered with researchers from the local CDCs in collaboration with an international team of researchers in Canada (University of Waterloo), Australia (The Cancer Council of Victoria), and the United States (Roswell Park Cancer Institute and The State University of New York at Buffalo) to create the ITC China Project. The main objectives of the ITC China Survey are:

1. To examine patterns of smoking behaviour in Mainland China*. The ITC Survey collects very detailed information on smokers' quitting behaviour, consumption patterns, and other important aspects of smoking behaviour.

2. To examine the impact of specific tobacco control policies implemented in China. The ITC Survey has several sections that are intended to evaluate the impact of specific policies, such as health warning labels on cigarette packs, smoke-free laws, mass media campaigns, and price/taxation increases. As a result, the ITC Survey establishes an evidence-gathering system to measure the extent to which policies (and other interventions such as media campaigns) affect smoking behaviour and factors that are known to be related to smoking behaviour, such as beliefs and attitudes towards smoking and intentions to quit smoking.

3. To compare smoking behaviour and the impact of policies between China and other ITC countries. The ITC Survey is being administered in 21 other countries. Because the survey questions are identical or very similar across all ITC countries, we are able to compare smoking patterns and policy impact in China with those of the other ITC countries.

Longitudinal Cohort Design

As in all ITC surveys, respondents are recontacted to participate in subsequent survey waves, and respondents who are lost to follow-up are replaced with a replenishment sample (i.e., smokers and non-smokers randomly chosen from the same sampling frame). This longitudinal cohort design allows the research team to track any changes in smoking behaviour and to conduct analyses to identify possible factors that may be responsible for these changes in behaviour, including the impact of policies introduced between survey periods. The longitudinal cohort design is recognized as a rigorous method for evaluating policies.[1] Three waves of the ITC China Survey have been conducted to date as follows:

Wave 1

Wave 1 of the ITC China Survey was conducted from April to August 2006. Using face-to-face procedures, a cohort of 4,732 adult smokers and 1,269 adult non-smokers was interviewed in 6 cities in China: Beijing, Changsha, Guangzhou, Shanghai, Shenyang, and Yinchuan.

Wave 2

Wave 2 was conducted from October 2007 to January 2008. A total of 4,843 adult smokers and 1,221 adult non-smokers were interviewed in the Wave 2 Survey. Of this sample, 3,926 smokers and 1,066 non-smokers from Wave 1 were successfully re-interviewed at Wave 2 (83% of smokers and 84% of non-smokers). Those Wave 1 respondents who could not be reached at Wave 2 were replaced with newly recruited respondents (the replenishment sample). The replenishment sample consisted of 917 smokers and 155 non-smokers. The Wave 1 and Wave 2 Surveys were also conducted in Zhengzhou, but the data quality was found to be poor and were not included in the analysis.

Wave 3

Wave 3 was conducted from May to October 2009. The Wave 3 sample was comprised of a total of 5,583 smokers and 1,417 non-smokers. About 3% of the smoker respondents in three cities were resurveyed during January to March 2010 to correct errors in the original survey interview procedures. The Wave 3 sample consisted of 4,996 respondents who were also interviewed at previous wave(s) and 2,004 respondents who were newly recruited. The replenishment sample consisted of 1,675 smokers and 329 non-smokers. At Wave 3, Kunming replaced Zhengzhou as the seventh city.

This Report

This report presents key findings from the ITC China Wave 1, Wave 2, and Wave 3 Surveys to provide a detailed picture of the tobacco control landscape in China and to describe smokers' and non-smokers' beliefs, attitudes, and behaviours in relation to tobacco control policies.

*Mainland China will be referred to as "China" for the rest of the report.

KEY FINDINGS

1. Social norms which are strongly favourable to smoking in China, coupled with known evidence of the high prevalence of smoking indicate an urgent need for strong tobacco control intervention.

Known evidence of the high prevalence of smoking in China and the relatively high level of addiction/dependence among smokers present a significant challenge to reducing the devastating health, social, and economic consequences of tobacco use that are projected in the near and distant future. There is an urgent need for strong, evidence-based tobacco control policies to be implemented as soon as possible. China has a well-defined path toward tobacco control in the form of the FCTC. What is necessary is strong and swift action to fulfill China's obligation as a Party to the FCTC.

2. Few Chinese smokers plan to quit smoking.

China has a low percentage of smokers who intend to quit smoking and smokers who attempt to quit compared to other ITC countries. The price of cigarettes and warning labels on cigarette packages in China do not motivate smokers to quit. In addition, cessation assistance and stop-smoking medications are rarely used.

3. City-level smoke-free initiatives are ineffective because smoking bans are not comprehensive and are not well enforced.

Various initiatives in China to implement partial smoke-free public places have not led to any real reduction in smoking prevalence in key public areas. The majority of smokers and non-smokers in China continue to be exposed to cigarette smoke in the workplace, in restaurants and bars, and in the home. There is increasing support among Chinese smokers and non-smokers for smoke-free policies in public places, in some cases matching the level of support of other countries, such as Ireland, prior to implementing successful smoke-free laws.

4. China's text-only health warning labels are not effective.

China's text-only health warnings on 30% of the front and 30% of the back of the pack that were introduced in October 2008 and updated in April 2012 do not meet the standard set by the FCTC Article 11 Guidelines. The ITC China Survey found that the 2008 warnings were very low on all indicators of label effectiveness, compared to other ITC countries. There were substantial increases in label effectiveness following the introduction of large graphic warnings in other ITC countries. In contrast, the introduction of new text warnings in 2008 in China led to no overall increase in effectiveness – the warnings were not salient to smokers, and they did not motivate smokers to quit. An ITC experimental study found that the new text warnings introduced in October 2008 were significantly less effective than graphic warnings implemented in other countries.

5. The low price of cigarettes and existence of less expensive brands prevent smokers from quitting.

Cigarettes in China are highly affordable — few smokers see the price of cigarettes as a reason for quitting. A tax increase in 2009 has not resulted in an increase in retail price, and after adjusting for inflation, the real price of cigarettes has actually decreased from 2007 to 2010. The existence of less expensive cigarettes decreases the likelihood that smokers will quit and increases the likelihood that young people will start smoking.

China People's Congress

Smoking sign in Stone Forest, Yunnan, China

The ITC China Survey findings provide evidence that China has fallen behind other ITC countries in implementing effective measures to protect people from the harms of tobacco. There is an urgent need for strong, evidence-based tobacco control policies to be implemented in China as soon as possible.

6. Smokers are becoming more aware of the harms of smoking, but still lack knowledge of important health effects when compared to other ITC countries.

Knowledge of the harms of smoking has increased among smokers in China since 2006; however, the majority of smokers still lack knowledge of important health effects. For example, Chinese male smokers had the fourth lowest level of awareness among 16 ITC countries that secondhand smoke causes lung cancer in non-smokers. Chinese smokers are also the most likely to believe the myth that 'light/mild' cigarettes are less harmful.

7. Despite bans on direct tobacco advertising, Chinese smokers are heavily exposed to tobacco promotion through event sponsorships, outdoor displays, and entertainment media.

High levels of exposure to tobacco advertising indicate that tobacco advertising and promotion restrictions need to be strengthened and enforced in China. There is strong support among smokers and non-smokers for complete bans on tobacco advertising and promotion.

8. Chinese cigarettes contain elevated levels of heavy metals.

An ITC study found that Chinese cigarettes contained significantly elevated levels of heavy metals, with some containing about 3 times the level of lead, cadmium, and arsenic found in Canadian cigarette brands.

IMPLICATIONS FOR TOBACCO CONTROL IN CHINA

1. Create and implement large pictorial health warnings on cigarette packages.
2. Increase excise taxes and translate tax increases to price increases at the retail level.
3. Set a minimum price for cigarettes to discourage brand switching that occurs when prices increase.
4. Strongly enforce the national smoking ban in public places and implement strict penalties for violations.
5. Design and implement public education campaigns to highlight the harms of tobacco use and motivate quitting.
6. Implement a ban on the sponsorship of events by tobacco companies, promotions at the point of sale, and outdoor advertising.
7. Increase the capacity of the health care system to play a role in promoting cessation.
8. Create a system for independent monitoring and testing of tobacco products.

ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

THE TOBACCO LANDSCAPE IN CHINA

This section provides a brief overview of tobacco use and tobacco policies in China at the time the ITC China Wave 1 to Wave 3 Surveys were conducted (April 2006 to October 2009). China ratified the Framework Convention on Tobacco Control (FCTC) in August 2005. In March 2011, the Chinese Ministry of Health announced a national ban on smoking in indoor public places, which came into effect on May 1, 2011. The ban included parks, hotels, theatres, museums, and restaurants, but not all workplaces. However, the law did not include details on penalties and enforcement, and it is still unclear what effect the ban will have on smoking rates. China's long history of pro-tobacco culture, strong resistance from the powerful tobacco industry, and poor enforcement have created a challenging environment in which to make tobacco control policy advancements.

Smoking Prevalence

China has the largest smoking population in the world. With over 300 million smokers, China accounts for about 30% of the world's smokers.[2] The health burden from tobacco use in China is significant – an estimated more than 1 million deaths occur from smoking in China each year, and this figure is projected to triple in the next 50 years. Overall, as many as 100 million Chinese smokers currently under the age of 30 are projected to die from smoking.[3] More than 70% of the Chinese population, or over 740 million people, are regularly exposed to secondhand smoke.[4]

The Chinese National Health Services Survey found that the cost of smoking in China was $29 billion (USD) in 2008, which is equivalent to 0.7% of China's GDP. The direct healthcare cost of smoking was estimated at $6.2 billion. Nearly 9% of all deaths in 2008 were attributable to smoking, and two-thirds of those deaths were caused by cancer.[5] The study suggests that the increasing economic burden of smoking is connected to China's rapid economic growth.

In addition to the fact that many smokers in China are young, the overall quit rates in China, expressed as a proportion of ever smokers who are former smokers, remain low: in 1998, the rate of quitting was 10.1%; in 2008 it was 8.6%.[5] Therefore, the demographic composition of smoking combined with the lack of interest in quitting will elevate the burden of tobacco use in China to levels far above the heavy burden that is currently being experienced.

There is also a dramatic gender difference in smoking prevalence. The Global Adult Tobacco Survey (GATS), conducted in 2010, estimated that 52.9% of males and 2.4% of females currently smoke in China.[6] The country's smoking culture imposes strong social pressure on men to smoke. However, the potential exists for smoking among women to increase as well. According to Hitchman and Fong (2011), as empowerment among women increases, the gap in smoking rates between males and females decreases.[7] In addition, if the tobacco industry begins to target female smokers, it is expected that smoking among females will become more socially acceptable over time.[8] Indeed, the ITC Survey has found that China has among the lowest rates of social disapproval of smoking – at Wave 3, just over half (53%) of smokers reported that Chinese society disapproves of smoking. Based on ITC cross-country analyses, China has the second lowest rate of perceived societal disapproval for smoking among 19 ITC countries. If smoking rates among women increase as empowerment increases, then the magnitude of the costs of tobacco use in China will grow even higher than the existing projections.

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China's long history of pro-tobacco culture, strong resistance from the powerful tobacco industry, and poor enforcement have created a challenging environment for creating strong tobacco control policies.

A billboard on a highway, Yunnan, China

Tobacco Control Policies

China signed the WHO Framework Convention on Tobacco Control (FCTC) in 2003 and ratified the treaty in 2005. The FCTC, the world's first public health treaty, addresses the global tobacco epidemic through a variety of measures to reduce tobacco demand and supply, including price and taxation (Article 6), exposure to tobacco smoke (Article 8), packaging and labelling of tobacco products (Article 11), tobacco advertising and sponsorship (Article 13), and cessation and treatment (Article 14). With 176 Parties as of August 2012, the FCTC is one of the most successful treaties ever established. Despite having ratified the FCTC, China has been slow to adopt strong tobacco control policies as recommended in FCTC Guidelines established to assist Parties in best practice implementation of their treaty obligations.

Strong implementation of the FCTC has been hampered by structural challenges and deep-rooted institutional barriers. Addressing these barriers however, offers an immense opportunity to change the course of the tobacco epidemic in China and around the world.[9]

Pricing and Taxation

Increasing taxes on tobacco products is considered to be one of the most effective components of a comprehensive tobacco control strategy, particularly among young people. Article 6 of the FCTC obligates countries that have ratified the treaty to adopt pricing and taxation measures that reduce tobacco consumption, such as higher retail prices on cigarettes.

As the largest producer of tobacco in the world, China produces over 31% of the world's cigarettes.[10] Since 1990, cigarettes have become more than twice as affordable in China.[11] The government-owned tobacco monopoly, the China National Tobacco Company (CNTC) and the State Tobacco Monopoly Administration (STMA), controls 90-97% of the cigarette market in China.

In May 2009, the Chinese government readjusted its cigarette product tax structure to increase the ad valorem tax, but the specific excise tax of 0.06 RMB per pack remained unchanged. However, the retail prices of cigarettes have remained stable since the adjustment of the tobacco tax in May 2009.[12, 13] By definition, an increase in tax cannot influence consumer behaviour unless the tax increase is reflected in the consumer price. Thus, this most important tobacco control policy has not yet been implemented in China in a way that would lead to decreases in smoking.

With 176 Parties as of August 2012, the FCTC is one of the most successful treaties ever established. Despite having ratified the FCTC, however, China has been slow to adopt strong tobacco control policies as recommended in FCTC Guidelines.

ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

Smoke-Free Policies

Article 8 requires the adoption of effective measures to achieve 100% smoke-free environments in indoor workplaces and indoor public places. According to the GATS (2010), 7 in 10 non-smoking adults were exposed to secondhand smoke in a typical week and 6 in 10 noticed smoking at the workplace.[14] Chinese municipalities have taken the lead on enacting smoke-free legislation in public places. Several major cities, including all of the seven cities where the ITC China Survey was conducted had smoke-free laws in public places before 2006 and all seven cities banned or restricted smoking in schools. Before the 2008 Olympic Games, Beijing enacted smoking bans in 10 types of public places, including medical institutions, childcare centres, transport stations, cultural sites, and sporting venues, with fines of up to RMB 5,000 ($730 USD) for violations. Similar bans were implemented in Shanghai for the 2010 World Expo and in Guangzhou for the 2010 Asian Games, where smoking was banned in 12 types of public places.

On May 31, 2012, comprehensive smoke-free laws were implemented in Harbin, a city of more than 10 million residents, and Tianjin, a city of more than 12 million. The law in Harbin bans smoking in all indoor public places, indoor workplaces, and public transport. Tianjin's ban covers indoor public places and workplaces, including all government office buildings. Restaurants and discos are required to either set up separately ventilated smoking rooms or establish 100% smoke-free indoor environments.

One important barrier to effective smoke-free laws has been enforcement. Often, violations do not result in punishment. In Hangzhou, however, collected fines for violation of the smoke-free law totalled more than RMB 40,000 in one year, among the highest in China.

A poster by Shenyang Institute of Health Education - everyone has the right to breathe clean air - say no to secondhand smoke.

In Nanchang, legislation to ban smoking in 11 categories of public places starting in 2013 has been shelved after undergoing a second reading by Nanchang Municipal People's Congress in December 2010.[15] However, in March 2011, the Ministry of Health released a new national policy which banned smoking in many public places as of May 1, 2011. This was a very important step for China in meeting Article 8 requirements of the FCTC.

Warning Labels

Article 11 of the FCTC stipulates that Parties shall adopt and implement effective packaging and labelling measures. More rigorous Article 11 Guidelines adopted in 2008 state that the Parties should implement rotating graphic warnings that cover at least 50% of the principal display areas of the package (i.e., both the front and back).

Until October 2008, China's health warning labels were small and positioned on the side of the pack with only one message: "smoking is harmful to your health". In October 2008, larger text warnings were introduced on 30% of the front and 30% of the back of the pack. The warnings were positioned at the bottom of the package and consisted of two general messages: "smoking is harmful to your health" and "quit smoking reduces health risk". The message on the back of the packages was printed entirely in English. These revised labels do not meet the standard set by the FCTC Article 11 Guidelines. In August 2011, the China National Tobacco Corporation (CNTC) announced new changes to be implemented on cigarette warning labels. In April 2012, cigarette packs produced and sold in China were required to bear new text warning labels with lettering that is twice the size (no less than 4 millimeters in height) of the previous text warnings. In addition, the English language warning labels on the back of the pack was changed to Chinese. The overall label size remains unchanged. Without the requirement for graphic warnings, China's warning labels will still not meet the minimum FCTC standards. An ITC experimental study in China has demonstrated that pictorial warnings are perceived as more effective in motivating smokers to quit and in convincing youth not to start smoking.[47]

Light/Mild Product Descriptions

Article 11 of the FCTC also restricts deceptive tobacco product labelling that "directly or indirectly creates the false impression that a particular product is less harmful than other tobacco products". These may include terms such as 'low tar', 'light', 'ultra-light', or 'mild'. In 2010, the GATS found that 86% of the Chinese people have misperceptions about 'low tar' and 'low harm', especially among the well-educated groups, such as medical professionals and teachers.[14] As the public becomes more aware of the health risks of smoking, it is anticipated that the market share of lower tar brands will increase.

Children exposed to cigarettes at point of sale, Shanghai, China

Education, Communication, Training, and Public Awareness

Under Article 12, Parties must promote and strengthen public awareness of tobacco control issues through education and public awareness programs on the health risks of tobacco consumption and the benefits of cessation, and provide public access to information on the tobacco industry.

Few efforts have been made to increase public awareness on the dangers of smoking in China. According to the GATS (2010), only 23% of adults believe that smoking causes stroke, heart attack, and lung cancer.[14] Health warnings on cigarette packages are vague, and there is little published information about the level of health knowledge about smoking. An obstacle in increasing public awareness of smoking risks is the deeply ingrained smoking culture in China. For example, a 2004 study found that 23% of all Chinese physicians smoke.[17] It is also acceptable, and indeed, common, to give cigarettes as gifts in China, a tradition that extends to giving cigarettes to guests at weddings. In 2009 and 2010, the World Lung Foundation ran the national "Giving cigarettes is giving harm" media campaign in 11 cities in order to educate the public about the harmful consequences of giving cigarettes as gifts to family, friends, and colleagues.

Advertising, Promotion, and Sponsorship

Article 13 of the FCTC requires Parties to implement effective measures against tobacco advertising, promotion, and sponsorship. Guidelines for Article 13 recommend a comprehensive ban on tobacco advertising, promotion, and sponsorship (or apply restrictions that are as comprehensive as possible). Included among the recommended measures are bans on cross-border advertising, promotion, and sponsorship; display of tobacco products at points of sale; tobacco product vending machines; internet sales; and attractive packaging and product features.

The advertisement of tobacco products in China is regulated by the 1991 Tobacco Products Monopoly Law and the 1994 Advertisement Law, which ban direct tobacco advertisements in television, radio, newspapers, and periodicals. However, tobacco companies have easily maintained a visible marketing presence through sponsorships and promotions using outdoor displays and internet advertisements.[18] As a result, the public is exposed to high levels of both direct and indirect forms of tobacco advertising. The WHO FCTC requires China to ban all forms of tobacco advertisement and promotion by 2011. In February 2011, the State Administration of Radio, Film, and Television ordered producers to minimize the amount of smoking depicted on-screen.[19]

Cessation and Treatment

Article 14 of the FCTC promotes the implementation of programs for smoking cessation, including programs for diagnosing, counselling, preventing, and treating tobacco dependence, as well as facilitating accessible and affordable treatments.

Few cessation programs exist in China, and few studies have examined factors associated with quitting among Chinese smokers. Although physicians' advice is a powerful motivator to encourage quitting, only 64% of physicians in China offer cessation advice to smoking patients.[17] "Quit-and-Win" campaigns began in China in 1996. By 2006, the Chinese International Quit-and-Win competition had expanded to 31 provinces with approximately 130,000 smokers participating.[20] Cessation clinics and quitlines are available in several cities, such as the quitline at the Beijing Chaoyang Hospital. Nicotine replacement therapy has also recently become available, although it is not subsidized.[21]

METHODS

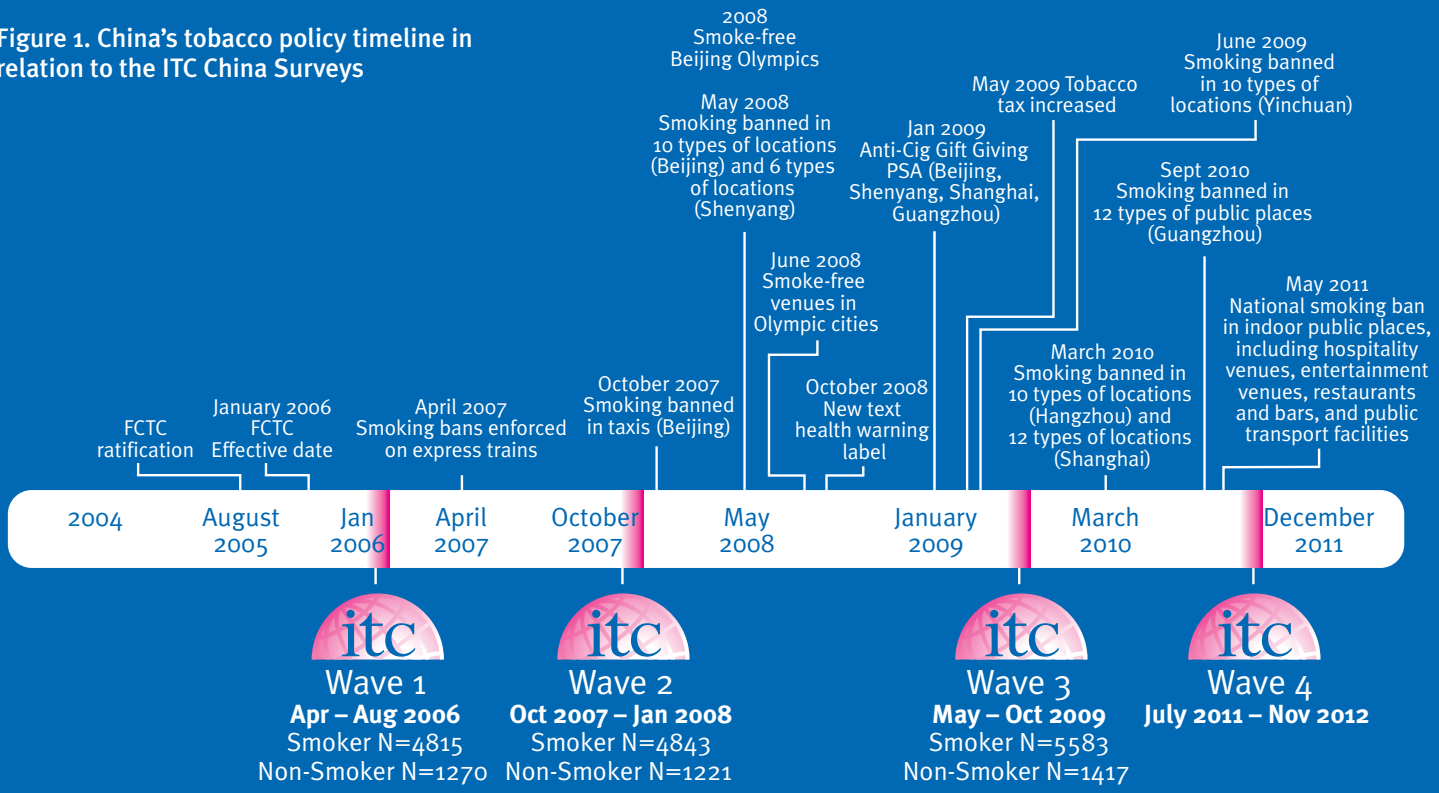
OVERVIEW

The International Tobacco Control Policy Evaluation Project (the ITC Project) is an international research collaboration across more than 20 countries – Canada, United States, United Kingdom, Australia, Ireland, Thailand, Malaysia, Republic of Korea, China, Mexico, Uruguay, New Zealand, France, Germany, the Netherlands, Bhutan, Mauritius, Brazil, India, Bangladesh, Kenya, and Zambia. The primary objective of the ITC Project is to conduct rigorous evaluation of the psychosocial and behavioural effects of national-level tobacco control policies of the WHO FCTC. Each ITC Survey includes key measures for each FCTC policy domain that are identical or functionally similar across ITC countries to facilitate cross-country comparisons. The evaluation studies conducted from the ITC Surveys take advantage of natural experiments created when an ITC country implements a policy: changes in policy-relevant variables in that country from pre- to post-policy survey waves are compared to other ITC countries where that policy has not changed. This research design provides high levels of internal validity, allowing more confident judgments regarding the possible causal impact of the policy. For a description of the conceptual model and objectives of the ITC Project, see Fong et al. (2006)[22]; for a description of the survey methods, see Thompson et al. (2006).[23]

The International Tobacco Control Policy Evaluation Project in China (the ITC China Project) was created in 2006 as a system for evaluating the psychosocial and behavioural effects of tobacco control legislation in China, using methods that the ITC Project has employed in many other countries. The project objective is to provide an evidence base to guide policies enacted under the FCTC and to systematically evaluate the effectiveness of these legislative efforts. As with all ITC surveys, the ITC China Survey was tailored for the tobacco control environment in the country and therefore included questions that were unique to China. For example, the Wave 1 to 3 Surveys (for both smokers and non-smokers) included a set of questions on the International Quit-and-Win Competition. The Wave 2 Survey for smokers included questions on alcohol consumption. The Wave 3 Survey for smokers included questions on cigarette gifting. Figure 1 illustrates the timeline of the ITC China Surveys in relation to the implementation of tobacco control policies and related initiatives.

Each ITC Survey includes key measures for each FCTC policy domain that are identical or functionally similar across ITC countries to facilitate cross-country comparisons.

Figure 1. China's tobacco policy timeline in relation to the ITC China Surveys

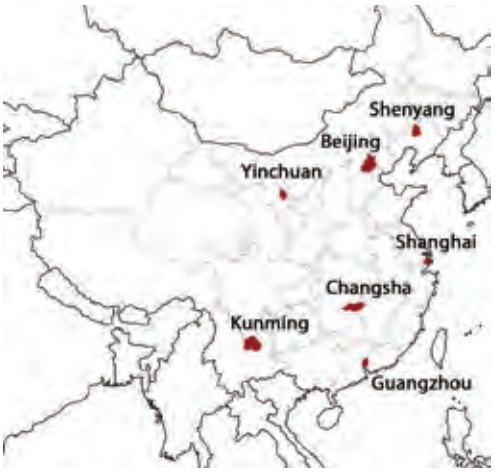


Sampling Design

The ITC China Survey is a prospective longitudinal study of smokers and non-smokers in China that uses a face-to-face survey mode to collect data from respondents. A more detailed description of the methods of the ITC China Survey can be found in Wu et al.[24] and the Waves 1, 2, and 3 ITC China Project technical reports.[25, 26, 27]

The Wave 1 Survey used a multistage cluster sampling method to obtain a representative sample of adult smokers and adult non-smokers who were registered residents in the seven cities (Figure 2). In each of the seven cities, the China team selected 10 *Jie Dao* or Street Districts, with the probability of selection proportional to the population size of the Jie Dao. In each of the Jie Dao selected, two residential blocks or *Ju Wei Hui* were further selected. From each Ju Wei Hui, a sample of 300 addresses was drawn by simple random sampling without replacement. The enumerated 300 households within each Ju Wei Hui were then randomly ordered, and adult smokers and non-smokers were approached until 40 adult smokers and 10 adult non-smokers were surveyed. Because of low smoking prevalence among women, one female smoker from every selected household was surveyed whenever possible in order to increase the number of female smokers in the sample. As in other ITC surveys, respondents who were lost to follow-up in subsequent survey waves were replaced by randomly selected respondents from the population (the replenishment sample) based on the same sampling design as Wave 1.

Figure 2. Location of ITC China Survey



Characteristics of the Sample

Survey fieldwork in all cities except for Kunming was conducted by survey interviewers from the National CDC and local CDCs. In Kunming, the survey was conducted by the Yunnan Institute of Health Education. Smokers were defined as having smoked more than 100 cigarettes in their lifetime and are currently smoking at least once a week. Table 1 provides the sample sizes of smokers and non-smokers in each city where the ITC China Survey was conducted. Tables 2 to 4 summarize the demographic characteristics of the adult cohort (aged 18 and older) in the Wave 1, 2, and 3 Survey samples.

Table 1. ITC China Wave 1-3 Survey sample sizes in each city

	Wave 1 (n=6,001)		Wave 2 (n=6,064)		Wave 3 (n=7,000)	
	Smokers	Non-Smokers	Smokers	Non-Smokers	Smokers	Non-Smokers
Beijing	785	219	801	218	802	217
Shenyang	781	200	799	198	788	199
Shanghai	784	204	803	204	784	204
Changsha	800	205	795	185	772	204
Guangzhou	791	226	833	211	829	206
Yinchuan	791	215	812	205	808	192
Kunming	-	-	-	-	800	195
Total	4,732	1,269	4,843	1,221	5,583	1,417

Table 2. Demographic characteristics of the ITC China Wave 1 smokers and non-smokers

	Wave 1 Smokers (n=4,732)		Wave 1 Non-Smokers (n=1,269)	
	N	%	N	%
Sex				
Female	231	4.9	515	40.6
Male	4501	95.1	754	59.4
Age (years)				
18-24	56	1.2	54	4.3
25-39	792	16.7	258	20.3
40-54	2314	48.9	509	40.1
55+	1570	33.2	448	35.3
Gross Income (RMB)				
<1000	925	21.1	238	20.3
1000-2999	2132	48.6	594	50.6
3000-4999	860	19.6	237	20.2
5000-6999	299	6.8	71	6.0
7000-8999	84	1.9	19	1.6
9,000 or above	89	2.0	16	1.4
Education				
No education	152	3.2	44	3.5
Elementary school	468	9.9	108	8.5
Junior high school	1505	31.8	325	25.6
High school, some technical school	1593	33.7	426	33.6
College	586	12.4	230	18.1
University or higher	423	9.0	136	10.7

ITC China Project team, October 2009, Shantou University, China

Table 3. Demographic characteristics of the ITC China Wave 2 smokers and non-smokers

	Wave 2 Smokers (n=4,843)		Wave 2 Non-Smokers (n=1,221)	
	N	%	N	%
Sex				
Female	254	5.2	477	39.1
Male	4589	94.8	744	60.9
Age (years)				
18-24	46	1.0	48	3.9
25-39	766	15.8	238	19.5
40-54	2352	48.6	489	40.1
55+	1679	34.7	446	36.5
Gross Income (RMB)				
<1000	794	17.6	173	15.1
1000-2999	2199	48.7	611	53.3
3000-4999	977	21.6	247	21.6
5000-6999	357	7.9	76	6.6
7000-8999	80	1.8	21	1.8
9000 or above	110	2.4	18	1.6
Education				
No education	155	3.2	37	3.1
Elementary school	433	9.0	106	8.7
Junior high school	1515	31.5	305	25.1
High school, some technical school	1685	35.0	438	36.1
College	627	13.0	205	16.9
University or higher	398	8.3	122	10.1

Table 4. Demographic characteristics of the ITC China Wave 3 smokers and non-smokers

	Wave 3 Smokers (n=5,583)		Wave 3 Non-Smokers (n=1,417)	
	N	%	N	%
Sex				
Female	297	5.3	547	38.6
Male	5286	94.7	870	61.4
Age (years)				
18-24	95	1.7	64	4.5
25-39	1038	18.6	291	20.5
40-54	2566	46.0	515	36.3
55+	1884	33.8	547	38.6
Gross Income (RMB)				
<1000	549	10.4	115	8.5
1000-2999	2133	40.6	587	43.3
3000-4999	1584	30.1	440	32.5
5000-6999	617	11.7	161	11.9
7000-8999	186	3.5	26	1.9
9000 or above	188	3.6	25	1.9
Education				
No education	170	3.1	39	2.8
Elementary school	491	8.8	125	8.9
Junior high school	1655	29.7	336	24.0
High school, some technical school	1888	33.9	492	35.1
College	793	14.3	237	16.9
University or higher	567	10.2	173	12.3

The ITC China Survey is a prospective longitudinal study of smokers and non-smokers in China that uses a face-to-face survey mode to collect data from respondents. Eligible respondents in each of the seven cities included adult smokers and non-smokers 18 years of age and older.

Content of the ITC China Survey

The ITC China Survey was developed by an international team of tobacco control researchers from the University of Waterloo, the Office of Tobacco Control (China CDC), The Cancer Council of Victoria, Roswell Park Cancer Institute, and The State University of New York at Buffalo (Waves 1 and 2). Most of the survey methods and survey questions have been taken from the standardized protocols used in ITC surveys conducted in more than 20 other countries around the world, beginning in 2002. In the ITC China Survey, each respondent who was categorized as a smoker was asked to respond to the following types of questions:

Smokers responded to questions on:

1. **Smoking Behaviour and Cessation.** Smoking history and frequency, as well as current smoking behaviour and dependence, and quitting behaviours;
2. **Knowledge and Basic Beliefs About Smoking.** Knowledge of the health effects of smoking and important beliefs relevant to smoking and quitting, perceived risk and perceived severity of tobacco-related diseases;
3. **Tobacco Control Policies.** Awareness of, impact of, and beliefs relevant for each of the FCTC demand reduction policy domains (warning labels, price/taxation, advertising/promotion, smoke-free bans, light/mild descriptors);
4. **Other Important Psychosocial Predictors.** Smoking behaviour and potential moderator variables such as attitudes, normative beliefs, self-efficacy, and intentions to quit;
5. **Individual Difference Variables Relevant to Smoking** (e.g., depression, stress, time perspective);
6. **Demographics** (e.g., age, gender, marital status, education, occupation).

Respondents who were categorized as non-smokers were asked to respond to similar survey items, with the exception of the smoking- and cessation-relevant questions. The ITC China Survey was first developed in English and translated into the Chinese language in order for the face-to-face interview to be conducted in the appropriate language. The interview took approximately 30 to 40 minutes to complete for adult smokers and approximately 15 minutes for non-smokers. Full copies of the questionnaire are available on the ITC Project website at www.itcproject.org.

Analytic Approach

This report presents findings from Waves 1 to 3 of the ITC China Survey (2006-2009). The focus of this report is to inform tobacco control policy development by evaluating the effectiveness of policies as they are implemented in China over time. Comparisons with other ITC countries are also drawn. This section describes the analytic approach used in this report, including methods used to control for time-in-sample effects and the covariates used in the survey logistic model.

Time-in-sample effects

The longitudinal nature of the ITC China Survey allows for the measurement of behavioural responses to tobacco control policies among smokers in China before and after a new policy is introduced. During the 3 years that the ITC China Wave 1 to 3 Surveys were conducted, respondents were lost to attrition, as they are in any longitudinal cohort study. In order to maintain a sufficient sample size, new respondents were recruited at Waves 2 and 3 to replace the Wave 1 and Wave 2 respondents that were not successfully interviewed. Therefore, at Wave 2 and Wave 3, the total set of respondents consists of individuals with different levels of prior participation in the ITC Survey. For example, the Wave 3 sample of respondents consists of 3142 smokers and quitters who have participated in all 3 survey waves, 783 smokers and quitters who have participated in 2 survey waves (either Wave 2 and Wave 3 or Wave 1 and Wave 3), and 1660 smokers who have participated in 1 survey wave (those who were newly recruited in Wave 3). The composition of the sample is important because responses to survey questions have been shown to vary systematically as a function of the number of times that a respondent has completed the ITC Survey. Newly recruited respondents may vary in their responses compared to those with one prior wave, who may vary from those with two prior waves, and so on.

These documented effects are known as "time-in-sample" (TIS) effects[28, 29, 30] and have been found in the ITC Surveys in other countries as well.[31] The analytic methods described next provide adjustments for time-in-sample and some other potentially confounding effects.

Analytic methods

In order to assess temporal changes in policy relevant measures, data from all three waves of the ITC China Survey are used, unless otherwise stated. Quitters are only included in the analysis where the measure of interest is especially relevant for quitters. The analytic data set for smokers in Waves 1 to 3 is based on 7375 unique smokers and has a total of 14567 observations. Among these 14567 observations, 4732 are from Wave 1 smokers, 4626 are from Wave 2 smokers, and 5209 are from Wave 3 smokers.

If the same questions are asked in multiple waves and an outcome of interest is categorical then a complex survey logistic regression analysis is used to estimate standardized or adjusted values of the descriptive statistics (proportions) over time. Variables such as sex, age group, smoking status, wave, and time-in-sample (the number of times a respondent has participated in the survey, a time-varying quantity over time) were included in the model as covariates, and the measure of interest is used as the response variable. The sampling design was taken into account in the analysis and all estimates were weighted using the sampling weights so that results are representative of smokers in the sampled cities. Based on the estimated logistic regression models, adjusted percentages of response variables can be calculated using the parameter estimates from the regression model, assuming the overall distributions of the covariates in the data combined across all waves. This approach is called a logistic regression adjustment for descriptive statistics. Similarly, if the measure of interest is continuous, a complex survey linear regression model is used for adjustment. It should be noted that the resulting predicted means (percentages) depend on the set of covariates chosen for the model. Since time-in-sample has the largest impact on adjustments, the estimates are referred to as "adjusted for time-in-sample". SAS 9.2 is used to calculate both adjusted and unadjusted means.

In cross-country comparisons, since the country samples vary in their composition, the same kind of adjustment is applied. Multi-country comparisons control for differences in age, smoking status, and time-in-sample. Since the distribution of female smokers varies widely across countries, multi-country comparisons are based on male smokers only.

FINDINGS

SMOKING BEHAVIOUR

With over 300 million smokers, China has the largest smoking population in the world. According to the GATS (2010), the smoking rate of people aged 15 or older in China is 28.1% (52.9% of men and 2.4% of women).[6] The ITC China Survey includes a number of measures to assess smokers' consumption of tobacco products, attitudes, and beliefs concerning smoking.

Daily Cigarette Consumption

The ITC China Survey found that 96% of smokers at Wave 3 (96% of males and 91% of females) were daily smokers—the second-highest percentage of daily smokers among 19 ITC countries.

At Wave 3, adult male daily smokers in China smoked an average of 17 cigarettes per day. Based on cross-country comparison analyses, Chinese male smokers have the third highest average daily cigarette consumption among male smokers in 8 low- and middle-income countries (Figure 3). Smokers in Changsha smoked significantly more cigarettes per day on average (22) compared to smokers in the other 6 cities surveyed: Guangzhou (19), Shanghai (18), Yinchuan (17), Beijing (16), Kunming (17), and Shenyang (16).

Types of Cigarettes

Compared to other ITC countries, China has a high prevalence of factory-made cigarette smoking and low prevalence of roll-your-own tobacco use (Figure 4). At Wave 3, 92% of smokers smoked only factory-made cigarettes; 8% smoked both factory-made and roll-your-own cigarettes, and 1% smoked only roll-your-owns. At Wave 3, 4% of smokers said they had used other tobacco products besides cigarettes in the past month. In addition, 8% of Chinese smokers who had heard of e-cigarettes had tried one. Among all Chinese smokers, only 2% had ever smoked an e-cigarette.

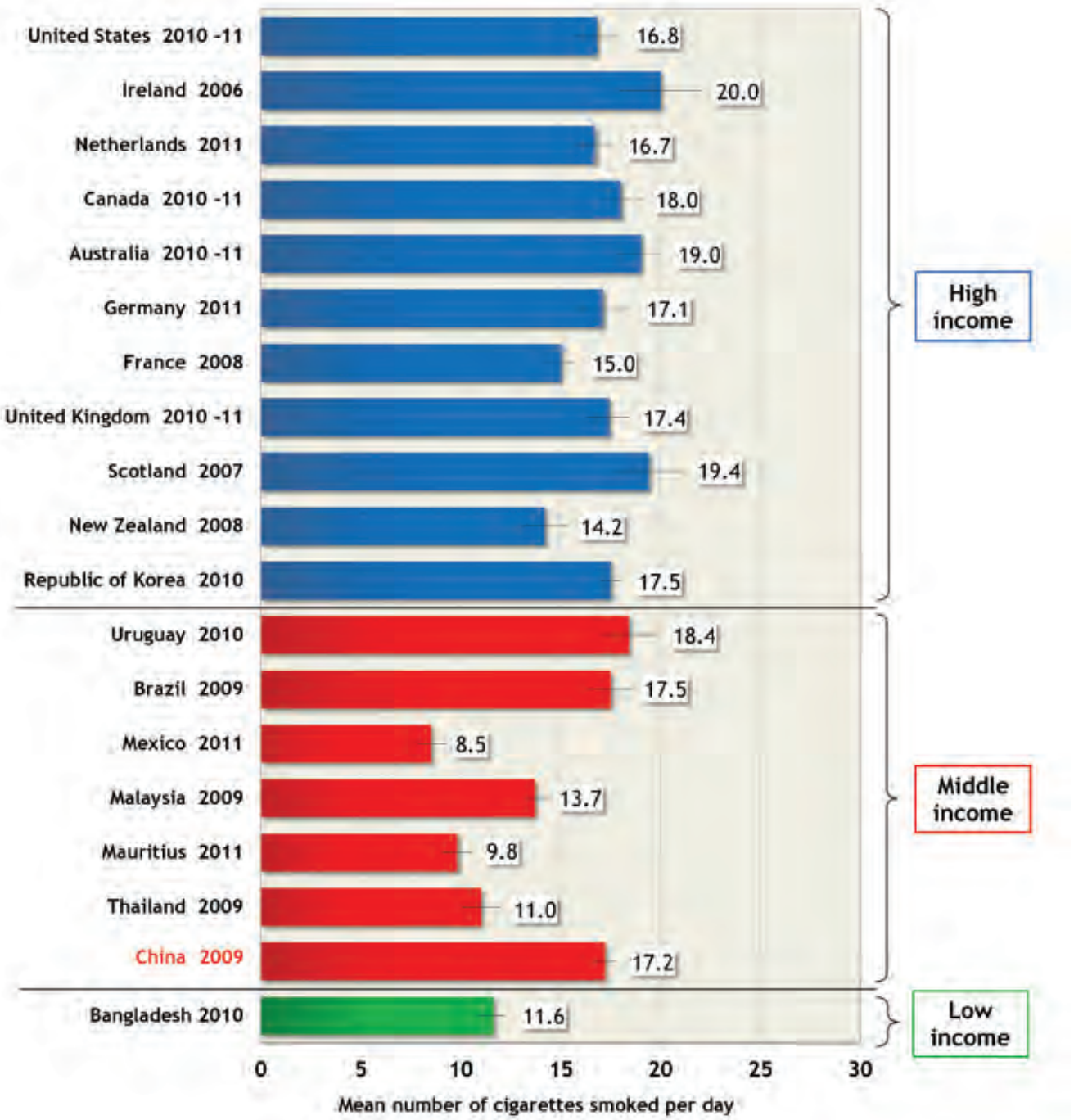
Addiction and Perceived Addiction

Cigarettes are known to be highly addictive. In fact, a warning label in Canada states that "Studies have shown that tobacco can be harder to quit than heroin or cocaine."

A commonly accepted measure of dependence/addiction is the amount of time after waking before a smoker has his/her first cigarette of the day—the shorter the time period, the greater the level of addiction. At Wave 3, 29% of smokers reported having their first cigarette within 5 minutes after waking, indicating the highest level of addiction. This percentage is higher than in the United States (25%), Canada (22%), and Thailand (22%), showing that Chinese smokers may be more dependent on cigarettes than smokers in these other countries.

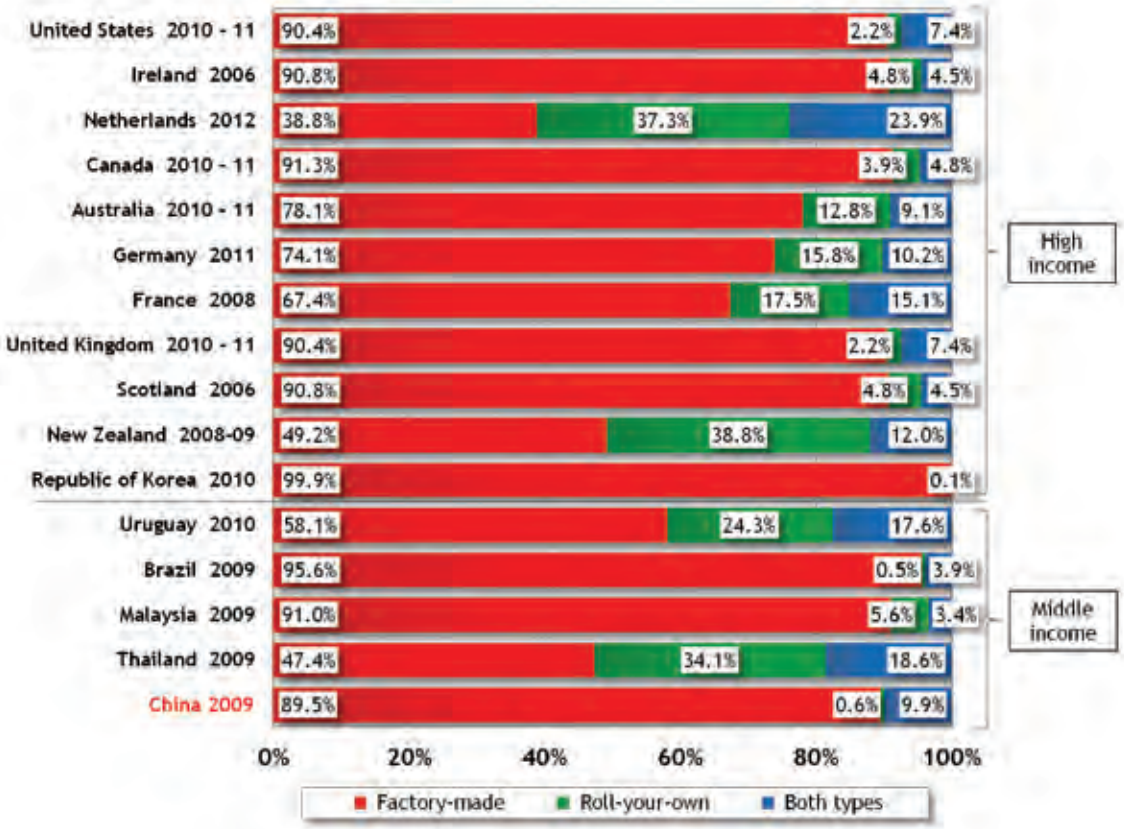
The ITC China Survey also included the following question to measure perceived addiction: 'Do you consider yourself addicted to cigarettes?' At Wave 3, only 8% of Chinese smokers said that they were addicted to cigarettes 'a lot.' ITC cross-country comparison analyses indicate that perceived addiction is much lower in China compared to other ITC countries. For example, in 2010, 69% of smokers in Canada and 62% of smokers in the United States reported that they consider themselves to be 'very addicted' to cigarettes. This percentage was 38% in the Republic of Korea (2010) and 28% in Thailand (2009). These findings may have implications for quitting – see the Smoking Cessation section of this Report.

Figure 3. Mean number of cigarettes smoked per day by male daily smokers, by country



Although daily cigarette consumption is high among Chinese male daily smokers, perceived addiction to cigarettes is low. Only 8% of Chinese male smokers said they were addicted to smoking 'a lot' - the lowest percentage of 19 ITC countries.

Figure 4. Percentage of male smokers who smoke factory made, roll-your-own, or both types of cigarettes, by country



Smokers' Opinions of Smoking

Approximately half of Chinese smokers have a negative opinion of smoking. At Wave 3, just over half (55%) of smokers felt that smoking was 'bad' or 'very bad'. ITC cross-country comparison analyses show that male smokers in China have the 11th highest rate of negative opinions of smoking among 19 ITC countries. More than one-third (39%) of smokers felt that smoking was 'neither good nor bad', and a minority (6%) said that smoking was 'good' or 'very good'.

Perceived Norms about Smoking

Norms are known to be an important determinant of the onset of smoking as well as a determinant of quitting among smokers. The ITC China Survey asks smokers to give their perceptions of two kinds of norms: (1) societal norms: 'Chinese society disapproves of smoking', and (2) important people norms: 'People who are important to you think you should not smoke.' Responses to both questions are the level of agreement with each statement.

Findings from the ITC China Survey demonstrate that societal norms appear to be more supportive of continued smoking, but results for important others norms show that the majority of smokers in China believe that important others disapprove of their smoking (which is similar to other ITC countries). At Wave 3, more than half (53%) of smokers believed that Chinese society disapproves of smoking. ITC cross-country comparison analyses show that perceived societal disapproval of smoking is much lower in China than it is in other high- and middle-income countries including Canada (84%), the United States (79%), and Thailand (80%). With respect to the important people norm, the vast majority (85%) of Chinese smokers 'strongly agreed' or 'agreed' that people important to them (such as friends and family) thought they should not smoke. ITC cross-country comparison analyses indicate that male Chinese smokers are just as likely to report that friends and family disapprove of their smoking in comparison to male smokers in other ITC countries such as Canada (86%), Australia (83%), and Uruguay (86%).

Thus, the perceptions of Chinese smokers of Chinese society are favourable to continued smoking and less favourable to quitting than they are in other countries. These findings point to the need to engage in information and educational campaigns to change norms about tobacco in China by making smoking less socially acceptable. Such campaigns have been highly successful in other countries, for example in Australia, the United States, and Canada, for denormalizing cigarette use, and it is possible that such campaigns could be effective in China as well.

Perception of Health Damage

At Wave 3, 68% smokers said that smoking had damaged their health 'a little' or 'very much'. In contrast, 32% said that smoking has 'not at all' damaged their health. Similarly, when asked if they were worried that smoking will damage their health in the future, 70% of smokers said 'a little' or 'very much', while 30% said they were 'not at all' worried.

Regret of Smoking

Regret of smoking is an important factor in understanding smoking behaviour. One common argument that is given against tobacco control is that smokers are simply doing what they like to do and that they understand the risks, and have decided to continue to smoke. However, an ITC study of smokers in Canada, United States, United Kingdom, and Australia found that about 90% of smokers regret having started smoking: they stated that if they were to live their life over again, they would NOT have started smoking – a finding that contrasts with the tobacco industry's efforts to associate smoking with positive benefits.[32] In addition, regret is related to quit intentions. Thus, regret stands as an important indicator both of smokers' overall assessment of whether smoking "is worth it" and as a predictor of future quitting.

The ITC China Survey asked smokers whether they would NOT have started smoking if they had to do it all over again. Among smokers who participated in all three waves, 76% at Wave 1, 77% at Wave 2, and 79% at Wave 3 said they 'agree' or 'strongly agree' that they would not have started smoking if they had to do it over again. These findings demonstrate that the vast majority of Chinese smokers do indeed regret smoking, contrary to the argument that smokers are just doing what they like to do. The fact that the level of regret is lower in China also points to the importance of increasing tobacco control efforts to increase regret in China, which, as mentioned above, is linked to motivating future quitting.

Smoking Behaviour: Summary and Recommendations

- The high prevalence of smoking in China presents a challenge to tobacco control, not only because of the enormous number of smokers (over 300 million) but because the norms of Chinese society currently are more favourable to smoking than they are in other countries.
- A higher percentage of smokers in China show a high level of addiction/dependence on cigarettes compared to smokers in other countries, and yet the perceived level of addiction is significantly lower than smokers in those same countries. This reluctance to identify oneself as being addicted is likely culturally based, but whatever the source, may pose an additional challenge to tobacco control in China.
- Perceived societal norms about smoking are less negative in China than they are in other countries. Because norms are related to one's own attitudes and motivations, these findings suggest that the social and cultural environment are less motivating for smokers to think about quitting, and likely more motivating for non-smokers (especially youth) to start smoking.
- Over two-thirds of smokers report that smoking has already damaged their health, and over two-thirds are worried that smoking will damage their health in the future. Moreover, more than three-quarters of smokers regret ever having started smoking. This high level of concern about current and future health effects suggests that Chinese smokers may be receptive to education and cessation campaign messages focused on the negative health impacts of continued smoking and the short- and long-term benefits of quitting.
- China has made a strong commitment to tobacco control with the ratification of the FCTC, but implementation of the FCTC must progress more quickly and policies that are created to fulfill China's obligation as an FCTC party must be those that have been demonstrated to be effective.
- Of particular importance would be interventions and policies designed to increase knowledge about the harms of tobacco use and to make the societal norms more negative. Such interventions would be the foundation for smokers themselves to increase their motivation for quitting and to create a social environment that would deter the uptake of smoking among non-smokers (especially youth).

SMOKING CESSATION

Article 14 of the WHO Framework Convention on Tobacco Control (FCTC) requires Parties to "include diagnosis and treatment of tobacco dependence and counselling services on cessation of tobacco use in national health and education programmes, plans and strategies" and to take "effective measures to promote cessation of tobacco use and adequate treatment for tobacco dependence." Such measures include mass communication and education programs, integrating brief advice to quit into health-care systems, establishment of quitlines, and providing accessible and affordable medications to help smokers quit.

The ITC China Survey includes a broad set of questions to assess cognitive, motivational, and behavioural factors known to be related to quitting, including intentions to quit, self-efficacy for quitting, outcome expectancy of quitting, past quitting history, and use of assistance for quitting.

As reported in the Smoking Behaviour section, despite the finding that Chinese smokers are highly addicted to cigarettes, with 29% of smokers at Wave 3 reporting having their first cigarette within 5 minutes after waking, Chinese smokers generally do not consider themselves to be addicted to cigarettes. The difference between the physical signs of addiction/dependence and perceptions of addiction/dependence is potentially an important one. Although these findings need to be followed up with additional analyses, this may have implications for quitting: Chinese smokers may be reluctant to seek assistance to help them quit, despite the fact that they may need assistance to a greater extent than smokers in other countries.

No smoking poster

Smokers Who Quit Smoking

At the time of the ITC China Wave 3 Survey, 244 smokers (7%) who had participated at Wave 2 had quit smoking. Of the total sample of quitters at Wave 3, 94% were male and 6% were female. The majority of the smokers who had quit (86%) were aged 40 or older.

Quit Attempts

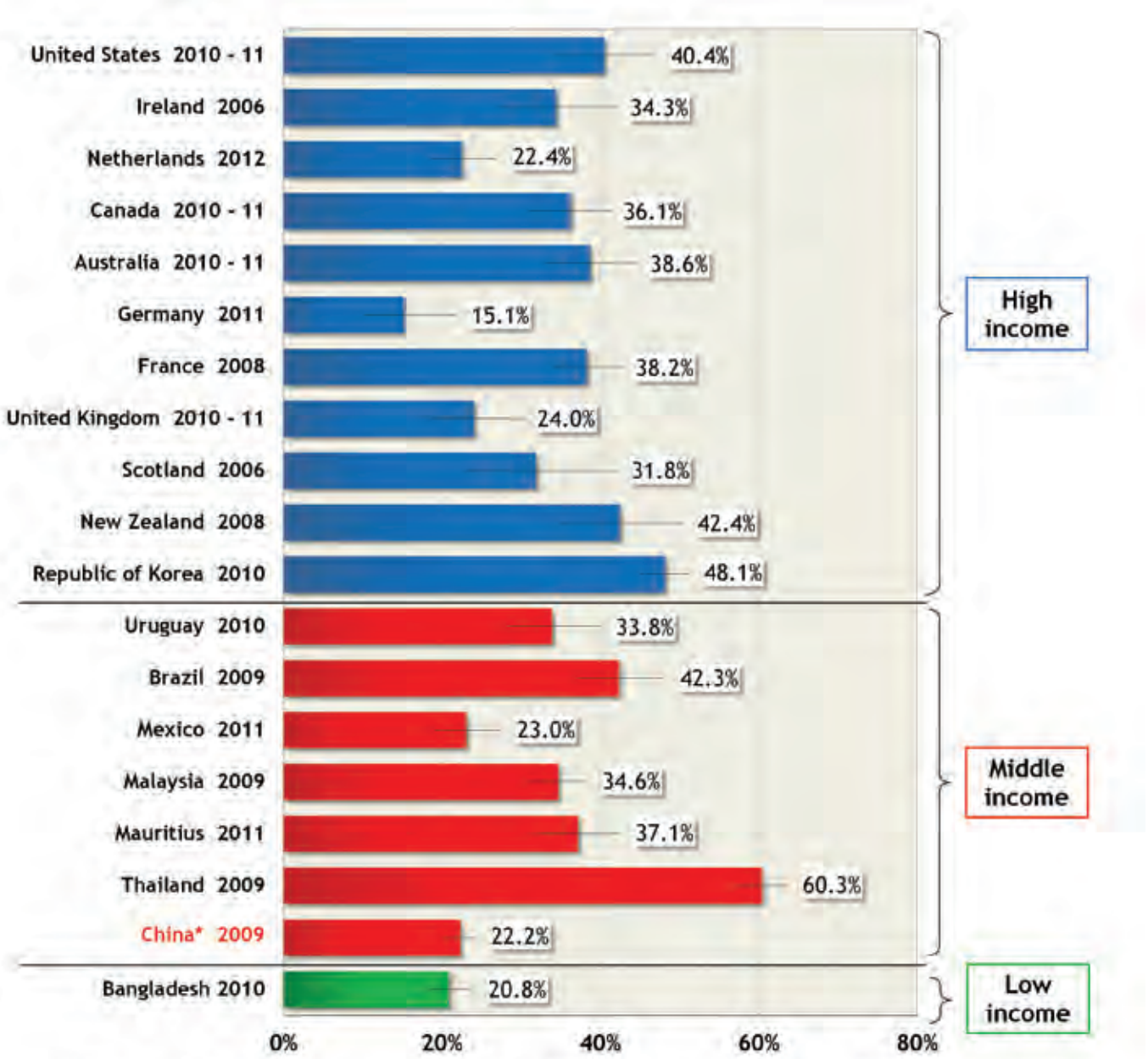
ITC cross-country comparison analyses show that at Wave 3, 22% of male smokers in China had made a quit attempt in the last year - the second lowest rate of quit attempts among 8 low- and middle-income countries and the third lowest rate among all 19 ITC countries (Figure 5).

Quit Intentions

Intention to quit is a strong and important predictor of future quitting. The ITC China Survey findings show that most Chinese smokers have no intentions to quit smoking. At Wave 3, only 17% of Chinese male smokers said they were planning to quit smoking within the next 6 months. In comparison to 19 ITC countries, China has the third lowest percentage of male smokers who plan to quit smoking within the next 6 months (Figure 6). About two-thirds of male smokers (67%) were not planning to quit at all, and less than one-quarter (15%) were planning to quit sometime in the future beyond 6 months.

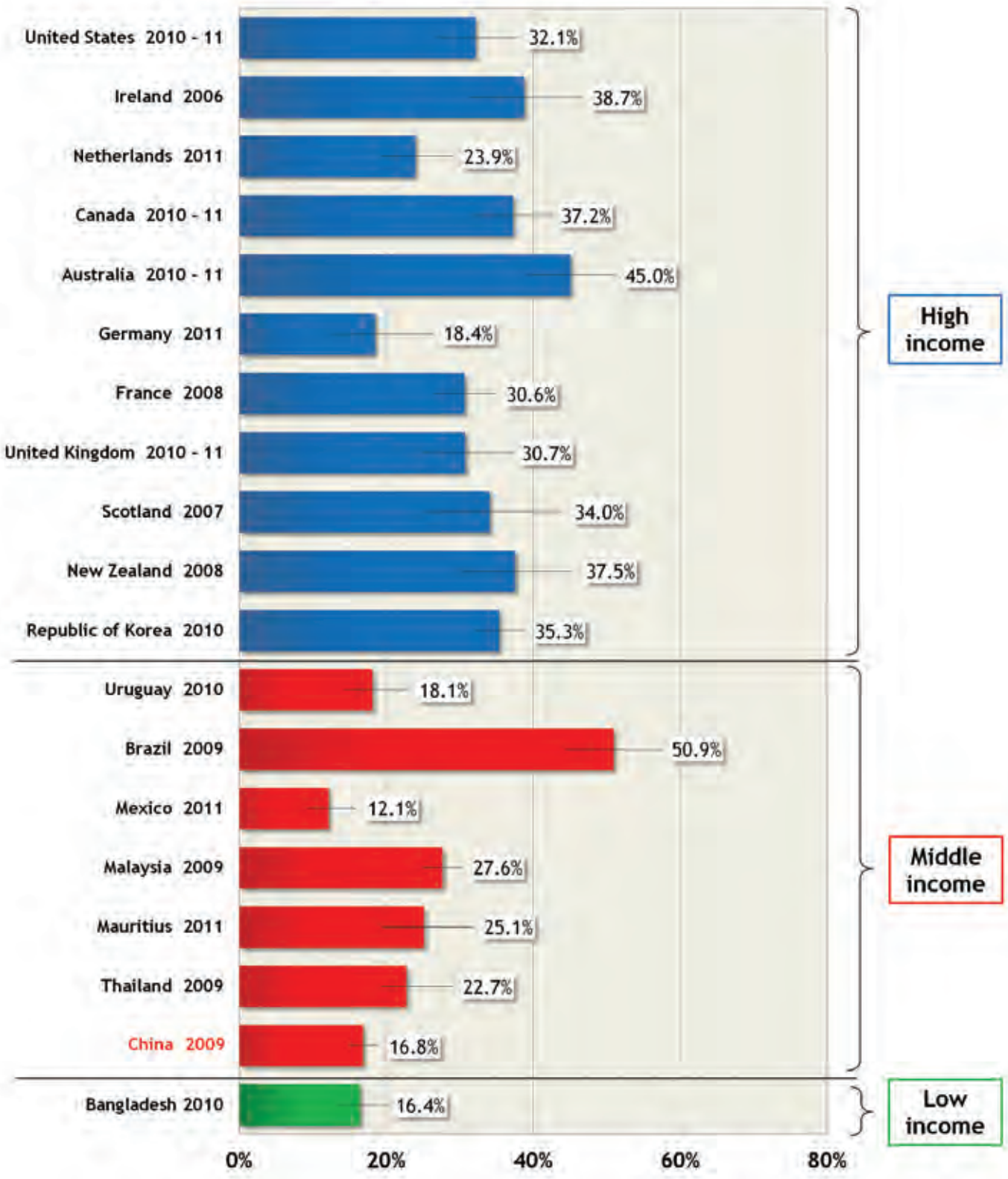
Studies have found that the level of interest in quitting among Chinese smokers is generally low (between 15% and 31%) and is considerably lower than in four developed countries in the West (Australia, Canada, United Kingdom, and United States) where the level of interest in quitting ranged from 65% to 81%.[33, 34] This low level of interest is a concern, and greater effort is needed to stimulate interest in quitting among Chinese smokers in order to encourage China to make significant advances in reducing the health burden of tobacco use. Findings from an ITC China study show that, like many other countries both in the West and in Asia, Chinese smokers from lower socio-economic backgrounds have lower interest in quitting, are less confident in being able to quit smoking, and are more addicted to smoking compared to their high income counterparts.[35]

Figure 5. Percentage of male smokers who tried to quit in the last 12 months, by country



* For Wave 3 of the ITC China Survey, the question used to assess quit attempts in the past year differed for recontact and replenishment respondents. Whether a quit attempt was attempted in the last year could be determined for the replenishment respondents. However, for recontact respondents, there was no way to distinguish whether a quit attempt was attempted in the last 7-12 months or whether it was longer. Respondents who reported a quit attempt ending 7 or more months ago were classified as having a quit attempt in the past year. Thus, the estimate of attempt to quit in the past year is likely overestimated.

Figure 6. Percentage of male smokers who plan to quit smoking within 6 months, by country



ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

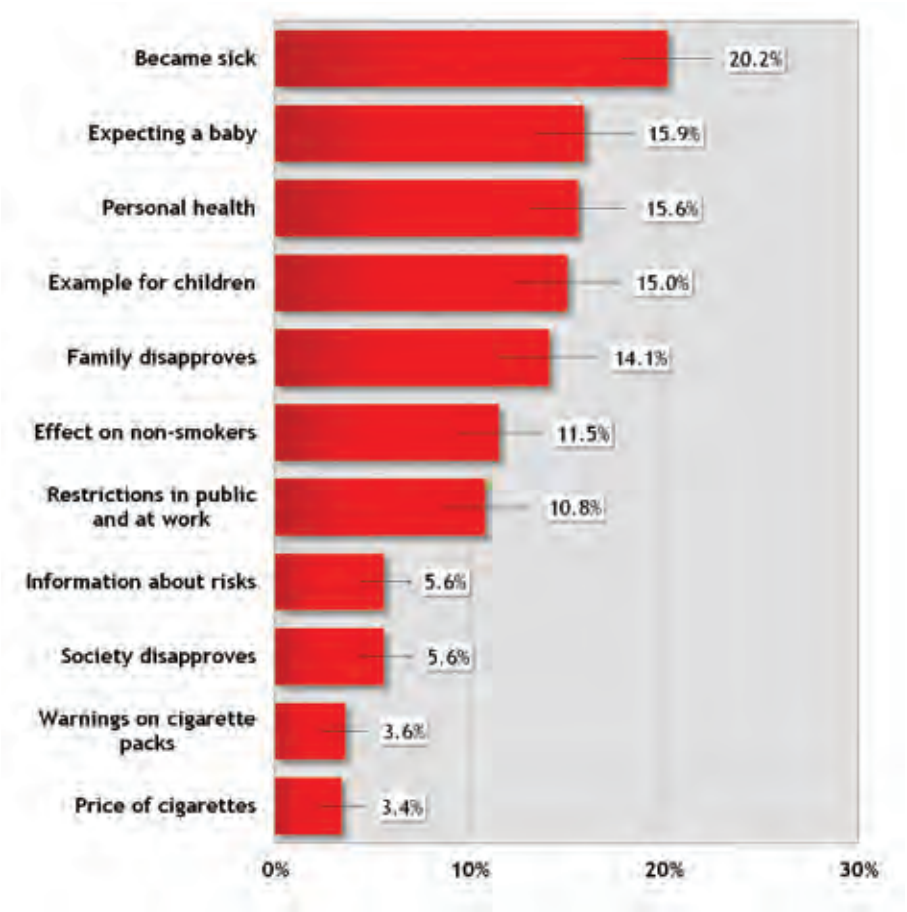
Reasons to Quit

The ITC China Surveys asked smokers to report on the reasons that led them to think about quitting in the past 6 months, regardless of whether they currently intended to quit.

Smoking restrictions, advertisements warning about the dangers of smoking, pictorial health warnings on cigarette packages, and the price of cigarettes are all policies that have been effective in encouraging quitting in other countries. However, these policies are infrequently given as reasons to think about quitting smoking in China, which is a clear indication that these policies must be strengthened in China.[20]

At Wave 3, smoking restrictions in public and workplaces were cited by 11% of smokers as 'very much' a reason to quit. Advertising or information about the health risks of smoking was reported by 6% of smokers as 'very much' a reason to quit. 4% of smokers responded that health warning labels were 'very much' a reason to quit and price of cigarettes was the reason least frequently cited as only 3% of smokers responded that this was 'very much' a reason to quit (Figure 7).

Figure 7. Smokers' opinions: 'Which reasons made me think of quitting smoking?' Percentage who reported 'very much', Wave 3 (May-Oct 2009)



Use of Cessation Assistance and Stop-Smoking Medications

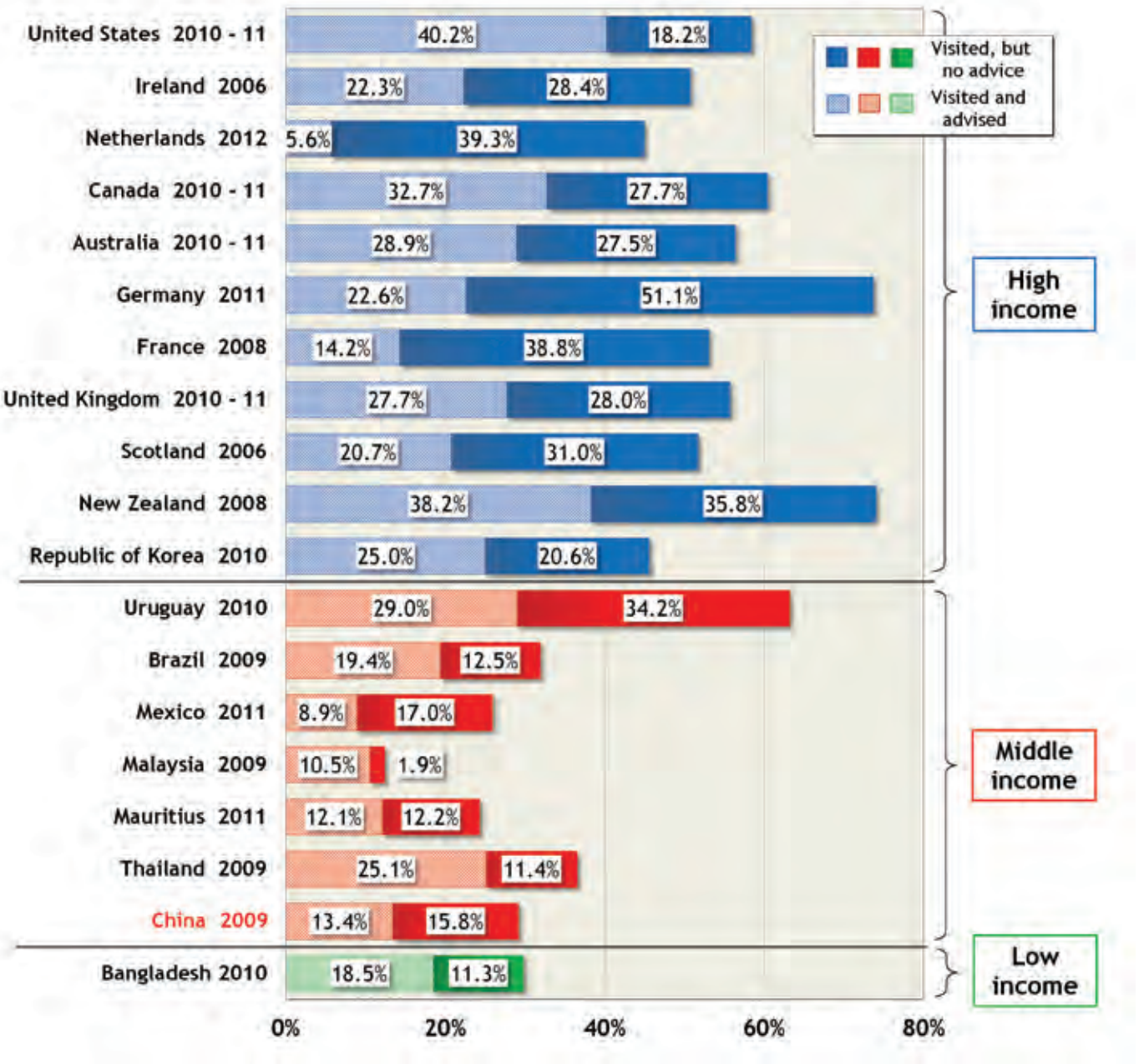
A recent study in China suggests that only 48% of physicians ask their patients about their smoking status and only 64% offer cessation advice to these smoking patients.[17] Research evidence suggests that physicians' advice is a powerful motivator to encourage quitting.[36] However, research demonstrates that physicians are not advising smokers to quit, providing smokers with information about how to quit (pamphlets/brochures), or referring smokers to other stop-smoking services to help them quit.[37]

At Wave 3, 29% of Chinese smokers reported having visited a doctor or other health professional in the last 6 months. Among these smokers, 47% received advice during their visit on how to quit smoking. ITC cross-country comparisons show that 13% of Chinese male smokers are advised by their physician to quit. This rate is lower than found in Bangladesh, Thailand, Brazil, and Uruguay, but higher than in Mauritius, Malaysia, and Mexico (Figure 8). Only 3% of smokers who had visited a doctor received a pamphlet or brochure on how to quit and 5% were referred to another service to help them quit.

Smokers also rarely received quitting information from local stop-smoking clinics (8%) and quitlines (2%). This is not surprising given that very few cessation services were available at the time of the ITC China Survey. Rates of quitline use among male Chinese smokers who made quit attempts in the previous year are similar to other ITC middle-income countries, with the exception of Brazil where quitline use is twice as high (Figure 9). It is possible that smokers are not able to quit successfully because cessation services and medications are not widely available in China. In addition, smokers may not be aware of the short-and long-term benefits to quitting. Indeed, only about one-third (34%) of smokers reported that they would benefit 'very much' from health or other gains if they were to quit. In contrast, ITC cross-country comparison analyses show that more than 50% of male smokers in 16 other ITC countries stated that they would benefit 'very much' or 'extremely' if they were to quit. Increasing knowledge about the health benefits of quitting smoking could therefore increase interest in quitting and remaining smoke-free.[20]

Few Chinese smokers reported having used stop-smoking medications at Wave 3. Only about 5% of Chinese smokers had used the following stop-smoking medications and treatments: nicotine gum (5%), nicotine patch (4%), bupropion (3%), acupuncture (3%), and other medications (5%). Cross-country comparison analyses show that male smokers in China are ranked second lowest out of 18 ITC countries with respect to use of stop-smoking medications among those who have made a quit attempt in the past year (Figure 10).

Figure 8. Visits to health professionals and provision of cessation advice for current male smokers, by country



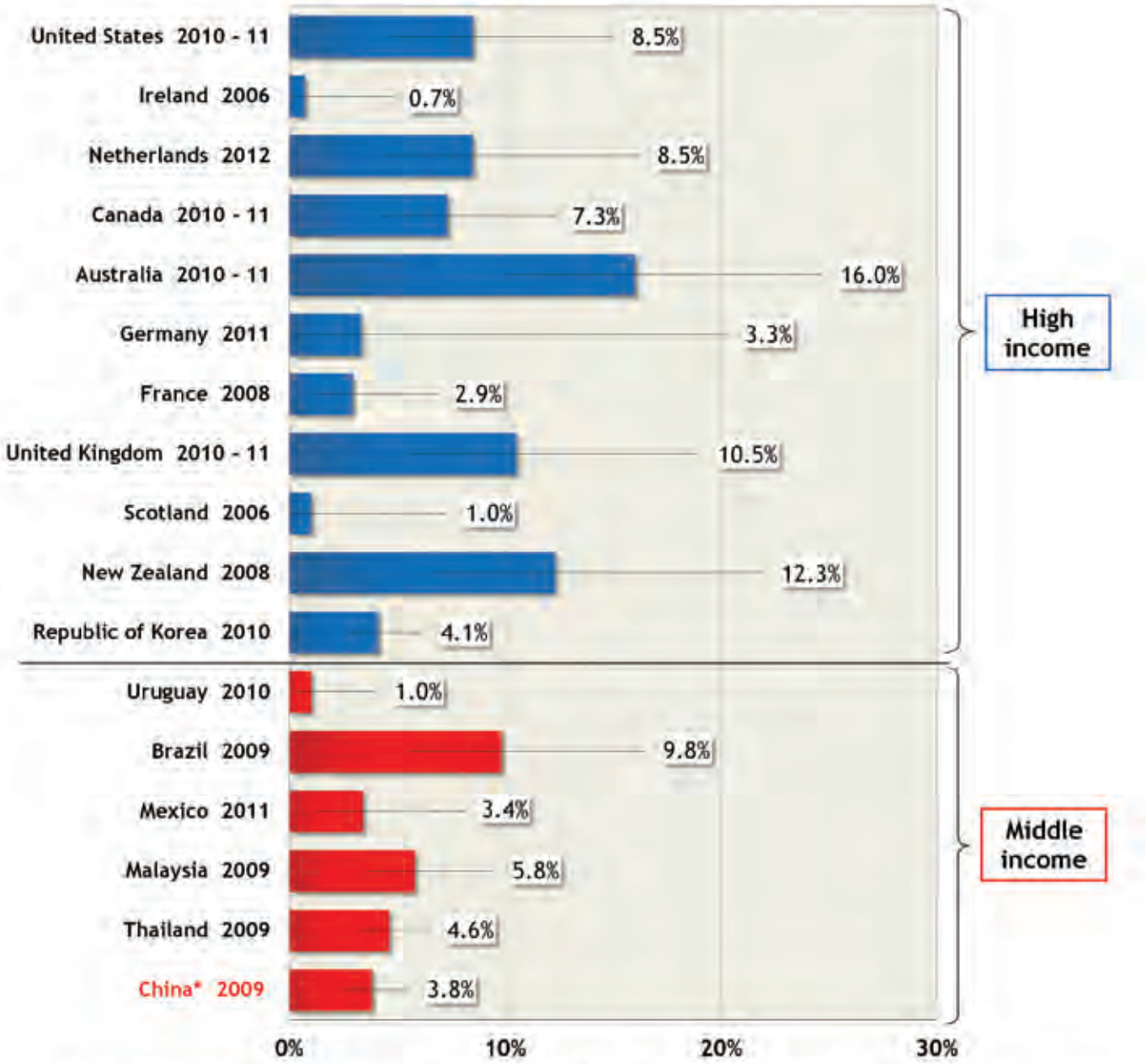
Evaluation of the Quit-and-Win Contest

The Chinese International Quit-and-Win is a biannual smoking cessation contest designed to promote quitting with the aid of a positive incentive. In 2006, the Chinese International Quit-and-Win competition took place in 31 provinces with approximately 130,000 smokers participating. Smokers at all three survey waves were asked questions to assess awareness and effectiveness of the Quit-and-Win campaigns, however only the 2006 campaign could be evaluated as it was held in the same year as a survey wave.

Overall, few Chinese smokers were aware of the 2006 Quit-and-Win contest. At Wave 1, 13% of smokers had ever heard about the Quit-and-Win contest in China. 3% of those smokers who had heard about the contest participated in it. If promotion of this contest was increased, it may increase smokers' participation. Nonetheless, those who had heard of Quit-and-Win had positive opinions about the contest. At Wave 1, 47% of smokers who had heard about the contest said that it made them think about quitting 'a little' or 'very much'.

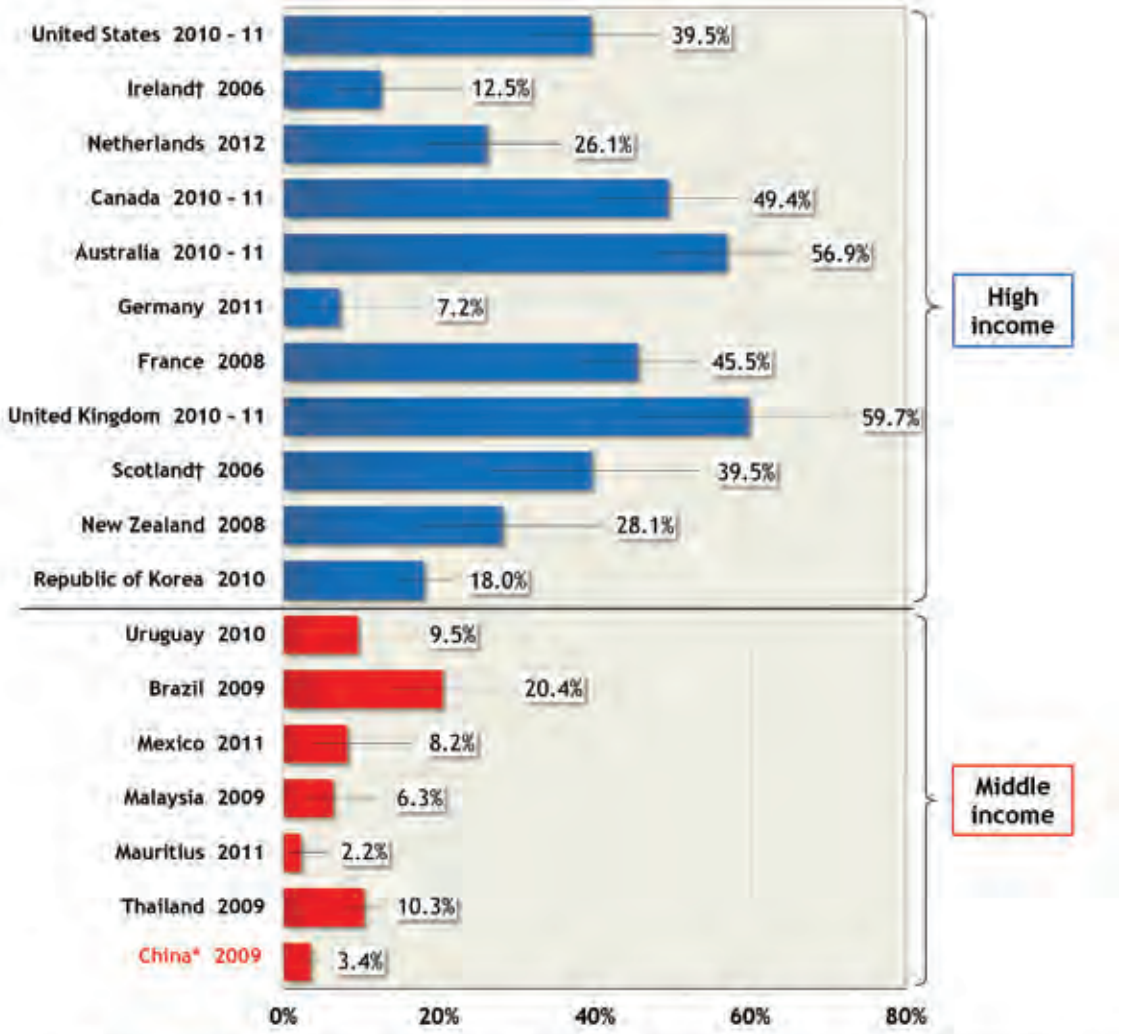
ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

Figure 9. Reported use of quitlines (or related services) for assistance in smoking cessation among male smokers reporting making quit attempts in the previous year, by country



* For Wave 3 of the ITC China Survey, the question used to assess quit attempts in the past year differed for recontact and replenishment respondents. Whether a quit attempt was attempted in the last year could be determined for the replenishment respondents. However, for recontact respondents, there was no way to distinguish whether a quit attempt was attempted in the last 7-12 months or whether it was longer. Respondents who reported a quit attempt ending '7 or more months' ago were classified as having a quit attempt in the past year. Thus, the estimate of use of quitlines for male respondents with a quit attempt in the past year is likely overestimated.

Figure 10. Reported use of quit smoking medications among male smokers reporting making quit attempts in the previous year, by country



* For Wave 3 of the ITC China Survey, the question used to assess quit attempts in the past year differed for recontact and replenishment respondents. Whether a quit attempt was attempted in the last year could be determined for the replenishment respondents. However, for recontact respondents, there was no way to distinguish whether a quit attempt was attempted in the last 7-12 months or whether it was longer. Respondents who reported a quit attempt ending 7 or more months' ago were classified as having a quit attempt in the past year. Thus, the estimate of use of quit smoking medications among male smokers with a quit attempt in the past year is likely overestimated.

† In Wave 3 of the ITC Ireland and Scotland Surveys, the question asked about the use of quit smoking medications in the last 6 months.

Smoking Cessation: Summary and Recommendations

- Quit attempts and intentions to quit smoking in China are among the lowest compared to other countries. Thus, Chinese smokers may actually need greater assistance to help them quit.
- Given that warning labels and the price of cigarettes are the least cited reasons for Chinese smokers to quit, it is clear that stronger taxation measures and labelling restrictions are needed to encourage cessation.
- Few Chinese smokers make use of cessation assistance and stop-smoking medication.
- As successful quitting requires repeated interventions and multiple attempts to quit, there is a need to increase the capacity of the health care system to play a role in promoting cessation.
- Professional counselling and medical treatments should be provided to increase the chances of successful quitting. It is important that cessation services and quitting medications, such as nicotine replacement therapy medications, be made available in China, especially in rural areas and among urban Chinese smokers from lower socio-economic status backgrounds.
- Efforts need to be made to train doctors and health professionals in providing brief cessation interventions or making referrals to cessation services.

SMOKE-FREE PUBLIC PLACES AND WORKPLACES

Article 8 of the WHO FCTC requires the adoption of effective measures to provide protection from exposure to tobacco smoke. As a Party to the FCTC since 2005, China is required to ban smoking in indoor public places and workplaces by 2011. Guidelines for Article 8 recommend a comprehensive ban on smoking in public places and workplaces, without exceptions. In 2010, the Chinese Center for Disease Control and Prevention (China CDC) estimated that 740 million non-smokers, including 182 million children, are exposed to secondhand smoke at least once a day in a typical week and that exposure to secondhand smoke causes 100,000 deaths annually.

On March 22, 2011, the Ministry of Health released the "Detailed Implementation Rules for Public Place Sanitary Administration Regulation", which took effect on May 1, 2011. Article 18 relates to smoke-free regulations, in which: (1) smoking is banned in indoor public places; (2) administrators of public places should set up salient no-smoking signs and warning labels; and (3) managers of public places should (a) conduct "propaganda" (actions to inform people) of the harms of smoking on health, and (b) allocate staff to stop people from smoking in indoor areas. Although these new Implementation Rules are detailed and specific, there is no information about enforcement or fines and other penalties for violation of the smoke-free regulations. To date, the regulations do not seem to have made any significant impact on smoking in public places. In its 12th Five-Year Plan (2011-2015), China has also committed to banning smoking in public places over the next five years.

At the time of the ITC China Wave 1 to 3 Surveys, smoke-free laws in workplaces and restaurants were implemented in some ITC Survey cities, as shown in Table 5. These included Beijing's May 2008 ban on smoking in schools, hospitals, government offices, Olympic venues, and a partial ban in workplaces and restaurants. After Wave 3, further city-level bans were implemented in Yinchuan (June 2009, during the Wave 3 fieldwork), in Shanghai (March 2010) and Guangzhou (September 2010) in 12 types of public venues.

Although these smoke-free initiatives represent initial attempts to take action consistent with the dictates of Article 8 of the FCTC, in every case these laws were not comprehensive and were poorly enforced.

The ITC China Survey includes several measures to evaluate smoke-free policies, including awareness of policies in workplaces (in Waves 1 to 3), bars (in Waves 2 and 3), hospitals (in Wave 3), and schools (in Wave 3). The ITC China Survey evaluates the effectiveness of (and need for) smoke-free policies in public places by asking smokers and non-smokers whether they noticed smoking in indoor workplaces, bars and restaurants, and taxis (in Waves 2 and 3). Smokers and non-smokers are also asked questions about support for smoke-free laws in various venues. To assess whether the implementation of smoke-free policies influences smoking in the home, the ITC China Survey also asks smokers about rules on smoking at home (in Waves 1 to 3).

Table 5. Smoke-free policies in workplaces, restaurants, and bars in ITC China cities at Wave 1, Wave 2, and Wave 3 (policy implemented before survey wave)

	Beijing			Shenyang			Shanghai			Changsha			Guangzhou			Yinchuan		
Venue	Wave 1 (2006)	Wave 2 (2007-08)	Wave 3 (2009)	Wave 1 (2006)	Wave 2 (2007-08)	Wave 3 (2009)	Wave 1 (2006)	Wave 2 (2007-08)	Wave 3 (2009)	Wave 1 (2006)	Wave 2 (2007-08)	Wave 3 (2009)	Wave 1 (2006)	Wave 2 (2007-08)	Wave 3 (2009)	Wave 1 (2006)	Wave 2 (2007-08)	Wave 3 (2009)
Workplaces			Partial ban[1]										Partial ban[2]	Partial ban[2]	Partial ban[2]			
Restaurants			Partial ban[3,4]			Partial ban[3,4]			Partial ban[3,4]				Partial ban[2]	Partial ban[2]	Partial ban[2]			Partial ban[1]
Bars																		

[1] Designated smoking rooms (DSRs) permitted
[2] Complete ban only applies to air conditioned venues
[3] Restrictions in Olympic village restaurants, but DSRs permitted
[4] Requires a minimum of 75% smoke-free seats in medium and large venues

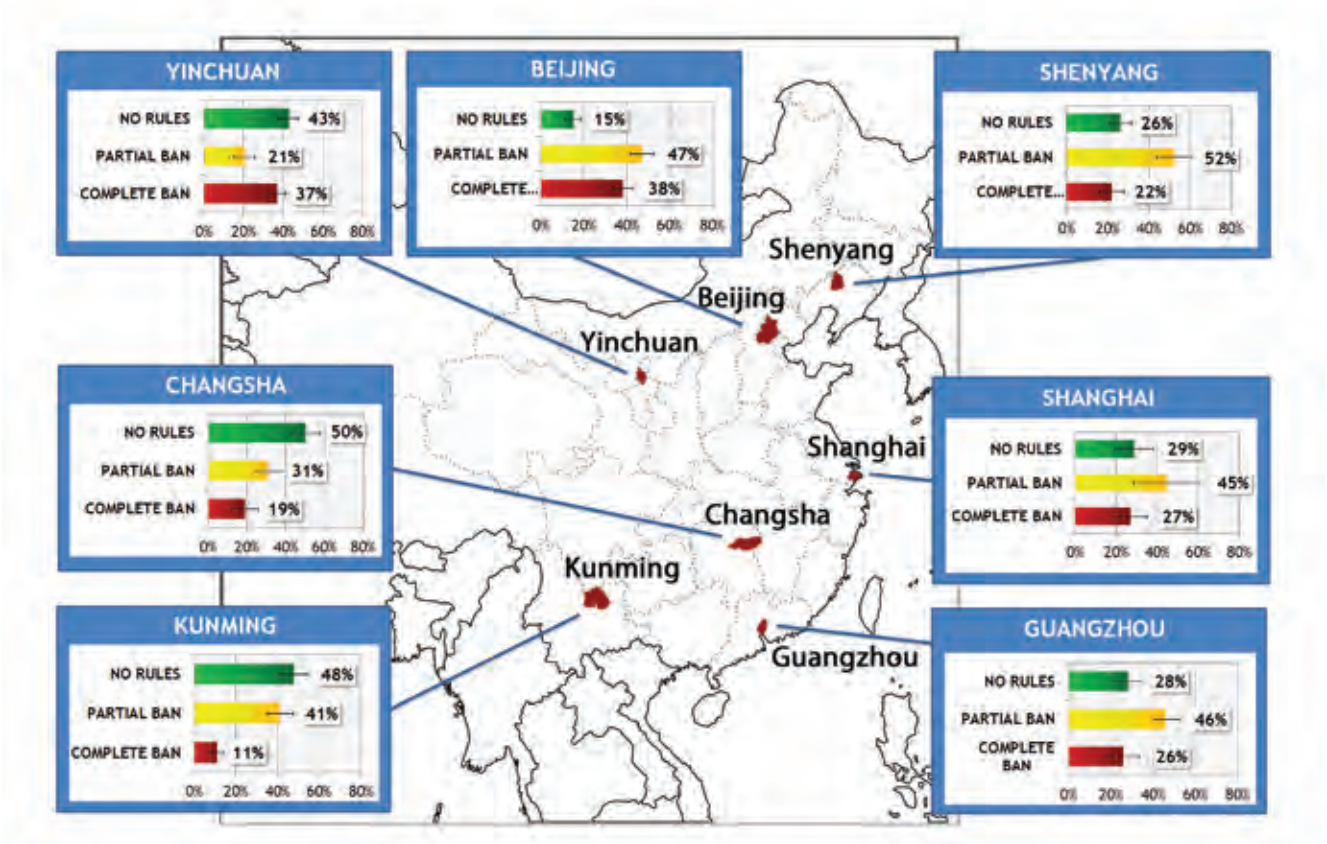
ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

Workplace Smoking Policies

Comprehensive workplace bans represent an important tobacco control strategy to protect the public from exposure to secondhand smoke. At the time of the Wave 1 Survey, Guangzhou had a local smoke-free law banning smoking in workplaces with air conditioning; however, this policy was not well-enforced.[38] In September 2010 (after Wave 3), Guangzhou implemented a new smoke-free law banning smoking in 12 types of indoor public places, including workplaces. The Wave 4 Survey will be used to evaluate the new Guangzhou smoke-free law to determine whether the ban has been successful in reducing smoking in these venues. The ITC China Wave 3 Survey evaluated a city-level workplace policy implemented in Beijing in 2008 (after the Wave 2 Survey) that restricted smoking in restaurants, but permitted designated smoking rooms.

According to smokers who work indoors in China, the majority of workplaces in the 6 cities surveyed have not adopted comprehensive indoor smoking bans (Figure 11). At Wave 3, 38% of smokers in Beijing and 37% of smokers in Yinchuan reported that their workplaces have complete smoking bans. In Kunming, on the other hand, only 11% of smokers reported that their workplaces have a complete smoking ban policy.

Figure 11. Status of smoke-free policies in workplaces according to smokers in Yinchuan, Beijing, Shenyang, Shanghai, Guangzhou, Kunming, and Changsha, Wave 3 (May – Oct 2009)

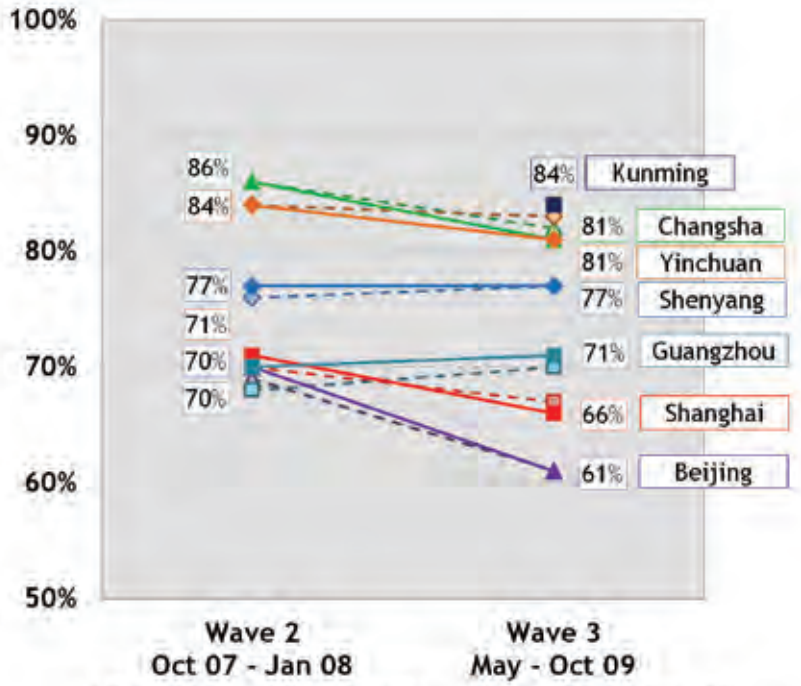


Workplaces without any rules or restrictions on smoking were most often reported by smokers in Changsha at 50% and least often in Beijing at 15%. More smokers than non-smokers reported that there were no smoking rules or restrictions in their workplaces in all cities except Beijing. For example, in Changsha, 28% of non-smokers compared to 50% of smokers reported that there were no rules or restrictions on smoking in their workplaces.

At Wave 3, the majority of smokers reported noticing smoking indoors in their workplaces in the last 6 months, ranging from 61% of smokers in Beijing to 84% of smokers in Kunming (Figure 12). The Wave 2 and 3 Surveys show slight decreases (less than 10%) in the percentages of smokers who noticed smoking in indoor workplaces in the last 6 months in all cities except for Guangzhou, where the percentage increased slightly from 70% at Wave 2 to 71% at Wave 3, and Shenyang, where the percentage did not change.

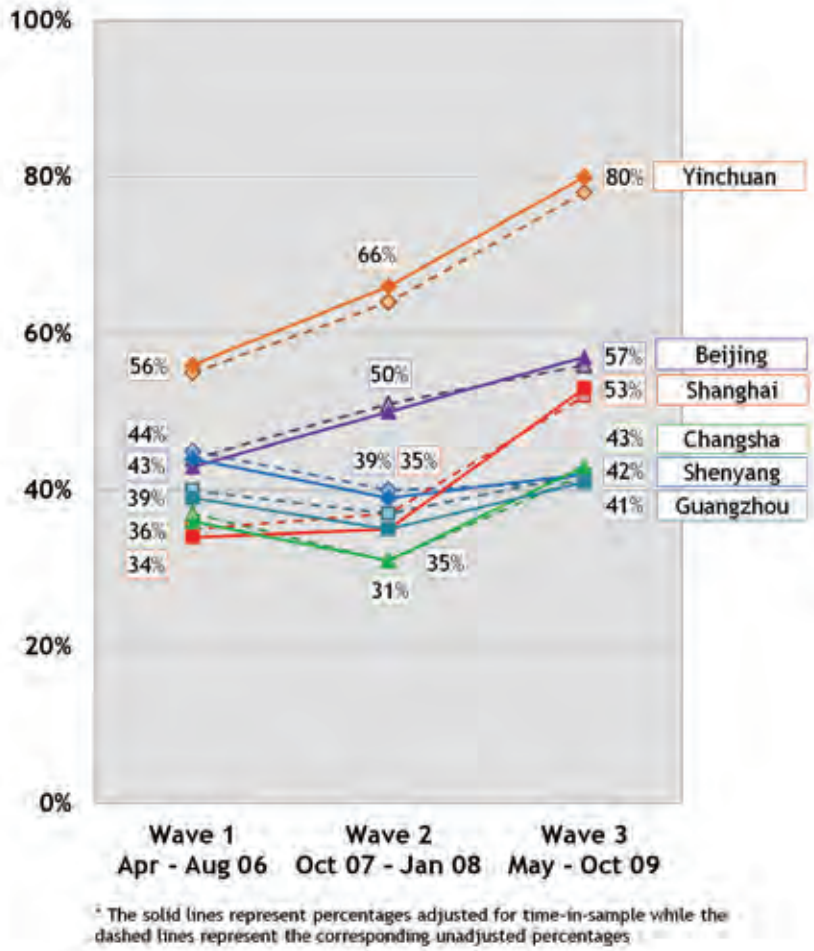
Support for a complete ban on smoking indoors in workplaces increased among smokers in all six cities between Wave 2 and Wave 3 (Figure 13). The largest increase in support (18%) was in Shanghai, where support jumped from 35% at Wave 2 to 53% at Wave 3. The increase in support for a smoke-free law, which was found in Shanghai and Yinchuan after its introduction, is consistent with what has happened in Ireland, Scotland, the rest of the United Kingdom, and France after the implementation of smoke-free laws. At Wave 3, more than half of smokers in Beijing (57%) supported a full ban. Slightly fewer smokers supported a complete workplace ban in Guangzhou (41%), Shenyang (42%), and Changsha (43%).

Figure 12. Percentage of smokers who noticed smoking in their indoor workplaces, by city, by wave*



* The solid lines represent percentages adjusted for time-in-sample while the dashed lines represent the corresponding unadjusted percentages

Figure 13. Percentage of smokers who support complete smoking bans in their workplaces, by city, by wave*



* The solid lines represent percentages adjusted for time-in-sample while the dashed lines represent the corresponding unadjusted percentages

In summary, the majority of smokers and non-smokers in China continue to be exposed to secondhand smoke in the workplace. In fact, almost half of all smokers in Kunming and Changsha have no restrictions at all on smoking in the workplace. Support for comprehensive workplace smoking bans has increased among smokers in all 6 cities in China between Waves 2 and 3, suggesting a favourable environment for workplace smoking bans.

The ITC China Survey findings demonstrate that support for comprehensive smoking bans in workplaces has increased among smokers in all six cities between Waves 2 and 3.

ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

Smoking Prevalence in Restaurants and Impact of Smoke-Free Policies in Beijing, Shenyang, and Shanghai

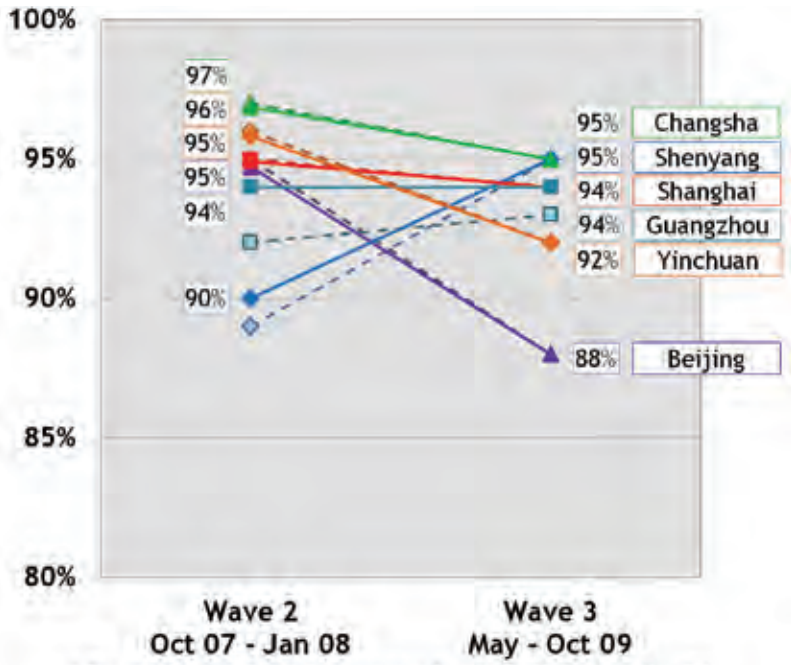
The ITC China Wave 3 Survey evaluated smoke-free policies in restaurants in Beijing, Shenyang, and Shanghai that were implemented in May 2008 after Wave 2, as well as the partial ban in restaurants in Yinchuan, also implemented after Wave 2. These policies placed restrictions on smoking in restaurants, but allowed designated smoking rooms. At Wave 3, an overwhelming majority of smokers reported noticing smoking in restaurants in the last 6 months (Figure 14). More than 87% of respondents across 6 cities in China noticed smoking in restaurants. The lowest percentage of respondents noticing smoking in these venues was 88% in Beijing.

Between Waves 2 and 3, there were minimal reductions (less than 10%) in the percentage of respondents who noticed smoking in restaurants in the last 6 months in four cities (Changsha, Beijing, Yinchuan, and Guangzhou). For instance, the percentage of respondents who noticed smoking in restaurants only dropped 7% from 95% to 88% in Beijing and 4% from 96% to 92% in Yinchuan. However, in Shenyang, there was a 5% increase (from 90% to 95%) in observed smoking in restaurants.

In general, the ITC China Survey findings demonstrate that smoking in restaurants remains extremely high. The partial smoking bans implemented in May 2008 in Beijing, Shenyang, and Shanghai did not lead to any significant reduction in smoking. In comparison, after Ireland implemented its comprehensive smoke-free law, the percentage of respondents who noticed smoking decreased from 85% to only 3% — a near-total reduction in restaurant smoking.[39]

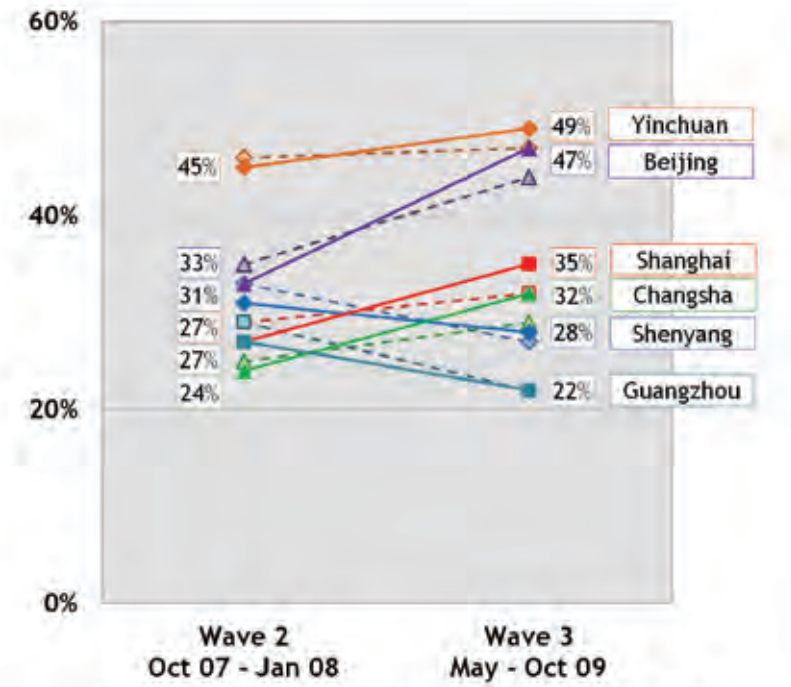
Almost half of smokers in Yinchuan (49%) and Beijing (47%) supported a complete ban on smoking in restaurants at Wave 3 (Figure 15). Support was not as strong in the four other cities, ranging from 35% of smokers in Shanghai to 22% of smokers in Guangzhou. The largest increase in support between Waves 2 and 3 was in Beijing at 14%, which is consistent with findings in other ITC countries of increased smokers' support for smoke-free policies after they are implemented. In Yinchuan, support for a complete smoking ban in restaurants increased slightly from 45% to 49%. The smoke-free law came into effect in June 2009, during the Wave 3 fieldwork (May to October 2009).

Figure 14. Percentage of smokers who noticed smoking in restaurants, by city, by wave*



* The solid lines represent percentages adjusted for time-in-sample while the dashed lines represent the corresponding unadjusted percentages

Figure 15. Percentage of smokers who support complete smoking bans in restaurants, by city, by wave*



* The solid lines represent percentages adjusted for time-in-sample while the dashed lines represent the corresponding unadjusted percentages

These results demonstrate that a fairly high percentage of smokers in China do indeed support complete smoking bans in restaurants. In fact, the support in Yinchuan and Beijing is comparable to the percentage of smokers in Ireland that supported a complete restaurant ban before Ireland implemented its very successful law (46%). These fairly high levels of support among Chinese smokers are encouraging and can be expected to further increase with dedicated efforts to educate Chinese people on the harms of secondhand smoke and on the importance of China's national smoke-free laws to public health.

Smoking Prevalence in Bars Over Time in the Absence of Smoke-Free Laws

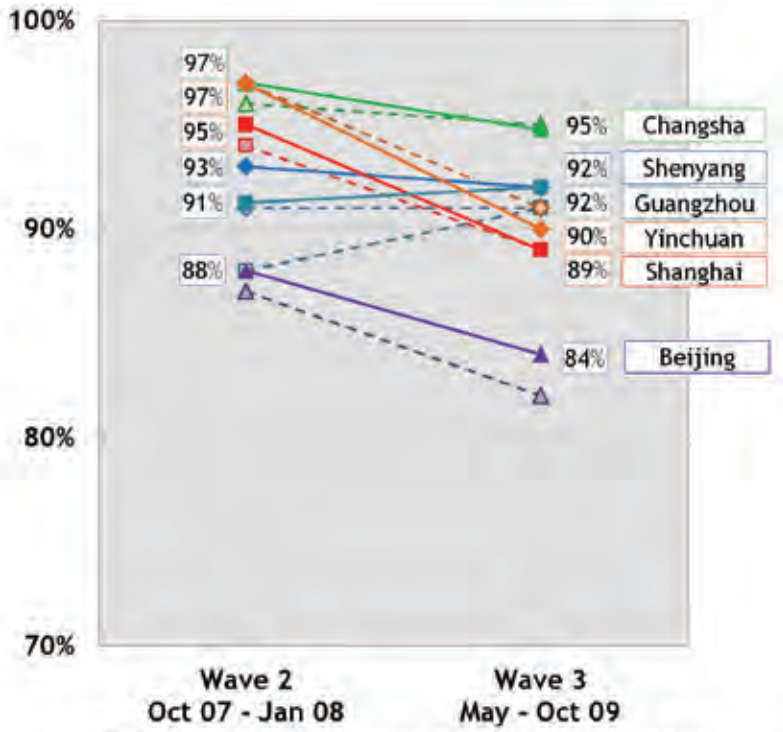
China did not have restrictions on smoking in bars during the Wave 1 to Wave 3 Surveys. Similar to the findings in restaurants, at Wave 3, the great majority of smokers reported noticing smoking in bars in the last 6 months (Figure 16). More than 90% of smokers across four cities in China noticed smoking in bars. Beijing had the lowest percentage of smokers who noticed smoking in bars at 84%.

Yinchuan and Beijing had the highest percentage of smokers who supported a complete ban on smoking in bars in China at 44% and 34%, respectively. The largest increase in support between Waves 2 and 3 was also found in these two cities – a 10% increase in Beijing and 11% increase in Yinchuan (Figure 17).

Comparing the level of support for a complete ban in bars between China and Ireland is important: in Ireland, before the very successful smoke-free law, the percentage of Irish smokers who supported a complete ban in bars was only 12%. This means that in every city in the ITC China Survey, the level of support for complete bans is considerably higher than the support was in Ireland (pre-implementation of comprehensive smoke-free laws). This suggests that, with strong enforcement and support by the government, comprehensive smoke-free laws could succeed in China.

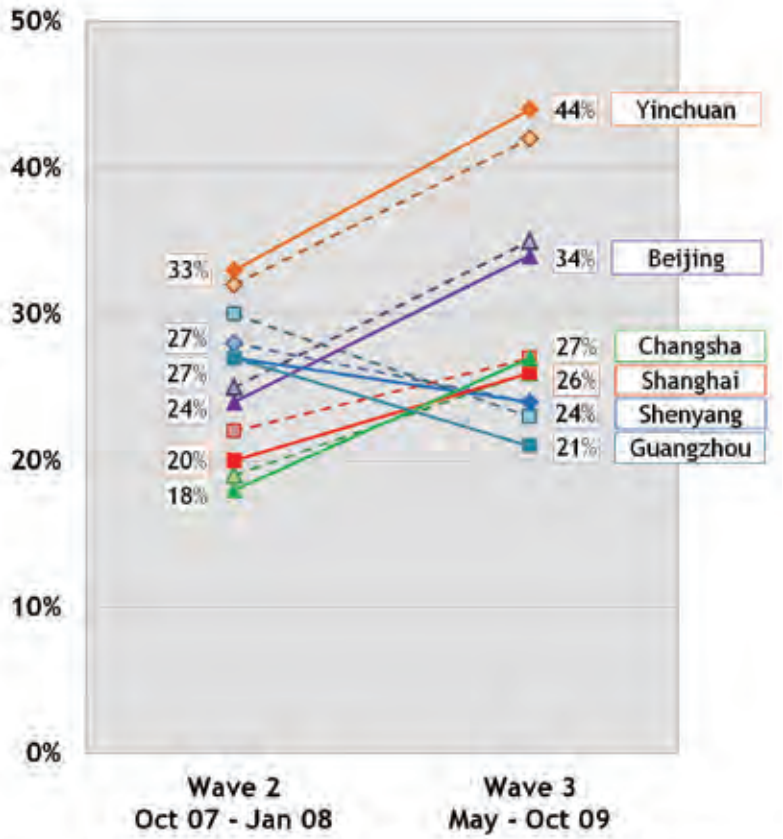
Smokers' support for a complete smoking ban in bars and restaurants is comparable and in some cities higher in China than found among Irish smokers before their successful smoke-free law. This suggests that with strong enforcement and government support, comprehensive smoke-free laws could succeed in China.

Figure 16. Percentage of smokers who noticed smoking in bars, by city, by wave*



* The solid lines represent percentages adjusted for time-in-sample while the dashed lines represent the corresponding unadjusted percentages

Figure 17. Percentage of smokers who support complete smoking bans in bars, by city, by wave*



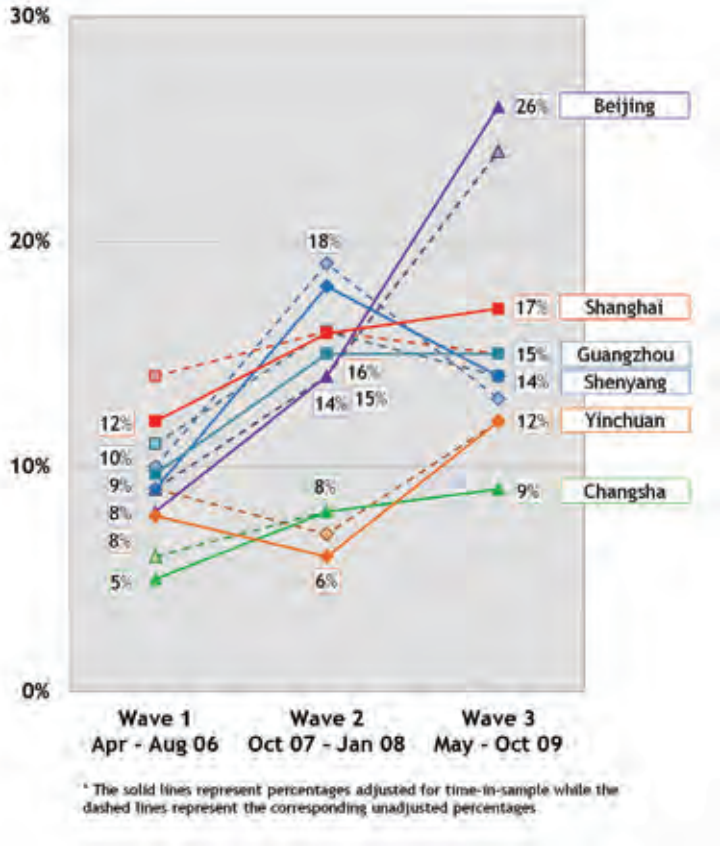
* The solid lines represent percentages adjusted for time-in-sample while the dashed lines represent the corresponding unadjusted percentages

Smoking in the Home

At Wave 3, one-quarter (26%) of smokers in Beijing had a complete ban on smoking indoors at home — the highest percentage of smokers with home smoking bans among the 6 cities surveyed in China. In comparison, 61% of smokers in Kunming, 68% in Changsha, and 69% in Yinchuan have no rules or restrictions on smoking in the home. Non-smokers are more likely to have complete bans, ranging from 26% of non-smokers in Kunming to 54% of non-smokers in Beijing and 56% of non-smokers in Shanghai.

Complete bans on smoking in the homes of smokers increased in all 6 cities between Waves 1 and 3 (Figure 18). Beijing had the largest increase in home bans between Waves 2 and 3—from 14% to 26%. This increase occurred over the same period as the implementation of the May 2008 smoke-free law in Beijing, which banned smoking in Olympic venues and restricted smoking indoors in hospitality venues. This finding confirms what the ITC Project has found in many other countries: smoking bans in public places do NOT lead to more smoking in the home. In fact, they often lead to an increase in smoke-free homes.[39, 40, 41, 42, 43] This provides strong evidence that comprehensive smoke-free laws in China could serve to stimulate bans in private spaces, such as homes.

Figure 18. Percentage of smokers with complete smoking bans in their homes, by city, by wave*



* The solid lines represent percentages adjusted for time-in-sample while the dashed lines represent the corresponding unadjusted percentages

Smoke-Free Public Places and Workplaces: Summary and Recommendations

- By ratifying the FCTC, China is obligated to implement strong and comprehensive smoke-free laws, in accordance with the Article 8 Guidelines. To protect the public from the negative health consequences of secondhand smoke, China must implement a strongly-enforced, national comprehensive ban on smoking in public places, including restaurants and bars, with no exceptions.
- China's Ministry of Health implemented a national ban on indoor smoking on May 1, 2011. This is a positive step; however, in the absence of strong enforcement and strict penalties, it is likely that this smoke-free initiative will not be as effective as laws in other countries; this will lead to a continuation of the public health hazard of secondhand smoke for a majority of people in China.
- The ITC China Survey demonstrates that the various initiatives in China to implement partial smoke-free public places have not led to any real reduction in smoking prevalence in key public areas, such as restaurants and bars, and in workplaces.
- Support for smoke-free workplaces has increased such that entirely smoke-free workplaces would be supported by about half of smokers. This suggests that policies requiring smoke-free workplaces would succeed in China.
- The level of support among Chinese smokers for smoke-free laws in restaurants and bars is relatively low; however, it is still comparable or fairly close to the level of support among smokers in Ireland that the ITC Ireland Survey observed before the implementation of that country's very successful smoke-free law. This suggests that there are opportunities to implement a stronger comprehensive smoke-free law at the national level.
- China has an opportunity to reduce secondhand smoke exposure significantly. This would reduce the 100,000 deaths per year from secondhand smoke in China. Evidence from successful smoking bans in other ITC countries point to key factors that make smoke-free laws work: information campaigns to educate the people about the hazards of secondhand smoke and the importance of smoke-free laws in reducing those hazards and protecting public health, and then strong and consistent enforcement of the policies. For example, the Global Smokefree Partnership at http://www.globalsmokefreepartnership.org is a key resource for helping countries to achieve 100% smoke-free places by providing information and materials on smoke-free policies and technical assistance on implementation, enforcement, and training.

HEALTH WARNING LABELS

Until October 2008, China's health warning labels were small and located on the side of the pack. In October 2008, larger text warnings were introduced on 30% of the front and 30% of the back of the pack (Figure 19). The warning on each side consists of the same two general messages, but the back appears in English (Figure 20). These new labels do not meet the standard set by the FCTC Article 11 Guidelines, adopted in November 2008, which states that Parties should include graphic images on warnings that cover at least 50% of the top of the front and the back of the pack. Findings from the ITC China Survey and from an ITC experimental study demonstrate that there is a need to enhance the warning labels in China. In April 2012, new text warning labels were introduced, however the warnings still do not meet the minimum FCTC requirements. The size of lettering was increased to twice the size (no less than 4 millimeters in height) of the previous labels, however the overall label size is the same. The English language text warning on the back of the pack was changed to Chinese. There is still no requirement for pictorial health warnings.

International studies and research conducted by the ITC Project have demonstrated that warning labels are an effective tool for educating smokers and non-smokers about the many negative health consequences of smoking.[44, 45, 46] Strong health warnings are the foundation of a comprehensive approach to tobacco control because the objective of health warnings is to inform the public about the harms of tobacco products, using methods that will increase the likelihood that smokers will be motivated to quit.[47] Large pictorial warnings have been found to increase knowledge of the harms of smoking, thoughts about the health risks, and behaviours (avoiding the warnings, forgoing a cigarette) that can motivate intentions to quit and then quit attempts.

This section presents a description of the health warnings introduced in China in 2008, followed by data from both the ITC China Survey and an experimental study conducted by the ITC China Project demonstrating that these 2008 warnings were ineffective. The findings suggest that new text warnings introduced in April 2012 will continue to be ineffective as they still do not meet the minimum FCTC requirements.

Analysis of Health Warnings Introduced in October 2008

Text-based health warnings that were introduced in China in October 2008 do not meet the rigorous Article 11 Guidelines, which were adopted by the FCTC Conference of the Parties in November 2008. The 2008 warnings are positioned at the bottom of the package, covering 30% of the front and 30% of the back, and consist of two general messages: "smoking is harmful to your health" and "quit smoking reduces health risk". The messages on the back of the pack are repeated but in English. The Article 11 Guidelines recommend rotating graphic warnings covering at least 50% of the front and the back of the pack, among other guidelines. As illustrated in Table 6, these 2008 warnings only meet one of the nine Article 11 Guidelines.

The ITC China Survey includes a broad set of questions to assess the effectiveness of health warnings. For example, to measure the **salience** of warning labels smokers are asked: (1) how often they had *noticed* the warnings over the past month, and (2) whether they had *read or looked closely* at them (both on 4-point scales: 'never' to 'very often'). To measure **behavioural responses**, smokers are asked to what extent, if at all, warning labels had (1) *stopped them from having a cigarette when they were about to smoke one,* (2) made them *think about the health risks* of smoking, and (3) led them to *think about quitting smoking*.

Figure 19. The old (before October 2008) health warning and the new (October 2008) health warning on cigarettes (side and front of the pack)

Figure 20. Text-based health warnings introduced in China in October 2008 (back of the pack, which appears in English)

Table 6. Summary of the 2008 Chinese warnings with respect to the Article 11 Guidelines

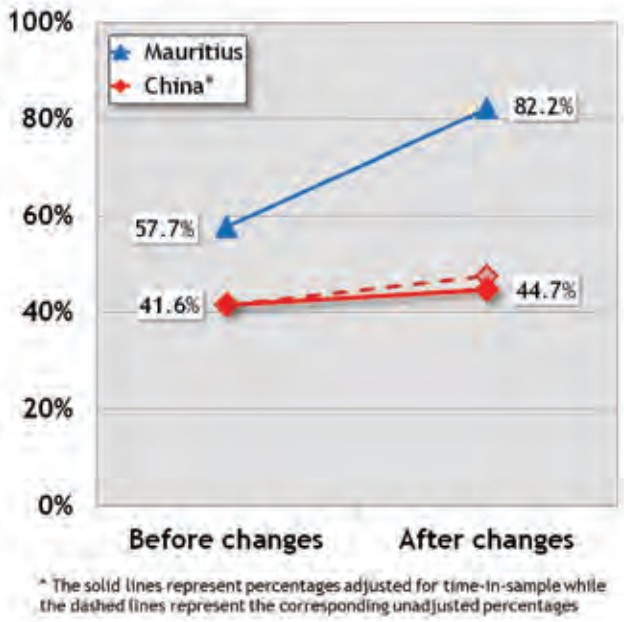
	Guideline	YES	NO
1	Should appear on both front and back	✓ ?	
2	Should be at the TOP of the package		✓
3	Should be as large as possible (at least 50%)		✓
4	Should include full colour pictures		✓
5	Should rotate multiple messages		✓
6	Should include a range of warnings and messages		✓
7	Should include info on harmful effects of tobacco smoke		✓
8	Should provide advice about cessation		✓
9	Should list constituents without numbers		✓

Note: Guideline #1 is a question mark because the warning on the back of the pack is in English

Awareness of Health Warnings

Health warnings on tobacco packages constitute an important method to inform and educate the public about the harms of tobacco use.[44] Table 6 shows that the Chinese 2008 warnings do not comply with the Article 11 Guidelines. In October 2008, Mauritius enhanced its warning labels from text to pictorial warnings. Its new warnings were compliant with the Article 11 Guidelines. As shown in Figure 21, noticing warning labels 'often' or 'very often' was largely unchanged among smokers in China (42% at Wave 2 and 45% at Wave 3) after the larger text warnings were introduced—thus the effectiveness of the warnings did not increase. In contrast, noticing warning labels 'often' or 'very often' increased from 58% to 82% among smokers in Mauritius after the implementation of large graphic warnings. The significant increase in Mauritius shows that China *could* expect a significant increase in label effectiveness if it were to revise its warnings in accordance with the Article 11 Guidelines.

Figure 21. Percentage of smokers who 'often' or 'very often' noticed warning labels in the last month, before and after changes to warning labels in Mauritius (from text to graphic) and China (larger text-only)

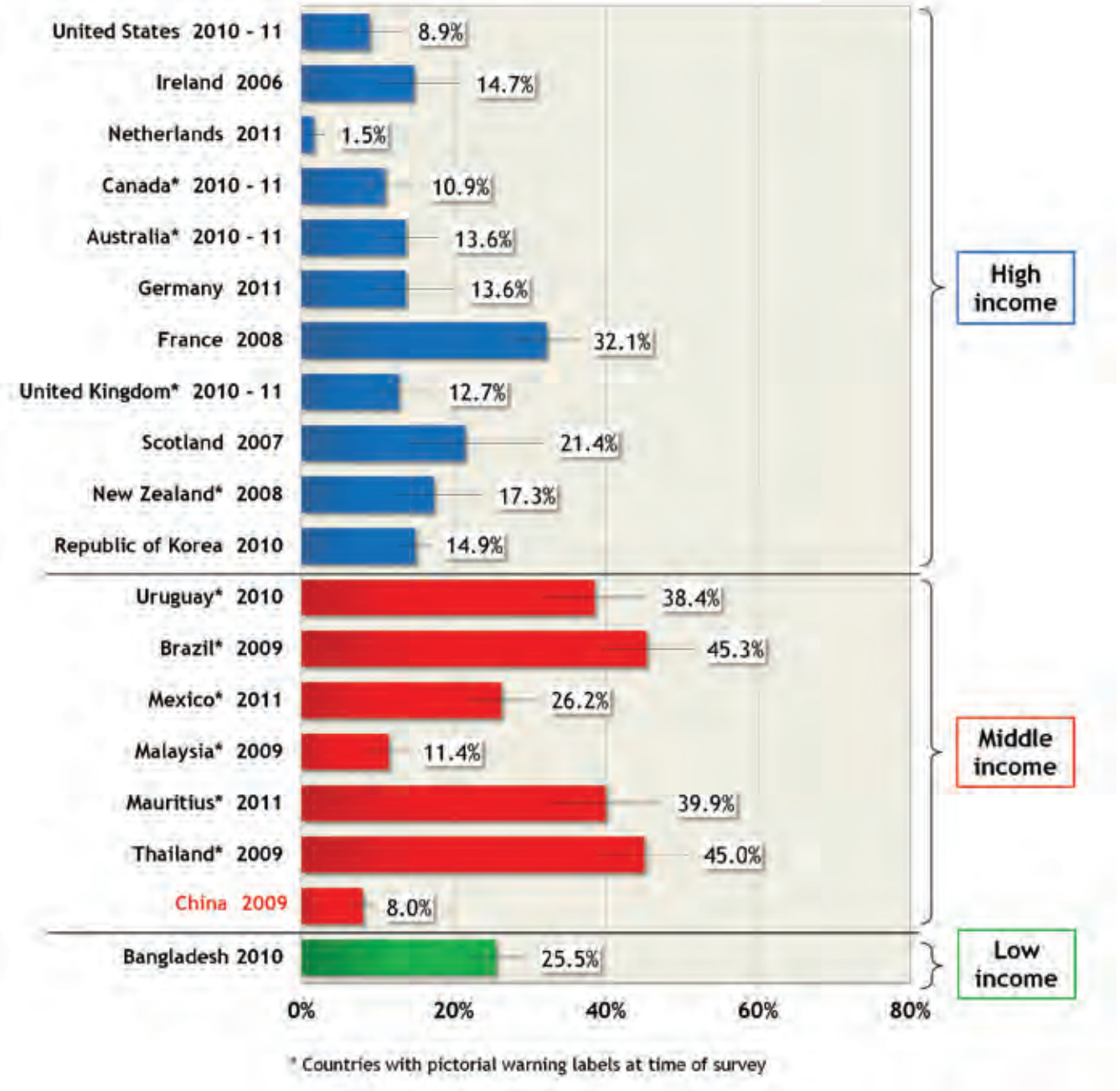


* The solid lines represent percentages adjusted for time-in-sample while the dashed lines represent the corresponding unadjusted percentages

Impact of Health Warnings

For the majority of Chinese smokers, the 2008 text warning labels are not effective at making smokers think about the health risks of smoking. At Wave 3, only 8% of all smokers said that the current health warnings made them think about the health risks of smoking 'a lot' – cross-country comparison analyses indicate that this percentage is the second lowest out of 19 ITC countries (Figure 22). There was no change in the percentage of smokers who thought about the health risks 'a lot' after the new text warnings were implemented. On the other hand, the percentage who said that the labels made them think about risks 'a little' increased from 40% to 49%.

Figure 22. Percentage of male smokers who said that warning labels on cigarette packages made them think of the health risks of smoking 'a lot', by country



* Countries with pictorial warning labels at time of survey

Figure 23 shows that the 2008 text warnings have resulted in only small improvements on two measures of warning label effectiveness. At Wave 3, the percentage of smokers who read or looked closely at the warnings increased from 19% to 24%. The percentage of smokers who said that in the last month, labels have stopped them from smoking at least once increased slightly from 17% to 22%. In addition, fewer Chinese smokers took steps to avoid warning labels. At both Waves 2 and 3, only 13% of smokers reported avoiding labels in the last month (Figure 23). In comparison, after the large graphic warnings were implemented in Mauritius, 30% of smokers gave up a cigarette at least once because of the labels and 40% of smokers reported avoiding the labels.

Furthermore, the 2008 warning labels do not motivate Chinese smokers to quit. Most smokers (70% at Wave 2 and 59% at Wave 3) stated that the labels do 'not at all' make them more likely to quit smoking. The percentage of smokers who stated that warnings made them want to quit smoking 'a lot' was 4% at Wave 2 and 5% at Wave 3. In contrast, 25% of smokers in Mauritius said the health warnings made them 'a lot' more likely to quit after the graphic warnings were implemented.

In the Wave 3 Survey, smokers who had participated in the Wave 2 Survey and had since quit smoking were asked whether the labels would increase the probability that they would stay quit. Almost one-third (31%) of those who had quit smoking at Wave 3 responded that the labels would 'not at all' increase the probability of staying quit, while 45% responded they would 'a little' and 25% said they would 'a lot'. In comparison, only 18% of smokers in Mauritius responded that the labels would 'not at all' increase the probability of staying quit and 61% of smokers said they would increase the probability of staying quit 'a lot'.

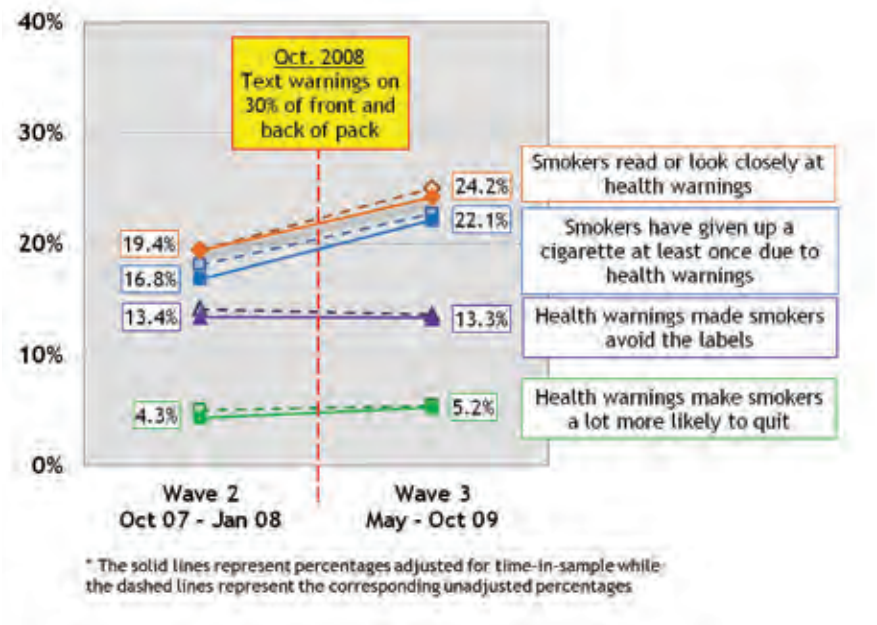
Emotional Responses to Health Warnings

Several questions were included in the Wave 3 Survey to measure emotional responses to the health warnings introduced in October 2008. Research evidence suggests that health warning labels have the most impact when they are prominent and include emotionally engaging imagery.[48]

The findings indicate that the text-based warning labels introduced in China in 2008 do not arouse strong emotional responses. The majority of Chinese smokers (76%) reported that the warning labels caused neither pleasant nor unpleasant feelings. Although 41% reported that the labels made them feel 'somewhat' or 'very' alarmed, 46% reported feeling 'neither alarmed nor calm'. In addition, when asked if the warning labels made them worried, 74% responded that they were 'not at all worried'. In contrast, in Mauritius, where a set of eight pictorial warnings including graphic images of mouth cancer (Figure 24) covering 70% of the back of the pack in English and 60% of the front of the pack in French were implemented in 2009, 72% of smokers reported feeling 'somewhat' or 'very' alarmed by the warnings.

Many smokers in China do not feel that the current health warnings are realistic. Only 10% felt that they were 'very realistic' and 45% stated that the warning labels were 'somewhat unrealistic' or 'very unrealistic'. In contrast, in Mauritius the percentage of smokers who think the current warnings are realistic is much higher, with 62% of smokers stating that the new pictorial warnings were 'extremely' or 'very' realistic. It is notable that the Mauritius warnings were still perceived as realistic despite evoking strong emotional responses such as 'alarm' and 'unpleasant' feelings.[49]

Figure 23. Impact of health warnings on smokers' perceptions and behaviours in the last month at Wave 3 (larger text warnings) vs. Wave 2 (text on side of the pack)*



* The solid lines represent percentages adjusted for time-in-sample while the dashed lines represent the corresponding unadjusted percentages

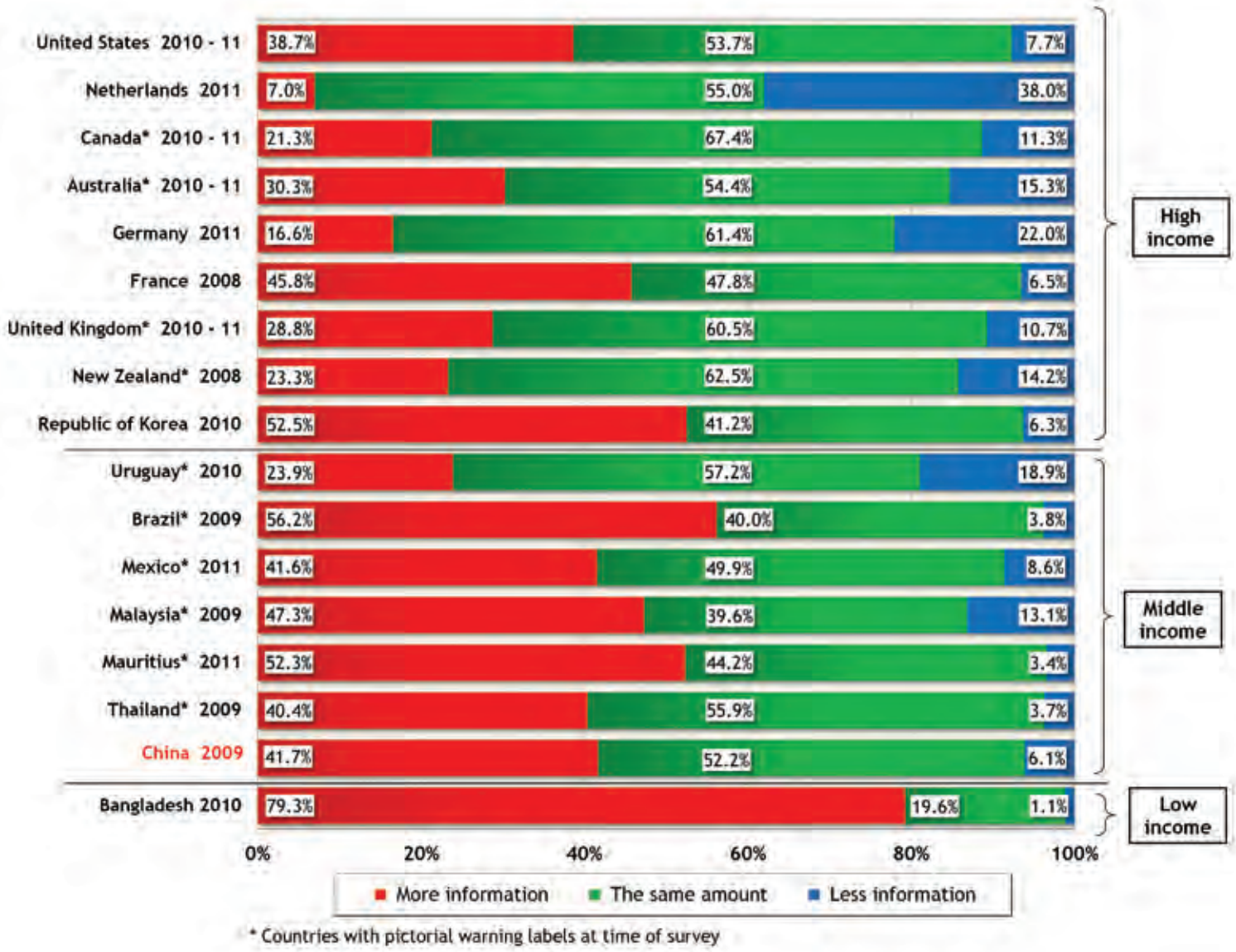
Figure 24. Pictorial warning label in Mauritius

ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

Support for More Effective Health Warnings

Smokers in China support having more information on health warnings. At Wave 2, more than one-third of smokers (40%) wanted more information on warning labels. At Wave 3, after the implementation of the larger text warnings, 40% of smokers still wanted more information, and only 7% wanted less information. ITC cross-country comparisons among male smokers show that the percentage of male smokers in China who want more information on labels is similar to that of middle-income countries who have pictorial labels (Figure 25). This points to the powerful role that packs play as a cost-effective medium for communicating information about the harms of tobacco.

Figure 25. Male cigarette smokers' opinions on whether there should be more, less, or the same amount of health information on cigarette packages, by country



China's text-only warning labels on 30% of the front and 30% of the back of the pack do not meet the Article 11 Guidelines which call for graphic image warnings on at least 50% of the top of the front and the back of the pack. Smokers in China support having more information on health warnings. After the implementation of the larger text warnings, 40% of smokers still wanted more information.

Evidence for Effectiveness of Pictorial Warnings in China

In 2009, an ITC experimental study conducted with a sample of 1,169 adult smokers, adult non-smokers and youth across four cities in China (Beijing, Shanghai, Kunming, and Yinchuan) found that the 2008 enhanced text-only Chinese warnings were much lower in effectiveness than labels that included both pictorial and text warnings.[47] The former (text on the side of the pack) and 2008 enhanced Chinese text-only warnings (30% on the front and 30% on the back of the pack, but not very distinctive), along with eight alternative warnings that were created on Chinese packs using pictorial+text warnings from Canada, Singapore, Hong Kong, and The European Union, were ranked and rated by respondents on a number of dimensions, including perceived effectiveness in motivating smokers to quit and in convincing youth not to start smoking (Figure 26).

The results were remarkably consistent across male and female adult smokers, adult non-smokers, and youth, in all four cities. All four pictorial+text warnings were rated and ranked highest on effectiveness in motivating smokers to quit (Figure 27) and convincing youth not to start smoking. The text-only versions of the four pictorial warnings were rated in the middle. Finally, the actual 2008 enhanced Chinese text warnings (30% of front and back) were rated at the bottom of the set of 10 warnings, just above the old Chinese text warnings that had appeared on the side of the pack.

Understanding of English Warnings

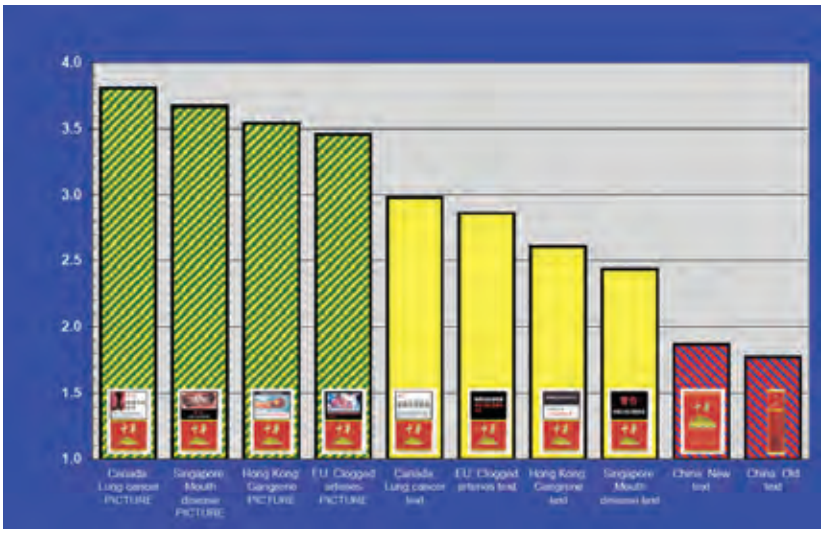
The use of English text only for the two health warning messages on the back of the pack ("smoking is harmful to your health" and "quit smoking early is good for your health") was shown to be ineffective at best: close to three-quarters (73%) of adult smokers could not translate "smoking is harmful to your health" and 90% could not translate "quit smoking early is good for your health". These findings support the reasonable principle that countries should not be presenting important health messages to their people in a foreign language.

Figure 26. Images of health warnings used in the study, including old and new Chinese health warnings

	Canada Lung Cancer	Singapore Mouth Disease	Hong Kong Gangrene	European Union Clogged Arteries	Actual China (Top=old; Bottom=new)
Text Only	 2	 6	 3	 10	 5
Text + Picture	 9	 8	 1	 4	 7
Text (English)	CIGARETTES CAUSE LUNG CANCER: 85% of lung cancers are caused by smoking. 80% of lung cancer vitims die within 3 years	WARNING: Smoking causes mouth diseases	Smoking causes peripheral vascular diseases	Smoking clogs the arteries and causes heart attacks and strokes	Smokig is harmful to your health. Quitting smoking early is good for your health.

Note: Numbers below each image are the random order numbers assigned to each of the images.

Figure 27. Mean effectiveness ratings of each health warning: 'How effective would each label be in motivating smokers to quit?' (All respondents)



Wave 3 Survey interviews being conducted by ITC interviewing teams in Shenyang

Health Warning Labels: Summary and Recommendations

- China's 2008 text health warnings were not more effective than the previous warnings.
- These text health warnings were less effective than pictorial warnings.
- Smokers in China rate pictorial warnings as much more effective than the same warnings without graphic images.
- Revising warnings to meet the Article 11 Guidelines, which recommend pictorial warnings covering at least 50% of the top of the front and the back of the pack, would significantly increase the impact of health warnings in China.
- Over 60 countries have already implemented pictorial warnings, and there are thus many examples of warnings that could be used to guide the design of more effective health warnings in China.
- Evidence from ITC evaluation studies suggests that revising the health warnings to meet FCTC Article 11 Guidelines would increase knowledge of the harms of cigarettes and motivation to quit among smokers in China.

PRICING AND TAXATION OF TOBACCO PRODUCTS

Increasing taxes and prices on tobacco products is considered to be one of the most effective components of a comprehensive tobacco control strategy. Article 6 of the FCTC obligates countries that have ratified the treaty to adopt pricing and taxation measures that reduce tobacco consumption.

In May 2009, the Chinese government readjusted its cigarette product tax structure to increase the ad valorem tax, but the specific excise tax of 0.06 RMB per pack remained unchanged. However, none of the increase in tax was passed on to the retail level: the retail price remained essentially the same. Because the tax increase did not result in a price increase, the 2009 tax adjustment has not yet served as a tobacco control measure. The findings from the ITC China Survey indicate that there is ample room to implement stronger pricing and taxation measures to reduce cigarette consumption and smoking prevalence in China.

It is well established that increasing tobacco excise taxes and prices is the most cost-effective intervention for reducing overall tobacco consumption and prevalence of tobacco use and improving of public health.[50, 51] A change to China's current taxation and pricing policies for tobacco products would have a substantial positive impact on public health outcomes, including higher rates of quitting among current smokers and lower rates of smoking uptake among young people.

A major challenge to tobacco control in China is that cigarette prices are very low and the affordability of cigarettes is high. China has experienced rapid economic growth over the past decade. Per capita family income quadrupled from 2000 to 2008 in urban districts and increased by 96% from 2000 to 2008 in rural districts.[52] Cigarette taxes and prices have not increased significantly over this same period. Thus, affordability of cigarettes has increased dramatically. Because price is the most important determinant of demand, the very high affordability poses a major obstacle for reducing tobacco use in China.

Article 6 of the FCTC obligates Parties, including China, to adopt pricing and taxation policies that will reduce tobacco consumption. In May 2009, China implemented a tax adjustment that was announced as a move toward fulfilling the FCTC obligation. This was the first change in the tax structure since 2001. Table 7 shows the changes that were made.

Table 7. The excise tax rates before and after the adjustment on cigarette excise tax rates in China in May 2009[53]

	Before May 31st, 2009	After May 31st, 2009
	Specific tax per pack	
	RMB 0.06 per pack	RMB 0.06 per pack
Ad valorem tax		
Factory price per pack	Class A: RMB ≥5 Tax rate = 45%	Class A: Changed to RMB ≥7 Tax rate = 56%
	Class B: RMB <5 Tax rate = 30%	Class B: RMB <7, 36% Tax rate = 36%
Wholesale price per pack	0%	5%

The following factors and evidence from the ITC China Survey demonstrate that current price and tax policies in China are supportive of continued high prevalence of smoking:

Low Excise Taxes

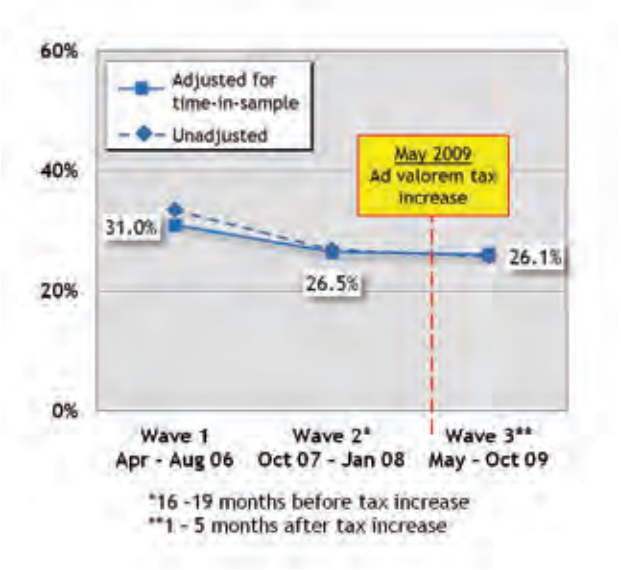
The overall tax rate in China (i.e., the percentage of the retail price that consists of taxes) was 40% before the 2009 tax adjustment and 43% afterward – far below the world median level of 65-70%. For the most widely purchased brand the tax rate was even lower, at 36%.[54, 55]

Low Reliance on Specific Taxes and High Reliance on Ad Valorem Taxes

Specific taxes are known to be more effective than ad valorem taxes in reducing consumption: such taxes cannot be reduced by the consumer because they are levied on the product rather than on the price. In China, the specific tax is very low: only RMB 0.06 per pack of 20 cigarettes, a rate that did not change in the 2009 tax adjustment. Ad valorem taxes, however, are levied on the price of the product, and thus can be reduced by the consumer by buying cheaper cigarettes. The possibility of this kind of reduction was enhanced by the change in the two-tier ad valorem tax structure in China: a greater proportion of brands now fall under the lower tier (those between RMB 5.00 and 7.00 per pack) and the difference in ad valorem tax rates has widened, from a 15% gap before the adjustment (45% vs. 30%) to a 20% gap after the adjustment (56% vs. 36%).

This analysis of the possible impact of the tax adjustment on consumer behavior only applies, of course, if the tax changes are accompanied by corresponding changes in retail prices. And it is here where the real problem in the tax adjustment is to be found: From 2007 to 2010, the tax adjustment has been absorbed by the China National Tobacco Company (CNTC), which has NOT changed the retail prices.

Figure 28. Percentage of smokers who said they thought about the financial cost of smoking in the last month, before and after the tax increase



The ITC Survey findings show that the average cost of the 18 cigarette brands remained almost unchanged from 2007 to 2010: RMB 7.90 per pack in 2007, RMB 7.79 per pack in 2009, and RMB 7.83 per pack in 2010. After adjusting for inflation, the real price of cigarettes actually decreased from 2007 to 2010.

In addition, at Wave 1 of the ITC China Survey, 69% of smokers said they 'never' thought about the money they spent on smoking during the last month, and this percentage increased to 74% at Wave 2 and Wave 3. In contrast, the percentage of smokers who said they 'occasionally' or 'often' thought about the money they spent on smoking during the last month decreased from 31% at Wave 1 to 27% at Wave 2 and 26% at Wave 3 (Figure 28). Findings from the ITC Survey clearly show that the tax adjustment has led to no changes in price, and thus cannot be considered to be an implementation of FCTC Article 6.

Low Cigarette Prices

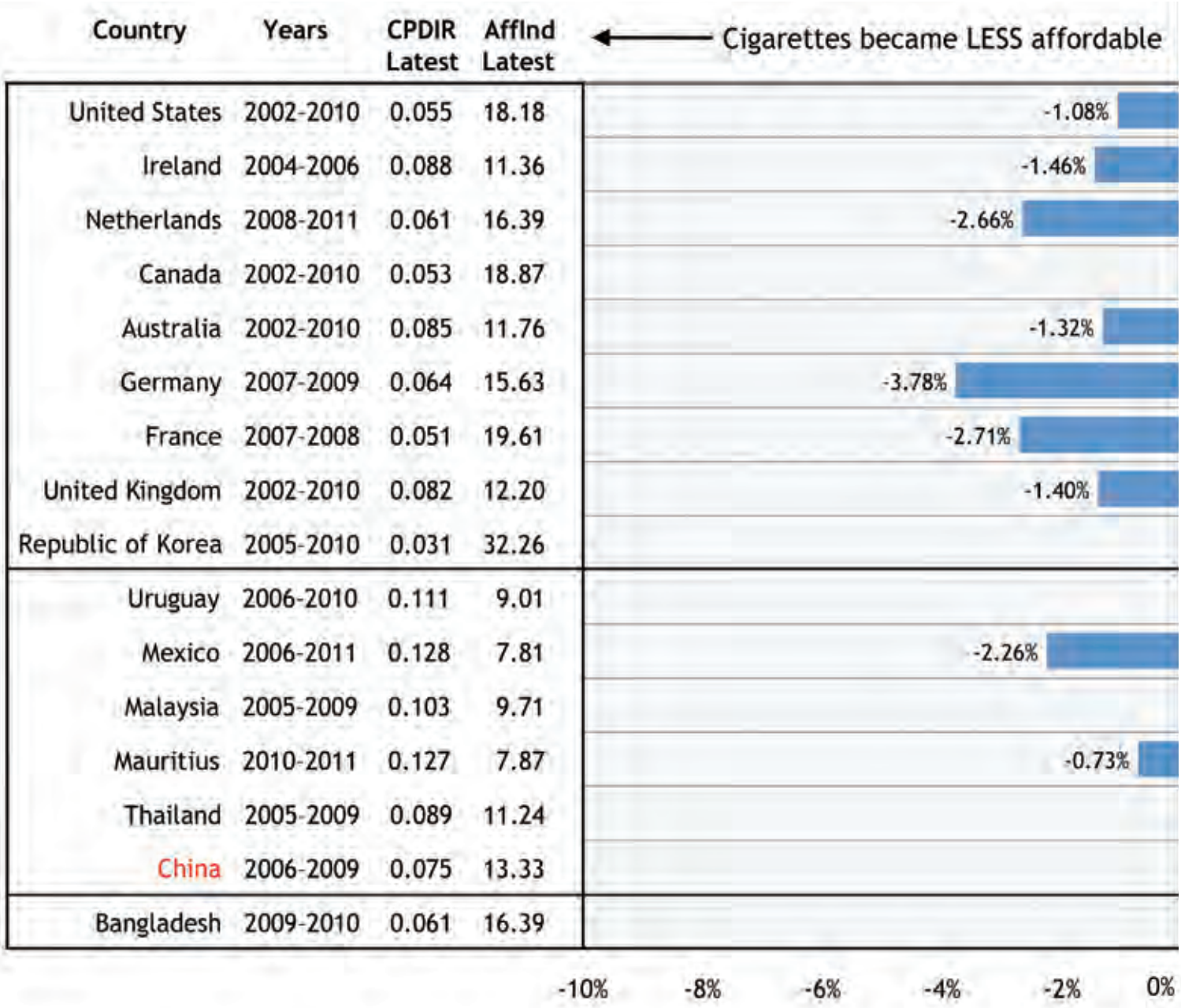
The median price of a pack of 20 cigarettes in China is just RMB 6.00, which is less than $1 US. A quarter of Chinese smokers in the ITC China Survey reported buying their most recent pack at a price of RMB 4.20 or less.

Chinese smokers pay attention to the price of cigarettes. At Wave 1 of the ITC China Survey, 70% of smokers said that they chose their brand based on affordability. This percentage increased slightly to 71% at Wave 2 and increased to 80% at Wave 3. The CNTC also pays close attention, and in fact requires local tobacco companies to produce certain amounts of less expensive cigarettes through subsidies. The CNTC claims that less expensive cigarettes may help satisfy low-income populations' needs, and this strategy works to keep poor smokers smoking. Such a rationale is problematic because there is research evidence showing that the existence of less expensive cigarettes can deter smokers from quitting. For example, a recent study found that smokers who reported buying less expensive cigarettes were also less likely to intend to quit smoking.[56]

Current price/tax policies in China are a major factor — perhaps the most important factor — that is responsible for the continuing high prevalence of smoking, particularly among low-income smokers. The continued presence of many low-priced brands will weaken the public health impact of any price increase because it provides opportunities for smokers to switch to these lower-priced brands instead of reducing their consumption or quitting.

The findings from the ITC China Survey indicate that there is ample room to implement stronger pricing and taxation measures to reduce cigarette consumption and smoking prevalence in China.

Figure 29. Affordability of cigarettes and change in affordability per year in 16 countries



ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

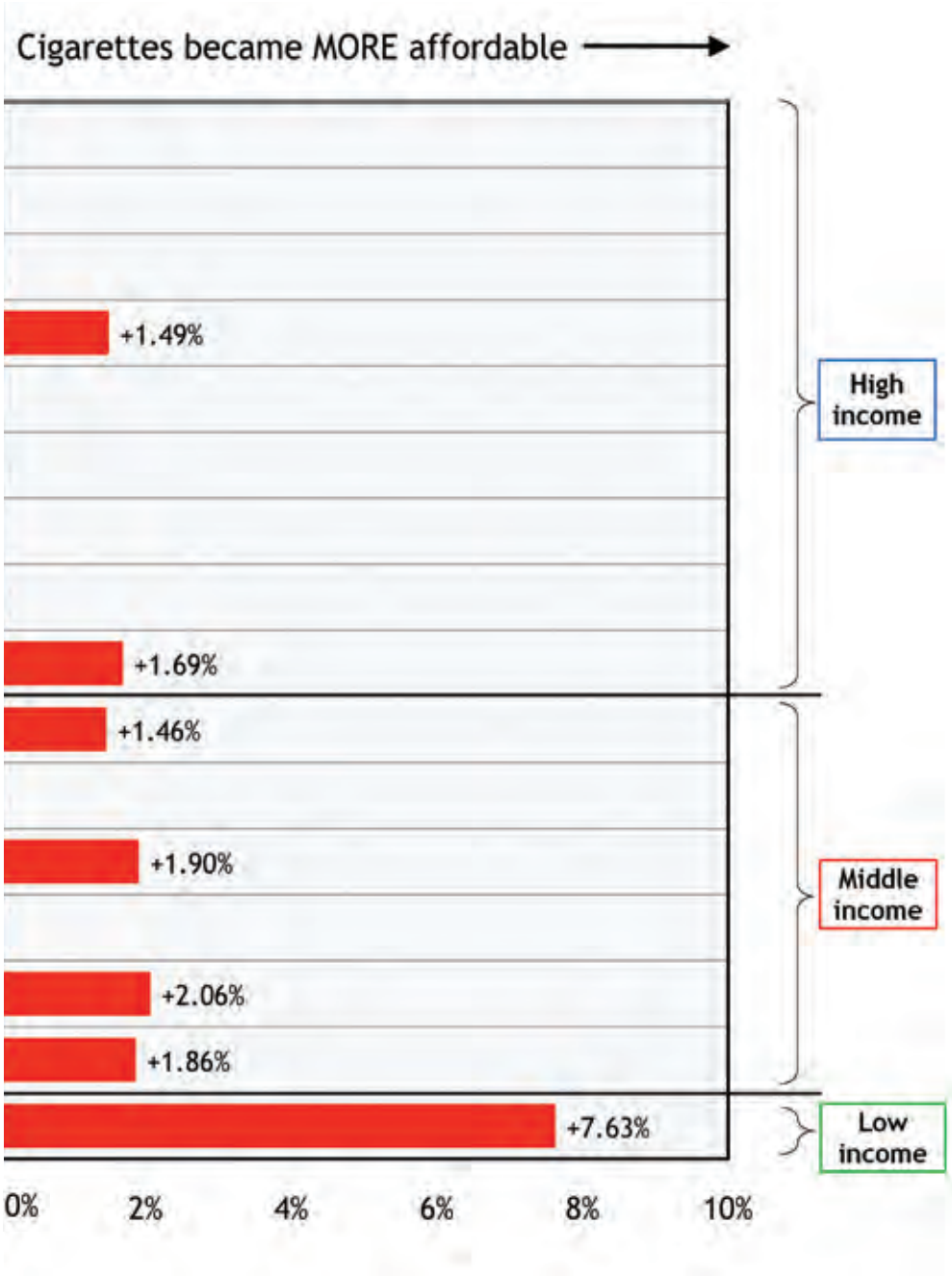


Figure 29 presents for 16 ITC countries: (a) Data presented for Mauritius is for Wave 2 (2010) and Wave 3 (2011). Data for all other countries is for the year of the first survey wave and of the most recent wave, (b) **CPDIR Latest**: the CPDIR (amount spent on cigarettes per day / income earned per day) at the most recent survey wave, (c) **AffInd Latest**: the Affordability Index (the reciprocal of CPDIR) for the most recent wave.*

*** Change in Affordability Index per year = (AffIndMost Recent - AffIndFirst) / [(Difference in days between Date of SurveyFirst fieldwork at the 1/3 timepoint of the survey interviewing period and Date of SurveyMost Recent fieldwork at the 1/3 timepoint of the survey interviewing period) / 365]. The date corresponding to 1/3 of the survey interviewing period was chosen because it was the approximate point at which 50% of the respondents had been interviewed for that survey wave in each country.**

Wave 1 Survey interviews being conducted by ITC interviewing teams in Yinchuan

Wave 2 Survey interviews being conducted by ITC interviewing teams in Changsha

Cigarette branding being worn by musicians at the Stone Forest, Yunnan, China

Few Smokers Think About Costs

Over three-quarters of Chinese smokers across all three waves (79% at Wave 1; 80% at Wave 2; 81% at Wave 3) report that they feel that they spend too much on cigarettes. However, the percentage of smokers who reported 'often' thinking about how much they spend on smoking was very low (12% at Wave 1; 6% at Wave 3). ITC cross-country comparison analyses indicate that China ranks lowest of 19 countries on this measure. These results suggest that price and tax increases in China will, as has been found in many other countries, motivate thoughts and action toward quitting smoking.

Affordability is Increasing

Average cigarette prices remained essentially unchanged across the three waves of the ITC China Survey. We monitored the price of a set of popular cigarette brands from Wave 1 to Wave 3 and found that the average price ranged from RMB 6.26-6.40. After adjusting for inflation, the real price of cigarettes decreased from 2007 to 2010.[57] Data from the ITC Surveys also allows for an analysis of cigarette affordability, which refers to the quantity of resources (or income) that is required to purchase a pack of cigarettes. Higher affordability, for example, means that the price of a pack of cigarettes would require a lower percentage of one's daily income.

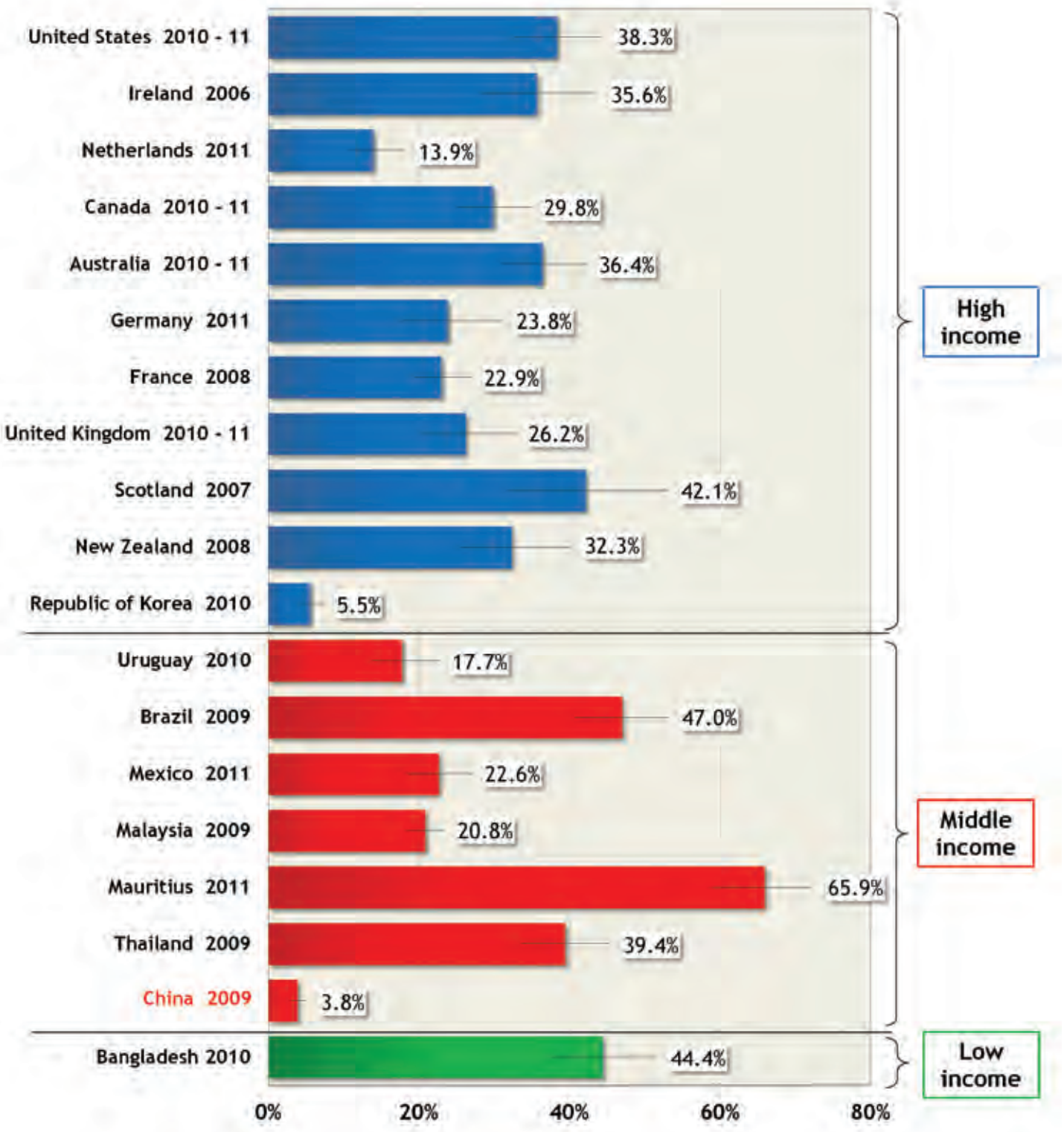
An Affordability Index (the reciprocal of the percentage of daily income spent on an average dose of cigarettes) was constructed using ITC China Survey data to determine the change in cigarette affordability in China between Wave 1 (2006) and Wave 3 (2009). This analysis took into account ITC data on price paid for the most recent cigarette purchase, number of cigarettes smoked per day, and household income. The results show that cigarettes became more affordable from Wave 1 to Wave 3, with an average annual increase in the affordability index of 1.86% (Figure 29). This means that smokers only spend on average 1.4% of their income on cigarettes.

As another measure of cigarette affordability, the ITC China Surveys asked smokers: "In the last six months, has there been a time when the money you spent on cigarettes resulted in not having enough money for household essentials such as food?". The survey results provide additional evidence that cigarettes are becoming more affordable in China. At Wave 1, only 10% of smokers said there had been a time that they didn't have enough money for household essentials because of money spent on cigarettes, decreasing to 5% of smokers at Wave 3.

These factors translate into low motivation to quit. At Wave 3, for example, only 3% of smokers responded 'very much' when asked if the price of cigarettes was a reason to think about quitting. This percentage remained relatively unchanged from Wave 1 (5%) and Wave 2 (3%). Figure 30 shows that among 19 ITC countries, China has the lowest percentage of male smokers who consider the price of cigarettes as a reason for quitting.

ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

Figure 30. Percentage of male smokers who think price is a reason to quit smoking, by country



Pricing and Taxation of Tobacco Products: Summary and Recommendations

Current tax and pricing policy in China is ineffective as a tobacco control measure. Cigarettes in China have become increasingly affordable for more people. The existence of a large number of less expensive brands and the great reliance on ad valorem taxes encourage smokers to switch to cheaper brands rather than to quit.

The following recommended changes in taxation policy would make a substantial impact on public health in China, based on the findings of the ITC China Survey and on economic studies of tobacco taxation in China and in other countries:

Translate Tax Increases to Price Increases

- By removing the artificial barrier that prevents the tax increase from resulting in price increases, China would be implementing an effective tobacco control policy that would lead to increased quitting among adult smokers and decreased smoking initiation among youth, as required under China's obligations as a Party to the FCTC. Cigarette prices in China almost remained unchanged from 2007 to 2010, and the 2009 cigarette excise tax adjustment did not result in an increase in cigarette retail prices.
- If the May 2009 tax adjustment, with its relatively small tax increase of 11.7%, was allowed to be expressed in an increase of 3.4% in the retail price, the projected impact would reduce the number of smokers to between 640,000 and 2.09 million, and reduce between 210,000 and 700,000 premature deaths due to smoking.[12]
- In China, smokers are considerably less responsive to price than in other countries. Estimates of price elasticity (i.e., the change in demand resulting from a price increase) range from -0.08 to -0.15, far below the price elasticity of high-income Western countries, which range from -0.30 to -0.50.[58, 59] This low elasticity is likely due to the high affordability of cigarettes and the availability of lower-priced brands. The recommendations provided here are likely to increase price sensitivity, which would then translate to greater public health gains if China begins to implement truly effective tax/price policies to fulfill its obligation as a Party to the FCTC.

Increase Excise Taxes

- It is a myth that increasing tobacco taxes will decrease tax revenue. In fact, because demand for cigarettes is fairly inelastic, elementary economic principles predict that raising taxes will raise revenue at the same time as it will reduce consumption. This would be a win-win situation for the economic health and public health of China.
- Assuming a price elasticity of -0.15, a conservative estimate, a 3.4% increase in the retail price of cigarettes in China would reduce cigarette consumption by about 545 million packs of the total national cigarette consumption of 106.98 billion packs and the government would gain an additional 22.58 billion RMB ($3.4 billion) in revenue.[60]

Increase the Specific Tax Rate and Eliminate the Two-Tier Ad Valorem System

- Hu et al. (2010) suggest the following changes to the current two-tier tax structure: (1) increase the specific tax so that it represents a much higher proportion of the total tax; and (2) eliminate the two-tier ad valorem tax, which weakens the tax effect by encouraging smokers to switch to lower-priced cigarettes rather than to reduce consumption or to quit.[12]

Set a Minimum Price to Discourage Brand Switching with Cost Increases

- The ITC Survey found that the price of the most expensive cigarette brand was approximately 100 times higher than the least expensive brand. The very high variability of brand prices and the presence of a large number of less expensive brands have contributed to the fact that only 3% of smokers consider the price of cigarettes 'very much' a reason for quitting, which is a sign that cigarette prices are too low to encourage smokers to quit. Setting a higher minimum price would decrease the tendency for smokers (especially lower-income smokers) to simply switch to lower-priced cigarettes (if the minimum price was set at a sufficiently high level).
- The WHO FCTC requires Parties to adopt price and tax policies to reduce tobacco consumption. However, when cigarette prices are increased in China, the presence of many low-priced brands easily enables smokers to find a less expensive cigarette brand to substitute their old brand. Any such substitution will reduce the effectiveness of the policy. Therefore, if China is to adopt price and tax policies as suggested in WHO FCTC, accompanying measures should be taken to reduce the price differential among brands. Therefore, the price difference between cigarette brands should be reduced in order to discourage brand switching.

EDUCATION, COMMUNICATION, AND PUBLIC AWARENESS

Under Article 12 of the FCTC, Parties must promote and strengthen public awareness of tobacco control issues through education and public awareness programs on the health risks of tobacco use and the benefits of cessation, and provide public access to information on the tobacco industry.

Few efforts have been made to increase public awareness on the dangers of smoking at the national level in China. Between 2008 and 2010, the World Lung Foundation ran several local media campaigns to raise awareness about the harms of smoking, including the graphic "Sponge" campaign in Beijing and the "Giving cigarettes is giving harm" campaign in 11 cities.

The ITC China Survey assesses public awareness of information on the dangers of smoking and the benefits of quitting, identifies the main sources of this information, and measures public attitudes towards the tobacco industry. Wave 3 of the ITC China Survey also included measures to evaluate the anti-cigarette gifting media campaign.

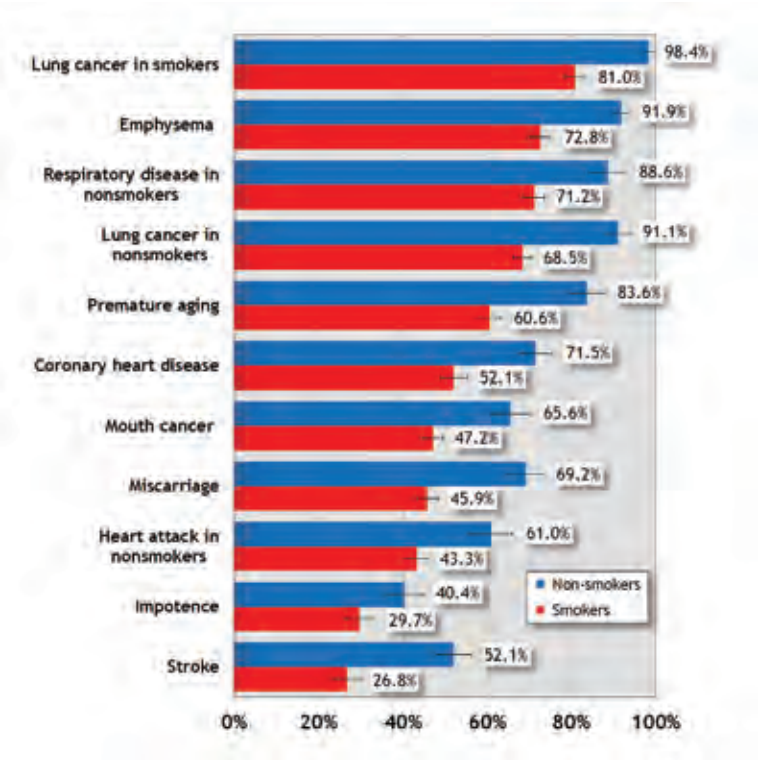
Knowledge of the Harms of Smoking

The ITC China Survey measures smokers' and non-smokers' awareness of a range of health effects associated with smoking. The findings suggest that knowledge and awareness of the harms of smoking has increased among Chinese smokers and non-smokers. However, awareness among Chinese smokers continues to remain low compared to smokers in Western countries for stroke and coronary heart disease – both leading causes of death in China.[61]

At Wave 3, Chinese smokers correctly believed that smoking causes lung cancer (81%), emphysema (73%), premature aging (61%), and coronary heart disease (52%). However, fewer than half of smokers believed that smoking causes stroke (27%), impotence (30%), miscarriage (46%), and oral cancer (47%).

Overall, Chinese non-smokers were more aware than smokers of the health effects of smoking, a pattern found in other ITC countries. At Wave 3, the majority of Chinese non-smokers believed that smoking causes lung cancer (98%), emphysema (92%), premature aging (84%), coronary heart disease (72%), miscarriage (69%), oral cancer (66%), and stroke (52%) (Figure 31). Among smokers who were recontacted at all three survey waves, the level of awareness increased considerably between Wave 1 and Wave 3 for all health effects (Figure 32).

Figure 31. Percentage of smokers and non-smokers who believe that cigarette smoking causes specific health effects, Wave 3 (May – Oct 2009)

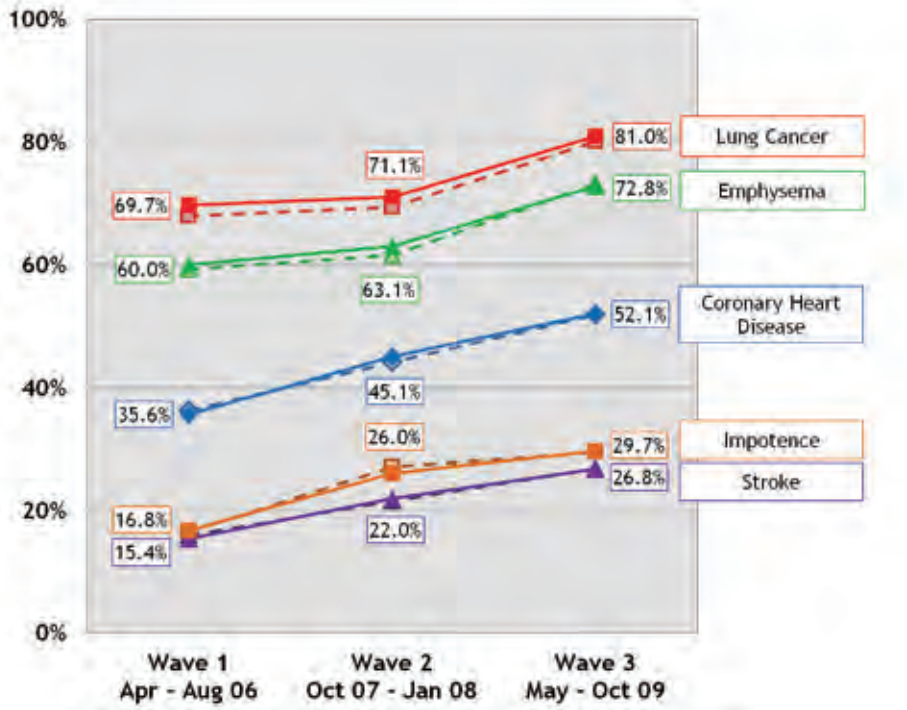


Knowledge and awareness of the harms of smoking has increased among Chinese smokers and non-smokers, but awareness that smoking causes stroke and coronary heart disease remains low compared to smokers in Western countries.

Chinese smokers and non-smokers are becoming more aware of the health effects of secondhand smoke. At Wave 3, nearly all non-smokers (91%) believed that smoking causes lung cancer in non-smokers. Although over two-thirds of smokers (69%) believed that smoking causes lung cancer in non-smokers, cross-country comparison analyses show that male smokers in China are among the least aware compared to 15 other ITC countries (Figure 33). Most smokers (71%) and non-smokers (89%) at Wave 3 believed that secondhand smoke causes respiratory diseases in non-smokers. Only 43% of smokers and 61% of non-smokers believed that secondhand smoke causes heart attacks in non-smokers.

Although Chinese smokers are becoming increasingly aware of the health effects of smoking, they do not often think about the harms to themselves. Only 32% of Chinese smokers thought about the harms of smoking to themselves 'often' or 'very often' in the last month. ITC cross-country comparisons of male smokers show that among 17 countries, China has the third lowest percentage of male smokers who 'often' or 'very often' think about the harm of smoking to themselves (Figure 34). Only 14% of smokers at Wave 3 believed that smoking has damaged their health 'very much'. This percentage remained relatively unchanged from previous waves (19% at Wave 1 and 15% at Wave 2).

Figure 32. Percentage of smokers who believe that cigarette smoking causes specific health effects, by wave*



* The solid lines represent percentages adjusted for time-in-sample while the dashed lines represent the corresponding unadjusted percentages.

Beliefs about Light/Mild Cigarettes

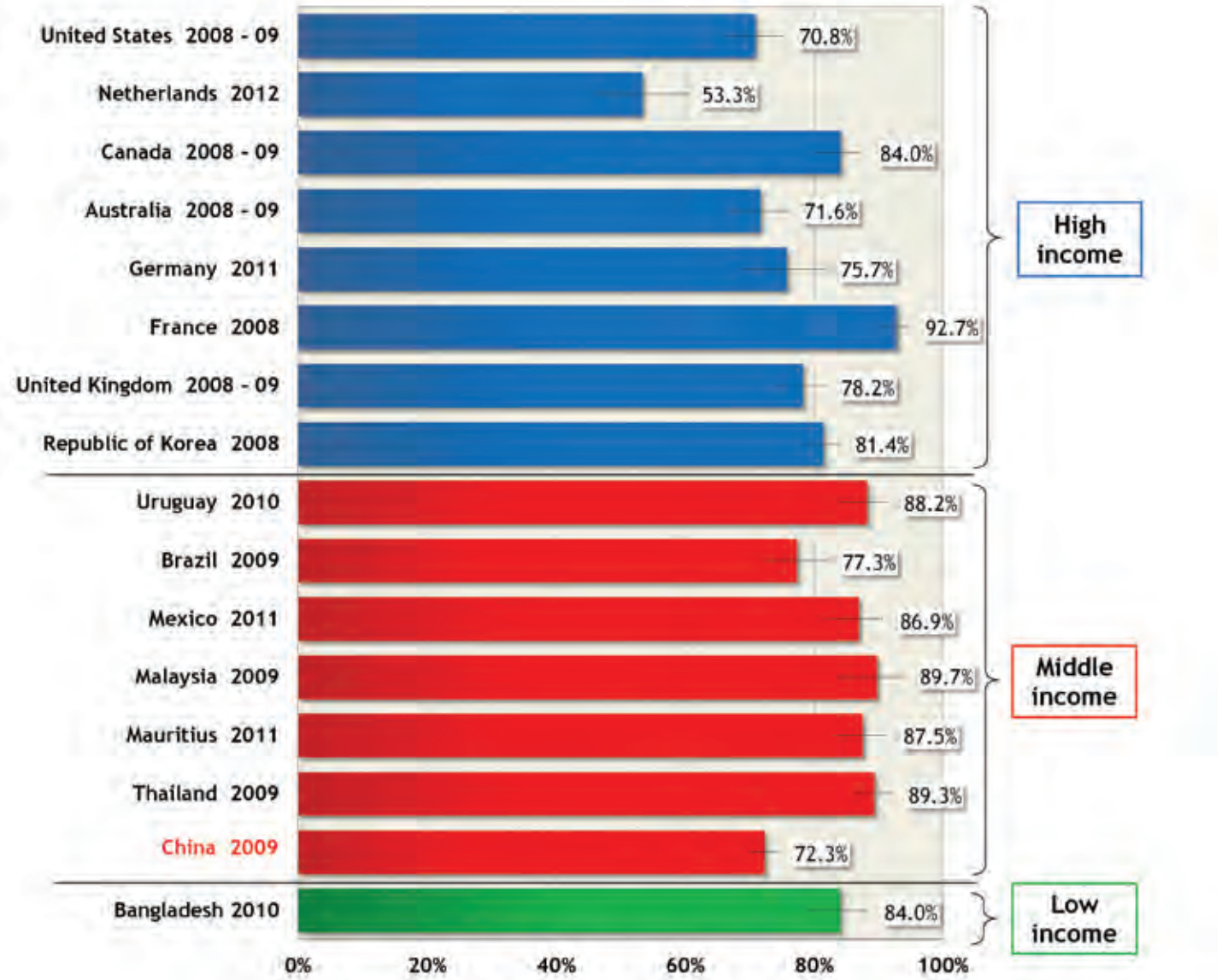
In January 2006, China banned descriptors such as 'light', 'ultra-light', 'mild', and 'low tar'; however, the tobacco industry was given until April 2006 (the month that the Wave 1 Survey was launched) to comply with this ban. The Wave 1 Survey found that the majority of smokers believed that 'light' and/or 'low tar' cigarettes were less harmful compared to 'full flavoured' cigarettes.[62] These misperceptions were strongly related to the belief that these cigarettes are smoother on the respiratory system. Highly educated smokers were also significantly more likely than low educated smokers to believe that 'light' and/or 'low tar' cigarettes are less harmful.

Government officials in China said that the English descriptors were not covered under the ban and thus were kept on cigarette packages. Despite the ban on the Chinese descriptors, the majority of smokers in China continue to be misinformed about the use of the terms 'light' and 'mild' on cigarette packs. In comparison to smokers in all other ITC countries, Chinese smokers are the most likely to believe that 'light' and 'low tar' cigarettes are less harmful. At Wave 3, most Chinese smokers believed that 'light' and 'low tar' cigarettes are less harmful (69% and 78%, respectively) than regular cigarettes, when in fact there is no evidence that such cigarettes are indeed less harmful.

Almost two-thirds of Chinese smokers at Wave 3 said they 'agree' or 'strongly agree' that 'light' cigarettes (65%) and 'low tar' cigarettes (62%) make quitting easier, and 67% 'agree' or 'strongly agree' that 'light' and 'mild' cigarettes are less addictive than regular cigarettes. As found in Wave 1, three-quarters of smokers 'agree' or 'strongly agree' that 'light' (75%) and 'low tar' (77%) cigarettes are smoother on the respiratory system.

The high prevalence of misperceptions among Chinese smokers that 'light/mild' cigarettes are less harmful indicate a strong need for more effective educational campaigns to inform smokers about the myth of 'light/mild' cigarettes—that such cigarettes are NOT less harmful. Findings from the ITC Uruguay Survey suggest that bans on misleading descriptors and limiting brand varieties to one single presentation do not go far enough in controlling deceptive packaging practices.[68] Article 11 and Article 13 Guidelines recommend that Parties adopt plain packaging in order to curb the tobacco industry's use of packaging design techniques that may suggest that some products are less harmful than others.

Figure 33. Percentage of male smokers who believe that secondhand smoke causes lung cancer in non-smokers, by country

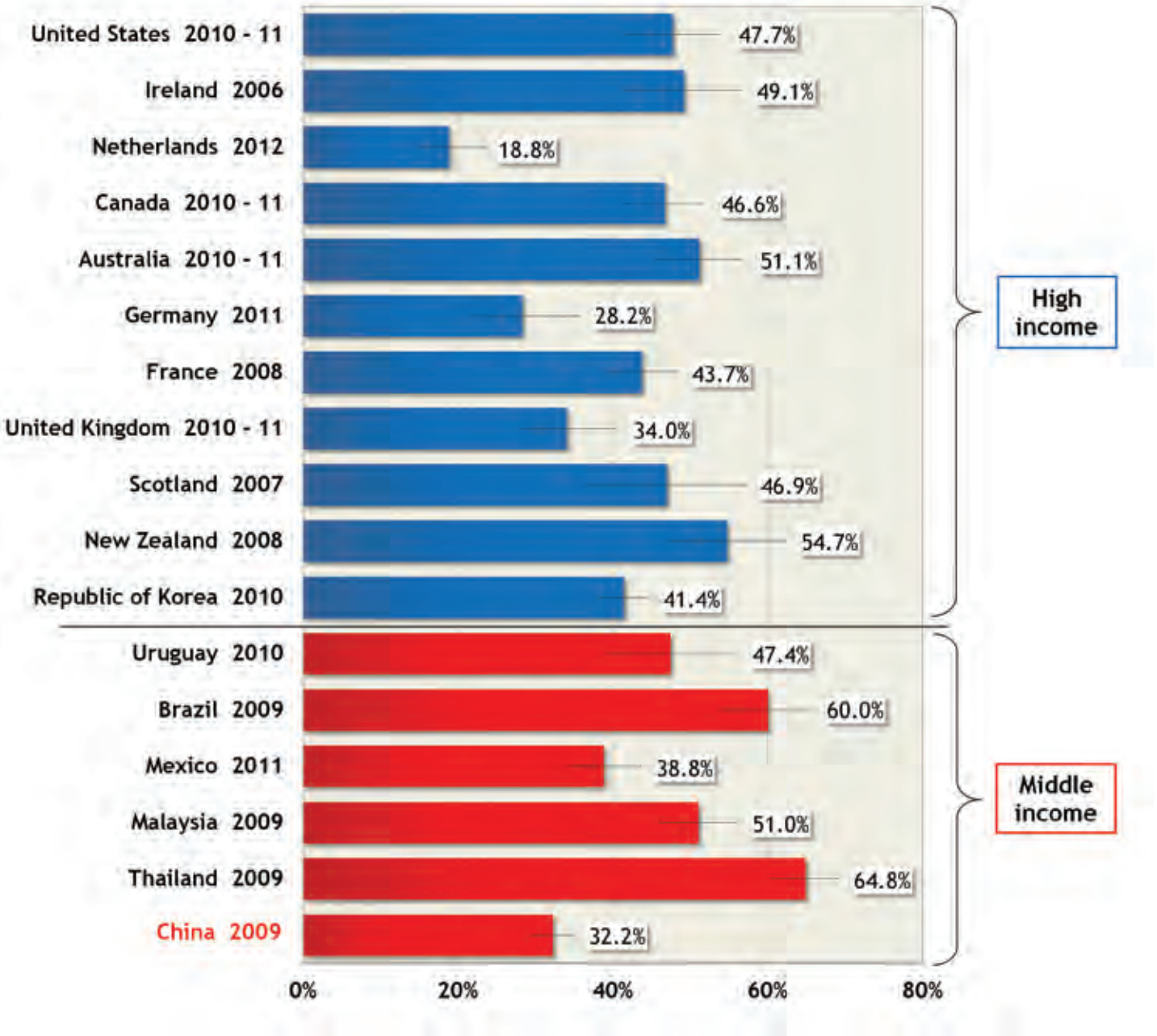


Exposure to Anti-Smoking Messages

In general, smokers in China do not frequently notice anti-smoking messages. At Wave 3, only 23% of smokers said they 'often' noticed anti-smoking information; 48% said they noticed it 'once in a while', and 29% said they 'never' noticed anti-smoking information. Sources of information on the dangers of smoking cigarettes or encouraging quitting at Wave 3 were cigarette packs (79%), television (70%), public transport vehicles or stations (61%), newspapers or magazines (58%), in shops (36%), over the Internet (32%), and on or around street vendors (19%).

Wave 1 to Wave 3 Survey results suggest an increase in the prominence of anti-smoking information over time. A greater percentage of Chinese smokers reported noticing anti-smoking messages in each of the media outlets and venues at Wave 3 than at previous waves. For example, the percentage of Chinese smokers who reported noticing anti-smoking information at the workplace increased from 25% at Wave 1 to 52% at Wave 3. Similarly, the percentage of smokers who noticed anti-smoking information at restaurants and tea bars increased from 19% at Wave 1 to 57% at Wave 3. The percentage of smokers believing that the anti-smoking messages made smoking less socially acceptable also increased from 63% at Wave 1 to 75% at Wave 3. At Wave 3, 34% of smokers who reported noticing anti-smoking messages said that the latter made them more likely to quit, increasing from 28% at Wave 1.

Figure 34. Percentage of male smokers who 'often' or 'very often' thought about the harm of smoking to themselves in the last month, by country



Awareness of the Anti-Cigarette Gifting Media Campaign

Offering cigarettes as a gift is a deeply entrenched social norm in Chinese culture.[63] At Wave 3, 9% of smokers said part of their decision to smoke the brand that they smoked more than any other brand in the last month was that it was a gift from others. The ITC China Survey found that 3% of smokers at Wave 2 and 2% of smokers at Wave 3 said that they last obtained cigarettes as a gift from others. At Wave 3, 25% of smokers said they 'agree' or 'strongly agree' that cigarettes make good gifts.

From December 2008 to February 2009 and in May 2010, the World Lung Foundation, in partnership with the China CDC and World Health Organization, ran a mass media campaign in 11 Chinese cities to discourage gifting of cigarettes. The "Giving cigarettes is giving harm" campaign consisted of a public service advertisement on television, mobile media, and posters in 11 provinces. Wave 3 of the ITC China Survey included several measures to evaluate the effectiveness of the campaign.

ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

Although few Chinese smokers recalled seeing or hearing the campaign (15% of smokers at Wave 3), those who were exposed to it were more likely to believe that cigarettes are not good gifts for family or friends. More than two-thirds of smokers (68%) who saw the campaign 'strongly disagreed' or 'disagreed' that cigarettes are good gifts compared to 58% of smokers who did not see the campaign. The majority of those who saw the campaign said they 'agree' or 'strongly agree' that the campaign makes giving cigarettes as gifts less acceptable by society (74%) and makes people less likely to give cigarettes as gifts to others (78%).

Perceptions of the Tobacco Industry

In a country where the Government owns the tobacco industry, it is not surprising that perceptions of the tobacco industry in China are generally favourable. More than half of Chinese smokers (56% at Wave 1, 58% at Wave 2, and 56% at Wave 3) 'agree' or 'strongly agree' that tobacco companies do good things for Chinese society; only 38% at Wave 3 said they 'disagree' or 'strongly disagree'. Non-smokers have less favourable perceptions of the tobacco industry — 37% of non-smokers 'agree' or 'strongly agree' that tobacco companies do good things for Chinese society.

Despite these generally positive attitudes about the tobacco industry, there is strong support for tobacco control in China. The majority of smokers (84%) and non-smokers (91%) said they 'agree' or 'strongly agree' that the Chinese government should do more to control smoking. At Wave 3, 68% of smokers and 84% of non-smokers 'disagreed' or 'strongly disagreed' that the tobacco industry should be allowed to advertise.

The majority of smokers (84%) and non-smokers (91%) 'agree' or 'strongly agree' that the Chinese government should do more to control smoking.

Education, Communication, and Public Awareness: Summary and Recommendations

- Knowledge of the harms of smoking has increased among smokers in China since 2006; however, the majority of smokers still lack knowledge of important health effects. For example, Chinese male smokers were the least likely among male smokers in 8 low- and middle-income countries to be aware that smoking can cause lung cancer in non-smokers.
- Chinese smokers are also the most likely to believe the myth that 'light/mild' cigarettes are less harmful. The existing ban on the use of these terms must be extended to ALL languages. China must implement further packaging restrictions to ban the tobacco industry's use of colours and other design features of the pack that convey the invalid perception that a brand is 'lighter' or 'milder'. These strategies have been used by the tobacco industry in other countries and have been as effective as the words 'light' and 'mild' in conveying the perception of a safer product.
- There has been an increase in recent years in noticing of anti-smoking campaigns, but these efforts must be expanded and deepened. There is some evidence from the ITC China Survey that the anti-gifting campaign was successful, but the percentage of smokers that actually noticed the campaign was too low. There are substantial challenges, such as the enormous size of the country, in fulfilling the objective of raising the level of knowledge among Chinese people about the harmful effects of smoking.
- There is a pressing need for stronger educational programs and mass media campaigns to inform the Chinese people about the many harms of cigarette smoking. Such programs could serve to motivate smokers to quit and to reduce the number of youth who begin to smoke.
- A powerful method of educating the Chinese people about the harms of cigarette smoking is through large health warning labels with graphic images. The recommendations in this section on education therefore reinforce those of the section on health warning labels: China should fulfill their obligation as a Party to the FCTC by strengthening their health warnings in accordance with the strong Article 11 Guidelines of the FCTC.

TOBACCO ADVERTISING, PROMOTION, AND SPONSORSHIP

Article 13 of the FCTC requires Parties to implement effective measures against tobacco advertising, promotion, and sponsorship. Guidelines for Article 13 recommend a comprehensive ban on all forms of tobacco advertising, promotion, and sponsorship.

Direct tobacco advertisements in the mass media, such as television, radio, newspapers and periodicals, are banned in China. However, tobacco companies have easily maintained a visible marketing presence through sponsorships and promotions and indirect promotion in the entertainment media. In February 2011, the State Administration of Radio, Film, and Television ordered producers to minimize the amount of smoking depicted on-screen. This is an important step given that exposure to smoking in movies has been shown to increase adolescents' positive attitudes towards smoking and smoking initiation by normalizing smoking behaviour and downplaying negative health effects.[64]

Tobacco advertisement in a public place, Sichuan, China

Tobacco Advertising

The ITC China Survey findings indicate that smokers are exposed to tobacco advertising and promotion despite bans on direct advertising in China. At Wave 3, 39% of smokers said they noticed promotion of smoking 'often' or 'once in a while' in the last 6 months. This percentage represents a slight decrease from previous waves (40% at Wave 1 and 42% at Wave 2). At Wave 3, smokers noticed tobacco advertising most on television (30%), billboards (28%), in stores (27%), in newspapers and magazines (21%), and in transport vehicles and stations (19%). Over 10% of smokers noticed tobacco product advertising on posters (18%), in discos and karaoke lounges (17%), in restaurants and tea bars (17%), around street vendors (16%), at workplaces (16%), on the radio (16%), and over the Internet (12%) (Figure 35).

Although direct tobacco advertisements are banned, there are no clear restrictions on outdoor and internet advertisements, allowing tobacco companies to exploit the loopholes in existing laws. For example, in Kunming, tobacco companies' names, images, and websites were found on rooftop signage and the windscreens of taxis.[65] The name and brand of a tobacco company was also visible on promotional lanterns near tourist attractions. Tobacco advertisements in the form of large posters could be seen on the street and on buildings near Kunming railway station.

Tobacco Promotion and Sponsorship

Tobacco companies have maintained visibility through event sponsorships, especially the sponsorship of sporting and charity events. At Wave 3, around a quarter of smokers said they saw or heard about a sporting event (21%) or charity event (16%) connected with either cigarette brands or tobacco companies in the last 6 months. Approximately 10% of smokers noticed the promotion of free gifts or discount offers on other products when buying cigarettes (14%), competitions linked to cigarettes (9%), free samples of cigarettes (9%), special price offers (9%), and clothing or other items with a cigarettes brand name or logo (7%).

Cigarette smoking is also indirectly promoted through the entertainment media. At Wave 3, 81% of smokers and 85% of non-smokers reported having seen people smoking in the entertainment media 'often' or 'once in a while' in the past 6 months. Among smokers, this percentage is relatively unchanged from previous waves (81% at Wave 1 and 78% at Wave 2). Among non-smokers, the Wave 3 percentage (85%) was a considerable increase since Wave 2 (76%) (Note: non-smokers were not asked this question in the Wave 1 Survey). In addition, 31% of smokers and 29% of non-smokers at Wave 3 said they had 'often' or 'once in a while' seen VIPs smoking in the newspaper or on television.

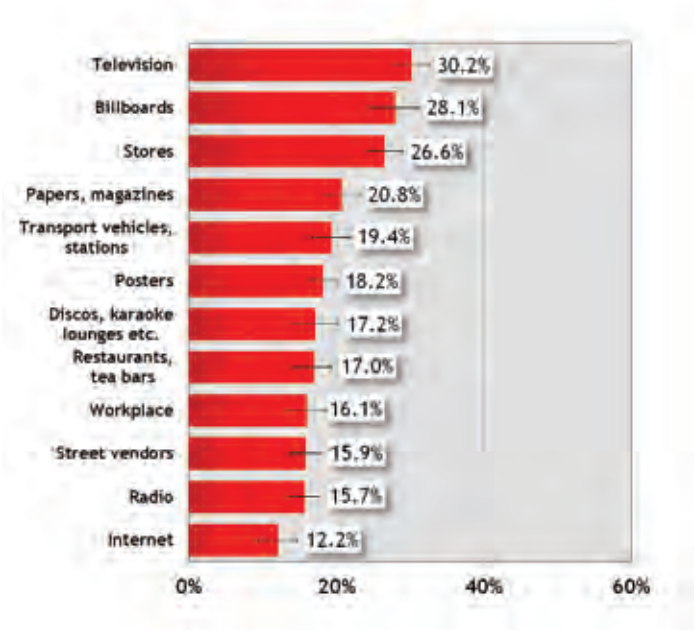
ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

Support for Advertising Bans

The ITC China Survey findings suggest that there is strong support for stringent measures against tobacco advertising in China. At Wave 3, 68% of smokers and 84% of non-smokers said they 'disagree' or 'strongly disagree' that tobacco companies should be allowed to advertise and promote cigarettes as they please. The majority of smokers (74%) and non-smokers (89%) support a complete ban on tobacco advertising inside shops and stores 'somewhat' or 'a lot'.

Chinese smokers and non-smokers strongly support stringent measures against tobacco advertising in China – the majority of smokers (74%) and non-smokers (89%) support a complete ban on tobacco advertising inside shops and stores 'somewhat' or 'a lot'.

Figure 35. Percentage of smokers who have noticed cigarettes or tobacco product advertising in various venues in the last 6 months, Wave 3 (May – Oct 2009)



School sponsored by a tobacco company: Tobacco Hope School, Sichuan, China

Tobacco Advertising, Promotion and Sponsorship: Summary and Recommendations

- High levels of exposure to tobacco advertising indicate that tobacco advertising and promotion restrictions need to be strengthened and enforced in China.
- There is strong support among smokers and non-smokers for complete bans on tobacco advertising and promotion. China's recent steps to comply with FCTC Article 13 Guidelines by limiting the amount of smoking in television and movies needs to be expanded to include bans on the sponsorship of events by tobacco companies, promotions at the point of sale, and outdoor advertising.

CONTENTS OF CHINESE CIGARETTES

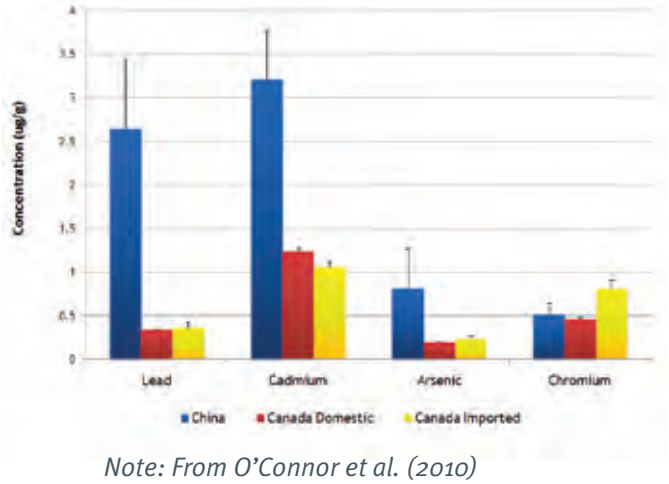
Article 9 of the FCTC obligates countries that have ratified the treaty to propose guidelines for "testing and measuring the contents and emissions of tobacco products, and for regulation of these contents and emissions." Article 10 of the FCTC requires Parties to implement measures for public disclosure of information about the toxic constituents of tobacco products and emissions. Findings from an ITC study suggest that cigarettes sold in China increasingly resemble those sold in Western countries, but with tobacco containing higher levels of heavy metals, such as lead, cadmium, and arsenic.

China is home to the world's largest cigarette maker, the China National Tobacco Company (CNTC), which as a state monopoly dominates China's domestic tobacco market. CNTC is currently in the process of consolidating its brands and is planning to substantially increase its exports.

A recent ITC study examined the design and physical characteristics, labelled smoke emissions, and tobacco metals content of the leading brands of Chinese cigarettes. Cigarettes were purchased in 2005 to 2006 and in 2007 from seven cities in China (Beijing, Changsha, Guangzhou, Shanghai, Shenyang, Yinchuan, and Zhengzhou).[66] A randomly selected subsample of 13 brands was tested for trace metals using polarised energy dispersive x-ray flourescence.

All 13 Chinese cigarette brands tested were found to have significantly elevated levels of heavy metals, with some containing about three times the level of lead, cadmium, and arsenic, compared to Canadian cigarette brands (Figure 36). Exposure to heavy metals is known to present a significant cancer risk.[66] The high level of heavy metals is likely due to the soil conditions where the tobacco is grown in China, rather than resulting from processing. The findings of this study indicate that tobacco product disclosures must be strengthened. Smokers have the right to know what is in their cigarettes.[66]

Figure 36. Comparisons of average metal contents for Chinese and Canadian cigarettes



Note: From O'Connor et al. (2010)

Contents of Chinese Cigarettes: Summary and Recommendations

- Chinese cigarettes were found to have significantly higher levels of heavy metals compared to Canadian cigarettes.
- As CNTC looks to export its product around the world, independent surveillance of tobacco characteristics, including tobacco blend characteristics, will become increasingly important.
- Regulators should require disclosure of the source and growing conditions of tobacco used in all products and should consider product standards based on heavy metal content.

ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

“The presence of such contaminants (heavy metals) in an already-deadly consumer product demonstrates the need for strong regulation of tobacco products, as called for under the Framework Convention on Tobacco Control (FCTC). Smokers and non-smokers in China and elsewhere deserve to know what is in their cigarettes.”

Dr. Richard J. O’Connor
Roswell Park Cancer Institute

IMPLICATIONS FOR TOBACCO CONTROL IN CHINA

The ITC China Wave 1-3 Surveys provide powerful evidence of the high level of tobacco use in China and the urgent need for comprehensive tobacco control efforts to reduce cigarette consumption, encourage quitting among smokers, and prevent youth from starting to smoke. Moreover, China is obligated to implement the FCTC, including the strong Guidelines that have already been adopted unanimously by all 176 FCTC Parties, including China. Below are a set of recommendations for strengthening tobacco control in China based on the findings of the ITC China Survey.

1. Create and implement large pictorial health warnings on cigarette packages.

Revising warnings to meet the Article 11 Guidelines, which recommend pictorial warnings covering at least 50% of the top of the front and the back of the pack, would substantially increase knowledge about the health harms of cigarettes and motivations to quit among Chinese smokers.

2. Increase excise taxes and translate tax increases to price increases at the retail level.

Cigarette prices in China are currently too low to encourage smokers to quit. In fact, the price of cigarettes was one of the least cited reasons for Chinese smokers to quit in the ITC China Survey. Thus, it is clear that stronger pricing and taxation measures are required to encourage cessation, as described in FCTC Article 6. Removing the artificial barrier that prevents the tax increase from resulting in price increases would lead to increased quitting among adult smokers and decreased smoking initiation among youth. Because a greater reliance on specific taxes is known to be more effective in decreasing tobacco consumption, China should consider restructuring the tax system so that a greater proportion of the tax comes from specific taxes rather than ad valorem taxes, as recommended by the WHO and other leading authorities.

3. Set a minimum price for cigarettes to discourage brand switching that occurs when prices increase.

The continued presence of many low-priced brands weakens the public health impact of potential price increases because it provides opportunities for smokers to switch to these lower-priced brands instead of reducing their consumption or quitting. Setting a higher minimum price would decrease the tendency for smokers (especially lower-income smokers) to simply switch to lower-priced cigarettes.

4. Strongly enforce the national smoking ban in indoor public places and implement strict penalties for violations. Amend the legislation to ban smoking in indoor workplaces as required by Article 8 of the FCTC.

China's Ministry of Health implemented a national ban on smoking in indoor public places as of May 2011. The ban includes hospitality venues, entertainment venues, restaurants and bars, and public transport facilities. Although this smoke-free policy is a step in the right direction, the exclusion of indoor workplaces, is not consistent with the FCTC Article 8 Guidelines. In order to be effective, implementation of the policy must include public education campaigns, strong enforcement, and strict penalties for violations. There are many detailed examples of successful smoke-free laws in other countries – as diverse as those from North America, Latin America, Europe, and Southeast Asia – from which China could create its own successful initiatives.

ITC China Project Report (2006-2009): Wave 1: April–August 2006; Wave 2: October 2007–January 2008; Wave 3: May–October 2009.

5. Design and implement public education campaigns to highlight the harms of tobacco use and motivate quitting.

It is very clear from the ITC China Survey that there is a pressing need for stronger educational programs and mass media campaigns to inform the Chinese people about the harms of cigarette smoking, as described by FCTC Article 12. Such programs could serve to motivate smokers to quit and to reduce the number of youth who begin to smoke. Of particular importance would be interventions and policies designed to increase knowledge about the health risks of tobacco use and to make the societal norms of smoking more negative. It should also be emphasized that implementing effective large health warnings with graphic images and with information about the specific harms of smoking (e.g., lung cancer, heart attacks) and of secondhand smoke, which China is already obligated to implement under Article 11, would be an effective policy for increasing knowledge.

6. Implement a ban on the sponsorship of events by tobacco companies, promotions at the point of sale, and outdoor advertising.

The ITC China Survey findings suggest that there is strong support for stricter measures against tobacco advertising in China. China's recent steps to comply with FCTC Article 13 Guidelines by limiting the amount of smoking in television and movies need to be expanded to include bans on the sponsorship of events by tobacco companies, promotions at the point of sale, and outdoor advertising.

7. Increase the capacity of the health care system to play a role in promoting cessation.

Successful quitting requires repeated interventions and multiple attempts to quit. Efforts need to be made to train Chinese doctors and health professionals in providing brief cessation interventions or making referrals to cessation services. It is important that cessation services and quitting medications, such as nicotine replacement therapy medications, be made available in China, especially in rural areas. With over 300 million current smokers, strong cessation measures, as described in the FCTC Article 14 Guidelines, will be crucial to reducing the health burden of tobacco use in China.

8. Create a system for independent monitoring and testing of tobacco products.

The presence of high levels of heavy metals in Chinese cigarettes points to the need for a system for monitoring and testing of tobacco products that would allow action to be taken to reduce existing additional sources of hazards in cigarettes. This monitoring and testing should be conducted by an independent health or regulatory agency that is not owned or controlled by the tobacco industry. This is consistent with the Partial Guidelines for implementation of Articles 9 and 10 and the general spirit of industry non-interference contained in the FCTC.

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The International Tobacco Control Policy Evaluation Project

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Evaluating the Impact of FCTC Policies in...

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