The International Tobacco Control Policy Evaluation Project

CHINA
PROJECT REPORT

Findings from the Wave 1 to 5 Surveys (2006-2015)

OCTOBER 2017

CHINESE CENTER FOR DISEASE CONTROL AND PREVENTION
CDC
itc
International Tobacco Control Policy Evaluation Project
UNIVERSITY OF WATERLOO

Promoting Evidence-Based Strategies to Fight the Global Tobacco Epidemic

Findings from the ITC China Wave 1 to 5 Surveys

ITC China Project Report

2006-2015

Suggested Report Citation

ITC Project and Tobacco Control Office, China CDC (October, 2017). *ITC China Project Report. Findings from the Wave 1 to 5 Surveys (2006-2015)*. University of Waterloo, Waterloo, Ontario, Canada, and Tobacco Control Office, Chinese Center for Disease Control and Prevention, Beijing, China.

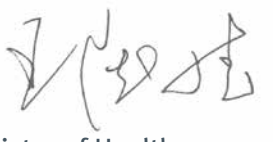
Message from Longde Wang

Smoking and secondhand smoke (SHS) are deadly killers. China is the world's largest tobacco producer and consumer — the smoking rate among people over 15 years of age is 27.7%, with the male smoking rate as high as 52.1%, and there are over 300 million smokers in the country. Each year, more than 1 million people die from smoking, and tobacco use has caused great harm to people's health.

Health is an inevitable requirement to promote human development as a whole, and is the basic precondition for economic and social development as well. The health and longevity of its citizens is an important indication of a country's level of wealth and strength, and is also the common aspiration of all Chinese people. Mr. Xi Jinping, the General Secretary of the Communist Party of China, has noted that without the wellness of its people, the dream of a well-off society for the Chinese population cannot be realized. Thus, in 2016, the China Central Committee and the State Council released a "Healthy China 2030 Plan". The plan lists the key indicators to attain the vision of a healthy China: by 2030, the rate of premature death caused by major chronic diseases must be reduced by 30% as compared to 2015, and the average life expectancy should reach 79 years. However, these indicators will be almost impossible to achieve if effective tobacco control measures are not implemented and cigarette consumption and SHS exposure are not reduced.

In order to curb the tobacco epidemic, the Chinese government ratified the Framework Convention on Tobacco Control (FCTC), which is the first treaty developed within the World Health Organization. Since the FCTC came into force on January 9, 2006, the Chinese government has implemented a number of tobacco control measures. For instance, 18 cities have adopted or revised their smoking control regulations to build smoke-free environments, including Beijing, Shanghai and other cities, requiring a comprehensive smoke-free environment in all indoor public places. In addition, the draft national "Smoking Control in Public Places Ordinance" has been listed in the second top priority catalogue in the work plan of the Legislative Affairs Office of the State Council. The National Health and Family Planning Commission has carried out tobacco control education programs throughout the country, strived to build smoke-free health care facilities, promoted smoking cessation services, and established surveillance systems to document the tobacco epidemic. The deputies of the National People's Congress, members of the National Committee of the Chinese People's Political Consultative Conference, as well as non-governmental tobacco control organizations have actively advocated and monitored the implementation of tobacco control efforts and played an important role in the passage, revision, and drafting of the Advertising Law, Charity Law, and Smoking Control in Public Places Ordinance. Raising tobacco taxes and prices is the most effective way to reduce tobacco use, and China has adjusted its tobacco tax twice - in 2009 and 2015.

The effectiveness of FCTC tobacco control measures that have been implemented in China needs to be assessed using empirical data. The International Tobacco Control Policy Evaluation Project (ITC Project) China Survey showed that 10 years after ratifying the FCTC, the effectiveness of China's tobacco control policies has been limited. Therefore, in order to attain the objectives set out in the Healthy China 2030 Plan, it is necessary to strongly implement the tobacco control measures prescribed in the FCTC and reduce the high smoking prevalence, which will not only save the lives of millions of people, but also help to set China off to a healthier and more prosperous future.



Longde Wang
Former Vice-Minister of Health
Member of Standing Committee of the 12th National People's Congress
Academician of the Chinese Academy of Engineering Science
Chairman of Chinese Preventive Medicine Association

Message from Bernhard Schwartländer

China faces a monumental challenge in tobacco use. There are more than 315 million smokers in China, including more than half of all adult men. China's fast-growing addiction to tobacco is taking an alarming toll on public health and creating significant challenges for the country's future economic and social development.

Action on tobacco control is therefore critically important in China, yet there has been limited progress over the last decade. The ITC China Wave 1 to 5 Report highlights key areas where China needs to accelerate progress in tobacco control. Findings from this Report present a compelling case for the implementation of a national law to make all indoor public places 100% smoke-free, strong pictorial warnings on cigarette packs, comprehensive bans on all forms of tobacco advertising, and further increases to tobacco taxes. The Report also demonstrates that such policies are likely to be well-received by the people of China. For example, more than 90% of both smokers and non-smokers support a complete ban on smoking in restaurants and other public places. Lawmakers should thus be reassured that they can implement and enforce comprehensive tobacco control policies with popular support, which will have an immediate and positive impact on the health of China's 1.4 billion citizens.

There are some encouraging signs that China may now be ready to take serious action to curb smoking. In the last few years, we have seen three of China's largest cities adopt and begin to implement comprehensive 100% smoke-free laws – Beijing, Shenzhen, and Shanghai. China also introduced tougher restrictions on tobacco advertising in 2015, including a complete ban on marketing tobacco products aimed at young people. In the same year, the Ministry of Finance announced an increase in tobacco taxes. This led to an increase in the retail price of cigarettes; however, cigarette prices remain too low to effectively curb tobacco use.

It is now time for policymakers in China to build on these steps and enact strong national tobacco control measures, including actions which have been proven effective around the world at raising public awareness of the hazards of smoking, motivating smokers to quit, and preventing people from starting to smoke. China has both the opportunity and the capacity to undertake these measures to break the tobacco habit.

This timely Report – a collaboration between the ITC Project and the China CDC – shows that China needs to move decisively to reverse the tobacco epidemic. The recommendations in this Report, if adopted, would help China to make unprecedented progress towards meeting its commitments as a Party to the WHO FCTC, and put the country firmly on the path to achieve President Xi Jinping's powerful vision for a Healthy China 2030.

Dr. Bernhard Schwartländer, M.D.
WHO Representative in China

Message from Xiaofeng Liang

Findings from a recent national disease burden study conducted by the Chinese Center for Disease Control and Prevention (China CDC) show that smoking is a leading risk factor for chronic non-communicable diseases, which account for nearly 90% of deaths in China. At present, China has more than 300 million smokers who consume 45% of the world's cigarettes. Tobacco use causes more than 1 million deaths in China each year. If China does not implement effective measures to reduce tobacco use, the annual number of tobacco-related deaths will reach 3 million by 2050.

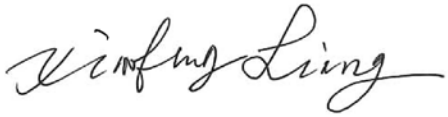
In order to protect people's health, the Chinese government ratified the WHO FCTC in 2005. Since the Treaty came into force, the Chinese government has adopted a series of tobacco control policies in an effort to curb the tobacco epidemic. Scientific research is needed in order to evaluate the effectiveness of tobacco control measures that have been implemented in China, which in turn, can guide the development of more effective policies in the future.

Strong research programs and monitoring are critical for evaluating the effectiveness of FCTC implementation. To evaluate the impact of FCTC policies in China, the Tobacco Control Office of the China CDC has been working with the University of Waterloo in Canada on the International Tobacco Control Policy Evaluation Project in China (ITC China Project), with five survey waves conducted since 2006.

The ITC China Wave 1 to 5 Report shows that tobacco control policies in China are largely ineffective. China's partial smoke-free laws are not adequately protecting the millions of adults and children from secondhand smoke. Price and tax policies have not led to increases in the real prices of cigarettes. As a result, most Chinese smokers do not consider the cost of smoking as a financial burden, and the availability of low-price cigarettes also prevents smokers from quitting. China's text-only warnings on cigarette packages are not effective in educating smokers about the dangers of smoking and motivating them to quit.

This Report provides strong evidence that China needs to accelerate the full implementation of measures across all key FCTC policy domains to reduce the high rates of smoking, encourage smokers to quit, and prevent youth from starting to smoke. This Report provides a summary of the tobacco control efforts in China over the past decade, and is useful for guiding future progress. There is a high level of public support for stronger tobacco control policies in China, including comprehensive smoke-free laws and pictorial health warnings, and this support should be used to build a solid foundation for the implementation of evidence-based tobacco control efforts in the country.

We hope that the findings and recommendations in this Report will help China to move forward with the implementation of effective measures to reduce smoking prevalence and exposure to secondhand smoke, including a national 100% smoke-free law, pictorial health warning labels on cigarette packages, and a complete ban on all forms of tobacco advertising, promotion and sponsorship. Strong and swift implementation of the FCTC will help China to achieve its strategic goals for a "Healthy China".



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

Message from Judith Mackay

The toll of the tobacco epidemic in China is enormous. Tobacco causes more than one million deaths annually and devastates the lives of China's citizens and the economy due to ill health, lost productivity, and medical and health costs.

China ratified the World Health Organization Framework Convention on Tobacco Control more than 10 years ago, and is therefore under international obligation to introduce strong tobacco control measures. Over the past decade, the ITC China Project has been an important evidence-gathering system that has allowed us to understand and evaluate the impact of tobacco control efforts in China. Unfortunately, the findings presented in this ITC China Wave 1 to 5 Report clearly demonstrate that China's progress in tobacco control, particularly in the key areas of taxation, smoke-free policies, and pack warnings, has had a very minimum effect. Tobacco tax remains extremely low; there is still no national smoke-free law; and China is extraordinarily reluctant to introduce any graphic pack warnings on cigarette packs.

The evidence from cross-country comparisons presented in this ITC Report not only calls attention to China's poor performance in tobacco control relative to other ITC countries, but also provides the clear path for China to achieve the same dramatic improvements as those countries that have implemented and enforced strong tobacco control policies consistent with the FCTC and its guidelines. These findings are valuable to help guide the Chinese government in the development and implementation of similar strong policies, such as comprehensive smoke-free laws and large pictorial health warnings.

Since 2013, there has been an acceleration in tobacco control efforts in China. Indeed, more has been achieved in the last few years than in the preceding 20 years. These efforts include no-smoking directives to government officials and the People's Liberation Army (PLA); smoke-free regulations issued by the Ministry of Education; tobacco clauses in national advertising and philanthropy laws; a modest increase in tobacco taxation leading to a price increase; comprehensive smoke-free laws in Beijing, Shenzhen, and Shanghai; and a national smoke-free law currently in draft.

Of course, there is a still a long way to go and a lot of work to be done to tackle the tobacco epidemic in China, but the momentum for stronger tobacco control measures is growing, especially from the Chinese people themselves. The success of Beijing's smoke-free law is a leading example, as it has shown that a strict and well-enforced law will work in China, and people's health, including that of Chinese children, will be protected. And as we have seen in other countries, once the momentum for tobacco control policies such as smoking bans and graphic health warnings takes hold, there is no turning back. Therefore, there is a crucial need for China to continue to build on recent developments by implementing robust, comprehensive legislation as described in this Report and, most challenging of all, to tackle the power and influence of the state tobacco monopoly over tobacco control – without this, tobacco control efforts are less likely to be successful.

As China moves forward in its tobacco control efforts, it will be critically important to evaluate the impact of its recent and forthcoming tobacco control policies. I congratulate the ITC China Project at the University of Waterloo and China CDC for their dedicated work to conduct rigorous evaluation of tobacco control policies and for sharing their valuable findings in this informative Report.

Tobacco control efforts are good for the wealth as well as the health of China. Action taken now will avoid massive economic costs in the future.

J. M. Mackay

Prof. Dr. Judith Mackay, SBS, OBE, JP, FRCP(Edin), FRCP(Lon)
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Senior Policy Advisor, World Health Organization

EXECUTIVE SUMMARY

The Tobacco Epidemic in China

China is home to more than 300 million smokers, making it the world's largest smoking population. Each year, more than 1 million people die from smoking-related diseases in China, and about 100,000 more die from exposure to secondhand smoke (SHS). Without effective measures to reduce tobacco use, the annual number of tobacco-related deaths in China will reach 3 million by 2050.

The WHO Framework Convention on Tobacco Control

The World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) is the world's first global health treaty, obligating 180 Parties to implement strong, evidence-based tobacco control policies such as comprehensive smoke-free laws; large warning labels with graphic images; bans on tobacco advertising, promotion, and sponsorship; and strong taxation policies on tobacco products to reduce demand. China signed the treaty in 2003 and it came into force in 2006.

Evaluating the Progress of Tobacco Control: the ITC China Survey

This report evaluates China's progress in the implementation of the FCTC and its guidelines, based on research conducted by the International Tobacco Control Policy Evaluation Project (the ITC Project) – an international cohort survey conducted in 28 countries, designed to evaluate the impact of tobacco control policies. Between 2006 and 2015, five waves of the ITC China Survey were conducted among a cohort of adult smokers and non-smokers in China (approximately 800 smokers and 200 non-smokers in each survey location at each wave). The ITC China Survey was developed by an international research team from Canada (University of Waterloo) and the Chinese Center for Disease Control and Prevention (China CDC). The Wave 1 to 3 ITC China Project Report was released in December 2012 (see http://www.itcproject.org/resources/view/1143). This new Wave 1 to 5 Report assesses China's progress in tobacco control up to 6 years later and 10 years after China ratified the FCTC, and compares China's progress against other ITC countries around the world.

Key Findings from the ITC China Wave 1 to 5 Project Report

Since the FCTC came into force more than a decade ago, China has taken important steps to strengthen tobacco control efforts. These steps include a directive that prohibits government officials from smoking in public places (December 2013); the implementation of comprehensive smoke-free laws in Beijing (June 2015), Shenzhen (January 2017), and Shanghai (March 2017); a ban on tobacco advertising in mass media, public places, public transport, and outdoors, as well as a ban on all forms of tobacco advertising that target youth (September 2015); and an increase in the ad valorem tax rate for cigarettes at the wholesale level from 5% to 11% (May 2015) which resulted in a price increase.

Despite these important policy achievements, the ITC China Wave 1 to 5 Project Report provides powerful evidence that China needs to accelerate the full implementation of evidence-based measures to reduce the high rates of smoking, encourage smokers to quit, and prevent youth from starting to smoke. The following key findings highlight the urgent need for China to continue to take strong actions to tackle the tobacco epidemic, and protect the current and future health of its population.

Although smoking in public places has decreased in recent years, the majority of adults and children are still not fully protected from the harms of SHS.

Prior to 2015, China had made some progress in protecting people from the harms of tobacco smoke through partial indoor smoking bans in at least 18 cities, as demonstrated by decreases in SHS in public places and workplaces, and an increase in smoke-free homes across the ITC cities. The recent implementation of comprehensive smoke-free laws in several cities in China since 2015 is an important step forward in achieving full protection from SHS in all public places. However, evidence from the ITC Project points to the need to build on this progress further by passing a national smoke-free law in public places followed by strong enforcement.

While awareness of the harms of smoking has increased among Chinese smokers over the past decade, there is room for improvement, especially in rural areas. This improvement in awareness could be achieved through pictorial health warnings and more education campaigns.

Although there has been an increase in knowledge of the harms of smoking, China still has the lowest percentage of male smokers who are aware that smoking causes stroke (40%) and heart disease (61%) among all ITC countries – both leading causes of premature death. ITC findings also show that awareness of health effects is lower in rural areas. In 2013-15, smokers living in rural areas were significantly less likely to be aware of 9 of 11 smoking-related health effects, compared to smokers in cities. This knowledge gap may be due in part to the lower exposure to information on the harms of smoking in rural areas versus cities – almost half (43%) of smokers in rural areas said that they "never" noticed anti-tobacco information in 2013-15, compared to 31% of smokers in cities.

Minor changes to China's text-only warnings have had little impact in educating smokers about the harms of tobacco use and motivating them to quit.

International research evidence shows that large pictorial warnings are more effective than text warnings in increasing smokers' awareness of the harms of smoking and motivating them to quit. Health warnings on cigarette packages are one of the most cost-effective health interventions with wide reach – a pack-a-day smoker (20 cigarettes/day) is potentially exposed to the warnings 7,300 times a year. In fact, findings from the ITC China Survey show that more smokers in China get their information about the harms of smoking from tobacco packages than from any other source, even though the health warnings in China are text-only. Despite being noticed by the majority of smokers, however, the text-only warnings on cigarette packs have not been effective in motivating smokers to quit. Between 2009 and 2013-15, fewer than 2 in 10 smokers reported that warning labels made them think about the harms of smoking or made them more likely to quit.

While China's 2015 tobacco tax increase clearly shows that the government is ready to implement effective measures to curb smoking, additional tax policy reforms and price increases are still needed to make cigarettes less affordable for consumers.

Increasing the price and tax on tobacco products is the single most effective way to reduce tobacco use by motivating smokers to quit, and by preventing young people from starting to smoke. Because China's price and tax increases in 2009 and 2015 have not kept pace with rapid income growth, cigarettes have become more affordable over this time period. ITC Survey findings indicate that the vast majority of Chinese smokers are not concerned about the cost of cigarettes. China has the second lowest percentage of male smokers (15%) among 19 ITC countries who "often" thought about the cost of smoking in last 30 days. In 2013-15, affordable price was the most common reason for brand choice – reported by 91% of smokers as one of their reasons to smoke their current brand.

Increasing numbers of Chinese smokers are quitting, but there remain challenges.

Quit rates among Chinese smokers in cities have gone up from 6.0% (between 2006 to 2007-08) to 9.2% (between 2011-12 to 2013-15). This is an achievement; however, Chinese smokers' interest in quitting remains low compared to smokers in other countries – China has the third highest percentage of male smokers (59%) who said that they have no plans to quit smoking among 20 ITC countries. Because cigarettes in China are still very affordable, few smokers report the price of cigarettes as a reason to quit smoking.

In China, both non-smokers AND smokers support stronger tobacco control policies.

ITC China Survey findings show a high level of public support for stronger tobacco control policies, including a comprehensive smoke-free law, pictorial health warnings, and comprehensive bans on tobacco advertising, even among smokers:

- Over three-quarters of smokers and non-smokers across all survey waves "agreed/strongly agreed" that the Chinese government should do more to control smoking.
- Smokers' support for complete indoor smoking bans in public places has increased from 2007 to 2013-15 and is much higher than support among smokers in Europe before their smoke-free laws were implemented. For example, in 2013-15 more than 4 in 10 Chinese smokers overall support smoke-free bars compared to less than 2 in 10 smokers in 6 ITC European countries before the implementation of their smoke-free laws. In 2013-15, over 90% of both smokers and non-smokers said that a ban on smoking in restaurants and other public places would be "good/very good".
- In 2013-15, more than two-thirds of smokers (67%) and non-smokers (75%) said that they would support the implementation of pictorial health warnings.

It is important for tobacco control efforts, especially public education campaigns and cessation services, to reach out to China's large rural population.

China has the largest population in the world, and nearly half of its people live in rural areas. Rising rates of smoking and smoking-related mortality in rural areas in China poses an immense threat to public health and thus should be an important focus for tobacco control efforts.

The ITC China Wave 5 Survey findings show that smokers in urban and rural areas are quite similar on tobacco-related beliefs and behaviours, including smoking in restaurants and in the home, and overall exposure to tobacco advertising. However, the findings also highlight some important differences between urban and rural smokers. Smokers in rural areas smoked more cigarettes per day than smokers in cities and were more likely to have plans to quit. Smokers in cities had greater awareness of the specific harms of smoking and greater exposure to anti-tobacco information compared to rural smokers. However, the impact of China's text-only warnings on smokers' cognitions and behaviors was stronger in rural areas. These findings are consistent with research showing that the impact of warnings may be greater in places where there are fewer sources of health information available.

Therefore, there is an urgent need to target rural areas with more sustained tobacco control interventions, including public education campaigns and cessation support. ITC findings suggest that such efforts would be supported by the public – an important finding from the ITC China Wave 5 Survey is that support for stronger tobacco control policies, including smoke-free laws and pictorial health warnings, is not only high in comparison with other countries, but is also similar among urban and rural Chinese smokers.

IMPLICATIONS FOR TOBACCO CONTROL IN CHINA

The ITC China Wave 1 to 5 Survey findings and evidence on best practices for effective tobacco control suggest that China has an opportunity to continue to build on its recent achievements and progress towards reducing tobacco use. The following recommendations are proposed to further strengthen tobacco control in China:

- Building on Beijing, Shanghai, and Shenzhen's comprehensive smoke-free laws, adopt a comprehensive national smoke-free law accompanied by a strong, rigorous enforcement effort.
- Implement large pictorial health warnings covering at least 50% of the front and back of cigarette packages.
- Design and implement more public education campaigns to further raise awareness of the harms of tobacco use and motivate quitting.
- Implement regular tobacco tax increases which translate to price increases at the retail level in order to make cigarettes less affordable over time.

Table of Contents

1 Message from Longde Wang, Former Vice-Minister of Health
2 Message from Bernhard Schwartländer, WHO Representative in China
3 Message from Xiaofeng Liang, Deputy-Director General, Chinese Center for Disease Control and Prevention
4 Message from Judith Mackay, Senior Policy Advisor, World Health Organization
5 Executive Summary
11 List of Tables and Figures
16 ITC Policy Evaluation Project in China
18 The Tobacco Landscape in China
30 ITC Survey Methods
40 Findings
40 Smoking in China: Behaviour, Beliefs and Perceptions
56 Smoking Cessation
63 Smoke-free Public Places and Workplaces
79 Health Warning Labels
88 Education, Communication, and Public Awareness
101 Tobacco Advertising, Promotion, and Sponsorship
111 Tobacco Price and Taxation
121 Contents of Chinese Cigarettes
123 Conclusions and Implications for Tobacco Control in China
127 ITC Survey Project Contacts
128 References

List of Tables and Figures

Table 1	ITC China Wave 1 to 5 Survey retention rates	32
Table 2	ITC China Wave 1 to 5 Survey sample sizes	34
Table 3	ITC China Wave 1 to 5 Survey sample: Demographic characteristics of smokers and non-smokers	35
Table 4	ITC China Wave 5 Survey sample: Demographic characteristics of smokers and non-smokers in cities vs rural areas	37
Table 5	ITC China Wave 1 to 5 Survey quit rates among smokers - cities only	56
Table 6	Smoke-free policies implemented in ITC China Survey areas from Waves 1 to 5 (2006-2015)	63
Table 7	ITC Survey measures on smoke-free policies	64
Figure 1	Change in affordability of cigarettes in China compared to other countries between 2008-2014	22
Figure 2	Timeline of implementation of key demand reduction policies in China in relation to the ITC China Wave 1 to 5 Surveys	31
Figure 3	ITC China Wave 1 to 5 Survey sampling areas	33
Figure 4	Average number of cigarettes smoked per day among male daily smokers, by country	41
Figure 5	Percentage of male smokers who smoke factory-made cigarettes only, roll-your-own tobacco only, or both types of cigarettes, by country	42
Figure 6	Percentage of male cigarette smokers who have their first cigarette of the day within 5 minutes after waking, by country	43
Figure 7	Percentage of male smokers and quitters who “agree” or “strongly agree” that if they had to do it over again, they would not have started smoking, by country	44
Figure 8	Percentage of male smokers and quitters who “agree” or “strongly agree” that society disapproves of smoking, by country	45
Figure 9	Percentage of male smokers and quitters who “agree” or “strongly agree” that people who are important to them believe they should not smoke, by country	46
Figure 10	Active switching between “low harm” and regular brands/brand variants among smokers from 2006-2011/12	47
Figure 11	Percentage of male smokers and quitters who “agree” or “strongly agree” that light cigarettes are less harmful than regular cigarettes, by country	48
Figure 12	Percentage of respondents who have ever tried e-cigarettes, by wave - cities only	51
Figure 13	Percentage of male smokers and quitters who have ever used e-cigarettes, by country	52

List of Tables and Figures

Figure 14	Overall percentage of smokers and quitters who have ever tried e-cigarettes at Wave 5, by survey location	53
Figure 15	Percentage of respondents who said they use e-cigarettes for various reasons, at Wave 5	54
Figure 16	Percentage of respondents who think e-cigarettes are less harmful than regular cigarettes, by wave and smoking status - cities only	55
Figure 17	Intentions to quit smoking among male smokers, by country	57
Figure 18	Percentage of respondents who said various reasons “very much” led them to think about quitting in the last 6 months (among smokers) or led them to quit (among quitters), at Wave 5	59
Figure 19	Percentage of male smokers who visited a doctor and received advice to quit in the last year/6 months/since the last survey date, by country	60
Figure 20	Percentage of male smokers who used any stop-smoking medications (SSMs) in the last year (or since the last survey date), by country	62
Figure 21	Percentage of smokers who noticed smoking in workplaces, by survey location and wave	65
Figure 22	Percentage of male smokers and quitters who reported noticing people smoking indoors in their workplaces in the last month, by country	66
Figure 23	Percentage of smokers who noticed smoking in restaurants, by survey location and wave	67
Figure 24	Percentage of male smokers and quitters who noticed smoking in restaurants among those who visited a restaurant in the last year, by country	68
Figure 25	Percentage of smokers who noticed smoking in bars, by survey location and wave	69
Figure 26	Percentage of male smokers and quitters who noticed smoking in bars, cafés and pubs among those who visited a bar, café or pub in the last year, by country	70
Figure 27	Percentage of smokers who reported having a complete smoking ban at home, by survey location and wave	71
Figure 28	Percentage of male smokers and quitters who “never allow” smoking in their home, by country	72
Figure 29	Percentage of smokers who think smoking should not be allowed in any indoor areas in workplaces, restaurants, and bars at Wave 5, by survey location	73
Figure 30	Percentage of smokers who support complete smoking bans in workplaces, by survey location and wave	74

List of Tables and Figures

Figure 31	Percentage of smokers who support complete smoking bans in restaurants, by survey location and wave	75
Figure 32	Percentage of smokers who support complete smoking bans in bars, by survey location and wave	76
Figure 33	Percentage of smokers who support complete smoking bans in bars/pubs in China (2013-15) compared to the percentage of smokers who supported smoking bans in bars/pubs before and after the bans in Ireland (2004), Scotland (2006), UK (2007), France (2008), Germany (2007-08), and the Netherlands (2008)	77
Figure 34	Percentage of smokers who think a ban on smoking in restaurants and other enclosed public areas would be "good" or "very good", by survey location and wave	78
Figure 35	Evolution of China's text warnings (Rounds 1 to 4)	79
Figure 36	Malaysia's switch from text-only warnings on side of pack to pictorial warnings in 2009	80
Figure 37	Impact of health warnings on smokers' cognitions and behaviours, by wave - cities only	81
Figure 38	Impact of health warnings on smokers in cities versus rural areas at Wave 5	82
Figure 39	Percentage of male smokers who "often" or "very often" noticed warning labels, by country	84
Figure 40	Percentage of male smokers who reported that warning labels on cigarette packages made them think about the health risks of smoking "a lot", by country	85
Figure 41	Examples of emotionally arousing warning labels in Uruguay (2012-2013; 80% of front and back) and Mauritius (2009-present; 60% of front, 70% of back)	86
Figure 42	Percentage of smokers and non-smokers who support enhanced health warnings at Wave 5	87
Figure 43	Percentage of smokers who believe smoking causes various health effects, by wave - cities only	89
Figure 44	Percentage of male smokers and quitters who believe that smoking causes stroke, by country	90
Figure 45	Percentage of male smokers and quitters who believe that smoking causes heart disease, by country	91
Figure 46	Percentage of smokers and non-smokers who believe that smoking causes various health effects at Wave 5	92
Figure 47	Percentage of male smokers and quitters who believe that secondhand smoke causes lung cancer in non-smokers, by country	93

List of Tables and Figures

Figure 48	Percentage of smokers in cities versus rural areas who believe that smoking causes various health effects at Wave 5	94
Figure 49	Percentage of male smokers who thought “often” or “very often” about the harm their smoking might be doing to them in the last month, by country	95
Figure 50	Percentage of smokers who noticed anti-smoking advertising or information “often”, “once in a while”, or “never” in the last 6 months, by wave - cities only	96
Figure 51	Percentage of smokers who noticed anti-tobacco advertising or information in various places in the last 6 months, at Wave 5	97
Figure 52	Percentage of smokers who gave or received cigarettes as gifts to family or friends at least once in the last 6 months, by wave - cities only	98
Figure 53	Percentage of urban vs. rural smokers at Wave 5 who received cigarettes as a gift from family or friends once, 2-5 times, more than 5 times, or not at all in the last 6 months	99
Figure 54	Percentage of smokers and non-smokers who “agree” or “strongly agree” that the government should do more to control smoking, by wave - cities only	100
Figure 55	Percentage of male smokers and quitters who noticed things that promote smoking “often” or “very often” in the last 6 months, by country	102
Figure 56	Percentage of smokers and non-smokers at Wave 5 who noticed tobacco advertisements in the last 6 months in places where tobacco advertising was banned	103
Figure 57	Percentage of smokers and non-smokers at Wave 5 who noticed tobacco advertisements in the last 6 months in places where tobacco advertising was not explicitly banned	104
Figure 58	Percentage of smokers and non-smokers at Wave 5 who noticed various forms of tobacco promotion or sponsorship in the last 6 months	106
Figure 59	Percentage of smokers and non-smokers at Wave 5 who saw various forms of tobacco use or promotion in the media “once in a while” or “often” in the last 6 months	107
Figure 60	Percentage of smokers and non-smokers who support complete bans on tobacco advertisements inside shops “a little” or “a lot” at Wave 5, by survey location	108
Figure 61	Percentage of smokers and non-smokers who support complete bans on displays of cigarettes inside shops “a little” or “a lot” at Wave 5, by survey location	109
Figure 62	Percentage of smokers and non-smokers who support a total ban on outdoor tobacco promotion “a little” or “a lot” at Wave 5, by survey location	110

List of Tables and Figures

Figure 63	Percentage of smokers who said they chose their current cigarette brand for various reasons, at Wave 5	112
Figure 64	Percentage of smokers who "often" thought about the cost of smoking or made an effort to buy cheaper cigarettes, by wave - cities only	113
Figure 65	Percentage of male smokers and quitters who thought "often" or "very often" about the money they spend (or used to spend) on smoking in the last 30 days, by country	114
Figure 66	Percentage of male smokers who said the price of cigarettes "somewhat" or "very much" led them to think about quitting in the last 6 months, by country	115
Figure 67	Percentage of smokers who spent money on cigarettes that they knew would otherwise be spent on household essentials like food in the last 6 months, by wave - cities only	116
Figure 68	Percentage of male smokers who reported spending money on cigarettes instead of other household essentials such as food in the last 6 months, by country	117
Figure 69	Change in relative income price of cigarettes in China, 2006-2015	118
Figure 70	Change in cigarette market structure between 2014 and 2015	120
Figure 71	Cigarette market share by volume (2007-2015)	120
Figure 72	Mean concentrations of metals in selected cigarettes from China (2009 and 2012) compared to other ITC countries (2012-2013)	122

ITC POLICY EVALUATION PROJECT IN CHINA

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 World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC).

In 2006, the University of Waterloo in Canada partnered with the Chinese Center for Disease Control and Prevention (China CDC) to create the ITC China Survey. The ITC China Survey is a face-to-face longitudinal survey of smokers and non-smokers which was conducted five times between April 2006 and July 2015. The ITC China Wave 1 to 4 Surveys were conducted in six cities in China – Beijing, Changsha, Guangzhou, Shanghai, Shenyang, and Yinchuan. Kunming was added as the seventh city at Wave 3. The Wave 5 Survey was conducted in five cities that were included in previous waves (i.e., Beijing, Guangzhou, Kunming, Shanghai, and Shenyang), as well as in five new rural areas (i.e., Changzhi, Huzhou, Tongren, Yichun, and Xining). In each location at each of the five 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 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 Treaty text and in the 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.

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Funding for the ITC China Project

- U.S. National Cancer Institute (RO1 CA125116)
- Canadian Institutes of Health Research: Operating Grant (#79551, #115016) and Knowledge Transfer and Utilization Grant (#104765)
- Tobacco Control Office, Chinese Center for Disease Control and Prevention
- Ontario Institute for Cancer Research Senior Investigator Award
- Canadian Cancer Society Research Institute Prevention Scientist Award

Acknowledgements

This report was prepared by a team of collaborators at the University of Waterloo: Dr. Janet Chung-Hall (lead author of ITC Survey Methods; Smoking in China: Behaviour, Beliefs, and Perceptions; Smoking Cessation; Tobacco Advertising, Promotion, and Sponsorship; and Tobacco Price and Taxation), Dr. Genevieve Sansone (data visualization, lead author of The Tobacco Landscape in China; Smoke-free Public Places and Workplaces; Health Warning Labels; Education, Communication, and Public Awareness; and Contents of Chinese Cigarettes), Lorraine Craig (project management and writing), Mi Yan (data analysis), Dr. Gang Meng (data analysis), Dr. Anne C.K. Quah (editing), Dr. Steve Shaowei Xu (editing and translation), Grace Jingyuan Hu (translation), and Dr. Geoffrey T. Fong (reviewer). Danielle Balan, Mi Yan, and Grace Li contributed timely proofreading of the draft final reports. Dr. Guoze Feng of the Tobacco Control Office, China CDC also provided review comments on the report and translation checking.

The evidence and images contained in this report would not be possible without the dedicated effort of the staff from China CDC, Beijing CDC, Shanghai CDC, Guangzhou CDC, Hunan CDC, Ningxia CDC, Shenyang CDC, Yunnan Health Education Institute, Zhejiang and Huzhou CDC, Qinghai CDC, Guizhou and Tongren CDC, Changzhi CDC, and Yichun CDC who conducted the ITC China Surveys.

We are also grateful to Dr. Nigar Nargis and Dr. Rose Zheng for reviewing and providing comments on the Tobacco Price and Taxation chapter, as well as Ms. Yang Wang and Ms. Xiao Hu for providing CNTC's price information for that chapter.

Graphic design and layout was provided by Ms. Sonya Lyon of Sentrik Graphic Solutions Inc.

THE TOBACCO LANDSCAPE IN CHINA

This section provides an overview of tobacco supply, tobacco use, and tobacco policies in China during the time of the ITC China Wave 1 to Wave 5 Surveys (April 2006 to July 2015).[i] As a Party to the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) since 2006, China is obligated to implement effective tobacco control measures.

China's long history of pro-tobacco culture, strong resistance from the powerful tobacco industry, and weak enforcement have created a challenging environment in which to make tobacco control policy advancements. However, in recent years, the Chinese government has demonstrated a commitment to tackling the tobacco epidemic. This shift has led to stronger tobacco control policies and actions to reduce tobacco use at the national and local level:

1) In December 2013, the General Office of the Communist Party of China Central Committee and the General Office of the State Council jointly issued a notice requiring government officials to set an example to the people by not smoking in public places;

2) In November 2014, the State Council released the draft national ordinance banning smoking in all indoor public places, workplaces, and public transport; banning all forms of tobacco advertising, promotion, and sponsorship (TAPS); and requiring pictorial health warnings on cigarette packs.[1] The draft law was prioritized as "Striving to Complete by Year End" in the 2016 legislation work plan of the Legislative Affairs Office of the State Council;

3) In May 2015, the Ministry of Finance (MOF) imposed a specific excise tax of 0.10 RMB (US$0.017) per pack and increased the ad valorem tax from 5% to 11% at the wholesale level. Unlike the previous 2009 tax increase, which was levied at the producer level and was thus absorbed entirely by the China National Tobacco Corporation (CNTC), leading to no increase of cigarette prices, the MOF's imposition of the tax increase at the wholesale level in 2015 was clearly meant to ensure that at least some of the tax increase would be passed to the retailer, resulting in price increases, which would be expected to lead to some reduction in consumption;[2]

4) In September 2015, the new Advertising Law came into effect prohibiting tobacco advertisements in the mass media, in public places, on public transport, and outdoors, as well as a ban on all forms of tobacco advertising targeting youth.[3]

5) In June 2015, Beijing implemented a comprehensive smoke-free law banning smoking in all indoor public places, workplaces, and public transport without exceptions. The Beijing smoke-free law is the strongest city-level smoke-free law in China to date and is fully compliant with Article 8 of the FCTC. More recently, Shenzhen fully implemented their comprehensive smoke-free law on January 1, 2017 and Shanghai's comprehensive law which was passed in November 2016 came into effect on March 1, 2017.

i The contents of this chapter are current up to February 7, 2017.

Barriers to Tobacco Control and FCTC Implementation in China

China's State Tobacco Monopoly System

The Chinese tobacco industry is a wholly state-owned enterprise. The production and sale of tobacco leaf and manufactured cigarettes is controlled by the CNTC, which is regulated and supervised by the State Tobacco Monopoly Administration (STMA). The STMA and CNTC have been referred to as the same institution with different names because they are so closely connected, sharing the same set of personnel, lines of command, and office space.[4, 5] The dual identity of the STMA/CNTC as both regulator and owner of the tobacco industry means there is no distinction between the government and enterprise.

In 2008, the Ministry of Industry and Information Technology (MIIT), where the STMA is affiliated, was designated as the lead governmental institution responsible for the FCTC decision/implementation process, rather than the National Health and Family Planning Commission (NHFPC). The STMA is also directly responsible for preparing the implementation rules for policies on health warnings, sales to minors, and price/tax (with MOF).

Growth of the CNTC

China produces and consumes more tobacco than any other country in the world. The CNTC and STMA control 90-97% of the cigarette market in China, and CNTC produces over 40% of the world's cigarettes.[5] After China ratified the FCTC, cigarette production increased by almost 34% between 2005 and 2014, and the revenue generated by the tobacco industry also grew each year.[4] The CNTC is currently the largest cigarette manufacturer in the world, producing 2.6 trillion cigarettes in 2014 – nearly three times as many as its nearest rival, Philip Morris International.[6] In 2015, CNTC had a wholesale revenue of 1.4 trillion RMB (approximately $220 billion USD) and gross profits of 303 billion RMB (about $47 billion USD), making it the most profitable company in China.[7] Most of the cigarettes produced by the CNTC are consumed in China rather than exported. In 2010, CNTC exported only 1% of its total production of cigarettes.[4] However, with the domestic market becoming more saturated since 2005, CNTC has recently taken on a more global business strategy, aiming to expand their operations overseas. Chinese cigarette exports have increased since 2004, up to 5% in 2013.[8]

Another strategy employed by the tobacco industry in China over the last decade has been to consolidate the production of cigarettes into a smaller number of well-defined Chinese "flagship brands" in order to better compete in the global market.[8] In 2009, CNTC listed 30 of these flagship brands and began to limit the production of other non-flagship brands. The number of cigarette brands in China decreased from about 2,000 in the late 1990s to 90 in 2013.[8] The total volume of flagship brand cigarettes has increased over this same period, while the production of cigarettes for non-flagship brands has remained the same.[9] In 2015, the market share of CNTC flagship brand cigarettes reached 83.7% by sales volume and 93.9% by value.[7]

High Social Acceptability of Smoking in Chinese Society

The gifting and giving of cigarettes is commonly regarded as an important and appropriate social activity to build up and maintain social connections or "Guanxi" in China. The widespread practices of gifting and sharing cigarettes have increased the social acceptability of smoking and strongly contribute to smoking initiation as well as failure to quit smoking, thereby limiting the effectiveness of tobacco control polices.[10, 11]

Smoking Prevalence and Trends in China

China has the largest smoking population in the world — with over 300 million smokers, China accounts for about 30% of the world's smokers.[12] The Chinese market consumes more cigarettes than all other low- and middle-income countries (LMICs) combined.

National health surveys in China have shown a decline in smoking prevalence in both men and women since the early 1990s, but an increase in the number of cigarettes smoked per day, earlier age of uptake, and low rates of cessation.[13, 14] More recent national surveys of tobacco use in China have been conducted by the Global Adult Tobacco Survey (GATS) in 2010 and the Tobacco Questions for Surveys[ii] (TQS; a subset of key questions from GATS) in 2014-15. The estimated smoking prevalence did not change between the two surveys, with 27.7% of adults aged 15 and older reported to be current smokers in 2015.[15] While prevalence has remained the same, the number of smokers increased by about 15 million over this five-year period due to the increase in population, reaching an estimated 316 million in 2015.[15] The average number of cigarettes smoked per day (CPD) by Chinese smokers also increased slightly from 14.2 in 2010 to 15.2 in 2015.[15, 16]

There is a dramatic gender difference in smoking prevalence in China. The 2015 TQS reported that 52.1% of males compared to only 2.7% of females are smokers, which was very similar to the 2010 GATS rates (52.9% of men and 2.4% of females).[15, 16] It is likely that this gender difference is due to strong cultural values in China where smoking among women is strongly discouraged, whereas smoking among men is acceptable and may even be encouraged. However, the potential exists for smoking among women to rise with increasing gender equality and with increasing influence of Western values.[17] In addition, because the tobacco industry is increasingly targeting female smokers through marketing strategies such as slim cigarettes, it is expected that smoking among females will become more socially acceptable over time.[18] If smoking rates among women increase, then the magnitude of the costs of tobacco use in China will grow even higher than the existing projections.

Smoking prevalence appears to be increasing among Chinese youth, especially young females.[19] The 2014 Global Youth Tobacco Survey (GYTS) reported that 19.9% of Chinese youth aged 13 to 15 had ever tried tobacco products, and current smoking prevalence rates among youth were 6.4% overall, with a higher prevalence among male youth (10.6%), compared to females (1.8%).[20] This is an increase from the 1999 GYTS results, in which an average of 4.7% of youth were current smokers[21]; however, comparisons between the two surveys are limited by the fact that the 1999 GYTS was conducted in only four provinces, while the 2014 GYTS was nationally representative.

The use of electronic cigarettes (e-cigarettes) is increasing globally, but is still low in most LMICs, including China. In the 2015 TQS, about 40% of Chinese smokers reported that they had heard of e-cigarettes, and only 0.5% reported any current e-cigarette use (daily or non-daily).[15] However, markets for e-cigarettes in China have grown significantly in the last few years, supported by an increased focus on development of new types of tobacco products by the STMA.[22] China is the largest e-cigarette manufacturer in the world — 95% of the world's e-cigarettes are produced in the city of Shenzhen.[23] There are currently no regulations on e-cigarettes in China; therefore, it is important to monitor trends in e-cigarette use over time.

The Burden of Tobacco Use in China

The health burden from tobacco use in China is enormous. About two-thirds of Chinese men begin smoking in early adulthood, and national cohort studies reveal that at least half of them will eventually die from smoking-related illnesses.[24] Recent estimates indicate that approximately 17-18% of all male deaths and 2-3% of female deaths in China are due to smoking.[14, 23] If current smoking trends continue, the mortality rate is expected to increase further – while 1.4 million deaths occur in China each year currently as a result of smoking, this number is expected to rise to over 3 million by 2050.[24, 25]

While rates of smoking and smoking-related mortality are much lower among Chinese women, the increasing number of male smokers means that non-smoking women face a greater risk of health effects from exposure to secondhand smoke (SHS). A recent meta-analysis of risk factors for lung cancer in non-smoking Chinese women determined that exposure to SHS at work, at home, and overall throughout one's lifetime significantly increases the likelihood of lung cancer.[26] Compared to other countries, the proportion of lung cancer cases among Chinese women is high given their low smoking rates, and rates of lung cancer mortality are increasing among both men and women, with almost half a million new cases diagnosed each year.[27] It is estimated that 740 million non-smokers in China, including 182 million children, are currently exposed to SHS at least once a day in a typical week and that exposure to SHS causes 100,000 deaths annually.[28]

ii Note: The TQS was conducted by the China CDC as part of the Global Tobacco Surveillance System (GTSS). The TQS used a subset of GATS questions and followed the sampling method of GATS. In China, the survey is known as the 2015 China Adult Tobacco Survey.

The economic burden of smoking in China is also significant. Data from the Chinese National Health Services Survey indicates that the cost of smoking in China increased from $17 billion USD in 2003 to $29 billion USD in 2008, which is equivalent to 0.7% of China's GDP, and the direct healthcare cost of smoking was estimated at $6.2 billion USD in 2008.[29] In 2014, the estimated cost for acute myocardial infarction was 13.4 billion RMB (about $1.9 billion USD), with an average increase of 8.7% annually in hospital treatment expenses since 2004.[30] The rising toll of tobacco use on public health and on the economy poses an immense threat to economic development in China. The strong linkage between tobacco and development has been recognized by the United Nations Development Programme (UNDP) and the Convention Secretariat of the WHO FCTC in their call for accelerated implementation of strong tobacco control policies and integration of the FCTC into countries' national health and development planning through multisectoral, whole-of-government actions.[31] Evidence demonstrates that tobacco control policies are highly cost-effective, can reduce the economic toll of tobacco use, and generate significant government revenues for health and development work.[32]

The rising toll of tobacco use on public health and on the economy poses an immense threat to economic development in China.

Overall, quit rates in China remain low: according to the 2010 GATS, only 36.4% of smokers (35.9% of males and 46.4% of females) tried to quit during the past 12 months.[16] This decreased in the 2015 TQS to 31.5% of smokers overall (31.3% of men and 35.9% of women).[15] The 2013-14 China City Adult Tobacco Survey (CCATS) also found low rates of quit intentions across 14 cities, ranging from 8-22% of smokers who intended to quit in the next 12 months.[33] Therefore, the demographic composition of smoking combined with the lack of interest in quitting threatens to further elevate the current heavy burden of tobacco use in China.

Surging Tobacco-Related Mortality in Rural Areas

According to 2015 population data, 44% of the Chinese population lives in rural areas. Comparatively, this is much higher than in the United States, where 19% of the population lives in rural areas.[34, 35] This is important for tobacco control efforts in China since smoking prevalence in rural areas has risen. According to the 2015 TQS, the overall prevalence of smoking is higher in rural areas (29.4%) compared to urban areas (26.1%).[15] Among male smokers, those in rural areas have a higher current cigarette smoking prevalence (54.0% vs. 48.9%), higher average CPD (15.7 vs. 14.7), and spend proportionally more disposable income on cigarettes (17.3% vs. 8.8%) compared to those in urban areas.[24]

Rural residents tend to be less educated and, not surprisingly, less knowledgeable about the harmful effects caused by smoking; there are fewer resources allocated to public health, including non-communicable diseases (NCDs) control and prevention; and the healthcare system in rural settings has far fewer resources than in urban settings and is ill-prepared to tackle the increase in NCDs.[36-38] As a result, there is an urgent need to target rural areas with more sustained tobacco control interventions in order to contain the tobacco epidemic in these areas.

Progress on Tobacco Control Policies

China signed the FCTC in 2003 and ratified the treaty in 2005; it came into force in January 2006. 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, promotion, and sponsorship (Article 13), and cessation and treatment (Article 14). With 180 Parties as of January 2017, the FCTC is one of the most successful treaties ever established.

Since 2005, there has been slow progress towards implementing tobacco control policies recommended in the FCTC guidelines, due to structural challenges and deep-rooted institutional barriers. However, there are recent signs of increasing momentum on tobacco control in China. China has recently introduced a number of initiatives to combat its tobacco problem, including a tobacco advertising ban, a tax increase, and comprehensive smoke-free laws in Beijing, Shenzhen, and Shanghai. Addressing these barriers offers an immense opportunity to change the course of the tobacco epidemic in China and put China on the path to tremendous public health and economic gains.[5]

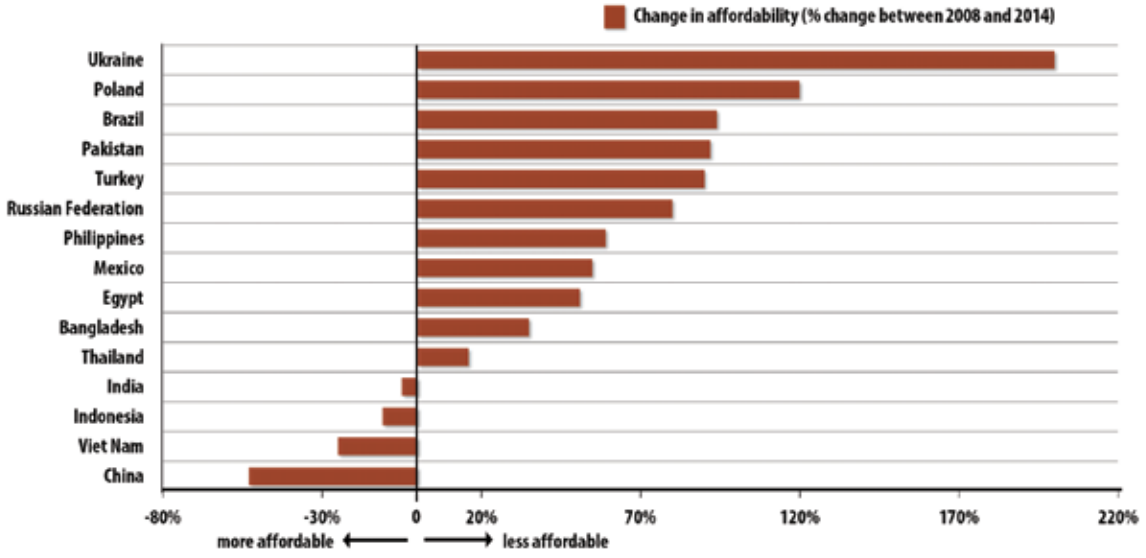
Tobacco Price and Taxation

Increasing taxes on tobacco products is considered to be the most cost-effective component of a comprehensive tobacco control strategy, particularly among youth and people in LMICs.[32, 39]

Article 6 of the FCTC obligates Parties to adopt pricing and taxation measures that reduce tobacco consumption, such as higher retail prices on cigarettes. The Article 6 guidelines further recommend that more reliance on specific excise tax rather than ad valorem tax is the most effective way to reduce consumption, provided the excises are adjusted for inflation and income.

The threat of smoking is enhanced because disposable income in China has increased considerably in both cities and rural areas with the huge upsurge in economic development. Tobacco has become substantially more affordable in recent years in China — between 1990 and 2005, cigarettes doubled in affordability.[40] China had the greatest increase in affordability of cigarettes between 2008 and 2014 compared with 14 other countries, according to WHO estimates (see Figure 1).[41]

Figure 1. Change in affordability of cigarettes in China compared to other countries between 2008-2014[iii, 41]



iii Reprinted from WHO Report on the Global Tobacco Epidemic, 2015: Raising Taxes on Tobacco, World Health Organization, Copyright (2015).

CNTC has kept prices of the low-cost brands very low, resulting in large price differentials across brands and an increase in smoking rates among low-SES smokers and in rural areas.[42] Affordability is expected to continue to increase if higher taxes that result in price increases are not introduced.

Cost-effectiveness studies have demonstrated the substantial health and financial gains to be made by implementing tax and price increases in China, including years of life gained, lower healthcare costs, greater tax revenue, and reduced disparities in health and economic outcomes across different wealth categories.[43] For example, using the SimSmoke model, it is estimated that raising cigarette taxes in China to 75% of the retail price as recommended by the WHO would reduce smoking prevalence by 12-13% between 2010 and 2050 and avert over 3 million deaths.[44]

In May 2009, ad valorem taxes were increased on cigarettes in China for the purpose of raising government revenue and improving the cigarette taxation structure. The result was an increase in tax rates by 11.7 percentage points at the producer level and an additional 5% at the wholesale level; however, the increase was not passed on to consumers (i.e., there was no change to retail prices). By failing to raise the retail price, the Chinese government lost the opportunity to reduce smoking rates and smoking-related deaths; researchers have estimated that if the 2009 tax increase was fully passed on to the consumer in retail prices, this would have resulted in up to 2 million smokers quitting.[45]

In May 2015, the Chinese government again raised its excise tax at the wholesale level from 5% to 11%. In addition, specific excise taxes on cigarettes were raised by 0.005 RMB per stick or 0.10 RMB per pack of 20 cigarettes, which is expected to increase cigarette retail prices by 7-10%. Preliminary assessments of the tax adjustment have shown a positive impact, as retail prices increased and sales of cigarettes decreased, leading to a reduction in the number of smokers in China.[46, 47] However, the price increase was still minimal and cigarettes continue to be affordable, thus limiting the potential impact of the tax increase.[46] Therefore, it is important to further monitor the impact of this 2015 tax change on retail prices, cigarette consumption, smoking behaviour, and government revenues to provide the evidentiary foundation for stronger and more effective tax policies in line with the FCTC to reduce the affordability of cigarettes, reduce demand, and to increase revenue.

Smoke-Free Policies

Article 8 of the FCTC obligates Parties to adopt effective measures to provide protection from exposure to tobacco smoke. Guidelines for Article 8 call for a comprehensive ban on smoking in indoor public places, workplaces, and public transport, and as appropriate, other public places within 5 years of the FCTC coming into force for each Party. The guidelines also establish the core principles for achieving 100% smoke-free environments, including monitoring and evaluation of enforcement.

Since ratifying the FCTC, some progress towards achieving this goal has been made in China; however, progress has been slower than in other countries and SHS exposure remains an enormous public health problem. According to the 2010 GATS, 7 in 10 non-smoking adults in China were exposed to SHS in a typical week and 6 in 10 noticed smoking at their workplace.[16] A recent meta-analysis of 46 studies on SHS exposure in China reported that the pooled overall prevalence of exposure among non-smokers was 48.7% between 1995 and 2013 and remained high during the study period.[48] SHS exposure was more likely in urban areas compared to rural, although there was no significant difference between females and males.

However, in the last decade, several Chinese municipalities have taken the lead on enacting smoke-free legislation in public places. The 2015 TQS showed some impact of these efforts, as SHS exposure was slightly lower in workplaces, public transit, public places, and at home compared to 2010 GATS findings.[15] However, rates of SHS exposure in China are still high compared to other countries.[49]

China does not currently have a national smoke-free law, but at least 18 cities have enacted smoke-free legislation at the local level. However, none of the city-level laws enacted prior to 2015 fully aligned with the Article 8 guidelines, as they were not comprehensive and lacked strong enforcement, and evidence from evaluations of these partial smoking bans have shown that they have not been as effective as comprehensive bans in reducing SHS exposure.[49]

On June 1, 2015, a new smoke-free law came into effect in Beijing. The Beijing Smoking Control Regulation is the first smoke-free law to be fully compliant with FCTC Article 8 and is the strongest tobacco control law to date in China. Smoking in all indoor public places and workplaces as well as many outdoor places was banned, and smoking rooms at airports were eliminated. Several measures have been introduced to help enforce Beijing's new law. First, there are stringent fines for non-compliance – from 50-200 RMB ($8-32 USD) for individuals and up to 10,000 RMB ($1,600 USD) for businesses. In addition to fines, businesses found breaking the law more than three times will be publicly named and shamed on a special government website. A government hotline is also available to report cases of smoking in public places, and early reports suggest that many people are making use of the hotline, demonstrating strong public support. Finally, there are thousands of volunteers – over 11,000 in October 2015 – signed up to support enforcement of the law by reporting violations.[50]

An observational evaluation study conducted 5 months before and 1 month after the ban found high levels of initial compliance with the Beijing smoke-free law. Among 176 restaurants visited, smoking decreased from 40% before the ban to 15% after the ban came into effect, and the percentage of restaurants with smoke-free signs posted increased from 53% to 82%.[51] However, fewer than half of the no-smoking signs displayed the hotline number as required by the law, and venue owners did not intervene when smoking did occur, demonstrating the need to strengthen enforcement of the law.[51] A 2016 study provides further evidence of the positive impact of the Beijing smoke-free law on reducing the prevalence of smoking in public places. One year after the implementation of the smoke-free law, there were large reductions in the percentage of smokers who noticed someone smoking in the last 30 days in a number of indoor public places and workplaces. The largest decline in smoking prevalence occurred in restaurants – from 65.3% in 2014 to 32.5% in 2016.[33, 260] Reductions in smoking prevalence also occurred in indoor workplaces (35.7% in 2014 vs. 20.0% in 2016); primary and secondary schools (33.4% in 2014 vs. 19.1% in 2016); government buildings (19.9% in 2014 vs. 10.8% in 2016); and health care facilities (13.4% in 2014 vs. 6.2% in 2016). Smoking prevalence was highest in bars and night clubs and decreased only slightly from 2014 (89.1%) to 2016 (80.3%).

The Beijing smoke-free law sets a strong example for other cities to follow and has significant potential to lead the way to a national comprehensive smoke-free law. In November 2016, Shanghai also adopted a comprehensive smoke-free law with the passage of the Shanghai Regulations on Control of Smoking in Public Places.[52] The law, which took effect on March 1, 2017, requires all indoor public places, including indoor workplaces and public transportation, to be 100% smoke-free. However, there is a clause stating that the Shanghai government may issue specifications for indoor smoking rooms in special circumstances. In order for the law to be fully comprehensive without exceptions as called for under Article 8, it is important to ensure this clause is never invoked.[53] In addition, Shenzhen fully implemented their comprehensive smoke-free law on January 1, 2017 and there is growing momentum to pass stronger smoke-free laws in other locations in China.

At the national level, in November 2014, China's State Council issued a draft regulation on "Smoking Control in Public Places" which calls for a complete ban on smoking in all public places, workplaces and public transportation, with no exceptions. The draft national smoke-free ordinance has since moved up in priority level each year in the legislation work plan released by State Council, from being under consideration in the 2015 work plan to the stage of being ready for completion in the 2016 work plan. Including the national smoke-free ordinance in the work plan makes it a step closer to reality. However, at the time of writing this Report the comprehensive smoke-free law was not yet promulgated.

Health Warnings

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

Prior to January 2009, 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, it was announced that larger text warnings were to be introduced in January 2009. These warnings, however, did not meet the FCTC Article 11 guidelines on a number of dimensions – the size of the warnings was only 30% of the front and 30% of the back of the pack rather than the recommended 50%, and they were positioned at the bottom of the package rather than the top.

The 2009 warnings consisted of two general messages, which were essentially the same message but framed in slightly different ways: "Smoking is harmful to your health" and "Quit smoking early is good for your health", and the message on the back of the packages was printed entirely in English, a foreign language; an ITC study demonstrated that only 10% of adult Chinese smokers in four cities could understand the English warnings.[54]

In August 2011, CNTC announced revisions to the warnings. In April 2012, cigarette packs produced and sold in China were required to bear new text warning labels with lettering that was twice the size (no less than 4 millimeters in height) of the previous text warnings. In addition, the English language warning on the back of the pack was changed to Chinese to meet the FCTC requirement that warnings be written in the country's principal language. However, the overall label size remained unchanged at 30% of both sides of the package and without the requirement for graphic warnings that are clear, visible, and rotating, China's warning labels still do not meet the FCTC Article 11 guidelines.

In November 2014, in response to China's ineffective health warnings, the Chinese government called for pictorial and text health warnings and dictated in the draft national smoke-free ordinance that these warnings must cover at least half of the area of a cigarette pack. However, the use of pictorial warnings on packs was later dismissed by the Deputy Director of STMA during the National People's Congress in March 2016 because they are incompatible with Chinese cultural traditions.[55] As of October 2016, cigarette packs produced and sold in China are required to include one of three warning messages similar to the previous messages ("Smoking is harmful to health and please do not smoke in smoke-free areas", "Quit smoking early is good for health; quit smoking reduces health risk", and "Dissuade youth from smoking and forbid elementary and middle school students from smoking"). The size of the warning labels increased only slightly to cover 35% of the front and back of the pack – well below the FCTC recommendation of at least 50%, and the font size of the text increased from 4mm to 4.5mm.[56]

Light/Mild Product Descriptors

Article 11 of the FCTC also obligates Parties to eliminate deceptive tobacco product labelling that "directly or indirectly creates the false impression that a particular product is less harmful than other tobacco products".[57] This may include terms such as "low tar", "light", "ultra-light", "healthy", or "mild". China banned these descriptors in 2006; however, lower tar cigarettes are still marketed and promoted in other ways as being less dangerous, such as by lowering the maximum tar thresholds for Chinese cigarettes.[58]

Studies have shown that the perception that light or low tar cigarettes are less harmful is still common in China. The 2010 GATS found that the majority of Chinese people have misperceptions about low tar and low harm, as only 14% of respondents overall were aware that low tar cigarettes are just as harmful as regular cigarettes.[16] The 2015 TQS also found that Chinese people lack knowledge about the harmfulness of low tar cigarettes as 75.5% of respondents could not answer correctly if low tar cigarettes are less harmful.[15]

Findings from the 2009 ITC China Survey have also shown the importance of smokers' own sensory beliefs in their perceptions of harmfulness, as smokers who think their brand of cigarettes is smoother are more likely to believe their brand is also less harmful.[58] This perception that a brand is smoother mainly comes from the increased filter ventilation in some cigarettes in China, a technique that is used to lower tar yields. Therefore, it is recommended that statements about product contents and emissions such as tar yields should be removed from packs in accordance with the Article 11 guidelines.

Education, Communication, and Public Awareness

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

One obstacle in increasing public awareness of smoking risks is the deeply ingrained smoking culture in China, and until recently, few sustained efforts have been made to increase awareness of the harms of smoking at the national level. As a result, knowledge of the specific health risks caused by smoking is lower than in other countries. For example, according to the 2010 GATS, only 23% of Chinese adults believed that smoking causes stroke, heart attack, and lung cancer.[16]

According to the 2015 TQS, the Chinese public was more aware of the harms of SHS compared to 5 years earlier — 64.6% knew that SHS causes lung cancer, 41.7% knew that SHS causes heart attack; and 65.2% knew that SHS causes lung disease in children.[15] However, the public's knowledge of smoking risks did not increase significantly over the same period. While the majority (80%) knew that smoking causes lung cancer, only 31%, 42.6%, and 19.7% knew smoking causes stroke, myocardial infarction, and erectile dysfunction, respectively.

Mass media campaigns are an effective method for educating the public, decreasing social acceptability of smoking, and reducing smoking initiation, especially among youth. Although ITC China data has shown low rates of exposure to anti-tobacco messages from 2006 to 2009, those who reported higher levels of exposure across a greater range of sources were more likely to attempt to quit.[59] This demonstrates the importance of educational campaigns in China, but that more needs to be done to improve such efforts.

Since 2008, China has regularly carried out anti-smoking mass media campaigns at both the subnational and national levels. For example, at the national level, China launches anti-smoking mass media campaigns addressing the key themes of World No Tobacco Day each year.

Between 2008 and 2010, local media campaigns were initiated by the World Lung Foundation to raise awareness about the harms of smoking, including the graphic "Sponge" campaign in Beijing and the "Giving cigarettes is giving harm" campaign, which ran in several cities through television and posters to discourage the practice of gifting cigarettes. The gifting campaign was found to be effective in increasing knowledge of smoking-related harms and reducing perceived acceptability of gifting cigarettes.[10]

Media campaigns have also been developed to increase awareness of tobacco control laws in China, such as new rules to restrict smoking in Beijing as part of the smoke-free Olympics initiative in 2008. The ThinkTank Research Center for Health Development also launched an innovative campaign in 2011 advocating for pictorial warnings in China, which had a wide reach and received strong support.[60]

Until recently, few sustained efforts have been made to increase public awareness of the harms of smoking. As a result, smokers' knowledge of the specific harms of smoking is poor, especially compared to other countries.

Social media is also now being used as a medium for health promotion in China. The first government-led national social media campaign on tobacco control in China was launched in 2011 by the China Center for Health Education, under the former Ministry of Health (MOH, which became the National Health and Family Planning Commission (NHFPC) in 2013). The campaign used microblog postings on the Sina Weibo social media platform to disseminate information on smoking harms and to encourage cessation. An analysis of this campaign found that postings containing content on perceived risk of smoking and self-efficacy increased online engagement (e.g. comments, sharing, and liking of posts).[61] Social media was also used in May 2014, when the anti-smoking advertisement "Support Smoking Ban in Public Places, for You and Others" sponsored by NHFPC was continually played on state and local TV stations as well as such new media as WeChat, Weibo, and outdoor billboards for 1 month. Finally, around the time when the June 2015 Beijing smoke-free law was implemented, Beijing carried out educational campaigns through several forms of media (e.g. outdoor, social media, mass media), reaching out to both rural and urban residents.

Other examples of educational initiatives in China include reports and efforts to change social norms around smoking. On May 30, 2012, the MOH (now the NHFPC) released its first official report on the harms of smoking titled, *China Report on the Health Hazards of Smoking*. The report used scientific evidence from national and international research to describe the dangers of smoking and SHS.[62] Following that report, the new NHFPC released informational materials such as *Tobacco Control Knowledge for Beginners and Core Health Education Information of Tobacco Control* based on the findings of the previous MOH report.[63]

In December 2013, the General Office of the Communist Party of China Central Committee and the General Office of the State Council banned Party and government officials from smoking in public and from using public funds to buy cigarettes, in order to set a positive example to the public.[64]

These initiatives demonstrate the growing level of support and readiness among the population and the government for stronger tobacco control initiatives, paving the way for more change in the future.

Tobacco Advertising, Promotion, and Sponsorship

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

The influence of TAPS on tobacco use has been well-documented. There is evidence that exposure to TAPS increases tobacco consumption and that comprehensive bans on TAPS reduce tobacco use, whereas partial bans have little or no effect.[65, 66]

Prior to 2015, there was no national legislation banning TAPS in China and only one city (Shenzhen) had implemented a complete ban on TAPS.[41] The advertisement of tobacco products in China is regulated by the 1991 Tobacco Products Monopoly Law and the 1994 Advertisement Law. Under these laws, direct tobacco advertisements were banned in television, radio, newspapers, periodicals, and some public places.

However, outdoor, point of sale, and Internet advertising were not banned, allowing tobacco companies to maintain a visible marketing presence through sponsorships and promotions using outdoor displays such as billboards and Internet advertisements.[67] Tobacco companies also use branding and marketing strategies that incorporate famous Chinese landmarks and icons, including images on packages, as a way of exploiting Chinese culture.[4]

Under these earlier laws, the public was exposed to high levels of both direct and indirect forms of tobacco advertising. The 2010 GATS found that about 20% of adults in China noticed some form of TAPS in the last 30 days, and exposure was higher among young people (39% among males aged 15-24).[16] A study of tobacco marketing among preschool children in 6 countries in 2012 found that 5-6 year olds in China (86%) were the most likely to be able to identify at least one cigarette brand logo.[68] Greater media exposure among Chinese children was associated with higher likelihood of identifying cigarette brand logos and with higher intention to smoke.[68]

Recently, China has implemented new legislation to restrict TAPS. In 2011, strict regulations on the portrayal of smoking in movies and television were introduced, and the 2012 National Tobacco Control Plan included a strong commitment to strengthening existing TAPS bans in China.[69] In April 2015, an amended Advertising Law was passed, which came into effect in September 2015. The new law prohibits any form of tobacco advertisement targeting youth, and bans tobacco advertisements in the mass media, outdoors, in public places and public transport, as well as tobacco brand sharing or stretching activities.[3] The law also comes with higher penalties for non-compliance. However, "public places" was not clearly defined in the legislation, allowing a possible loophole for the tobacco industry.[70]

Other recent laws also call for further restrictions on TAPS. The Philanthropy Law was passed by the National People's Congress in March 2016 and came into force on September 1, 2016. This law specifically prohibits promoting tobacco products through the act of charitable donations; however, it does not specifically ban tobacco firms from other forms of donations, such as sponsorship of charity events or educational initiatives, free clinics, and fund raising activities.[71] The promotion of tobacco products on the Internet is also prohibited under the Interim Regulation on Internet Advertisement, which came into effect in September 2016.[259]

Cessation and Treatment

Article 14 of the FCTC obligates Parties to implement effective measures to promote cessation of tobacco use, including programs for diagnosing, counselling, preventing, and treating tobacco dependence, as well as facilitating accessible and affordable treatments. Guidelines for Article 14 recommend a broad range of interventions, including population-based approaches, and where resources permit, more intensive individual approaches. The guidelines outline a "stepwise approach" to building the infrastructure needed for a comprehensive cessation and treatment strategy in LMICs.

Effective September 2015, tobacco advertisements targeting youth are banned, as well as tobacco advertisements in the mass media, in public places, and public transport. Brand sharing and brand stretching activities are also prohibited.

A recent cohort study in China that examined national trends in prevalence over 14 years found that rates of quitting among men have increased but are still low, since only 9% of male smokers in the study had quit in 2006.[24] The study also demonstrated that while tobacco-attributed mortality has risen since the 1990s, the risk of mortality is reduced among quitters, and decreases further the longer the quitting duration. Therefore, effective measures to accelerate cessation are needed in China in order to reduce premature death and disability.

Few cessation programs have been introduced in China, and few studies have examined factors associated with quitting among Chinese smokers. Although physicians' advice is a powerful motivator to encourage quitting, the 2015 TQS found that only 58% of doctors in China advised smokers to quit – an increase from 33% in the 2010 GATS.[15,16] The rate of physician advice varies across cities, ranging from 42-70% of smokers who visited a health provider in the last year across the 14 cities in the 2013-14 CCATS.[33]

"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.[72] Cessation clinics and quitlines are available in several cities, such as the quitline at the Beijing Chaoyang Hospital. In 2009, the first national quitline was set up by the MOH and WHO, and in 2015, another national quitline was set up with support from the NHFPC. In 2014, a pilot program of providing cessation services through a non-profit public health hotline was expanded to all provinces and is now available in 28 of the 31 provinces, reaching more than 1 billion people.[73] Although these cessation resources are available, their use among the Chinese population is still infrequent, and many clinics have been forced to close as a result.[25, 74] In addition, cessation treatment medications are not currently covered by national health insurance and remain too costly for many people.[75]

The NHFPC has issued several notices related to improving cessation services by doctors and hospitals. All smoke-free hospitals are required to provide smoking cessation doctors and quitline services, as stated in the Standard for Smoke-free Hospitals jointly issued by the former Ministry of Health and National Patriotic Heath Campaign Office in 2008.[76] NHFPC issued an executive notice on further strengthening tobacco control and FCTC implementation in January 2014. This notice required that medical institutes establish a procedure in which doctors must ask patients about their smoking history in the medical history examination and must provide cessation advice and services for patients who smoke.[77] The China Clinical Guidelines for Smoking Cessation (2015) was also published in May 2015, guiding medical professionals in how to treat their patients' tobacco addictions.[78]

Finally, the 2014 draft regulation proposed by China's State Council includes measures to help smokers quit, such as establishing cessation advice through phone services and providing brief cessation interventions for patients at healthcare institutions. Depending on resources, healthcare institutions may also provide cessation clinics and professional cessation services.

Although some cessation services are available, their use among Chinese smokers is infrequent. Effective measures to accelerate cessation are needed in China in order to reduce premature death and disability.

ITC SURVEY METHODS

Overview

The International Tobacco Control Policy Evaluation Project (the ITC Project) is an international research collaboration across 28 countries – Canada, United States, United Kingdom, Australia, Ireland, Thailand, Malaysia, China, Republic of Korea, New Zealand, Mexico, Uruguay, France, Germany, the Netherlands, Brazil, Mauritius, Bangladesh, Bhutan, India, Kenya, Zambia, Spain, Romania, Greece, Hungary, Poland, and Abu Dhabi – United Arab Emirates.

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 FCTC. The ITC Project is conducting large-scale prospective cohort surveys of tobacco use to evaluate FCTC policies in countries inhabited by over 50% of the world's population, over 60% of the world's smokers, and over 70% of the world's tobacco users. 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)[79]; for a description of the survey methods, see Thompson et al. (2006).[80]

The ITC China Survey: Waves 1 to 5

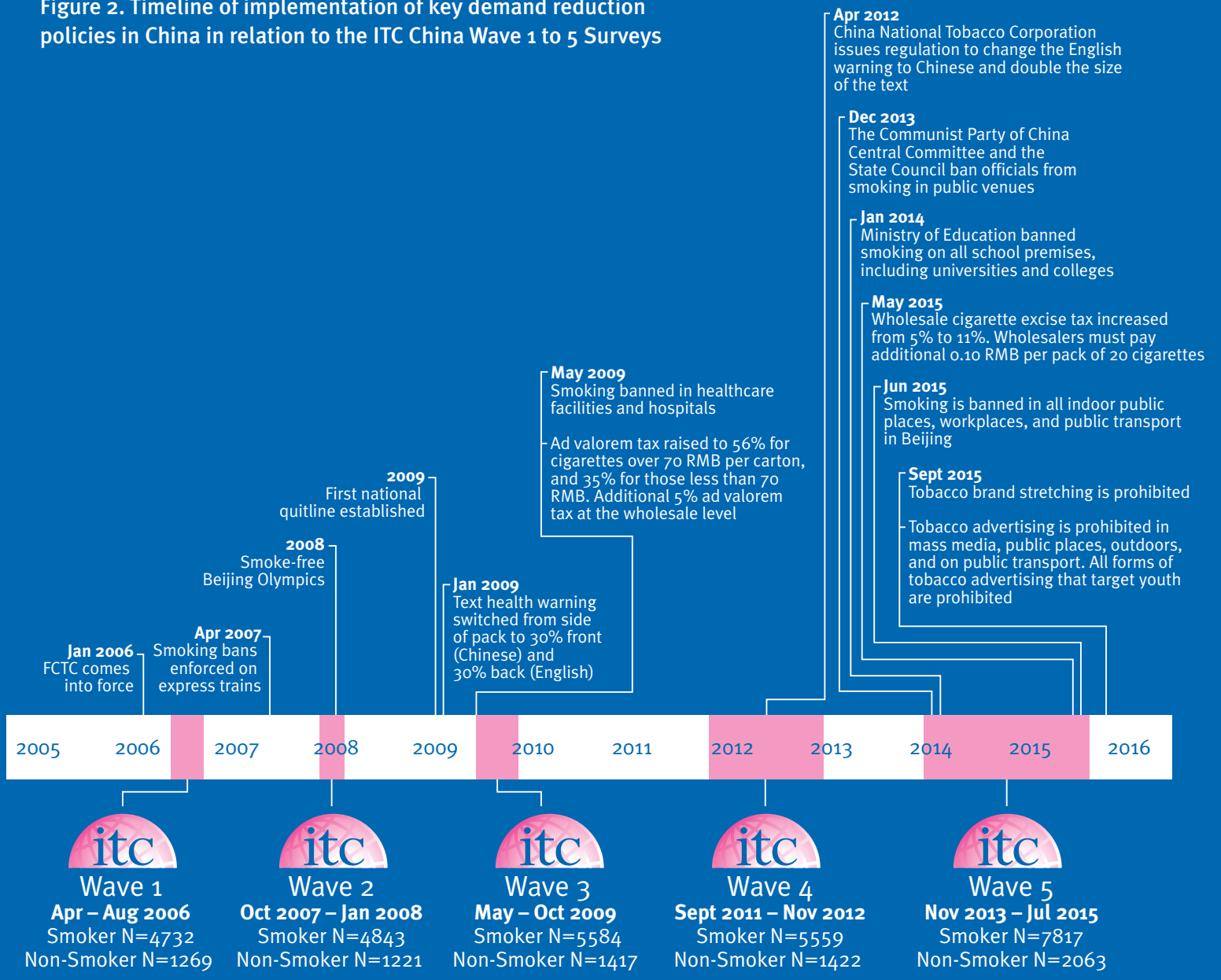
In 2006, the University of Waterloo in Canada partnered with the China CDC to create the ITC China Survey. The ITC China Survey is designed as a system for evaluating the psychosocial and behavioural effects of tobacco control legislation in China, using methods that the ITC Project has employed in many other countries throughout the world. The primary objective of the ITC China Survey 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. 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. At Waves 4 and 5, more detailed questions to measure cigarette gifting, e-cigarette use, and smoke-free policies were added to the smokers' and non-smokers' survey.

The ITC China Wave 1 Survey (2006) was conducted shortly after the FCTC entered into force in China (ratified in October 2005 and entered into force in January 2006). The ITC China Wave 2 to 5 Surveys (2007-2015) were conducted during the implementation of several new tobacco control measures, including two rounds of revisions to text-only health warnings (January 2009 and April 2012); partial bans on smoking in restaurants and workplaces in some cities (2008-2010); and a tax increase (May 2009). Wave 5 Survey fieldwork was in progress during the implementation of a tax increase in May 2015 and during Beijing's implementation of a comprehensive smoke-free law in June 2015.[iv] Figure 2 illustrates the timeline of the ITC China Surveys in relation to the implementation of major tobacco demand reduction policies.

iv. Beijing's comprehensive June 2015 smoke-free law came into effect after the Wave 5 Survey fieldwork was completed in that city, and most of the survey fieldwork was completed prior to the May 2015 tax increase, so the impact of these laws was not evaluated at Wave 5.

Figure 2. Timeline of implementation of key demand reduction policies in China in relation to the ITC China Wave 1 to 5 Surveys



Sampling Design

The ITC China Survey is a prospective longitudinal study of adult smokers and non-smokers (18 years of age or older) in China that uses a face-to-face survey mode to collect data from respondents. For a more detailed description of the ITC China Survey methods, see Wu et al. (2010 & 2015).[81, 82] For further information on the sampling design, construction of sampling weights, and retention rates, please see the ITC China Project technical reports at www.itcproject.org.[83-87]

The ITC China Survey fieldwork was conducted by team members from the China CDC and local CDCs in all urban and rural locations, with the exception of Kunming, where fieldwork was conducted by the Yunnan Health Education Institute. The ITC China Wave 1 to 4 Surveys were conducted in six cities in China – Beijing, Changsha, Guangzhou, Shanghai, Shenyang, and Yinchuan. Kunming was added as the seventh city at Wave 3. At Wave 5, the study was expanded to examine whether policy effects are moderated by survey location with a special focus on whether there is a need for stronger action in lower-resourced rural areas.

Therefore, the Wave 5 Survey was conducted in five cities that were included in previous waves (i.e., Beijing, Guangzhou, Kunming, Shanghai, and Shenyang), as well as in five new rural areas (i.e., Changzhi, Huzhou, Tongren, Yichun, and Xining), four of which are located in tobacco manufacturing provinces. The 10 participating locations in the Wave 5 Survey were chosen for their breadth and diversity with respect to geographic region, economic development, reliance on tobacco economy, and tobacco use.

A total of 4732 adult smokers and 1269 non-smokers participated in Wave 1 of the ITC China Survey. The study sample in Waves 2 to 5 included cohort participants from the previous waves, as well as newly recruited respondents (the replenishment sample) to replace respondents who were lost to recontact. At Wave 5, the study sample also included 4971 newly recruited respondents from five rural areas (as described above). Table 1 provides a summary of the Wave 1 to 5 participant retention rates for smokers and non-smokers.

Table 1. ITC China Wave 1 to 5 Survey retention rates

	N	Retention Rate (%)
Smokers		
Wave 1	4732	-
Wave 2	4843	83.0
Wave 3	5584	81.0
Wave 4	5559	66.4
Wave 5	7817	72.3*
Non-Smokers		
Wave 1	1269	-
Wave 2	1221	84.0
Wave 3	1417	82.6
Wave 4	1422	77.6
Wave 5	2063	80.3*
Total		
Wave 1	6001	-
Wave 2	6064	83.2
Wave 3	7001	82.6
Wave 4	6981	68.7
Wave 5	9880	74.0*

* Wave 1 to 5 retention rates are based on cohort samples from the following cities: Beijing (Waves 1 to 5); Changsha (Waves 1 to 4); Guangzhou (Waves 1 to 5); Kunming (Waves 3 to 5); Shanghai (Waves 1 to 5); Shenyang (Waves 1 to 5); and Yinchuan (Waves 1 to 4).

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 six cities (see Figure 3).[v] In each of the six cities, the China team selected 10 Jie Dao (JD) or street districts, with the probability of selection proportional to the population size of the JD. In each of the JD selected, two Ju Wei Hui (JWH) or residential blocks were further selected. From each JWH, a sample of 300 addresses was drawn by simple random sampling without replacement.

v. There was a seventh city in the first two waves—Zhengzhou—but the quality of the data from that city was not sufficiently high; thus, the data from that city were not included in the overall ITC China Survey dataset.

The enumerated 300 households within each JWH were then randomly ordered, and adult smokers and non-smokers were surveyed until a designated quota (40 adult smokers and 10 adult non-smokers) was met. 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.

For the Wave 5 Survey, the same multistage cluster sampling method that was developed for Wave 1 was also used to obtain a representative sample of adult smokers and non-smokers who were registered residents in each the five newly added rural areas. In Kunming, six new Ju Wei Hui (JWH) were selected to replace the original six JWH due to relocation and adjustments were made to the administrative areas. The remaining 14 JWH were retained. In Tongren, all nine Xiang Zhen (XZ) or townships in the Bijiang District were selected. A total of 20 Cun Wei Hui (CWH) were selected from the nine XZ from which a sample of 350 households in each CWH was then drawn by simple random sampling for enumeration. The same sampling method was used in Changzhi, Huzhou, Yichun, and Xining, but 10 XZ were selected using probability proportional to size method. Two CWHs were further selected in each XZ. In each CWH, 300 households were enumerated and a total of 40 adult smokers and 10 adult non-smokers were interviewed within the enumerated households.

Figure 3. ITC China Wave 1 to 5 Survey sampling areas

Characteristics of the Wave 1 to 5 Sample

Smokers were defined as having smoked more than 100 cigarettes in their lifetime and currently smoking at least once a week.

Table 2 provides the sample sizes of smokers and non-smokers in each location where the ITC China Survey was conducted by wave. Tables 3 and 4 summarize the demographic characteristics of the survey participants in the Wave 1 to 5 Survey samples.

Table 2. ITC China Wave 1 to 5 Survey sample sizes

	Wave 1 (n)		Wave 2 (n)		Wave 3 (n)	
	Smokers	Non-Smokers	Smokers	Non-Smokers	Smokers	Non-Smokers
Cities						
Beijing	785	219	801	218	802	217
Changsha	800	205	795	185	772	204
Guangzhou	791	226	833	211	829	206
Kunming	-	-	-	-	801	195
Shanghai	784	204	803	204	784	204
Shenyang	781	200	799	198	788	199
Yinchuan	791	215	812	205	808	192
Rural Areas						
Changzhi	-	-	-	-	-	-
Huzhou	-	-	-	-	-	-
Tongren	-	-	-	-	-	-
Xining	-	-	-	-	-	-
Yichun	-	-	-	-	-	-
Total	**4732**	**1269**	**4843**	**1221**	**5584**	**1417**

	Wave 4 (n)		Wave 5 (n)	
	Smokers	Non-Smokers	Smokers	Non-Smokers
Cities				
Beijing	796	218	774	225
Changsha	798	193	-	-
Guangzhou	798	216	783	223
Kunming	793	201	804	205
Shanghai	808	203	815	205
Shenyang	790	195	684	191
Yinchuan	776	196	-	-
Rural Areas				
Changzhi	-	-	804	200
Huzhou	-	-	799	201
Tongren	-	-	804	213
Xining	-	-	750	199
Yichun	-	-	800	201
Total	**5559**	**1422**	**7817**	**2063**

Table 3. ITC China Wave 1 to 5 Survey sample: Demographic characteristics of smokers and non-smokers

	Smokers									
	Wave 1		Wave 2		Wave 3		Wave 4		Wave 5	
	N	%	N	%	N	%	N	%	N	%
Sex										
Male	4501	95.1	4589	94.8	5287	94.7	5260	94.6	7493	95.9
Female	231	4.9	254	5.2	297	5.3	299	5.4	324	4.1
Age (years)										
18-24	56	1.2	46	1.0	95	1.7	77	1.4	199	2.6
25-39	792	16.7	766	15.8	1038	18.6	951	17.1	1430	18.3
40-54	2314	48.9	2352	48.6	2566	46.0	2429	43.7	3351	42.9
55+	1570	33.2	1679	34.7	1885	33.8	2098	37.8	2831	36.2
Gross Income (RMB)										
<1000	925	19.6	794	16.4	549	9.8	282	5.1	477	6.1
1000-2999	2132	45.1	2199	45.4	2134	38.2	1565	28.2	1605	20.5
3000-4999	860	18.2	977	20.2	1584	28.4	1728	31.1	1601	20.5
5000-6999	299	6.3	357	7.4	617	11.1	921	16.6	1386	17.7
7000-8999	84	1.8	80	1.7	186	3.3	411	7.4	590	7.6
9000+	89	1.9	110	2.3	188	3.4	387	7.0	966	12.4
Not stated	343	7.3	326	6.7	326	5.8	265	4.8	1192	15.3
Education										
None	152	3.2	155	3.2	170	3.0	152	2.7	315	4.0
Elementary school	468	9.9	433	8.9	491	8.8	456	8.2	1462	18.7
Junior high school	1505	31.8	1515	31.3	1655	29.6	1659	29.8	2992	38.3
High school, some technical school	1593	33.7	1685	34.8	1889	33.8	1838	33.1	1823	23.3
College	586	12.4	627	13.0	793	14.2	813	14.6	676	8.7
University or higher	423	8.9	398	8.2	567	10.2	590	10.6	515	6.6

Table 3. ITC China Wave 1 to 5 Survey sample: Demographic characteristics of smokers and non-smokers

	Non-Smokers									
	Wave 1		Wave 2		Wave 3		Wave 4		Wave 5	
	N	%	N	%	N	%	N	%	N	%
Sex										
Male	515	40.6	477	39.1	547	38.6	534	37.6	700	33.9
Female	754	59.4	744	60.9	870	61.4	888	62.5	1363	66.1
Age (years)										
18-24	54	4.3	48	3.9	64	4.5	59	4.2	113	5.5
25-39	258	20.3	238	19.5	291	20.5	302	21.3	409	19.8
40-54	509	40.1	489	40.1	515	36.3	518	36.5	803	38.9
55+	448	35.3	446	36.5	547	38.6	542	38.1	737	35.7
Gross Income (RMB)										
<1000	238	18.8	173	14.2	115	8.1	52	3.7	163	7.9
1000-2999	594	46.8	611	50.0	587	41.4	454	31.9	414	20.1
3000-4999	237	18.7	247	20.2	440	31.1	473	33.3	368	17.8
5000-6999	71	5.6	76	6.2	161	11.4	223	15.7	387	18.8
7000-8999	19	1.5	21	1.7	26	1.8	85	6.0	149	7.2
9000+	16	1.3	18	1.5	25	1.8	83	5.8	247	12.0
Not stated	94	7.4	75	6.1	63	4.5	52	3.7	335	16.2
Education										
None	44	3.5	37	3.0	39	2.8	33	2.3	127	6.2
Elementary school	108	8.5	106	8.7	125	8.8	104	7.3	413	20.0
Junior high school	325	25.6	305	25.0	336	23.7	337	23.7	640	31.0
High school, some technical school	426	33.6	438	35.9	492	34.7	480	33.8	460	22.3
College	230	18.1	205	16.8	237	16.7	273	19.2	231	11.2
University or higher	136	10.7	122	10.0	173	12.2	183	12.9	184	8.9

Table 4. ITC China Wave 5 Survey sample: Demographic characteristics of smokers and non-smokers in cities vs rural areas

	Cities				Rural Areas			
	Smokers		Non-Smokers		Smokers		Non-Smokers	
	N	%	N	%	N	%	N	%
Sex								
Male	3632	94.1	396	37.8	3861	97.6	304	30.0
Female	228	5.9	653	62.3	96	2.4	710	70.0
Age (years)								
18-24	61	1.6	39	3.7	138	3.5	74	7.3
25-39	613	15.9	170	16.2	817	20.7	239	23.6
40-54	1564	40.6	388	37.0	1787	45.2	415	40.9
55+	1616	41.9	451	43.0	1215	30.7	286	28.2
Gross Income (RMB)								
<1000	46	1.2	6	0.6	431	10.9	157	15.5
1000-2999	425	11.0	124	11.8	1180	29.8	290	28.6
3000-4999	916	23.7	224	21.4	685	17.3	144	14.2
5000-6999	998	25.9	300	28.6	388	9.8	87	8.6
7000-8999	460	11.9	128	12.2	130	3.3	21	2.1
9000+	696	18.0	186	17.7	270	6.8	61	6.0
Not stated	319	8.3	81	7.7	873	22.1	254	25.1
Education								
None	64	1.7	21	2.0	251	6.3	106	10.5
Elementary school	264	6.8	82	7.8	1198	30.3	331	32.6
Junior high school	1165	30.2	235	22.4	1827	46.2	405	39.9
High school, some technical school	1324	34.3	345	32.9	499	12.6	115	11.3
College	569	14.7	196	18.7	107	2.7	35	3.5
University or higher	462	12.0	165	15.7	53	1.3	19	1.9

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 Tobacco Control Office (China CDC), The Cancer Council of Victoria, Roswell Park Cancer Institute, and The State University of New York at Buffalo. Most of the survey methods and survey questions have been taken from the standardized protocols used in ITC surveys conducted in more than 25 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, brand choice and purchasing, gifting of cigarettes, and quitting behaviours;
2. **Alternative Tobacco Products**. Awareness and use of e-cigarettes and herbal cigarettes; reasons for use; and perceptions of harm;
3. **Knowledge and 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;
4. **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 laws, light/mild descriptors);
5. **Other Important Psychosocial Predictors**. Smoking behaviour and potential moderator variables such as attitudes, normative beliefs, self-efficacy, and intentions to quit;
6. **Individual Difference Variables Relevant to Smoking** (e.g., depression, stress, time perspective);
7. **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 questionnaires are available on the ITC Project website at www.itcproject.org.

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 nine years that the ITC China Wave 1 to 5 Surveys were conducted, some respondents were lost to attrition, as they are in any longitudinal cohort study.

In order to compensate for this attrition and maintain a sufficient sample size, new respondents were recruited in Waves 2 to 5. Therefore, at Waves 2 to 5, 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 three survey waves, 783 smokers and quitters who have participated in two survey waves (either Wave 2 and Wave 3 or Wave 1 and Wave 3), and 1660 smokers who have participated in one 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 and have been found in the ITC surveys in other countries as well.[88-91] The analytic methods described next provide adjustments for TIS and some other potentially confounding effects.

Analytic Methods

In order to assess temporal changes in policy relevant measures, data from all five waves of the ITC China Survey were used, unless otherwise stated. Quitters were only included in the analysis where the measure of interest was especially relevant for quitters. The analytic data set for smokers in Waves 1 to 5 was based on 14158 unique smokers and had a total of 27040 observations. Among these 27040 observations, 4732 were from Wave 1 smokers, 4626 were from Wave 2 smokers, 5210 were from Wave 3 smokers, 5080 were from Wave 4 smokers, and 7392 were from Wave 5 smokers.

If the same questions were asked in multiple waves and an outcome of interest was categorical, a complex survey logistic regression analysis (fitted by Generalized Estimating Equations) was used to estimate standardized or adjusted values of the descriptive statistics (proportions) over time, where feasible. Variables such as sex, age group, smoking status, wave, and TIS (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 was used as the response variable. Strata and cluster information, repeated measures at each wave, as well as survey weights were also taken into account. Based on the estimated logistic regression models, the adjusted percentages of response variables were 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 was used for adjustment. This method is directly analogous to age adjustment when comparing mortality in two or more populations in epidemiology and demography.[92]

It should be noted that the resulting predicted means (percentages) depend on the set of covariates chosen for the model. In this report, covariates such as gender, age group, smoking status (i.e., daily vs. non-daily smokers, or quitters, if appropriate), wave, and TIS were used for adjustment except where indicated. Since TIS has the largest impact on adjustments, the estimates are referred to as "adjusted for TIS". Hence, these TIS adjusted estimates are best for understanding the evolution of a given variable's outcomes over the five waves of the ITC China Survey. In this report, adjusted estimates are shown in figures illustrating changes between waves unless otherwise indicated. SAS 9.4 and SUDAAN 11.0.1 were used to calculate both adjusted and unadjusted means.

Wave 1 to 5 longitudinal analyses were conducted among smokers in the ITC China cities only (excluding the rural areas that were added at Wave 5), unless otherwise noted. Wave 5 only results (including cross-country comparisons) include respondents in cities and rural areas.

In cross-country comparisons, the same kind of adjustment was applied since the country samples vary in their composition. Multi-country comparisons include smokers and quitters where relevant and control for differences in age, smoking status (daily vs. non-daily smokers), and TIS. Due to the wide variation in the distribution of female smokers across countries, cross-country estimates presented in this report are for male smokers and quitters only. Smokers in Bangladesh, India, Kenya, and Zambia include smokers of cigarettes and other smoked tobacco products such as bidis, except where otherwise noted. It should also be noted that the Wave 5 percentages for China presented in cross-country comparisons may vary slightly from the Wave 5 Survey results provided in the text due to differences in adjustment methods.

FINDINGS

SMOKING IN CHINA: BEHAVIOUR, BELIEFS, AND PERCEPTIONS

In China, the largest global producer and consumer of tobacco, there are over 300 million smokers. Although the prevalence of smoking among females remains low at 2.7%, rates of smoking among males are among the highest in the world at 52.1%.[15, 16, 93] The annual number of deaths caused by tobacco is projected to double from about 1 million in 2010 to 2 million in 2030, with a further increase up to 3 million in 2050.[24]

The FCTC obligates Parties to implement measures to prevent and reduce tobacco consumption and to monitor the magnitude and patterns of tobacco use, with the goal of protecting public health. The ITC China Wave 1 to 5 Surveys include several measures to assess tobacco use behaviour, such as cigarette consumption, use of "low harm" cigarettes, and use of alternative nicotine delivery systems such as e-cigarettes. The ITC surveys also measure smokers' attitudes and beliefs about smoking, including perceived addiction, regret for smoking initiation, opinions about smoking, and perceptions of harm.

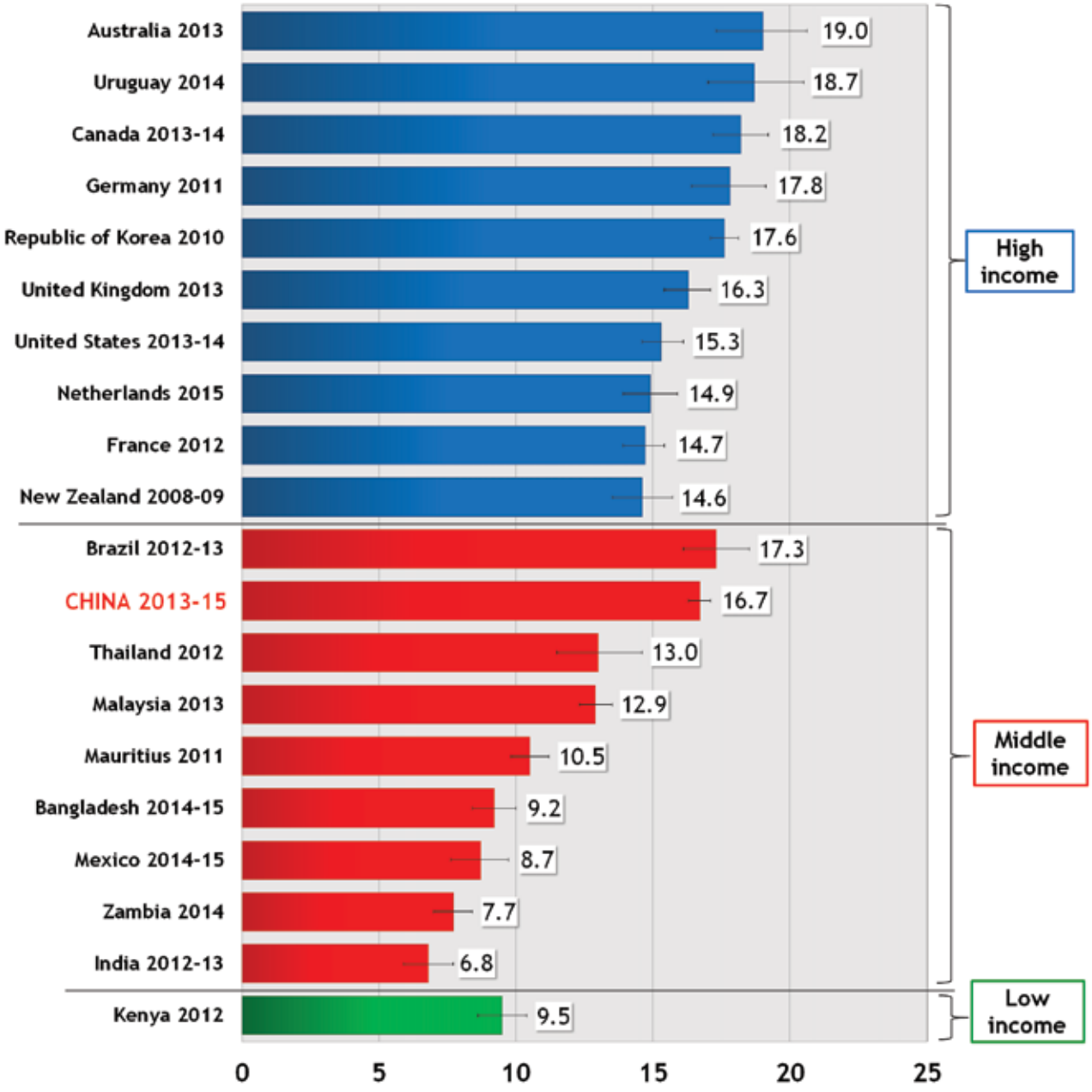
Daily Cigarette Consumption

The vast majority of smokers in China are daily smokers. At Wave 5, 93% of male smokers and 87% of female smokers reported daily use of cigarettes. Among male daily cigarette smokers, the average number of CPD was 17. The average daily cigarette consumption among male Chinese smokers is high in comparison to male smokers in other LMICS. At Wave 5, Chinese male smokers had the second highest average CPD among 10 ITC LMICs (see Figure 4).

It is possible that average CPD may be lower in LMICs where tobacco is consumed in a variety of smoked (e.g., cigarettes, bidi, hookah) and smokeless (e.g., khaini, gutka, betel quid with tobacco) forms. For example, estimates from the GATS show that one-third of male tobacco users in India use smokeless tobacco (33%)[94], and ITC data show that smokeless tobacco is the most common form of tobacco product used across four states (ranging from 52% in West Bengal to 84% in Maharashtra).[95] ITC data also show that up to nearly one-quarter of male tobacco users in the following countries use smokeless tobacco: Kenya (24%)[96], Bangladesh (20%)[97], and Zambia (18%).[98] However, in all of these countries, with the exception of India, overall rates of smoked tobacco use are still higher than use of smokeless tobacco. This highlights the importance of implementing effective policies that apply to all forms of smoked and smokeless tobacco products. In China, where the vast majority tobacco users smoke cigarettes and CPD is high, stronger policies to curb the high rates of cigarette consumption are needed.

Overall, average CPD was significantly higher among smokers in rural areas than in cities at Wave 5 (18.4 vs. 15.9). In cities, CPD was highest among smokers in Guangzhou (17.3), followed closely by Shenyang (16.1) and Shanghai (15.8), and lowest in Beijing (15.4) and Kunming (15.3). In rural areas, CPD was higher among smokers in Huzhou (20.0) and Tongren (19.4), compared with smokers in Changzhi (17.6), Xining (17.4), and Yichun (17.3).

Figure 4. Average number of cigarettes smoked per day among male daily smokers†, by country



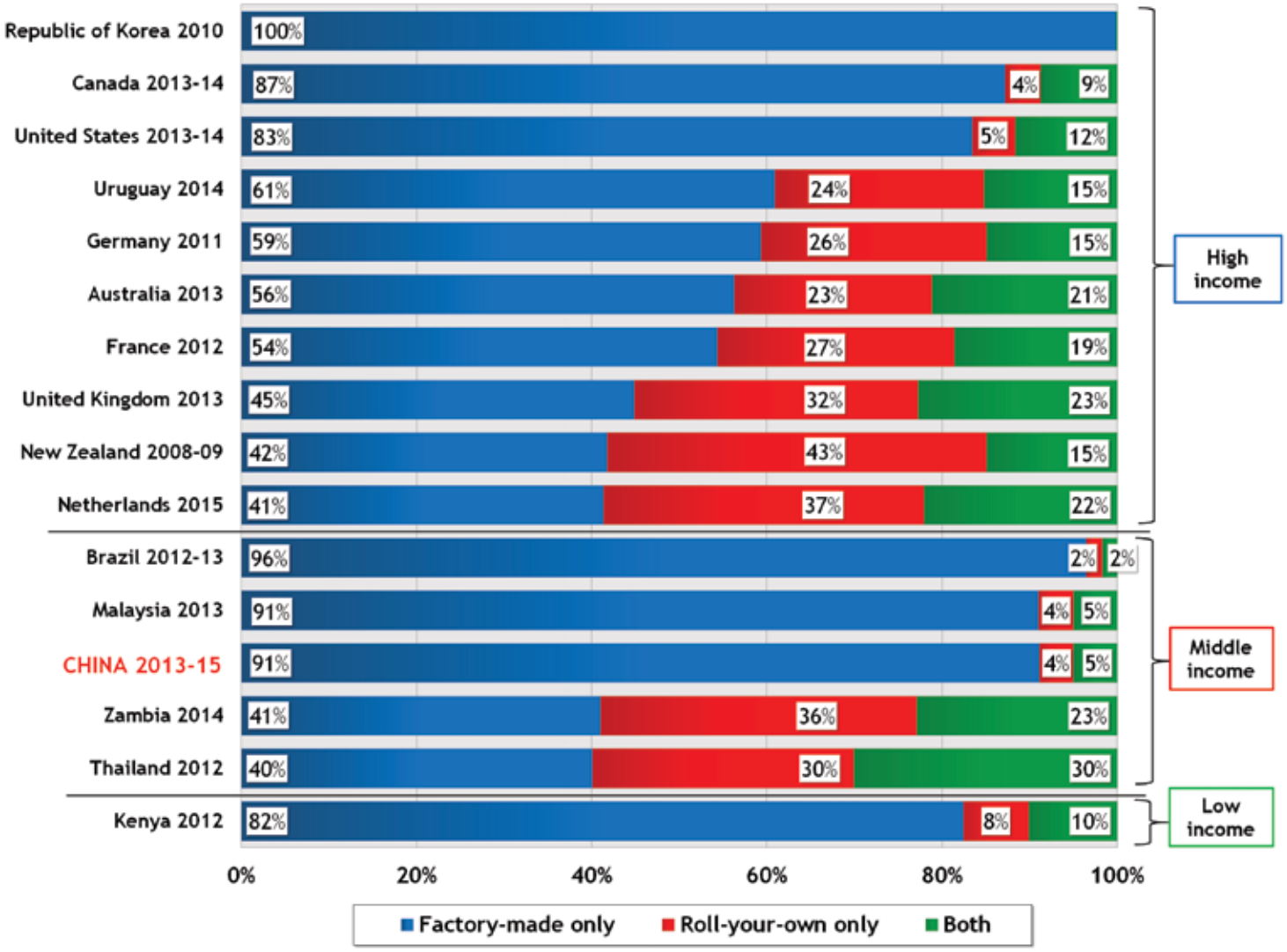
† For this variable, results were calculated among cigarette-only smokers in all countries (excluding dual or mixed smokers in Bangladesh, India, Zambia, and Kenya).

Factory-Made vs. Roll-Your-Own

At Wave 5, 89% of smokers used factory-made cigarettes only; 6% used both factory-made and roll-your-own (RYO) cigarettes; and only 5% used RYO cigarettes exclusively.

Compared to other ITC countries, China has a high prevalence of factory-made cigarette smoking. Of 16 ITC countries, China (along with Malaysia) has the third highest percentage of male smokers who use factory-made cigarettes exclusively (91%), after the Republic of Korea (100%), and Brazil (96%) (see Figure 5).

Figure 5. Percentage of male smokers who smoke factory-made cigarettes only, roll-your-own tobacco only, or both types of cigarettes, by country

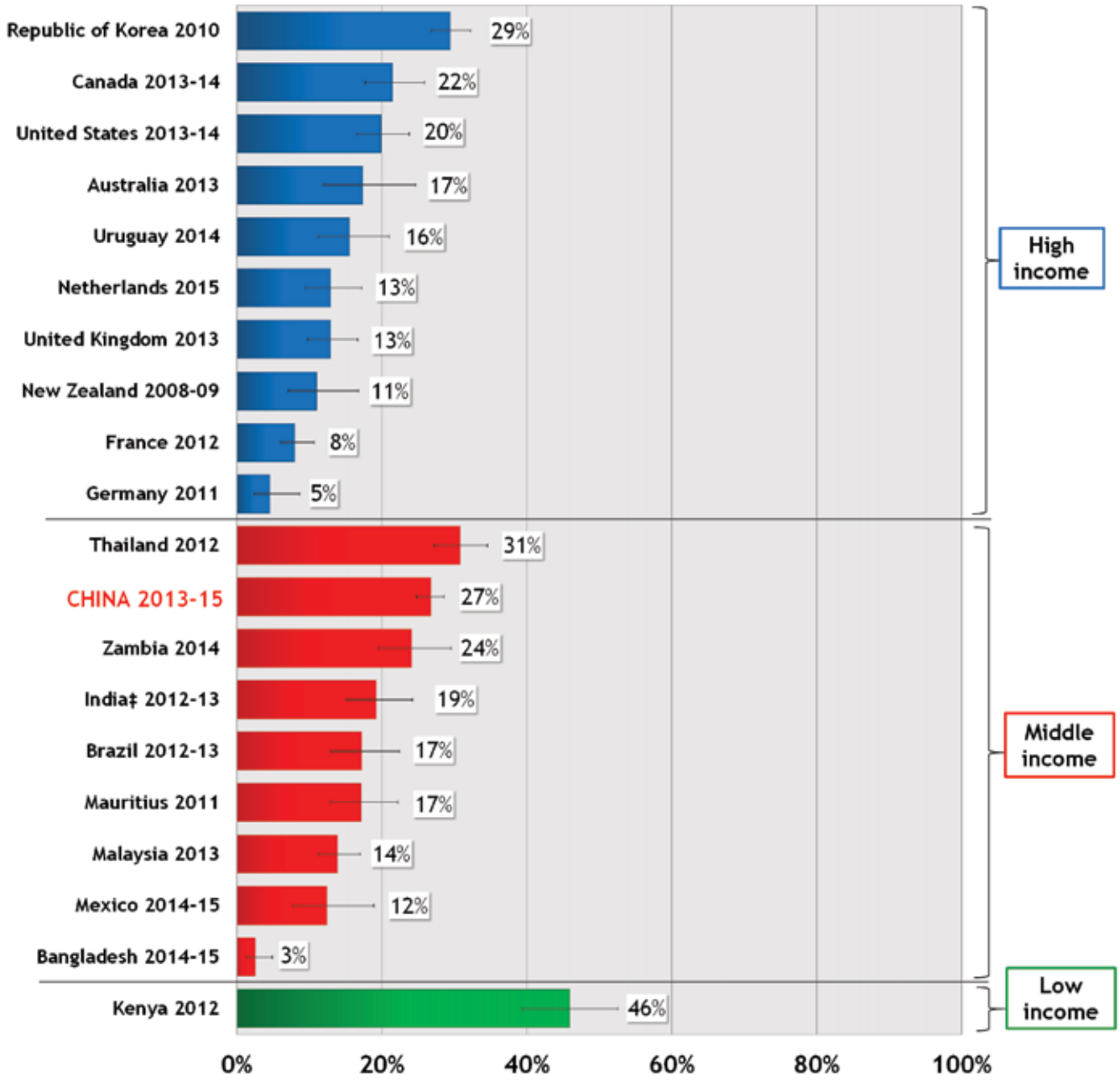


Addiction to Cigarettes

Cigarettes contain nicotine, which is known to be highly addictive, thus making it difficult for smokers to quit.[99, 100] In fact, studies have shown that nicotine is even more addictive than heroin, cocaine, cannabis, and alcohol.[101-103] The ITC China Wave 1 to 5 Surveys asked smokers to report the usual time from waking to their first cigarette, which is recognized as a good single-item measure of nicotine dependence/addiction that is a stronger predictor of cessation success than any other single measure.[104, 105] Smokers who report that they usually have their first cigarette per day within 5 minutes after waking are more dependent/addicted to nicotine than those who have their first cigarette within the first 30 minutes or later, and are thus less likely to quit and more likely to relapse after a quit attempt.[105-108] Cross-country comparisons indicate that Chinese smokers have a high level of nicotine addiction. Across 20 ITC countries, China has the fourth highest percentage of male smokers who reported usually having their first cigarette within 5 minutes after waking (27%), after Kenya (46%), Thailand (31%), and the Republic of Korea (29%) (see Figure 6).

The ITC China Survey also measured smokers' perceived addiction. Consistent with the findings for time to first cigarette, 28% of smokers said that they were addicted to cigarettes "somewhat" or "a lot" at Wave 5, compared to only 14% of smokers who said that they were "not at all" addicted.

Figure 6. Percentage of male cigarette smokers† who have their first cigarette of the day within 5 minutes after waking, by country



† For this variable, results were calculated among cigarette-only smokers in all countries (excluding dual or mixed smokers in Bangladesh, India, Zambia, and Kenya).
‡ In India, the question referred to their "first smoke" of the day in general, rather than first cigarette specifically.

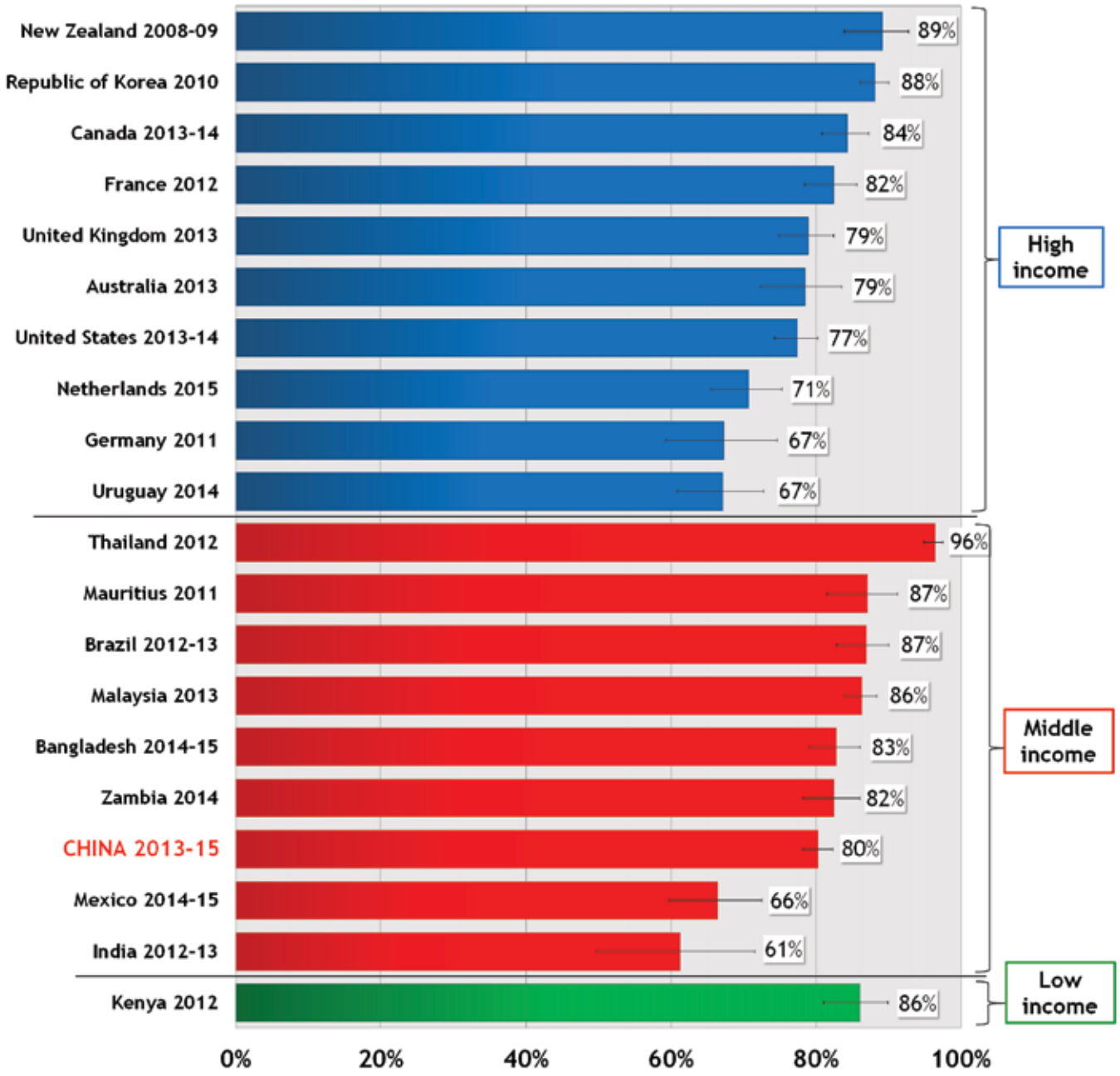
Smokers' Regret for Smoking

Although the tobacco industry claims that smokers are happy, that they enjoy smoking, and that they fully understand the risks when they start smoking, evidence indicates that for the vast majority, this is simply untrue. For example, an ITC study of smokers in Canada, the United States, the United Kingdom, and Australia found that about 90% of smokers across the four countries stated that if they were to live their life over again, they would not have started smoking.[109] Smokers' regret for ever having started smoking is also an important indicator of societal norms about smoking, and a key predictor of future quitting behaviour.[109, 110] In addition, studies have shown that ex-smokers are not only happier after they quit, but that they are also happier compared to current smokers.[111-113]

The ITC China Wave 1 to 5 Surveys asked smokers whether they would have started smoking if they had to do it all over again. Across all five waves, approximately three-quarters of smokers (74% to 78%) "agreed" or "strongly agreed" that they would not have started smoking if they had to do it over again.

Cross-country comparisons indicate that regret for taking up smoking among Chinese male smokers (80%) is not as high as it is in other LMICs such as Thailand (96%), Mauritius (87%), Brazil (87%), Malaysia (86%), and Kenya (86%) (see Figure 7). This is consistent with previous ITC cross-country research showing that regret tends to be lower in countries with weaker tobacco control policies, such as China, compared to those with stronger histories of tobacco control, such as Thailand.[110] However, regret among Chinese male smokers is comparable to several high-income countries (HICs), including the United Kingdom (79%), and Australia (79%); and higher than regret among smokers in HICs such as the Netherlands (71%), Germany (67%), and Uruguay (67%).

Figure 7. Percentage of male smokers and quitters who "agree" or "strongly agree" that if they had to do it over again, they would not have started smoking, by country

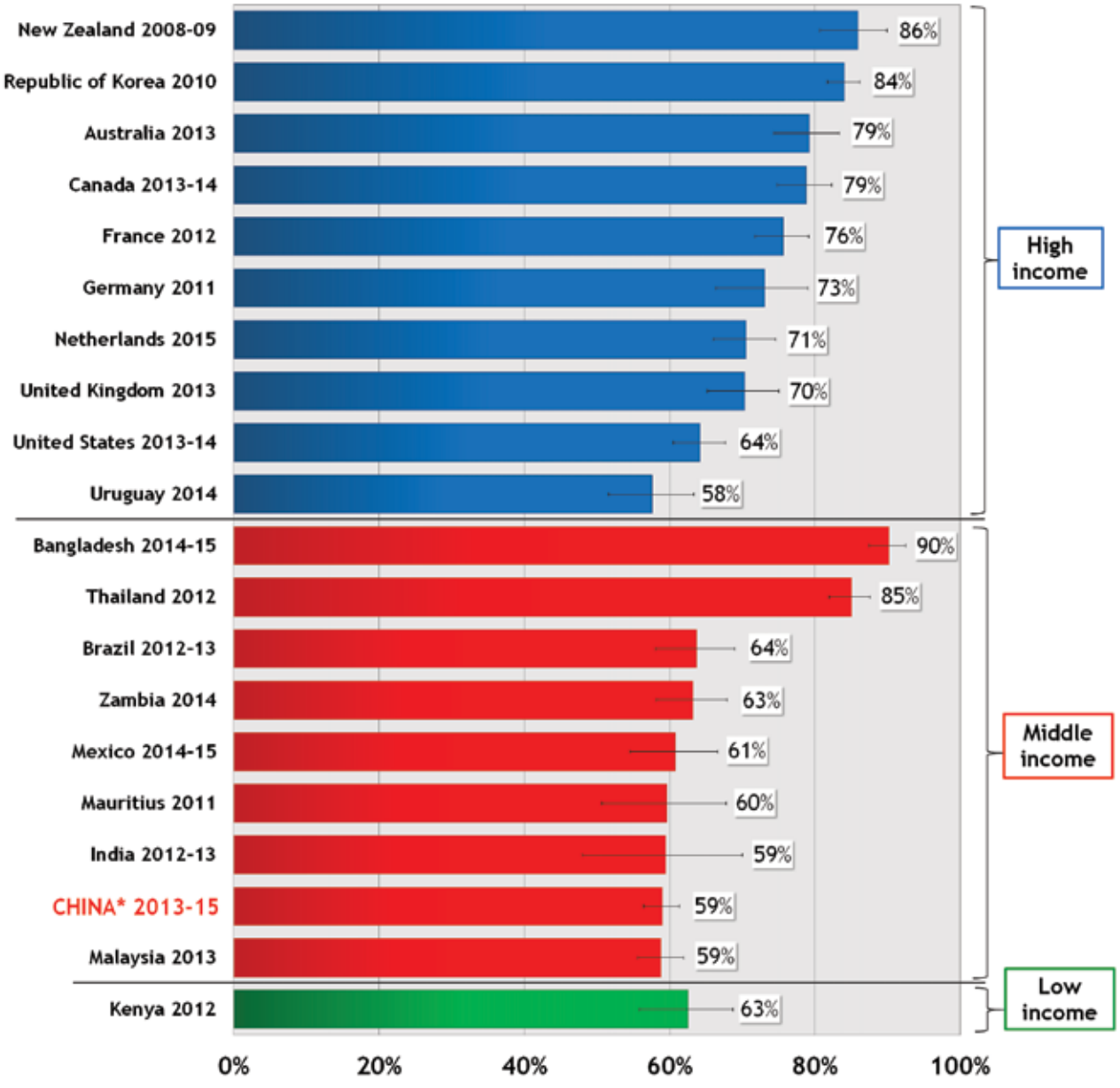


Smokers' Opinions and Perceived Norms about Smoking Behaviour

The tobacco industry creates and cultivates myths about the linkages between smoking and positive values in order to prevent smokers from quitting and to entice new smokers. For example, in China, smoking has come to be viewed as a symbol of personal freedom, and regarded as a customary part of social interactions.[114] The ITC China Wave 1 to 5 Surveys included several measures to assess smokers' opinions and perceptions of smoking behaviour. Overall, results suggest that attention should be given to increase efforts to denormalize smoking in China, particularly among males.

The ITC China Survey findings show that the majority of Chinese smokers have a negative opinion about smoking. At Wave 5, more than half of smokers (57%) said that smoking is "bad" or "very bad". Many smokers also believe that smoking is generally not socially acceptable in China. At Wave 5, a majority (61%) of smokers said that Chinese society disapproves of smoking. Nevertheless, ITC cross-country comparisons show that perceived societal disapproval of smoking is still much lower in China than it is in other countries (see Figure 8). China (along with India and Malaysia) has among the lowest percentages of male smokers (59%) across 20 ITC countries who believe that society disapproves of smoking.

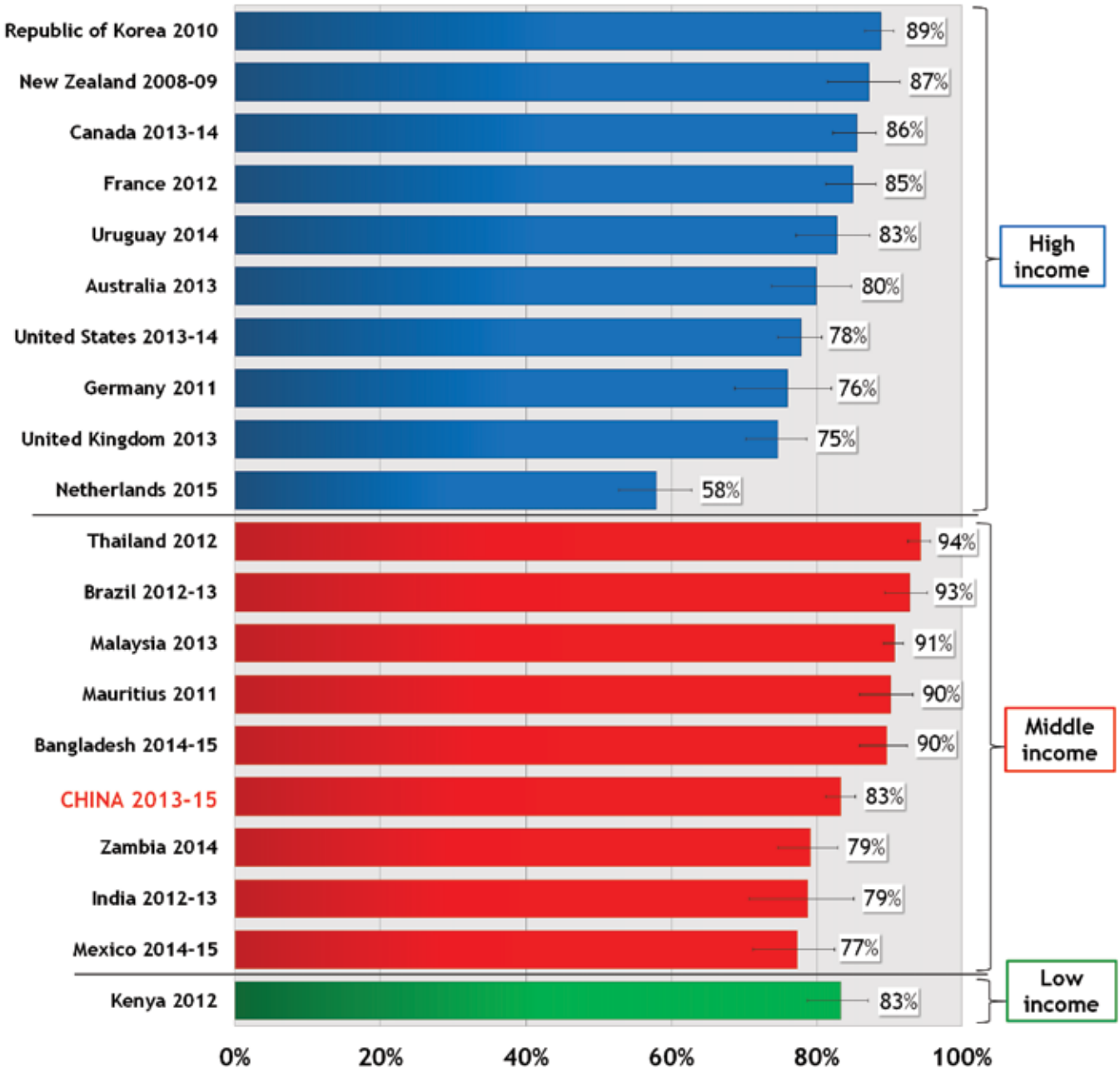
Figure 8. Percentage of male smokers and quitters who "agree" or "strongly agree" that society disapproves of smoking, by country



* In China, the equivalent question asked "What is Chinese society's attitude towards smoking?". Results are shown for the response of "Chinese society disapproves of smoking".

Results also indicate that smoking behaviour is perceived to be much more socially acceptable for males in China than it is for females. At Wave 5, 62% of smokers "agreed" or "strongly agreed" that male smoking is acceptable. In contrast, only 21% of smokers "agreed" or "strongly agreed" that female smoking is acceptable. The Wave 1 to 5 Surveys also asked smokers whether important others, such as partners, children, and friends, disapproved of their smoking. Similar to findings in other ITC countries, the vast majority of Chinese male smokers (83%) said that important others believe that they should not smoke at Wave 5 (see Figure 9).

Figure 9. Percentage of male smokers and quitters who "agree" or "strongly agree" that people who are important to them believe they should not smoke, by country

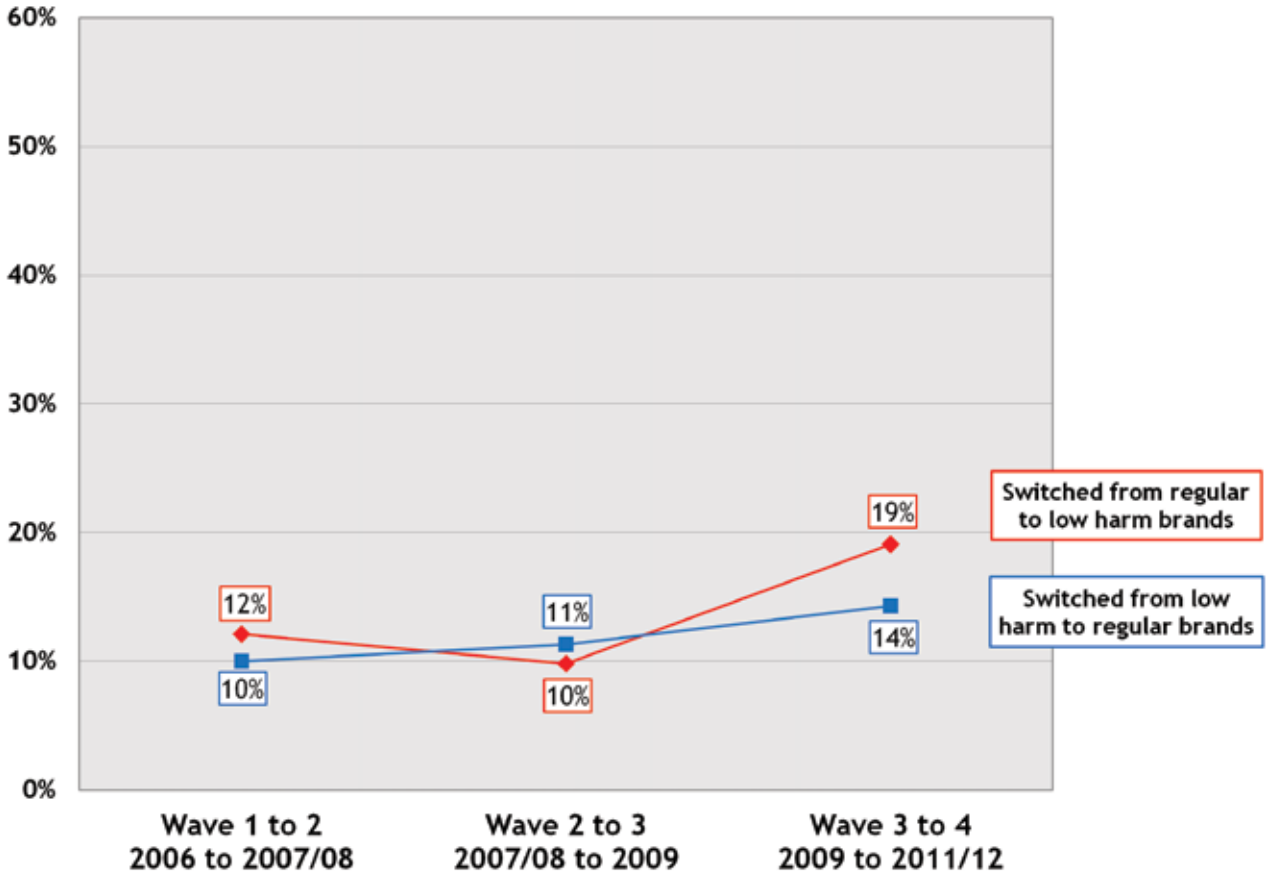


Use of "Low Harm" Cigarettes

Over the last decade, the CNTC has increasingly promoted so-called "low harm" cigarettes, based on false claims that such products are safer and healthier than regular cigarettes.

As the Chinese public becomes more aware of the health risks of smoking,[25] more smokers may opt to use "low harm" cigarette products, such as low tar, herbal, and natural/organic brands. For example, preliminary analyses of ITC China Wave 1 to 4 Survey brand coding data[vi] show an increase in the percentage of smokers who actively switched from using their regular cigarette brand to a "low harm" brand over time. Between 2006 and 2007/08, 12% of smokers switched from their usual regular brand to a "low harm" brand. Over the next two- to four-year period, however, the percentage of smokers who switched from a regular to "low harm" brand nearly doubled from 10% of smokers between 2007/08 and 2009 to 19% between 2009 and 2011/12. In contrast, the percentage of smokers who switched from a "low harm" brand to a regular brand remained fairly constant from 2006 (10%) to 2011/12 (14%)[115] (see Figure 10).

Figure 10. Active switching between "low harm"† and regular brands/brand variants among smokers from 2006-2011/12



Note: Results shown include smokers in 6 ITC China cities (Beijing, Changsha, Guangzhou, Shanghai, Shenyang, and Yinchuan). However, the data for 2009 to 2011/12 includes 7 cities (Kunming was added at Wave 3). There was no significant difference between the two groups.

† Low tar, herbal, and natural/organic cigarette brands were all coded as "low harm" brands.

Light/Mild and Low Tar Cigarettes

In China, the use of misleading descriptors such as "light", "mild" or "low tar" on cigarette packaging has been banned since January 2006. The STMA has also reduced maximum limits on ISO tar ratings over time, from 17 mg in 2001 to 11 mg in 2013.[116] However, the tobacco industry continues to aggressively promote the use of light and low tar cigarettes as a harm reduction strategy in China.[117]

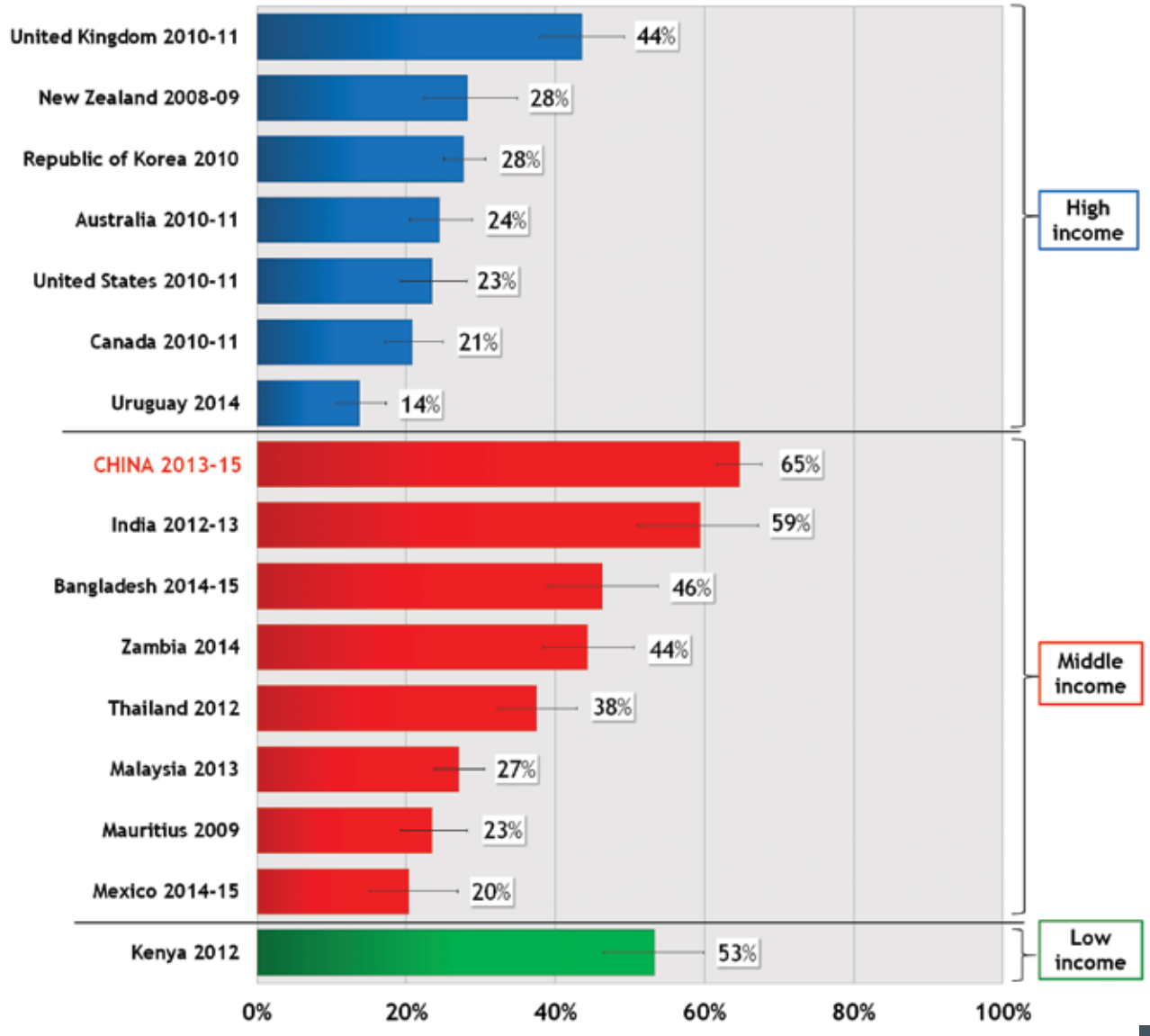
vi. Please note that brand variety codes were assigned using a classification scheme, based on the Universal Product Code on the barcode of each cigarette pack.

There is evidence that these marketing tactics, in combination with additives (e.g., menthol) and design features of cigarettes (e.g., filter ventilation), have been successful in misleading Chinese smokers to believe that light and low tar cigarettes are less harmful. For example, research has shown that the sensory perception of smoothness is a primary factor that influences light/mild smokers' misperceptions that their cigarettes are less harmful, and that a substantial proportion of Chinese smokers falsely believe that light or low tar cigarettes are less harmful than regular cigarettes.[16, 58, 118]

The industry also provides funding for research on low tar cigarettes in China, which lacks a scientific basis and further misleads the public about the dangers of such products.[119-124]

The ITC China Surveys included several measures of smokers' beliefs about light and low tar cigarette products. At Wave 5, the majority of smokers "agreed" or "strongly agreed" that light and low tar cigarettes are smoother on the throat and chest (73% for light cigarettes, 70% for low tar cigarettes). A substantial proportion of smokers also "agreed" or "strongly agreed" that light and low tar cigarettes are less harmful than regular cigarettes at Wave 5 (69% for light cigarettes, 72% for low tar cigarettes). In fact, ITC cross-country comparisons show that China has the highest percentage of male smokers and quitters (65%) who "agree" or "strongly agree" that light cigarettes are less harmful than regular cigarettes among 16 ITC countries (see Figure 11). In addition, more than half of smokers "agreed" or "strongly agreed" that light and low tar cigarettes make quitting easier (62% for light cigarettes, 58% for low tar cigarettes).

Figure 11. Percentage of male smokers and quitters who "agree" or "strongly agree" that light cigarettes are less harmful than regular cigarettes, by country



These results are consistent with previous research showing that simply banning misleading descriptors does not eliminate smokers' false beliefs about "low harm" cigarette products. For example, the industry continues to use alternative strategies to create the sensation of "smoothness" for smokers, including changes to filter ventilation and nicotine yields,[125-128] package design features,[129-131] and the use of new descriptors to replace banned terms (e.g., "smooth", "silver").[129, 132] These "smoother" sensory experiences then reinforce smokers' misperceptions of reduced harm. In China, where cigarette brand names are largely unregulated, tobacco companies use brand names as a key strategy to market their products. For example, cigarette brand names that include the real names of national symbols, Chinese herbals, and tourist attractions are used to convey misleading messages to smokers and to promote positive associations with cigarettes.[133] In order to eliminate misperceptions about the relative harm of cigarettes and to reduce smoking rates, China needs to implement comprehensive measures to prohibit deceptive product labelling that go beyond the removal of "light" and "mild" descriptors.

Use of Herbal Cigarettes

In China, herbal cigarettes that contain tobacco and a mixture of traditional Chinese medicinal herbs, have been available on the market since the late 1970s.[134] The Chinese tobacco industry promotes herbal cigarettes as a safer alternative to conventional cigarettes. Contrary to industry claims about the various health benefits of herbal cigarettes, however, evidence shows that herbal cigarettes do not deliver less carcinogens than regular cigarettes.[135]

The ITC China Wave 5 Survey asked smokers whether they had ever tried herbal cigarettes. Results indicate that just over one-quarter of smokers (29%) had ever tried herbal cigarettes. However, of those smokers who had ever tried herbal cigarettes, the vast majority (84%) said that they do not currently use them at all, and only 4% said that they use these products on a daily basis.

This finding is consistent with ITC China Wave 1 to 4 brand coding trend data showing consistently low rates for the use of herbal cigarettes among smokers (less than 3% of male and female smokers) across all four waves, as well as other data indicating that while the market for herbal cigarettes is expanding in China, it still makes up a relatively small fraction of the total market share.[135]

Use of Menthol Cigarettes

Since the 1930s, the tobacco industry has marketed menthol cigarettes as a "healthier" alternative to non-menthol cigarettes, and strategically targeted young people, women, specific racial groups, and health-concerned smokers who might otherwise quit.[136] Similar to smokers' misperceptions of light cigarettes discussed above, menthol cigarettes are often perceived by smokers as being "smoother" than regular cigarettes and therefore less harmful.[137-139]

Over the last few years, a growing number of countries have adopted or passed legislation to ban menthol tobacco products, including Brazil, the European Union, several provinces in Canada, Ethiopia, Moldova, and Turkey.[140] In China, there are currently no restrictions on the use of menthol and other flavourings in tobacco products.

The ITC China Wave 3 to 5 Surveys asked smokers whether their usual brand of cigarettes are menthol flavoured. Rates of use for menthol cigarettes were low across all three survey waves, reported by only 7% to 11% of smokers.

The Wave 1 to 5 Surveys assessed smokers' perceptions of the harmfulness of menthol cigarettes relative to regular cigarettes. The percentage of smokers who "agreed" or "strongly agreed" that menthol cigarettes are less harmful than regular cigarettes increased from 47% at Wave 1 to 59% at Wave 2, and then gradually decreased to 49% at Wave 5.

Use of Other Tobacco Products

Awareness and Use of E-Cigarettes

E-cigarettes, also known as electronic nicotine delivery systems (ENDS), are battery-operated devices that vaporize different concentrations of nicotine, flavourings, vegetable glycerine and/or propylene glycol, and other chemicals into a mist, which can then be inhaled in the same manner as regular cigarettes. In light of the fact that smoking cigarettes poses extremely high health risks, it is likely that using e-cigarettes as intended will be considerably less harmful than smoking cigarettes. Indeed, several recent reviews (published in 2015-16) of the available evidence to date have concluded that the health harms of e-cigarettes to individual users and/or others are likely to be very small in comparison to those due to the use of smoked tobacco products. In addition, while the overall quality of existing studies remains low, there is some evidence that e-cigarettes can help adult smokers to quit.[141-145] On the other hand, the Surgeon General's December 2016 report on e-cigarettes warns of the risks of e-cigarette use among youth and young adults. This report concluded that the use of e-cigarettes that contain nicotine can cause addiction and have adverse effects on adolescent brain development; and that e-cigarette use is strongly associated with the use of other tobacco products among youth and young adults.[146] Rigorous scientific evaluation of the long-term health effects of e-cigarettes, and their potential impact on public health is needed before definitive statements about the safety and efficacy of these products, especially for youth, can be made.

Example of deceptive e-cigarette marketing using health promotion messages

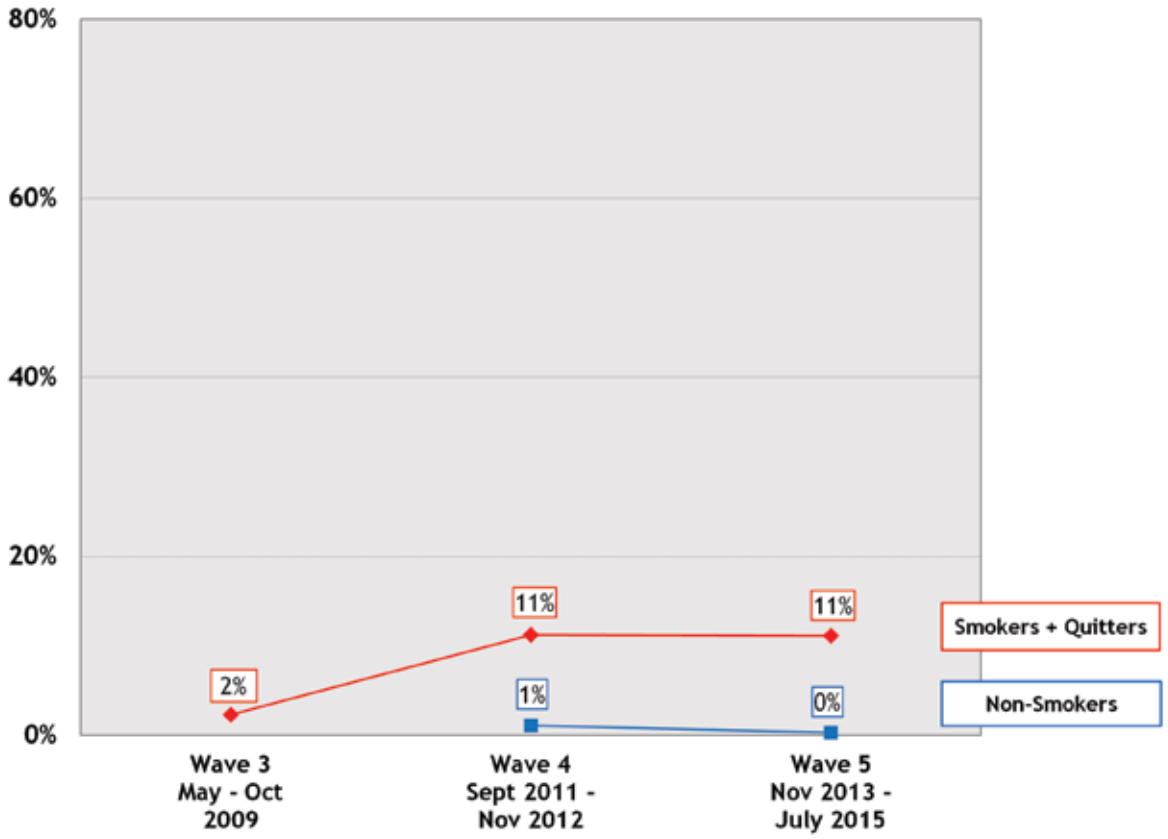
In recent years, the use of e-cigarettes has become increasingly popular in HICs across North America and Europe.[99, 147-150] E-cigarettes are currently available on the market in China, but because they are not classified as either a tobacco product or drug, there are no regulations or marketing restrictions for these types of products. Presently, rates of e-cigarette use in China are still very low in comparison to rates of use in HICs.[15] However, there is a vast market potential for e-cigarettes in the country, where the popularity of such products may rise as they become more accessible to Chinese consumers, and as manufacturers expand domestic e-cigarette advertising and promotion.[151, 152] The CNTC has also turned its attention towards the e-cigarette market, with the Hubei provincial subsidiary of the STMA launching the first series of their own e-cigarette products in Wuhan in 2014.[153]

The ITC China Wave 3 to 5 Surveys asked smokers, non-smokers, and quitters whether they had ever heard of and used e-cigarettes. Results show a marked increase in awareness of e-cigarettes among smokers and quitters in cities over time. There was a two-fold increase in the percentage of smokers who had ever heard of e-cigarettes from 29% at Wave 3 to 60% at Wave 5, and awareness of e-cigarettes among quitters also went up from 35% at Wave 3 to 60% at Wave 5. Compared to smokers and quitters, non-smokers were less likely to be aware of e-cigarettes, and there have been no changes over time (39% at Wave 4 and Wave 5).

Results also show an upward trend in experimentation with e-cigarettes among smokers and quitters in cities. There was more than a five-fold increase in the percentage of smokers and quitters who had ever tried an e-cigarette from 2% at Wave 3 to 11% at Wave 5. In contrast, less than 2% of non-smokers had ever tried an e-cigarette at Waves 4 and 5 (see Figure 12).

Rates of e-cigarette use in China are still very low in comparison to rates of use in high-income countries. However, there is a vast market potential for e-cigarettes in the country, where the popularity of such products may rise as they become more accessible to Chinese consumers, and as manufacturers expand domestic e-cigarette advertising and promotion.

Figure 12. Percentage of respondents† who have ever tried e-cigarettes, by wave - cities only

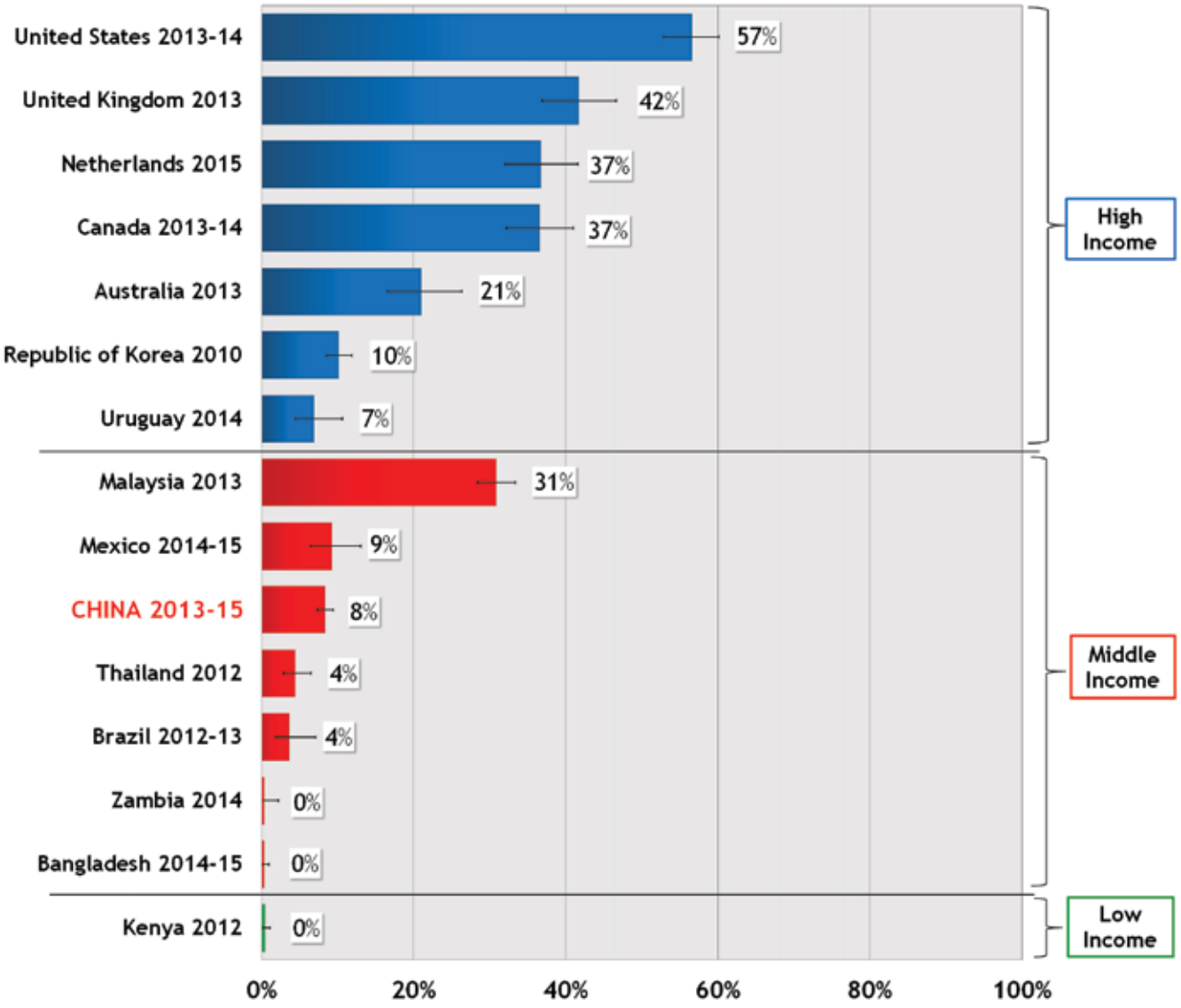


† Results shown are among respondents in cities only (excluding those in rural areas)

Although the percentage of Chinese smokers and quitters who had ever tried an e-cigarette has increased over time, cross-country comparisons indicate that rates of e-cigarette use among males in China at Wave 5 (8%) are still much lower in comparison to other HICs such as the United States (57%), the United Kingdom (42%), Canada (37%), the Netherlands (37%), and Australia (21%) (see Figure 13).

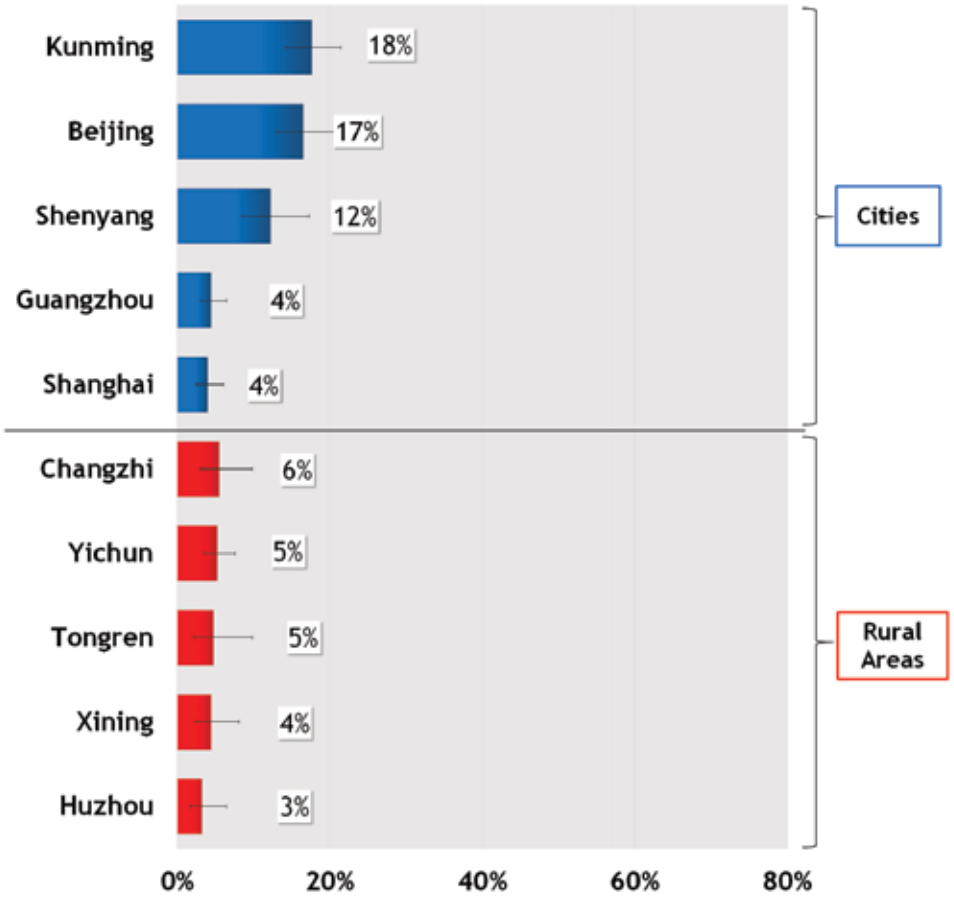
There was a two-fold increase in the percentage of smokers in cities who had ever heard of e-cigarettes from 29% at Wave 3 to 60% at Wave 5, and awareness of e-cigarettes among quitters also went up from 35% at Wave 3 to 60% at Wave 5. Results also show more than a five-fold increase in the percentage of smokers and quitters who had ever tried an e-cigarette from 2% at Wave 3 to 11% at Wave 5. In contrast, less than 2% of non-smokers had ever tried an e-cigarette at Waves 4 and 5.

Figure 13. Percentage of male smokers and quitters who have ever used e-cigarettes, by country



As shown in Figure 14, rates of experimentation with e-cigarettes among smokers and quitters at Wave 5 differed by location, with significantly higher overall rates of trying e-cigarettes in cities (11%) than in rural areas (5%). In cities, the percentage who had ever tried an e-cigarette was much higher in Kunming (18%), Beijing (17%), and Shenyang (12%), compared to Guangzhou (4%) and Shanghai (4%). In contrast, only a small percentage had ever tried an e-cigarette across all rural areas: Changzhi (6%), Yichun (5%), Tongren (5%), Xining (4%), and Huzhou (3%).

Figure 14. Overall percentage of smokers and quitters who have ever tried e-cigarettes at Wave 5, by survey location



The Wave 5 Survey asked smokers and quitters who had ever tried e-cigarettes how often they currently use these devices. Nearly all smokers said they do not use e-cigarettes frequently – 92% (n=495) do not currently use e-cigarettes at all, and a minority currently use e-cigarettes on a daily (2%, n=13), weekly (3%, n=10), monthly (1%, n=6), or less than monthly basis (2%, n=8). Among quitters, none reported current use of e-cigarettes.

The ITC China Wave 5 Survey also asked smokers who are current e-cigarette users (8%, n=37) whether their current brand contains nicotine. Among current e-cigarette users, 29% said that their current brand contains nicotine, while 9% said that they did not know.

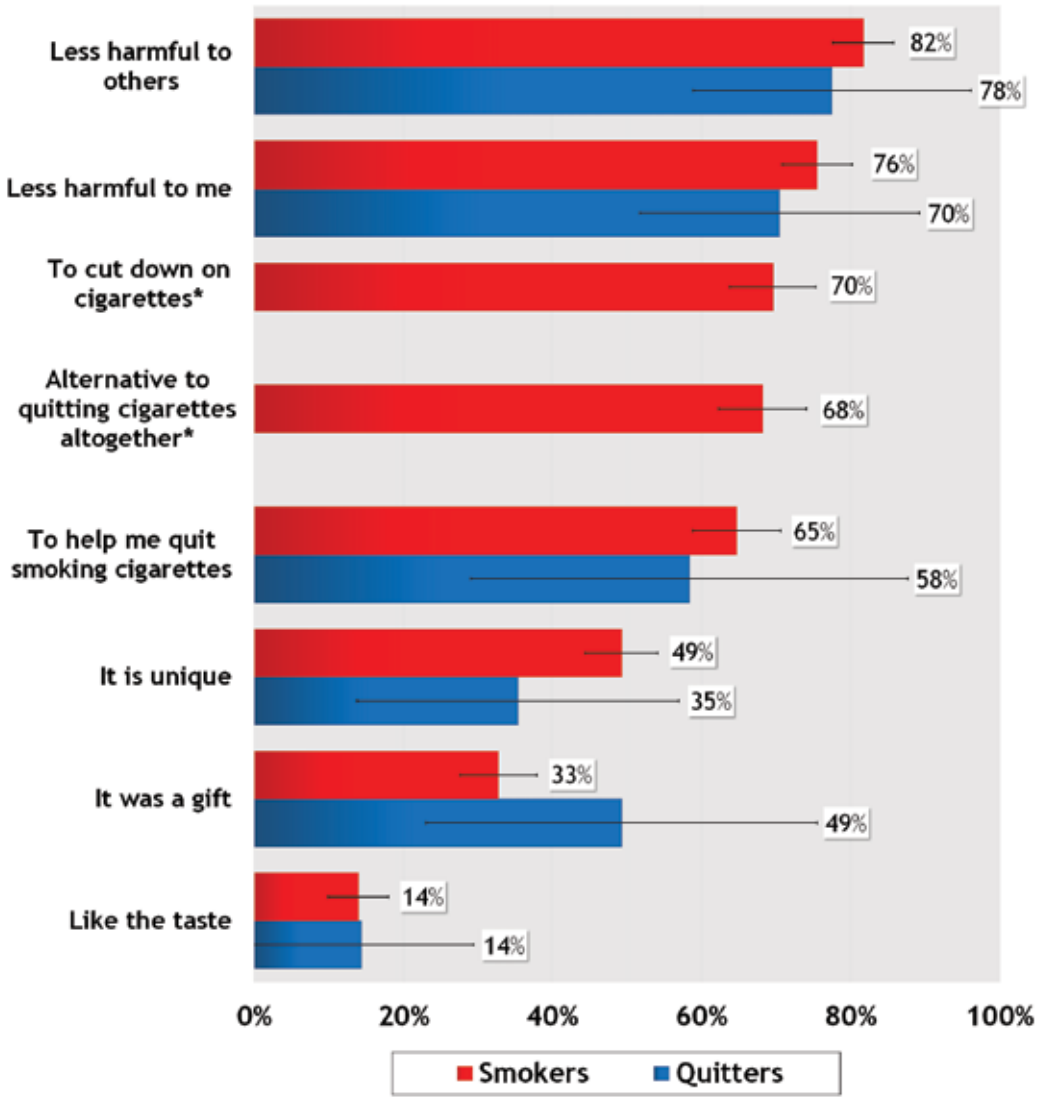
Reasons for Using E-Cigarettes

The ITC China Wave 3 to 5 Surveys asked smokers and quitters who had ever tried e-cigarettes why they used them. Figure 15 indicates that harm reduction and using e-cigarettes as a cessation aid were most commonly cited by both smokers and quitters as reasons for their use of these devices at Wave 5. The vast majority of smokers and quitters who ever tried e-cigarettes said that they used e-cigarettes because they were less harmful to others around them (82% of smokers, 78% of quitters), and less harmful for themselves (76% of smokers, 70% of quitters).

A large proportion of respondents who had ever tried e-cigarettes also said that they used them to help them to quit smoking cigarettes (65% of smokers, 58% of quitters), or to cut down on the number of cigarettes smoked (70% of smokers). Although approximately two-thirds of smokers who used e-cigarettes did so to help them quit or to cut down on smoking, findings also showed that a comparable proportion of smokers said they used e-cigarettes as an alternative to quitting. At Wave 5, 68% of smokers used e-cigarettes to replace some of their regular cigarettes so that they did not have to give up smoking regular cigarettes altogether. These results highlight the strong need to monitor whether the use of e-cigarettes may promote dual use with cigarettes, and decrease the likelihood of Chinese smokers' quitting altogether.

At least one-third of smokers and quitters who had ever tried e-cigarettes said they used them because they are unique (49% of smokers, 35% of quitters), or because they received them as a gift (33% of smokers, 49% of quitters). Taste was the least common reason for e-cigarette use, cited by only 14% of smokers and quitters.

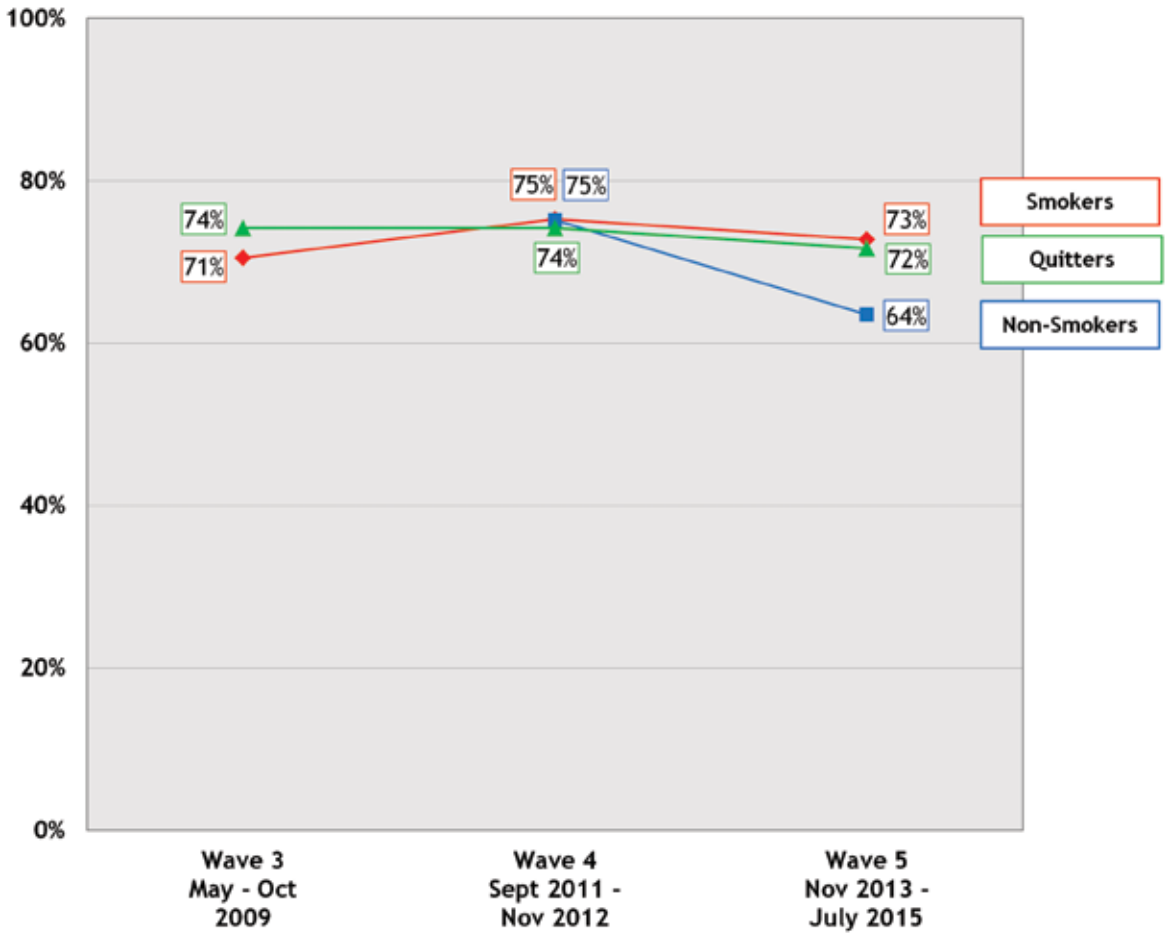
Figure 15. Percentage of respondents who said they use e-cigarettes for various reasons, at Wave 5



* These questions were not asked to quitters.

The Wave 3 to 5 Surveys asked smokers, non-smokers, and quitters to provide their opinion on the harmfulness of e-cigarettes compared to regular cigarettes. Overall, the majority of respondents believed that e-cigarettes are less harmful relative to regular cigarettes. Across Waves 3 to 5, approximately three-quarters of smokers (71% to 75%) and quitters (72% to 74%) in cities believed that e-cigarettes are "less harmful" or "much less harmful" than regular cigarettes. Similarly, 75% of non-smokers in cities believed that e-cigarettes are "less harmful" or "much less harmful" than regular cigarettes at Wave 4, with a decrease to 64% at Wave 5 (see Figure 16).

Figure 16. Percentage of respondents† who think e-cigarettes are less harmful than regular cigarettes, by wave and smoking status - cities only



† Note: Results are shown for respondents in cities only (excludes those in rural areas at Wave 5).

The vast majority of smokers and quitters in cities who ever tried e-cigarettes (11% had ever tried at Wave 5) said that they used them because they were less harmful to others around them (82% of smokers, 78% of quitters), and less harmful for themselves (76% of smokers, 70% of quitters). Across Waves 3 to 5, approximately three-quarters of smokers and quitters in cities believed that e-cigarettes are "less harmful" or "much less harmful" than regular cigarettes.

SMOKING CESSATION

Article 14 of the FCTC obligates Parties to take effective measures to promote smoking cessation and provide treatment for tobacco dependence. Evidence shows that it is very difficult for smokers to quit. Studies conducted in the United States indicate that only 3% to 5% of smokers who try to quit are able to remain abstinent for more than 6 months.[154] In China, few smokers attempt to quit, cessation rates are very low, and relapse rates are high. For example, a study by the ITC Project in 15 countries found that less than 20% of smokers in China had recently attempted to quit, which was much lower than rates among smokers in other countries, such as Thailand (approximately 50%), and the United States (approximately 40%).[155] Data from the 1996 National Prevalence Survey show that about 4% of Chinese smokers successfully quit.[156] An analysis of nationally representative cross-sectional household surveys across 16 countries (data from the GATS in 14 LMICs, and population surveys in the United Kingdom and United States) indicates that China has the second lowest percentage of ever daily smokers who no longer smoke (12.6% of males, 16.8% of females).[93] Because cessation is the only way for smokers to reduce their health risk, there is an urgent public health need to increase cessation rates among Chinese smokers.

Access to effective tobacco dependence treatment interventions, in accordance with Article 14 and its guidelines, is critical to improve cessation outcomes among smokers, and reduce smoking-attributable mortality. Leading experts in tobacco dependence treatment have identified the following as low-cost, effective measures that could be implemented by most countries: recording of tobacco use in all medical notes; integrating brief advice into existing healthcare systems; helping healthcare workers to stop smoking; establishing a text messaging support programme; providing affordable medications such as cytisine; and developing an official national cessation strategy and national treatment guidelines.[157]

The ITC China Wave 1 to 5 Surveys measured smokers' intentions to quit smoking, number of quit attempts, reasons to quit smoking, use of cessation assistance, and attitudes toward government support for cessation.

Smokers Who Quit Smoking

ITC China Survey results indicate that quit rates are increasing among Chinese smokers. Among smokers in the ITC China cities, there was a small increase in quit rates over time, from 6.0% between the Wave 1 and 2 Surveys (2006 to 2007-08) to 9.2% between the Wave 4 and 5 Surveys (2011-12 to 2013-15) (see Table 5).

Table 5. ITC China Wave 1 to 5 Survey quit rates among smokers – cities only

	Total Number of Smokers (N)	Number of Smokers Who Quit Between Survey Waves (n)	Quit Rate (%)*
Wave 1 to 2	3863	212	6.0%
Wave 2 to 3	3726	244	6.8%
Wave 3 to 4	3425	275	8.8%
Wave 4 to 5	2602	211	9.2%

*Estimates for quit rates between surveys are adjusted for age, sex, and city.

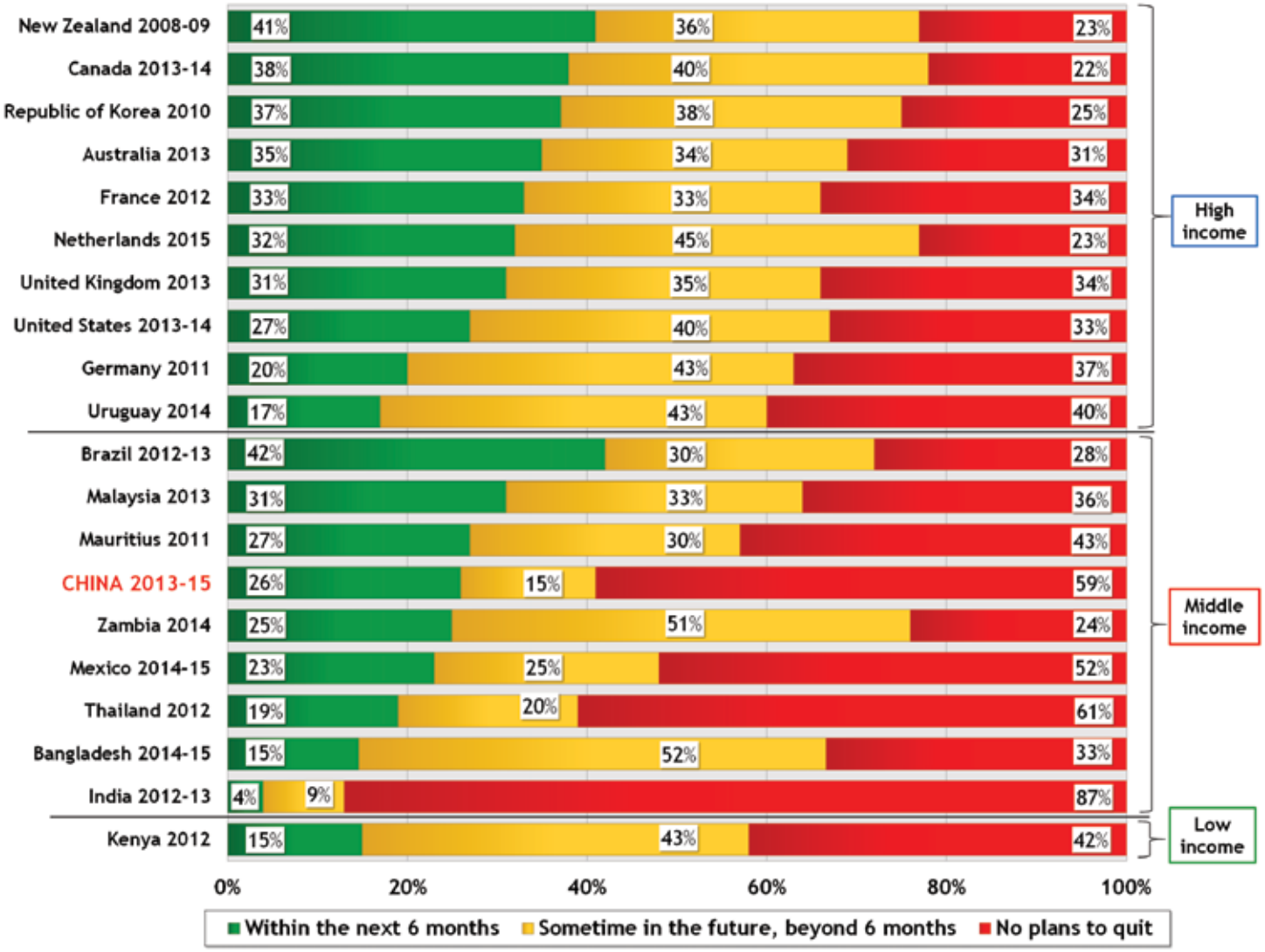
Quit Intentions and Quit Attempts

Intention to quit smoking is an important predictor of future quit attempts as well as success in quitting.[158, 159] Previous studies have shown that the level of interest in quitting is generally low among Chinese smokers (ranging from 15% to 31%),[160] and that less than 10% of ever-smokers in China quit smoking.[24] In contrast, interest in quitting is considerably higher among smokers in other high- and middle-income countries, where quit rates often exceed 50%,[93] such as Australia, Canada, the United Kingdom, and the United States (ranging 65% to 81%)[161], Mauritius (78%)[162], Thailand (40%), and Malaysia (54%).[163]

The ITC China Wave 1 to 5 Surveys asked smokers if they are planning to quit smoking, and in what timeframe. As shown in Figure 17, most Chinese smokers have no intentions to quit smoking. At Wave 5, more than half of smokers (57%) said that they were "not planning to quit". Fewer than 2 in 10 smokers had an intention to quit smoking "within the next month" (11%), "within the next 6 months" (15%), or "sometime in the future, beyond 6 months" (14%). Finally, 3% of smokers said that they "don't know" if and when they plan to quit.

Of 20 ITC countries, China has the third highest percentage of male smokers who said they have no plans to quit (59%), after India (87%), and Thailand (61%) (see Figure 17).

Figure 17. Intentions to quit smoking among male smokers, by country



Further testing showed that smokers in rural areas were significantly more likely to have plans to quit "within the next month" compared to smokers in cities (14% vs. 8%). Smokers in rural areas were also significantly less likely to report that they were "not planning to quit" (54% vs. 60%), or that they "don't know" if and when they plan to quit (2% vs. 4%), compared to smokers in cities.

Smokers were also asked about their previous quit attempts. At Wave 5, approximately two-thirds of smokers (65%) reported that they have made no attempts to quit smoking since they were last surveyed.

The low level of interest in quitting among Chinese smokers underscores the need to further strengthen policies to motivate smokers to quit, and to ensure access to support services for those who want to quit.

Reasons to Quit Smoking

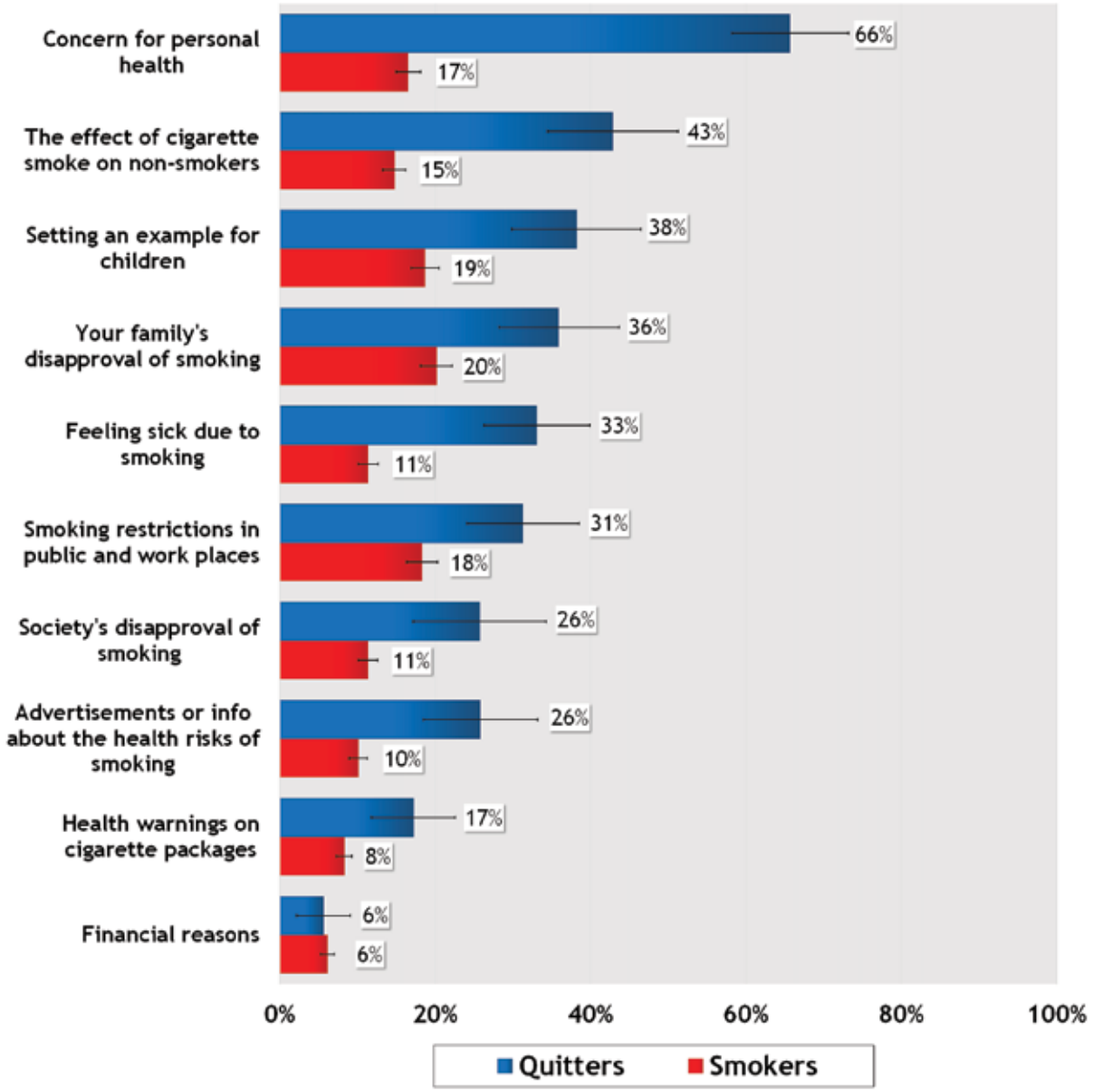
The ITC China Wave 1 to 5 Surveys asked respondents which of several reasons related to tobacco control policies led them to think about quitting in the last 6 months (among smokers) or led them to quit (among quitters) either "very much", "a little", or "not at all".

International studies provide strong evidence that comprehensive smoke-free laws,[164] pictorial health warnings on cigarette packages,[165, 166] and tax increases that raise the price of tobacco products[32, 39] are among the most effective strategies to reduce smoking prevalence, and to encourage smokers to quit. While China has recently taken important steps to reduce smoking, evidence shows that at the time of the Wave 5 Survey (2013-15), China still lagged behind many other countries in the implementation of strong policies that align with the FCTC in all of these domains. China does not currently have a national smoke-free law. As of 2017, only three cities have implemented a comprehensive ban on smoking in all indoor public places, workplaces, and public transport: Beijing (effective 1 June 2015), Shenzhen (March 2014 law fully implemented on 1 January 2017), and Shanghai (effective 1 March 2017). China currently has text-only warnings that cover 35% of the front and back of cigarette packs. The size of the Chinese warnings falls far below the FCTC minimum recommended size of 50% of the front and back of packs, ranking 115 out of 205 countries/jurisdictions in 2016 (see Health Warning Labels chapter).[167] The excise tax on cigarettes in China is very low and most cigarettes in China are still very cheap. In 2015, the tax rate on the most popular brand of cigarettes in China was estimated to be 50% of the retail price[168], which is well below the FCTC recommendation of 75%. Moreover, recent increases to the excise tax rate have not been high enough to offset income growth, and cigarettes have become more affordable over time (see Tobacco Price and Taxation chapter).[40, 169] It is not surprising then, that Chinese smokers do not frequently cite measures for smoke-free environments, health warnings, and tobacco price and taxation as reasons to think about quitting, which signals the need for continued implementation of stronger policies in these domains.[72]

At Wave 5, the percentage of smokers who said that various tobacco control policies led them to think about quitting was generally lower than the percentage of quitters who said that policies led them to quit smoking (see Figure 18). Restrictions on smoking in public places and workplaces, the most common policy-related reason that led smokers to think about quitting, and quitters to actually quit smoking (18% of smokers, 31% of quitters), was followed by advertisements or campaign information about the health risks of smoking (10% of smokers, 26% of quitters), and health warnings on cigarette packages (8% of smokers, 17% of quitters). Financial reasons were least commonly cited by respondents as a reason that led them to think about quitting (6% of smokers), or that led them to quit (6% of quitters). This finding is especially notable given that in countries where taxes and prices are high, smokers are generally more likely to state that financial reasons led them to think about quitting. As presented in the Tobacco Price and Taxation chapter of this report, ITC cross-country comparisons show that a majority of male smokers in countries with high tobacco tax rates and prices reported that the price of cigarettes "somewhat" or "very much" led them to think about quitting in the last 6 months, such as Australia (79%), the United Kingdom (76%), Canada (75%), France (74%), and Thailand (74%) (see Figure 66). In contrast, only 35% of male smokers in China said that the price of cigarettes "somewhat" or "very much" led them to think about quitting.

In general, a higher percentage of respondents cited other personal reasons that led them to think about quitting or to quit than reasons directly related to tobacco control policies. The two most commonly reported personal reasons were concerns about personal health (17% of smokers, 66% of quitters); and concerns about the effect of cigarette smoke on non-smokers (15% of smokers, 43% of quitters). This is consistent with data showing that while public awareness of the health harms of tobacco use in China remains low in comparison with other countries, it has improved over the past decade.[25] Other common personal reasons cited by respondents included wanting to set an example for children (19% of smokers, 38% of quitters); and family disapproval of smoking (20% of smokers, 36% of quitters). More than one-quarter of quitters said that feeling sick due to smoking (33%), and societal disapproval of smoking (26%) led them to quit. In contrast, only 11% of smokers cited these as reasons that led them to think about quitting.

Figure 18. Percentage of respondents who said various reasons "very much" led them to think about quitting in the last 6 months (among smokers) or led them to quit (among quitters), at Wave 5



The benefits of quitting smoking are well established. For example, smoking cessation improves life expectancy and reduces the risk of tobacco-related diseases such as cancer, stroke, and coronary heart disease.[170-173] The ITC China Wave 1 to 5 Surveys asked smokers how much they thought they would benefit in terms of health and other gains if they were to quit smoking permanently in the next 6 months. At Wave 5, just over one-third of smokers (37%) reported that they would benefit "very much" from quitting, which suggests that most smokers are not aware of the immediate and long-term benefits of quitting. In sharp contrast, data from other ITC surveys indicate that more than 50% of male smokers in 16 other ITC countries said that they would benefit "very much" or "extremely" if they were to quit.[72] Although a small proportion of Chinese smokers thought that quitting smoking would greatly improve their health and confer other benefits, findings from the Wave 5 Survey showed that a large majority of quitters (72%) reported that they would benefit "very much" from remaining quit. This suggests that smokers with a better understanding of the advantages of quitting may be more likely to try to stop smoking. Alternatively, it is possible that smokers are more likely to understand the advantages of quitting after they stop smoking. Public education campaigns to raise awareness about the benefits of smoking cessation will thus be important in order to encourage more Chinese smokers to take steps towards quitting, and to stay quit.

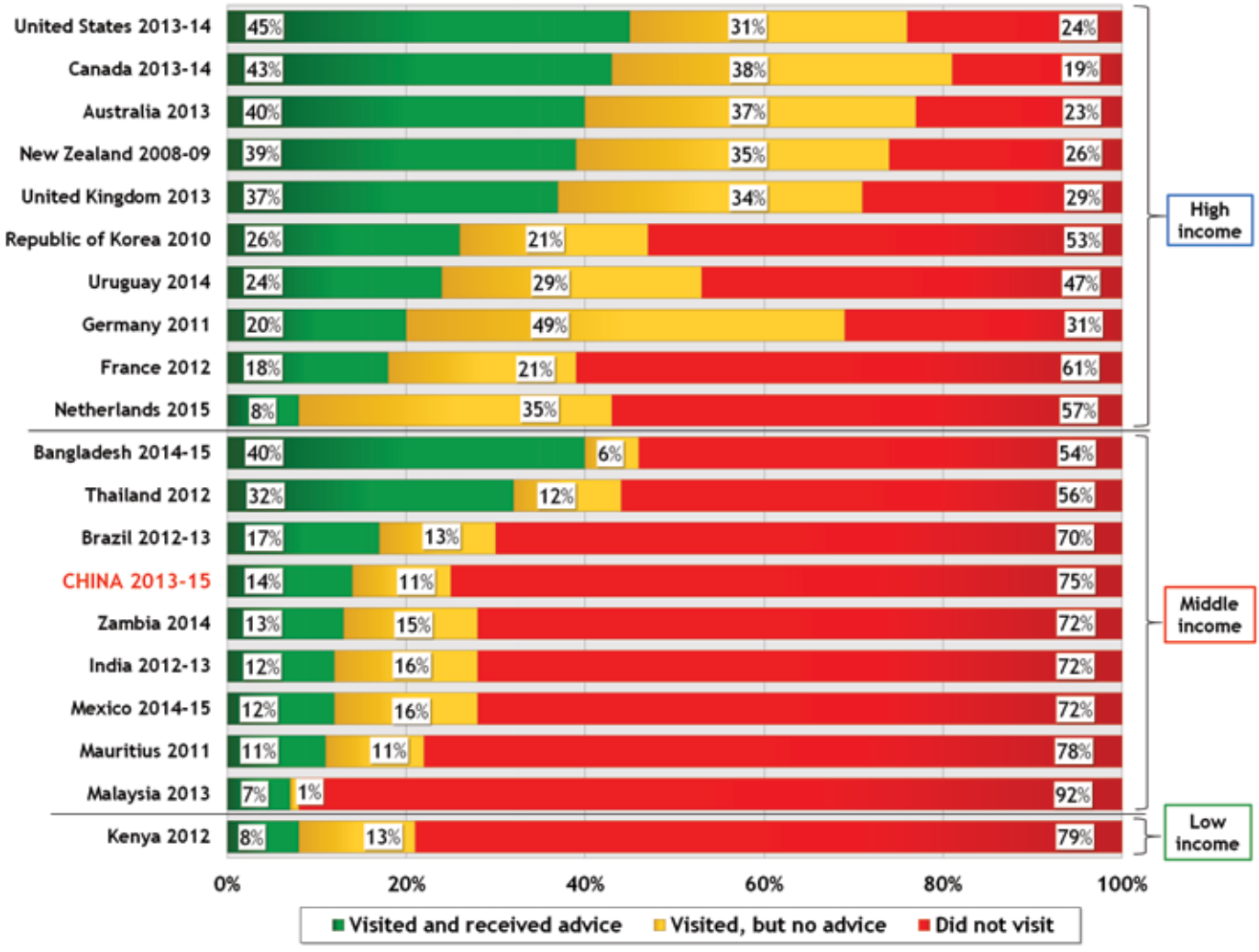
Use of Cessation Assistance

The delivery of brief advice from doctors is a cost-effective measure to encourage cessation. Research evidence shows that advice from doctors can help smokers to quit, and that even brief simple advice can increase cessation rates by 1% to 3%.[174] Nevertheless, doctors in China and many other countries often lack formal training on cessation techniques, and do not routinely advise smokers to quit, or refer smokers to stop-smoking services.[175, 176]

The ITC China Wave 1 to 5 Surveys asked smokers and quitters who had visited a doctor or other health professional in the last 6 months if they received various types of support for smoking cessation during any visit. At Wave 5, 28% of smokers and 63% of quitters said that they had visited a doctor or health professional in the last 6 months (or since the last survey for recontact respondents). Among these respondents, 57% of smokers said they received advice on how to quit during any visit, compared to 41% of quitters. Fewer than 2 in 10 respondents said they received additional help or a referral to another service for cessation support (10% of smokers, 15% of quitters), or received a pamphlet or brochure on how to quit (6% of smokers, 13% of quitters).

Overall, ITC cross-country comparisons indicate that male smokers in China are less likely to visit a doctor compared to smokers in many other countries. In addition, among those male smokers who did visit a doctor, the percentage who were advised to quit is lower in China than in other most other countries. As shown in Figure 19, China has the fourth highest percentage of male smokers (75%) who said that they did not visit a doctor, and the sixth lowest percentage who said that they received advice to quit smoking from a doctor (14%) out of 20 ITC countries.

Figure 19. Percentage of male smokers who visited a doctor and received advice to quit in the last year/6 months/since the last survey date†, by country



† The question asked about doctor visits in the *last 6 months* in the following countries: Bangladesh, Brazil, Germany, India, Kenya, Netherlands, and Zambia. In China and France, respondents were asked about the *last 6 months* (new resepondents) or *since the last survey date* (recontact). In the other countries, respondents were asked about the *last year* (new respondents) or *since the last survey* (recontact).

Smokers and quitters were also asked whether they had received advice or information about quitting from other sources, such as quitlines, or local services. China launched its first national quitline in 2009, and another national quitline was set up in 2015. Cessation counselling was also integrated into a public health hotline service that was expanded to all provinces in 2014, and is currently available in 28 of 31 provinces in total.[73] Nevertheless, use of quitlines is still infrequent in China, with virtually no smokers (3%) and quitters (4%) reporting that they received support from a quitline at Wave 5. Telephone-based quitlines, when implemented correctly, can increase both short- and long-term success rates for quitting.[177, 178] One potential strategy that could help to promote smokers' awareness and use of quitline services in China is the addition of the quitline number on cigarette packaging. For example, evidence from ITC surveys in Australia[179], New Zealand[180], and Canada[181, 182] shows that the inclusion of telephone quitline numbers on cigarette packaging is an effective means of increasing the number of quitline calls, and expanding the reach of these services.

Smoking cessation clinics have also been available in China since 1996, and there are now more than 800 clinics around the country.[183] At Wave 5, half of smokers (50%) said that they would "definitely" or "probably" visit a clinic that provided information about smoking and advice about how to quit successfully. However, only 10% of smokers and 8% of quitters said that they received this type of information from local stop-smoking services, such as hospitals or clinics.

Use of Stop-Smoking Medications

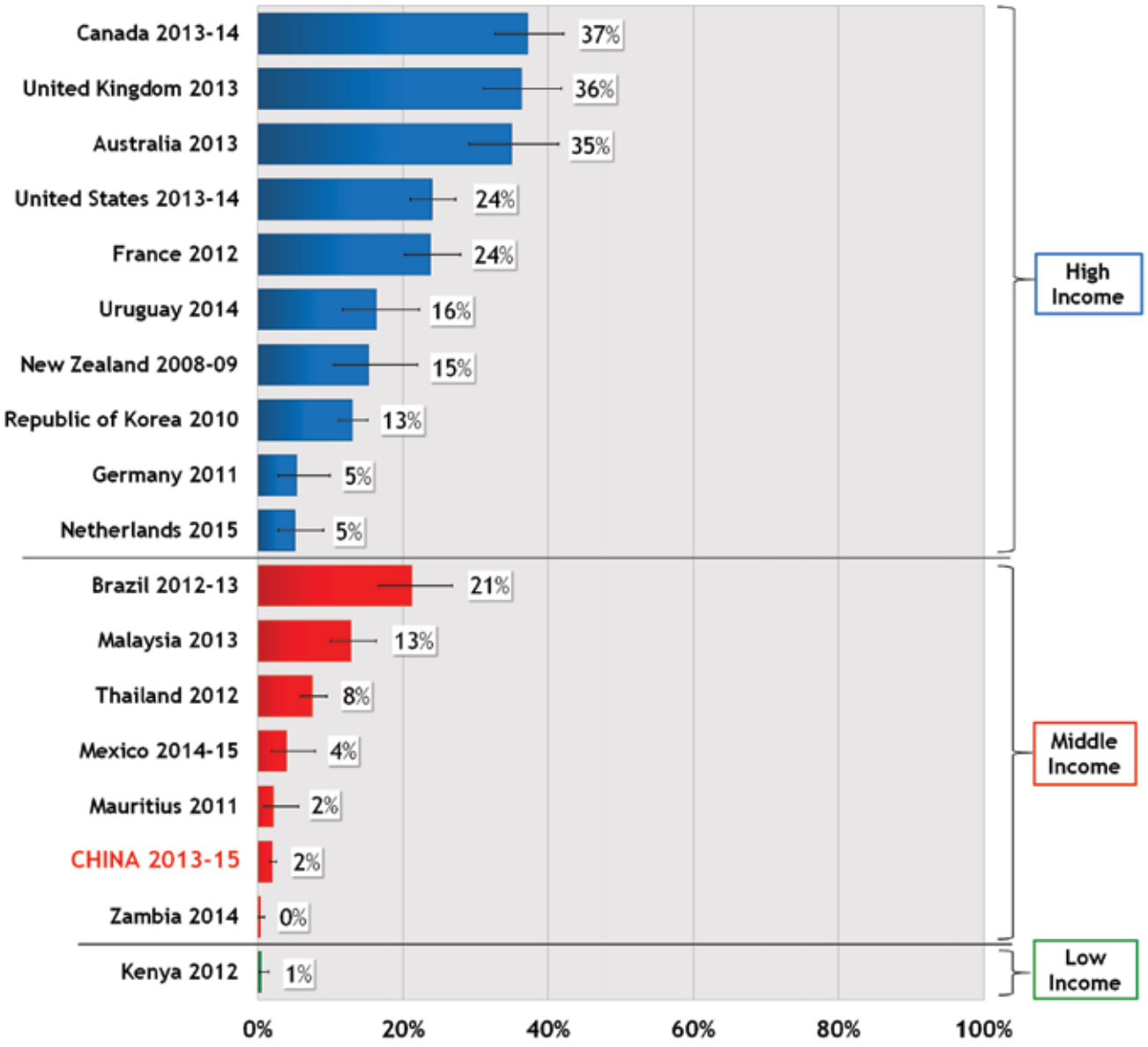
Stop-smoking medications (SSMs), such as NRT, bupropion, varenicline, and cytisine are effective in helping smokers to quit, particularly when they are used in combination with other behavioural support services.[184, 185] In China, there is currently no national health insurance coverage for SSMs, and the high cost of these products makes them inaccessible to many smokers.[186] In addition, SSMs are not widely available in pharmacies, and Chinese smokers are generally not interested in the use of such products.[72]

It is not surprising that among smokers who made at least one quit attempt since the last survey date and quitters, virtually none reported use of the following SSMs at Wave 5: nicotine patches (5% of smokers, 0.2% of quitters), and Zyban or bupropion (2% of smokers, 1% of quitters). Rates of use for the following alternative smoking cessation products were also low: other medication or treatment (8% of smokers, 1% of quitters), and acupuncture (3% of smokers, 1% of quitters).

ITC cross-country comparisons indicate that use of SSMs among male smokers in China is much lower than in most other countries. China has the third lowest percentage of male smokers who used any SSMs (2%) out of 18 ITC countries (see Figure 20).

The delivery of brief advice from doctors is a cost-effective measure to encourage cessation. ITC cross-country comparisons indicate that male smokers in China are less likely to visit a doctor compared to smokers in many other countries. In addition, among those male smokers who did visit a doctor, the percentage who were advised to quit is lower in China than in other most other countries.

Figure 20. Percentage of male smokers who used any stop-smoking medications (SSMs) in the last year (or since the last survey date)†, by country



† In Brazil, the question asked whether smokers have ever used any SSMs. In Mauritius, the question asked whether smokers used SSMs in their last quit attempt. All other countries asked about any use in the last 12 months (for new respondents) or since the last survey date (for recontact respondents).

Support for Ban on Tobacco Products

The ITC China Wave 5 Survey asked smokers, quitters, and non-smokers whether they would support a total ban on tobacco products within 10 years, if the government provided assistance such as smoking cessation clinics to help smokers quit. Nearly all non-smokers (95%) and quitters (91%), and the vast majority of smokers (82%) said that they would "support" or "strongly support" such a ban. This is a clear indication that there is overwhelming public support for measures to ban tobacco products and increased government support for smoking cessation in China, even among smokers.

SMOKE-FREE PUBLIC PLACES AND WORKPLACES

Article 8 of the FCTC recognizes that there is no safe level of exposure to tobacco smoke and calls on Parties to adopt effective measures to protect the public from exposure to SHS. Guidelines for Article 8, adopted in 2007, obligate Parties to implement a comprehensive ban on smoking in indoor public places, workplaces, public transport, and other public places as appropriate, without exemptions and recommend a timeline for implementation of 5 years after entry into force of the Convention for each Party (by 2011 for China).The Article 8 guidelines also establish the core principles for achieving 100% smoke-free environments, including strong enforcement of legislation and educational campaigns to raise awareness of the harms of SHS.

China has made some progress in implementing its obligations under Article 8, but has not implemented a comprehensive national smoke-free law by 2011 as recommended in the Article 8 guidelines. This has resulted in extremely high rates of exposure to dangerous SHS, causing more than 100,000 deaths per year. In recent years, the government has taken some steps to reduce exposure to SHS. However, the recently proposed national comprehensive smoke-free law is no longer under consideration. If the government were to reinstate the development of this law, and if the law were implemented, it would have immense public health and economic benefits. Currently, at least 18 cities across China (including four ITC cities) have adopted local smoke-free legislation; however, only three cities thus far have implemented comprehensive smoke-free laws that comply with Article 8 guidelines: Beijing (implemented in June 2015), Shenzhen (March 2014 law fully implemented in January 2017), and Shanghai (implemented in March 2017).

During the time of the ITC China Wave 1 to 5 (2006-15) Surveys, few smoke-free laws of any kind were implemented. Of those laws that were implemented at the local level, none were comprehensive and thus were not compliant with Article 8 guidelines (see Table 6). There is clear evidence that partial smoke-free laws, such as those listed in Table 6, do not protect people from the dangers of SHS.[187] For example, some cities banned smoking in restaurants but allowed for designated smoking areas with no physical separation between them – which is essentially equivalent to having no smoking ban at all. Other ITC cities and the five rural areas did not implement any smoke-free laws during this period.

Table 6: Smoke-free policies implemented in ITC China Survey areas from Waves 1 to 5 (2006-2015)

Date	City	Description
May 2008	Beijing	Partial ban in restaurants and workplaces implemented
	Shenyang	Partial ban in restaurants and workplaces implemented
June 2009	Yinchuan	Partial ban in restaurants and workplaces implemented
March 2010	Shanghai	Partial ban in large restaurants; ban in shared workplace areas implemented
Sept 2010	Guangzhou	Partial ban in large restaurants; ban in selected indoor workplaces implemented
Nov 2014	Beijing	Comprehensive smoke-free law in all indoor public places and public transportation passed, but not implemented until June 1, 2015 (after Wave 5 fieldwork was completed in Beijing)

The ITC China Survey includes several measures to evaluate smoke-free policies (see Table 7). The survey evaluates the effectiveness of existing partial smoke-free policies in public places by asking smokers and non-smokers whether they noticed people smoking in public places such as indoor workplaces, bars, restaurants, and taxis. Smokers and non-smokers were also asked whether they support smoke-free laws in various public places. Finally, to assess whether the implementation of smoke-free policies influences smoking in the home, smokers were asked about rules on smoking in their home.

Table 7: ITC Survey measures on smoke-free policies

Measure	Survey Question	Response Options
Visiting restaurants (bars)	In the last 6 months, have you visited a restaurant (bar) in your city?	Yes or no
Last visit: reported smoking in restaurants (bars)	The last time you visited, did you see people smoking inside?	Yes or no
Employed outside the home	Are you currently employed?	Yes or no
Working inside vs. outside	Do you usually work inside a building?	Yes or no
Reported smoking at work	In the last 6 months, have people smoked in indoor areas where you work?	Yes or no
Support for smoke-free places (by venue)	For each of the following public places, what do you think the smoking rules should be? Hospitals, workplaces, restaurants, schools, government buildings, bars, taxis	Smoking should not be allowed in any indoor area/ only in designated indoor areas/ no rules or restrictions
Overall support for smoking ban	Overall, would you say that a ban on smoking in restaurants and other enclosed public places would be good or bad?	Scale from 1 to 5 (very good to very bad)
Smoking in the home	Which of the following best describes smoking inside your home?	Smoking is not allowed in any indoor area/ only in designated indoor areas/ no rules or restrictions

Smoking in Indoor Workplaces

Implementing comprehensive workplace smoking bans is an important tobacco control strategy to protect the public from exposure to SHS; in fact, it is the only FCTC policy measure that has a direct impact on protecting the health of non-smokers. Studies from China and other countries have shown that comprehensive smoke-free policies in workplaces are much more effective than partial restrictions in reducing consumption and exposure to SHS.[188, 189] For example, a study in Shanghai found that workplaces with a complete smoking ban (vs. those with a smoke-free policy that allowed for designated smoking rooms on site) had lower smoking prevalence, lower daily consumption of cigarettes among smokers and more quit attempts.[190] However, smoke-free regulations covering workplaces vary widely across cities in China, and prior to Beijing's June 2015 law, none were comprehensive, as they allowed for indoor smoking rooms or covered only certain types of workplaces.

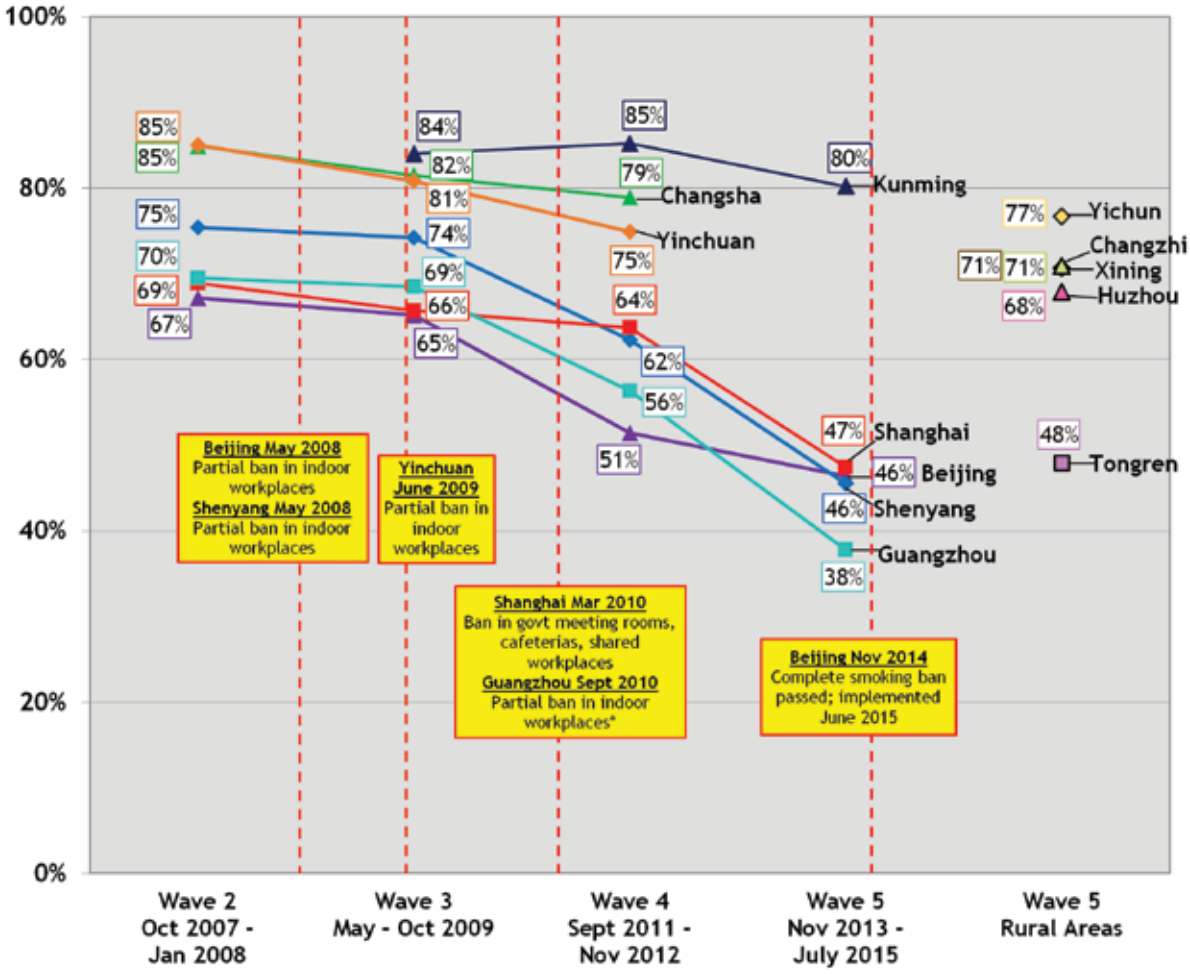
During the period of the ITC China Wave 1 to 5 Surveys, five cities (Beijing[vii], Shenyang, Yinchuan[viii], Shanghai, and Guangzhou) implemented partial workplace smoking bans, while workplace smoke-free policies were not implemented in the other cities and rural areas. In September 2010 (after Wave 3), Guangzhou implemented the strongest smoke-free law to date banning smoking in 12 types of indoor public places, including workplaces. However, only certain types of workplaces (such as government offices) were covered by the complete smoking ban, whereas other indoor workplaces (as well as restaurants and bars) were allowed to have smoking rooms.

From Waves 2 to 4, the majority of smokers who work indoors reported noticing smoking in their workplaces in the last 6 months (see Figure 21). Among the cities surveyed at Wave 5, smoking prevalence in workplaces was as high as 80% in Kunming, where no smoke-free laws were implemented during the survey period, and almost half of workplaces in Shenyang (46%), Beijing (46%), and Shanghai (47%) still had smoking at Wave 5.

In contrast, smoking in workplaces was lowest in Guangzhou (38%), after the implementation of a smoking ban in 2010. Workplace smoking also decreased in Beijing, Shanghai, and Shenyang from Waves 3 to 5 after partial smoking bans were implemented.

Fewer smokers in rural areas reported working indoors at Wave 5, but among those who did, over two-thirds (68%-77%) noticed people smoking indoors in the last 6 months in all of the rural areas except for Tongren (48%).

Figure 21. Percentage of smokers who noticed smoking in workplaces, by survey location and wave



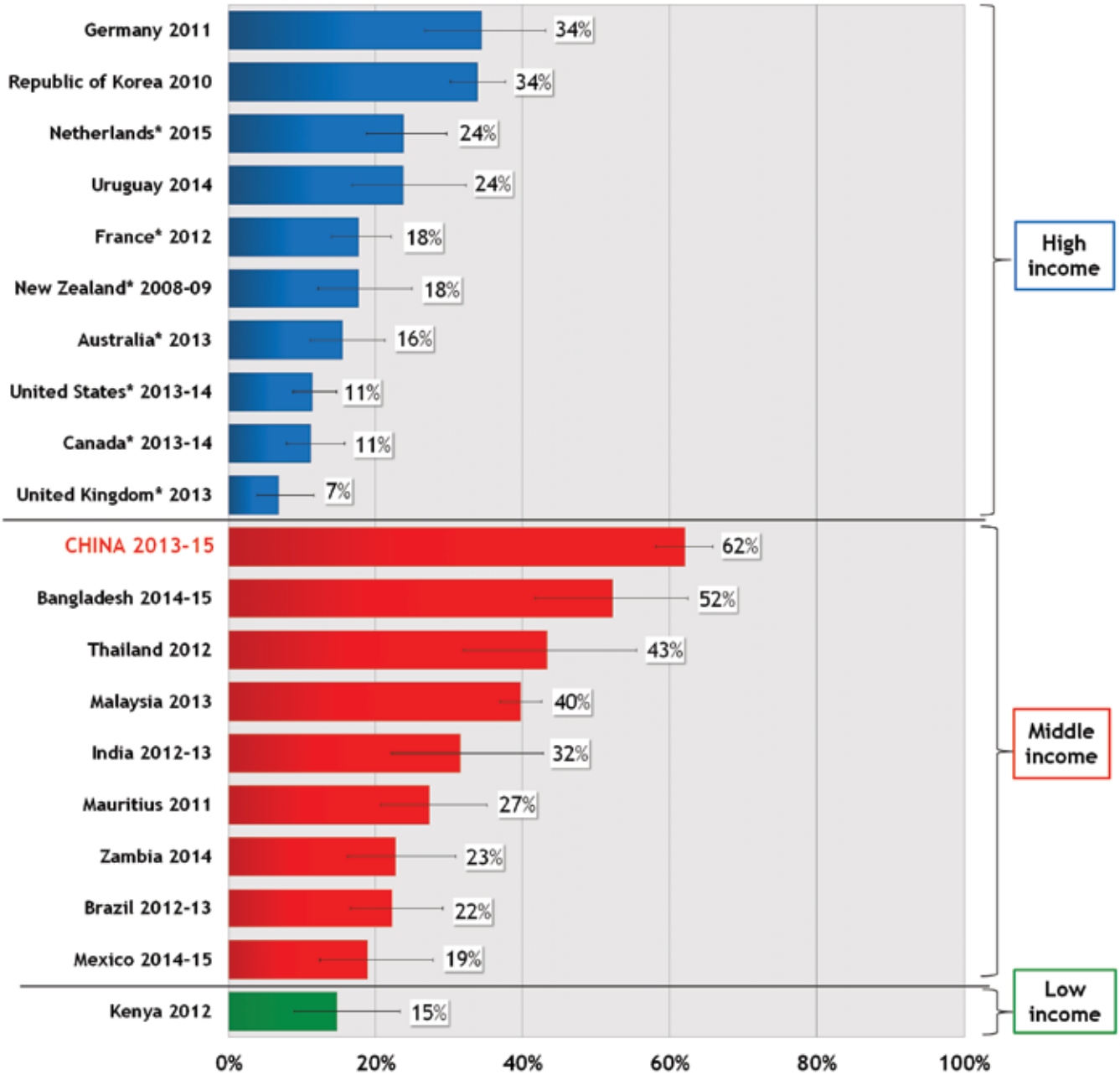
* Ban included offices, meeting rooms, cafeterias, elevators, and corridors
Note: this question was only asked to smokers who said they: (a) are currently employed, and (b) work inside a building. The number of respondents who were able to answer the question was much smaller in rural areas than in urban cities, resulting in wide confidence intervals for the results in some rural areas.

vii. Beijing's comprehensive June 2015 smoke-free law came into effect after the Wave 5 Survey fieldwork was completed in that city, so the impact of that law was not evaluated.

viii. Yinchuan and Changsha did not participate in the ITC China Wave 5 Survey.

While smoking in indoor workplaces has declined during the time of the ITC China Surveys, ITC cross-country comparisons show that the prevalence of smoking in workplaces in China is still alarmingly high. In fact, China has the highest percentage of male smokers and quitters who noticed people smoking in their indoor workplace (62%) among 20 ITC countries (see Figure 22). Smoking in workplaces is much lower (7-34%) in HICs with stronger smoke-free policies.

Figure 22. Percentage of male smokers and quitters who reported noticing people smoking indoors in their workplaces in the last month, by country



† All countries asked about noticing smoking in the last month except China, where the question asked about the last 6 months.

* In these countries, responses include all those who were employed outside of home, regardless of whether the workplace was indoors or outdoors. In all other countries, respondents who worked outdoors only were excluded.

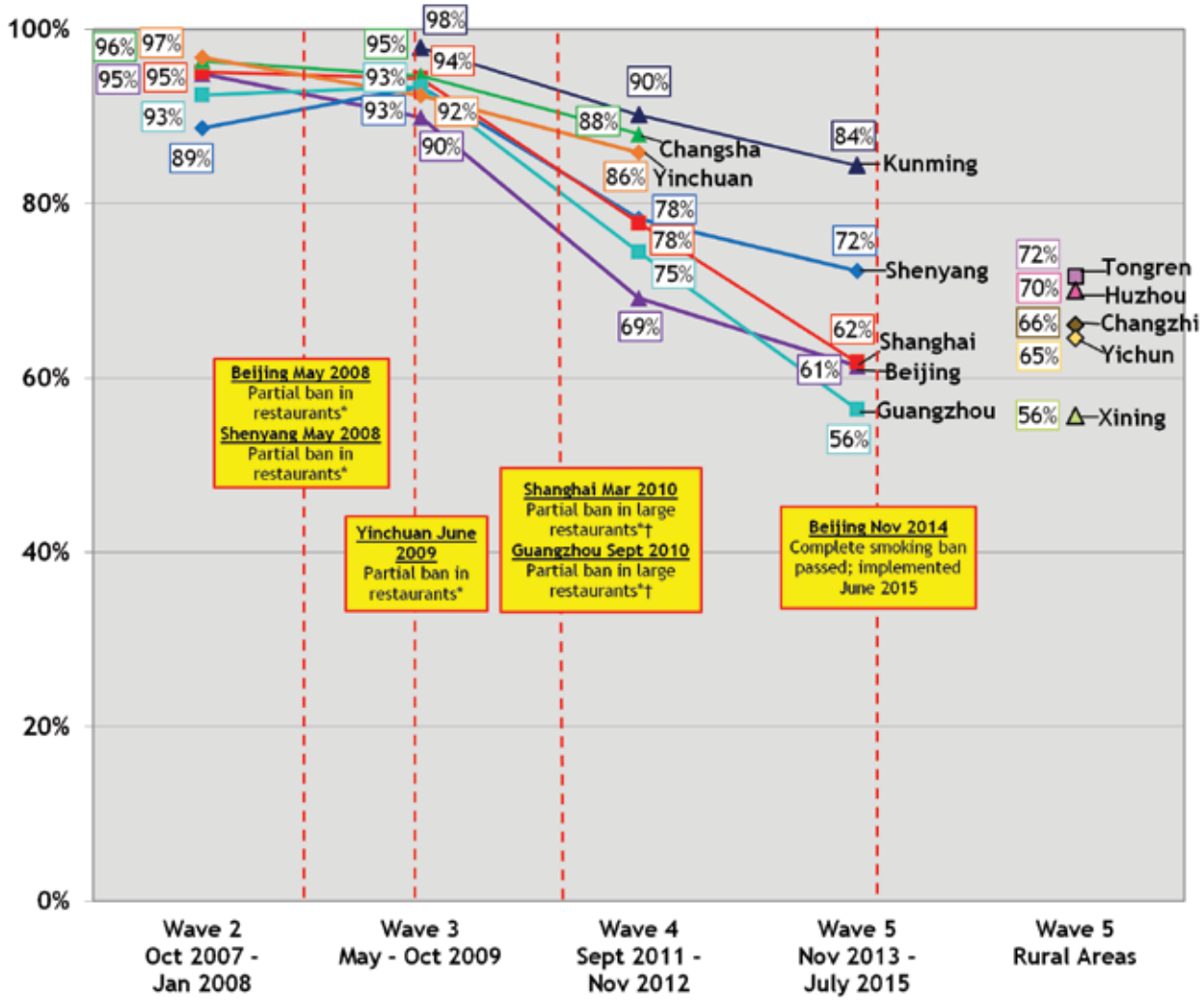
Smoking in Restaurants

The ITC China Survey evaluated partial smoke-free policies in restaurants in Beijing, Shenyang, Yinchuan, Shanghai, and Guangzhou that were implemented after the time of the Wave 2 Survey. As described in Table 6, these policies were not comprehensive as they applied only to large restaurants or allowed for designated smoking rooms.

From Waves 2 to 5, the majority of smokers in all locations who had visited a restaurant in the last 6 months reported that people were smoking inside the restaurant during their last visit – which is not surprising given that there were no complete smoking bans in restaurants in any of the cities (see Figure 23). The prevalence of smoking in restaurants decreased over time, with the largest decrease in Guangzhou after the implementation of a partial smoking ban in restaurants in 2010 — from 93% at Wave 3 (2009) to 56% at Wave 5 (2013-15). However, over half of restaurants in each location still had smoking at Wave 5, with the highest prevalence reported in Kunming (84%).

These findings demonstrate that China's partial smoking bans have had only a small impact in reducing exposure to SHS. In comparison, after Ireland implemented its comprehensive smoke-free law in 2004, the percentage of respondents who noticed smoking in restaurants decreased dramatically from 85% to only 3% — a near-total elimination of smoking in restaurants.[191]

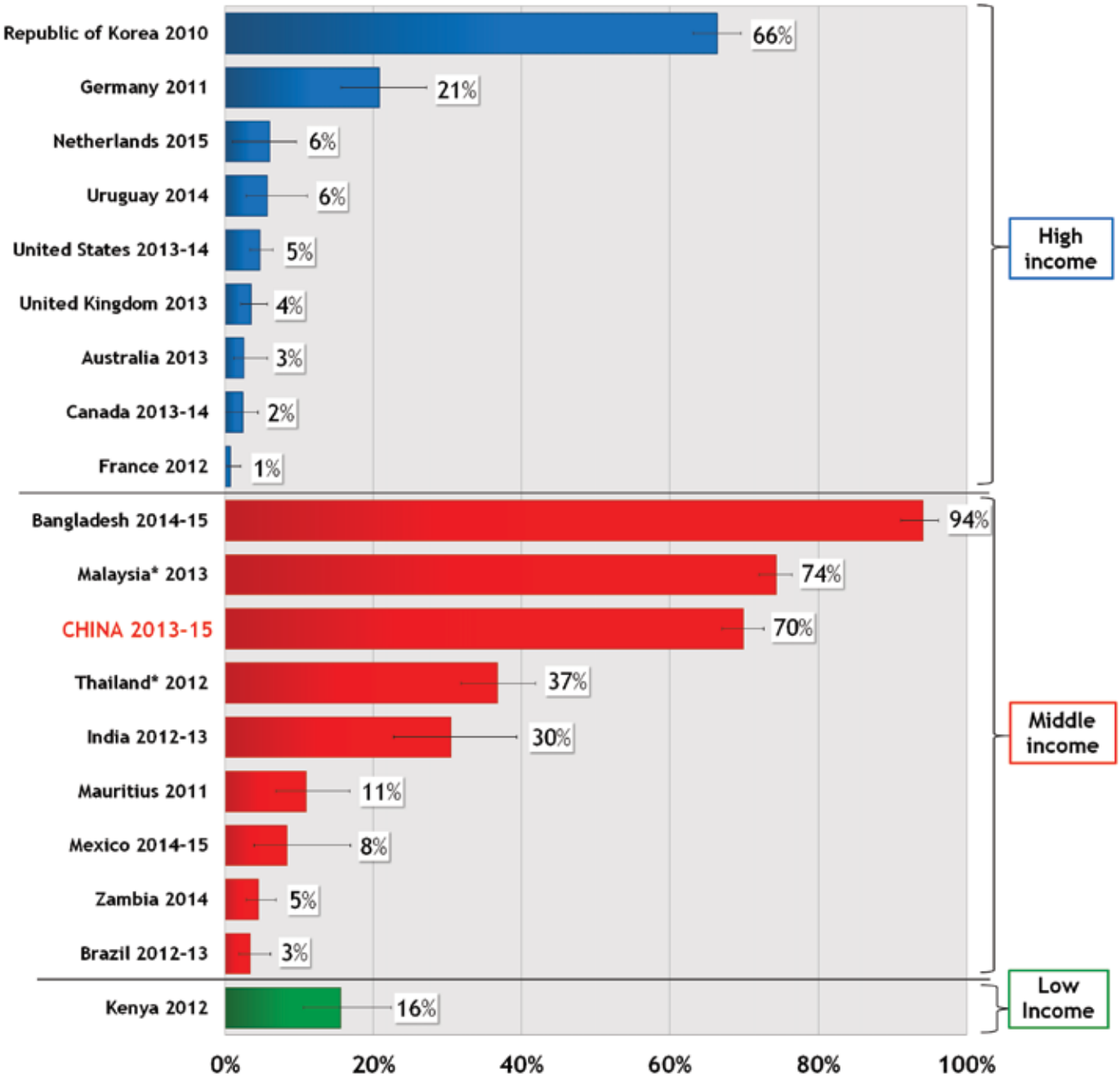
Figure 23. Percentage of smokers who noticed smoking in restaurants, by survey location and wave



* Designated smoking rooms permitted; designated non-smoking areas in Yinchuan
† Restaurants with 75+ seats or 150+ square metres

ITC cross-country comparisons further demonstrate the need for China to strengthen smoke-free laws in restaurants, as China has the third highest percentage of smoking in restaurants (70%) among 19 countries (see Figure 24). In contrast, the majority of non-Asian ITC countries have achieved smoking rates of 5% or less in restaurants.

Figure 24. Percentage of male smokers and quitters who noticed smoking in restaurants among those who visited a restaurant in the last year, by country



* In Malaysia and Thailand, the results are the average between indoor air-conditioned restaurants and the non-smoking areas of non-air-conditioned/outdoor restaurants.

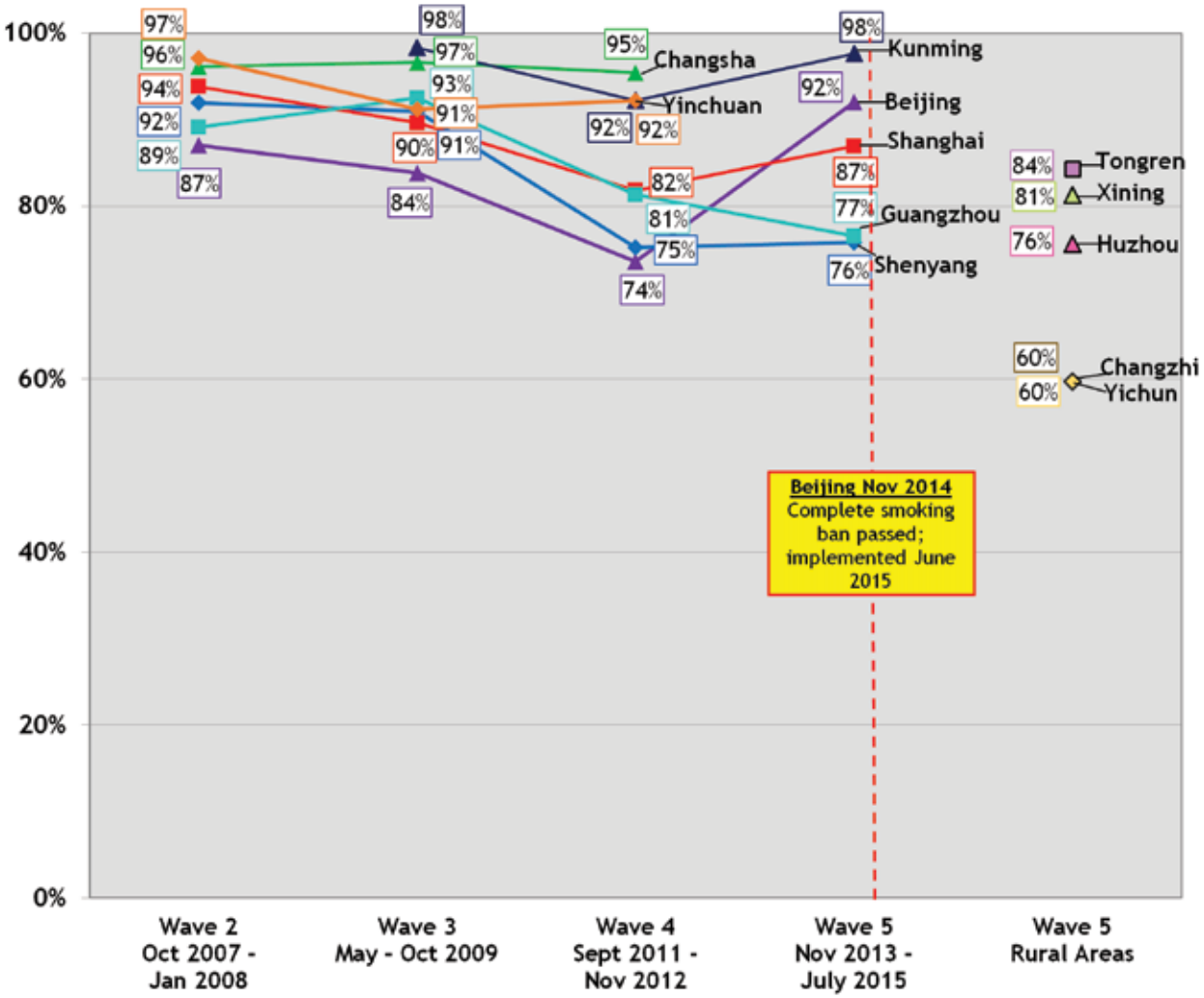
Smoking in Bars

During the time of the Wave 1 to 5 ITC China Surveys, there were no regulations on smoking in bars in any of the urban locations, resulting in extremely high levels of exposure to SHS.

Smokers who had visited a bar in their city in the last 6 months were asked whether people were smoking inside the bar at their last visit. From Waves 2 to 5, the prevalence of smoking in bars in the ITC China Survey locations remained high, ranging from 87-97% in cities at Wave 2 to 76-98% in cities at Wave 5, with Kunming having the highest percentage of smoking at both Wave 3 and Wave 5 (98%) (see Figure 25). While there were minor declines in observed smoking in bars between Waves 3 and 4, three of the cities (Kunming, Beijing, and Shanghai) had increases in smoking between Waves 4 and 5.

Few smokers reported visiting bars in rural areas at Wave 5, but among those who did, 60-84% reported that people were smoking inside the last time they visited.

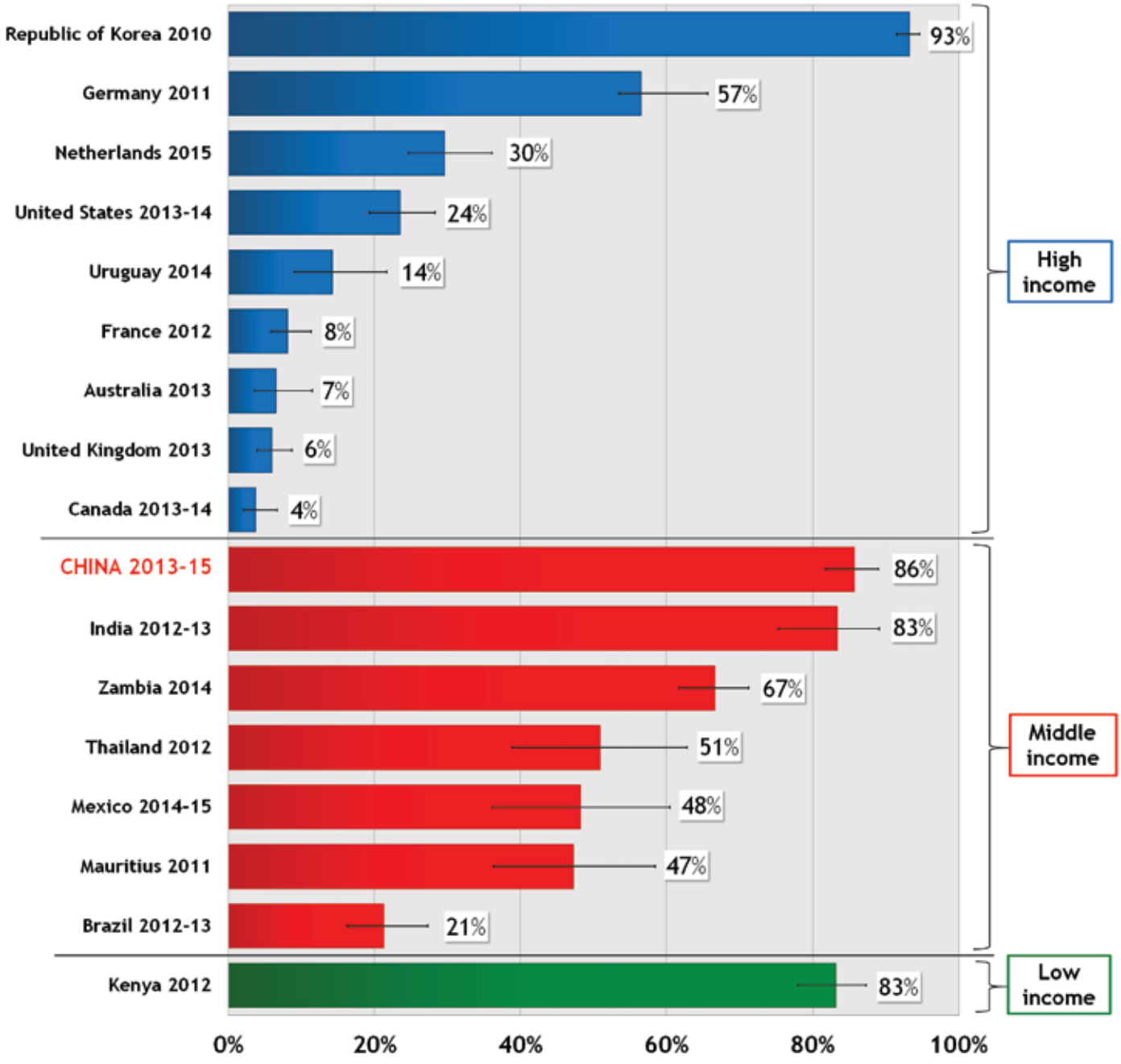
Figure 25. Percentage of smokers who noticed smoking in bars, by survey location and wave



Note: this question was only asked to smokers who had visited a bar in their city in the last 6 months. Caution should be taking in interpreting these results as the number of respondents who were able to answer the question was fairly small in many of the survey locations, especially in the rural areas, resulting in wide confidence intervals.

The consistently high rates of smoking observed in bars across China is also evident in ITC cross-country comparisons, which show that China has the second highest percentage of smoking in bars (86%) among 17 ITC countries – second only to Republic of Korea (93%) (see Figure 26). In contrast, results from Western countries such as Canada and the United Kingdom demonstrate the low smoking rates that could be achieved with strong, well-enforced smoke-free laws covering all public places, including bars.

Figure 26. Percentage of male smokers and quitters who noticed smoking in bars, cafés and pubs among those who visited a bar, café or pub in the last year, by country

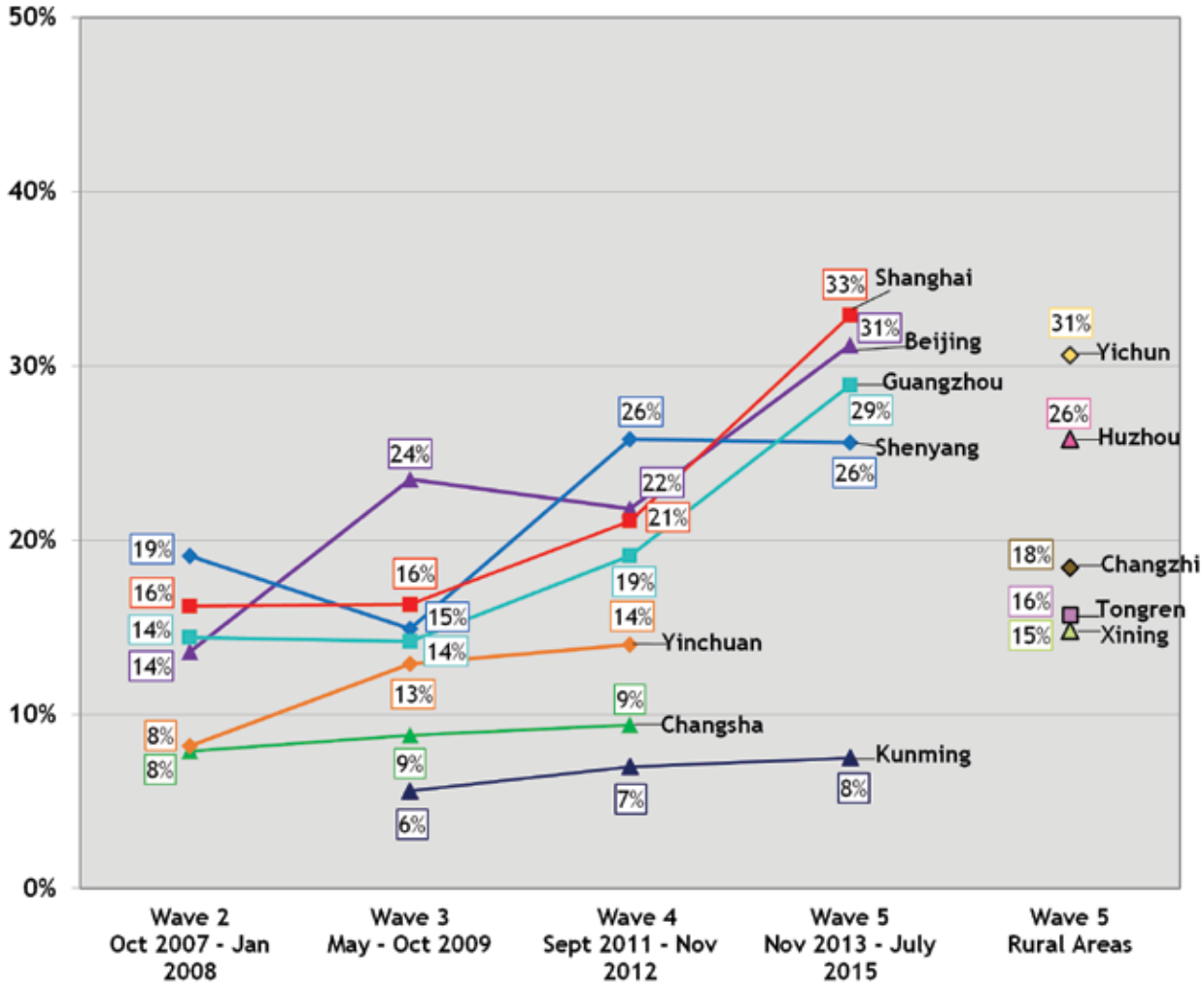


Smoking in the Home

At Wave 5, less than one-third of smokers in all survey locations reported that smoking is never allowed in their home (see Figure 27). Only 8% of smokers in Kunming had a complete home smoking ban at Wave 5 – the lowest percentage among the 10 locations surveyed. However, there was an increase in complete smoking bans in the homes of smokers in all of the cities from Waves 2 to 5. Beijing and Shanghai had the largest increases in home smoking bans, which occurred after the implementation of partial smoke-free laws in these cities. The percentage of smokers with home smoking bans also increased in Guangzhou after the implementation of their smoke-free law in 2010 – from 14% at Wave 3 to 29% at Wave 5.

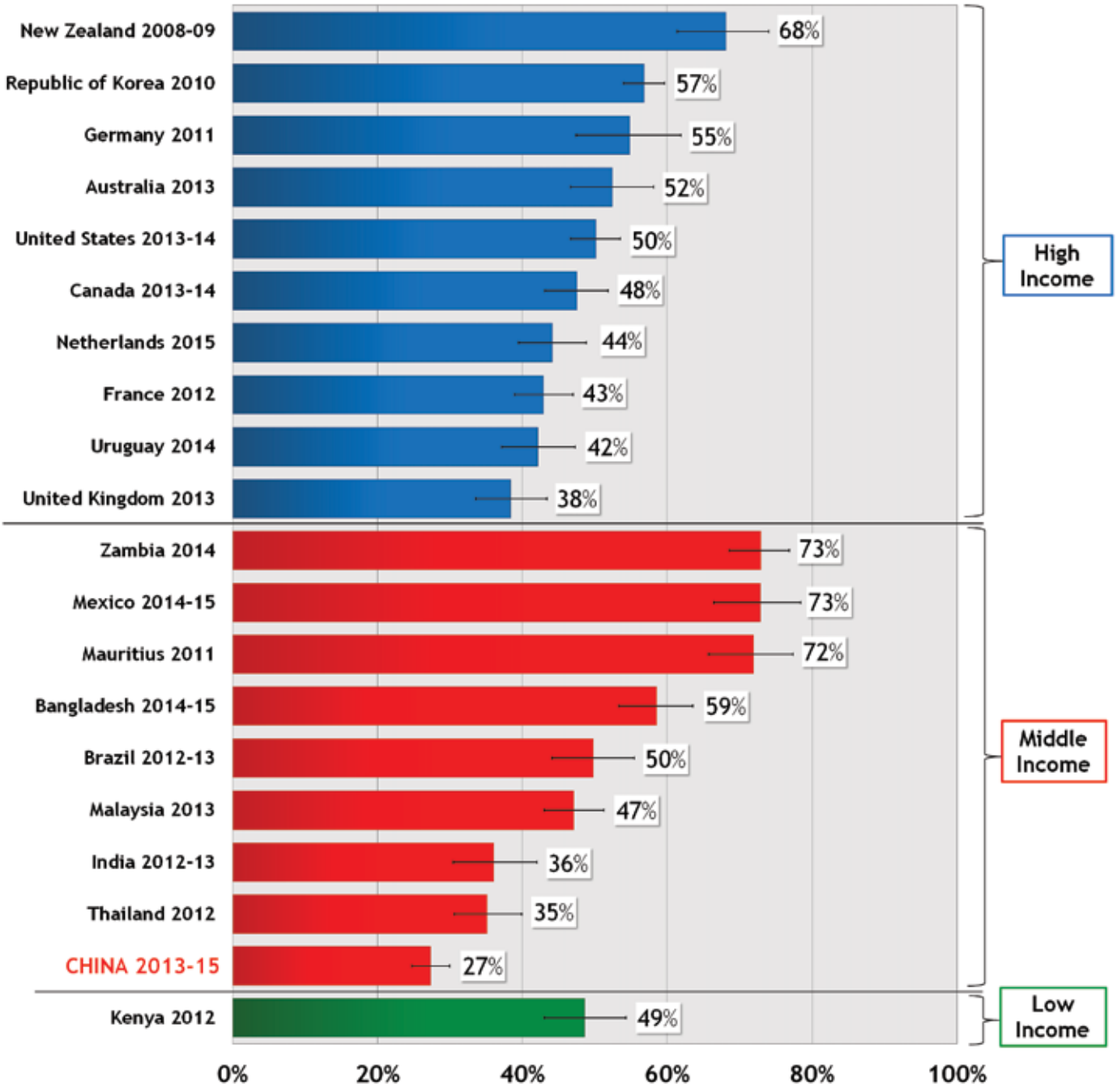
These findings support previous ITC research which has consistently shown that smoking bans in public places do not lead to more smoking in the home; in fact, they often lead to an increase in smoke-free homes.[191-193] This provides strong evidence that comprehensive smoke-free laws in China could stimulate more smoking bans in private places such as homes, and reduce exposure to SHS further, which is especially important to protect the health of women and children.

Figure 27. Percentage of smokers who reported having a complete smoking ban at home, by survey location and wave



While more smokers have made their homes smoke-free during the period of the ITC China Surveys, ITC findings demonstrate that much greater increases would be likely if China implemented a strong national comprehensive smoke-free law. China currently has the lowest percentage of smokers who do not allow smoking in their home (27%) and, therefore, the highest percentage of SHS exposure in the home among 20 ITC countries (see Figure 28).

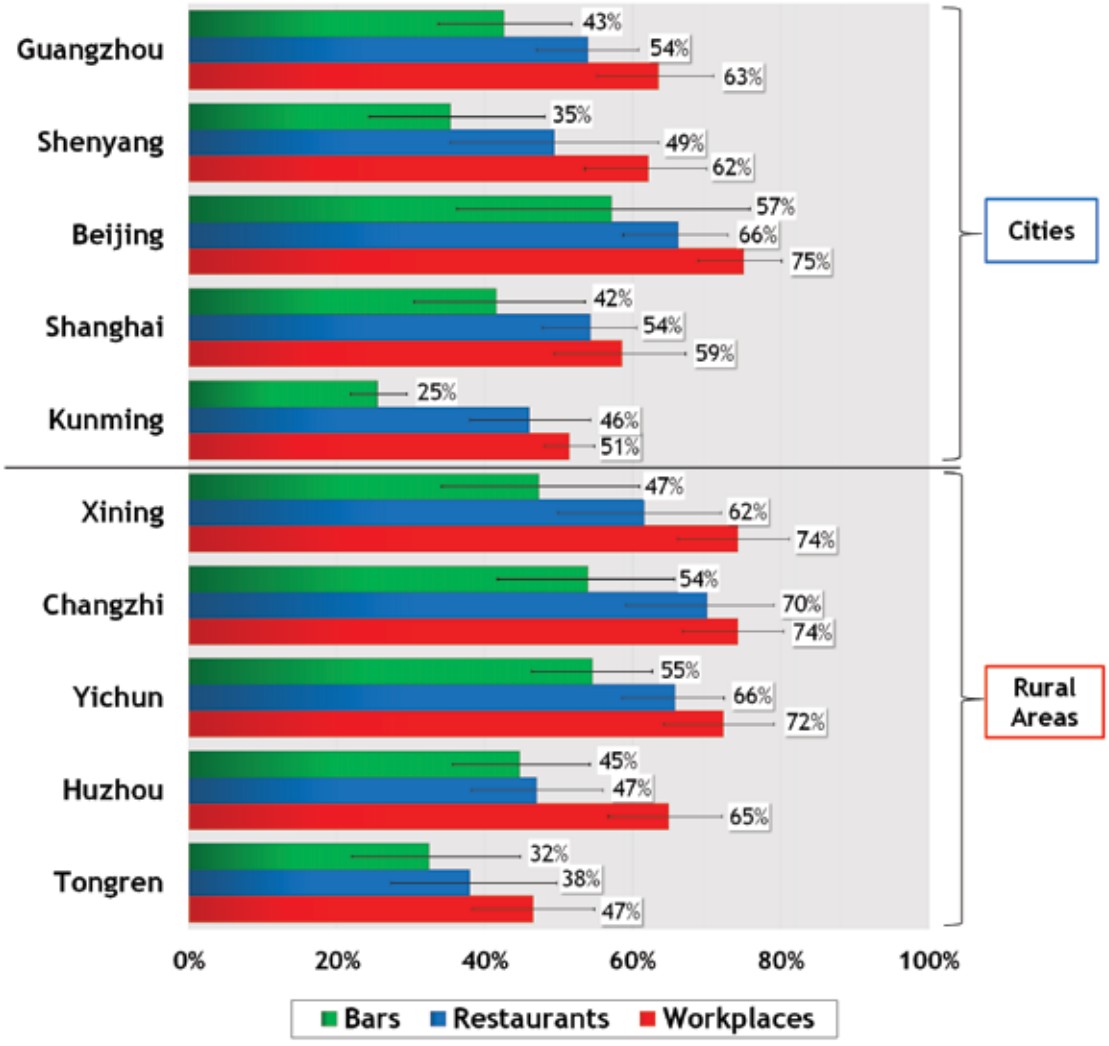
Figure 28. Percentage of male smokers and quitters who "never allow" smoking in their home, by country



Public Support for Smoke-Free Laws

The ITC China Survey asked respondents whether they think smoking should be allowed in each of several public venues. Figure 29 summarizes the level of support among smokers for smoke-free laws in workplaces, restaurants, and bars in each ITC China survey location at Wave 5 (2013-15). Support varied across locations, but the percentage of smokers who said that smoking should not be allowed at all in indoor areas was consistently highest for workplaces (ranging from 47% to 75% of smokers) and lowest for bars (ranging from 25% to 57% of smokers). There was no difference in the average level of support in cities compared to rural areas for each venue, which shows that there is consensus at the national level across both urban and rural areas in support for smoke-free policies.

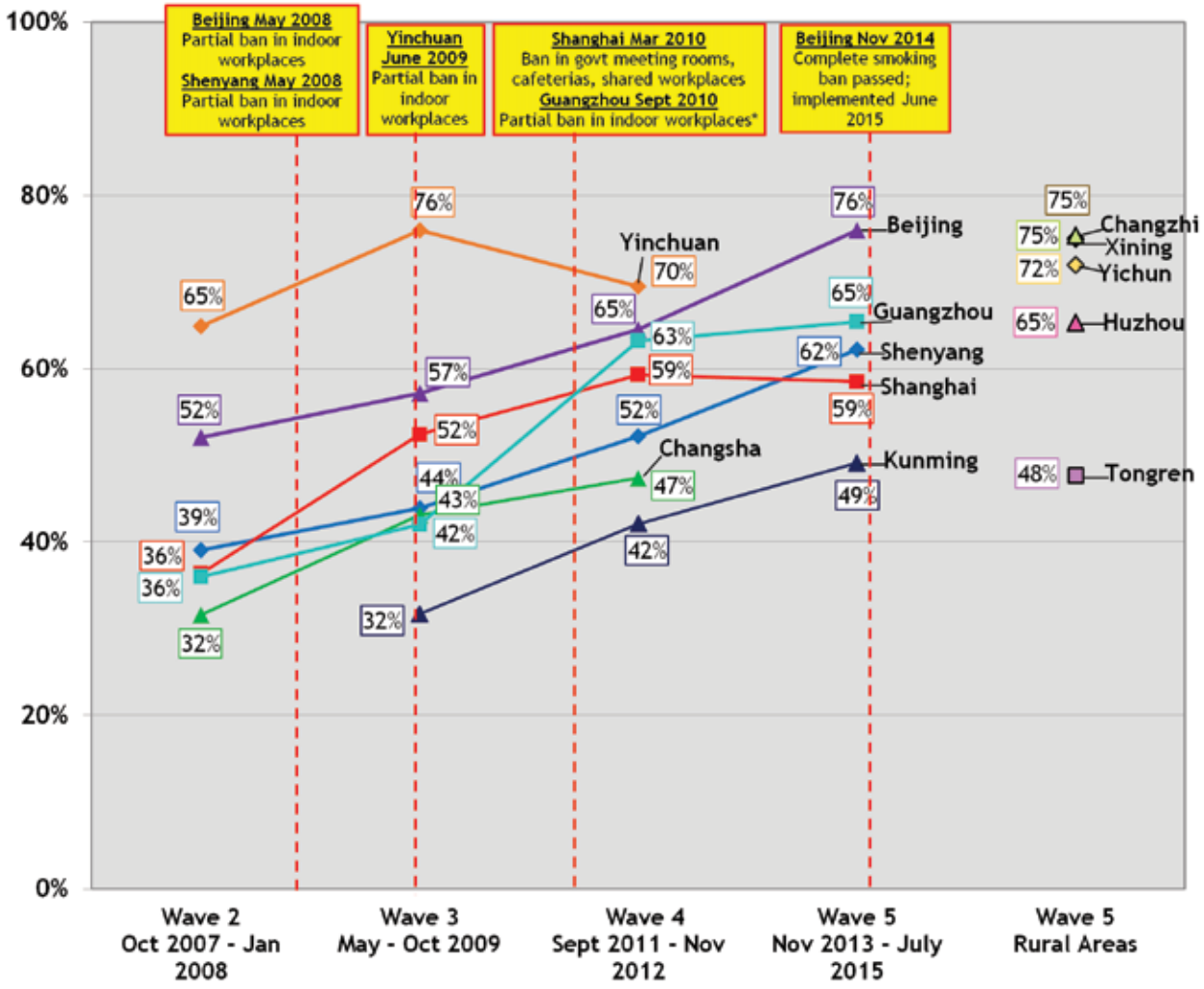
Figure 29. Percentage of smokers who think smoking should not be allowed in any indoor areas in workplaces, restaurants, and bars at Wave 5, by survey location



Support for Smoke-Free Workplaces

Support for a complete ban on smoking indoors in workplaces increased among smokers in all cities between Waves 2 and 5 except Yinchuan, where support decreased slightly between Waves 3 and 4 (see Figure 30). At Wave 5, over half of smokers in all survey locations except Tongren (48%) and Kunming (49%) said they support a complete ban on smoking in workplaces, with the highest level of support in Beijing (76% of smokers).

Figure 30. Percentage of smokers who support complete smoking bans in workplaces, by survey location and wave

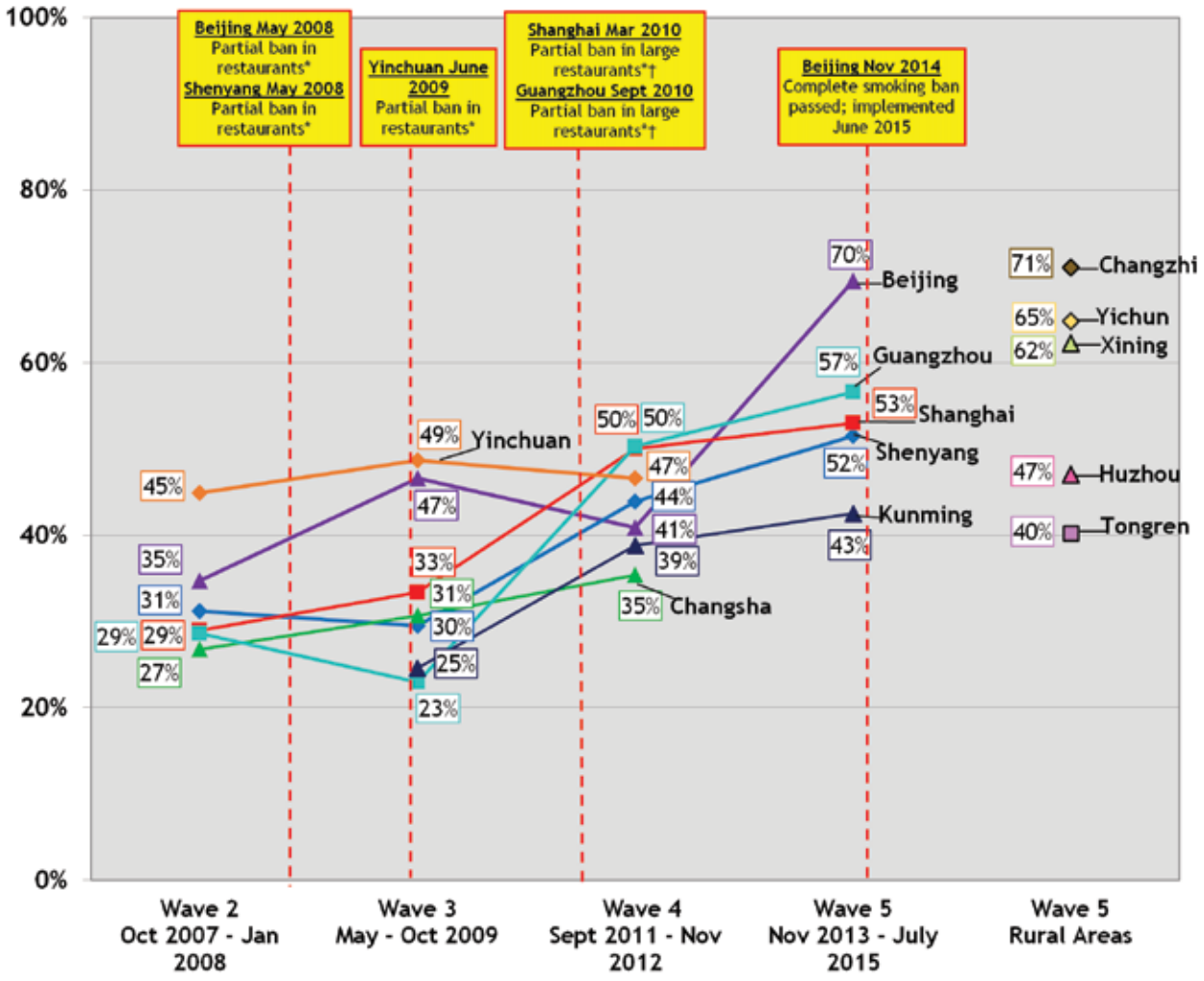


* Ban included offices, meeting rooms, cafeterias, elevators, and corridors

Support for Smoke-Free Restaurants

Support for complete smoking bans in restaurants increased overall among smokers from Waves 2 to 5 (see Figure 31). At Wave 5, approximately two-thirds of smokers supported a complete smoking ban in restaurants in Yichun (65%), Beijing (70%), and Changzhi (71%), and over half of smokers supported a complete ban in Shenyang (52%), Shanghai (53%), Guangzhou (57%), and Xining (62%). Support was lowest at Wave 5 in Tongren (40%).

Figure 31. Percentage of smokers who support complete smoking bans in restaurants, by survey location and wave



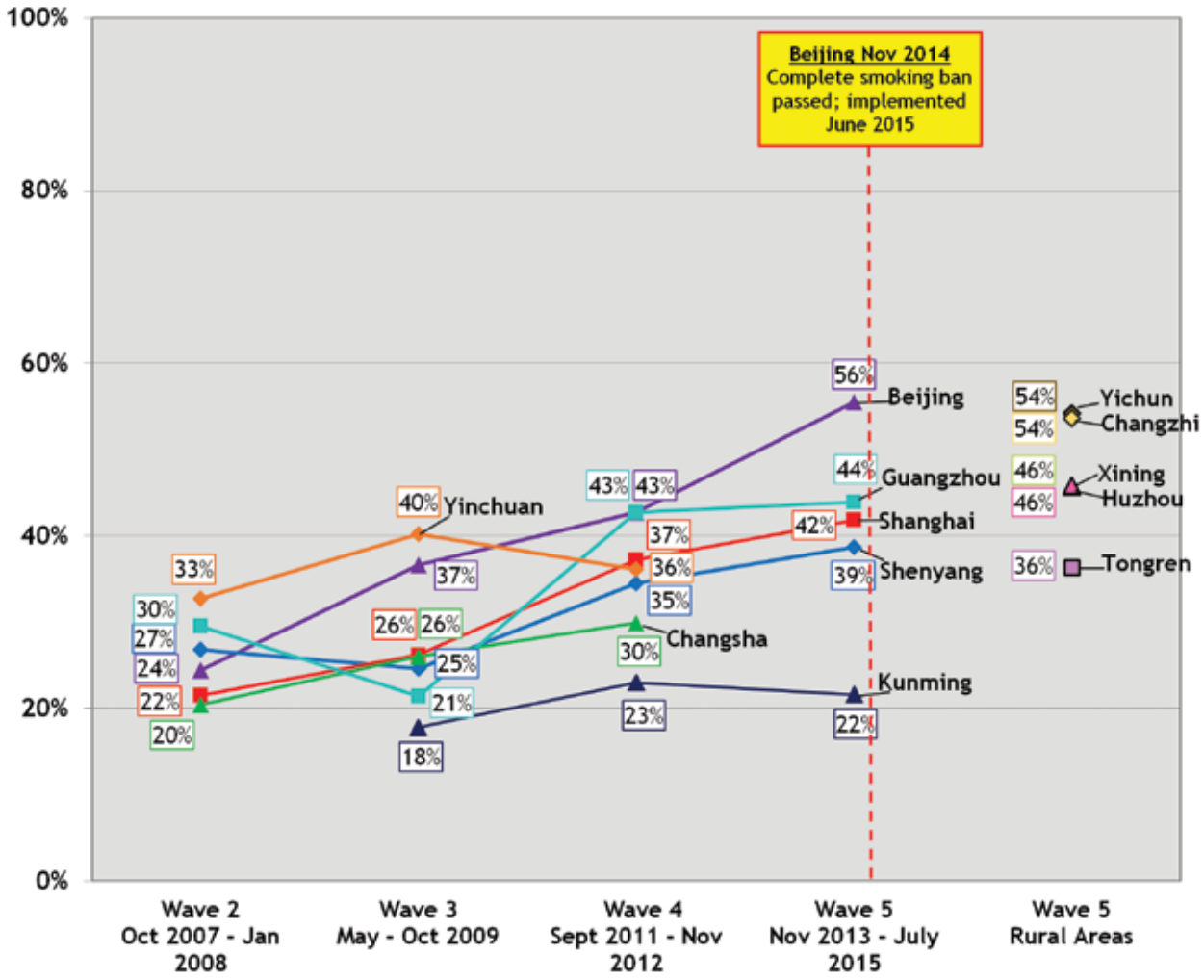
* Designated smoking rooms permitted; designated non-smoking areas in Yinchuan
† Restaurants with 75+ seats or 150+ square metres

The largest increase in support for a complete smoking ban in restaurants was in Beijing between Waves 4 and 5 (from 41% to 70%). These results demonstrate that a growing majority of smokers in China do indeed support complete smoking bans in restaurants. Moreover, the sharp increase in support in Beijing demonstrates that the public – including smokers themselves – was ready for the comprehensive smoke-free law that was announced in November 2014 (and implemented in June 2015). In fact, the levels of support in Beijing and in Shanghai (where a comprehensive smoke-free law was recently adopted in November 2016 and took effect in March 2017) at Wave 5 are higher than the percentage of smokers in Ireland (45%) that supported a complete restaurant ban before Ireland implemented its very successful smoke-free law.[191]

Support for Smoke-Free Bars

Consistent with findings in other ITC countries, support for smoke-free laws in bars is lower than support for smoking bans in other public places. From Waves 2 to 4, less than half of smokers across all cities supported a complete smoking ban in bars (see Figure 32). However, support has increased slightly over time in most cities, with the largest increase observed in Beijing (from 24% of smokers at Wave 2 to 56% at Wave 5). At Wave 5, over half of smokers in three survey locations (Beijing, Yichun, and Changzhi) said they think smoking should not be allowed at all inside bars.

Figure 32. Percentage of smokers who support complete smoking bans in bars, by survey location and wave



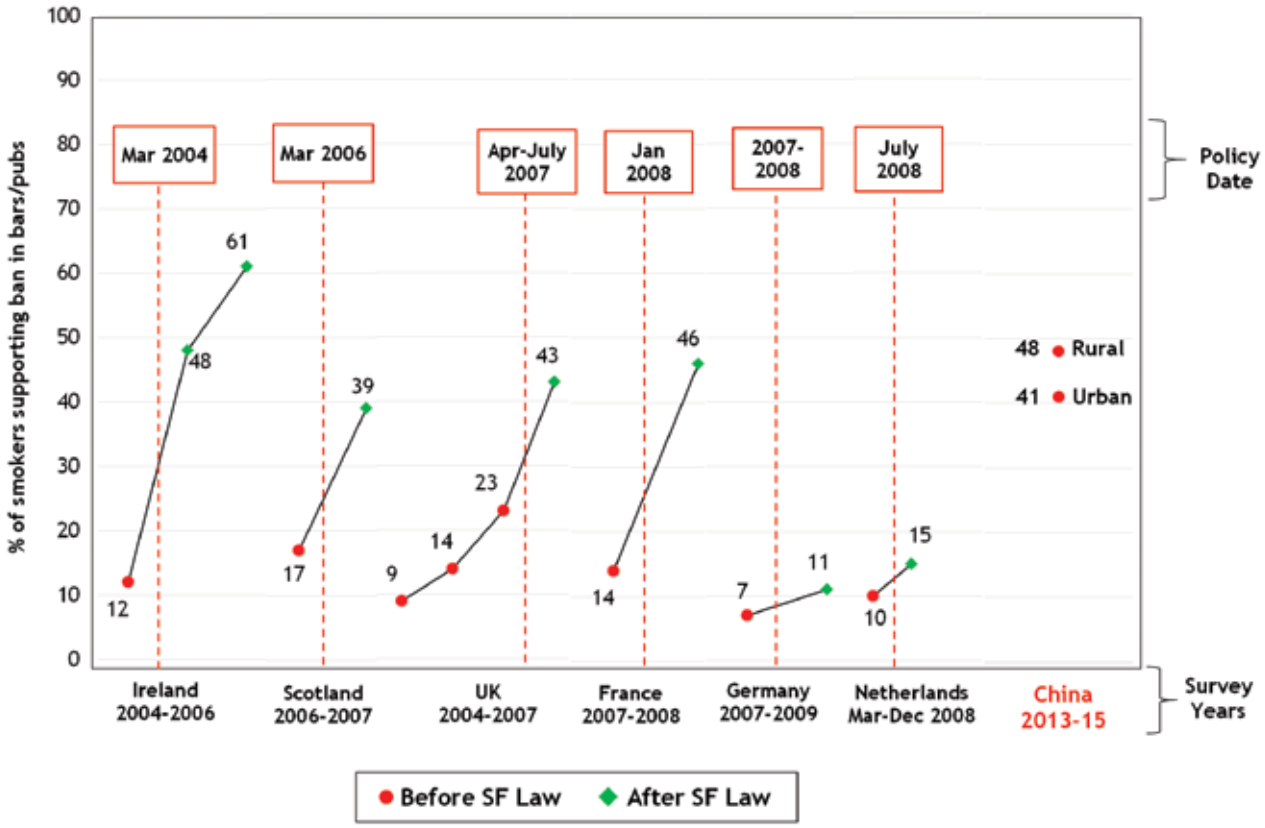
Overall support for a complete smoking ban in bars is much higher among urban and rural Chinese smokers (41% and 48% respectively) than the level of support among smokers in six European countries before their smoke-free laws covering bars were implemented (see Figure 33). For example, only 12% of smokers in Ireland supported a complete smoking ban in bars before their successful 2004 law was implemented.

Support for Other Smoke-Free Public Places

At Wave 5, smokers and non-smokers were asked whether they think smoking should be allowed in a variety of indoor venues and public transportation. Support for complete smoking bans in public places was strong across most venues — over 80% of smokers and non-smokers said smoking should not be allowed indoors in schools, taxis, government buildings, or hospitals. The percentage of both smokers and non-smokers who said that smoking should not be allowed in any indoor areas was highest for schools (90% of smokers, 93% of non-smokers) and lowest for bars (44% of smokers, 53% of non-smokers).

Smokers and non-smokers strongly support a complete ban on smoking in a variety of indoor venues. For example, over 80% of smokers and non-smokers think smoking should not be allowed inside schools, taxis, government buildings, or hospitals.

Figure 33. Percentage of smokers who support complete smoking bans in bars/pubs in China (2013-15) compared to the percentage of smokers who supported smoking bans in bars/ pubs before and after the bans in Ireland (2004), Scotland (2006), UK (2007), France (2008), Germany (2007-08), and the Netherlands (2008)

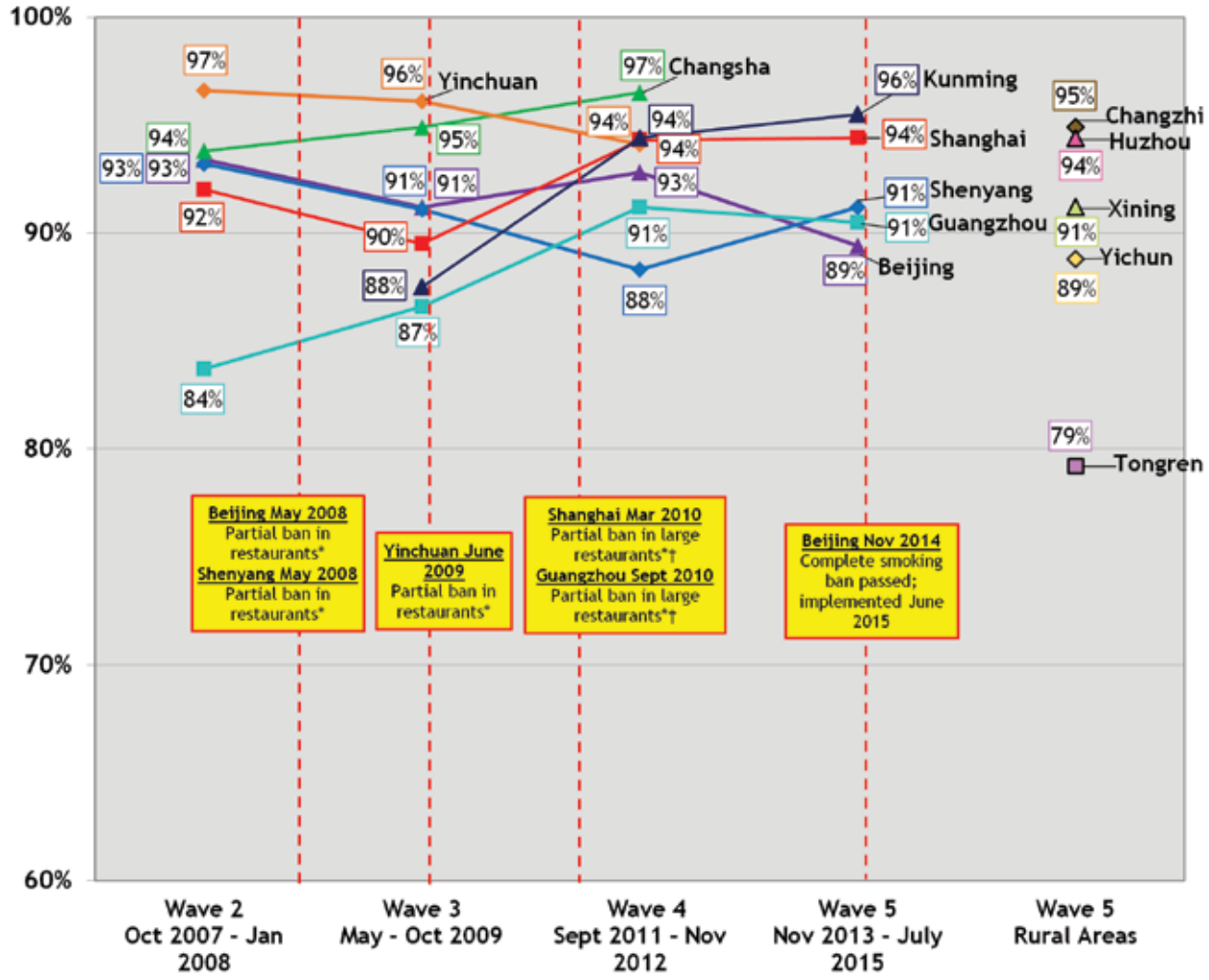


Note: The percentages for China represent the average across the survey locations for rural areas and for urban areas.

Overall Support for Smoke-Free Law

Finally, as a measure of overall support for smoke-free laws, the ITC China Wave 2 to 5 Surveys asked smokers and non-smokers whether they think "a ban on smoking in restaurants and other enclosed public places would be good or bad". A strong majority of respondents across all waves (an average of at least 90% of both smokers and non-smokers at each wave) thought that a smoking ban would be "good" or "very good". At Wave 5, smokers' support for a smoking ban was consistently high across survey locations (at least 89%, except for Tongren at 79%; see Figure 34). Smokers in cities (95%) were significantly more likely than smokers in rural areas (89%) to say that a smoking ban would be good. However, there was no difference in average support between smokers and non-smokers at Wave 5 (92% vs. 93%).

Figure 34. Percentage of smokers who think a ban on smoking in restaurants and other enclosed public places would be "good" or "very good", by survey location and wave



* Designated smoking rooms permitted; designated non-smoking areas in Yinchuan
† Restaurants with 75+ seats or 150+ square metres

Overall, these high levels of support among Chinese smokers for complete smoking bans in public places provide evidence that smokers are ready for a strong national smoke-free law. Public support can be expected to further increase with dedicated efforts to educate the Chinese people on the harms of SHS and on the importance of smoke-free laws to public health.

In 2013-2015, 92% of smokers and 93% of non-smokers reported that a ban on smoking in restaurants and other enclosed public places would be "good" or "very good". These high levels of support suggest that Chinese smokers are ready for a strong national smoke-free law.

HEALTH WARNING LABELS

Article 11 of the FCTC obligates Parties to implement large, visible, rotating health warnings on tobacco product packaging within 3 years of entry into force of the Treaty. Guidelines for the implementation of Article 11, adopted in November 2008, call for warnings that include full-colour pictures covering at least 50% (and no less than 30%) of the top of the front and back (or on all main faces if there are more than two) of the package, in the country's principal language(s).[57]

China has made slow and incomplete progress towards implementing effective health warnings in line with the Article 11 guidelines. Although four rounds of health warnings have been required on cigarette packages between 1992 and 2016, China has still not implemented pictorial warnings.

China's Health Warnings

The evolution of health warnings in China is described below and summarized in Figure 35.

- The Law of the People's Republic of China on Tobacco Monopoly implemented in 1992 specified a small text warning located on the side of the pack only (Round 1).
- In January 2009, text warnings were introduced on the bottom 30% of the front and 30% of the back of the pack and consisted of the same two general messages, but the message on the back appeared in English (Round 2).
- In April 2012, new text warning labels were introduced, however the warnings still did not meet the minimum FCTC requirements and they did not include pictures. The English language text warning on the back of the pack was changed to Chinese, and the font size was increased to twice the size (no less than 4 millimeters (mm) in height) of the previous labels, however the overall label size was the same (Round 3).
- On October 1, 2016, new requirements came into effect that increased the overall size of warnings to 35% of the pack and increased the font size to 4.5 mm, with three new messages (Round 4). However, the warnings are still text-only.

Figure 35. Evolution of China's text warnings (Rounds 1 to 4)

Round 1 Warnings (1992 to 2008)	Round 2 Warnings (Jan 2009 to Mar 2012)	Round 3 Warnings (Apr 2012 to Oct 2016)	Round 4 Warnings (Oct 2016 to present[ix])
			
Text-only on side of pack	Text-only on 30% of front (Chinese) & back (English); font size 2 mm	Text-only on 30% of front & back (Chinese only); font size doubled to 4 mm	Text-only on 35% of front & back (Chinese only); font size increased to 4.5 mm

ix. Round 4 warnings are current as of January 2017

ITC Studies Demonstrate Need for Pictorial Warnings

Tobacco health warnings are a highly visible and low-cost method for communicating the health risks of tobacco use to both smokers and non-smokers. Global evidence from the ITC Project and other studies clearly demonstrates that health warnings are an effective tool to increase awareness of the harms of smoking and reduce tobacco consumption and prevalence.[167, 194] The evidence also shows that effectiveness increases with size and with the inclusion of pictures — large pictorial warnings are more effective than text-only warnings in increasing 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 quit attempts.[165, 195, 196]

ITC Project studies have shown that China's 2009 enhancement of the health warnings (from text on the side of the pack to text on 30% of the front and back of packs) was not effective. An experimental study conducted in 2009 after the revised health warnings were implemented found that the warnings were rated by Chinese smokers and non-smokers as much less effective in motivating smokers to quit and convincing youth not to smoke compared to pictorial warnings from Canada, Singapore, Hong Kong, and the European Union.[54] The study also found that the majority of adult smokers could not translate the English warnings on the back of packs, supporting the FCTC recommendation that warnings should appear in the country's principal language in order to be understood.

ITC evidence also demonstrates the potential impact that pictorial warnings could have in China. Chinese smokers' responses to the Round 2 text warnings were compared with Malaysian smokers' responses to pictorial warnings that were introduced in the same year (see Figure 36). Results showed that the text-only warnings in China had a much lower impact on measures of warning effectiveness than the pictorial warnings in Malaysia, demonstrating the missed opportunity to implement effective health warnings in China.[197]

Figure 36: Malaysia's switch from text-only warnings on side of pack to pictorial warnings in 2009

Round 1 Warnings (1976 to 2009)	Round 2 Warnings (2009 to 2013)
	
Text-only on side of pack	Pictorial warnings on 40% of front & 60% of back

ITC China Survey Measures on Health Warnings

The ITC China Survey includes a broad set of questions to assess the effectiveness of health warnings in place at the time of each survey wave. For example, to measure the **salience** of warning labels, smokers were asked: (1) how often they noticed the warnings over the past month, and (2) whether they had read or looked closely at the warnings (both on 3-point scales: "never", "once in a while", or "often"). To measure **cognitive** responses, smokers were asked to what extent, if at all, warning labels (1) made them think about the health risks of smoking, and (2) made them more likely to quit (both on 3-point scales: "not at all", "a little", or "a lot"). Finally, **behavioural** responses were measured by asking smokers how many times the warnings had stopped them from having a cigarette in the last month ("never", "once", "a few times", or "many times") and whether they made any effort to avoid the warnings in the last month ("yes" or "no").

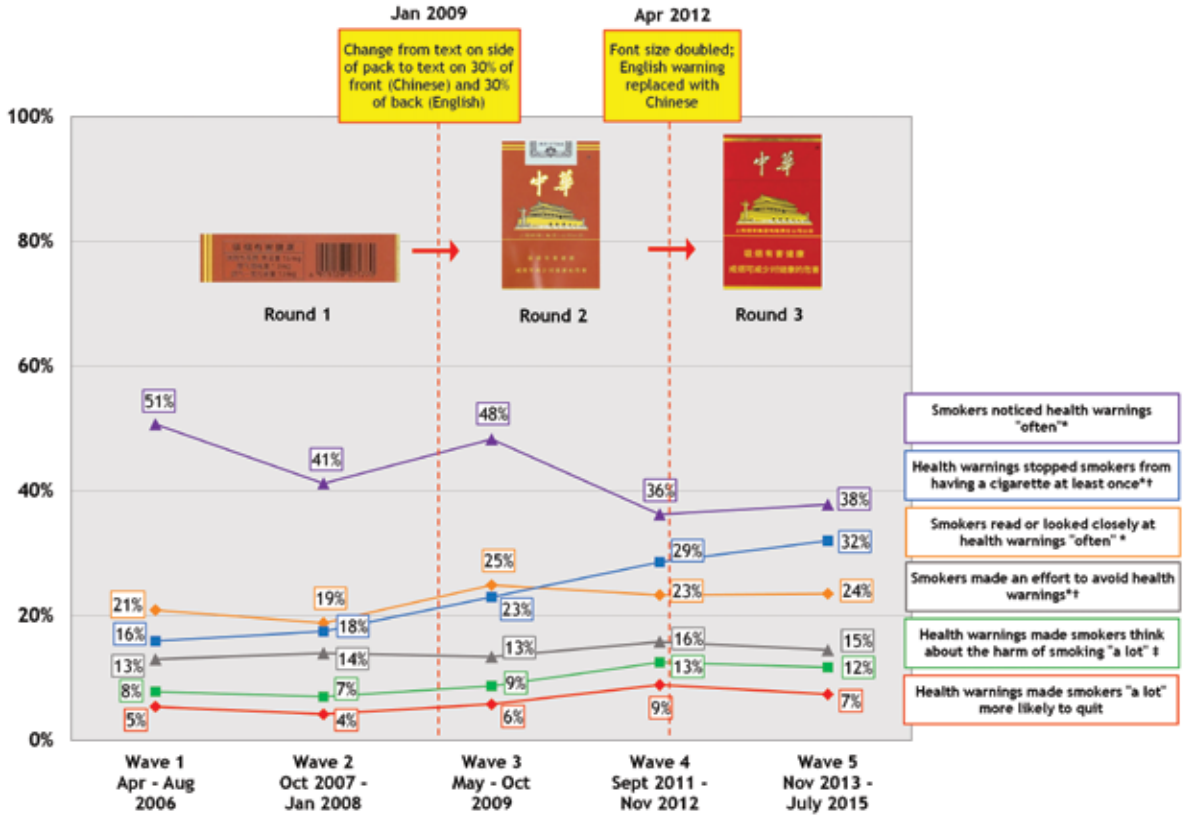
Evidence of Weak Impact of China's Health Warnings from ITC China Wave 1 to 5 Surveys

ITC China Wave 1 to 5 Survey findings demonstrate the weak impact of the text-only warnings that were on the sides of packs (Round 1) and on 30% of the front and back of packs (Rounds 2 and 3). Data from Wave 5 (November 2013 – July 2015) was used to evaluate the minor changes to the warnings that were introduced in April 2012 (Round 3), approximately 7 months before the end of the Wave 4 Survey.[x]

Figure 37 shows the trends in impact of the health warnings on smokers' cognitions and behaviours over time in the ITC China cities (excluding the rural areas that were added at Wave 5). Overall, smokers' awareness of the warnings significantly decreased or stayed the same between Waves 1 and 5, except for a slight increase in awareness after the warnings were changed from being on the side of packs to 30% of the front and back of packs (Round 2) between Waves 2 and 3 — from 41% of smokers to 48% who reported noticing the warnings "often" in the last month. The percentage of smokers who reported reading the warnings closely "often" in the last month also increased significantly from 19% at Wave 2 to 25% at Wave 3. However, after Wave 3, warning salience significantly decreased again from 48% of smokers reporting noticing the warnings "often" to only 36% at Wave 4.

In addition to low salience of the health warnings, less than one-third of smokers in cities across Waves 1 to 5 reported behaviours or cognitions associated with quitting as a result of the warnings (see Figure 37). One encouraging finding was that the percentage of smokers who reported that the warnings stopped them from having a cigarette increased overall from 16% at Wave 1 to 32% at Wave 5. However, for other key measures of health warning impact, there were no significant improvements overall between Wave 1 and Wave 5. Across all survey waves, only 13-16% of smokers said they made an effort to avoid the warnings; 7-13% said the warnings made them think about the harm of smoking "a lot"; and only 4-9% said the warnings made them "a lot" more likely to quit.

Figure 37. Impact of health warnings on smokers' cognitions and behaviours, by wave - cities only



Note: Data shown is for urban cities only (excludes rural areas at Wave 5).
* These questions asked about the last month or last 30 days.
† Only those respondents who said they noticed warnings at least "once in a while" in the last 30 days were asked these questions.
‡ At Wave 1, this question was worded differently ("think about the health risks (health danger) of smoking"). From Waves 2-5, it used the wording "think about the harm of smoking to health".

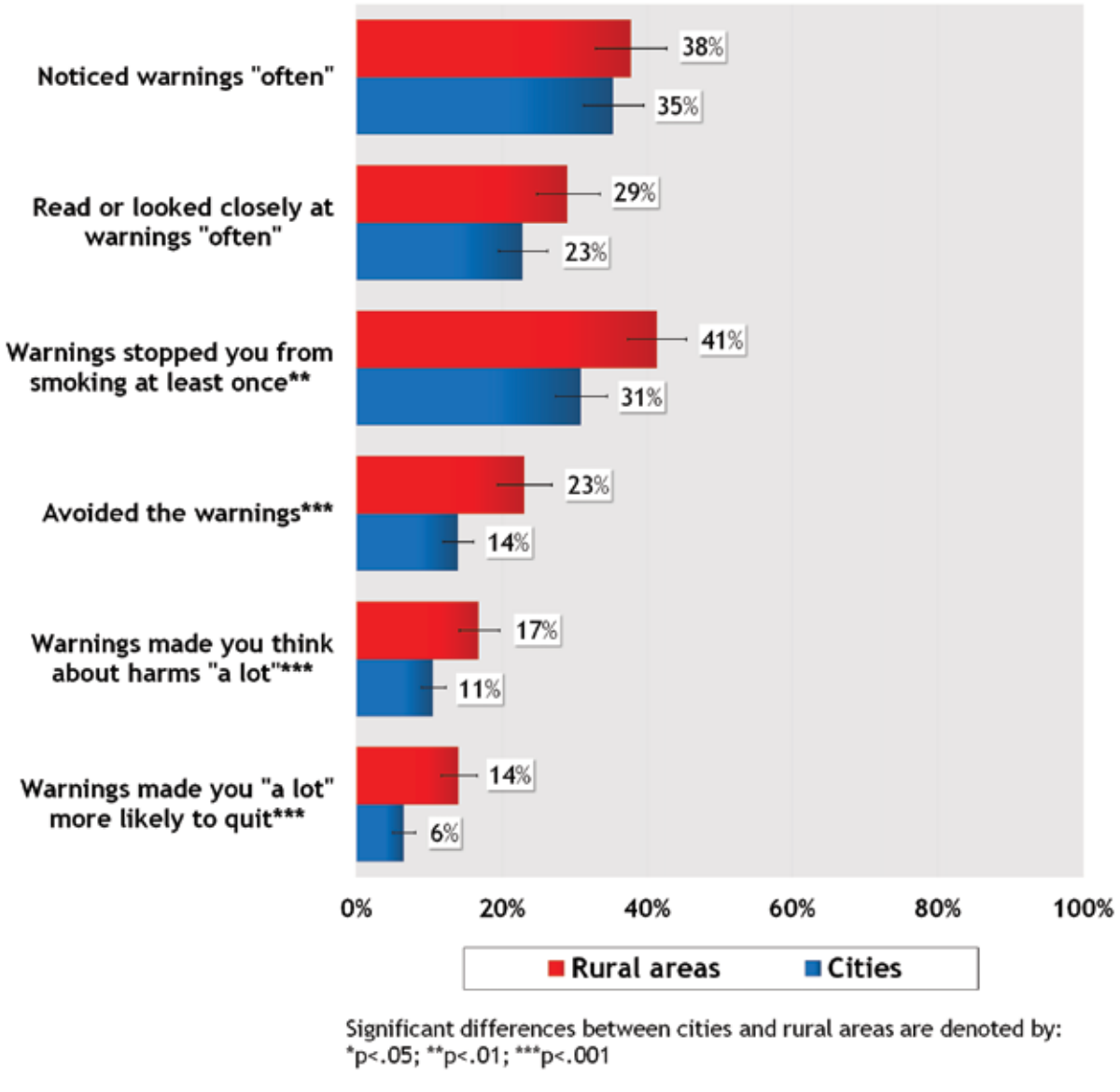
x. Approximately 26% of the smokers in the sample used for the analyses in this chapter were surveyed after April 1, 2012 (i.e. after the changes to the health warnings were introduced). However, these respondents were still included in the analyses as part of the Wave 4 sample. It is likely that the previous health warnings remained on some packs for several months after the new rules took effect; therefore, it is assumed that all Wave 4 respondents referred to the old warnings when answering the survey questions about the health warnings.

The minor changes to China's health warnings that were introduced in April 2012 (Round 3; increased the font size and replaced the English warning on the back with Chinese) did not improve the effectiveness of the warnings. Between Waves 4 and 5, after the new warnings were implemented, there were no significant changes in any of the measures of warning impact (see Figure 37).

Urban-Rural Differences in Warning Impact

The addition of five rural areas to the Wave 5 Survey allows for comparisons of the effectiveness of health warnings in urban versus rural areas in China. As shown in Figure 38, there was no significant difference in warning label salience (noticing and reading) between the cities and rural areas surveyed at Wave 5. However, the warnings had a greater impact on smokers' cognitions and behaviours in rural areas than in cities. Overall at Wave 5, smokers in rural areas were significantly more likely to avoid the warnings (23% vs. 14%), to report that warnings stopped them from having a cigarette (41% vs. 31%), made them think about the harms "a lot" (17% vs. 11%), and made them "a lot" more likely to quit (14% vs. 6%) than smokers in cities.

Figure 38. Impact of health warnings on smokers in cities versus rural areas at Wave 5



Significant differences between cities and rural areas are denoted by:
*p<.05; **p<.01; ***p<.001

The finding that the Chinese warnings had greater cognitive and behavioural impact in rural areas, where access to health care resources and education is less available, is consistent with other research on the effects of health warnings by socioeconomic status (SES). While studies examining the impact of health warnings across different subpopulations are limited, evidence suggests that warnings have a greater impact on smokers of lower SES. For example, an ITC Project study comparing the impact of text warnings in four European countries found higher scores on an overall measure of label impact among respondents with lower income and low to moderate education.[198] An experimental study in Mexico also found that smokers with lower education rated pictorial warnings as more effective compared to those with high education.[199]

The greater impact of the health warnings among rural smokers is also consistent with the ITC China Wave 5 findings on awareness of the harms of smoking (see Education, Communication, and Public Awareness chapter), which showed that rural smokers were less likely to be aware of the specific health effects of smoking than smokers in cities.

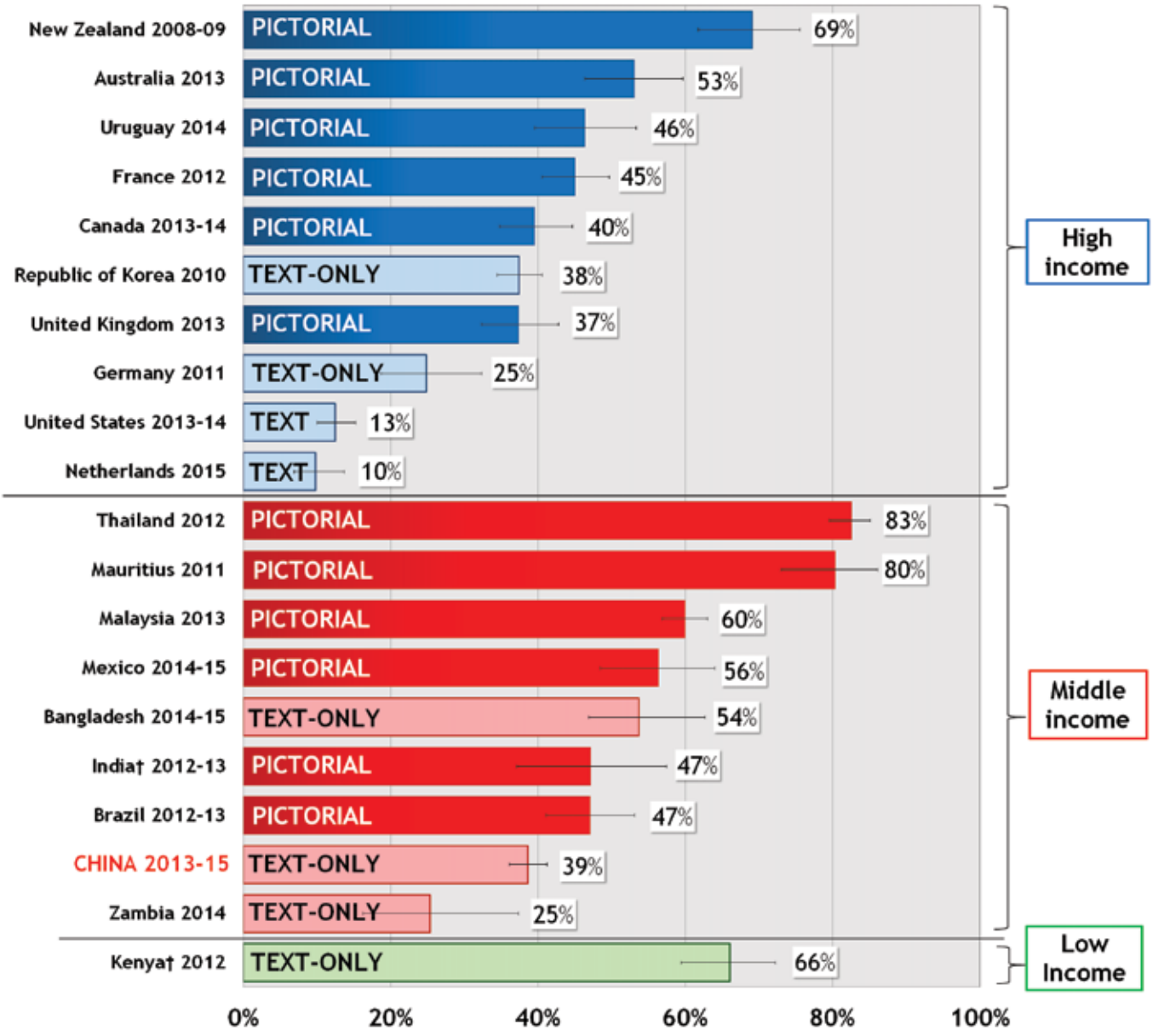
Research has shown that health warnings are not only a particularly important and effective communication method for improving awareness of the harms of tobacco use, but also for reaching those with lower SES, due to their broad reach. In addition, pictorial warnings may help to reduce disparities in health warning impact across SES levels more than text-only warnings, which require adequate literacy skills in order to be read and understood.[199, 200] Therefore, if China were to introduce pictorial warnings, we would likely see increases in effectiveness across all income and education levels, especially in rural areas.

Cross-Country Differences

The weak impact of China's text-only health warnings is shown in comparisons with other ITC countries, where the same measures of warning label effectiveness have been used. Overall, only 39% of male smokers in China in 2013-15 said they noticed health warnings "often" in the last month – the second lowest percentage among 10 ITC LMICs (see Figure 39). In contrast, the percentage of male smokers who noticed warnings "often" or "very often" was higher in all countries with pictorial warnings in place at the time of the survey (except United Kingdom at 37%, where pictorial warnings are on the back of packs only).

It should also be noted that high levels of awareness of text warnings are not necessarily associated with other measures of warning effectiveness. For example, in Kenya (where text warnings cover 30% of the front and 50% of the back of packs), two-thirds of smokers reported noticing the warnings "often" or "whenever I smoke" (see Figure 39). However, ITC data has shown that smokers in Kenya have low levels of knowledge of the harms of smoking compared to other countries, and that the majority of smokers want more health information on packs.[96] In addition, a lower percentage of Kenyan smokers reported avoiding the text warnings (13%) or that the warnings stopped them from smoking (20%) compared to Chinese smokers.[96]

Figure 39. Percentage of male smokers who "often" or "very often" noticed warning labels, by country

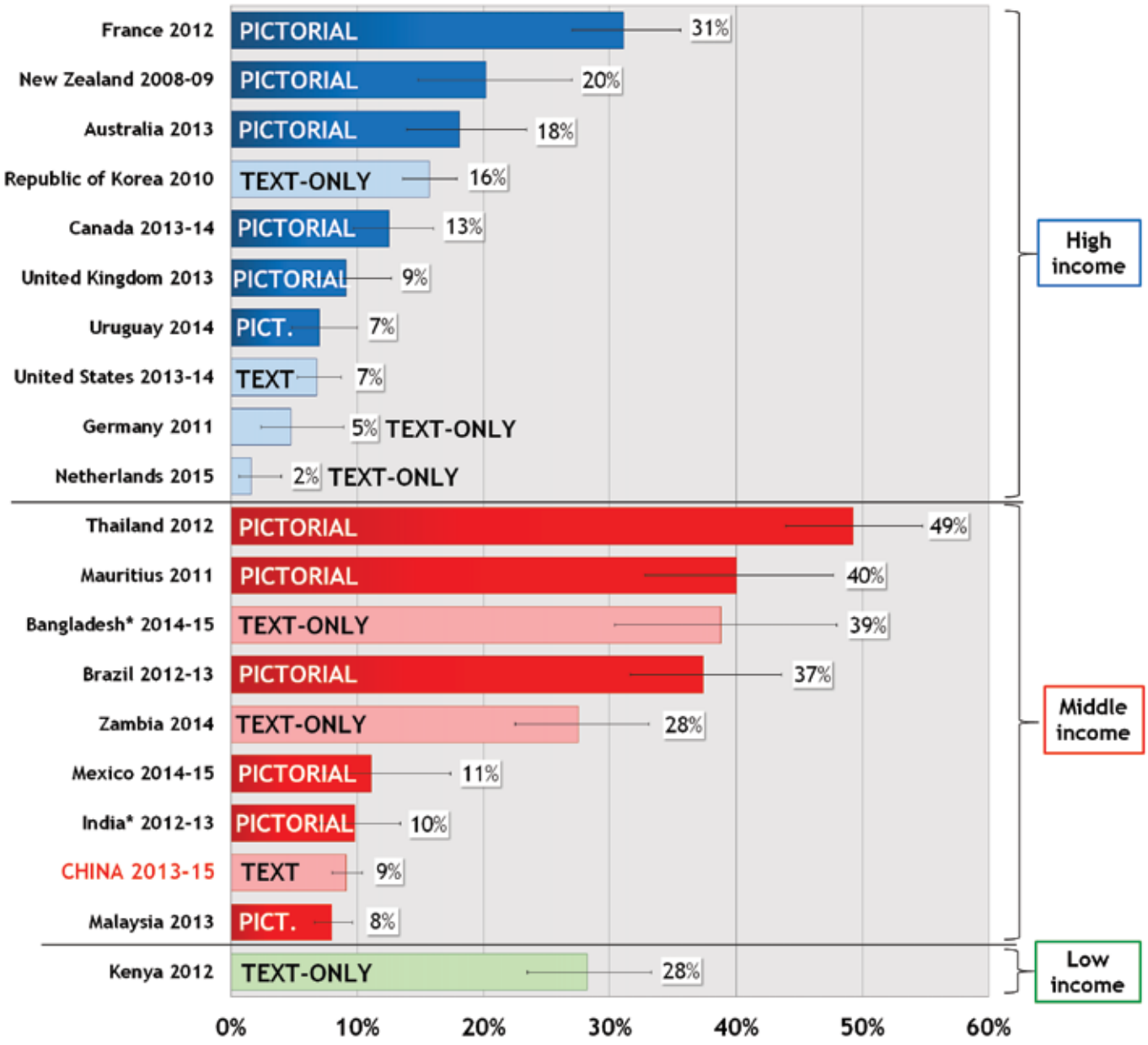


† In India and Kenya, there was an extra filter that asked "As far as you know, do any smoked tobacco/cigarette packages in India/Kenya have warning labels?". If the respondent answered "no" then noticing warning labels was set to "never".

Results shown are for responses of "often" or "very often" except for the following: In Zambia, results are for responses of "often" or "regularly". In India and Kenya, results are for "often" or "whenever I smoke". In China, results are for "often" only as there was no "very often" option.

In addition, only 9% of male smokers in China at Wave 5 said that the warnings led them to think about the health risks of smoking "a lot" – the sixth lowest percentage of 20 ITC countries (see Figure 40). In comparison, countries that have implemented large pictorial warnings, such as Thailand (55% of the front and back at the time of the survey), Mauritius (60% of the front, 70% of the back), and Brazil (100% of the back), had among the highest percentages of smokers who said warnings made them think about the health risks.

Figure 40. Percentage of male smokers who reported that warning labels on cigarette packages made them think about the health risks of smoking "a lot", by country



* The ITC India and Bangladesh Surveys asked the comparable question about smoked tobacco in general rather than cigarettes.

Overall, these findings show that the current health warnings in China have not been effective in promoting awareness of the harms of smoking or motivating smokers to quit.

Emotional Responses to Health Warnings

The ITC China Survey also included several questions to measure emotional responses to the health warnings. Research evidence suggests that health warnings are more effective when they include emotionally engaging imagery or elicit strong emotional reactions, such as images of human suffering due to smoking or of diseased organs.[165, 200]

Figure 41. Examples of emotionally arousing warning labels in Uruguay (2012-2013; 80% of front and back) and Mauritius (2009-present; 60% of front, 70% of back)

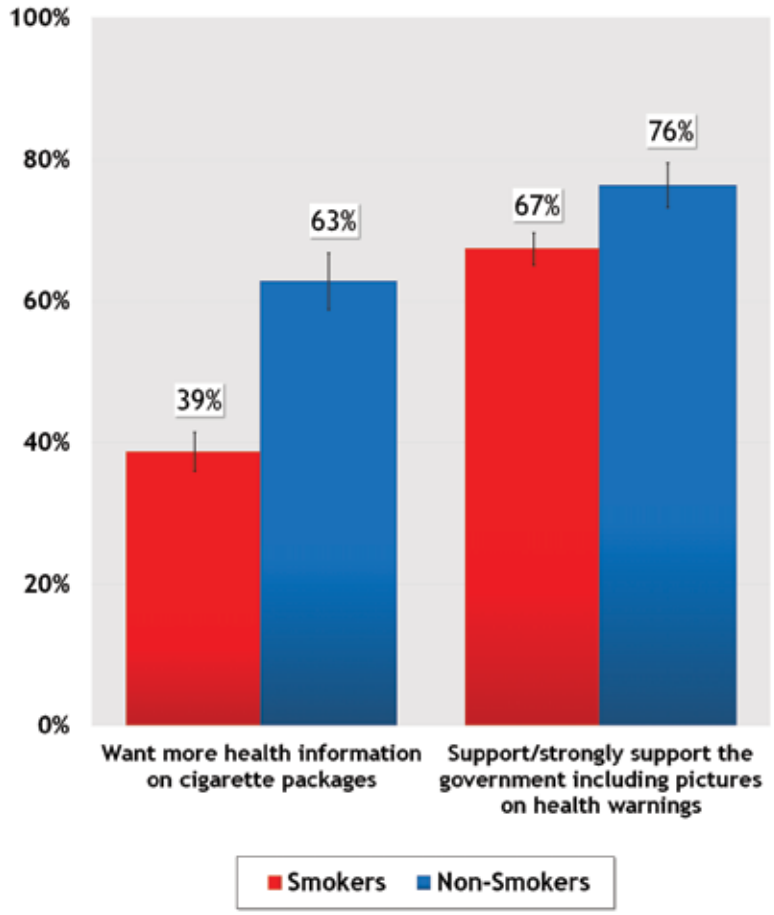
The ITC China Wave 5 Survey results indicate that the text-only warnings in China do not arouse strong emotional responses from smokers – another sign of the weak impact of the warnings. The majority of smokers responded that the warnings had little to no emotional impact. For example, on a scale from "very alarmed" to "very calm", most smokers (43%) said the warnings made them feel "neither alarmed nor calm". Similarly, over two-thirds of smokers (68%) said the warnings made them feel "neither pleasant nor unpleasant". On a 5-point scale from "not at all" to "extremely" scared, the majority (53%) said the warnings made them feel "not at all" scared. Less than 10% of smokers said that the warnings made them feel "very" or "extremely" scared (9%), "very" alarmed (8%), or "very" unpleasant (4%).

At Wave 5, smokers were also asked how believable they thought the warnings are, on a 5-point scale from "not at all" to "extremely" believable. Only 17% of smokers said the warnings were "extremely" believable, while about one-third (35%) said they were only "a little" or "not at all" believable. In contrast, the percentage of smokers in Mauritius who thought the new pictorial warnings introduced in 2009 (see Figure 41) were "extremely" or "very" realistic was much higher (62%).[201] The Mauritius warnings were still perceived as realistic despite evoking strong negative emotional responses from smokers, such as alarm and unpleasant feelings.

Support for Enhanced Health Warnings

The Wave 2 to 5 Surveys asked smokers and non-smokers whether they think cigarette packages should have more, less, or the same amount of health information as they do now. Overall, more than one-third of smokers in the ITC China cities said they think there should be more health information on packs, with little change in support between 2007 and 2015 (38% at Wave 2, 41% at Wave 3, 40% at Wave 4, and 38% at Wave 5). The level of support for more health information on health warnings was similar in the rural areas at Wave 5, where an average of 42% of smokers said they think cigarette packages should have more health information. As shown in Figure 42, overall, support for more health information was higher among non-smokers at Wave 5 (63%) compared to smokers (39%; excluding quitters).

Figure 42. Percentage of smokers and non-smokers who support enhanced health warnings at Wave 5



The Wave 5 Survey also asked smokers and non-smokers whether they would support or oppose the government including pictures as part of the health warning on cigarette packs. The majority of respondents were in favour of pictorial health warnings in China – 76% of non-smokers and 67% of smokers said they would "support" or "strongly support" the government including pictures as part of health warnings at Wave 5 (see Figure 42). This is consistent with previous studies showing that Chinese smokers believe pictorial warnings are more effective in both motivating smokers to quit and preventing youth from starting smoking.[54]

There is strong support among smokers and non-smokers for pictorial warnings on cigarette packs - 67% of smokers and 76% non-smokers said they would "support" or "strongly support" the government including pictures as part of health warnings.

EDUCATION, COMMUNICATION, AND PUBLIC AWARENESS

Article 12 of the FCTC obligates Parties to 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.

Until recently, there were few national level education campaigns to increase public awareness on the dangers of smoking 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 "Sponge" campaign (a graphic depiction of the damage that smoking does to your lungs) and the "Giving cigarettes is giving harm" campaign in 11 cities (designed to raise awareness of the negative health impact of gifting cigarettes). Media campaigns have also been used to increase awareness of new tobacco control laws in China, such as Beijing's 2015 smoke-free law. In addition, government campaigns promoting a smoke-free lifestyle were held in May 2015 to observe World No Tobacco Day. Support is now growing among the population and government for stronger tobacco control initiatives, including educational campaigns and efforts to change social norms around smoking in China.

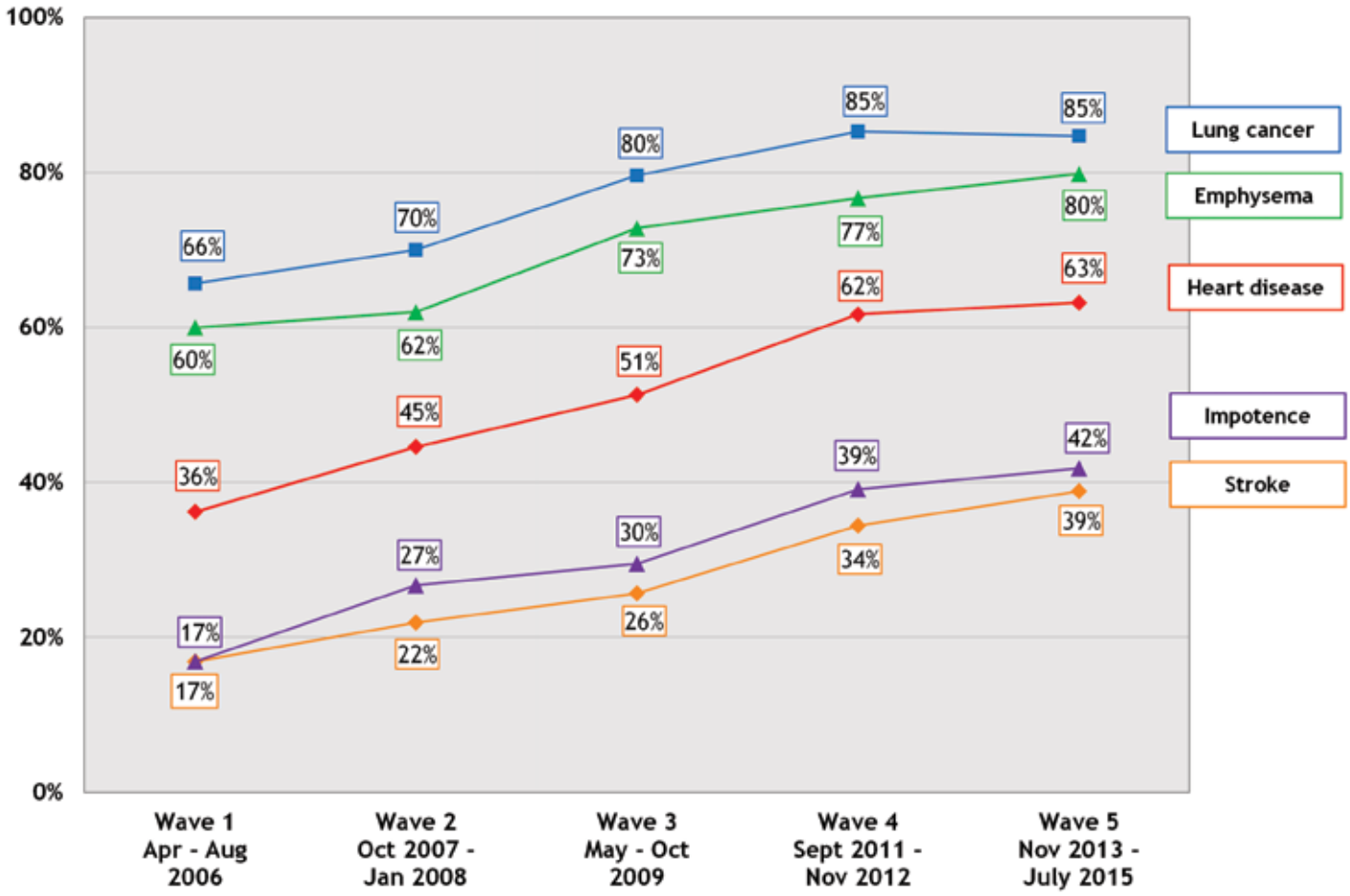
The ITC China Survey assesses smokers' awareness of advertising or information on the dangers of smoking and the benefits of quitting, identifies the main sources of this information, and the perceived impact of this information on smokers. The Survey also evaluates public awareness of the various harms caused by tobacco use and SHS and opinions about the practice of gifting cigarettes.

Knowledge of the Harms of Smoking

To measure knowledge of the harms of smoking, the ITC China Survey asked smokers and non-smokers whether they were aware of a range of health effects associated with smoking and SHS. Awareness of health risks has been shown to be strongly associated with smoking and quitting behaviour, including intentions to quit, in both China and Western countries.[202, 203] The findings suggest that knowledge and awareness of the harms of smoking have increased among Chinese smokers from Wave 1 to 5; however, Chinese smokers are still less likely to be aware of specific harms of smoking to human health compared to smokers in other ITC countries, especially for stroke and heart disease – both leading causes of death in China.[204] These knowledge gaps are not surprising given the absence in China of sustained mass media campaigns and large pictorial health warnings highlighting the specific health risks of smoking, which have been shown to increase awareness among smokers of the harms of tobacco use.[202]

Figure 43 shows that awareness of five specific smoking-related health effects increased among smokers in the ITC China cities from Waves 1 to 5. Smokers were consistently most likely to be aware that smoking causes respiratory diseases such as lung cancer and emphysema across all waves - awareness was highest for lung cancer, increasing from 66% of smokers at Wave 1 to 85% at Wave 5. Awareness that smoking causes emphysema increased from 60% of smokers at Wave 1 to 80% at Wave 5. Smokers' awareness that smoking causes heart disease also increased from about one-third (36%) at Wave 1 to almost two-thirds by Wave 5 (63%). However, given that smoking kills more people from heart disease than from cancer, the fact that over one-third of smokers are still unaware that smoking causes heart disease indicates the need to further improve smokers' knowledge of specific health risks.

Figure 43. Percentage of smokers† who believe smoking causes various health effects, by wave - cities only



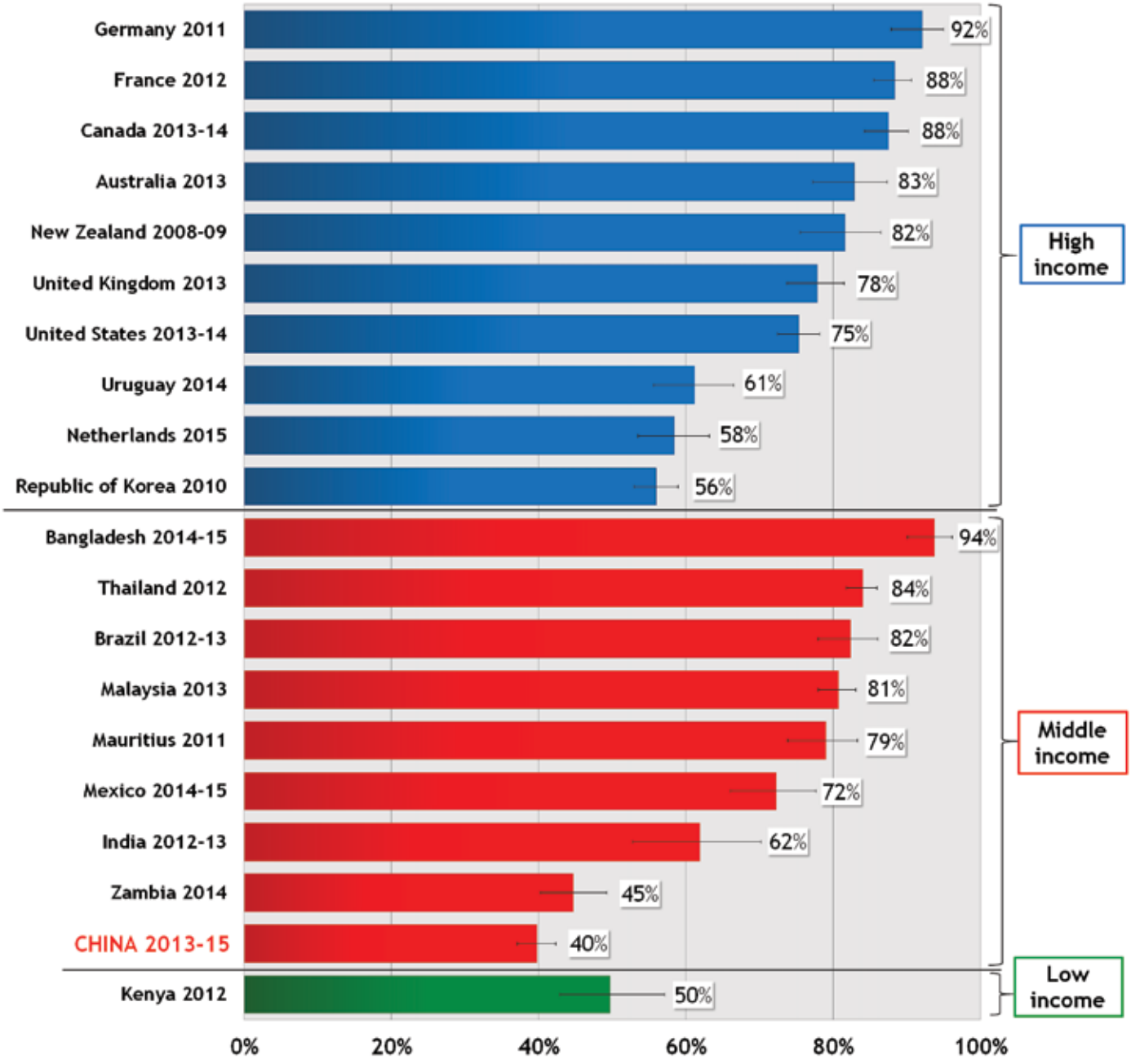
† Note: Data shown is for smokers in cities only (excludes smokers in rural areas at Wave 5).

Large knowledge gaps were also found for impotence and stroke — although knowledge improved over time, less than half of smokers at each wave believed that smoking causes impotence (ranging from 17% at Wave 1 to 42% at Wave 5) or stroke (from 17% at Wave 1 to 39% at Wave 5).

These knowledge gaps were also evident in ITC cross-country comparison data, which shows that China has the lowest percentage of male smokers and quitters (40%) who believe that smoking causes stroke among 20 ITC countries (see Figure 44).

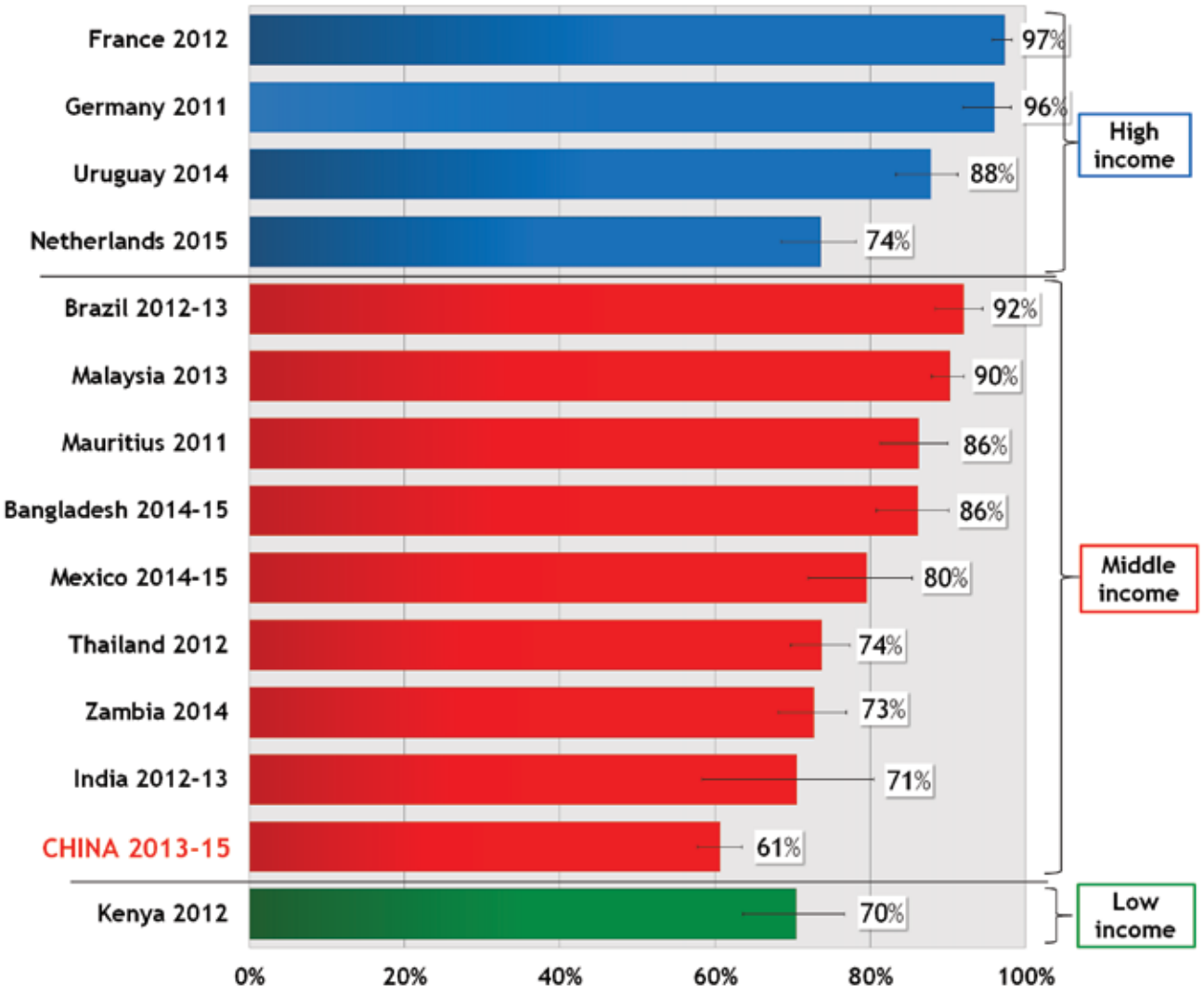
Knowledge of smoking-related health effects has generally increased among Chinese smokers between 2006-2015. However, ITC cross-country comparisons demonstrate that China has the lowest percentage of male smokers and quitters who are aware that smoking causes stroke and heart disease - leading causes of death in China.

Figure 44. Percentage of male smokers and quitters who believe that smoking causes stroke, by country



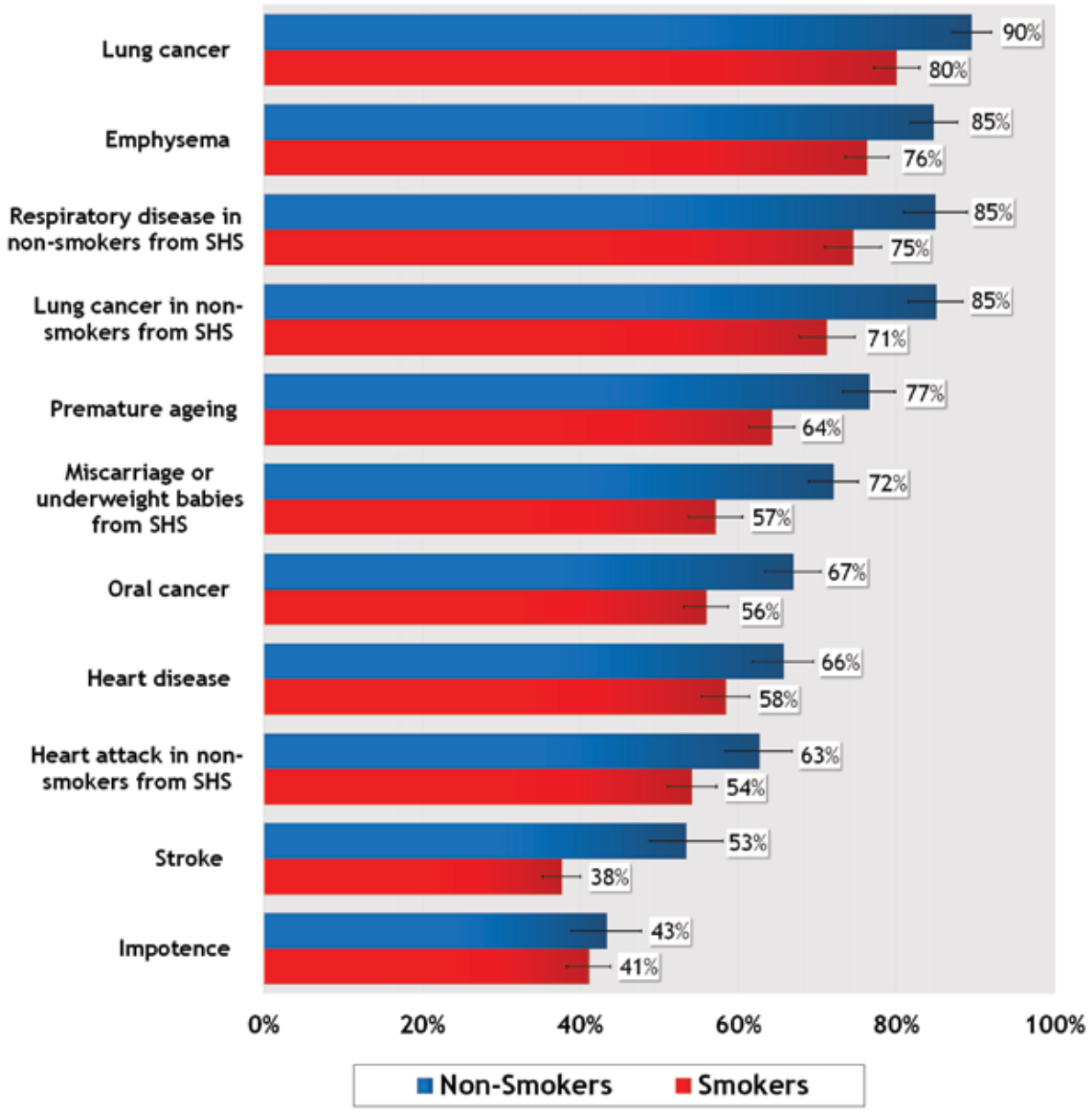
Similarly, China also has the lowest percentage of male smokers and quitters (61%) who believe that smoking causes heart disease among 14 ITC countries (see Figure 45).

Figure 45. Percentage of male smokers and quitters who believe that smoking causes heart disease, by country



Overall, awareness of the harms of smoking at Wave 5 was higher among non-smokers than smokers (see Figure 46). This finding is consistent with studies from other countries showing that smokers are not fully informed about the risks of smoking, and that they tend to underestimate their own personal risk from smoking.[202, 205] However, both smokers and non-smokers in China were surprisingly similar in terms of which specific health effects they were most and least informed about. They were most likely to believe that smoking causes lung cancer (90% of non-smokers, 80% of smokers) and emphysema (85% of non-smokers, 76% of smokers), and the least likely to believe that smoking causes stroke (53% of non-smokers, 38% of smokers) and impotence (43% of non-smokers, 41% of smokers). These findings suggest a lack of awareness among the Chinese public of the broad range of serious health risks caused by smoking.

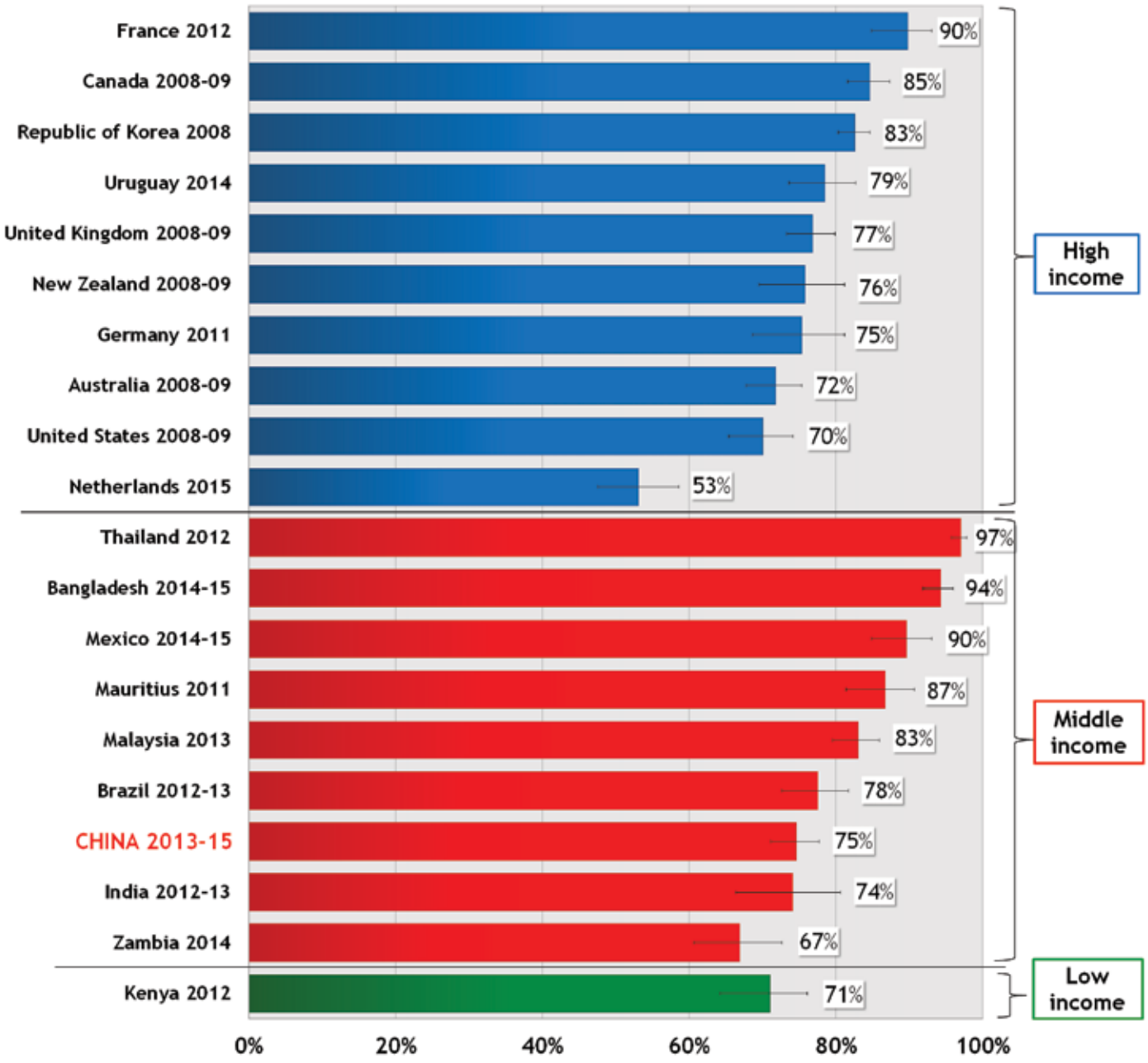
Figure 46. Percentage of smokers and non-smokers who believe that smoking causes various health effects at Wave 5



The gaps in knowledge among Chinese smokers and non-smokers for certain health effects are also consistent with ITC research from HICs, where the strong majority of smokers know that smoking causes lung cancer, but fewer smokers are aware of other health effects associated with smoking, including other forms of cancer, impotence in males, and diseases in non-smokers caused by exposure to SHS.[202]

For example, ITC cross-country comparisons show that awareness that SHS causes lung cancer in non-smokers varies across countries – with a low of 53% of smokers in the Netherlands (see Figure 47). Chinese smokers' awareness that SHS causes lung cancer in non-smokers (75%) is the fourth-lowest percentage among 10 ITC LMICs.

Figure 47. Percentage of male smokers and quitters who believe that secondhand smoke causes lung cancer in non-smokers, by country

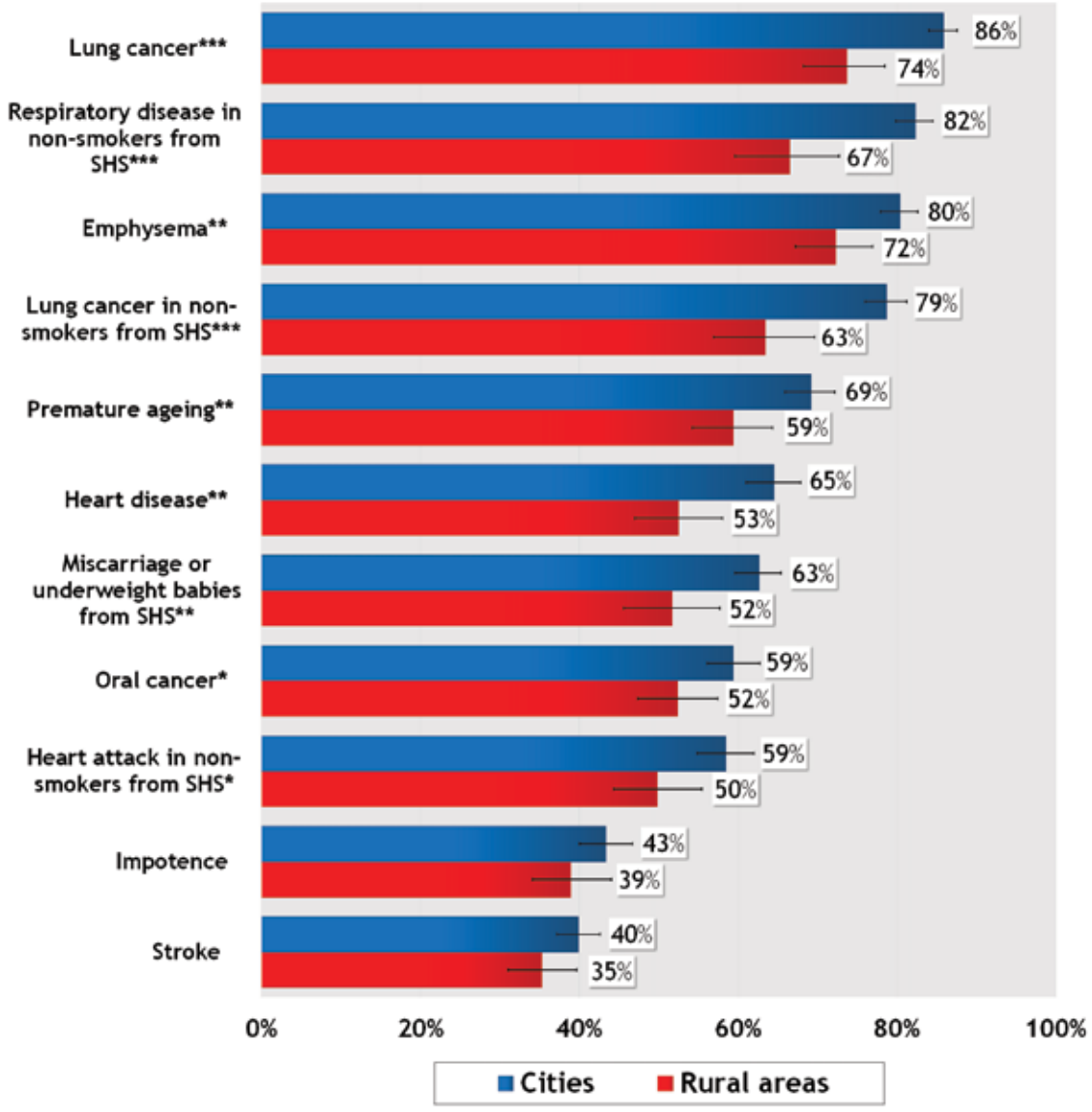


Urban-Rural Differences in Knowledge

Awareness of specific health effects at Wave 5 was also compared among urban versus rural smokers. There is little research examining urban-rural differences in knowledge of the harms of smoking; however, lower levels of awareness in rural areas in China would not be unexpected as resources for health care and educational initiatives are more limited. Previous ITC studies have shown that smokers with higher levels of education and income have greater awareness of smoking-related harms,[206] and data from the ITC India Survey has also found that smokers in urban areas have higher levels of health knowledge than smokers in rural areas.[207]

As shown in Figure 48, awareness of smoking-related harms at Wave 5 was significantly higher in cities than in rural areas for each of the 11 health effects (although the difference was not significant for impotence and stroke, where awareness was low among smokers in all survey locations). For example, 86% of smokers in cities believed that smoking causes lung cancer compared to 74% of smokers in rural areas.

Figure 48. Percentage of smokers in cities versus rural areas who believe that smoking causes various health effects at Wave 5



Significant differences between cities and rural areas are denoted by:
*p<.05; **p<.01; ***p<.001

Thoughts about the Harm of Smoking

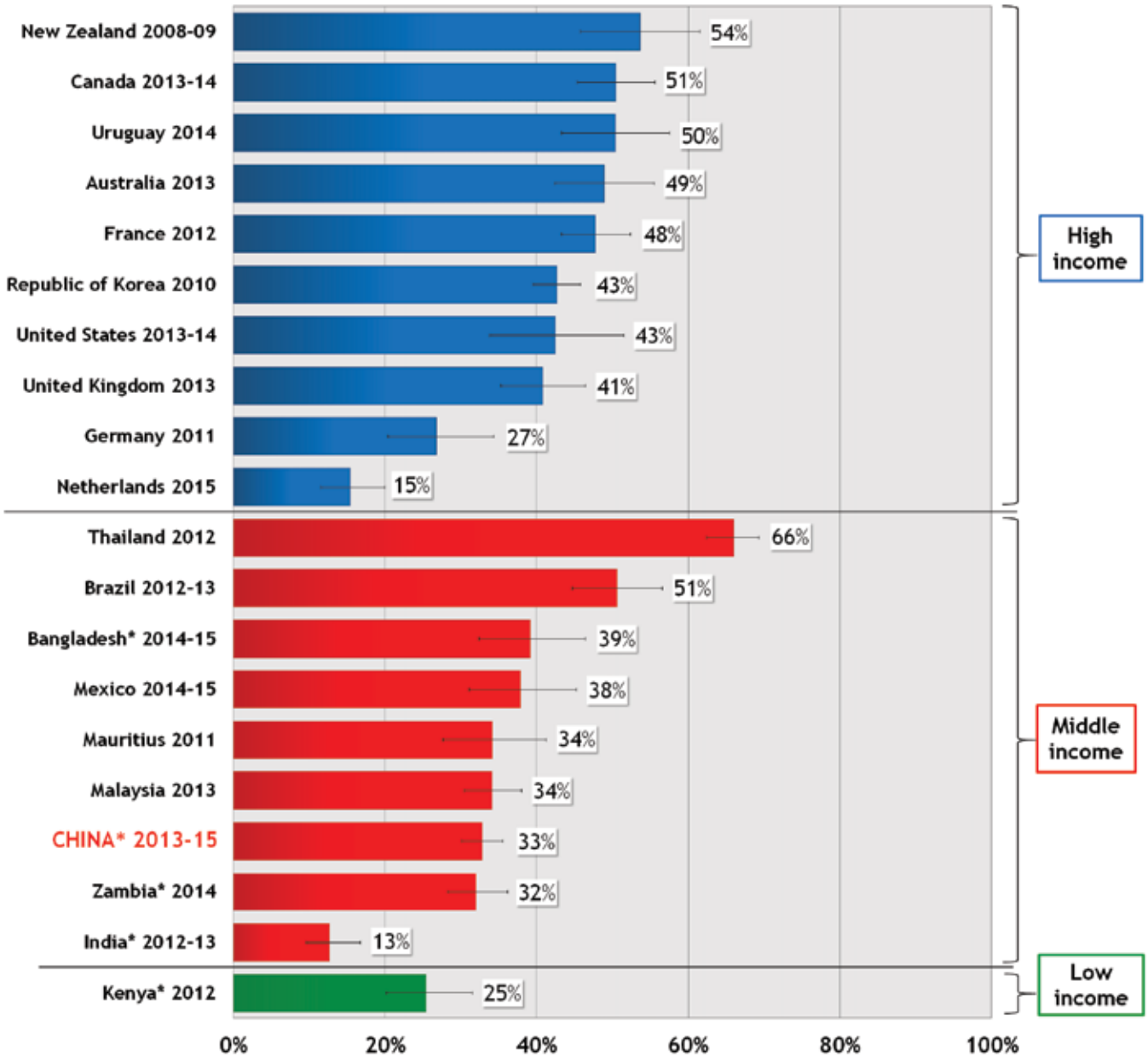
Thinking about the harms of smoking is an important predictor of quitting behaviour. ITC Project research from four HICs (US, UK, Australia, and Canada) has shown that concern for one's personal health is consistently the most frequently endorsed reason for thinking about quitting among smokers, and is strongly associated with making an actual quit attempt.[208]

The ITC China Wave 5 Survey findings indicate that in general, the majority of Chinese smokers do not frequently think about the harms of smoking to themselves or to other people caused by exposure to their tobacco smoke.

Only one-third of smokers (33%) said that in the last month, they "often" thought that smoking might harm their health, with no significant difference between smokers in cities versus rural areas. Similarly, only 36% of smokers said they "often" thought about how smoking might harm others' health in the last month, with a higher percentage among smokers in cities (40%) compared to rural smokers (32%).

Given the importance of thinking about the harms of smoking for quitting behaviour, these findings suggest that Chinese smokers will be less inclined to think about quitting than smokers in other countries. ITC cross-country comparisons show that among 20 ITC countries, China has the sixth lowest percentage of male smokers (33%) who "often" thought about the harm their smoking might be doing to them in the last month (see Figure 49). In Thailand, where strong tobacco control measures have been implemented, including large graphic health warnings (60% front and back at the time of the survey), the percentage of smokers who often thought about the harms (66%) was twice as high as in China.

Figure 49. Percentage of male smokers who thought "often" or "very often" about the harm their smoking might be doing to them in the last month, by country



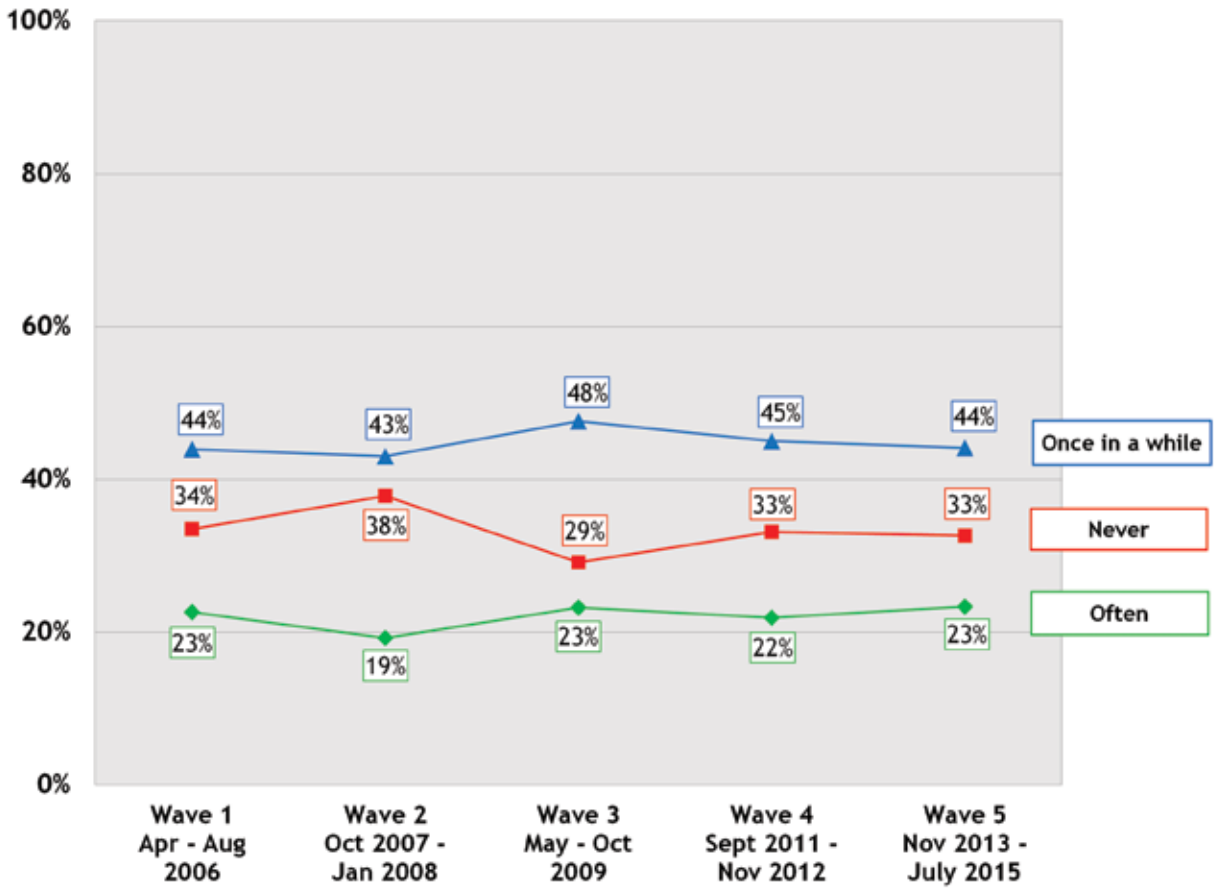
* In these countries, response options did not include "very often" so results are shown for "often" only.

Exposure to Anti-Tobacco Messages

In general, the ITC China Wave 1 to 5 Survey findings indicate that Chinese smokers do not frequently notice anti-smoking information or advertising. At Wave 5, 37% of all smokers (smokers in cities and rural areas) said they "never" noticed advertising or information that talks about the dangers of smoking or encourages quitting in the last 6 months; while 43% said they noticed such information "once in a while" and only 20% said they noticed it "often" in the last 6 months. Smokers in rural areas were significantly more likely to report "never" noticing anti-tobacco information in the last 6 months compared to smokers in cities (43% vs. 31%).

Figure 50 shows that among smokers in the ITC China cities, the percentage who "often" noticed anti-smoking information did not change much over the five waves, ranging from 19%-23%. However, there was a significant increase in the percentage of smokers in cities who noticed information "often" or "once in a while" between Waves 2 and 3, along with a decrease in the percentage who said they "never" noticed such information. This time period coincides with the introduction of mass media campaigns, such as subnational campaigns around the smoke-free Olympics in 2008 and the "Giving cigarettes is giving harm" campaign in 2009. Therefore, these findings suggest that further increases in awareness of anti-smoking information could be achieved if more mass media campaigns were introduced in China.

Figure 50. Percentage of smokers† who noticed anti-smoking advertising or information "often", "once in a while", or "never" in the last 6 months, by wave - cities only



† Results shown are among respondents in cities only (excluding those in rural areas)

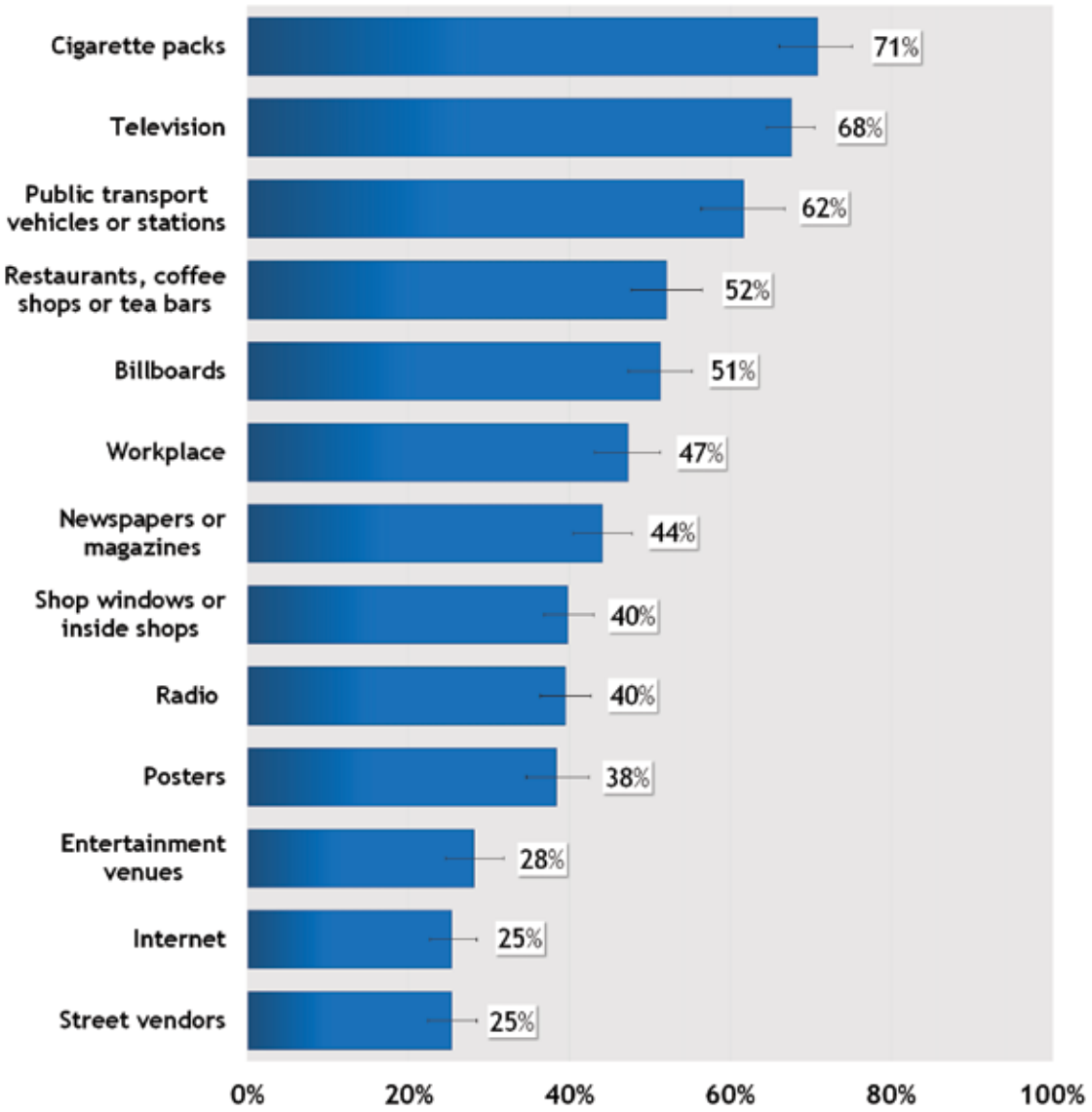
The Wave 3 to 5 Surveys also asked smokers more specifically whether they had seen advertising or information that talks about the harmfulness of SHS or encourages not smoking in public places in the last 6 months. Less than half of smokers at Wave 5 (43%) said they had seen this type of anti-smoking advertising – a decrease from previous waves (57% at Wave 3 and 53% at Wave 4).

Overall, these findings demonstrate that exposure to anti-tobacco information and campaigns remains low in China and has only improved slightly since China became a Party to the FCTC in 2006. Given the importance of media communications in shaping tobacco-related knowledge, opinions, and behaviours, there is a strong need for greater efforts to expand and strengthen anti-tobacco educational programs and mass media campaigns.[66]

Sources of Anti-Tobacco Information

Smokers were also asked whether they noticed anti-tobacco advertising in specific places in the last 6 months. As shown in Figure 51, the most commonly reported information sources at Wave 5 were cigarette packs (71% of smokers at Wave 5), television (68%), and public transportation vehicles or stations (62%). The Internet (25%) and around street vendors (25%) were the least common sources for noticing anti-tobacco information.

Figure 51. Percentage of smokers who noticed anti-tobacco advertising or information in various places in the last 6 months, at Wave 5



The percentage of smokers who reported noticing anti-smoking information on cigarette packs increased sharply between Waves 1 and 3 (from 47% to 78%), after the introduction of text-only warnings on 30% of the front and back of cigarette packs; however, the percentage did not change much after Wave 3 (80% at Wave 4, 76% at Wave 5), when only minor changes to the text warnings were implemented (see Health Warnings chapter for more details). The finding that cigarette packs are the most frequently reported source of anti-tobacco information among smokers demonstrates the potential power that strong pictorial warnings could have in China.

Perceived Impact of Anti-Smoking Campaigns

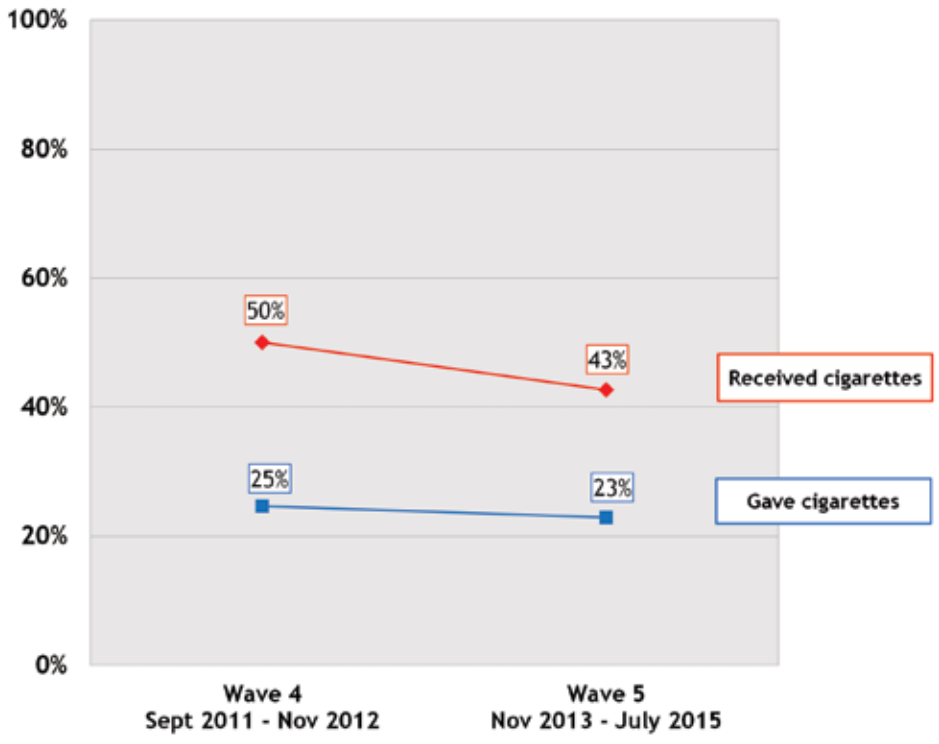
At Wave 5, smokers were asked whether they thought anti-tobacco campaigns have made an impact on society and on their own likelihood of quitting smoking or thinking about quitting. Results show that most smokers (79%) do believe that tobacco control campaigns have made an impact on society either "a little" or "a lot". However, smokers were less likely to report that anti-smoking advertising had an impact on their actual likelihood of quitting – 42% of smokers said that anti-tobacco advertising has made them more likely to quit, whereas 55% said it made no difference.

In addition, only 10% of smokers and one-quarter (26%) of quitters at Wave 5 said that advertisements or campaigns about the health risks of smoking were a factor that led them to think about quitting "very much" in the last 6 months or led them to quit "very much" (the third lowest percentage among ten possible reasons for thinking about quitting or actual quitting; see Cessation chapter for more details).

Awareness and Impact of the Anti-Cigarette Gifting Media Campaign

Offering or exchanging cigarettes as gifts is a deeply entrenched social custom in China.[11] ITC China Survey findings indicate that this practice is still common today, although it appears to be decreasing. Approximately one-quarter of smokers reported that they gifted cigarettes to family or friends at least once in the last 6 months (25% at Wave 4, 23% at Wave 5), while less than half of smokers at Wave 5 (43%) reported receiving cigarettes as a gift in the last 6 months – a decrease from 50% at Wave 4 (see Figure 52). In addition, approximately 10% of smokers across Waves 1 to 5 said that part of the reason they chose their current cigarette brand was because they received it as a gift.

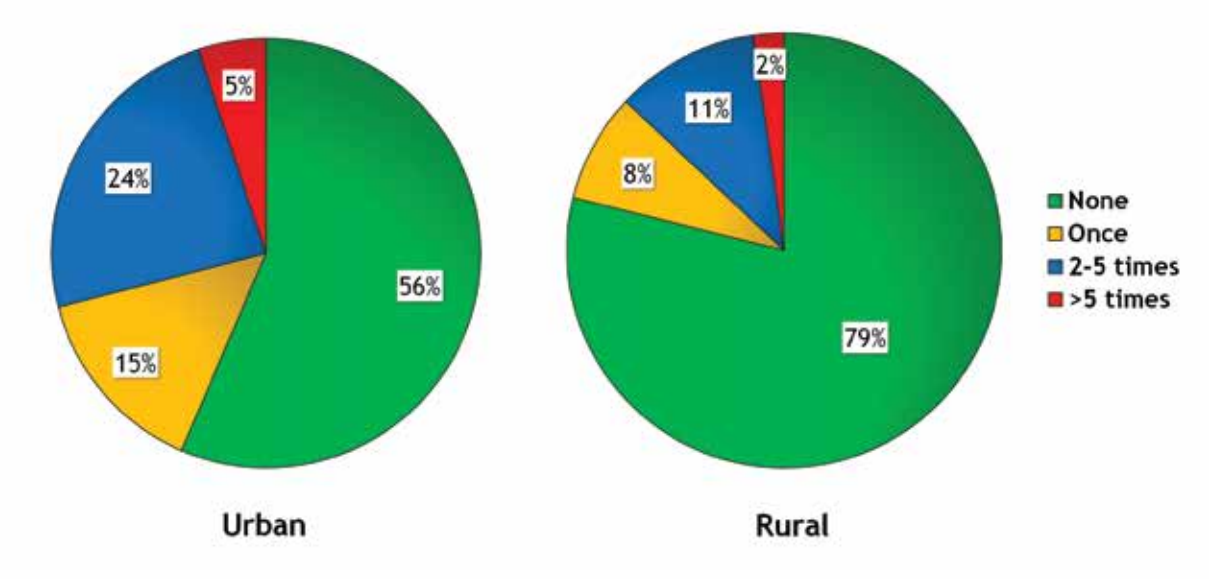
Figure 52. Percentage of smokers† who gave or received cigarettes as gifts to family or friends at least once in the last 6 months, by wave - cities only



† Results shown are among smokers in cities only (excluding those in rural areas)

While the practice of gifting cigarettes has decreased overall in recent years, the findings indicate that it is still much more common in urban areas than in rural areas. As shown in Figure 53, a significantly higher percentage of rural smokers said they never received cigarettes as gifts in the last 6 months compared to those in cities (79% vs. 56%). Smokers in cities were significantly more likely to have received cigarettes gifts either once, a few times, or more than 5 times in the last 6 months.

Figure 53. Percentage of urban vs. rural smokers at Wave 5 who received cigarettes as a gift from family or friends once, 2-5 times, more than 5 times, or not at all in the last 6 months



From December 2008 to February 2009, the World Lung Foundation, in partnership with the China CDC and WHO, launched a mass media campaign in 11 Chinese cities to discourage the practice of gifting cigarettes. The campaign, called "Giving cigarettes is giving harm", equated gifting cigarettes with graphic imagery of the harms caused by smoking through television ads and posters.[10]

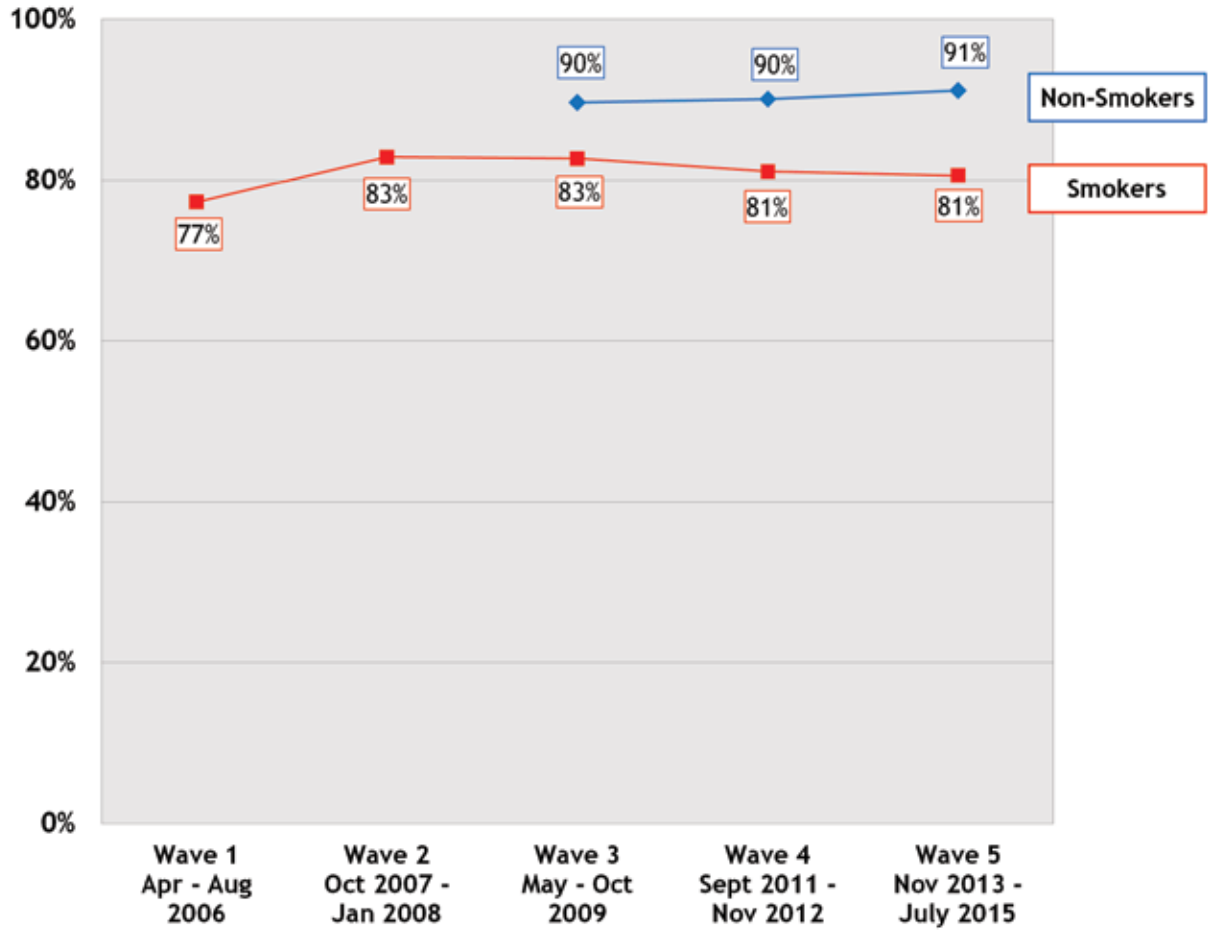
Previous ITC research has shown that this campaign was effective in increasing knowledge of smoking-related harms and higher disapproval of gifting cigarettes.[10] The Wave 3 to 5 Survey results suggest that the perceived social acceptability of gifting cigarettes has continued to decrease in recent years. At Wave 3 (which was conducted 3-9 months after the first media campaign ended), 60% of smokers said they "disagree" or "strongly disagree" that cigarettes make good gifts for family or friends. This percentage increased to 61% at Wave 4, and 67% at Wave 5.

Perceptions of the Tobacco Industry

Given that the tobacco industry in China is owned by the government, it is not surprising that perceptions of the tobacco industry in China are generally favourable. From Waves 1 to 4, at least half of smokers "agreed" or "strongly agreed" that tobacco companies do good things for Chinese society. However, this percentage decreased to 40% at Wave 5 – a sign that the recent tobacco control initiatives taken by the Chinese government may be helping to reduce the acceptability of tobacco. The percentage of smokers who "disagreed" or "strongly disagreed" that tobacco companies do good things for society also increased from 39% at Wave 4 to 46% at Wave 5. Non-smokers were more likely to have negative opinions of tobacco companies – half of non-smokers "disagreed" or "strongly disagreed" that tobacco companies do good things for society from Waves 3 to 5 (50-51%).

Despite these largely positive attitudes about the tobacco industry, there is still strong support among smokers for enhanced tobacco control efforts in China. At least three-quarters of smokers from Waves 1 to 5 (81% at Wave 5) "agreed" or "strongly agreed" that the Chinese government should do more to control smoking (see Figure 54). Support is even higher among non-smokers – at least 90% of non-smokers "agreed" or "strongly agreed" that the government should do more to control smoking from Waves 3 to 5.

Figure 54. Percentage of smokers and non-smokers who "agree" or "strongly agree" that the government should do more to control smoking, by wave - cities only



Note: Results shown are among respondents in cities only (excluding those in rural areas at Wave 5)

TOBACCO ADVERTISING, PROMOTION, AND SPONSORSHIP

Article 13 obligates Parties, within 5 years after entry into force of the FCTC, to implement a comprehensive ban on all forms of TAPS.

China ratified the FCTC in October 2005, and the Treaty came into force in January 2006, which obligated China to implement a comprehensive ban on TAPS by 2011. This did not happen. Until recently, progress in the implementation of Article 13 in China has been slow. Restrictions on direct tobacco advertising (limited to only five types of media and four types of public places[xi]) that were put in place under the 1991 Tobacco Products Monopoly Law and the 1994 Advertising Law were not strengthened by the Chinese Government until 2015.[209, 210] The new measures introduced in 2015 and 2016 represent important steps forward in banning tobacco advertising.

Currently, all forms of tobacco advertising that target youth are prohibited, in addition to bans on tobacco advertising in mass media, public places, public transport, and outdoors (effective September 2015). The promotion of tobacco products and brands through charitable donations, and on the Internet (effective September 2016) is also prohibited. However, existing TAPS bans contain multiple loopholes, and there is still no national legislation banning all forms of TAPS in China, with subnational legislation for a comprehensive TAPS ban implemented in only one city (Shenzhen) as of 2015.[211] As a result, the tobacco industry can still use evolving strategies to market their products in China. For example, the industry continues to advertise and promote tobacco products in public venues that are not explicitly banned. In recent years, tobacco companies have also increasingly focused on the expansion of tobacco advertising to the large number of point of sale (POS) locations across the country (estimated 5.5 million POS locations in China), and the use of brand stretching through new digital media channels.[70]

The new 2015-16 restrictions on TAPS were implemented at the national level after the completion of the ITC China Wave 1 to 5 (2006-15) Surveys, so the effectiveness of these additional TAPS restrictions was not evaluated.

Tobacco Advertising

The ITC China Wave 1 to 5 Surveys asked smokers and non-smokers whether they noticed direct or indirect tobacco advertising in different mass media channels and public venues in the last 6 months. As of Wave 5, national bans on tobacco advertising covered the following forms of mass media: television, film, radio, newspapers, and periodicals. Tobacco advertising was also prohibited in the following public venues: waiting rooms, cinemas and theatres, meeting rooms and halls, and sports sites and gyms.[xii]

Overall, findings showed that the partial TAPS ban in China was not effective, as the public continued to be exposed to various forms of tobacco advertising. At Wave 5, nearly one-quarter of non-smokers (22%) and half of smokers (47%) reported noticing things that are designed to encourage smoking "once in a while" or "often" in the last 6 months.

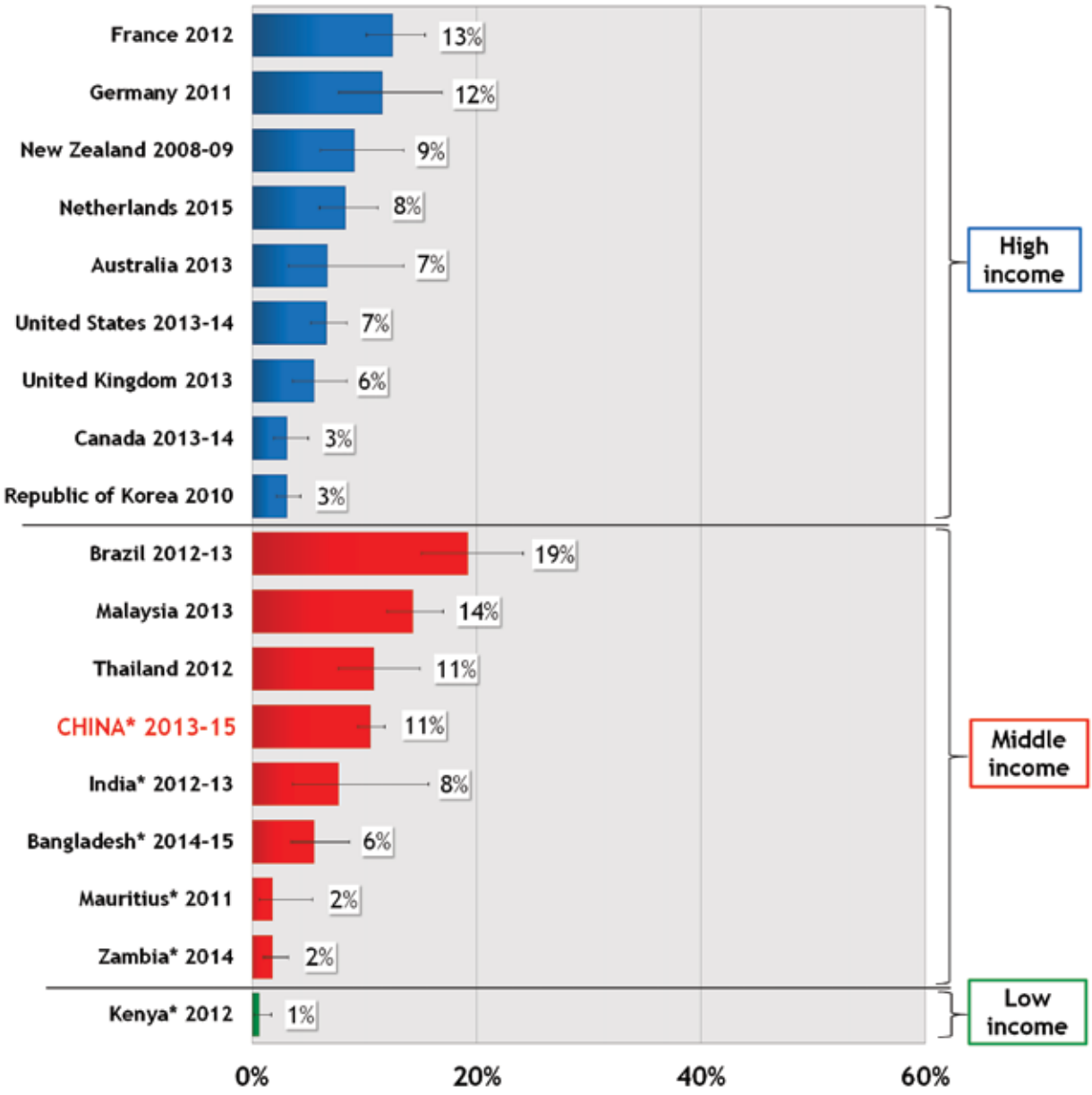
The addition of five rural areas to the Wave 5 Survey allows for comparisons of exposure to tobacco advertising in cities versus rural areas. Overall, there were no significant urban-rural differences in noticing of things that are designed to encourage smoking "once in a while" or "often" for smokers (42% in cities vs. 46% in rural areas) and for non-smokers (24% in cities vs. 16% in rural areas).

ITC cross-country comparisons indicate that Chinese smokers are generally more likely to notice things that are designed to promote smoking than smokers in HICs (see Figure 55). China (along with Thailand) also has the third highest percentage of smokers (11%) who noticed things that are designed to promote smoking among 10 LMICs, after Brazil (19%), and Malaysia (14%).

xi. Under the 1991 Tobacco Products Monopoly Law, direct tobacco advertisements are prohibited in television, radio, newspapers, and periodicals. The 1994 Advertising Law prohibits direct tobacco advertisements in any waiting rooms; cinemas and theatres; meeting rooms and halls; and sports sites and gyms; and also extends the 1991 ban on tobacco advertising in mass media to include the airing of advertisements in cinemas and theatres before films/movies.

xii. Amendments to the 1994 Advertising Law to prohibit all forms of tobacco advertising targeting youth, and in the mass media, public places, and public transport came into effect after the Wave 5 survey fieldwork was completed. As such, the impact of this amended law was not evaluated.

Figure 55. Percentage of male smokers and quitters who noticed things that promote smoking "often" or "very often" in the last 6 months, by country

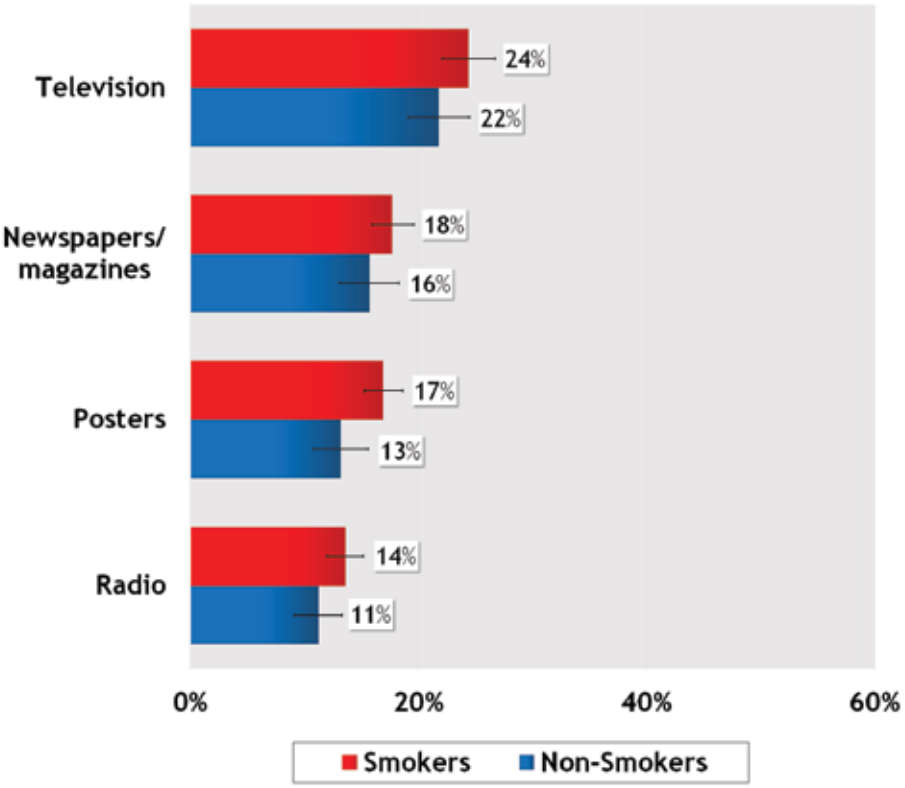


* In these countries, there was no response option of "very often" so results are shown for "often" only.

The findings also indicate that the industry continues to advertise their products even through mass media channels that have been banned, such as television. At the time of the Wave 5 Survey, bans on direct tobacco advertising in the mass media (i.e., television, radio, newspapers, and periodicals) had been in place for more than two decades, and regulations for minimizing the depiction of smoking in movies and television had been in effect for 4 years, and yet, nearly one-quarter of smokers (24%) and non-smokers (22%) reported noticing tobacco advertising on television in the last 6 months (see Figure 56). In China, television is a primary entertainment medium that reaches a significant proportion of the population. As of 2015, there were 239 million cable television subscribers, and 202 million cable digital television subscribers in China, with a television population coverage rate of 98.8%.[212] It is not surprising then, that tobacco companies are motivated to continue using television advertising to maintain a visible presence.

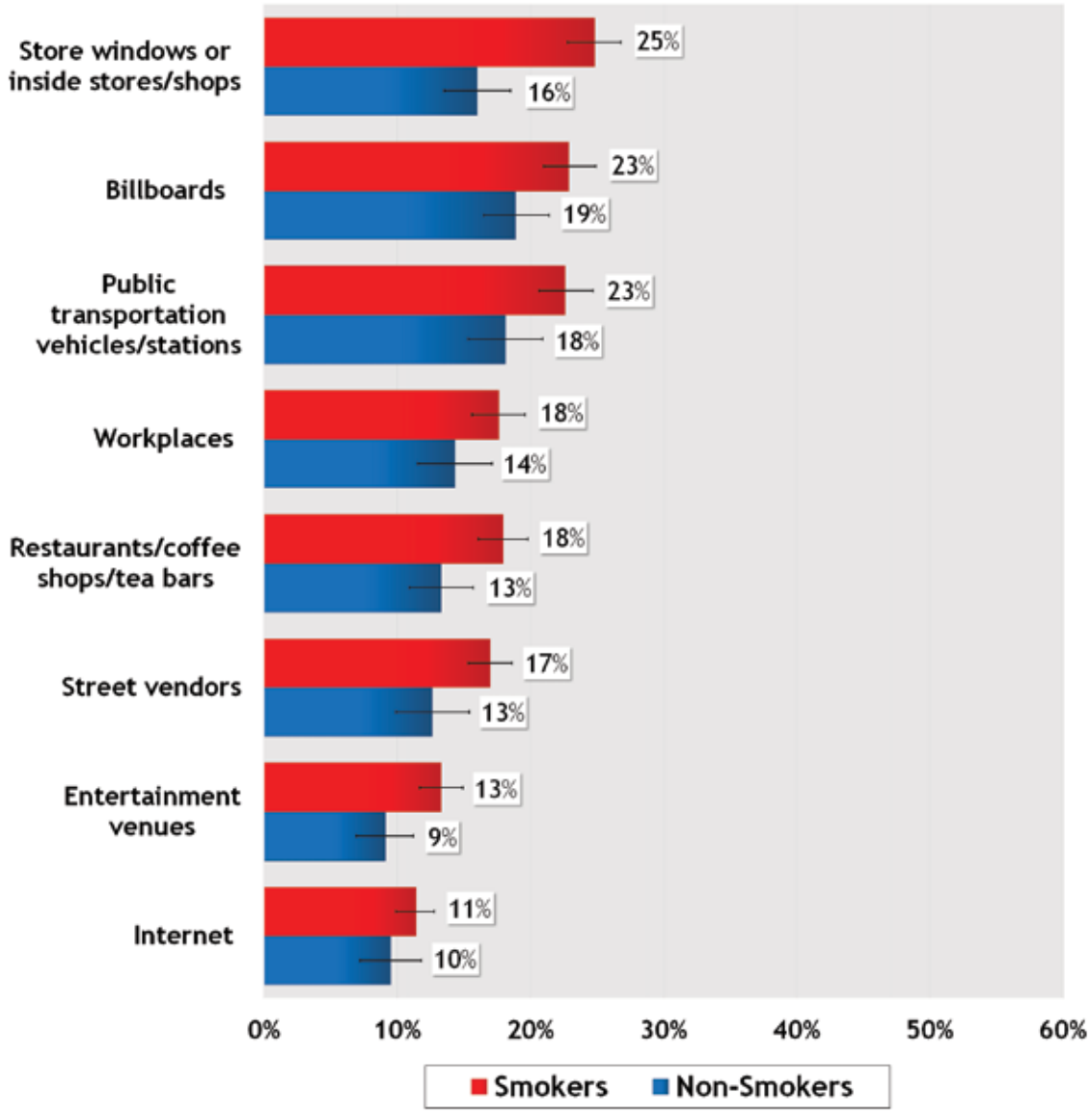
Tobacco advertising through other forms of mass media that were also banned at the time of the Wave 5 Survey (i.e. newspapers, radio) was less frequently noticed. However, as many as 18% of smokers and 16% of non-smokers still noticed advertising in newspapers and magazines in the last 6 months, while advertising on posters and radio were still noticed by at least 14% of smokers and 11% of non-smokers (see Figure 56).

Figure 56. Percentage of smokers and non-smokers at Wave 5 who noticed tobacco advertisements in the last 6 months in places where tobacco advertising was banned



The findings also show that at the time of the Wave 5 Survey (2013-15), the public was still exposed to tobacco advertising in public venues where advertising was not yet explicitly banned. At Wave 5, tobacco advertising was most commonly noticed by smokers and non-smokers in the following public venues: on store windows or inside stores/shops (25% of smokers, 16% of non-smokers); on billboards (23% of smokers, 19% of non-smokers); and on public transportation vehicles or stations (23% of smokers, 18% of non-smokers). Exposure to tobacco advertising in other public venues was lower – less than one-quarter of smokers and non-smokers noticed tobacco advertising in workplaces (18% smokers, 14% non-smokers); in restaurants, coffee shops, or tea bars (18% smokers, 13% non-smokers); and around street vendors (17% smokers, 13% non-smokers). Noticing of tobacco advertising was lowest in entertainment venues (13% of smokers, 9% of non-smokers), and on the Internet (11% of smokers and 10% of non-smokers) (see Figure 57).

Figure 57. Percentage of smokers and non-smokers at Wave 5 who noticed tobacco advertisements in the last 6 months in places where tobacco advertising was not explicitly banned



Urban-Rural Differences in Exposure to Tobacco Advertising

Overall, smokers reported higher levels of exposure to tobacco advertising than non-smokers at Wave 5. Further testing found no significant urban-rural differences in smokers' self-reported exposure to tobacco advertising through most forms of mass media and in most public locations. However, noticing of tobacco advertising was significantly higher among smokers in cities than in rural areas for the following mass media outlets and public venues: billboards (27% vs. 22%), store windows or inside shops/stores (32% vs. 21%), posters (24% vs. 15%), and around street vendors (22% vs. 15%).[xiii]

xiii. Note that tests for urban-rural differences in noticing specific forms of advertising/promotion were conducted only with samples of smokers who said that they: (a) used and/or noticed the following forms of mass media in the last 6 months: television, newspapers/magazines, posters, radio, billboards, and the Internet; and (b) visited and/or used the following public venues in the last 6 months: shops/stores, public transportation vehicles/stations, workplaces, restaurants/coffee shops/tea bars, street vendors, and entertainment venues.

Tobacco Promotion and Sponsorship

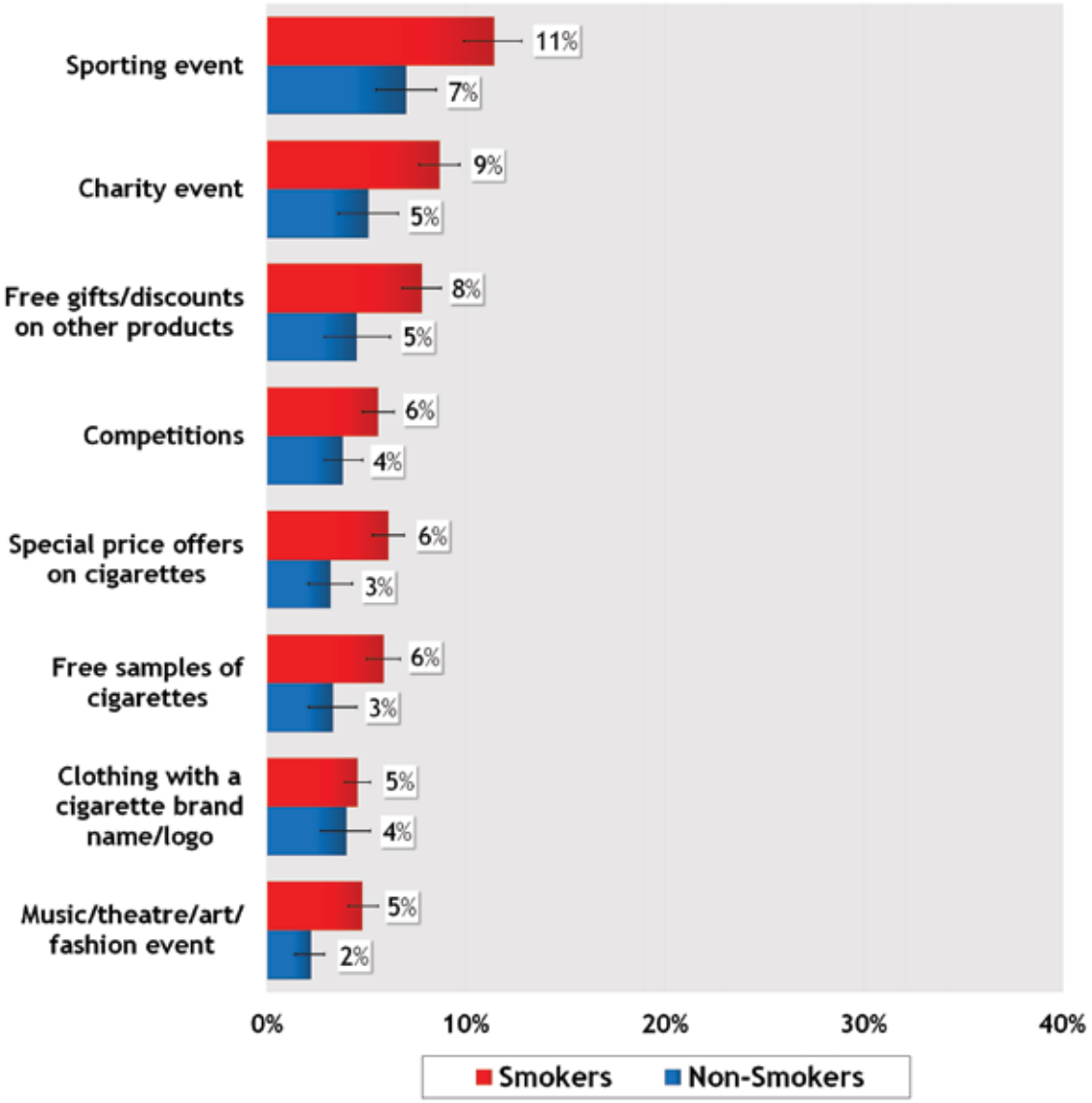
The ITC China Wave 1 to 5 Surveys asked smokers and non-smokers whether they noticed different forms of tobacco promotion in the last 6 months. At the time of the surveys, most forms of tobacco promotion and sponsorship were still permitted. For example, tobacco companies were allowed to promote their products through event sponsorship, promotional discounts and gifts with a tobacco product purchase, and brand stretching.[xiv] Findings showed that while these strategies are not as widely used by the industry as other forms of tobacco advertising, they still provide opportunities for them to market their products.

In comparison to the high visibility of tobacco advertising in the popular mass media and some public venues, smokers and non-smokers reported a lower overall presence of the promotion and sponsorship of tobacco products. At Wave 5, a minority of smokers and non-smokers reported noticing industry sponsored sporting events (11% of smokers, 7% of non-smokers); charity activities (9% of smokers, 5% of non-smokers); competitions (6% of smokers, 4% of non-smokers); and music, theatre, arts, or fashion events (5% of smokers, 2% of non-smokers). Less than 9% of smokers and non-smokers reported noticing promotions with a tobacco product purchase, such as free gifts or special discount offers with purchase (8% of smokers, 5% of non-smokers); free samples (6% of smokers, 3% of non-smokers); and special price offers (6% of smokers, 3% of non-smokers). Noticing clothing or other items with a cigarette brand name or logo was reported by only 5% of smokers and 4% of non-smokers (see Figure 58).

At Wave 5, rates of noticing different forms of tobacco promotion and sponsorship were generally higher among smokers than non-smokers. Further testing showed that smokers in cities were significantly more likely than those in rural areas to notice industry sponsored sporting events (17% vs. 5%); music, theatre, arts, or fashion events (6% vs. 3%); charity activities (13% vs. 4%); and competitions (9% vs. 2%). Smokers in cities were also more likely to notice free gifts or special discount offers with purchase (13% vs. 3%), free samples (9% vs. 4%), special price offers (9% vs. 4%), and clothing or items with a cigarette brand name or logo (6% vs. 3%) than smokers in rural areas.

xiv. Amendments to the 1994 Advertising Law to prohibit brand sharing or stretching activities, and the 2016 Philanthropy Law to prohibit the promotion of tobacco products through charitable donations came into effect after the Wave 5 survey fieldwork was completed. As such, the impact of these laws was not evaluated.

Figure 58. Percentage of smokers and non-smokers at Wave 5 who noticed various forms of tobacco promotion or sponsorship in the last 6 months

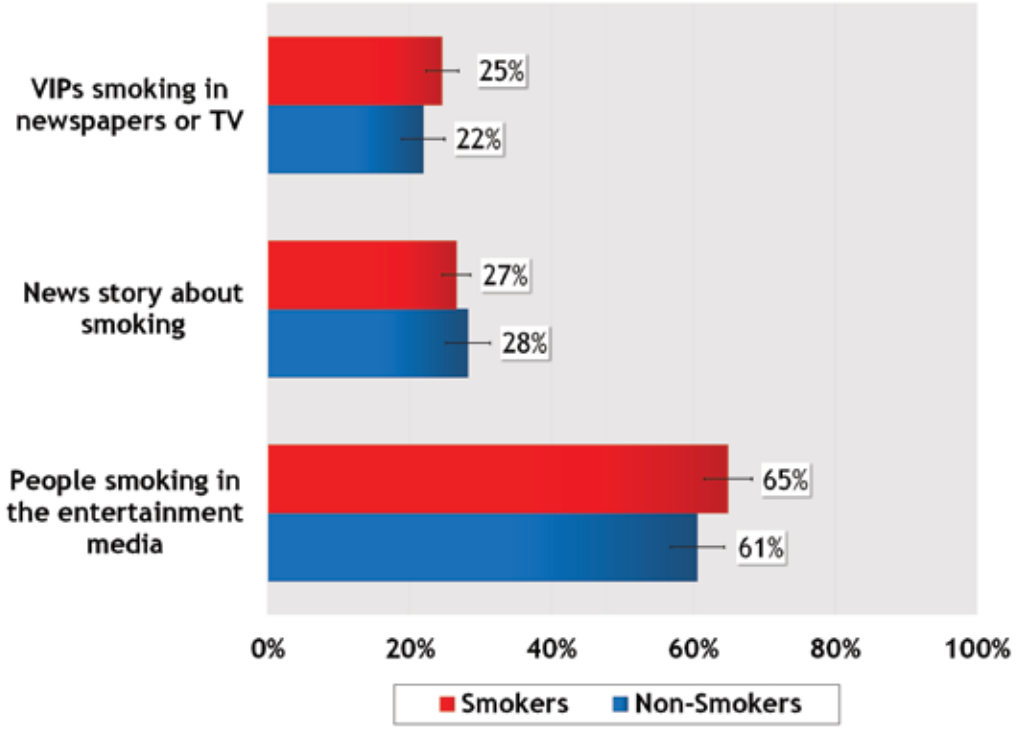


Indirect Promotion of Smoking Through the Entertainment Media

In China, images of smoking in the entertainment media are pervasive, particularly in forms of media that are highly popular among youth. For example, surveys of Chinese youth show a high level of exposure to depictions of smoking in animations, cartoons, dramas, and movies viewed by young audiences, and that exposure to smoking imagery in films communicate to youth that smoking is socially acceptable.[213-216]

The ITC China Survey asked smokers and non-smokers whether they noticed the promotion of smoking through entertainment media in the last 6 months. Findings showed that cigarette smoking remains highly visible in the entertainment media, where it was noticed "once in a while" or "often" by approximately two-thirds of smokers (65%) and non-smokers (61%) at Wave 5. Approximately one-quarter of smokers and non-smokers also reported noticing depictions of VIPs smoking in the newspaper or on television (25% of smokers, 22% of non-smokers); and news stories about smoking on television, radio, or in the newspapers (27% of smokers, 28% of non-smokers) (see Figure 59).

Figure 59. Percentage of smokers and non-smokers at Wave 5 who saw various forms of tobacco use or promotion in the media "once in a while" or "often" in the last 6 months



Further testing was conducted to examine whether there were urban-rural differences among smokers. Results indicated that smokers in cities were significantly more likely to notice people smoking in the entertainment media (72% vs. 58%), and depictions of VIPs smoking in the newspaper or on television (30% vs. 20%) than smokers in rural areas.

In light of the evidence that TAPS activities lead to an increase in tobacco consumption by preventing smokers from quitting, and encouraging smoking initiation among youth[66, 217, 218] the continued prominence of tobacco use in the entertainment media in China and other countries around the world is concerning. In recent years, the Conference of the Parties (COP) has called for targeted actions to address depictions of tobacco in the entertainment media. In a report prepared prior to the seventh session of the COP (COP7, November 2016), the Convention Secretariat stated that "Although several Parties have already taken action to ban tobacco use in the entertainment media as part of their comprehensive advertising bans, the situation is still alarming." The report also highlights the rapid proliferation of channels for cross-border entertainment media (e.g., Internet-based devices, cable television, transnational flight entertainment and public lounges, and online streaming) that allow the tobacco industry to circumvent national TAPS bans.[219] In order to reduce the promotion of smoking by the entertainment industry, a comprehensive ban on the depiction of smoking through all forms of entertainment media is required, as called for by FCTC Article 13 and its guidelines.

Support for Bans on Tobacco Advertising and Promotion

The ITC China Wave 3 to 5 Surveys asked smokers and non-smokers whether they believed that the tobacco industry should be allowed to advertise. At Wave 5, only 13% of smokers and 8% of non-smokers "agreed" or "strongly agreed" that the tobacco industry should be allowed to advertise and promote cigarettes.

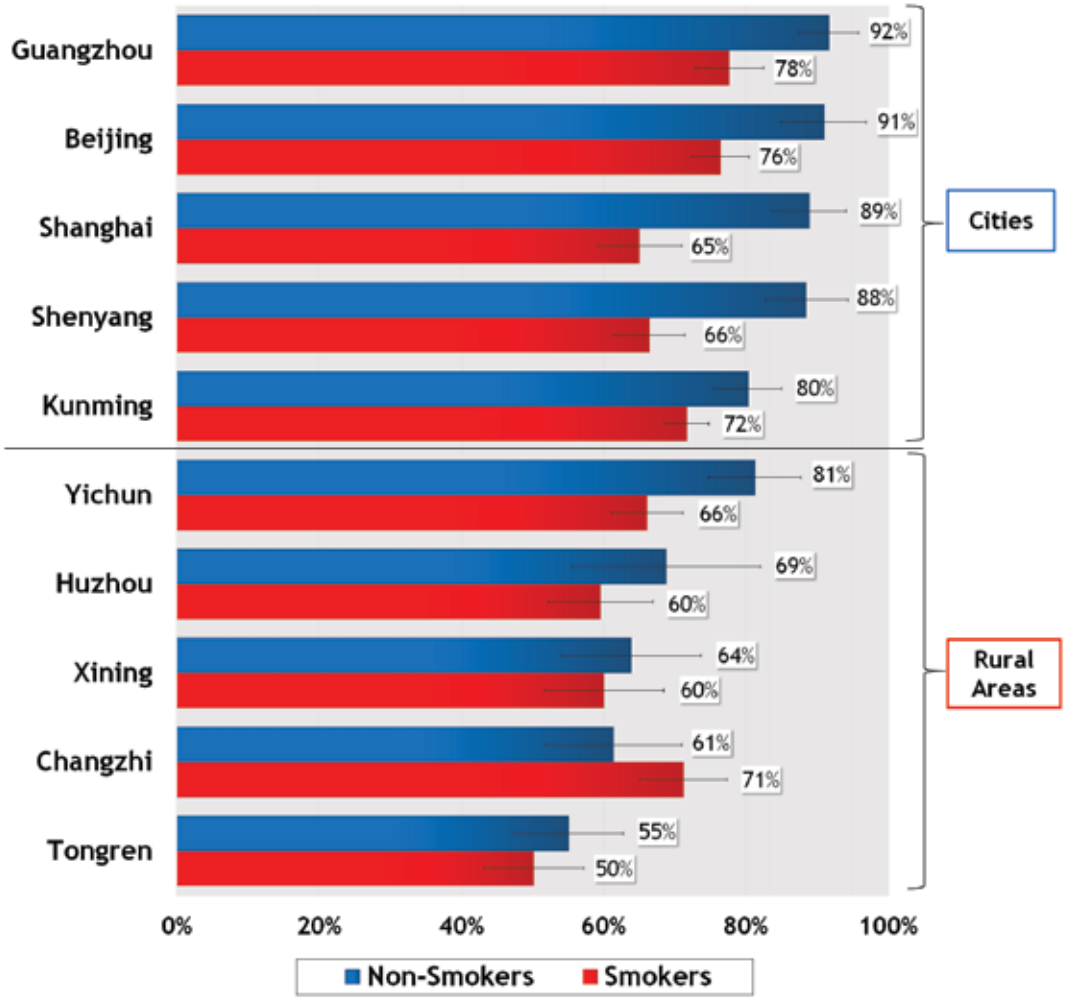
The Survey also asked smokers and non-smokers whether they would support complete bans on different types of tobacco advertising and promotion. Findings showed majority support for a complete ban on the advertising and promotion of tobacco products in places where tobacco is sold (67% of smokers and 78% of non-smokers) and outdoors (65% of smokers and 78% of non-smokers) at Wave 5. Support was highest in the cities of Guongzhou and Beijing, where more than 90% of non-smokers and at least 75% of smokers supported these bans, and the lowest support was in the rural area of Tongren, where about 50% of smokers and non-smokers supported such restrictions.

Support for a Complete Ban on Tobacco Advertising in Shops

At Wave 5, the vast majority of smokers and non-smokers in each of the five cities said they support a complete ban on tobacco advertising inside shops and shopping centres "a little" or "a lot" (see Figure 60). Support was highest in Guangzhou and Beijing, where more than three-quarters of smokers (78% in Guangzhou, 76% in Beijing) supported such a ban. Support was even higher among non-smokers in both of these cities, where there was near unanimous support for a complete ban on advertising in shops and shopping centres (92% in Guangzhou, 91% in Beijing).

There was strong support among smokers and non-smokers for this type of ban in rural areas as well. However, the level of support in each of the five rural areas was generally lower than in the cities at Wave 5. Overall, support was highest in Yichun and the lowest in Tongren. Support among smokers ranged from 50% in Tongren to 71% in Changzhi, and support among non-smokers ranged from 55% in Tongren to 81% in Yichun.

Figure 60. Percentage of smokers and non-smokers who support complete bans on tobacco advertisements inside shops "a little" or "a lot" at Wave 5, by survey location

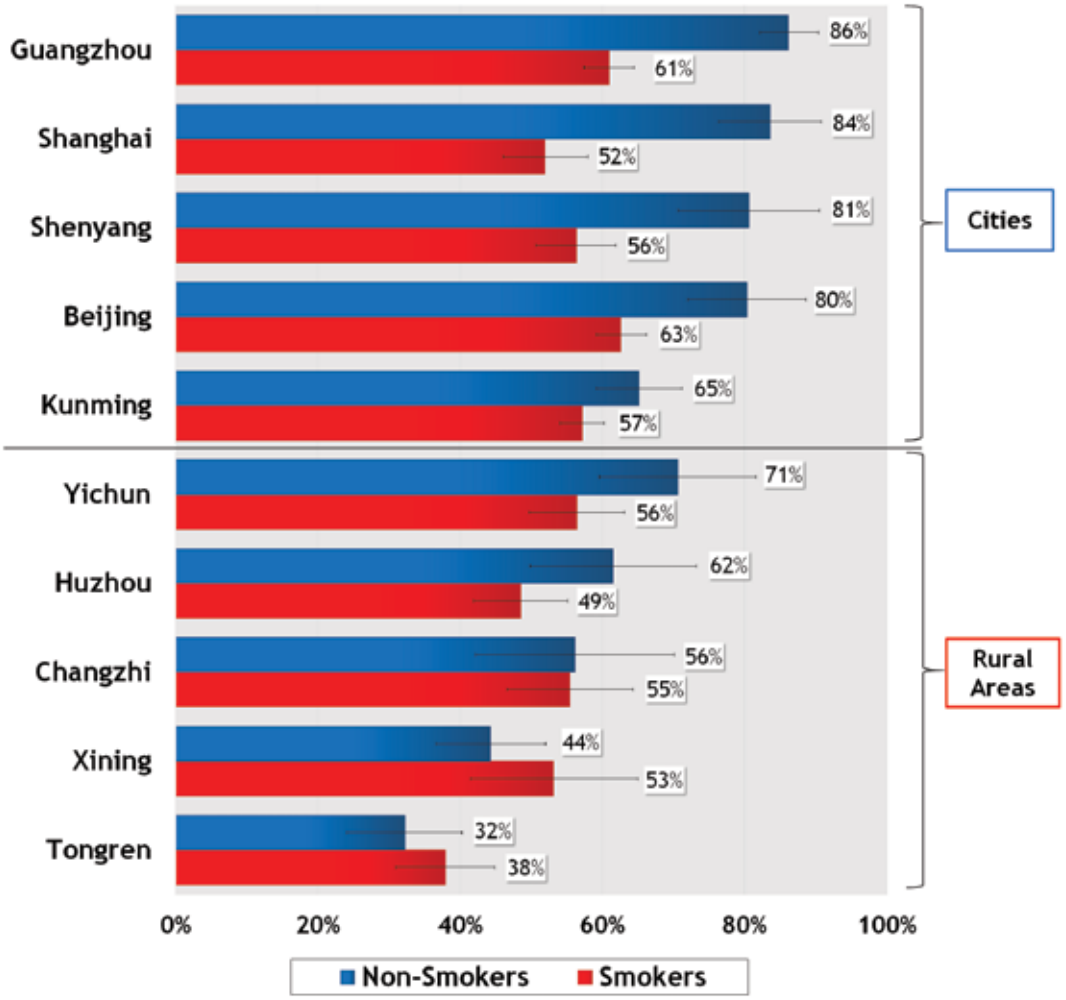


Support for a Complete Ban on Point of Sale (POS) Displays

Smokers and non-smokers were also supportive of a complete ban on displays of cigarettes inside shops and shopping centres, particularly in cities. At Wave 5, more than half of smokers in each of the five cities said they support such a ban "a little" or "a lot", with the highest levels of support in Beijing (63%) and Guangzhou (61%) (see Figure 61). Across all five cities, support for a complete ban on cigarette displays inside shops was even higher among non-smokers (86% in Guangzhou; 84% in Shanghai; 81% in Shenyang; 80% in Beijing; 65% in Kunming).

Support for a complete ban on cigarette displays was lower in rural areas. Among the five rural areas, support was highest in Yichun (56% of smokers and 71% of non-smokers) and lowest in Tongren (38% of smokers and 32% of non-smokers).

Figure 61. Percentage of smokers and non-smokers who support complete bans on displays of cigarettes inside shops "a little" or "a lot" at Wave 5, by survey location

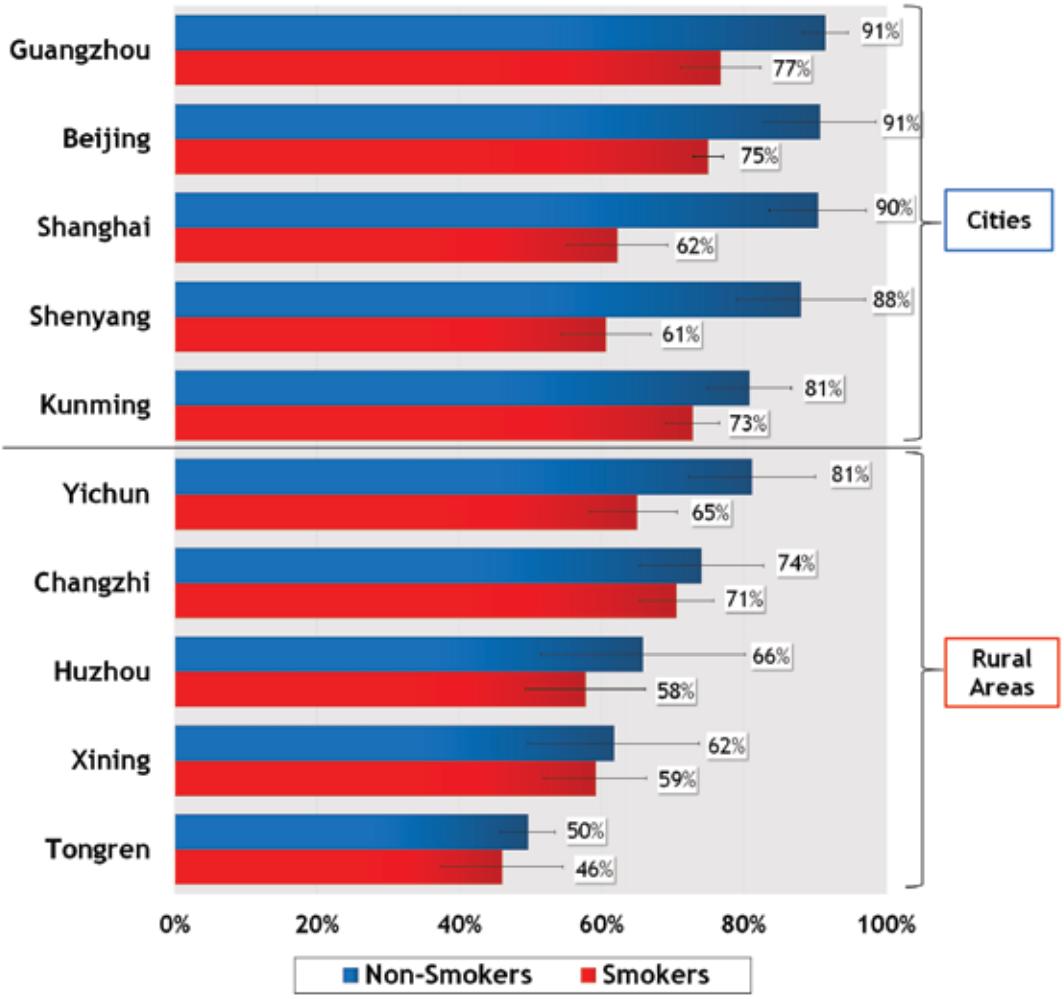


Support for a Complete Ban on Outdoor Advertising and Promotion

There was high support among smokers and non-smokers for a complete ban on outdoor tobacco promotion, such as posters, billboards, and banners. Across the five cities, support for such a ban ranged from 61% of smokers in Shenyang to 77% in Guangzhou (see Figure 62). Support was even higher among non-smokers, with near unanimous support for a complete ban on outdoor tobacco promotion in Guangzhou (91%), Beijing (91%), and Shanghai (90%), followed closely by Shenyang (88%), and Kunming (81%).

In rural areas, support for a complete ban on outdoor tobacco promotion was lower than that in cities, and there were variations by survey location. Support among smokers ranged from 46% in Tongren to 71% in Changzhi, and support among non-smokers ranged from 50% in Tongren to 81% in Yichun.

Figure 62. Percentage of smokers and non-smokers who support a total ban on outdoor tobacco promotion "a little" or "a lot" at Wave 5, by survey location



TOBACCO PRICE AND TAXATION

Article 6 of the FCTC obligates Parties to adopt pricing and taxation measures that reduce tobacco consumption. Article 6 guidelines further recommend that Parties implement regular adjustment processes or procedures to make tobacco products less affordable over time, including periodic revaluation of tobacco tax levels that take into account price and income elasticity, inflation, and changes in household income.

From the time the FCTC came into force in China in January 2006 until 2015, there was very little progress in the implementation of strong price and tax policies that would result in substantial gains to public health. Changes to the cigarette tax structure and tax rates were made in 2009 and 2015; however, these changes have not yet led to price and tax increases that are large enough to offset rapid income growth. As a result, cigarettes have become more affordable over time. Although the evidence thus far suggests that the 2015 tax increase is having a positive initial impact on reducing consumption while increasing government revenue, average cigarette prices in China are still very low by international standards.

Overall, evidence from the ITC China Survey and other studies indicate that there is an urgent need for China to build on the recent tax increase and continue to implement stronger pricing and taxation measures to reduce cigarette consumption and smoking prevalence.

Increasing taxes and prices on tobacco products is considered to be one of the most effective components of a comprehensive tobacco control strategy. Global research evidence shows that significant increases to the tax and price of tobacco products is the single most effective tool for reducing tobacco use because it encourages current users to quit, prevents the uptake of smoking among potential users, and reduces consumption among current users.[32] Increasing tobacco prices is particularly effective for reducing tobacco consumption and prevalence of tobacco use among youth and persons of low SES.[218, 220-222] Moreover, increasing taxes on tobacco products leads to substantial increases in tobacco tax revenues; this has been demonstrated in many countries, including Turkey, South Africa, Mexico, Ukraine, and The Gambia.[223-227]

This section provides an overview of tobacco pricing and taxation policies in China. It also presents ITC China Wave 1 to 5 Survey findings on the extent to which the price of cigarettes influences smokers' brand selection, perceptions of the cost of smoking, motivation to quit smoking, and purchasing behaviour. Findings on the affordability of cigarettes based on data from the ITC China Surveys, and preliminary findings from other economic studies on the initial impact of China's 2015 tax adjustment are also presented.

Tobacco Pricing and Taxation Policies in China

The Chinese government collects five different taxes from the tobacco industry: tobacco leaf tax, value added tax (VAT), excise tax, urban construction supplemental tax, and educational supplemental tax. Of these five types of taxes, the excise tax has the greatest impact on the magnitude of the retail price of cigarettes.[228]

There are two main types of excise taxes – specific and ad valorem. Specific excise taxes are based on quantity or weight (e.g., per pack of 20 cigarettes or per gram of tobacco) and add a fixed monetary tax to every cigarette, regardless of baseline price. Ad valorem excise taxes are based on the value of the product (e.g., a specific percentage of the manufacturer's price or the retail price).[229] Specific taxes offer several advantages over ad valorem taxes. Specific taxes are easier to implement and can enhance the impact of tax policies on public health by reducing price differentials between premium and less expensive brands, preventing the industry from lowering prices in response to tax increases, and reducing consumer switching to less expensive brands.[32, 230, 231]

In China, the specific excise tax per pack of 20 cigarettes is very low at only 0.06 RMB at the producer level, and 0.10 RMB per pack at the wholesale level. Ad valorem taxes make up the largest share of the total taxes on cigarettes. Under the classification system of the CNTC, there are five classes (or grades) of cigarettes in China: Classes I and II include premium brands, Class III includes mid-priced brands, and Classes IV and V include discount brands. China uses a two-tiered ad valorem structure at the producer level for cigarettes that applies a higher tax rate for higher-priced brands (36% of producer price for brands < 7 RMB vs. 56% for brands ≥ 7 RMB). There is an additional ad valorem tax of 11% of wholesale price at the wholesale level. The tiered tax structure coupled with the heavy reliance on ad valorem taxes weakens the impact of tax on reducing demand for cigarettes.

This is further amplified by the fact that the cigarette market is dominated by lower-priced brands. If China were to introduce more tax increases, the current tax structure would likely encourage smokers to switch down to less expensive brands with lower tax rates rather than quitting, thus reducing the health benefit of any tax increases.

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, because none of the increase in tax was passed on to consumers at the retail level, there was no reduction in cigarette consumption.[45]

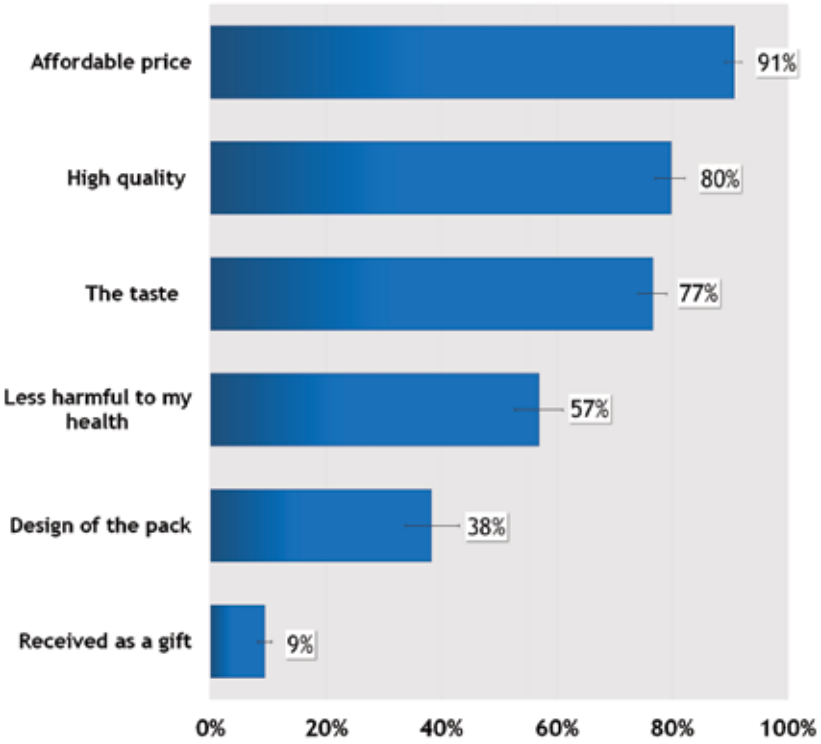
On 10 May 2015, the China MOF officially increased the ad valorem tax rate at the wholesale level from 5% to 11%. An additional specific tax of 0.10 RMB ($0.015 USD) per pack of 20 cigarettes was also introduced at the wholesale level. Preliminary estimates suggest that China's 2015 tax increase led to a 10% increase in the average retail price per pack of cigarettes that was passed onto consumers.[228]

Smokers' Brand Choice is Highly Sensitive to the Price of Cigarettes

A major challenge to tobacco control in China is that cigarette prices are very low. The CNTC claims that lower-priced cigarettes are essential to low-income consumers. In order to guarantee supply, the CNTC requires local tobacco companies to produce a certain amount of less expensive cigarettes annually, and offers subsidies to those producers to make up for the relatively low profit margin. This strategy is problematic for public health because research shows that the availability of less expensive cigarettes deters smoking cessation, and thereby undermines the effectiveness of price and tax policies. For example, studies from the United States indicate that smokers who use lower-priced cigarettes are less likely to quit, reduce consumption, or make a quit attempt, compared with those who use higher-priced cigarettes.[232, 233] Similarly, ITC research has found that Chinese smokers who use less expensive cigarettes and who are less knowledgeable about the health harms of smoking are less likely to have an intention to quit.[42]

The ITC China Wave 1 to 5 Surveys asked smokers if they have a regular brand and variety of cigarettes. Smokers with a regular brand were then asked to report on reasons for their brand choice. Although two rounds of cigarette tax increases were implemented during the time of the Wave 1 to 5 Surveys, the majority of smokers in cities said that they chose their brand based on affordability, and this percentage increased from 67% at Wave 1 to 89% at Wave 5. In fact, affordable price was the most common reason for brand choice, reported by 91% of smokers overall in all survey locations at Wave 5 (see Figure 63). Other common reasons for brand choice cited by smokers at Wave 5 included the following: high quality (80%), taste (77%), and because it is less harmful to their health (57%). More than one-third of smokers (38%) also said that they chose their brand based on the design of the pack. The least common reason for brand choice was because they received them as a gift, cited by only 9% of smokers. These findings provide evidence for the growing affordability of cigarettes in China. Because Chinese smokers pay close attention to the price of cigarettes when choosing a brand, stronger price and tax measures are especially important to reduce the high rates of smoking.

Figure 63. Percentage of smokers who said they chose their current cigarette brand for various reasons, at Wave 5



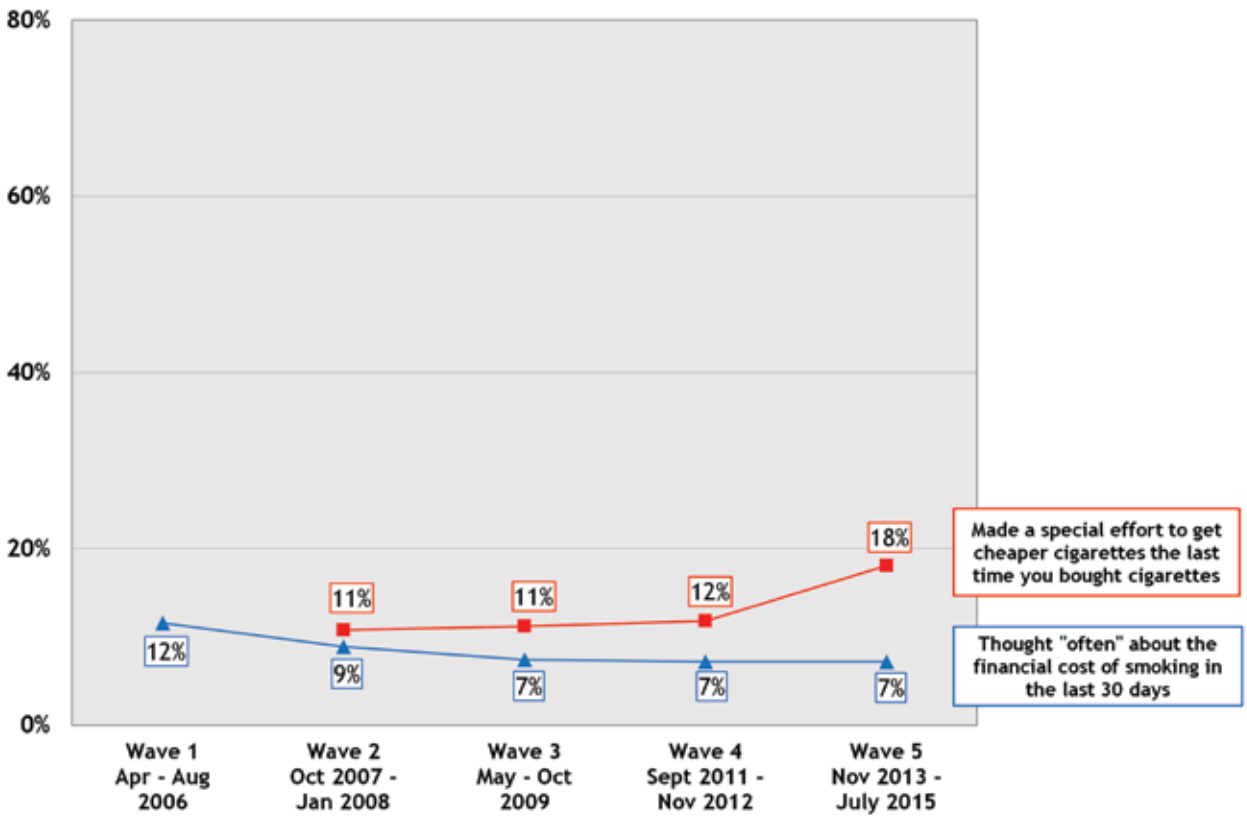
Few Smokers Think About the Financial Cost of Smoking

The ITC China Wave 1 to 5 Surveys asked smokers how often they thought about the financial cost of smoking in the last 30 days. As shown in Figure 64, the percentage of smokers who said that they "often" thought about the financial cost of smoking decreased from 12% at Wave 1 to 7% at Wave 5. ITC cross-country comparisons indicate that China (along with India) has the second lowest percentage of male smokers and quitters who said that they "often" or "very often" thought about the financial cost of smoking in the last 30 days (15%) out of 19 ITC countries (see Figure 65). This provides further evidence that cigarettes are highly affordable in China, which may prevent smokers from taking steps towards quitting. Indeed, the ITC findings verify the high affordability: in China, cost of cigarettes was LEAST commonly cited by smokers as a reason that led them to think about quitting (see Figure 18 in the Smoking Cessation chapter), in contrast to other countries, where cost is often the MOST commonly cited reason.

The Wave 2 to 5 Surveys also asked smokers whether they made any special effort to get their own cigarettes at a cheaper price at their last purchase. Across all waves, fewer than 1 in 5 smokers (11% to 18%) said that they made a special effort to get cheaper cigarettes the last time they bought cigarettes (see Figure 64).

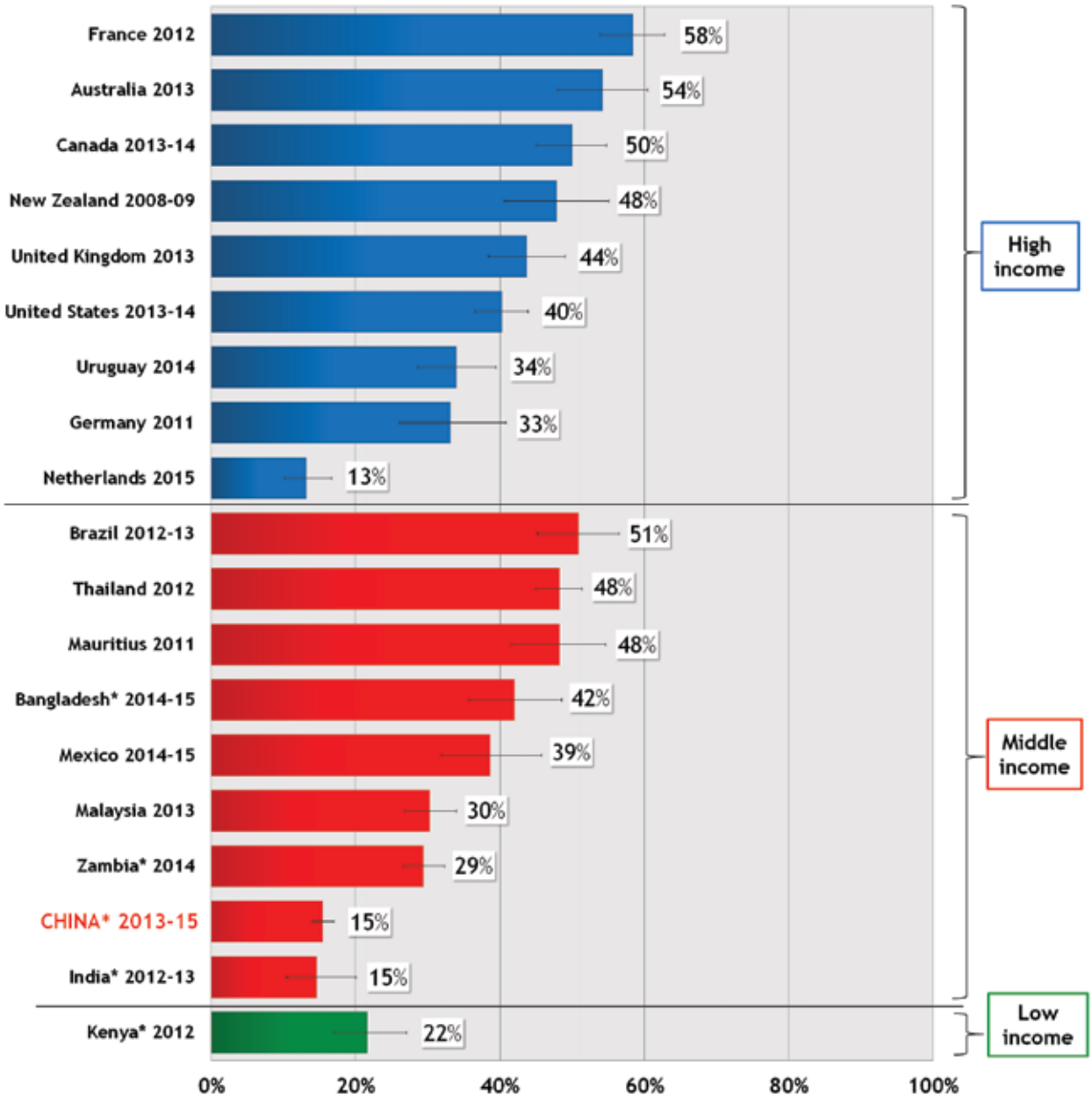
These findings show that the vast majority of smokers in China are not concerned about the financial burden of smoking. Measurable progress towards tackling the tobacco epidemic in China will require steeper tax increases that raise the price of cigarettes.

Figure 64. Percentage of smokers who "often" thought about the cost of smoking or made an effort to buy cheaper cigarettes, by wave - cities only†



† Results shown are among respondents in cities only (excluding those in rural areas at Wave 5)

Figure 65. Percentage of male smokers and quitters who thought “often” or “very often” about the money they spend (or used to spend) on smoking in the last 30 days, by country



* In these countries, response options did not include "very often" so results are shown for "often" only. In China, the question was worded differently for current smokers: "How often in the last 30 days did you consider the financial cost of smoking?"

Low Cigarette Prices Do Not Motivate Smokers to Quit

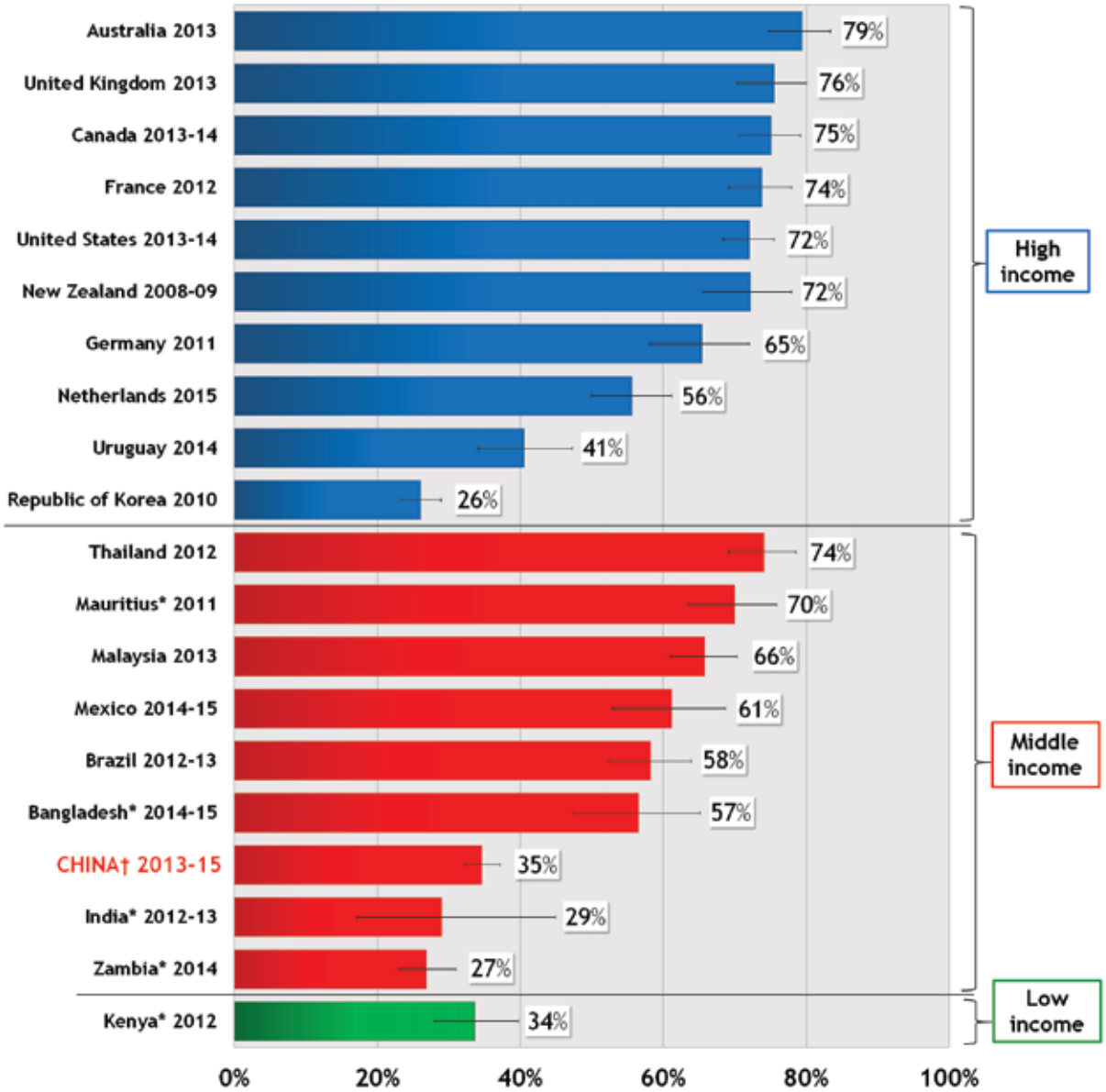
The ITC China Wave 1 to 5 Surveys asked smokers which of several reasons led them to think about quitting either “very much”, “a little”, or “not at all” in the last 6 months. Financial reasons were the least commonly reported reason for thinking about quitting among Chinese smokers. At Wave 5, only 6% of smokers said that financial reasons “very much” led them to think about quitting, compared to much higher rankings for other personal and policy-related reasons such as concern for personal health (66%), the effect of cigarette smoke on non-smokers (43%), smoking restrictions in public and workplaces (31%), and health warnings on cigarette packages (17%) (see Figure 18 in the Smoking Cessation chapter).

In China, there is a high level of income inequality, which is largely driven by the substantial rural-urban gap.[234] For example, it is estimated that the average household income is approximately three times higher in urban areas than in rural areas.[235]

It is not surprising then, that compared to smokers in cities, a significantly higher percentage of smokers in rural areas stated that financial reasons led them to think about quitting "very much" (8% vs. 4%) or "a little" (42% vs. 16%) at Wave 5. This suggests that increasing cigarette prices may be particularly important to encourage low-income smokers in rural areas to quit, which would effectively eliminate smoking-induced deprivation by significantly reducing their household spending on cigarettes. It should be noted, however, that a majority of smokers in both rural areas and cities stated that financial reasons did not lead them to think about quitting "at all" (50% of smokers in rural areas and 80% of smokers in cities).

ITC cross-country comparisons indicate that in countries where tobacco taxes are high and where prices are also high, smokers are generally more likely to report that the price of cigarettes led them to think about quitting. As shown in Figure 66, a majority of male smokers in countries with high tobacco tax rates and prices reported that the price of cigarettes "somewhat" or "very much" led them to think about quitting in the last 6 months, such as Australia (79%), the United Kingdom (76%), Canada (75%), France (74%), and Thailand (74%). In contrast, only 35% of male smokers in China said that the price of cigarettes led them to think about quitting "a little" or "very much".

Figure 66. Percentage of male smokers who said the price of cigarettes "somewhat" or "very much" led them to think about quitting in the last 6 months, by country



* In these countries, the response options were yes/no versus very much/somewhat/not at all. The percentage of respondents who answered "yes" is shown. In these countries, there was also no time frame of 6 months.
†In China, the question asked about "financial reasons" in general instead of the price of cigarettes, and the response options were very much/a little/not at all.

Cigarettes are Becoming More Affordable

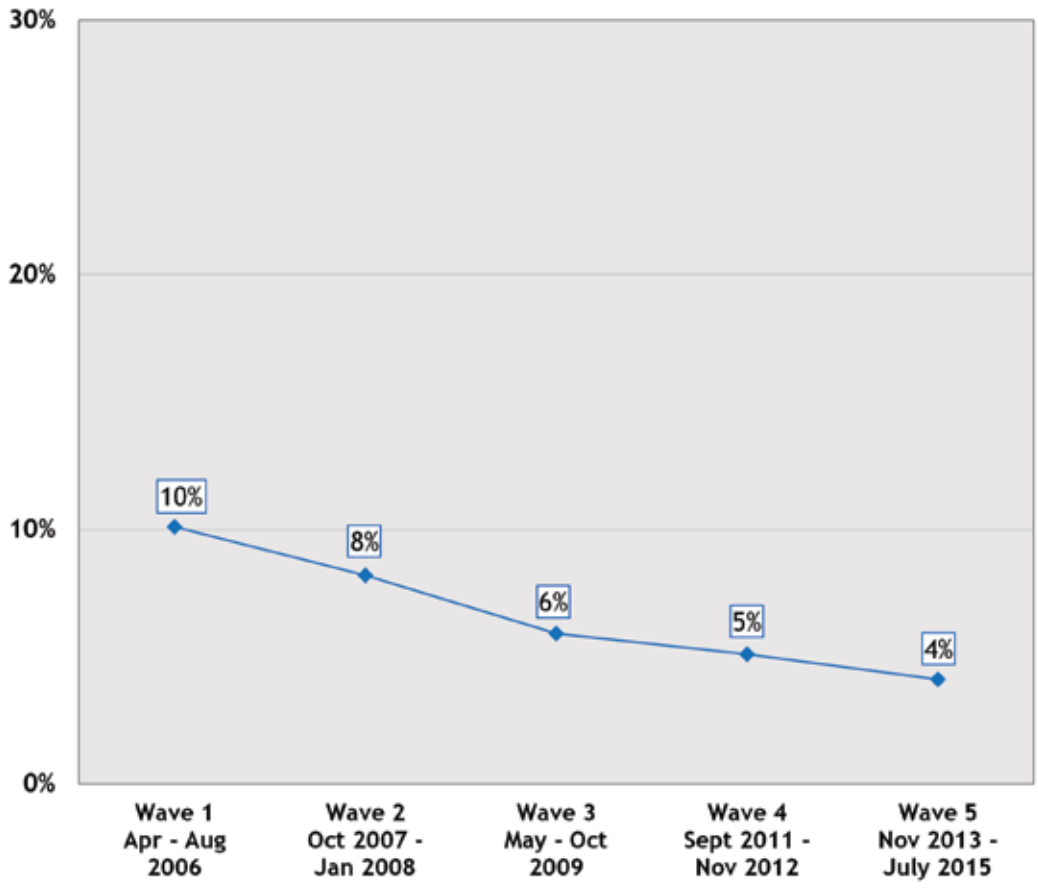
The price of tobacco products in relation to the income of tobacco users, that is, *affordability*, is recognized as a key determinant of tobacco use behaviour. Increasing price can reduce demand for tobacco products, but the effectiveness of price increases as a deterrent to tobacco use depends on how much price increases in relation to the income of potential users. If incomes go up more quickly than inflation, the relative cost of tobacco products can actually decrease over time. The FCTC has clearly stated the need to take affordability into account in setting tobacco tax policies. Article 6 guidelines recommend that:

> *"When establishing or increasing their national levels of taxation Parties should take into account – among other things – both price elasticity and income elasticity of demand, as well as inflation and changes in household income, to make tobacco products less affordable over time in order to reduce consumption and prevalence. Therefore, Parties should consider having regular adjustment processes or procedures for periodic revaluation of tobacco tax levels."* [236]

The ITC China Wave 1 to 5 Surveys asked smokers if they had spent money on cigarettes or tobacco that they knew would otherwise be spent on household essentials like food in the last 6 months. Across all five waves, a small percentage of smokers in cities reported spending money on cigarettes instead of other household essentials, and this percentage decreased from 10% at Wave 1 to 4% at Wave 5 (see Figure 67). ITC cross-country comparisons show that China has the second lowest percentage of male smokers who said that they spent money on cigarettes instead of other household essentials like food (9%) out of 10 LMICs (see Figure 68).

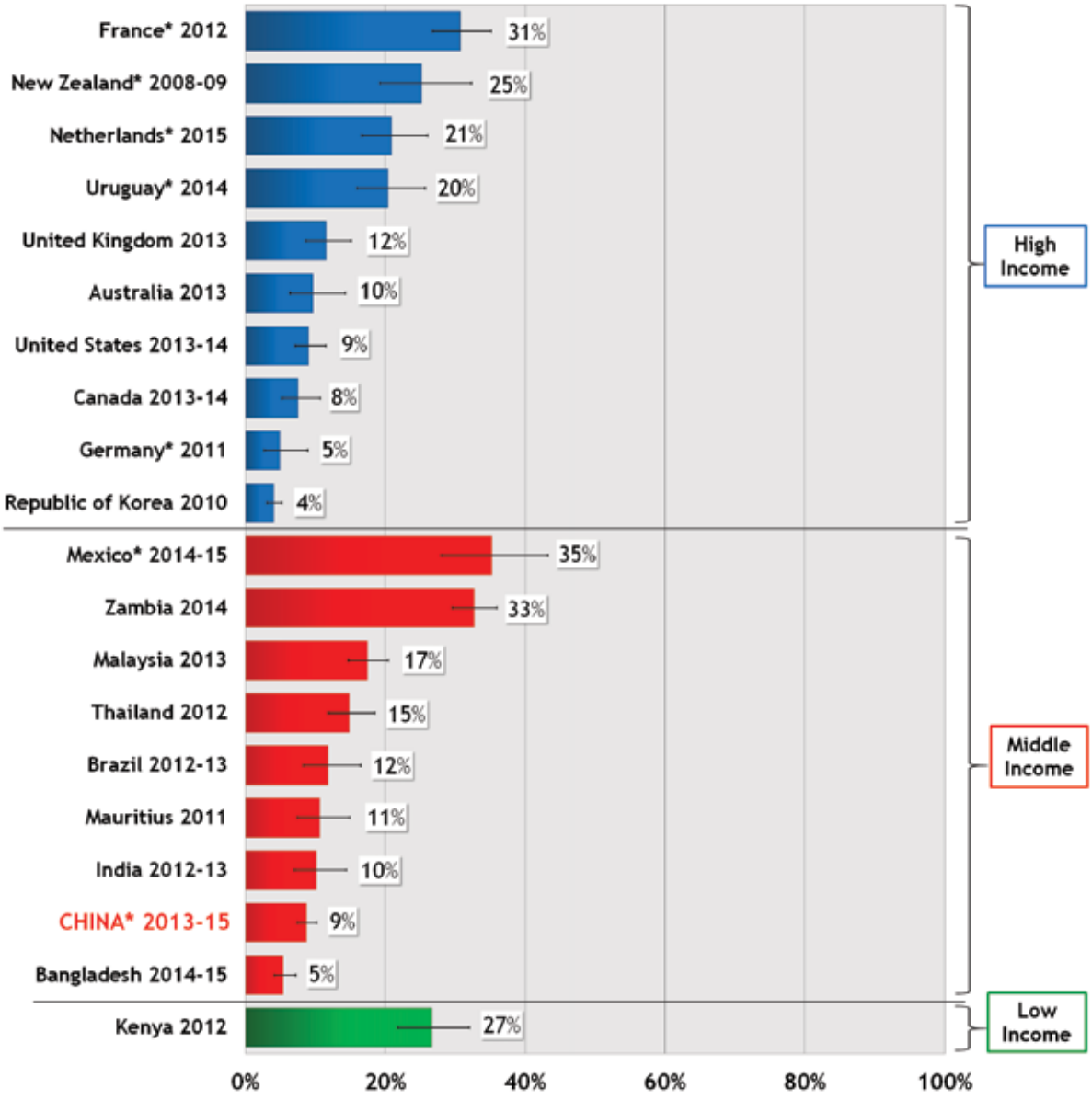
Further testing showed that smokers in rural areas were significantly more likely than smokers in cities to report spending money on cigarettes instead of other household essentials at Wave 5 (14% vs. 4%).

Figure 67. Percentage of smokers who spent money on cigarettes that they knew would otherwise be spent on household essentials like food in the last 6 months, by wave - cities only†



† Results shown are among respondents in cities only (excluding those in rural areas) who reported buying cigarettes in the last 12 months.

Figure 68. Percentage of male smokers who reported spending money on cigarettes instead of other household essentials such as food in the last 6 months, by country



* In these countries, the question asked whether smokers spent money on cigarettes that "they knew would be better spent on household essentials like food" (France, New Zealand, Netherlands, Germany)/"would otherwise be spent on household essentials like food" (China)/"should have (been) spent on household essentials like food" (MX/UY). In all other countries, the question asked if there was a time when the money they spent on cigarettes resulted in not having enough money for household essentials like food.

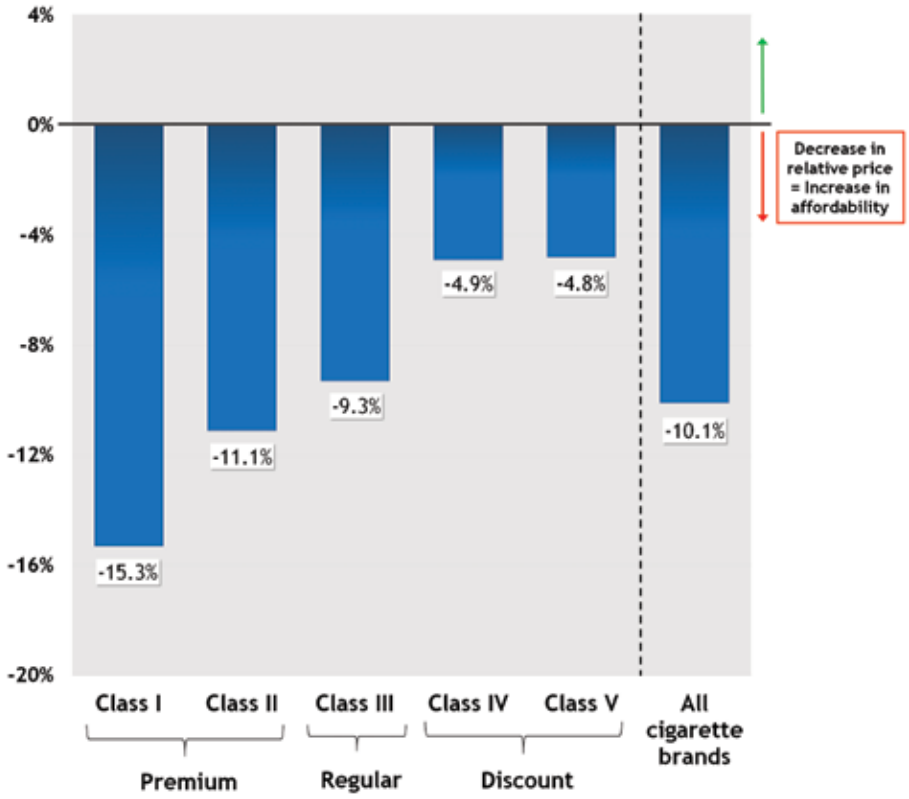
The price elasticity of demand is used to measure the percentage change in cigarette consumption that would result from a 1% increase in the price of cigarettes.[237] Estimates of price elasticities of demand for cigarettes in China based on large nationally representative samples are generally low in magnitude, with data trends suggesting a substantial decline in elasticity over time.[238] For example, a time-series analysis of national data from 1980 to 1996 found an estimated price elasticity of -0.54.[239] Subsequent studies using nationally representative data found lower estimated price elasticities of -0.15 in 2002, and -0.12 to -0.14 between 2006 and 2010.[240, 241] This implies that a 10% increase in the price of cigarettes would have led to a 5.4% reduction in consumption over 1980 to 1996, while a 10% price increase would have led to less than a 2% reduction in consumption between 2002 and 2010. Price elasticity generally gets lower with lower price levels, higher income, and greater availability of cheaper brands. This is a clear indication that cigarette taxes and prices have not kept up with the significant increases in income from the economic growth that China has experienced over the past two decades.

Low-end price elasticity estimates in China may reflect the wide range of prices across cigarette brands available on the market. For example, the range in prices per pack of 20 cigarettes routinely vary so that the highest-price brands are 10 times more expensive than the lowest-price brands; in some retail locations, this range is much higher, with highest-price brands being 50 times more expensive. This enormous variation in cigarette prices reduces the price elasticity of demand because it allows smokers to switch to lower-priced brands in response to price increases instead of quitting.[242, 243]

As mentioned earlier, low price elasticity in China may also be due in part to the fact that increases to cigarette prices have failed to keep pace with rapid income growth.[243, 244] Since 2000, cigarettes have become increasingly affordable as average incomes have increased in the wake of rapid economic growth in the country.[25] Data from the CNTC show that per capita disposable income in China increased almost 2.34 times faster than the price of cigarettes between 1990 and 2007. As a result, cigarettes became more than twice affordable over this time period.[245] Between 2000 and 2012, the affordability index of cigarette consumption increased from 1.00 in 2000 to 1.66 in 2012 – this means that cigarettes were about 70% more affordable in 2012 than they were in 2000.[228]

A recent ITC study by Nargis and colleagues (2016)[246] also found that cigarettes in China have become more affordable from 2006 to 2015, as measured by decreases in the Relative Income Price (RIP) across brands. The decrease in RIP (which translates to greater affordability) was larger for higher-priced brands (-15.3% and -11.1% decrease for Class I and II premium brands, respectively) than lower-priced brands (-4.9% and -4.8% decrease for Class IV and V discount brands, respectively) (see Figure 69). This trend in the growing affordability of higher-priced cigarette brands is consistent with other research showing an increase in the market share of Class I and II brands from 2007 to 2015 (see Figure 71).[47] These findings confirm that tax and price policies in China need to be stronger to counteract the effect of income growth on tobacco consumption. This is especially important given the evidence that demand for tobacco products in LMICs is likely to be at least as responsive and often more responsive to price as demand in HICs.[32]

Figure 69. Change in relative income price of cigarettes in China, 2006-2015



In recent years, a few countries, including the Philippines, Canada, New Zealand, Australia, and Singapore, have implemented or adopted plans to impose regular tax increases that are automatically adjusted for inflation.[247-250] Similar measures are urgently needed in China, where tax and price increases thus far have not kept pace with economic and income growth, and cigarettes have become more affordable over time.

In order to create a win-win situation to decrease the demand for tobacco products and increase government revenues that can be invested in tobacco control or other healthcare programs, China needs to increase tobacco taxes on a regular basis taking inflation into account.

Preliminary Evidence for the Positive Impact of the 2015 Tax Reform in China

On 10 May 2015, the China MOF raised the tax on cigarettes (increased ad valorem tax rate at the wholesale level from 5% to 11%, and added a specific tax of 0.10 RMB ($0.015 USD) per pack of 20 cigarettes at the wholesale level). The STMA passed the tax onto the retail price of cigarettes.

This section presents preliminary evidence for the impact of China's 2015 tax adjustment, based on analyses led by Dr. Guoze Feng (China CDC), and Dr. Rose Zheng (WHO Collaborating Centre on Tobacco Control and Economics at the University of International Business and Economics (UIBE) in Beijing). Overall, findings suggest that the 2015 tax increase has led to some improvements in public health and economic outcomes in China. The evidence thus far shows that following the 2015 tax increase, consumption has decreased while government revenue has increased. Nevertheless, the price of cigarettes is still very low, and cigarettes have become increasingly affordable.

Impact on Consumption

Preliminary findings indicate that for the first time since 2001, the volume of cigarette sales decreased by 2.36% in 2015 compared to 2014. Following the 2015 tax adjustment, sales have continued to decrease by 4.61% from May 2015-April 2016 compared with May 2014-April 2015, and by 5.36% between October 2015-September 2016 compared with October 2014-September 2015.[228] According to STMA data, cigarette consumption decreased by 5.60% in 2016 compared to 2015.[7] Based on this early data, it is estimated that the total number of smokers in China would decrease by about 5 million in the 12-month period after the implementation of the 2015 tax increase.[228]

Impact on Cigarette Prices and Market Structure

Using data from the ITC China Wave 5 Survey (2013-15), Feng and colleagues evaluated the preliminary impact of the 2015 tax increase on the retail price of cigarettes. The nominal and real prices of 352 brand varieties of cigarettes were calculated using data that were collected in the 10 ITC survey locations between 2013 and 2015. Results show a significant increase in the average nominal price of cigarettes (across 286 brand variants) from 24.33 RMB in 2013 to 24.84 RMB in 2015. There was also a significant increase in the average nominal price of the top 10 most popular brand variants between 2014 and 2015 (from 0.6% to 7.4%). While the average real price of cigarettes also went up after the 2015 tax adjustment, the increase was very limited, if factors such as inflation and purchasing power are taken into consideration.[47]

Using the WHO tobacco tax simulation model (TaXSiM), Zheng and colleagues also evaluated the initial impact of the 2015 tax increase on cigarette prices across five brands (selected to represent five classifications of 870 different kinds of cigarettes on the market with 150 brand families). Early findings show an 8.9% increase in the weighted average nominal wholesale price from 10.27 RMB per pack in 2014 to 11.18 RMB per pack in 2015, as well as a 10.3% increase in the average nominal retail price from 11.61 RMB per pack in 2014 to 12.81 RMB per pack in 2015. However, the weighted average cigarette price in China is still low at less than $2.00 USD per pack on average.[168]

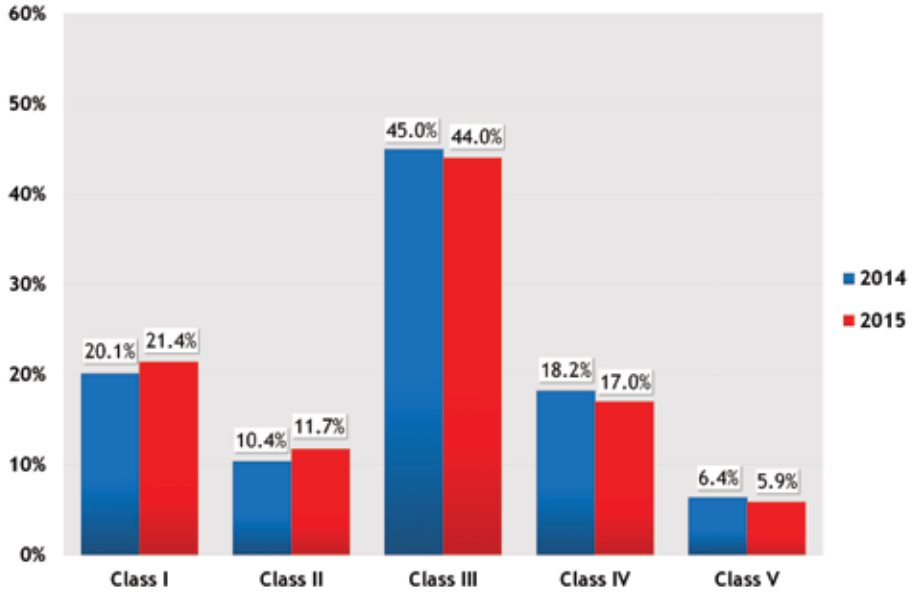
Between 2014 and 2015, price increases for brands in the discount category (Class IV and V) were larger than those for brands in the middle and premium categories (Class II and III). This has led to a reduction in the price gaps between brands in these different classes, which may encourage smokers to up-shift from lower-priced (Class IV and V) brands to mid- and higher-priced (Class II and III) brands.[228]

The significant price gaps between cigarette brands in different price categories, in combination with aggressive marketing of premium brands and increased affordability, has also led to an increase in the market share of higher-priced Class I and II premium brands (see Figures 70 and 71).[168]

Impact on Tax Incidence

The average total taxes on cigarettes (across all five classes) as a percentage of the retail price increased from 52% in 2014 to 56% in 2015, but cigarette tax rates in China are still very low. In 2015, the total tax rate on the most popular brand of cigarettes was estimated at 50%,[168] which is well below the range that is recommended by the World Bank (66% to 80% of the retail price).[251] It is also much lower than the 75% benchmark recommended by the WHO that has been achieved in 33 countries around the world, including Jordan (83%), Bulgaria (83%), the United Kingdom (82%), Turkey (82%), Madagascar (80%), France (80%), and Poland (80%).[41]

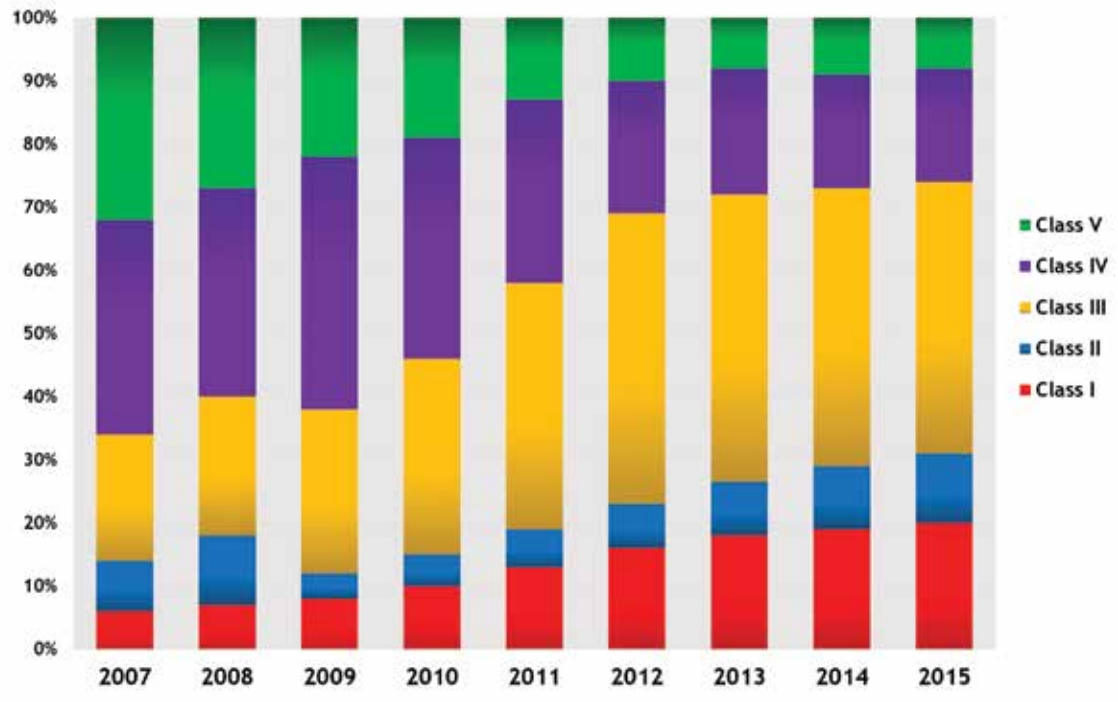
Figure 70. Change in cigarette market structure between 2014 and 2015



Impact on Government Revenue

There is some evidence showing an increase in government revenue after the 2015 tax reform. According to STMA data, the tobacco industry contributed 840.4 billion RMB (about $129.29 billion USD) in tobacco tax revenue in 2015, which represents a 9% increase from their contribution in 2014. As a state-owned enterprise, the industry also contributed an additional after-tax profit of 190.97 billion RMB ($29.38 billion USD), along with 63.6 billion RMB ($9.79 billion USD) enterprise income tax to the central government in 2015.[228] The Chinese government does not currently earmark tobacco tax revenues for tobacco control, health promotion, and/or other health-related activities and programmes, which can lead to greater reductions in smoking than from tax increases alone.[229]

Figure 71. Cigarette market share by volume (2007-2015)



CONTENTS OF CHINESE CIGARETTES

Articles 9 and 10 of the FCTC call upon Parties to regulate the contents of tobacco products and tobacco product disclosures. Article 9 obligates Parties to adopt and implement measures for the testing, measuring, and regulation of the contents and emissions of tobacco products; while Article 10 obligates Parties to implement measures that require manufacturers and importers of tobacco products to disclose information about the toxic constituents and emissions to the government and to the public. Partial guidelines for Articles 9 and 10 were first adopted at the fourth session of the Conference of the Parties (COP4) in November 2010 and continue to be under development, including two new provisions that were added to the guidelines at COP7 in November 2016 to regulate product design features that increase attractiveness (e.g., slim cigarettes and flavour capsules in cigarettes filters) and to require disclosure of information on the contents of products by manufacturers and importers of tobacco products to government authorities.[252, 253] The current guidelines do not yet provide any guidance for reducing the toxicity or addictiveness of tobacco products; however, an intersessional group from diverse backgrounds will be assembled to look at issues related to addictiveness regulation and report back to COP8 in 2018.[253]

Smoking-related diseases result from repeated inhalation of a variety of toxic constituents in cigarette smoke, including nitrosamines, polycyclic aromatic hydrocarbons, volatile organic compounds, and several toxic heavy metals (particularly arsenic, cadmium, lead, and nickel) which accumulate in the body over time.[254] This cumulative exposure to toxic heavy metals through smoking is known to present a significant cancer risk, and biomonitoring studies have indeed shown that smokers have higher levels of cadmium and lead compared to non-smokers.[254, 255] Regulation of the contents of tobacco products has the potential to reduce tobacco-related disease and premature death by reducing the addictiveness and toxicity of tobacco products.

Toxic Heavy Metals

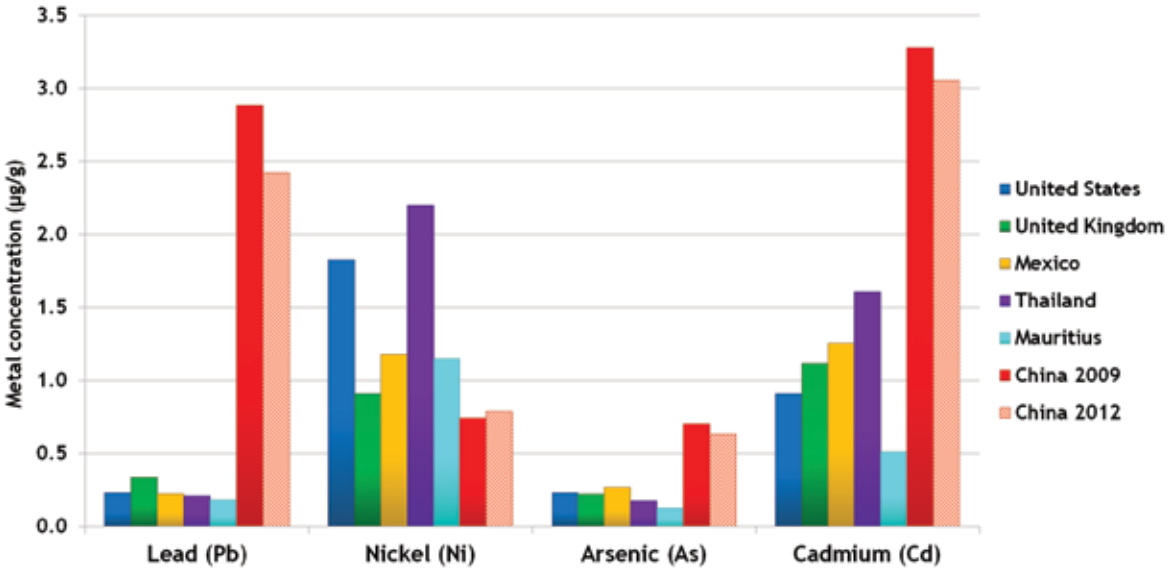
Evidence of high levels of toxic heavy metals in cigarettes in China is a significant public health concern. Metals are absorbed through the soil from which the tobacco is grown, and research has shown that tobacco grown in China has higher levels of certain carcinogenic metals such as cadmium and lead compared to tobacco grown elsewhere.[256]

Studies by the ITC Project have examined the content, emissions, and design characteristics of Chinese cigarettes. O'Connor and colleagues collected samples of packs from a range of Chinese cities and brands in two separate studies done in 2005-06 and 2007, and again in 2009 and 2012.[256, 257] The researchers randomly selected cigarettes from each pack to test the concentrations of toxic heavy metals and nicotine and determine whether there were any changes over time or across regions or brands. Average levels of toxic metals were similar in both studies, and were substantially higher than levels found in American cigarettes in 2009.[254, 256] The levels of toxic metals decreased slightly from 2009 to 2012, but only in four of the cities and mainly in one brand (Beijing brand[xv]), and there was no significant change in nicotine content.

The levels of toxic metals found in Chinese cigarettes can also be compared to the levels found in cigarettes across five other ITC countries (United States, United Kingdom, Mauritius, Mexico, and Thailand) that were collected in 2012-13 using similar measurement procedures.[255] While there were significant differences in cigarette design and metal concentrations across countries and manufacturers, the levels of toxic metals in Chinese cigarettes in both 2009 and 2012 were still higher overall compared to levels in the other ITC countries (see Figure 72). Chinese cigarettes had much higher levels of arsenic (As) (0.63 ug/g in China in 2012 vs. 0.27 ug/g in Mexico, the highest among the five other countries), cadmium (Cd) (3.06 ug/g in China in 2012 vs. 1.61 ug/g in Thailand) and lead (Pb) (2.42 ug/g in China in 2012 vs. 0.33 ug/g in UK) compared to cigarettes from the other five countries, but lower levels of nickel (Ni) (0.79 ug/g in China in 2012 vs. 2.2 ug/g in Thailand).

xv. Note that as of January 2017 the Beijing brand no longer exists.

Figure 72. Mean concentrations of metals in selected cigarettes from China (2009 and 2012) compared to other ITC countries (2012-2013)[255, 256]



Given China's high smoking prevalence and per capita consumption rates, these high levels of exposure to toxic metals among smokers pose a significant public health risk, and point 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. There is a need to develop systems to monitor tobacco metal content and to set upper limits on levels in tobacco. This monitoring and testing should be conducted by a health or regulatory agency that is independent from 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. The WHO Study Group on Tobacco Product Regulation (TobReg), a group of scientific experts mandated to provide evidence-based recommendations to the WHO on tobacco product regulation, has identified a non-exhaustive list of priority toxic contents and emissions of tobacco products for regulation under Articles 9 and 10.[258]

Tar Levels

Cigarette packages in China are required to show tar, nicotine, and carbon monoxide emissions levels from the ISO test, even though FCTC Article 11 recommends removing these numbers from packages because they mislead consumers into thinking that some cigarettes are less harmful than others.

With the claimed intent of fulfilling its responsibility to the FCTC, the STMA has lowered maximum limits on ISO tar ratings in Chinese cigarettes from 17 mg in 2001 to 12 mg in 2011 to 11 mg in 2013.[116, 128] While the goal of this was to continue to mislead smokers into thinking that Chinese cigarettes have become less harmful, reductions of machine-generated tar yields have mainly been achieved by cigarette design modifications, such as increasing filter ventilation.[128] This strategy reduces the amount of smoke collected with the ISO machine; however, it has been well-established that the ISO method is not representative of human smoking patterns and that values obtained from ISO machines are not valid indicators of health risk.[257] This is because smokers can compensate for reduced tar and nicotine yields by smoking more intensively, such as by taking more or larger puffs, smoking more cigarettes, or blocking the filter vents.[128]

This has been shown by an ITC study in which cigarettes were collected from various Chinese cities in 2009 and 2012 to examine changes in design characteristics and reported tar, nicotine, and carbon monoxide levels. The study found that Chinese tobacco companies were indeed able to meet the reduced tar limits set in 2011 by increasing filter ventilation, as ventilation increased by 31.7% from 2009 to 2012 and was the most important predictor of tar yields.[128]

China's increasing focus on lowering tar limits, which is primarily achieved by increasing filter ventilation, has no actual public health benefit in terms of exposure and uptake and may even contribute to negative health consequences by promoting the misconception among Chinese smokers that low tar cigarettes are less harmful.

CONCLUSIONS AND IMPLICATIONS FOR TOBACCO CONTROL IN CHINA

China was among the first 40 countries to become a Party to the FCTC when they ratified the treaty on 11 October 2005. Although the overall pace of tobacco control in China has been slow over the last decade, the government has recently taken important steps to accelerate tobacco control efforts: comprehensive smoke-free laws were implemented in Beijing (June 2015), Shenzhen (January 2017), and Shanghai (March 2017); the ad valorem tax rate for cigarettes was increased from 5% to 11% at the wholesale level which resulted in a price increase (May 2015); and tougher restrictions on tobacco advertising were imposed, including a ban on all forms of tobacco advertising that target youth (September 2015). However, China still needs to do more to reduce the enormous health burden of tobacco use. Each year, over 1 million deaths in the country are caused by smoking, and if current trends continue, this number will increase to 3 million by 2050.[24]

The findings from the ITC China Wave 1 to 5 (2006-2015) Surveys show that tobacco control policies that have been implemented in China as of the Wave 5 Survey (November 2013-July 2015) have had some positive impact; however, China still falls well behind other ITC countries that that have implemented stronger tobacco control policies. The findings below demonstrate the need for China to build on the momentum of recent advancements to combat the tobacco epidemic.

- Exposure to SHS is still higher in China than it is in other ITC countries - the vast majority of the Chinese public are still exposed to SHS in workplaces (62%), homes (73%), bars (82%), and restaurants (70%). The recent implementation of comprehensive smoke-free laws in several major cities sets a clear benchmark for strong smoke-free laws in other provinces and cities, and puts China on the path towards the adoption of a national smoke-free law.
- Smokers' overall knowledge of the health harms of smoking has increased since 2006, but awareness of specific health risks caused by smoking remains low compared to other countries – China has the lowest percentage of male smokers who are aware that smoking causes stroke (40%) and heart disease (61%) among all ITC countries.
- Tobacco packages are a primary source of information about the harms of smoking: 71% of smokers noticed anti-tobacco advertising on cigarette packs in 2013-15. But China's text-only warnings have not been effective in motivating smokers to quit: fewer than 2 in 10 smokers reported that warning labels made them think about the harms of smoking or made them more likely to quit from 2009 to 2015.
- China followed the FCTC's recommendation to raise tobacco taxes in 2009 and 2015, but cigarettes continue to be highly affordable as average incomes have increased over time. Nearly all (91%) smokers stated that they chose their current brand because the brand was affordable. China has the second lowest percentage of male smokers (15%) among 19 ITC countries who "often" thought about the cost of smoking in the last 30 days.
- Quit rates among Chinese smokers have gone up from 6.0% (between 2006 to 2007-08) to 9.2% (between 2011-12 to 2013-15). This is an achievement; however, quit rates in other countries are considerably higher. In addition, many smokers are not motivated to quit because the price of cigarettes in China continues to be low. In 2013-15, only 6% of smokers stated that financial reasons led them to think about quitting "very much", while at least half of smokers in rural areas (50%) and cities (80%) said that financial reasons did not lead them to think about quitting "at all".

Implications for Tobacco Control in China

The findings presented in this report point to the urgent need for the Chinese government to take strong and sustained action to reduce tobacco use and its harms through effective implementation of the FCTC. Importantly, ITC China Survey findings show that such efforts would be supported by the majority of the Chinese public – including both non-smokers AND smokers. For example, support among smokers for comprehensive smoke-free laws in China is already higher than it was in many other countries before the passage of successful smoke-free laws in those countries. ITC evidence also suggests that public support will increase further after strong, national tobacco control laws are implemented.

Based on the ITC China Wave 1 to 5 Survey findings, in comparison with evidence from other ITC countries, the following recommendations for strengthening tobacco control are proposed for China:

Building on Beijing, Shanghai, and Shenzhen's comprehensive smoke-free laws, adopt a comprehensive national smoke-free law accompanied by a strong, rigorous enforcement effort.

China's partial indoor smoking bans have had some positive impact; however, the global evidence is clear that the only way to fully protect the public from exposure to SHS is through 100% smoke-free laws. If China were to adopt a well-enforced, comprehensive national smoke-free regulation, it could achieve a significant reduction of SHS in public places and decrease smoking in the home. This would have a direct impact on protecting the health of hundreds of millions of non-smokers, and would reduce the economic burden associated with healthcare costs and disability caused by tobacco use. A national smoke-free law would position China favorably with the other BRICS countries (Brazil, Russian Federation, India, and South Africa) with respect to compliance with FCTC Article 8 guidelines. The recent adoption of strong smoke-free laws in Beijing, Shenzhen, and Shanghai demonstrate that such laws are possible and would be supported by the majority of the Chinese public, including smokers themselves. However, implementation of a national smoke-free law must also include public education campaigns, strong enforcement, and strict penalties for violations in order to be effective.

Implement large pictorial health warnings covering at least 50% of the front and back of cigarette packages.

Although knowledge of the harms of smoking has increased in China in recent years, there is still room for improvement in awareness of the range of health risks caused by smoking and SHS, especially in rural areas. Health warnings on tobacco packages are a critically important method for informing the public about the harms of smoking; therefore, introducing strong pictorial warnings, as recommended under FCTC Article 11 guidelines, would be the most important, and most cost-effective action that China could take to increase public awareness of the harms of smoking. Large pictorial health warnings accompanied by strong media campaigns would also help motivate smokers to quit and provide them with the information needed to do so. Furthermore, China would join more than 100 countries worldwide that have implemented pictorial warnings and would become the fourth BRICS country to implement pictorial warnings, joining Brazil (30% front and 100% back), Russian Federation (50% front and back), and India (85% front and back).

Design and implement more public education campaigns to further raise awareness of the harms of tobacco use and motivate quitting.

Evidence suggests that along with strong pictorial warnings, China should implement sustained, well-funded media campaigns that highlight the harms of smoking as part of a comprehensive tobacco control strategy. This would help China to improve public awareness about the dangers of tobacco use, reduce smoking initiation, and motivate quitting. Educational and mass media campaigns are also an effective method for decreasing the social acceptability of smoking – which is especially important in China, where smoking is highly acceptable and practices such as gifting cigarettes are still common.

Implement regular tobacco tax increases which translate to price increases at the retail level in order to make cigarettes less affordable over time.

A major barrier to tobacco control in China is that cigarette prices are very low and the affordability of cigarettes is high. Average household incomes have increased with China's rapid economic growth and development over the last decade. Although the government increased cigarette taxes in 2009 and 2015, these increases were not large enough to ensure that cigarette prices went up more quickly than inflation and income growth. As a result, cigarettes have become increasingly affordable for large segments of the population, which poses a major obstacle for reducing smoking in China. In fact, the price of cigarettes is rarely mentioned by Chinese smokers as a reason for thinking about quitting, and is much less likely to be given as a reason to quit compared to smokers in all other ITC countries. Thus, it is clear that stronger pricing and taxation measures, as called for in FCTC Article 6 and its guidelines, are very much needed to increase Chinese smokers' motivation to quit, increase the number of adult smokers who successfully quit, and decrease the number of young people who start to smoke.

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The International Tobacco Control Policy Evaluation Project

The ITC Project

Evaluating the Impact of FCTC Policies in...

25+ countries • >50% of the world's population
>60% of the world's smokers • >70% of the world's tobacco users

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Hungary
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Ireland
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