The International Tobacco Control Policy Evaluation Project

ITC Brazil Project Report

FINDINGS FROM THE WAVE 1 AND 2 SURVEYS (2009-2013)

MAY 2014

Promoting Evidence-Based Strategies to Fight the Global Tobacco Epidemic
Findings from the ITC Brazil Wave 1 and 2 Surveys

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To this end, a presidential decree established the National Commission for the FCTC Implementation (CONICQ) in 2003, which is responsible for the governance of this policy. This Committee is composed of representatives from 18 areas of the federal government, and aims to direct the organization and implementation of an intersectorial government agenda towards addressing the obligations under this treaty.

The National Cancer Institute José Alencar Gomes da Silva (INCA) has been a key player in addressing the obligations to the FCTC. As Executive Secretary of CONICQ, one of INCA’s responsibilities is coordinating the participation and alignment of all parts of the government to meet the objectives and measures set out in the treaty. INCA is also responsible for execution of some actions included in the treaty. Through its Tobacco Control Division, INCA coordinates smoking cessation treatment in the Public Health System, and conducts national campaigns and educational activities in schools, workplaces, and health units. The Epidemiology Division of INCA has actively participated in various national surveys, such as the Global Adult Tobacco Survey (GATS), in partnership with the Brazilian Institute of Geography and Statistics (IBGE). Through our surveillance and monitoring system we can monitor trends in tobacco product consumption in Brazil, as well as the effect of different policy measures. This has allowed us to observe that the policy is on track, as we have seen significant reductions in smoking prevalence over the past 20 years — from 34.8% in 1989 to 18.2% in 2008, among adults aged 18 years and over.

INCA’s role in assessing and monitoring tobacco consumption and behaviour provides a natural fit as a partner for Brazil’s participation in the International Tobacco Control Policy Evaluation Project (the ITC Brazil Project), internationally coordinated by the University of Waterloo in Canada.

This report provides scientific evidence about the strengths and weaknesses of the National Policy, resulting from a cohort survey of adult smokers and non-smokers who live in Rio de Janeiro, São Paulo, and Porto Alegre conducted in 2009 (Wave 1) and 2012-2013 (Wave 2). The results show that Brazil has achieved great progress in areas of tobacco control such as the adoption of health warnings on packages of tobacco products that inform about the dangers of smoking and encourage smoking cessation; the ban on smoking in workplaces and public places which reduces exposure of the population to secondhand smoke; and the ban on advertising, promotion, and sponsorship which reduces people’s exposure to marketing that induces consumption. Although Brazil has shown global leadership in these areas, the report points out some aspects that need to be strengthened or redirected to fully implement the FCTC and its guidelines.

Although nationally coordinated by INCA and the National Secretary of Drugs Policy (SENAD), the ITC Brazil Project had valuable contributions from several other governmental and non-governmental partners: Oswaldo Cruz Foundation (Fiocruz), Brazilian Alliance for Tobacco Control (ACTbr), and the Cancer Foundation. This partnership reflects the participative and collaborative spirit of the National Policy on Tobacco Control — a core strategy for facing opposition and undue interference of the tobacco industry.

We thank the ITC Brazil Project team at University of Waterloo led by Professor Geoffrey T. Fong for their ongoing support for the ITC Brazil Survey and commitment to disseminating ITC Project findings to assist Brazil and other countries in the global fight against tobacco.

Director General, Instituto Nacional de Câncer José Alencar Gomes da Silva
Message

Brazil has been highly successful in reducing the prevalence of smoking with the adoption of a strong National Policy on Tobacco Control. However, tobacco consumption continues to burden the Brazilian Public Health System, because it is responsible for 130,000 deaths annually and 30% of cancer deaths. Meanwhile, the tobacco industry continues to circumvent the law.

The Cancer Foundation became a partner in the ITC Brazil Project in 2009, recognizing the importance of conducting evidence-based research to identify the strengths and weaknesses of the Brazilian Policy on Tobacco Control, and to promote behaviour change among smokers.

This report presents the results of the two waves of the ITC Brazil Survey, which clearly show that the country has implemented effective measures in several important areas of tobacco control. For example, health warnings on cigarette packs were selected by more than half of respondents (56%) as a reason that led them to think about quitting smoking. The prohibitive laws on advertising, promotion, and sponsorship have reduced the awareness of tobacco promotion from 46% of smokers and 37% of non-smokers in 2009, to 21% of smokers and 24% of non-smokers three years later.

It is important to highlight the findings which point to specific measures that Brazil should adopt to enhance its national policy. For example, the percentage of smokers and non-smokers who own homes free of tobacco smoke is still low (41% in Wave 1 and 46% in Wave 2). ITC research data in Europe show that national laws banning smoking in public places, supported by ongoing educational campaigns in the media, result in an increase in the number of tobacco-free homes.

The policies that promote smoke-free places in Rio de Janeiro, São Paulo, and Porto Alegre resulted in over 80% of workplaces being totally free of smoking, and less than 10% of smokers and non-smokers have reported noticing people smoking in restaurants in these three cities. These numbers could be even better if Law no. 12,546 of 2011, which prohibits smoking in public places around the country was put into practice, regulated, and enforced, and if permanent financing was provided for mass-media educational campaigns about the dangers of secondhand smoke exposure, which would support smokers to quit. The vast majority of non-smokers (95% to 97% in the three cities) and smokers (88% to 90%) support the national legislation of smoke-free places.

Moreover, enforcement of the prohibition of cigarette advertising at point of sale (POS) in the country has not been established. As a result, the display of cigarette packs became more visible, with many stores placing them in attractive and illuminated showcases. The ITC Survey report urges Brazil to quickly implement compliance with this ban on advertising at POS, and also to further advance the policy by banning the display of cigarettes and other tobacco products in stores.

Finally, although Brazil has been playing a leadership role in adopting strong health warnings, the ITC Brazil Survey found that while there was a significant increase in the percentage of smokers who read or looked closely at the messages in the packaging between Waves 1 and 2, there was a downward trend in warnings making smokers think about the harms of smoking or making them more likely to quit smoking. The report recommends that in the next round of pictorial warnings, the messages be included on at least 50% of the front face of the packaging and that the target date for this implementation be accelerated from 2016 to 2014.

We thank Professor Geoffrey T. Fong and ITC Project staff in Brazil and Canada for preparing this comprehensive analysis. We are certain that this report of the ITC Brazil Survey findings will contribute to the formulation of effective tobacco control policies, both in Brazil and internationally.

Marcos Moraes
Chairman of the Board of Trustees of the Cancer Foundation
EXECUTIVE SUMMARY

Prevalence of cigarette smoking has declined over the past two decades in Brazil, in no small part as a response to the government policies implemented to reduce tobacco use. In addition, the impacts of these policies are reflected in the reduction of deaths from chronic diseases, such as lung cancer. Unfortunately, smoking and smoking initiation continue to occur as the tobacco industry finds ways to work around some of these policies and continue to promote their deadly product. Although Brazil has achieved very significant results in tobacco control, there are still issues that need to be addressed, such as the regulation of the total ban on smoking in enclosed places, the display of tobacco products at point of sale, as well as the effective prohibition of the use of additives aimed at making cigarettes more attractive.

The World Health Organization’s Framework Convention on Tobacco Control (WHO FCTC) is a global health treaty, established in 2005 to provide a framework for countries to reduce the use of tobacco products. The government of Brazil ratified the treaty in 2005 and continues to implement policies to meet the FCTC guidelines. The International Tobacco Control Policy Evaluation Project (the ITC Project) was developed to provide an evidence base to guide policies enacted under the FCTC and to systematically evaluate the effectiveness of these legislative efforts. The ITC Project conducts longitudinal cohort surveys in more than 20 countries to assess the impact, and identify the determinants of effective tobacco control policies, in the areas of: health warning labels and pack descriptors; pricing and taxation of tobacco products; smoke-free legislation; tobacco advertising, promotion, and sponsorship; and education and support for smoking cessation. In addition to policy evaluation, the ITC Project provides a greater understanding of patterns of tobacco use and cessation — over time and across countries, including factors that predict quit attempts and successful quitting.

The ITC Brazil Project was created in 2009 to develop a longitudinal smoking behaviour survey that was comparable to surveys used in all other ITC countries. The project is a partnership between the ITC Project in Canada at the University of Waterloo and several institutions in Brazil including: the National Cancer Institute (INCA), the National Secretariat for Drug Policy (SENAD), and the Cancer Foundation, with support from Oswaldo Cruz Foundation (Fiocruz), and the Brazilian Alliance for Tobacco Control (ACTbr). A cohort of approximately 1,200 adult smokers (18 years and older) and 600 adult non-smokers living in Rio de Janeiro, São Paulo, and Porto Alegre were randomly selected and interviewed by telephone in 2009 (Wave 1) and 2012-2013 (Wave 2). The sample was replenished in the second wave to replace Wave 1 respondents who were lost to follow-up. Data analyses incorporated survey weights, as well as adjustments for the potentially confounding effects of “time-in-sample”, gender, age, smoking status, and wave.

Some highlights of the results of the ITC Brazil Wave 1 and Wave 2 Surveys are summarized below.

1 Time-in-sample is the number of times a respondent has participated in the survey and controls for the variation in responses among respondents who are newly recruited compared to those who have completed one prior wave, who vary from those who have completed two prior waves and so on.
Smoking Behaviour

Daily consumption of cigarettes is relatively high in the three cities surveyed in Brazil, based on a comparison with other ITC countries. Overall, the average number of cigarettes smoked per day (CPD) by daily smokers in Brazil remained similar from Wave 1 to Wave 2 at 17 CPD; however, there was a significant increase in CPD by daily smokers in the city of Porto Alegre — from 15 cigarettes per day at Wave 1, to 19 cigarettes at Wave 2. This increase was significant for both females and males in Porto Alegre. In addition, the CPD in Porto Alegre at Wave 2 was significantly higher than both São Paulo and Rio de Janeiro.

A common indicator of addiction to cigarettes is measured by the amount of time after waking up that a smoker has his/her first cigarette of the day. Male smokers in the three cities surveyed (19%) are more likely to have their first cigarette within five minutes of waking than male smokers in the other ITC Latin American countries of Uruguay (16%) or Mexico (5%). Female smokers in these three cities (18%) are similar to female smokers in Uruguay (19%), but much higher than female smokers in Mexico (5%) in this measure of addiction.

Five percent (5%) of the smokers in the ITC Brazil Survey reported regularly smoking a flavoured cigarette brand (including menthol or vanilla). These findings differ from a recent survey conducted in Brazil with youth which found that 60% of this population preferred to smoke menthol cigarettes, and may be reflective of the difference in the age of the samples (the ITC Brazil Project surveys adults 18 years and older). The findings suggest that the flavours added to cigarettes increase smoking initiation.

The non-cigarette products that survey respondents reported using most frequently (including those who smoke regular cigarettes and those who do not smoke cigarettes) are clove cigarettes (13%), cigars (10%), and shisha/waterpipes (8%). Although the sale of electronic cigarettes is banned in Brazil, about one-third of all respondents had heard of them, and of those that had heard of them, about half (60% of smokers; 46% of non-smokers) believed they were less harmful than regular cigarettes. About 4% of all smokers had tried the product.

There were important findings that together provide evidence to support improvements to smoking cessation interventions in Brazil: Nearly all smokers (85% to 89%) regret ever having started to smoke and over two-thirds (69%) believe that Brazilian society disapproves of smoking. Indeed over two-thirds (69%) of smokers themselves have a negative overall opinion of smoking, and, as presented below, 80% have tried to quit. But the vast majority of smokers feel that they are addicted to cigarettes, with over half (54%) reporting that they are very addicted. It is clear from these findings, taken together, that the majority of smokers in Brazil don’t want to smoke but are trapped because they are addicted.
Smoking Cessation

Eighty percent (80%) of smokers in the Wave 2 sample reported ever making a quit attempt. Of the 495 cohort smokers in Wave 1 who were re-interviewed at Wave 2, 69% attempted to quit and 25% were successful in quitting. Of 303 female cohort smokers, 73 (24%) quit at Wave 2 and of 192 male cohort smokers, 52 (27%) quit. Smokers who reported that they were making plans to quit significantly altered their timeframe for a planned quit date between Waves 1 and 2. Those that planned to quit within one month decreased from 36% at Wave 1 to 19% at Wave 2. Those planning to quit within six months (20% at Wave 1 and 26% at Wave 2) or sometime later in the future (23% at Wave 1 and 32% at Wave 2), significantly increased.

The most common reasons cited by smokers to think about quitting and by quitters as reasons for quitting were: concern for their personal health, setting an example for their children, concern about the effect of their cigarette smoke on non-smokers, and warning labels on cigarette packages. Visits to a doctor or other health professional were significantly higher among smokers in Porto Alegre at Wave 2 compared to smokers in Rio de Janeiro and São Paulo. Among those who visited a doctor or other health professional, smokers in Porto Alegre were also more likely than those in São Paulo to receive: advice to quit (62%), suggestions for quitting (62%), referrals to other professionals (50%), and prescription medication to help them stop smoking (39%) at Wave 2.

A high percentage of smokers (85%) and non-smokers (92%) at Wave 2 agreed that the government should do more to tackle the harm done by smoking. Additionally 85% of all smokers felt that the government should do more to help smokers give up smoking.

Smoke-free Public Places

There was an increase in the percentage of smokers who reported having a complete workplace smoking ban between Waves 1 and 2. Seventy-eight percent (78%) of smokers at Wave 1 reported that smoking was not allowed in any indoor area of their workplace, and 85% reported that there was an indoor smoking ban at Wave 2. For non-smokers, 79% reported a workplace ban at Wave 1 and 89% reported there was a ban at Wave 2. Over three-quarters of smokers (75% at Wave 1 and 80% at Wave 2) believed that smoking should not be allowed at all in indoor workplaces.

Noticing smoking indoors in restaurants over the last 6 months by smokers decreased from 17% at Wave 1 to 5% at Wave 2. There was also a decrease in noticing smoking among non-smokers from 30% to 9%. Noticing smoking in bars over the last 6 months also decreased between waves. Sixty eight percent (68%) of smokers and 69% of non-smokers noticed smoking in bars at Wave 1, declining to 19% of smokers and 26% of non-smokers at Wave 2. There is very high support for the national smoke-free policy in both non-smokers (range of 95% to 97% across the three cities) and smokers (range of 88% to 90%). The percentage of smokers and non-smokers who had smoke-free homes at Wave 2 did not increase significantly over time (41% to 46%), but support for banning smoking in cars with children was very high (88% of smokers and 91% of non-smokers) at Wave 2.

The government has not yet established regulations for the national comprehensive smoke-free law legislated in December 2011, thus many parts of the country are not protected by smoke-free laws.
Packaging and Labelling

The current series of warning labels on cigarette packages have been in circulation in Brazil since 2009 and are located only on the back of the pack. These factors may negatively influence their impact on smokers. The study found that although smokers who reported noticing the labels showed a significant increase in reading or looking closely at the warning labels from Waves 1 to 2, there was little change, or a decreasing trend, in labels making smokers think about the harms of smoking, forgoing a cigarette, or making them more likely to think about quitting. There was a significant increase in the percentage of smokers who reported the warning labels made them feel extremely worried; however, this was reported by less than 15% of the sample at Wave 2. From a cross-country comparison perspective, female smokers in Brazil were the most likely to avoid looking at the warning labels out of the 20 countries surveyed.

A ban on misleading descriptors such as “light” and “mild” was implemented in Brazil in 2001, as the scientific evidence has established that these cigarettes are no less harmful to a smoker’s health than regular cigarettes. However, approximately 10% of smokers believe their regular brand is “a little less harmful” than other brands, and about half believe that their brand is lighter in taste and smoother on their throat and chest. About half of the smokers agreed that cigarettes should be sold in plain packaging, i.e., not allowing colorful designs on the packaging which can mislead consumers into perceiving that different cigarette brands or varieties have different levels of harm.

Tobacco Price and Taxation

Although ITC Brazil data shows that the affordability of cigarettes decreased between Waves 1 and 2, the percentage of smokers who reported that they “often” or “very often” thought about the money they spent on smoking remained relatively unchanged. In addition, decreases were also observed in the percentage of smokers reporting price as a reason for choosing their regular brand of cigarettes, as well as in the percentage of smokers who reported that the price of cigarettes led them to think about quitting.
Education, Communication, and Public Awareness

The majority of smokers were aware of the variety of health risks associated with smoking, with the exception of smoking-related blindness. Noticing advertisements or information related to the dangers of smoking, or encouraging quitting, decreased between Waves 1 and 2. Only a quarter of smokers surveyed frequently noticed anti-smoking information at Wave 2. Similarly, there were decreases in the percentage of smokers who thought about the harm smoking might be doing to them or to others, as well as in the percentage who thought that smokers have a “somewhat high” or “very high” likelihood of developing lung cancer.

Tobacco Advertising, Promotion, and Sponsorship

The ITC Survey findings demonstrate clearly that laws passed in Brazil since 2000 have subsequently reduced public awareness of tobacco advertising, promotion, and sponsorship (TAPS), and continue to do so. Smokers in all cities report significant decreases in noticing promotion of smoking (from 46% at Wave 1 to 21% at Wave 2), with low-income smokers more likely to notice smoking promotion at both waves. However, despite the passing of Federal Law no. 12.546 in December 2011 banning the promotion and advertising of cigarettes at point of sale in Brazil, the law has not yet been implemented; thus, in many places the tobacco industry has continued to promote their product within stores, clearly violating the current legislation. In parallel, the display of cigarettes has been enhanced through attractive, illuminated cases in stores, restaurants, and other venues where they are sold; sometimes without the required health warnings.

Noticing sponsorship of sport events by tobacco products decreased significantly between the two waves from 8% to 4% in smokers and 12% to 6% in non-smokers. Noticing art event sponsorship significantly decreased for smokers from 6% to 2%.

Analyses showed that 13% of smokers and 18% of non-smokers reported seeing an actor smoking “often” or “very often” in soap operas and TV programs.

The 2011 point of sale advertising ban has not been fully enforced, allowing illuminated cigarette display cases to become the norm and often lacking the required warning labels.
The results of the ITC Brazil Survey demonstrate that Brazil has made progress in implementing effective tobacco control policies; however, the evidence also points to areas where Brazil should strengthen policies to increase the salience and effectiveness of the health warnings, reduce secondhand smoke in public places, increase cessation, and reduce the initiation of smoking.

1. To broaden the impact of health warnings, it is recommended that Brazil require pictorial warnings on at least 50% of the front of the pack, in addition to the current status of 100% of the back. The present law which plans for text-only messages to occupy 30% of the front of the packaging by 2016 does not meet the recommendations of the Article 11 Guidelines which call for pictorial health warnings on at least 50% of the front and back of the pack. To avoid warning label wear-out, it is important to conduct a permanent rotation of messages. As the current warnings have been in circulation for five years, the government should move forward the scheduled date of implementation of the new warnings — from 2016 to 2014.

2. Effectiveness of the 2011 advertising ban at point of sale (POS) is weak due to poor enforcement. The tobacco industry continues to advertise their brands on panels at POS. Furthermore, the display of cigarette packs has generally become more visible as many establishments exhibit them in attractive, illuminated cases. To avoid further promotion of cigarettes in retail establishments, Brazil should quickly establish regulations and protocols for enforcement of the POS ban. Further restrictions on product advertising at POS should focus on implementing a complete ban on the display of cigarettes and other tobacco products at POS.

3. Retailers and the public should be educated about deceptive tactics used by the tobacco industry to promote their products among youth audiences and the harms of such strategies on the uptake of smoking among youth.

4. Strong public support for government initiatives to assist smokers in quitting, high perceived negativity about smoking overall, and strong feelings of regret among smokers for initiating smoking demonstrate that the timing is favourable to strengthen regulatory measures, such as a complete ban on the use of additives in tobacco products, as well as other initiatives to support smoking cessation. Increases in cigarette consumption among daily smokers in Porto Alegre, indicate that smokers in that city in particular could benefit from increased anti-smoking campaigns and access to cessation services. Smokers in Porto Alegre indicated a willingness to quit as they reported higher levels of visits to health professionals and a greater likeliness to receive cessation support than smokers in Rio de Janeiro and São Paulo.
5. Protocols for regulation and enforcement of the 2011 national legislation that bans smoking in all enclosed workplaces and public places need to be defined to fully implement and ensure compliance with this law, as already is in effect in São Paulo, Rio de Janeiro, and Paraná.

6. Sustained funding for mass media campaigns should be in place to educate the public about the harms of secondhand smoke, to further increase compliance with the forthcoming national smoke-free law regulations, as well as to encourage the adoption of home smoking bans.

7. The ITC Brazil Survey shows very strong public support for a ban on smoking in cars with children (88% of smokers and 91% of non-smokers). This demonstrates that Brazil is well-positioned to adopt national smoke-free legislation, which has been implemented in a number of countries, including Cyprus, Bahrain, Mauritius, Australia, and Canada, and which will be implemented in other countries, including the United Kingdom.

8. The World Cup in Brazil in 2014 presents an opportunity to associate the sport with a life free from tobacco. This could be done by completely banning smoking and prohibiting the sale of cigarettes and other tobacco products within all sports stadiums.

9. A new tax structure implemented in 2012, prior to ITC Brazil Wave 2 Survey, requires annual increases on cigarette tax rates for four years, up to the year 2016. The impact of these increases on cessation, quit intentions, and smoking behaviour should be closely monitored by the ITC Brazil Project and other studies because increasing the price of cigarettes is known to have an important influence on increasing quitting.

10. The high prevalence of noticing smoking in the entertainment media and conclusive evidence indicating that smoking in movies leads to initiation of smoking, suggests the need for Brazil to regulate smoking in movies and television programming by implementing strategies outlined in the FCTC Guidelines for Article 13.
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“The ITC Brazil Survey findings provide an important and comprehensive roadmap for guiding successful tobacco control policies, and will contribute to strengthening governmental efforts to regulate this lethal product. Brazil has been working hard to reduce the prevalence of smoking and the burden of tobacco consumption, especially among youth and low-income people. We are on course, but there are many challenges to overcome. The ITC Survey is a useful tool to guide the advances needed to curb the smoking epidemic and to evaluate the effects of global tobacco control.”

Tânia Cavalcante
Executive Secretariat of the National Commission for FCTC Implementation National Cancer Institute of Brazil Ministry of Health
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 Framework Convention on Tobacco Control (WHO FCTC) in more than 20 countries.

The ITC Brazil Project was created in 2009, when the National Cancer Institute José Alencar Gomes da Silva (Instituto Nacional de Cáncer - INCA) partnered with the ITC Project at the University of Waterloo to design a longitudinal survey to evaluate the impact of tobacco control policies in Brazil. The ITC Brazil Wave 1 Survey was conducted from April to June in 2009 in the cities of Rio de Janeiro, São Paulo, and Porto Alegre. Wave 2 was conducted in the same cities from October 2012 to February 2013.

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- Canadian Institutes of Health Research (CIHR)
- Ontario Institute for Cancer Research (OICR)

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BACKGROUND

The International Tobacco Control Policy Evaluation Project (the ITC Project)

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

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

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

In addition to policy evaluation, the ITC Project focuses on measuring and understanding patterns of tobacco use and cessation over time and across countries, including identifying factors that predict quit attempts and successful quitting. For example, ITC research is evaluating a broad range of influences on cessation such as policy-relevant factors, demographic factors, environmental factors, and beliefs and attitudes such as perceived risk, beliefs about the social acceptability of smoking and use of other forms of tobacco, and reports of whether significant others are supportive of quitting. Such findings have important implications for the design and implementation of effective individual and population-level programs and policies to support cessation.

The ITC Brazil Project

The ITC Brazil Project was created in 2009 to evaluate the impact of tobacco control policies in three Brazilian cities and to understand the determinants of tobacco use behaviour. The National Cancer Institute of Brazil (Instituto Nacional de Câncer José Alencar Gomes da Silva, INCA) partnered with the ITC Project at Waterloo University, Canada to design a longitudinal survey that was comparable to questionnaires developed for all countries involved in the ITC Project. The objectives of the ITC Brazil Survey are:

a) To evaluate the impact of the Brazilian pictorial warning labels.

The ITC Brazil Survey measures changes in effectiveness of warning labels as new labels are implemented by measuring smokers' responses to the labels across a variety of indicators such as awareness of health effects, noticing the health warnings, reading/looking closely at the warnings, thinking about the harms of smoking, thinking about quitting, avoiding the labels, and forgoing a cigarette.

b) To evaluate the impact of smoke-free initiatives, both cross-sectionally and longitudinally across the three cities in the survey.

The ITC Survey measures changes in smokers' and non-smokers' awareness of people smoking in key venues (workplaces, restaurants, public transportation, cinemas, etc.) as smoke-free laws are implemented, as well as self-reported smoking behaviour. It also determines support for smoke-free laws in those venues among smokers and non-smokers and compares support before and after the implementation of smoke-free laws.
c) To evaluate the impact of specific tobacco control policies on smoking attitudes and behaviour.

In addition to examining health warning labels and smoke-free initiatives, the ITC Brazil Survey has many questions that are designed to measure the extent to which policies (and other interventions such as media campaigns) affect smoking behaviour, such as beliefs and attitudes towards smoking and intentions to quit.

d) To compare smoking behaviour and the impact of policies in Brazil with other ITC countries.

The ITC Survey is being administered in more than 20 countries. The questions in the survey are designed to be equivalent across all ITC countries to enable comparisons in patterns of smoking and responses to policies across countries.

**Longitudinal Cohort Design**

A cohort of approximately 1,200 adult smokers and 600 non-smokers (18 years and older) living in Rio de Janeiro, São Paulo, and Porto Alegre were interviewed by telephone in 2009 (Wave 1) and 2012-2013 (Wave 2). The sample was replenished in the second wave to replace Wave 1 respondents who were lost to follow up.

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

**Wave 1**

A cohort of 1,215 smokers and 610 non-smokers were interviewed by telephone in three cities: Rio de Janeiro, São Paulo, and Porto Alegre.

**Wave 2**

A total of 1,222 smokers and 608 non-smokers were interviewed by telephone in the Wave 2 Survey. Of this sample, 495 smokers and 260 non-smokers were successfully recontacted from Wave 1 (41% of smokers and 43% of non-smokers). Those Wave 1 respondents who could not be reached at Wave 2 were replaced with newly recruited respondents (the replenishment sample). The replenishment sample consisted of 727 smokers and 348 non-smokers.

The ITC Brazil Wave 1 Survey (April – June 2009) was conducted after the implementation of substantial tax increases (a specific rate increase of 30% in 2007)² and just prior to the August 2009 implementation of the third round of pictorial warning labels mandated by the Brazilian government. This third set of images included some of the most vivid and emotionally arousing health warning label images in the world, based on research in neuropsychology and the neurobiology of emotions. Wave 2 (October 2012 – February 2013) was designed to measure the post-implementation impact of the third round of warning labels, as well as to monitor the response to recent legislation which banned flavours (regulated by a resolution of National Health Surveillance Agency – (ANVISA), Agência Nacional de Vigilância Sanitária) in March 2012. In addition, national smoke-free legislation and a ban on advertising at point of sale were passed in 2011 prior to Wave 2, but both polices have yet to be regulated and therefore are not enforceable. However, comprehensive smoke-free legislation was enacted and successfully enforced in the states of Rio de Janeiro and São Paulo by 2009, and the city of Porto Alegre had implemented smoking restrictions in public places in 2007; thus the three cities involved in the survey had smoke-free legislation in place by Wave 2.
THE TOBACCO LANDSCAPE

Brazil is a global leader in tobacco control, having implemented strong tobacco control measures over the past 25 years to protect the Brazilian public from the harms of smoking.

The National Policy on Tobacco Control is dedicated to fulfilling the obligations and guidelines of the World Health Organization Framework Convention on Tobacco Control (WHO FCTC). As the FCTC measures are of a multisectorial nature, the implementation of this international public health treaty requires the active participation of many government sectors, not exclusively the health sector.

The National Commission for the FCTC Implementation (CONICQ) is responsible for the governance of this policy. This Commission is composed of representatives from 18 areas of the federal government, including the National Secretary of Drugs (SENAD), and aims to direct the organization and implementation of an intersectorial government agenda towards addressing the obligations under this treaty. The National Cancer Institute (INCA) is responsible for the Executive Secretary of CONICQ.

The National Tobacco Control Program (NTCP) was created in 1989 by the Ministry of Health and coordinated by the National Cancer Institute of Brazil (INCA) nationwide. Encompasses a broad range of activities that promotes healthy behaviours and lifestyles, and includes activities designed to reduce tobacco-related deaths and diseases such as cancer in Brazil. Program actions are developed in partnership with federal, state, and municipal governments to empower and support the 5,561 Brazilian municipalities in the areas of education, legislation, and economics.

Brazil played a global leadership role in the development of the FCTC and ratified the treaty in November 2005. Brazil has continued to serve as a tobacco control leader in Latin America and globally, in the implementation of strong policies to meet the obligations of the treaty.

Smoking Prevalence

Brazil is the largest country in South America, with a population of approximately 200 million. Smoking prevalence in Brazil, which reached its height in the 1980s, has significantly decreased over the past two decades in conjunction with the implementation of effective policies to curb smoking. National surveys conducted in 1989, 2003, and 2008 (adjusted for sampling differences), show a decrease in smoking prevalence of nearly one-half— from 34.8% in 1989, to 22.4% in 2003, and to 18.2% in 2008 in adults 18 years and older. The rate of decline between 1989 and 2008 was relatively larger for younger age groups, and for those with over 9 years of education, but relatively similar across genders.

More recent Ministry of Health surveys, conducted in Brazilian capital cities and the federal district (a total of 27 cities), report a continuing decline in smoking prevalence in adults over 18 years from 15.6% in 2006 to 12.1% in 2012. These surveys were also in alignment with national surveys which reported higher prevalence rates in males, smokers with 8 or less years of education, and smokers in the southern tobacco growing region of Brazil.
Smoke-free Public Places

Article 8 of the FCTC obligates Parties to implement effective policies to protect people from exposure to tobacco smoke by adopting 100% smoke-free environments in public places. Research evidence is clear that there is no safe level of exposure to secondhand smoke, and that ventilation systems and designated smoking rooms are not effective in protecting people from the harmful effects of exposure to cigarette smoke. The Global Adult Tobacco Study (GATS) conducted in Brazil in 2008 found respondents’ reports of secondhand smoke exposure to be high: 22.8% reported exposure at the workplace, 10.1% in restaurants, 4.8% on public transportation, 4.1% at health care facilities, and 3.7% in government buildings or offices.

Throughout the 1970s and 1980s, anti-smoking campaigns were being endorsed in Brazil by medical profession advocates, and some members of the government proposed tobacco control policies to reduce smoking in public places. The first legislation to promote workplace smoke-free environments was passed in 1988, with an inter-ministerial Ordinance recommending the development of smoking control measures and designated smoking areas. In 1988, a new Constitution was created in Brazil, which stated that “Health is a right of all and an obligation of the State.” The new constitution stimulated the transformation of the national health policy and gave appropriate significance to primary care and preventive health measures.

In 1996, Law 9.294 was passed which banned the use of all smoked tobacco products in collective areas, whether public or private, such as government offices, hospitals, classrooms, libraries, workplaces, theaters, and movies, except in the proper designated smoking areas. At that time, the tobacco industry contributed to the creation of shared areas for smokers and non-smokers in restaurants, nightclubs and other commercial places, taking advantage of weak regulatory text of the law, which gave rise to different interpretations, hampering their application and enforcement. In 2000, Law 10.167 was passed which banned the use of tobacco products on aircraft or other vehicles of public transportation, as a result of a movement pushed by Brazilian Medical Association. In 2002, the inter-ministerial ordinance nº 1.498 recommended that health and educational institutions implement programs to promote smoke-free environments.

Without an effective national law to protect the population from the hazards of secondhand smoke, regional initiatives began to take place starting in 2008. 100% smoke-free laws were implemented in the states of São Paulo and Rio de Janeiro in 2009, and the city of Porto Alegre has had municipal legislation to restrict smoking in public places since 2007. With continued lobbying from civil society, a national smoke-free law was eventually passed in December 2011, which did not allow designated smoking areas. The regulation of this law has been pending since that time. It is the role of health surveillance organizations to implement the smoke-free law; however, to date the law has not been enforced. While regulations for the national smoke-free law are being developed, the National Health Surveillance Agency (ANVISA) is preparing protocols for inspection to ensure comprehensive enforcement of the laws across the country.
In 2001, Brazil became the second country in the world, after Canada, to implement pictorial warnings on tobacco packs. The current warnings occupy 100% of the back of the pack. An additional text warning is required on 30% of the front of the pack by 2016.

Tobacco Product Warning Labels in Brazil

Article 11 of the WHO FCTC requires each tobacco product package to include health warnings describing the harmful effects of tobacco consumption. These warnings must be approved by the competent national authority; be rotating; be large, clear, visible and legible; occupy 50% or more of the principal display areas; and include illustrative images.

Tobacco health warnings were first implemented in Brazil as early as 1988. The Health Ministry Advisory Board for Tobacco Control began to take action on tobacco by including text warnings on tobacco products and advertisements that stated: “The Health Ministry advises: Smoking is harmful to health.” In 1995, the text messages were required to be written as more specific health warnings, for example “Smoking can cause lung cancer”, through a voluntary agreement between the government and tobacco companies. However, this changed in 1996 when a law was passed that mandated the specific health warnings.

In 2001, Brazil became the second country in the world, after Canada, to implement pictorial health warnings on tobacco packs. ANVISA determined that images depicting the health risks of smoking would occupy 100% of one of the largest sides of the package. A quitline telephone number was also included on tobacco product packages. Additionally in 2001, Brazil became the first country to ban the use of terms such as “light” or “mild” on tobacco products to prevent any misleading or false perceptions that some products are safer than others.

Brazil’s pictorial warning labels have changed several times since the first set was released in 2001 (see Figure 1). Round 1 included nine pictorial warning labels that were in circulation from 2001-2004. Round 2 warnings, which included 10 images, were in circulation from 2004-2009. Round 2 warnings were accompanied by stronger text messages and were also required to be included on tobacco product advertising. A third set of 10 warning images was released in August 2009, and are currently in circulation. Overall, the labels have evolved to provide a clearer image of the message being conveyed and create avoidance, opposing strategies of the tobacco industry to make attractive packages.

Other studies showed that previous warning images may have triggered smokers to smoke rather than encouraging them to quit, therefore warnings after the Round 1 images no longer included people smoking or lighting cigarettes.

Overall, the labels have evolved to provide a clearer image of the message being conveyed and encouraging avoidance of the cigarette package — opposing strategies of the tobacco industry to make attractive packages.
Figure 1. Brazil’s Round 1 to Round 3 Pictorial Warnings

Round 1: 2001-2004

Round 2: 2004-2009

Round 3: 2009-present
The current Round 3 warning labels are more graphic and therefore more likely to trigger strong, aversion emotions compared to previous images. The aversive emotional characteristics are measured by neurophysiological reactions related to feelings of repulsion. Research has shown that participants have the highest arousal rates when labels are most threatening to survival, and are more likely to catch one’s attention, making them more avoidant to what can cause such a threat. The labels conveying the risk of smoking while pregnant demonstrate the evolution of the images as they become increasingly dramatic with each new Round — from a pregnant woman smoking contently in Round 1, to a premature baby in a hospital bed in Round 2, to a more shocking image of a fetus in an ashtray in Round 3.

Research using ITC data to evaluate the effectiveness of pictorial warnings in Brazil, Uruguay, and Mexico found that Brazil’s Round 2 health warning labels had a greater cognitive and behavioural impact than Uruguay’s 2008 labels which depicted abstract imagery (a vial with skull and crossbones, dynamite, and a tombstone) on 50% of the front and back of the pack, or Mexico’s 2008 text-only labels. In Brazil, cognitive impacts were strongest among smokers who had attained a low level of education. However, warning label salience (noticing and looking closely) was significantly higher in Uruguay than in Brazil or Mexico, likely due to having a pictorial warning on both the front and back of the pack. Brazilian smokers were also more likely to be aware of and to have used the telephone quitline, which was advertised not only on packs, but also in all Brazilian tobacco control media campaigns.

In December 2011, Brazil passed a law that would require an additional text warning to occupy 30% of the front of the pack by the year 2016.

**Product Regulation**

Article 9 of the FCTC requires Parties to take measures to regulate the contents and emissions of tobacco products. Article 10 requires manufacturers and importers of tobacco products to provide information to governmental authorities about these contents and emissions, so that the public is informed.

In 1999, ANVISA was created to promote the public health of the population through control of many products and services, which included regulation of tobacco products. Since then, the agency began creating resolutions which eventually resulted in the following regulations:

- The definition of a maximum allowable level of tar, nicotine, and carbon monoxide in the primary smoke stream for cigarettes marketed in Brazil.
- The prohibition of descriptors that may lead to a misinterpretation of the harm of cigarettes such as: “smooth”, “mild”, and “light”.
- The requirement for pictorial health warnings to accompany tobacco product packages and advertisements, and the prohibition of any type of box or device that covers up or makes it difficult to see the warnings.
- The requirement for the National Quitline toll-free number to be placed on all tobacco product packaging.
- The annual registration in ANVISA of smoke-producing products along with information on their marketing, sales, and physical characteristics.
- An annual payment for each marketed brand by the tobacco companies.
- The ban on the production, advertising, and sale of foods that resemble tobacco products or their packaging.

*An text warning on 30% of the front of the pack is required by 2016.*
Another important policy that was enacted in March 2012, a first in global tobacco control policies, is a ban throughout the country on all flavours in tobacco products, including menthol.\(^8\) The use of menthol, fruit flavours, sweeteners, and colours are known to lure young people to initiate smoking, and possibly set themselves up for a lifetime addiction to cigarettes. Tobacco companies were given 18 months to stop production of all cigarette brands containing flavours (with some exceptions such as sugars lost in the curing process, and other additives such as bleaching agents used for paper), and retail shops were given 24 months to remove these brands from their shelves. As of January 2014, the use of additives is still allowed due to injunctions granted by the courts to the tobacco industry. ANVISA also accepted a request from the tobacco industry to authorize the use of some additives until studies on the impact of consuming additives are conducted by a group of ANVISA-nominated experts, including representatives of INCA. The conclusion of this study is planned for August 2014.

The Ministry of Finance, through the Federal Revenue of Brazil, initiated measures to regulate fiscal control of cigarette production and distribution, including tax stamps, a requirement to declare fiscal information related to distribution, and tax collection. In 2007, they required tobacco companies to install product metering equipment to monitor and control product distribution throughout the country.\(^6\)

### Tobacco Advertising, Promotion, and Sponsorship (TAPS)

Research evidence clearly demonstrates that tobacco advertising increases tobacco consumption, and in particular can attract youth to start smoking, and to move towards smoking regularly. A comprehensive TAPS ban is necessary to reduce this trend. FCTC Article 13 obligates Parties to undertake a comprehensive ban on TAPS within a period of 5 years from the time of FCTC entry into force in each country.\(^10\) This ban includes traditional advertising methods such as commercials found on radio, television, billboards, and all print media, as well as indirect marketing techniques such as free samples, giveaways, and merchandising which promotes cigarette brands on non-tobacco products, such as clothes and toys.

Brazil has achieved great success in implementing many policies to restrict TAPS over the past 12 years. The government first implemented restrictions on tobacco advertising and promotion in 1988 when it set specific times for the placement of tobacco advertisements on television, film, and theater.\(^19\) In addition, any tobacco ads were required to be accompanied by health warnings about the dangers of smoking. In the same year, the Federal Constitution determined that tobacco advertising would be subject to legal restrictions. In 1990, the government passed a law prohibiting misleading and unfair advertising,\(^20\) and in 1995 recommended that television programs avoid broadcasting images of celebrities smoking.\(^21\) Restrictions on tobacco sponsorship were still weak in 1995, only recommending that organizations not accept funding from the tobacco industry for public health campaigns.

Continuing in its efforts to restrict TAPS, Brazil implemented a comprehensive policy in December 2000, which banned commercial tobacco advertising in all media except at point of sale (POS), banned the sponsorship of national and international cultural or sporting activities by tobacco brands, and prohibited promotional activities such as free samples and merchandising.\(^22\) In a law passed in 2003, all advertising in the interior of sale locations were required to cover 10% of the advertising space with the same pictorial health warnings that were mandated for cigarette packages.\(^23\) However, there was brief setback in 2003, when the tobacco ban on brand sponsorship of international sporting events was exempted until 2005.
In December 2011, Brazil moved forward with a ban on all POS advertising except for the display of the packs themselves. However, ANVISA is still not able to prepare protocols for inspection which would ensure comprehensive enforcement of this most recent TAPS law due to the lack of regulation. In the meantime, the tobacco industry is taking full advantage of the lack of enforcement in all cities and continues to advertise in retail establishments; often without the required health warnings, and now with many advertisements using illuminated display units to attract more attention. The industry has also found loopholes in sponsorship legislation by embarking on Corporate Social Responsibility activities which will allow their company names to be publicized with programs which are portrayed as positive for the community.

Price and Taxation

Higher tobacco taxes have been shown to be the most effective measure for reducing tobacco consumption and are an important part of overall tobacco control strategies used by governments, guided by FCTC Article 6. Higher taxes will induce some smokers to quit; reduce consumption by continuing smokers; prevent others from starting; and reduce the number of ex-smokers who relapse. Research also shows that governments can raise a significant amount of revenue from tobacco taxes, and not necessarily at the expense of the poor as is often suggested.

An ad valorem tax for cigarettes was first introduced in Brazil in 1990 at 41.3% of the retail price. This tax influenced a real price increase in cigarettes from 1990 to 1993, with a concurrent consumption decrease. The real price of cigarettes stayed relatively high until 1998, and in 1999, a multi-tiered specific excise tax was introduced which was levied based on the length of the cigarette and the style of packaging (hard or soft pack). Under this system and due to inflation, the real price of cigarettes declined through to 2002, as did revenue from tax collection. In 2003, the government implemented a significant increase on tobacco excise taxes and again in 2007 and 2009 so that overall the tax rate was 61% of the retail price. In December 2011, a new tax structure was decreed with implementation starting in March 2012. This law laid out a plan to increase tax rates over four years to a cumulative adjustment of 55%, and allowed the government to set a minimum retail price for a pack of cigarettes.

Education, Communication, and Public Awareness

Under Article 12 of the FCTC, Parties are obligated to promote and strengthen public awareness of tobacco control issues through education and public awareness programs on the health risks of tobacco consumption and the benefits of cessation, and provide public access to information on the tobacco industry. FCTC Guidelines on the implementation of Article 12 recommend that Parties provide broad access to different sources of information that increase public awareness of the health risks of tobacco use and exposure to secondhand smoke, encourage cessation among current tobacco users, prevent smoking initiation among non-users, and support the development of tobacco-free environments.
Public education campaigns are an essential component of a comprehensive national tobacco prevention and cessation strategy, particularly as the tobacco industry devises new ways to market and promote their products. Empirical evidence demonstrating the effectiveness of well-funded public education campaigns is vast and growing. Greater exposure to mass media campaigns is associated with increased quit attempts, improved rates of smoking cessation, and reduced adult smoking prevalence and consumption.\textsuperscript{30-32}

Brazil created the National Tobacco Control Program in 1989 with the aim to reduce tobacco prevalence and the burden of tobacco-related diseases. A logic model was developed in which education, communication, and health care activities, along with legislative and economic actions, were enhanced to prevent smoking initiation, especially among young people; promote smoking cessation; protect the population from exposure to tobacco smoke; and reduce the individual, social and environmental harm of tobacco products.

From this perspective, one of the key strategic milestones developed to provide national coverage for these actions was the articulation of a partnership network involving representation from State and Municipal Health Secretaries (which allowed the decentralization of tobacco control actions), of other sectors in the Ministry of Health, other ministries, non-governmental organizations, and international intergovernmental organizations at the regional and global level. Among many actions that were developed, emphasis was placed on the Saber Saúde (Health Knowledge) Program, which focuses on many aspects of health promotion in schools, and the smoking cessation treatment in the public health system.\textsuperscript{33}

INCA organizes Brazil’s participation in two annually recognized dates that promote tobacco control: the World Health Organization (WHO) World No Tobacco Day (May 31st), and Brazil’s own National Day Against Tobacco (August 29th).

World No Tobacco Day (WNTD) was created by WHO in 1987, and INCA is responsible for organizing activities around the promotion of the annual theme in Brazil. In 1994, Brazil received the Tobacco or Health medal from WHO, and was designated as host of the World No Tobacco Day that year. Brazilian government officials have also received World No Tobacco Day Awards in 2009 and 2012.\textsuperscript{34}

The National Day Against Tobacco, created by the federal government in 1986, was the inaugural launch of the Brazilian government’s long history of tobacco control legislation. Themes of the National Day Against Tobacco are prepared to dismantle societal norms and positive associations about smoking, such as (with translation): “Those who do not smoke are not obligated to smoke”, “Sports without smoking are more radical”, “Art without smoking is a show” and “No tobacco, 100% fashion.”\textsuperscript{35}

**Cessation and Treatment**

Article 14 of the FCTC obligates each Party to take effective measures to promote the cessation of tobacco use and adequate treatment for tobacco dependence. INCA has been coordinating the National Tobacco Control Program since 1989 whose mandate includes: developing strategies to reduce social acceptance and stimuli that promote smoking — particularly for youth, to protect the population from the hazards of secondhand smoke, and to increase opportunities for smokers to receive support for cessation. In the area of cessation and treatment, Brazil created a national toll-free telephone cessation counselling service in 2001 and required that its phone number be clearly placed on the package of all tobacco products. In August 2002, the government strengthened its commitment to cessation support when the Ministry of Health issued an ordinance outlining the development of a national, publicly-funded cessation program. By 2004, smoker treatment centers were implemented within the Brazilian primary care system that offered free access to cognitive-behavioral counselling and drug therapy for smokers, including free nicotine replacement therapy.
“Although Brazil has been playing a leadership role in adopting strong health warnings, the ITC Brazil Survey found that while there was a significant increase in the percentage of smokers who read or looked closely at the messages in the packaging between Waves 1 and 2, there was a downward trend in warnings making smokers think about the harms of smoking or making them more likely to quit smoking. The report recommends that in the next round of pictorial warnings, the messages be included on at least 50% of the front face of the packaging and that the target date for this implementation be accelerated from 2016 to 2014.”

Marcos Moreas
Chairman of the Board of Trustees of the Cancer Foundation
METHODS

OVERVIEW

The primary objective of the ITC Project is to conduct rigorous evaluation of the psychosocial and behavioural effects of national-level tobacco control policies of the WHO FCTC. Each ITC Survey includes key measures for each FCTC policy domain that are identical or functionally similar across ITC countries to facilitate cross-country comparisons. The evaluation studies conducted from the ITC Surveys take advantage of natural experiments created when an ITC country implements a policy: changes in policy-relevant variables in that country from pre- to post-policy survey waves are compared to other ITC countries where that policy has not changed. This research design provides high levels of internal validity, allowing more confident judgments regarding the possible causal impact of the policy. For a description of the conceptual model and objectives of the ITC Project, see Fong et al. (2006); for a description of the survey methods, see Thompson et al. (2006).

A summary of tobacco control policy implementation in Brazil is illustrated in the timeline on pages 29 and 30 (see Figure 2) in relation to the ITC Brazil Surveys.

Sampling Design

The ITC Brazil Survey is a prospective longitudinal study, with a sampling design chosen to yield representative random samples of adult smokers and non-smokers residing in the cities of Rio de Janeiro, São Paulo, and Porto Alegre. All interviews were conducted using computer assisted telephone interview (CATI) system, with respondents systematically selected from a comprehensive electronic directory of listed residential telephone land lines provided by the Brazilian research firm, Expertise. Within each of the three cities, households were randomly called within a geographic framework until the quota of 400 smokers and 200 non-smokers per city were achieved.

The Wave 1 ITC Brazil Survey included a total sample size of 1,825 respondents – 1,215 adult smokers and 610 adult non-smokers. All respondents who participated in Wave 1 were called for follow-up interviews in Wave 2. In Wave 2, a total of 1,830 respondents were interviewed – 1,222 adult smokers and 608 non-smokers. Of the total 1,830 Wave 2 respondents, 755 were cohort respondents who participated in Wave 1 and 1,075 were newly recruited for Wave 2.

The ITC Brazil Survey is a prospective longitudinal study, with a sampling design chosen to yield representative random samples of adult smokers and non-smokers residing in the cities of Rio de Janeiro, São Paulo, and Porto Alegre.
Figure 2. Timeline of tobacco control policies and the ITC Brazil Surveys

Dec 2000
Prohibition of advertising in media like TV, radio, and billboards, except for points of sale.
Distribution of samples or giveaways is prohibited, as well as promotional visits, sales and distribution in an educational institution, healthcare institution.
Merchandising is prohibited.
Advertising by electronic media, including the internet, is prohibited.

2001
Ban on descriptors such as “light” and “mild”.
Pictorial health warnings required on cigarette packs covering 100% of one side of the pack and tobacco advertising in points of sale.

2002
IPI tax bracket changed. Raised cigarette prices from 8% to 17%.
Implementation of cessation treatment in all public health units with medication.

Jan 2003
Partial ban on sponsorship of sporting events.

2004
Second set of pictorial warning labels implemented.

2005
Sponsorship of sporting events by tobacco industry banned.

Nov 2005
FCTC ratification.

2006
2007
**ITC Brazil Project Report (2009-2013)**

**2009**
- Taxes raised to 65% of retail price.
- São Paulo & Rio de Janeiro: Smoke-free laws implemented, no DSR.
- Porto Alegre: DSRs rooms permitted.
- Third set of 10 rotating pictorial warning labels implemented.

**Dec 2011**
- Smoking banned in all enclosed workplaces and public places.
- Tobacco advertising banned at POS (the product can be exposed).
- Tobacco taxes increased over the next four years.
- Health warnings to cover 30% of the front face of cigarette packs by 2016.

**2012**
- Ban on menthol and all flavours in tobacco products by 2013. Not yet implemented.

**July 2007**
- IPI tax raised for all classes of cigarettes by 30%.

**Nov 2007**
- Porto Alegre: Smoking restrictions in public places.

**Wave 1**
- April – June 2009
  - Smoker N=1,215
  - Non-smoker N=611

**Wave 2**
- Oct 2012 – Feb 2013
  - Smoker N= 1,222
  - Non-smoker N=608
Table 1. Sample sizes in the ITC Brazil Wave 1 and Wave 2 Surveys

<table>
<thead>
<tr>
<th></th>
<th>Wave 1 (n=1,825)</th>
<th>Wave 2 (n= 1,830)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Smokers</td>
<td>Non-smokers</td>
</tr>
<tr>
<td><strong>City</strong></td>
<td><strong>Male</strong></td>
<td><strong>Female</strong></td>
</tr>
<tr>
<td>Rio de Janeiro</td>
<td>168</td>
<td>242</td>
</tr>
<tr>
<td>São Paulo</td>
<td>185</td>
<td>218</td>
</tr>
<tr>
<td>Porto Alegre</td>
<td>166</td>
<td>236</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>519</td>
<td>696</td>
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</table>

Table 2. Demographics of ITC Brazil Survey sample in Wave 1 and Wave 2

<table>
<thead>
<tr>
<th></th>
<th>Wave 1</th>
<th>Wave 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td>Freq.</td>
<td>%</td>
</tr>
<tr>
<td>Female</td>
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<td>Male</td>
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<td><strong>Age</strong></td>
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<td></td>
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<tr>
<td>18-25</td>
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<td>9.4</td>
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<tr>
<td>25-39</td>
<td>511</td>
<td>28.0</td>
</tr>
<tr>
<td>40-55</td>
<td>686</td>
<td>37.6</td>
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<tr>
<td>55+</td>
<td>456</td>
<td>25.0</td>
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<td><strong>Smoking status</strong></td>
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<td></td>
</tr>
<tr>
<td>Daily smoker</td>
<td>1,126</td>
<td>62.0</td>
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<td>Non-daily smoker</td>
<td>89</td>
<td>4.9</td>
</tr>
<tr>
<td>Quitter</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Non-smoker</td>
<td>610</td>
<td>33.4</td>
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<tr>
<td><strong>Marital status</strong></td>
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<td></td>
</tr>
<tr>
<td>Married</td>
<td>895</td>
<td>49.0</td>
</tr>
<tr>
<td>Separated</td>
<td>143</td>
<td>7.8</td>
</tr>
<tr>
<td>Divorced</td>
<td>124</td>
<td>6.8</td>
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<tr>
<td>Widowed</td>
<td>135</td>
<td>7.4</td>
</tr>
<tr>
<td>Single</td>
<td>525</td>
<td>28.8</td>
</tr>
<tr>
<td>Not stated</td>
<td>3</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Highest level of education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>567</td>
<td>31.1</td>
</tr>
<tr>
<td>Medium</td>
<td>703</td>
<td>38.5</td>
</tr>
<tr>
<td>High</td>
<td>548</td>
<td>30.0</td>
</tr>
<tr>
<td>Not Stated</td>
<td>7</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Annual household income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>697</td>
<td>38.2</td>
</tr>
<tr>
<td>Medium</td>
<td>713</td>
<td>39.1</td>
</tr>
<tr>
<td>High</td>
<td>267</td>
<td>14.6</td>
</tr>
<tr>
<td>Not Stated</td>
<td>148</td>
<td>8.1</td>
</tr>
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</table>

Sample Characteristics

The ITC Brazil Survey respondents were adult smokers and non-smokers, aged 18 years or older. Smokers were defined as those who smoked more than 100 cigarettes in their lifetime, and smoked at least once in the past 30 days at recruitment. Non-smokers were defined as those adults not meeting the criterion for smokers described above. Individuals in jail and those living in institutions were ineligible for the survey. The number of respondents by gender, smoking status, and city of residence is portrayed in the Table 1.

Table 2 summarizes the demographic characteristics of the full sample by gender, age, smoking status, marital status, education, and income.
SURVEY CONTENT

The ITC Brazil Survey was developed by the project team with members from both INCA in Brazil and the University of Waterloo, in Ontario, Canada. Most of the survey methods and survey questions were adapted from the standardized protocols and surveys that have been used in ITC Surveys conducted in 21 other countries around the world.

In the ITC Brazil Survey, each respondent who was categorized as a smoker, a quitter, or a non-smoker was asked to respond to the following types of questions:

Smokers responded to the following questions:

1. **Smoking- and cessation-relevant questions** including smoking history and frequency, current smoking behaviour and dependence, quit history, self-efficacy for quitting, and quitting behaviours including questions about method(s) used at last quit attempt;

2. **Knowledge and basic beliefs about smoking** including knowledge and beliefs about the health effects of smoking and important beliefs relevant to smoking and quitting, perceived risk, and perceived severity of tobacco-related diseases;

3. **Policy-relevant questions** including awareness of, impact of, and beliefs relevant for each of the FCTC demand reduction policy domains (health warnings, taxation/price, advertising/promotion, smoke-free policies, light/mild descriptors, public communication), level of support for future policies and for government efforts to reduce tobacco use;

4. **Psychosocial predictors** including normative beliefs, attitudes, intentions to quit, and regret about smoking;

5. **Individual difference variables** relevant to smoking such as measures of depression, stress, and time perspective;

6. **Demographic variables** such as age, gender, marital status, income, and educational attainment.

Respondents who **quit smoking** between survey waves were also asked a similar set of survey questions, but with some questions rephrased to be relevant to those who had quit (e.g., using the past tense). In this Report, quitters at Wave 2 have been categorized as smokers except in cases where a measure was not relevant for quitters (e.g., avoiding health warnings on cigarette packages, or reported smoking during last visit to a bar).

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.

As with all ITC Surveys, the ITC Brazil Survey was tailored for the tobacco control environment in the country and therefore included questions that were unique to Brazil. For example, the Wave 2 Survey was conducted just after the government committed to banning additives in cigarettes by September 2013, thus questions were added to address smokers’ opinions on flavoured cigarettes and to determine the impact of the ban on menthol smokers. In addition, questions were added about the how the cost of cigarettes influences choices made in the home.

The protocol and questionnaires of the ITC Brazil Survey were first developed in English and translated by the Brazil team members. The translations were then reviewed by a third party who has knowledge of Portuguese linguistic nuances. The ITC Brazil Survey questionnaires are available at [http://www.itcproject.org/countries/brazil](http://www.itcproject.org/countries/brazil).
ANALYTIC APPROACH

This report presents findings from the first two waves of the ITC Brazil Survey (2009-2013). The focus of this report is to inform tobacco control policy development by evaluating the effectiveness of policies as they are implemented in Brazil over time. Comparisons with other ITC countries are also drawn. This section describes the analytic approach used in this report, including methods used to control for time-in-sample effects and the covariates used in the survey logistic model.

Time-in-sample effects

The longitudinal nature of the ITC Brazil Survey allows for the measurement of behavioural responses to tobacco control policies among smokers and non-smokers in Brazil before and after a new policy is introduced. During the four years that the two waves of the ITC Brazil Survey were conducted, respondents were lost to attrition, as they are in any longitudinal cohort study. To compensate for this attrition and maintain a sufficient sample size, new respondents were recruited at Wave 2. Therefore, at Wave 2, the total set of respondents consists of individuals with different levels of prior participation in the ITC Survey. For example, the Wave 2 sample of smoker respondents consists of 495 smokers and quitters who have participated in both survey waves, and 727 smokers who have participated in one survey wave (those who were newly recruited at Wave 2). 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. These documented effects are known as “time-in-sample” (TIS) effects and have been found in the ITC Surveys in other countries and in many other surveys as well. The analytic methods described next provide adjustments for time-in-sample and some other potentially confounding effects.

Analytic methods

In order to assess changes in any of the many variables measured in the ITC Brazil Survey over time, data from both waves of the ITC Brazil Survey are used to estimate the longitudinal trends in a measure of interest, unless otherwise stated. Quitters are grouped with smokers in the analysis. The analytical data set for smoker respondents in Waves 1 to 2 is based on 1,942 unique smokers and has a total of 2,437 observations. Among these 2,437 observations, 1,215 are from Wave 1 smokers and 1,222 are from Wave 2 smokers and quitters. The analytical data set for non-smoker respondents in Waves 1 to 2 is based on 958 unique non-smokers and has a total of 1,218 observations. Among these 1,218 observations, 610 are from Wave 1 non-smokers and 608 are from Wave 2 non-smokers.

If the same questions are asked across waves and an outcome of interest is categorical then a complex survey logistic regression approach is used to generate standardized or adjusted values of the descriptive statistics (proportions) over time, where feasible. Variables like sex, age group, smoking status, wave, and time-in-sample can be included in the model as covariates, and the measure of interest is used as the response variable. Strata and cluster information as well as survey weights are also taken into account. Based on the logistic model generated, the time-specific least squares means of the response variable can be calculated using the parameter estimates from the regression model, assuming the overall distributions of the covariates in the data combined across all waves. This approach is called a logistic regression adjustment for descriptive statistics. Similarly, if the measure of interest is continuous, a complex survey regression model is used for adjustment. This method is directly analogous to age-adjustment when comparing mortality in two or more populations in epidemiology and demography. 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 sex, age group, smoking status (i.e., daily vs. non-daily smokers), city, wave, and time-in-sample are used for adjustment except where indicated. Since time-in-sample has the largest impact on adjustments, the estimates are referred to as “adjusted for time-in-sample”. Hence, these time-in-sample adjusted estimates best represent what is happening at a given wave. In this report, both adjusted and unadjusted estimates are shown in figures illustrating changes between waves; the solid lines represent adjusted percentages while the dashed lines represent the corresponding unadjusted percentages. SAS 9.3 and SUDDAN 10.0 are used to calculate both adjusted and unadjusted means.

In cross-country comparisons, since the country samples vary in their composition, the same kind of adjustment is applied. Multi-country comparisons include smokers only and control for differences in age, smoking status (daily vs. non-daily smokers), and time-in-sample.
SMOKING BEHAVIOUR

The WHO FCTC aims to protect individuals from the consequences of tobacco use by providing a framework for tobacco control measures. Parties are obligated to implement measures to prevent and reduce all tobacco consumption and to monitor the magnitude and patterns of tobacco use. The ITC Brazil Survey includes several measures to assess smokers' tobacco use behaviour, such as cigarette consumption, brand choice, and types of products used. The Survey also measures smokers' perceptions and attitudes, such as beliefs about society's attitude towards smoking and regret for smoking initiation.

Daily Cigarette Consumption

Most smokers in the ITC Brazil Survey smoke every day. Survey results show that 92% were daily smokers at Wave 1, and 93% were daily smokers at Wave 2. The average number of cigarettes smoked per day by daily smokers in the Wave 1 sample was 17, which remained unchanged at Wave 2.

However, more variation occurred at the city level and by gender between Waves 1 and 2. Regarding city differences, the average number of cigarettes per day for daily smokers in Porto Alegre at Wave 2 (19) was significantly higher than both São Paulo (15) and Rio de Janeiro (16). For gender, males smoked significantly more cigarettes per day than females at Wave 1, but a similar amount at Wave 2. At Wave 1, female smokers smoked an average of 15 cigarettes per day compared to 17 for males. At Wave 2, females smoked an average of 17 cigarettes per day compared to 18 for males.

In Porto Alegre, average daily consumption significantly increased among females, while in São Paulo and Rio de Janeiro the amount remained about the same (see Figure 3). At Wave 2, average daily consumption among females was significantly higher in Porto Alegre compared to São Paulo, but not compared to Rio de Janeiro.

Similarly, there was a significant increase in daily consumption among males in Porto Alegre, a non-significant increase in Rio de Janeiro, and no change in São Paulo (see Figure 4). At Wave 2, average daily consumption was significantly higher among males in Porto Alegre compared to males in São Paulo, but was not significantly higher than Rio de Janeiro.

Figure 3. Mean number of cigarettes smoked per day among female daily smokers, by city, by wave*
There was a significant increase in the mean cigarettes smoked per day by daily smokers in the city of Porto Alegre — from 15 cigarettes per day at Wave 1, to 19 cigarettes at Wave 2. This increase was significant for both females and males.

Brazilian smokers consume an average of 17 cigarettes per day. This is similar to Uruguay, but twice the average consumption of smokers in Mexico.
Types of Cigarettes and Other Tobacco Products

Brazilian smokers in the ITC Survey smoked mainly factory-made cigarettes, with only 3% of smokers smoking roll-your-own cigarettes. Five percent (5%) reported that they regularly smoke a flavoured brand (including menthol). This is in contrast to a recent survey conducted in Brazil with youth which found that nearly 60% of this population preferred to smoke menthol cigarettes. In that study with 17,127 young people, ages 13 to 15, it was found that 58% of males and 53% of females who had ever tried cigarettes preferred to smoke flavoured cigarettes.44
The much higher prevalence of flavoured cigarettes among youth smokers compared to adult smokers in the ITC Brazil Survey points to the importance of flavoured cigarettes for the youth market, which is strong evidence supporting the claim that the tobacco industry uses flavourings to attract youth to their products.

Similar large differences in the prevalence of flavoured cigarettes between youth and adults have been observed in Canada where the ITC Canada Wave 8 (2012) Survey found that only 5% of adult smokers (aged 18 and older) reported currently smoking menthol cigarettes; in contrast, a study conducted among Canadian youth in 2010-2011 found that one-third (32%) who smoked cigarettes in the last 30 days had smoked menthol cigarettes.45

These and other examples throughout the world provide the rationale for laws banning menthol and other additives—on the grounds that additives and flavorings promote uptake of tobacco products by youth. One of the mechanisms that contributes to this uptake among youth is that menthol and other additives make the smoke produced more palatable.

In Wave 2, all respondents were asked about their use of other tobacco products, and the results show evidence of other tobacco product use even among non-cigarette smokers. Thirteen percent (13%) of the overall sample (smokers and non-smokers combined) have smoked clove cigarettes (kreteks), 10% have smoked cigars, 8% smoked shisha, 5% smoked pipes, and 4% smoked bidis.

Figures 6 and 7 depict the percentage of smokers and non-smokers in the sample who have tried various tobacco products, by city. The results show a significantly higher use of shisha among smokers in São Paulo (18%) compared to Rio de Janeiro (5%) and Porto Alegre (8%), and non-smokers in São Paulo were significantly more likely to smoke cigars than in the other two cities.

* Cohort respondents were asked if they had used each non-cigarette smoked tobacco product since last survey date, while replenishment respondents were asked if they had used each non-cigarette smoked tobacco product within the last 6 months.
Electronic Cigarettes – Perceptions and Behaviours

Electronic cigarettes (e-cigarettes) were banned from sale, importation, and advertising in Brazil in August 2009. ANVISA, the national health surveillance agency, concluded that there was not yet sufficient scientific data to prove their safety. Despite the ban, however, these products are known to be advertised for sale on the internet in Brazilian currency.

In the ITC Brazil Wave 2 Survey, respondents were asked “Have you ever heard of electronic cigarettes or e-cigarettes?” The results showed that 35% of smokers and 29% of non-smokers had heard of them. The highest level of awareness of the product was in Porto Alegre where 39% of smokers and 29% of non-smokers had heard of them.

Respondents who responded “yes” to the awareness question were then asked “Have you ever tried an electronic cigarette?” and “Do you think electronic cigarettes are more harmful than regular cigarettes, less harmful, or are they equally harmful to health?” Regarding belief about the harm caused by the product, about half of those who had heard of e-cigarettes felt that they were less harmful than regular cigarettes (60% of smokers; 46% of non-smokers), while 6% of both smokers and non-smokers perceived them to be more harmful. Smokers in Porto Alegre were significantly more likely to believe that e-cigarettes were less harmful (77%) than the other two cities. In each city, compared to non-smokers, smokers had higher rates of belief that the product was less harmful than regular cigarettes (see Figure 8). Among those who had heard of e-cigarettes, 38 smokers (12%) and one non-smoker reported trying these products.
Figure 8. Smokers and non-smokers’ perceptions of electronic cigarettes in comparison to regular cigarettes among those who have heard of electronic cigarettes, by city, Wave 2 (Oct 2012-Feb 2013)

### Reasons for Choosing Brand

Smokers were asked “In choosing your regular brand, was part of your decision to smoke this brand based on any of the following…tar and nicotine levels, not as bad for your health, the price, how they taste?” Respondents that chose their brand for each of these variables significantly decreased between Wave 1 and Wave 2 (see Figure 9). On a city level, significant decreases were seen in Rio de Janeiro for reasons of health, price, and taste. Porto Alegre had significant decreases in tar and nicotine, health, and taste. São Paulo only had a significant decrease in choosing their brand for price.

The variables reported most frequently as reasons for choosing a regular brand were taste (83% at Wave 1 to 65% at Wave 2), followed by tar and nicotine levels (49% at Wave 1 and 40% at Wave 2). Brazil does not ban quantitative statements of tar, nicotine, or carbon monoxide emission levels on cigarette packages as recommended in the Guidelines for Article 11 – it is optional for tobacco companies to display this information. This topic is discussed further in the Packaging and Labelling section.
Addiction and Perceived Addiction

A commonly accepted measure of dependence/addiction is the amount of time after waking before a smoker has his/her first cigarette of the day — the shorter the time period, the greater the level of addiction. The ITC Brazil Survey asked respondents “How soon after waking do you usually have your first smoke?” At Wave 1, 24% of daily smokers in the combined sample reported that they had their first cigarette within five minutes of waking, and 42% reported having their first cigarette within 30 minutes. At Wave 2, 20% of daily smokers reported having their first cigarettes within 5 minutes or less and 50% reported having their first cigarette within 30 minutes.

Comparing responses for this addiction measure among male daily smokers in Brazil to those in other ITC countries, Brazilian male smokers are found in the middle of the range (see Figure 10). Compared to daily smokers in other Latin American countries in the ITC Project, the evidence suggests that male smokers in Brazil are more addicted to cigarettes than those in Uruguay (19% of males in Brazil have their first cigarette within 5 minutes of waking compared to 16% in Uruguay), and more than male smokers in Mexico, where 5% report having their first smoke within 5 minutes of waking.
Female daily smokers in Brazil provided a similar response to Brazilian male smokers in estimating the time to their first cigarette, with 18% reporting at Wave 2 to have had their first cigarette in the first 5 minutes of waking, and 49% within the first 30 minutes (see Figure 11). Cross-country results show that approximately the same percentage of female daily smokers in Brazil (18%) and Uruguay (19%) have their first cigarette within 5 minutes. In Mexico, only 5% of female daily smokers have their first cigarette within 5 minutes of waking, identical to the percentage among male daily smokers.
Self-reported measures of addiction were also included in the survey. In response to “How addicted are you to cigarettes?”, 49% of smokers at Wave 1 and 54% of smokers/quitters at Wave 2 reported they were “very addicted.” When asked “How hard is it/would you find it to go a whole day without cigarettes?,” 15% of smokers at both waves reported it would be “extremely hard.”

**Regret for Initiating Smoking**

ITC Surveys measure smokers’ experience of regret for ever starting smoking as an important indicator of societal norms about tobacco use and as a predictor of future quitting behaviour. Smokers were asked their level of agreement with the following statement: “If you had to do it over again, you would not have started smoking.” As can be seen in Figure 12, there is a high level of regret across ITC countries, which along with the high percentage of smokers who have tried to quit and who want to quit, provide strong support for the notion that the vast majority of smokers do not want to be smoking. Brazil in particular ranks very high in this cross-country comparison with 85% of male smokers and 89% of female smokers reporting that they “agree” or “strongly agree” with this statement.

From the Latin American perspective, Brazilian smokers show a greater level of regret in both genders than smokers in Uruguay and Mexico. Seventy-one percent (71%) of male smokers in Uruguay and 66% in Mexico agree with the statement, and 74% of female smokers in Uruguay and 79% in Mexico agree. This high level of regret may suggest that smokers in Brazil would be receptive to campaigns that promote quitting, and suggest further that smokers in Brazil want support and assistance in quitting. Additional findings presented later in this report support this conclusion.
Opinions and Perceived Norms on Smoking

All survey respondents were asked “What is your overall opinion of smoking?” The results in both waves showed, as might be expected, non-smokers had a less favourable opinion of smoking. An analysis of smokers’ responses to the question showed that those who felt smoking was “negative” or “very negative” decreased slightly from 75% at Wave 1 to 69% at Wave 2. However, smokers in the three cities showed variability in their response to the question, in that smokers in Rio de Janeiro and Porto Alegre reported (non-significant) increases in feelings of negativity towards smoking from 77% to 78% in Rio de Janeiro, and 72% to 73% in Porto Alegre; while smokers in São Paulo reported a significant decrease in negative opinion of smoking from 74% to 58%.
This lack of increase in Rio de Janeiro and Porto Alegre and a significant decline in São Paulo points to a need for public education campaigns to maintain and strengthen the negativity of norms about smoking, which are important in promoting quitting among smokers and in inhibiting uptake among youth and young adults. In a cross-country comparison regarding opinions of smoking, Brazil shows a relatively strong sense of negativity towards smoking (see Figure 13). Within the Latin American countries, Brazil is similar to Uruguay with over half the sample having a “negative” or “very negative” opinion of smoking, and smokers in both countries perceiving smoking to be more negative than Mexican smokers. High negativity about smoking in Brazil among smokers, as well as high levels of regret about smoking, suggest that there is a need to strengthen initiatives to help smokers to quit.

**Figure 13. Percentage of cigarette smokers whose overall opinion of smoking is “negative” or “very negative”, by country**

*Response options were “bad” or “very bad.”
†For Bangladesh and India, dual tobacco users (those tobacco users who reported smoking both cigarettes and bids) were also included in the analyses.*
All respondents were also asked about their level of agreement with the following statement: “Society disapproves of smoking.” At Wave 1, 78% of smokers reported “agreeing” or “strongly agreeing” with this statement compared to 69% at Wave 2. Between the three cities, smokers in São Paulo reported the largest decrease regarding agreement with the statement that society disapproves of smoking, from 77% to 63% (see Figure 14), again highlighting the need for stronger public campaigns to restore and increase the negative norms against smoking.

Non-smokers in general are less likely to “agree” or “strongly agree” with the statement that society disapproves of smoking, as the results show that 63% agreed at Wave 1 and 64% at Wave 2. Non-smokers in Porto Alegre were the only respondents to increase their agreement with this statement, from 58% at Wave 1 to 68% at Wave 2 (see Figure 15); however, this increase is not significant.

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

**Quote**
Daily consumption of cigarettes in Brazil is relatively high for both male and female daily smokers, based on a comparison of the average number of cigarettes smoked per day among 20 ITC countries. Overall, average daily consumption was slightly higher at Wave 2 compared to Wave 1, with a significant increase found in the city of Porto Alegre. At Wave 2, daily consumption among females was higher in Porto Alegre than in São Paulo and Rio de Janeiro, and among males daily consumption was higher in Porto Alegre than in São Paulo, but was not higher than Rio de Janeiro. Eighteen percent (18%) of cigarette smokers in São Paulo reported also using shisha or waterpipes in the Wave 2 Survey. This was significantly higher than in the other two cities and may warrant specific education campaigns about shisha, particularly in São Paulo.

Electronic cigarettes are banned in Brazil but despite this, internet advertising, and presumably sale, does take place, resulting in 4% of smokers having tried one. From those that had heard of e-cigarettes, 12% had tried one. Over half of the smokers who have heard of e-cigarettes believe they are less harmful than regular cigarettes, leading to a concern that flavoured e-cigarettes may serve as a gateway for youth to initiate tobacco smoking. This may be addressed through stronger restrictions on internet sales. Regret for taking up smoking is high among male and female smokers in Brazil. This may suggest that a mass media educational campaign using testimonials from smokers may be valuable to emphasize the addictive toll of nicotine, and regret for ever having started to smoke.

These results suggest that smokers have a greater sense of disapproval from society about smoking than non-smokers do, but the sense of disapproval has decreased over time. Perhaps the impact of a continued focus on tobacco control in Brazil, such as the implementation of smoke-free laws in São Paulo and Rio de Janeiro, has contributed to creating an environment where smoking is not viewed as so negative as long as it is not interfering with others’ health. Given the clear fact that tobacco use leads to very high external costs that go beyond the individual smoker him/herself (e.g., in lost productivity, increased health care costs, and in pain and suffering experienced by families), it is necessary that public awareness campaigns begin to address these other negative aspects of the economic and social impact of smoking.
SMOKE-FREE PUBLIC PLACES

Article 8 of the FCTC obligates the Parties to implement effective legislation and other measures that will provide protection from exposure to tobacco smoke in indoor workplaces, public transport, indoor public places and, as appropriate, other public places.

A national smoke-free law was implemented in Brazil in December 2011, which included a ban on designated smoking rooms. However, to date (as of May 2014) it was not implemented, because the government has yet to develop the regulations for this law. Prior to this comprehensive national ban, smoking on public transportation has been banned in Brazil since December 2000.

However, many sub-national jurisdictions have enacted smoke-free initiatives, banning the designated smoking rooms. The three cities sampled for the ITC Brazil Survey now have smoking bans. In November 2007, Porto Alegre implemented municipal legislation to restrict smoking in workplaces and public places (but still allowing designated smoking rooms); comprehensive smoking bans came into effect in the states of São Paulo in August 2009 and Rio de Janeiro in November 2009.

The Wave 1 Survey (2009) was conducted approximately 16 months after the smoking ban in Porto Alegre and prior to the smoking bans in São Paulo and Rio de Janeiro. The Wave 2 Survey (2012-2013) was conducted approximately 5 years after the municipal ban in Porto Alegre and 3 years after the smoke-free laws were implemented in São Paulo and Rio de Janeiro. The ITC Brazil Wave 2 Survey was also conducted approximately 1 year after the comprehensive national ban was published; however, as described above, regulations for implementation have not yet been defined and enforcement of the national smoke-free law is not in full force.

Smoking in indoor workplaces

*Prevalence of smoking bans in workplaces*

Despite regional smoke-free laws and the intention to establish a national smoke-free law, there continue to be workplaces where complete bans have not been implemented in the three cities where the ITC Survey was conducted. Among those who were employed outside of the home, 78% of smokers and 79% of non-smokers in the combined sample reported that smoking is not allowed in any indoor area of their workplace at Wave 1. This percentage increased to 85% among smokers and 89% among non-smokers at Wave 2.

Among smokers in Rio de Janeiro and Porto Alegre, the percentage who reported complete smoking bans at their workplace remained relatively unchanged between Waves 1 and 2; however, the percentage of smokers in São Paulo who reported complete smoking bans at their workplace increased from 77% at Wave 1 to 92% at Wave 2 (see Figure 16). At Wave 2, the percentage of smokers in São Paulo who reported complete smoking bans at their work was higher than smokers in Rio de Janeiro and Porto Alegre. Among non-smokers in each of the three cities, the percentage who reported that their workplace has a complete ban on smoking indoors remained relatively unchanged between Waves 1 and 2 in São Paulo and Porto Alegre, but increased in Rio de Janeiro (78% at Wave 1; 92% at Wave 2) (see Figure 17).

*The percentage of smokers in São Paulo who reported complete smoking bans at their workplace increased from 77% at Wave 1 to 92% at Wave 2.*
Figure 16. Percentage of smokers who reported that smoking is not allowed in any indoor areas of their workplace, among those who work outside the home, by city, by wave*

* The solid lines represent percentages adjusted for time-in-sample, while the dashed lines represent unadjusted estimates.
† Ban allowed designated smoking rooms.
‡ Unregulated.

Figure 17. Percentage of non-smokers who reported that smoking is not allowed in any indoor areas of their workplace, among those who work outside the home, by city, by wave*

* The solid lines represent percentages adjusted for time-in-sample, while the dashed lines represent unadjusted estimates.
† Ban allowed designated smoking rooms.
‡ Unregulated.
Noticing compliance with smoking bans in workplaces

The percentage of smokers who noticed smoking in indoor areas of their workplace in the last month has remained relatively unchanged between Wave 1 (21%) and Wave 2 (17%). In contrast, the percentage of non-smokers who noticed smoking indoors at their workplace decreased from 23% at Wave 1 to 12% at Wave 2.

By city, noticing smoking in the workplace did not change between Waves 1 and 2 among smokers in Rio de Janeiro (26% at Wave 1; 27% at Wave 2) and Porto Alegre (13% at Wave 1; 14% at Wave 2); however, among smokers in São Paulo, noticing smoking indoors at the workplace decreased from 25% at Wave 1 to 13% at Wave 2 (see Figure 18). Among non-smokers, noticing smoking in workplaces decreased between Wave 1 (23% in Rio de Janeiro; 16% in São Paulo; 34% in Porto Alegre) and Wave 2 (19% in Rio de Janeiro; 6% in São Paulo; 13% in Porto Alegre); however, this decrease was only significant in Porto Alegre (see Figure 19).

**Figure 18. Percentage of smokers who noticed smoking in indoor areas of their workplace in the last month, by city, by wave**

In São Paulo, the percentage of smokers who reported noticing smoking in the workplace decreased from 25% at Wave 1 to 13% at Wave 2. There was no change in Rio de Janeiro and Porto Alegre.
Support for smoking bans in indoor workplaces

Support for smoking bans in indoor workplaces has remained high, but relatively unchanged among smokers and non-smokers across both waves of the ITC Brazil Survey. Over three-quarters of smokers in the combined sample said that smoking should “not be allowed at all” in indoor workplaces at Wave 1 (75%) and Wave 2 (80%). Similarly, 85% of non-smokers in the combined sample at Wave 1 and 84% at Wave 2 thought that smoking should “not be allowed at all” in indoor workplaces.

Smoking in restaurants and bars

Noticing compliance with smoking bans in restaurants

Among respondents who had visited a restaurant in the last 6 months, there was a decrease in the percentage of smokers and non-smokers who reported noticing smoking indoors at their last visit between Waves 1 and 2. Seventeen percent (17%) of smokers and 30% of non-smokers in the combined sample noticed smoking indoors at their last visit to a restaurant at Wave 1. This percentage decreased to 5% among smokers and 9% among non-smokers at Wave 2. Similar trends were observed within each city and are presented in Figures 20 and 21.

Among non-smokers, noticing smoking in workplaces decreased between Wave 1 and Wave 2; however, this decrease was only significant in Porto Alegre.
Figure 20. Percentage of smokers who noticed smoking inside restaurants, among those who visited a restaurant in the last 6 months, by city, by wave*

* The solid lines represent percentages adjusted for time-in-sample, while the dashed lines represent unadjusted estimates.
† Ban allowed designated smoking rooms.
‡ Unregulated.

Figure 21. Percentage of non-smokers who noticed smoking inside restaurants, among those who visited a restaurant in the last 6 months, by city, by wave*

* The solid lines represent percentages adjusted for time-in-sample, while the dashed lines represent unadjusted estimates.
† Ban allowed designated smoking rooms.
‡ Unregulated.
**Noticing compliance with smoking bans in bars**

Similar to noticing smoking in restaurants, noticing smoking indoors in bars among those who had visited a bar within the last 6 months also decreased between Waves 1 and 2 of the Brazil Survey. At Wave 1, 68% of smokers and 69% of non-smokers noticed smoking inside bars at their last visit. This percentage decreased to 19% among smokers and 26% among non-smokers at Wave 2. Figures 22 and 23 show the city-level results for noticing smoking in bars at last visit. It is interesting to note that observed smoking in bars among smokers was significantly lower in Rio de Janeiro compared to São Paulo and Porto Alegre at Wave 1, but is significantly higher than the other cities at Wave 2 (although observed smoking in bars decreased at Wave 2 in Rio de Janeiro), after the implementation of their smoking ban.

![Figure 22. Percentage of smokers who noticed smoking inside bars, among those who visited a bar in the last 6 months, by city, by wave*](image)

* The solid lines represent percentages adjusted for time-in-sample, while the dashed lines represent unadjusted estimates.
† Ban allowed designated smoking rooms.
‡ Unregulated.
Cross-country comparison data shows that the percentage of smokers in Brazil who noticed smoking inside bars at last visit is positioned relatively in between Uruguay, which has had comprehensive smoking bans in indoor public places since 2006, and Mexico, which has had a national smoke-free law in place since 2008, but allows for designated smoking rooms (see Figure 24). These findings demonstrate the potential for observed smoking to decrease further with the implementation of regulations for enforcement of the national smoke-free law, as well as suggest that the percentage of smokers in Brazil who noticed smoking in bars may become more similar to that of Uruguay after regulations for implementation of the Brazilian smoking ban are defined.
Support for smoking bans

Public support for the national smoke-free law is strong. At Wave 2, respondents were asked if they support or oppose the total ban on smoking in enclosed public venues. The Wave 2 findings show high levels of support for the national smoking ban in public places, with almost all non-smokers reporting that they “support” or “strongly support” the national ban (97% in Rio de Janeiro; 95% in São Paulo; 97% in Porto Alegre). Slightly fewer smokers reported that they “support” or “strongly support” the national ban (89% in Rio de Janeiro; 90% in São Paulo; 88% in Porto Alegre); however, the difference between smokers and non-smokers in São Paulo is not significant (see Figure 25).
Perceived enforcement of the smoke-free law

At Waves 1 and 2, the ITC Brazil Survey asked respondents in Rio de Janeiro to what extent they thought that their local restaurants were enforcing the smoking ban. Among smokers who had visited a restaurant in the last 6 months, the percentage who reported that their local restaurants were “totally” enforcing the smoking ban increased from 64% at Wave 1 to 84% at Wave 2. Perceived enforcement of the smoke-free law also increased among non-smokers (37% at Wave 1; 71% at Wave 2); however, compared to smokers, fewer non-smokers thought that their local restaurants were “totally” enforcing the smoking ban. Respondents in São Paulo and Porto Alegre were only asked about perceived enforcement at Wave 2. Eighty seven per cent (87%) of smokers in São Paulo and 90% of smokers in Porto Alegre thought that their local restaurants were “totally” enforcing the smoking ban at Wave 2. Similar to Rio de Janeiro, fewer non-smokers also thought that their local restaurants were “totally” enforcing the smoking ban (72% in São Paulo; 78% in Porto Alegre).

Respondents were also asked about the enforcement of the smoking ban in bars. Similar to perceived enforcement in restaurants, perceived enforcement in bars increased between Waves 1 and 2 among smokers and non-smokers in Rio de Janeiro, with fewer non-smokers reporting that their local bars were “totally” enforcing the smoking ban. Among those who had visited a bar in the last 6 months, the percentage of smokers in Rio de Janeiro who thought that their local bars were “totally” enforcing the smoke-free law increased from 35% at Wave 1 to 59% at Wave 2, while perceived enforcement among non-smokers increased from 9% at Wave 1 to 41% at Wave 2. At Wave 2, 77% of smokers and 55% of non-smokers in São Paulo, and 73% of smokers and 47% of non-smokers in Porto Alegre reported that their local bars were “totally” enforcing the smoking ban.

Although perceived enforcement of the 2011 smoke-free law has increased in restaurants and bars, enforcement is still relatively low. In addition, noticing smoking inside bars is still relatively high (see Figures 22 and 23). These findings indicate a strong need to develop regulations for implementation in order to fully enforce the national smoke-free law.
Smoking outdoors in hospitality venues

Smoking outdoors in restaurants

Among smokers who had visited a restaurant in the last 6 months, the percentage who reported smoking either inside or outside at their last visit remained relatively unchanged between Wave 1 (50% in Rio de Janeiro; 50% in São Paulo; 45% in Porto Alegre) and Wave 2 (43% in Rio de Janeiro; 48% in São Paulo; 51% in Porto Alegre). However, among this group of smokers, the percentage who reported that they only smoked outdoors increased in Rio de Janeiro (92% at Wave 1; 98% at Wave 2), São Paulo (77% at Wave 1; 99% at Wave 2), and Porto Alegre (89% at Wave 1; 96% at Wave 2).

Smoking outdoors in bars

Among smokers who had visited a bar in the last 6 months, the percentage who reported smoking either inside or outside at their last visit decreased between Waves 1 and 2 in São Paulo (84% at Wave 1; 58% at Wave 2), however, remained relatively unchanged in Rio de Janeiro (79% at Wave 1; 68% at Wave 2) and Porto Alegre (80% at Wave 1; 72% at Wave 2). Of these smokers, the percentage who reported that they only smoked outdoors increased in all three cities: from 65% at Wave 1 to 88% at Wave 2 in Rio de Janeiro; from 40% at Wave 1 to 96% at Wave 2 in São Paulo; and from 46% at Wave 1 to 87% at Wave 2 in Porto Alegre (see Figure 26).

Figure 26. Percentage of smokers who smoked outside only at their last visit to a bar, among those who visited a bar in the last 6 months, by city, by wave*
Smoking in the home

The percentage of smokers who reported that smoking is “never” allowed anywhere inside their home remained relatively unchanged between Wave 1 (41%) and Wave 2 (46%). This trend was also observed among smokers within each city, with the exception of Rio de Janeiro, where the percentage of smokers who reported having home smoking bans increased from 36% at Wave 1 to 55% at Wave 2. A higher percentage of non-smokers reported that they “never” allow smoking inside their home. This percentage remained relatively the same across waves (75% at Wave 1; 77% at Wave 2). A similar trend was observed among non-smokers in all three cities.

Respondents who allow smoking inside their home were asked if they had plans to make their home totally smoke-free within the next year. Of concern is that between Waves 1 and 2, there was a decrease in the percentage of smokers who reported having plans to adopt home smoking bans in São Paulo (72% at Wave 1; 50% at Wave 2) and Porto Alegre (73% at Wave 1; 59% at Wave 2). However, there was a (non-significant) increase among smokers in Rio de Janeiro (69% at Wave 1; 76% at Wave 2). There was also a significant decrease in plans to adopt home smoking bans among non-smokers in São Paulo (75% at Wave 1; 41% at Wave 2). The percentage of non-smokers who planned to make their home totally smoke-free within the next year in Rio de Janeiro and Porto Alegre remained relatively unchanged between Wave 1 (82% in Rio de Janeiro; 66% in Porto Alegre) and Wave 2 (65% in Rio de Janeiro; 62% in Porto Alegre).

Support for smoking bans in other public places

Railway stations

Among smokers and non-smokers in the combined sample, the percentage who thought that smoking should “not be allowed at all” indoors at railway stations remained relatively unchanged between Wave 1 (67% of smokers; 72% of non-smokers) and Wave 2 (72% of smokers; 76% of non-smokers). Similar trends were observed among smokers and non-smokers within each city.

Subway trains and subway stations

Among smokers, there was a decrease in the percentage who thought that smoking should “not be allowed at all” inside subway trains or subway stations from 93% at Wave 1 to 88% at Wave 2. By city, this trend was observed among smokers in São Paulo (94% at Wave 1; 86% at Wave 2); however, support for smoking bans in subway trains and stations remained relatively the same in Rio de Janeiro (95% at Wave 1; 90% at Wave 2) and Porto Alegre (89% at Wave 1; 87% at Wave 2). Among non-smokers in the combined sample, the percentage who thought that smoking should “not be allowed at all” inside subway trains or subway stations also remained relatively the same between Wave 1 (94%) and Wave 2 (92%). Support for smoking bans in subway trains and stations remained relatively the same among non-smokers in each city.

Fast food outlets

Among smokers and non-smokers in the combined sample, the percentage who thought that smoking should “not be allowed at all” indoors at fast food outlets remained relatively unchanged between Wave 1 (77% of smokers; 87% of non-smokers) and Wave 2 (81% of smokers; 86% of non-smokers). Similar trends were observed among smokers and non-smokers within each city.

Football stadiums

At Wave 2, smokers and non-smokers were asked about smoking at football stadiums. In Rio de Janeiro, 63% of smokers and 70% of non-smokers reported that smoking should “not be allowed at all” indoors at football stadiums. Sixty per cent (60%) of smokers and 68% of non-smokers in São Paulo, and 51% of smokers and 59% of non-smokers in Porto Alegre supported indoor smoking bans at football stadiums.

Olympic venues

The Wave 2 Brazil Survey also asked smokers and non-smokers about smoking at Olympic venues. The majority of smokers (82% in Rio de Janeiro; 78% in São Paulo; 74% in Porto Alegre) reported that smoking should “not be allowed” indoors at Olympic venues. Similarly, the majority of non-smokers (88% in Rio de Janeiro, 86% in São Paulo, and 83% in Porto Alegre) supported indoor smoking bans at Olympic venues.

Support for smoking ban in cars with children

At Wave 2, the majority of smokers and non-smokers support a smoking ban in cars with children in them. In the combined sample, 88% of smokers and 91% of non-smokers support a smoking ban in cars with children. City-level results are presented in Figure 27.


Conclusions

Findings from the ITC Brazil Waves 1 to 2 Surveys show that support for the national smoking ban in enclosed public places is high, despite the fact that regulation and enforcement for this ban is presently lacking. The study’s results suggest that regional smoke-free laws have been effective in reducing smoking in restaurants and bars. However, although there is evidence of reductions in smoking in bars, one-quarter of non-smokers still reported noticing smoking at last visit. In addition, perceived enforcement in these venues is still relatively low. Observed smoking in the workplace in the combined sample has remained relatively unchanged and thus there continue to be workplaces where complete smoking bans have not been implemented. It is strongly recommended that Brazil define regulations for the smoke-free legislation in order to fully enforce this law.

The percentage of smokers and non-smokers who report having home smoking bans remained relative unchanged between Waves 1 and 2. Plans to make homes smoke-free decreased in São Paulo and Porto Alegre, suggesting that sustained funding for mass media campaigns to educate the public about the harms of secondhand smoke may be helpful to further increase the adoption of home smoking bans.

Strong public support for a ban on smoking in cars with children suggests that Brazil is well positioned to adopt smoke-free car legislation. Laws banning smoking in cars carrying children have been implemented in a number of countries including Canada, South Africa, Cyprus, and Bahrain, while Mauritius has banned smoking in cars carrying passengers of any age. This data also suggests that Brazilians would be receptive to awareness campaigns that encourage people to not smoke in cars with children.
PACKAGING AND LABELLING

Article 11 of the FCTC obligates Parties to develop effective health warning labels taking into account such things as size, use of pictures, rotation of messages, and prominence on the pack. This article also obligates Parties to develop tobacco product packaging requirements that do not mislead the consumer about the product’s characteristics or level of harmfulness; including bans on the use of words such as “light” and “mild.” Since 2001, Brazil has implemented three rounds of pictorial warning labels covering 100% of the back of tobacco packages.

Round 1 pictorial health warnings were in circulation from 2001-2004 and included nine warning labels. From 2004-2009 the Round 2 pictorial warning were in circulation and included 10 images that were also accompanied by stronger text messages. Approximately 2 months after the ITC Brazil Wave 1 Survey was conducted, the Round 3 pictorial warning labels were released and are currently in circulation. Round 3 contained ten images that used more fear-arousing depictions of health effects with themes such as toxic substances, lung cancer lethality, and harmful effects to a fetus. The ITC Brazil Wave 2 Survey evaluates the effectiveness of the Round 3 pictorial warning labels approximately 3 years after they were implemented.

Since 2001, Brazil has had a ban on misleading descriptors such as “light”, “mild”, and “smooth”, and in May 2012, announced a ban on menthol and other flavors in tobacco products. This latter ban is suspended until more evidence on the health impact of additives in Brazilian cigarettes is presented by a committee of experts convened by ANVISA. The ITC Brazil Wave 2 Survey included questions about smokers’ perceptions of their current brand of cigarettes compared to other brands, as well as their perceptions of menthol cigarettes.

Changes in warning effectiveness over time

The ITC Brazil Survey includes a broad set of questions to assess health warning effectiveness, including measures of label salience as well as cognitive and behavioral responses to the warnings. Figure 28 shows the changes in these measures between Wave 1 and Wave 2 for the combined sample.

It should be noted that the Wave 2 Survey was conducted 3 years after the Round 3 pictorial warnings were introduced, and therefore the Wave 2 results reflect the combination of the impact of the Round 3 pictorial warnings and the wear-out due to the 4-year time period. This is important because studies have shown that warning effectiveness decreases over time.48

The Wave 2 Survey was conducted 3 years after the Round 3 pictorial warnings were introduced, and therefore the Wave 2 results reflect the combination of the impact of the Round 3 pictorial warnings and the wear-out due to the 4-year time period.

The Round 3 pictorial warnings are more graphic and therefore more likely to trigger strong, aversion emotions compared to previous images.
Figure 28. Impact of warning labels on smokers’ perceptions and behaviours in the last month in the combined sample, by wave*
Although there was an increase in the percentage of smokers in Brazil who noticed warning labels “often” or “very often” in the last month, cross-country comparison data show that this percentage is still low in comparison to smokers in Mexico and Uruguay.

Although there was an increase in the percentage of smokers who “often” or “very often” noticed warning labels in the last month increased in the combined sample between Waves 1 (44%) and 2 (51%) (see Figure 28). Although noticing the warnings increased among smokers in all three cities (Rio de Janeiro (50% at Wave 1; 52% at Wave 2), São Paulo (39% at Wave 1; 44% at Wave 2), and Porto Alegre (44% at Wave 1; 55% at Wave 2)); the increase was only significant in Porto Alegre.

This difference may be explained by the differences in size, including whether health warnings cover both the front and back of packs, and length of exposure to the warning labels in each country prior to the time the first post-warning change survey wave was conducted. The data presented in Figure 29 uses cross-sectional data from the ITC Brazil Wave 2 Survey (October 2012 – February 2013), the ITC Uruguay Wave 3 Survey (October 2010 – January 2011), and the ITC Mexico Wave 6 Survey (October – December 2012). Wave 2 of the Brazil Survey was conducted approximately three years after the implementation of the Round 3 pictorial labels that cover 100% of the back of cigarette packages, whereas Wave 3 of the Uruguay Survey was conducted approximately one year after the implementation of Uruguay’s Round 4 pictorial warnings, which introduced new warnings and increased the size of the warning labels to 80% of the front and back of cigarette packs. In Mexico, pictorial warnings cover 30% of the front and 100% of the back of cigarette packages and warnings are rotated every 6 months. The ITC Mexico Wave 6 Survey was conducted approximately one month after a new set of warning label rotations was implemented. Thus, compared to Brazil, warning labels cover a higher percentage of cigarette packages in Uruguay and Mexico, and smokers in these countries also had a shorter exposure to the new warnings.

Studies have shown that increasing the size of health warning labels increases the effectiveness of the warnings and that newly implemented warnings are more likely to be noticed by smokers, suggesting that Brazil should consider implementing more frequent rotation of new pictorial warnings and warning labels on the front of packs.49-51
Figure 29. Percentage of smokers who “often” or “very often” noticed warning labels, by country

<table>
<thead>
<tr>
<th>Country</th>
<th>High Income</th>
<th>Middle Income</th>
<th>Low Income</th>
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</tr>
<tr>
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<tr>
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<td></td>
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</tr>
<tr>
<td>India*† 2010-12</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Bangladesh‡ 2010</td>
<td>57%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

† ‘Smokers’ refer to only cigarette users for all countries except Bangladesh and India where dual tobacco users (those who reported smoking both cigarettes and bidis) were also included in the analysis.

* Countries with pictorial warnings at time of survey.

†† In India and Bangladesh, there was an extra filter that asks “As far as you know, do cigarette/bidis/any smoked tobacco packages in Bangladesh/India have health warnings/warning labels?” If the respondent answered “no” then noticing warning labels was set to “never.”
Reading/looking closely at health warnings

Those respondents who noticed warning labels at least “rarely” were also asked if they had read or looked closely at the warning labels. The percentage of smokers who read or looked closely at the warning labels “often” or “very often” in the last month had a non-significant increase between Wave 1 and 2 in the combined sample (35% at Wave 1 to 40% at Wave 2) (see Figure 28), and within each city (36% to 41% in Rio de Janeiro; 32% to 35% in São Paulo; 36% to 45% in Porto Alegre).

Thinking about the harms of smoking

The percentage of smokers who reported that the warning labels made them think about the health risks of smoking “a lot” decreased slightly between Wave 1 and 2 in the combined sample (47% at Wave 1 to 40% at Wave 2) (see Figure 28), and within each city (52% to 48% in Rio de Janeiro; 46% to 36% in São Paulo; 42% to 36% in Porto Alegre). However, only the decrease observed in São Paulo was significant.

More likely to quit

When asked “To what extent, if at all, do the warning labels on cigarette packs make you more likely to quit smoking?,” 30% of all smokers reported at Wave 1 that the warning labels make them “a lot” more likely to quit smoking. This percentage decreased to 20% at Wave 2. At the city level, decreasing trends were observed in São Paulo (32% at Wave 1; 17% at Wave 2) and Porto Alegre (26% at Wave 1; 14% at Wave 2). In Rio de Janeiro, the percentage who thought that the warning labels made them “a lot” more likely to quit smoking remained relatively unchanged between Waves 1 and 2 (see Figure 30).

ITC cross-country comparison data show that the percentage of smokers in Brazil who thought that the warning labels make them “a lot” more likely to quit smoking is lower compared to Mexico and Uruguay (see Figure 31).
Avoiding the warning labels

The percentage of smokers who have made efforts to avoid looking at or thinking about the warning labels have slightly increased among the combined sample (41% at Wave 1; 47% at Wave 2) (see Figure 28). However, at the city level, similar to reading or looking closely at the warning labels, these increases are not significant. In Rio de Janeiro, the percentage of smokers who avoided warning labels in any way increased from 40% at Wave 1 to 46% at Wave 2.
In São Paulo, the percentage increased from 40% to 43% between waves, and in Porto Alegre, the percentage increased from 43% to 52%.

ITC cross-country comparison data show that the percentage of smokers in Brazil who have made efforts to avoid the warning labels is higher than in Mexico and Uruguay, and is the highest among females across all ITC countries, and second highest among males (see Figure 32).

**Figure 32. Percentage of smokers† who made an effort to avoid warning labels, by country**

† ‘Smokers’ refer to only cigarette users for all countries except Bangladesh and India where dual tobacco users (those tobacco users who reported smoking both cigarettes and bids) were also included in the analysis.

* Countries with pictorial warnings at time of survey.

‡ If a respondent answered “never” to noticing warning labels in Malaysia, Thailand, Mauritius, India, or Bangladesh, or if a respondent answered “no” to knowing that cigarette/smoked tobacco packages have warning labels in India or Bangladesh, the question asking about avoiding warning labels was filtered. Thus the response was set to “no” for these individuals.
Forgoing a cigarette

The percentage of smokers who reported that the warning labels stopped them from having a cigarette at least once in the last month decreased from 40% to 24% between Waves 1 and 2 in the combined sample (see Figure 28). A decreasing trend was observed within each city with the percentage of smokers who gave up a cigarette at least once decreasing from 43% to 29% in Rio de Janeiro, 41% to 23% in São Paulo, and 38% to 22% in Porto Alegre (see Figure 33).

![Figure 33. Percentage of smokers who reported that the warning labels stopped them from smoking a cigarette at least once in the last month, by city, by wave*](image)

Emotional responses to warning labels

At both waves of the ITC Brazil Survey, respondents were asked about how the warning labels made them feel. Over three-quarters of the sample found the labels to be “somewhat”, “very”, or “extremely realistic” at both waves. Smokers reported that warning labels made them feel “somewhat” or “very unpleasant” (70% at Wave 1 and 68% at Wave 2) and that warning labels made them feel “somewhat” or “very alarmed” (61% at Wave 1 and 57% at Wave 2) also remained relatively unchanged between Waves 1 and 2. However, smokers who felt “somewhat”, “very”, or “extremely worried” by the warning labels increased significantly from Wave 1 (42%) to Wave 2 (58%). The change in trends between Waves 1 and 2 for the combined sample are presented in Figure 34, while city-level results are discussed below the graph.
At the city level, there were no significant differences in unpleasant feelings, or feelings of alarm in reaction to the warning labels between waves. Conversely, there was a significant increase in the percentage of smokers who reported that the warning labels made them feel “extremely”, “very”, or “somewhat worried.” In Rio de Janeiro, the percentage increased from 46% at Wave 1 to 64% at Wave 2, while in São Paulo and Porto Alegre, the percentage increased from 41% to 60% and 39% to 52%, respectively.

In addition, with the exception of São Paulo, there were significant increases in the percentage of smokers who thought that the warning labels were “very realistic” (35% to 47% in Rio de Janeiro; 33% to 39% in São Paulo; 36% to 45% in Porto Alegre). The percentage of smokers who thought that the warning labels were “not at all realistic” remained below 10% at both waves.
Support for more information on cigarette packs

Support for more information on cigarette packages decreased between Waves 1 and 2. In the combined sample, the percentage of smokers who thought that cigarette packages should have more health information decreased from 60% to 46%. By city, a decrease in the support for more information on cigarette packs was observed in São Paulo (56% at Wave 1; 41% at Wave 2) and Porto Alegre (60% at Wave 1; 42% at Wave 2). Support also declined in Rio de Janeiro (63% at Wave 1; 54% at Wave 2); however, this decrease was not significant.

ITC cross-country comparison data show that the percentage of male and female smokers in Brazil who want more information on cigarette packages is similar to that of male and female smokers in Mexico, and higher than smokers in Uruguay (see Figures 35 and 36).

Figure 35. Percentage of male cigarette smokers† who think there should be more, less, or the same amount of health information on cigarette packages, by country

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
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<td>79%</td>
<td>1%</td>
<td>20%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

† Cigarette smokers refer to only cigarette users for all countries except Bangladesh and India where dual tobacco users (those tobacco users who reported smoking both cigarettes and bids) were also included in the analysis.

* Countries with pictorial warnings at time of survey.

‡ Among respondents who answered “yes” to the question “As far as you know, do cigarette/any smoked tobacco packages in Bangladesh/India have health warnings/warning labels?”
Smokers' opinions of tobacco regulation and plain packaging

At Wave 2, respondents were asked whether they “agree”, “disagree”, or “neither agree nor disagree” with the statement “tobacco products should be more tightly regulated.” The majority of smokers in Rio de Janeiro (88%) and Porto Alegre (87%) “agreed” that tobacco products should be more tightly regulated. In São Paulo, slightly fewer smokers (75%) “agreed” with this statement.

Respondents were also asked whether they thought that tobacco companies should be required to sell cigarettes in plain packaging (i.e., in packs with only the brand name and health warnings, but without the colourful designs on the rest of the pack). Only about half of smokers in all three cities “agreed” that cigarettes should be sold in plain packaging at Wave 2 (51% in Rio de Janeiro; 42% in São Paulo; 54% in Porto Alegre).

Smokers’ perceptions of their usual brand of cigarettes

At Wave 2, the ITC Brazil Survey asked smokers questions about their usual brand of cigarettes compared to other brands of cigarettes. If the smoker indicated that they did not have a usual brand, they were asked about the current brand they were smoking.

When asked about how harmful their usual/current brand is compared to other cigarette brands, 13% of smokers in Rio de Janeiro, 16% in São Paulo, and 10% in Porto Alegre thought that their usual brand was “a little less harmful.” About half of smokers also thought that their usual/current brand of cigarettes were lighter in taste (56% in Rio de Janeiro; 48% in São Paulo; 53% in Porto Alegre) and smoother on their throat and chest (46% of smokers in Rio de Janeiro; 43% in São Paulo; 49% in Porto Alegre) compared to other brands (see Figure 37).
Brand Chosen for Tar and Nicotine Levels

Forty-nine percent (49%) of smokers at Wave 1 and 40% at Wave 2 reported choosing their brand for the tar and nicotine levels (see Figure 38). Brazil does not ban quantitative statements of tar, nicotine, or carbon monoxide emission levels on cigarette packages as recommended in the Guidelines for Article 11 – it is optional for tobacco companies to display this information. The results suggest that 40% of the smokers interviewed in the ITC Brazil Survey are aware of the tar and nicotine level of their cigarettes, and use this knowledge to make brand choices. This may suggest a significant, although decreasing, portion of smokers still believe that lower tar and nicotine cigarettes are less harmful.
Smokers’ perceptions of menthol cigarettes

The ITC Brazil Wave 2 Survey also asked smokers about their perceptions of menthol cigarettes compared to regular cigarettes. Ten per cent (10%) of smokers in Rio de Janeiro, 18% in São Paulo, and 13% in Porto Alegre “agreed” or “strongly agreed” that menthol cigarettes were less harmful than regular cigarettes and approximately one-third “agreed” or “strongly agreed” that menthol cigarettes are smoother on the throat and chest (26% in Rio de Janeiro; 32% in São Paulo; 32% in Porto Alegre) (see Figure 39).

Of smokers in the combined sample who were menthol smokers (N=52), 35% “agreed” or “strongly agreed” that menthol cigarettes were less harmful than regular cigarette products.

Smokers were also asked what they would be most likely to do if flavourings in cigarettes, such as menthol, chocolate, or vanilla, were banned. Of the 52 menthol cigarette smokers in the study (5% of the sample), 42% said that they would quit smoking or reduce the amount they smoke if flavourings were banned (see Figure 40). Although the confidence intervals are large due to the small sample (lower limit 24%, upper limit 60%), the findings still suggest that there are potentially positive benefits to implementing this policy. These results are similar to a larger study conducted with menthol smokers in the United States (N= 471) where 35% of smokers said they would stop smoking if menthol cigarettes were banned.52
Conclusions

Evidence from the ITC Brazil Wave 2 Survey indicates that there were no significant increases in warning label effectiveness since the implementation of the Round 3 pictorial warnings, with the exception of noticing the warning labels in Porto Alegre and in the percentage of smokers who reported that the warning labels made them feel “extremely worried” in each of the three cities. However, the Wave 2 Survey was conducted approximately three years after the Round 3 implementation, suggesting that the pictorial warnings in Brazil may be undergoing “wear-out”.48 The Survey findings suggest a need for more frequent introduction of new pictorial warnings to avoid “wear-out”, as well as placement of warnings on the front of cigarette packages in addition to the back, as called for by the FCTC Article 11 Guidelines.

Approximately 13% of all smokers, and 35% of menthol smokers in Brazil believe that their usual brand is “a little less harmful” compared to other brands of cigarettes. In addition, about half of all smokers (46%) believe that their usual brand is lighter in taste and smoother on their throat and chest than other brands. Product manipulation, such as filter vents and additives like menthol, can produce cigarettes that deliver a smoother sensation on the respiratory system, and this sensation has been shown to be strongly related to the belief that these cigarettes are less harmful.53, 54 The findings suggest that Brazil’s legislation to ban menthol and other flavourings would be effective in reducing the misperception that flavoured cigarettes are less harmful. Removing products from the market that produce a smoother physical sensation for smokers can also potentially reduce the initiation of new smokers who enter the market through use of these products.

It is also known that tobacco companies continue to promote the belief that some brands are less harmful through the brand or variety name or by other elements of pack design such as colour.55, 56 Article 11 Guidelines suggest that Parties adopt plain packaging in order to eliminate package design techniques that may suggest that some products are less harmful than others.

Many smokers in the ITC Brazil Survey (40% at Wave 2) still choose their brand because of the tar and nicotine levels, which currently are optional for display on cigarette packages. This result aligns with studies that have shown that some cigarettes are perceived to be less harmful than others (such as those with low tar and nicotine) despite scientific evidence to the contrary.57, 58 Brazil could more fully comply with the Guidelines for Article 11 of the FCTC if it implemented a ban on quantitative emission statements for tar and nicotine.
TOBACCO PRICE AND TAXATION

Increasing the price of tobacco through taxation is widely recognized as the most effective tobacco control measure, and Article 6 of the FCTC obligates Parties to adopt pricing and taxation measures in order to reduce tobacco consumption.

In 1990, an ad valorem tax for cigarettes was introduced in Brazil at 41.3% of the retail price. A multi-tiered specific excise tax was then introduced in 1999. In 2003, 2007, and 2009, significant increases on tobacco excise taxes were implemented such that the overall tax rate increased to 62% of the retail price. In March 2012, approximately 7 months before the ITC Brazil Wave 2 Survey, a new tax structure was implemented that will raise tax rates over 4 years to a cumulative increase of 55%. The 2012 law also allowed the government to set a minimum retail price for a pack of cigarettes.

The ITC Brazil Surveys assessed smokers’ perceptions of the cost of smoking, the influence of price on tobacco purchasing decisions, and on thoughts about quitting.

Source of last cigarette purchases

At both waves of the ITC Brazil Survey, smokers were asked where they last bought cigarettes for themselves. Among the sources listed at both waves, the percentage of smokers who reported last purchasing cigarettes at each source remained relatively unchanged with two exceptions: 1) last purchasing cigarettes at a bar, restaurant, or entertainment establishment in Porto Alegre (decreased from 31% at Wave 1 to 22% at Wave 2); and 2) last purchasing cigarettes from a kiosk or newsstand in Rio de Janeiro (decreased from 16% at Wave 1 to 7% at Wave 2) and São Paulo (decreased from 7% at Wave 1 to 3% at Wave 2).

At Wave 2, there was some variation between the three cities among the source of smokers’ last cigarette purchase (see Figure 41). In Rio de Janeiro, the most frequently reported source of last purchase of cigarettes was from a bar, restaurant, or entertainment establishment (42%). This percentage was significantly higher compared to São Paulo (22%) and Porto Alegre (23%). In contrast, the majority of smokers in São Paulo reported last purchasing cigarettes from a bakery (54%). This percentage was significantly higher compared to Rio de Janeiro (27%) and Porto Alegre (16%). In Porto Alegre, the most commonly reported source of last purchase was the supermarket (25%). Significantly fewer smokers in Rio de Janeiro (5%) and São Paulo (8%) reported that they had last purchased cigarettes from a supermarket. Only 1% of smokers in São Paulo and in Rio de Janeiro and only 3% of smokers of Porto Alegre mentioned the tobacco store as the source of the last cigarette purchase.

In March 2012, a new tax structure was implemented that will raise tax rates over 4 years to a cumulative increase of 55%. The 2012 law also allowed the government to set a minimum retail price for a pack of cigarettes.

ii. Note that there are slight differences between the Wave 2 percentages listed above and the Wave 2 percentages given in Figure 41, and discussed below. This note also applies to Figures 47, 51, and 55. Unadjusted estimates better represent what is happening at a given wave, thus, the percentages provided in Figures 41, 47, 51, and 55 are the unadjusted estimates. Conversely, percentages adjusted for time-in-sample are presented in the text accompanying these figures, as these adjusted percentages are best for understanding the change in a given variable’s outcome over the two waves. See the Methods section of this report for more detail.
Figure 41. Percentage of smokers reporting purchasing cigarettes from specific sources at last purchase, by city, Wave 2 (Oct 2012-Feb 2013)‡

‡ Note that there are slight differences between the Wave 2 percentages listed in text above and the Wave 2 percentages given in Figure 41. This note also applies to Figures 47, 51, and 55. Unadjusted estimates better represent what is happening at a given wave, thus, the percentages provided in Figures 41, 47, 51, and 55 are the unadjusted estimates. Conversely, percentages adjusted for time-in-sample are presented in the text accompanying these figures when discussing trends, as these adjusted percentages are best for understanding the change in a given variable’s outcome over the two waves. See the Methods section of this report for more detail.
Purchasing cigarettes outside of Brazil

Results from the ITC Brazil Survey indicate that less than 10% of smokers in the combined sample purchased cigarettes from outside the country in the last 6 months (8% at Wave 1; 10% at Wave 2) and less than 5% purchased cigarettes outside the country “many times” or “all the time” (2% at Wave 1; 3% at Wave 2). City-level results were similar with no differences between the three cities or across waves.

Price and brand choice

Among smokers in the combined sample who indicated that they have a regular brand and variety of cigarettes, 36% reported that price was a factor in choosing their regular brand at Wave 1. This percentage decreased to 25% at Wave 2. Decreases were also observed in each city (37% at Wave 1 to 21% at Wave 2 in Rio de Janeiro; 35% at Wave 1 to 23% at Wave 2 in São Paulo; 35% at Wave 1 to 31% at Wave 2 in Porto Alegre); however, the decrease observed in Porto Alegre was not significant.

Price as a reason to quit

At Wave 1, 74% of smokers in the combined sample reported that the price of cigarettes led them to think about quitting “somewhat” or “very much” in the last 6 months. This percentage decreased to 62% at Wave 2. Decreases were also observed within each city (71% at Wave 1 to 61% at Wave 2 in Rio de Janeiro; 72% at Wave 1 to 60% at Wave 2 in São Paulo; 74% at Wave 1 to 65% at Wave 2 in Porto Alegre). Despite this decrease, price as a reason to quit has remained the fourth most frequently mentioned reason by smokers for thinking about quitting (see the Smoking Cessation section of this report).

Thinking about money spent on smoking

At Waves 1 and 2, smokers were asked how often in the last month they had thought about the money they spend on smoking. The percentage of smokers who had “often” or “very often” thought about the money they spend on smoking in the last month increased slightly in Rio de Janeiro (63% at Wave 1; 65% at Wave 2) and decreased in São Paulo (60% at Wave 1; 52% at Wave 2); however, these changes were not significant. The percentage in Porto Alegre did not change (62% at Waves 1 and 2).

Cross-country comparison data show that the percentage of smokers who “often” or “very often” thought about the money they spend on cigarettes in the last month was the highest in Brazil compared to other ITC middle-income countries (see Figure 42).
Figure 42. Percentage of smokers who thought “often” or “very often” about the money they spent on smoking in the last month, by country

* For Bangladesh, India, and Zambia, dual tobacco users (those tobacco users who reported smoking both cigarettes and bidis) and mixed tobacco users (those tobacco users who reported smoking both smoked tobacco and smokeless tobacco) who reported smoking cigarettes were also included in the analysis.

† The response options for Bangladesh, China, India, and Zambia did not include “very often.”
Measures taken to save on the amount paid for cigarettes

At Wave 2, smokers were asked if, in the last 6 months, they had done anything to save on the amount they pay for cigarettes (see Figure 43). The two most frequently reported measures taken by smokers were considering quitting smoking (51% in Rio de Janeiro; 42% in São Paulo; 48% in Porto Alegre) and reducing the number of cigarettes smoked (50% in Rio de Janeiro; 47% in São Paulo; 51% in Porto Alegre). The next most common measure reported was purchasing a cheaper brand (13% in Rio de Janeiro; 16% in São Paulo; 19% in Porto Alegre). There were no significant differences between cities for each of these three measures of saving on the amount paid for cigarettes. Among the other measures taken, more variation between cities was observed. Significantly fewer smokers in Porto Alegre reported purchasing cigarettes in bulk (5%) compared to Rio de Janeiro (10%) and São Paulo (10%). Similarly, fewer smokers in Rio de Janeiro (7%) reported looking for a cheaper source of purchase for their usual brand compared to the other two cities (12% in São Paulo; 17% in Porto Alegre). The percentage of respondents in São Paulo (11%) who reported purchasing cigarettes from tax-free sources was also significantly higher compared to smokers in Rio de Janeiro (5%).

Figure 43. Various measures taken by smokers in the last 6 months to save on the amount they spend on cigarettes, by city, Wave 2 (Oct 2012-Feb 2013)
Cigarette Affordability

At Wave 1, smokers were asked “In the last 6 months, have you spent money on cigarettes that you knew would be better spent on household essentials like food?” Just above three-quarters of smokers (78% in Rio de Janeiro; 77% in São Paulo; 83% in Porto Alegre) reported that they had spent money on cigarettes that they knew would be better spent on household essentials. At Wave 2, the question was reworded to “In the last 6 months, has there been a time when the money you spent on cigarettes resulted in not having enough money for household essentials like food?” The highest percentage of smokers who reported that there was a time which resulted in not having enough money for household essentials was observed in Rio de Janeiro (21%). Fewer smokers in São Paulo (13%) and Porto Alegre (14%) reported having a time where this scenario occurred, however only the difference between Rio de Janeiro and São Paulo was significant.

Data from the ITC Surveys also allows for an analysis of affordability of manufactured cigarettes, which refers to the quantity of resources (or income) that is required to purchase a daily dose of cigarettes. Higher affordability, for example, means that the price of a daily dose of cigarettes would require a lower percentage of one’s daily income.

An Affordability Index was constructed using ITC Brazil data to determine the change in cigarette affordability between Wave 1 (2009) and Wave 2 (2012-2013). This analysis took into account ITC data on price paid for the most recent factory-made cigarette purchase, number of cigarettes smoked per day, household income, and number of adults in the household. The results show that cigarettes became less affordable from Wave 1 to Wave 2, with an average annual decrease in the affordability index of approximately 2.0% (see Figure 44).

Among smokers who smoke a regular brand, the percentage who reported that price was a reason for choosing their regular brand of cigarettes decreased from 36% at Wave 1 to 25% at Wave 2.
Figure 44. Affordability of manufactured cigarettes and change in affordability per year in 17 ITC countries

<table>
<thead>
<tr>
<th>Country</th>
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<td>20.46</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>2007-2011</td>
<td>19.40</td>
<td>17.99</td>
<td>-1.65%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2002-2010</td>
<td>15.08</td>
<td>13.24</td>
<td>-1.41%</td>
</tr>
<tr>
<td>France</td>
<td>2006-2012</td>
<td>23.03</td>
<td>18.45</td>
<td>-1.74%</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>2005-2008</td>
<td>27.37</td>
<td>31.61</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>2005-2011</td>
<td>8.00</td>
<td>17.17</td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>2006-2012</td>
<td>13.42</td>
<td>10.49</td>
<td>-1.75%</td>
</tr>
<tr>
<td>Uruguay</td>
<td>2006-2012</td>
<td>8.63</td>
<td>25.91</td>
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</tr>
<tr>
<td>Mauritius</td>
<td>2010-2011</td>
<td>7.68</td>
<td>7.63</td>
<td>-0.65%</td>
</tr>
<tr>
<td><strong>Brazil</strong></td>
<td>2009-2012</td>
<td>17.08</td>
<td>15.29</td>
<td>-1.98%</td>
</tr>
<tr>
<td>China</td>
<td>2006-2009</td>
<td>11.85</td>
<td>12.61</td>
<td></td>
</tr>
</tbody>
</table>

Cigarettes became less affordable in Brazil between 2009 and 2012, with an average annual decrease in the affordability index of approximately 2.0%.
Conclusions

The majority of smokers surveyed at Wave 2 buy their cigarettes from a bar, restaurant, or entertainment establishment in Rio de Janeiro, a bakery in São Paulo, and the supermarket in Porto Alegre.

ITC Brazil data shows that the affordability of cigarettes has decreased between Waves 1 and 2—a favourable trend. Besides that, more than 50% of smokers who reported that they “often” or “very often” thought about the money they spend on smoking. Decreases were also observed in the percentage of smokers reporting price as a reason for choosing their regular brand of cigarettes, as well as the price of cigarettes led them to think about quitting. Future waves of the ITC Brazil Survey will assess the extent to which perceptions and purchasing behaviours are impacted as the new tobacco tax structure is implemented in Brazil until 2015.

Figure 44 presents data for 17 ITC countries (males only): (a) Data presented for Mauritius is for Wave 2 (2010) and Wave 3 (2011). Data for the Republic of Korea is presented for Wave 1 (2005) and Wave 2 (2008). Data for all other countries is for the year of the first survey wave and of the most recent wave. Note that CPDIR is the cigarette price per day to daily income ratio, (b) Affind Initial: the Affordability Index (the reciprocal of CPDIR) for the initial wave, (c) Affind Latest: the Affordability Index (the reciprocal of CPDIR) for the most recent wave.*

* Change in Affordability Index per year = (% change in Affind between the first survey wave and the most recent survey wave)^[1/(Difference between the date at the 1/3 timepoint of the first survey wave interviewing period and the date at the 1/3 timepoint of the most recent survey wave interviewing period, in years)]. The date corresponding to 1/3 of the survey wave interviewing period was chosen because it was the approximate point at which 50% of the respondents had been interviewed for that survey wave in each country.
Article 12 of the FCTC requires Parties to promote and strengthen public awareness of tobacco control issues by providing broad access to public awareness programs on the health risks of tobacco consumption and exposure to tobacco smoke, and about the benefits of cessation. In 1989, Brazil created the National Tobacco Control Program which has a mandate that includes the dissemination of scientific knowledge through educational activities and public awareness campaigns. Brazil also annually participates in the WHO World No Tobacco Day (May 31st) and Brazil's own National Day Against Tobacco (August 29th).

The ITC Brazil Wave 1 (2009) and Wave 2 (2012-2013) Surveys measured changes in smokers’ knowledge of specific health risks of smoking and the dangers associated with exposure to secondhand smoke, as well as perceptions of harm.

Anti-smoking information and thinking about quitting

Noticing anti-smoking information

The ITC Brazil Survey asked respondents whether they had noticed any advertising or information in the last 6 months that talked about the dangers of smoking, or encouraged quitting. At Wave 1, 37% of smokers and 34% of non-smokers in the combined sample “often” or “very often” noticed information about the dangers of smoking. These percentages decreased to 25% of smokers and 21% of non-smokers at Wave 2. Significant decreases were also observed among smokers and non-smokers in São Paulo and Porto Alegre (see Figures 45 and 46). There was relatively no difference between the percentage of smokers and non-smokers who “often” or “very often” noticed anti-smoking information in each city, with the exception of Rio de Janeiro at Wave 1 and São Paulo at Wave 2.

The percentage of smokers and non-smokers who noticed anti-smoking information decreased between Wave 1 and Wave 2.
Thinking about quitting

At Waves 1 and 2, smokers were asked to report on various reasons that led them to think about quitting smoking in the last 6 months, regardless of whether they currently intended to quit (see the Smoking Cessation section of this report). Among the suggested reasons were those related to the provision of anti-smoking information, including advertisements or information about the health risks of smoking, prevention messages, and the availability of a telephone helpline/quitline/information line. There was a decrease in all three reasons to quit between Wave 1 and Wave 2.

Significantly, fewer smokers at Wave 2 stated that advertisements or information about the health risks of smoking “somewhat” or “very much” led them to think about quitting (72% at Wave 1 and 58% at Wave 2 in Rio de Janeiro; 68% at Wave 1 and 45% at Wave 2 in São Paulo; 69% at Wave 1 and 51% at Wave 2 in Porto Alegre). Similarly, there was a significant decrease in reporting that prevention messages “somewhat” or “very much” led them to think about quitting in each city (64% at Wave 1 and 53% at Wave 2 in Rio de Janeiro; 60% at Wave 1 and 46% at Wave 2 in São Paulo; 67% at Wave 1 and 43% at Wave 2 in Porto Alegre). There were also fewer smokers who reported that the availability of a telephone helpline/quitline/information line “somewhat” or “very much” led them to think about quitting (52% at Wave 1 and 42% at Wave 2 in Rio de Janeiro; 44% at Wave 1 and 37% at Wave 2 in São Paulo; and 52% at Wave 1 and 39% at Wave 2 in Porto Alegre); however, only the decrease observed in Porto Alegre was significant.

Knowledge of the harms of smoking

At both survey waves, respondents were given a list of ten health effects and diseases that may be caused by smoking and were asked if they believe smoking causes each one. Approximately 80% or more of smokers in the combined sample were aware of ten health effects that were listed at Wave 2. Knowledge of smoking-related blindness was lowest among all health effects; however, respondents were only asked whether they believed that smoking causes blindness at Wave 1. Only about one-third of smokers in São Paulo (36%) and Porto Alegre (34%) reported that they held this belief. In contrast, a higher percentage of smokers in Rio de Janeiro (47%) believed that smoking causes blindness at Wave 1.

For those smoking-related health effects asked at both waves, knowledge remained unchanged between Waves 1 and 2 among smokers within each city, with the exception of believing that smoking causes premature aging, heart disease, or lung cancer in smokers. Among smokers in São Paulo, the percentage who believed that smoking causes premature aging increased from 78% at Wave 1 to 87% at Wave 2, while a decrease was observed in the percentage of smokers who believed that smoking causes heart disease (96% at Wave 1; 91% at Wave 2). The percentage of smokers in São Paulo and Porto Alegre who believe that smoking causes lung cancer in smokers also decreased between Wave 1 (97% in São Paulo; 97% in Porto Alegre) and Wave 2 (92% in São Paulo; 90% in Porto Alegre). Despite these slight decreases, knowledge of smoking-related health effects remains high at Wave 2 (see Figure 47).
The vast majority of smokers were also aware of the harms of secondhand smoke. At Wave 1, 91% of smokers in Rio de Janeiro, 90% in São Paulo, and 93% in Porto Alegre believed that secondhand smoke causes asthma in children. These percentages remained relatively unchanged at Wave 2 (88% in Rio de Janeiro; 87% in São Paulo; 90% in Porto Alegre). Fewer smokers believed that secondhand smoke causes lung cancer in non-smokers (78% at Wave 1 and 81% at Wave 2 in Rio de Janeiro; 78% at Wave 1 and 81% at Wave 2 in São Paulo; 80% at Wave 1 and 77% at Wave 2 in Porto Alegre).
Also, when asked whether they agree or disagree with the statement “cigarette smoke is dangerous to non-smokers,” 95% of smokers in Rio de Janeiro, 91% in São Paulo, and 94% in Porto Alegre “agreed” or “strongly agreed” at Wave 1. These percentages have remained relatively unchanged at Wave 2 in Rio de Janeiro (92%) and Porto Alegre (90%); however, there was a decrease in São Paulo (from 91% to 83%).

Perceptions of health risks

Damage to the health of smokers and others

The ITC Brazil Survey asked smokers “to what extent, if at all, has smoking already damaged [their] health?” At Wave 1, approximately 20% of smokers in each city (18% in Rio de Janeiro; 19% in São Paulo; 17% in Porto Alegre) reported that smoking has “not at all” damaged their health. This percentage decreased to 14% in Rio de Janeiro and increased to 27% in São Paulo and 19% in Porto Alegre at Wave 2; however, none of these changes were significant. In contrast, the majority of smokers were “moderately” or “very worried” that smoking will damage their health in the future. In Rio de Janeiro, the percentage of smokers who were “moderately” or “very worried” that smoking will damage their health in the future remained relatively unchanged between Wave 1 (80%) and Wave 2 (79%); however, decreases were observed in São Paulo (72% at Wave 1; 61% at Wave 2) and Porto Alegre (72% at Wave 1; 65% at Wave 2). ITC cross-country comparisons showed that the percentage of smokers in Brazil who believe that smoking has “not at all” damaged their health is relatively low in comparison to Uruguay and Mexico (see Figure 48).
A lower percentage of smokers who believe that smoking has “not at all” damaged their health suggests higher overall perceived risk among the majority of smokers. Therefore, although there was a decrease in the percentage of smokers who were “moderately” or “very worried” that smoking will damage their health in the future in São Paulo and Porto Alegre, perceived risk of current damage remains higher among smokers in Brazil compared to other Latin American countries.

The ITC Brazil Waves 1 to 2 Surveys also asked smokers how often in the last month they had thought about the harm their smoking might be doing to them. At Wave 1, 72% of smokers in Rio de Janeiro, 65% in São Paulo, and 67% in Porto Alegre reported that they had “often” or “very often” thought about the harm that smoking might be doing to them. In all three cities, this percentage decreased at Wave 2 (59% in Rio de Janeiro; 44% in São Paulo; 55% in Porto Alegre). When asked how often they think about the harm that their smoking might do to others in the last month, over half of smokers at Wave 1 (59% in Rio de Janeiro; 61% in São Paulo; 59% in Porto Alegre) reported “often” or “very often” thinking about the harm to others. This percentage remained relatively unchanged at Wave 2 in Rio de Janeiro (61%) and Porto Alegre (53%), however has decreased in São Paulo (42%).

**Probability of lung cancer**

When asked how likely they think it is that a smoker will develop lung cancer, the majority of smokers thought that smokers have a “somewhat high” or “very high” likelihood of developing lung cancer at Wave 1 (87% in Rio de Janeiro; 82% in São Paulo; 83% in Porto Alegre). This percentage decreased to 84% in Rio de Janeiro, 70% in São Paulo, and 71% in Porto Alegre at Wave 2, although the decrease in Rio de Janeiro was not significant. Similar trends were observed among the percentage of smokers who thought they personally have a “somewhat high” or “very high” likelihood of developing lung cancer if they continue to smoke the amount they do now (72% at Wave 1 and 69% at Wave 2 in Rio de Janeiro; 72% at Wave 1 and 57% at Wave 2 in São Paulo; 68% at Wave 1 and 54% at Wave 2 in Porto Alegre). It should be noted that in every case, the smokers’ own perceived likelihood of developing lung cancer was significantly lower than the smokers’ perceived likelihood that “a smoker” would develop lung cancer. This lowered perceived risk for oneself relative to others is an example of a well-known phenomenon known as “unrealistic optimism”.59-61

At Wave 2, non-smokers were also asked how likely they think it is that a smoker will develop lung cancer. A higher percentage of non-smokers in Rio de Janeiro (94%) and Porto Alegre (90%) thought that smokers have a “somewhat high” or “very high” risk of developing lung cancer compared to smokers at Wave 2. In São Paulo, the percentage of non-smokers who believed that smokers have a high risk of developing lung cancer (76%) was significantly lower compared to the other two cities and was more similar to that of smokers.

**Conclusions**

The majority of smokers were aware of the variety of health risks associated with smoking, with the exception of smoking-related blindness. However, they were significantly less likely to believe that they personally would experience those health risks.

Noticing advertisements or information related to the dangers of smoking, or encouraging quitting, decreased between Waves 1 and 2. Only a quarter of smokers surveyed frequently noticed anti-smoking information at Wave 2. Similarly, there were decreases at Wave 2 in the percentage of smokers who thought about the harm smoking might be doing to them or to others, as well as in the percentage who thought that smokers have a “somewhat high” or “very high” likelihood of developing lung cancer. These decreases are of concern and suggest that anti-smoking campaigns and continued strengthening of educational activities are needed to increase the visibility of anti-smoking information, which is aimed especially to prevent smoking initiation and to encourage quitting.
SMOKING CESSATION

Article 14 of the FCTC obligates Parties to develop effective measures to promote the cessation of tobacco use and provide adequate treatment for tobacco dependence. The National Cancer Institute of Brazil (INCA) has been coordinating the National Tobacco Control Program since 1989 to help smokers receive support for cessation. By 2004, Brazil had included smoker treatment centers within the public health system to offer free access to cognitive-behavioural counselling and drug therapy for smokers, including free nicotine replacement therapies.

The ITC Brazil Survey measures the effectiveness of support provided through government policies and by health professionals in assisting smokers to quit. The survey also includes a broad set of measures to assess motivational and behavioural factors related to quitting, including intentions to quit and reasons to think about quitting.

Quitting behaviour

At Waves 1 and 2, 86% and 80% of smokers respectively reported ever making a quit attempt, respectively. At Wave 2, respondents in Porto Alegre (83%) were significantly more likely to have ever made a quit attempt than those in São Paulo (76%) (see Figure 49).

Among smokers who participated in both Waves 1 and 2, 69% attempted to quit in the 3 years between survey waves, with an average of three quit attempts. The average number of days that smokers who attempted to quit stayed quit was 113 days or 16 weeks. Smokers in São Paulo reported the longest quit periods with an average of 130 days or 19 weeks, while the shortest quit periods were reported in Rio de Janeiro with an average of 103 days or 15 weeks.

Of the 495 smokers in Wave 1 who were re-interviewed in Wave 2, 125 (25%) had quit smoking between waves. Of those who quit, 73 (58%) were female and 52 (42%) were male.

Figure 49. Percentage of smokers who have ever made a quit attempt, by city, Wave 2 (Oct 2012-Feb 2013)
Intention to quit by current smokers

The ITC Brazil Wave 1 and 2 Surveys asked smokers if they had any plans to quit smoking. The percentage of smokers who responded “not planning to quit” did not change significantly between waves (20% at Wave 1 and 22% at Wave 2); however, as seen in Figure 50, the amount of time smokers said they would take before quitting increased between the two waves. At Wave 1, 36% of smokers planned to quit within the next month, but this percentage decreased significantly to 19% at Wave 2. Smokers who felt they would quit “within the next 6 months” increased significantly from 20% at Wave 1 to 26% at Wave 2, and those that felt they would quit “sometime in the future, beyond 6 months” increased significantly from 23% at Wave 1 to 32% at Wave 2. Overall, there was a general decline in intentions to quit from Wave 1 to Wave 2.

Reasons to think about quitting among current smokers

Smokers were asked at both waves about the things that led them to think about quitting. Overall, the ranking of responses to the survey options among smokers in the combined sample were fairly consistent between the two waves. The most common reasons for thinking about quitting at Wave 2 were:

1. Concern for your personal health (84%)
2. Setting an example for children (73%)
3. Concern about the effect of your cigarette smoke on non-smokers (67%)
4. The price of cigarettes (62%)
5. Warning labels on cigarette packages (56%)

Figure 51 shows the change in trends among reasons to think about quitting between Waves 1 to 2. Every reason decreased between Waves 1 and 2, with the exception of concern for personal health and restrictions at work, which remained relatively unchanged between waves. The telephone helpline/quitline remained the least frequently noted reason for thinking about quitting at both waves, but 39% of smokers still mention this as a reason to think about quitting.

At least half of smokers were influenced by societal disapproval (63% at Wave 1; 50% at Wave 2). In addition, over half of smokers felt that advice from their health professional (65% at Wave 1; 51% at Wave 2), and advertisements and information about the health risks of smoking (70% at Wave 1; 51% at Wave 2) influenced their thoughts about quitting. This suggests that the policies supporting health warnings and the integration of cessation programs into the public health system are moderately successful, but could be strengthened so as to impact quitting decisions in more smokers.
Reasons for quitting and staying quit

At Wave 2, quitters were asked “To what extent, if at all, were each of the following things reasons for your quit attempt” if they had been quit for 6 months or less. Those who had been quit for longer than 6 months were asked “To what extent, if at all, have each of the following things helped you to stay quit” (see Figure 52). The most commonly cited reasons at Wave 2 were:

1. Concern for personal health (89%)
2. Concern about the effect of your cigarette smoke on non-smokers (69%)
3. Setting an example for children (67%)
4. Advertisements or information about the health risks, warning labels on cigarette packs, and society disapproval (54%)
5. Advice from a health professional (53%)
Similar to the reasons among current smokers that led them to think about quitting, concern for personal health was the most common reason that led to their quit attempt or have helped them to stay quit, followed by concern for non-smokers and children. The telephone helpline/quitline and inexpensive stop-smoking medication were also the least frequently reported reasons for quitting or staying quit.

Figure 52. Reasons among quitters that “somewhat” or “very much” led to their quit attempt or have helped them to stay quit, Wave 2 (Oct 2012-Feb 2013)
Cessation advice from health professionals

Sources of cessation support provided through the public health care system were measured among smokers at both waves. Forty percent (40%) of smokers reported visiting a doctor or other health professional in the last 6 months at Wave 1, and 31% had visited at Wave 2. At Wave 2, percentages were significantly higher in Porto Alegre (40%) compared to Rio de Janeiro (28%) and São Paulo (26%). The decrease in visits to a health professional in São Paulo from Wave 1 (41%) to Wave 2 (26%) was significant (see Figure 53).

Those who had visited a health professional in the last 6 months were then asked a series of questions about the information they received during any of their visits (see Figure 54). Fifty-nine percent (59%) of smokers in the combined sample at Wave 1 and 57% at Wave 2 received advice from a doctor or other health professional to quit.

Forty-nine percent (49%) of smokers at Wave 1 and 55% at Wave 2 were given suggestions for possible ways to stop smoking. There was a significant increase in the percentage of smokers in the combined sample that received a referral to a service that would help them quit, from 20% in Wave 1 to 39% at Wave 2.

Finally, those smokers who received a prescription for stop-smoking medication changed insignificantly from 20% to 24% overall, with almost all of this increase in Porto Alegre.
At a city level, Porto Alegre respondents were more likely to receive advice to quit smoking (56% at Wave 1; 65% at Wave 2). This was significantly higher than that reported by respondents in São Paulo (45% at both Wave 1 and 2). Porto Alegre respondents also reported a higher percentage of receiving brochures during a visit (44%) than respondents in São Paulo (23%) at Wave 2 (see Figure 55).

Smokers in Porto Alegre reported receiving significantly more referrals to cessation services than São Paulo smokers at both waves. They also reported a significantly higher rate of receiving prescription medication to stop smoking during a visit to a health professional compared to smokers in São Paulo and Rio de Janeiro at both waves.

Figure 55. Cessation assistance received by smokers at their last visit to a doctor or health professional, among those who visited a doctor or health professional within the last 6 months, by city, Wave 2 (Oct. 2012–Feb. 2013)

Cessation support from the government

The level of support for government involvement in smoking cessation was measured among both smokers and non-smokers. Respondents at both waves were asked how much they agreed with the statement “The government should do more to tackle the harm done by smoking.” There was a high level of agreement with this statement from non-smokers (96% at Wave 1; 92% at Wave 2), but also from smokers (87% at Wave 1; 85% at Wave 2). Within each city, the percentage of smokers and non-smokers who “agree” or “strongly agree” with this statement remained relatively unchanged with the exception of São Paulo where there was a significant decrease among smokers from 86% at Wave 1 to 79% at Wave 2 (see Figure 56).
The ITC Survey also asked smokers in both waves if they agreed with the following statement “The government should do more to help smokers give up smoking.” Support for this statement remained high across the two waves – at 84% at Wave 1 and 85% at Wave 2. This response was similar across the three cities. However, it appears from data presented in an earlier chapter that the Quitline is not well-utilized for cessation help as very few respondents (7% at Wave 1 and 4% at Wave 2) used the Quitline service for advice or information. This response was also similar across cities.

At Wave 2 all respondents were asked “Would you support or oppose a total ban on tobacco products within ten years, if the government provided assistance such as cessation clinics to help smokers quit?” Forty-eight percent (48%) of smokers in the combined city sample said they would strongly support a total ban, with the highest support coming from smokers in Rio de Janeiro (54%). This percentage was significantly higher than Porto Alegre (43%), but was similar to São Paulo (47%) (see Figure 57).

Figure 56. Percentage of smokers who “agree” or “strongly agree” that the government should do more to tackle the harm done by smoking, by city, by wave*

Figure 57. Percentage of smokers who “strongly support” a total ban on tobacco products within ten years, if the government provided assistance such as cessation clinics to help smokers quit, by city, Wave 2 (Oct 2012- Feb 2013)
Use of stop-smoking medications

There was a significant increase in smokers using medication among those who tried to quit: 18% of smokers at Wave 1, and 24% of smokers at Wave 2 reported that they had ever used any medication to help them stop smoking. Of those smokers who had ever made a quit attempt, 13% at Wave 1 and 19% at Wave 2 reported using stop-smoking medications at their last quit attempt. A similar increasing trend in the use of stop-smoking medications at last quit attempt was observed in all three cities, although none of these increases were significant (see Figure 58). The most commonly used cessation supports at both waves were nicotine replacement products — the patch (41% at Wave 1; 43% at Wave 2) and gum (40% at Wave 1; 47% at Wave 2), followed by the prescription medication Zyban or Bupropion (24% at Wave 1; 20% at Wave 2).

![Figure 58. Percentage of smokers who reported using any stop-smoking medications during their last quit attempt among those who have ever made a quit attempt, by city, by wave*](image)

Conclusions

Of the cohort smokers from Wave 1 who were re-interviewed in Wave 2, about 1 in 4 had quit smoking.

From the full sample, the percentage of smokers who were planning to quit did not change between waves (2009 and 2012-2013), but the length of time stated before smokers plan to begin quitting has increased.

Smokers in Porto Alegre reported higher rates of cessation support from health professionals including advice about quitting, suggestions for ways to quit, and brochures, referrals, and prescriptions to help quit, than both São Paulo (significantly lower rates) and Rio de Janeiro. In addition, smokers in Porto Alegre were significantly more likely to make a quit attempt than smokers in São Paulo.

Lastly, there is strong support from smokers and non-smokers in all cities for the government to help tackle the harms of smoking and to help smokers quit and almost half of smokers would strongly support a total ban on tobacco products within 10 years if the government provided cessation assistance.
TOBACCO ADVERTISING, PROMOTION, AND SPONSORSHIP

Tobacco product advertising was first banned in Brazil in 2000 with the implementation of a law prohibiting advertising except in commercial establishments where they are sold (point of sale), and the naming of a tobacco company within Corporate Social Responsibility (CSR) initiatives. In addition, any advertising displayed at the point of sale (POS) was required to depict the government-approved health warnings. In 2003, a law was implemented which required posters and advertisements within POS to cover a minimum of 10% of its advertising space with the standard health warning images. In December 2011, a new law went further to ban all advertising, including POS, although still allowing the product itself to be displayed. However, regulations of the 2011 ban have not been published; and as a result, advertising of tobacco is still found at POS.

Noticing promotion of smoking: Smokers and non-smokers across cities

Wave 1 (2009) of the ITC Brazil Survey was conducted before the December 2011 POS advertising ban was in place, and Wave 2 (2012-2013) was conducted after the ban. Respondents were asked, “Thinking about everything that happens around you, in the last 6 months — how often have you noticed things that promote smoking?” As seen in Figure 59, both smokers and non-smokers in the combined sample showed a significant decline in noticing the promotion of smoking (“often” or “very often”) between Wave 1 and Wave 2. Smokers experienced a more pronounced decline between the two waves than non-smokers. The percentage of smokers responding “often” or “very often” to noticing smoking promotion decreased from 46% at Wave 1 to 21% at Wave 2. Non-smokers who noticed the promotion of smoking, decreased from 37% at Wave 1 to 24% at Wave 2.

At the city level, smokers in each of the three cities reported significant decreases in noticing things that promote smoking between Wave 1 to Wave 2. Non-smokers in São Paulo and Porto Alegre also reported significant decreases. Non-smokers in Rio de Janeiro reported a non-significant decrease in noticing, and were found to have the highest awareness of smoking promotion at Wave 2 compared to the other two cities; however this difference is also not significant.

In 2008, the Global Adult Tobacco Study (GATS) conducted 39,245 interviews with Brazilians aged 15 and older and reported that 40.9% noticed cigarette marketing within the previous 30 days (46% of smokers and 40% of non-smokers). The GATS findings are consistent with the ITC Survey Wave 1 data gathered in 2009 (46% of smokers and 37% of non-smokers noticed smoking promotion in the last 6 months).
The ITC Survey findings demonstrate clearly that the laws passed in Brazil since 2000 have reduced public awareness of tobacco advertising, promotion, and sponsorship (TAPS) over the last 4 years. However, tobacco control advocates in Brazil have observed that from 2001 to 2008 the tobacco industry continued to violate the legislation, and more recently have noted that the tobacco industry has shifted its advertising techniques from overt approaches, such as the use of posters and larger advertisements at POS to use of luminous packaging displays (without the required health warnings) and attractive package design. The findings of the ITC Brazil Survey suggest that tobacco control policies aimed at the elimination of tobacco advertising, promotion, and sponsorship are moving in the right direction in Brazil; however, nearly one-quarter of the adult population interviewed in the ITC Survey still notice smoking promotion, suggesting there is more to be done. Actually, it is possible that tobacco advertising and promotion is even more prevalent than the data suggest, as awareness among youth was not measured in the ITC Brazil Survey—a population to whom the tobacco industry is focusing much of its TAPS efforts.

**Noticing promotion of smoking: Smokers and non-smokers by age**

Awareness of smoking promotion significantly decreased for smokers of all ages between Waves 1 and 2, but for non-smokers, only the 60+ age group saw a significant decrease between waves.

At Wave 1, smokers 35 to 44 years old (56%) and 18 to 24 years old (50%) noticed more smoking promotion than smokers between ages 25 to 34 (44%), ages 45 to 59 (46%), or age 60 and older (43%). At Wave 2, awareness of smoking promotion ranged from 26% in the 60+ group to 15% in the 18 to 24 year olds (see Figure 60).
Among non-smokers, the 18 to 24 year old group was most aware of smoking promotion (22%) at Wave 1 (44%). At Wave 2, this group was less likely to notice smoking promotion compared to 25 to 34 year olds (28%) and 45 to 59 year olds (29%) (see Figure 61).

**Figure 61. Percentage of non-smokers in the combined sample who noticed things that promote smoking “often” or “very often” in the last 6 months, by age group, by wave**

 respondsents from lower educational backgrounds and lower-income groups reported noticing more smoking promotion than those from higher educational backgrounds and higher-income groups at Wave 1. At Wave 2, low education and high education groups were more similar in noticing tobacco promotion, but low-income smokers remained the most likely to notice smoking promotion.

**Noticing promotion of smoking: Smokers and non-smokers by education and income**

Respondents from lower educational backgrounds and lower-income groups reported noticing more smoking promotion than those from higher educational backgrounds and higher-income groups at Wave 1. At Wave 2, low education and high education groups were more similar in noticing tobacco promotion, but low-income smokers remained the most likely to notice smoking promotion.
Noticing smoking promotion among low-income smokers (28%) was significantly higher compared to moderate income smokers (18%) at Wave 2; however, the difference in noticing smoking promotion between low-income (28%) and high-income smokers (17%) at Wave 2 was not significant (see Figure 62). Non-smokers of both low and moderate income (both at 25%) also noticed more smoking promotion than the high-income group at 14%, although this difference was not significant (see Figure 63).

**Figure 62. Percentage of smokers in the combined sample who noticed things that promote smoking “often” or “very often” in the last 6 months, by income, by wave**

At Wave 1 and Wave 2, low-income smokers were more likely to notice things that promote smoking “often” or “very often” than smokers from higher income groups.
Noticing sponsorship of events by tobacco companies

Sponsorship of national sporting and art events by tobacco brands has been banned in Brazil since December 2000, followed by a ban on sponsorship of international sport events in 2005. However sponsorship by tobacco companies is currently not regulated.

Respondents in the ITC Brazil Survey were asked, “In the last 6 months, have you seen or heard about any sport or sporting event that is sponsored by or connected with tobacco companies, such as Phillip Morris, Souza Cruz, or others?” Because the bans on sporting event sponsorship were implemented well before the ITC Survey was conducted, the ITC results provide just a snapshot of the effectiveness of the ban in the long term. Overall, the visibility of sporting event sponsorship by tobacco companies in the three cities was fairly low — less than 10% of respondents at Wave 2 reported that they had seen or heard of tobacco company sponsorship. However, the ITC Survey results showed that the percentage of smokers and non-smokers in the combined sample who noticed tobacco sponsorship at sporting events significantly decreased between Wave 1 and Wave 2 (see Figure 64). It is not clear whether these findings reflect strong industry compliance with the ban on sponsorship of events by tobacco brands, or if tobacco industry sponsored events are actually occurring but that the advertising is subtle and not noticed or possibly not perceived as sponsorship.
Of the three cities, smokers in Rio de Janeiro reported the largest decrease in noticing sporting event sponsorship between Wave 1 (11%) and Wave 2 (3%), with this decrease being significant (see Figure 65).

Among non-smokers, there was a significant decrease in noticing sponsorship in São Paulo between Wave 1 (15%) and Wave 2 (6%), while the other two cities showed non-significant decreases (see Figure 66). Porto Alegre reported the highest percentage of noticing sport sponsorship between the three cities at Wave 2 (11%), while Rio de Janeiro reported the lowest rates of noticing sponsorship (3%).

The percentage of smokers and non-smokers who noticed tobacco sponsorship at sporting events significantly decreased between Wave 1 and Wave 2.
Similar to sporting events, awareness of art or cultural events sponsored by tobacco companies was also low overall (below 10%) in all three cities (see Figure 67). The results suggest the ban implemented in 2000 has been successful over the long term, at least in reducing salient forms of sponsorship. There was a significant decrease in the percentage of smokers who noticed sponsorship of art events between Waves 1 and 2 of the ITC Brazil Survey, and a non-significant decrease among non-smokers.

Noticing promotion of tobacco in entertainment media

Another strategy used by the tobacco industry to promote its products is through depicting smoking in movies, television, and other entertainment media. Evidence shows that smoking in movies is an important cause of smoking initiation and progression to regular smoking among youth. The 2012 U.S. Surgeon General’s Report on Preventing Tobacco Use among Youth and Young Adults reviewed numerous studies conducted in the U.S. and in other countries about the impact of seeing smoking in the movies on smoking initiation among youth. This important Report concluded that there was a causal relationship between depictions of smoking in the movies and the initiation of smoking among youth. The Report concluded that youth who received the most exposure to on screen smoking were about twice as likely to begin smoking as those who got the least exposure.

Tobacco industry documents provide evidence of mutually beneficial collaborations between tobacco companies and major motion picture studios beginning in the late 1920s. Paid placement of tobacco products in movies between 1970 and the mid-1990s is well documented. While the tobacco industry claims to have ended the practice of placing and encouraging tobacco use in films, smoking in motion pictures increased through the 1990s and continues today. There are examples of the positive depiction of smoking in Brazilian films such as “Caminho das Nuvens” where smoking is portrayed as a tool for conflict mediation and a symbol of autonomy.
The promotion of tobacco products in soap operas and other television programs – through character smoking and product placement in the program, is not regulated in Brazil. The ITC study investigated this aspect of tobacco promotion in Wave 2 by asking “In the last 6 months, when watching soap operas and other TV programs, how often did you see actors smoking?” and “In the last 6 months, how often have you seen or heard about brands of cigarettes when watching soap operas and other TV programs?”

Analyses showed that only 13% of smokers and 18% of non-smokers reported seeing an actor smoking “often” or “very often” in soap operas and TV programs (see Figure 68). The percentage of smokers who saw or heard tobacco brand names “often” or “very often” was very small at less than 5% (2% for smokers and 5% for non-smokers). However, a very large percentage agreed that watching actors smoke in these shows encourages viewers to smoke (65% of smokers and 83% of non-smokers).

The 2008 GATS Brazil study reported that in an overall sample of smokers and non-smokers, awareness of tobacco promotion in the movies was 9% for Brazilian movies and 11% for foreign films.\(^5\)
Figure 68. Percentage of smokers and non-smokers in the combined sample who noticed various tobacco promotion when watching soap operas or other TV programs in the last 6 months, Wave 2 (Oct 2012-Feb 2013)

Conclusions

Brazil has taken strong steps to curb TAPS by enacting legislation that bans all commercial advertising of tobacco, including advertising at point of sale. Despite lack of regulation of the ban at point of sale, the ITC findings presented here show that the government’s efforts have been successful in significantly reducing the noticing of things that promote smoking. Respondents in Rio de Janeiro notice more smoking promotion than the other cities, as do those in lower-income groups.

The tobacco industry has shifted TAPS strategies from the use of overt forms of advertising, such as large posters and displays, towards more indirect means of promoting their products such as illuminated display cases. These promotions are more difficult to regulate and more difficult to measure in surveys evaluating the implementation of Article 13. Brazil could further the success of tobacco control by implementing a ban on the display of tobacco products at point of sale.

The bans on sponsorship of sporting and arts events implemented between 2000 and 2005 appear to have been largely successful in reducing this form of tobacco promotion, but not completely as 11% of non-smokers in Porto Alegre report having seen or heard about tobacco sponsorship of a sport event.

Smoking continues to be portrayed in movies and on television soap operas, contributing to normalization of smoking among viewers of all ages. Regulation of smoking in movies and on television, such as including requiring certification that no benefits have been received for tobacco depictions, prohibiting the use of identifiable tobacco brands or imagery, and requiring anti-tobacco advertisements and a rating or classification system that takes tobacco depictions into account could help to reduce the risk of young people initiating smoking. The high level of agreement by respondents to the statement that smoking in these programs encourages viewers to smoke might suggest that such measures would be supported by Brazilians.
CONCLUSIONS AND IMPLICATIONS OF THE FINDINGS

Findings from the ITC Brazil Wave 1 (2009) and Wave 2 (2012-2013) Surveys show that the government of Brazil has made many impressive achievements in the implementation of tobacco control policies. However, the results also highlight some areas where the government could strengthen public health legislation in Brazil.

Smoking Behaviour

Successes:

1. Brazil’s leadership in tobacco control policy is shown with the adoption of a ban on the use of flavouring in tobacco products in 2012, including menthol. This ground-breaking regulation directly confronts the tobacco industry’s use of flavouring as a marketing tool to entice young people to take up smoking. Although the number of menthol users in the survey is low, the ban is important as more than one-third of menthol smokers believed that their brand is less harmful than other brands. However, the additive ban has not yet come into force because of pending court challenges.

2. The vast majority of Brazilian smokers (85% of males and 89% of females) regret ever starting to smoke, indicating that a mass media campaign using testimonials from smokers may be valuable to emphasize the addictive toll of nicotine.

3. In a cross-country comparison with other ITC countries, Brazil smokers report a fairly high level of negativity in their opinion of smoking (56% of males and 66% of females have a “negative” or “very negative” opinion of smoking).

Challenges:

1. Brazilian smokers consume an average of 17 cigarettes per day — twice the average consumption of smokers in Mexico.

2. Consumption of cigarettes is significantly increasing in Porto Alegre in both females (15 cigarettes per day at Wave 1 to 17 at Wave 2) and in males (16 to 20).

3. Use of shisha (waterpipes) is currently notable in São Paulo compared to the other cities. Eighteen percent (18%) of respondents at Wave 2 in São Paulo have tried the product, which is significantly higher than Rio de Janeiro (5%) and Porto Alegre (8%).

4. Despite the banning of the advertisement and sale of electronic cigarettes, 12% of those who heard of e-cigarettes have tried them.

5. Smokers in São Paulo reported a significant decrease in negative opinion about smoking from 74% to 58%, suggesting an increasing lack of concern about the health impact of smoking in that city.

6. There is a trend for respondents overall to feel less societal disapproval of smoking, particularly in São Paulo, also suggesting a lesser concern about the harms of smoking.
Recommendations:
1. Develop a mass media anti-smoking campaign portraying testimonials from smokers, emphasizing their regret for starting smoking.
2. Reinforce educational campaigns about the dangers of shisha, particularly in São Paulo.
3. Monitor research on the potential benefits and concerns of electronic cigarette use, in order to make scientific evidence-based decisions about policies related to e-cigarettes.

Smoke-free Public Places

Successes:
1. Workplaces that have a complete smoking ban in effect have significantly increased since Wave 1. By city, a significant increase in complete bans was reported by smokers in São Paulo (from 77% at Wave 1 to 92% at Wave 2), and by non-smokers in Rio de Janeiro (78% to 92%).
2. Noticing smoking in indoor areas of the workplace significantly decreased in smokers in São Paulo (25% at Wave 1 and 13% at Wave 2), and in non-smokers in São Paulo (16% to 6%) and Porto Alegre (34% to 13%). Taken in context with the increase in the number of workplace bans mentioned above, this suggests compliance with smoke-free laws put in place in São Paulo and Rio de Janeiro after Wave 1.
3. Over 80% of respondents believe that smoking should not be allowed at all in workplaces (80% of smokers and 84% of non-smokers at Wave 2).
4. Smoking in bars and restaurants has significantly decreased in all three cities, indicating strong compliance and support for the smoke-free laws in effect in these cities.
5. There is very high support in smokers (over 88%) and non-smokers (over 95%) for a national smoke-free law which totally bans smoking in enclosed public venues.
6. Support for a ban on smoking in cars with children is very high – 88% of smokers and 91% of non-smokers support this policy.
7. Support for a ban on smoking indoors at Olympic venues is strong – over 74% of smokers and over 83% of non-smokers agreed with this restriction.

Challenges:
1. The government has not yet established regulations for the national comprehensive smoke-free law legislated in December 2011, thus many parts of the country are not protected by smoke-free laws.
2. Patrons at bars in Rio de Janeiro notice significantly more smoking than those in São Paulo and Porto Alegre. In Rio de Janeiro 29% of smokers report noticing smoking in bars compared to 16% of smokers in São Paulo and 13% in Porto Alegre.
3. Over half of the smokers in the study allow smoking inside their homes (at least some of the time) and the number of those planning to implement a smoke-free home has decreased overall.
**Recommendations:**
1. Establish regulations for the national smoke-free law so it can be effectively enforced throughout the country. This should further increase workplace bans on indoor smoking, further decrease bar and restaurant smoking, and eliminate designated smoking rooms.
2. Reinforce a mass media campaign to increase the knowledge of the harm of secondhand smoke and the need for home smoking bans.
3. Pass legislation to ban smoking in cars with children.
4. Ensure a smoke-free Olympics by implementing and enforcing a ban on smoking in all Olympic venues, including bars and restaurants in the Olympic Park, and a ban on the sale of tobacco in any Olympic venue.

**Packaging and Labelling**

**Successes:**
1. The government has passed a law requiring text warnings to occupy 30% of the front of the cigarette pack by 2016, in addition to the current requirement for pictorial warnings covering 100% of the back and 100% of one side of the pack (see Recommendation 1).
2. Fifty-six percent (56%) of smokers report that warning labels on cigarettes led them to think about quitting in the last 6 months. Fifty-four percent (54%) of those who had quit for at least 6 months reported that warning labels on packages helped them quit or stay quit.
3. Smokers in Brazil avoid looking at warning labels on cigarette packages more than smokers in most of the other ITC countries. Research has shown that avoidance creates strong negative associations which has the potential to make tobacco products less positive in the minds of smokers and may motivate quitting.
4. There has been an increase in Brazilian smokers who reported that warning labels make them feel extremely worried.
5. The majority of smokers agree that tobacco products should be more tightly regulated (88% in Rio de Janeiro, 87% in Porto Alegre, and 75% in São Paulo).
6. About half of the smokers in each city agree that cigarettes should be sold in plain packaging.
7. The survey results indicate that 35% of menthol smokers (N=15 out of 48) believe their brand is less harmful, supporting the government’s decision to ban all flavourings in cigarettes.

**Challenges:**
1. Warning label effectiveness has not significantly increased between Wave 1 and Wave 2. In fact, there have been decreases in smokers crediting the warning labels for making them “a lot” more likely to quit and for stopping them from having a cigarette.
2. Thirteen percent (13%) of all smokers, believe their brand is less harmful compared to other brands. More work is needed on reducing the tobacco industry’s ability to market brands with names or package designs that denote less harm. Forty percent (40%) of smokers choose their brand based on tar and nicotine levels, which have been shown to have no value in predicting the harmfulness of cigarettes.
**Recommendations:**

1. Increase the effectiveness of warning label legislation by:
   a) Requiring a pictorial warning label that occupies at least 50% of the top of the front of the pack (instead of the 30% text-only warning as stated in the 2011 law).
   b) Accelerate the timing of implementation of the new warning label requirement from the year 2016 to 2014.

2. Develop a new round of warning labels in order to avoid the wear-out effect of the current Round 3 warnings.

3. Adopt legislation that eliminates the posting of tar and nicotine levels on the pack so that consumers are not misled into thinking that a brand that has low tar/nicotine levels is less harmful.

4. Ensure the timely implementation of the 2012 legislation requiring tobacco companies to remove menthol and other flavourings from their product by 2014.

5. Research the potential impact of plain packaging (cigarette packs which contain the brand name and warning labels, but no brand-identifying colours or logos) as a strategy to further inhibit the tobacco company’s attempts to market cigarettes as less harmful than others.

**Tobacco Price and Taxation**

**Successes:**

1. The government continues to consider tax as an important tobacco control policy as reflected in legislation passed in March 2012 that will see tax rates increase over four years through to 2016.

2. Cigarettes have become less affordable in Brazil as calculated by an Affordability Index that is based on ITC Brazil data on price paid per pack, number of cigarettes smoked per day, and household income.

3. Brazilian smokers are concerned about the money they spend on cigarettes. In a cross-country comparison with other middle-income countries in the ITC Project, Brazil ranks the highest on this measure.

4. About 50% of smokers have either considered quitting or reducing cigarette consumption as a way to save money spent on cigarettes. Smokers reported these two measures more frequently than other options such as: buying cigarettes in bulk, looking for a cheaper source, or purchasing cigarettes from tax-free sources.

**Challenges:**

1. There has been a decrease in smokers reporting that price has lead them to think about quitting from 74% at Wave 1 to 62% at Wave 2, suggesting that the price may not be prohibitive enough to motivate quitting for many smokers.
**Recommendations:**

1. Government health agencies should continue to monitor the impact of tobacco tax policies on tobacco purchasing behaviour.

2. Brazil should keep the tax burden on cigarettes above 70% of the sale price, which was achieved with the recent measures adopted, and monitor the relationship between taxation and inflation in order to readjust it periodically to keep the low level of affordability to cigarettes.

**Education, Communication, and Public Awareness**

**Successes:**

1. The majority of smokers (80% to 95% depending on the health effect) are aware of most health effects and diseases caused by smoking (e.g., lung cancer, heart disease, and premature aging).

2. There is high awareness of the harm and danger of secondhand smoke according to the percentage of smokers who believe that smoking causes diseases in non-smokers (e.g., asthma in children (88%) and lung cancer in non-smokers (79%)).

3. A lower percentage of Brazilian male smokers (20%) believe that smoking has not at all damaged their health in comparison to male smokers in Mexico (29%) and Uruguay (29%), indicating that perceived risk of current damage is higher in Brazil compared to other Latin American countries.

4. Fifty-six percent (56%) of smokers have thought about quitting from seeing advertisements or information about the health risks of smoking.

**Challenges:**

1. The percentage of respondents who had noticed any advertising or information about the dangers of smoking or that encouraged quitting was about one-third of the sample in Wave 1, but has since decreased in Wave 2 to fewer than 25%. Specifically in São Paulo, the percentage dropped from 32% in Wave 1 to 14% in Wave 2.

2. Although Brazilian smokers are more likely to believe that smoking has damaged their health compared to smokers in other ITC countries, there are still 20% of smokers who believe that smoking has “not at all” damaged their health.

3. The percentage of smokers who believe that they have a very high chance of developing lung cancer if they continue smoking the amount they do now, has decreased.

**Recommendations:**

1. Provide sustained funding to support the development of innovative government and non-governmental public health campaigns about the harmfulness of smoking and encouraging quitting.
Smoking Cessation

Successes:
1. Most smokers in Brazil want to quit — 86% of smokers at Wave 1 and 80% at Wave 2 reported making a quit attempt at some point.
2. Twenty-five percent (25%) of the 495 Wave 1 smokers who were re-interviewed in Wave 2, were successful in quitting by Wave 2.
3. Many health professionals are addressing cigarette smoking with their patients. At Wave 2, 59% of smokers received advice to quit from their doctor or health professional and 55% were given suggestions for ways to quit. There was also a significant increase in the percentage of smokers who received a referral to a service that could help them quit from 20% at Wave 1 to 39% at Wave 2.
4. A large majority of smokers (84% at Wave 1 and 85% at Wave 2) agree that the government should do more to help smokers give up smoking and 48% of smokers support a total ban on tobacco products within 10 years if the government provided assistance such as cessation clinics to help smokers quit.

Challenges:
1. Smokers in Wave 2 who reported they were planning a quit attempt are not as prepared to quit in the near future as were smokers in Wave 1. Among those planning a quit attempt, there was a significant decrease in doing so within 1 month (36% at Wave 1 and 19% at Wave 2). There was a concurrent increase in those who were planning their quit attempt by 6 months or sometime further in the future.
2. Smokers in São Paulo are significantly less likely to receive advice for quitting, receive cessation brochures, or referrals to a cessation service than residents in Porto Alegre. Smokers in both Rio de Janeiro and São Paulo are significantly less likely to receive stop-smoking medication prescriptions than smokers in Porto Alegre.
3. The Quitline was only utilized by 7% of Wave 1 smokers and 4% of Wave 2 smokers.

Recommendations:
1. Encourage physicians to have a stronger focus on addressing smoking cessation with their patients and further strengthen smoking cessation services in the primary health care system.
2. Implement strategies to increase use of the Quitline including raising physician awareness of the service, and enhancing the visibility of the Quitline number in mass media cessation campaigns.
3. Consider the strong support among smokers for government intervention in helping smokers quit as encouragement for stronger future tobacco control policies.
Tobacco Advertising, Promotion, and Sponsorship

Successes:

1. There was a significant decline in noticing (often) things that promote smoking between 2009 and 2012. Forty-six percent (46%) of smokers and 37% of non-smokers noticed smoking promotion at Wave 1 and 21% of smokers and 24% of non-smokers noticed smoking promotion at Wave 2.

2. The bans on sport and art sponsorship put in place by the Brazil government between 2000 and 2005 have been largely effective. Noticing sport sponsorship by smokers was 8% at Wave 1 and decreased to 4% in Wave 2. Twelve percent (12%) of non-smokers noticed sport sponsorship at Wave 1 and 6% at Wave 2. For art sponsorship, 6% of smokers and 7% of non-smokers noticed art sponsorship at Wave 1 and 2% of smokers and 4% of non-smokers noticed at Wave 2.

3. Although the government has not put restrictions on smoking in TV programs, 65% of smokers and 83% of non-smokers agree that watching actors smoke encourages viewers to smoke.

Challenges:

1. The advertising ban at point of sale has not been regulated or fully enforced, allowing illuminated cigarette display cases to become the norm and often lacking in the required warning labels.

2. Over one-fifth of survey respondents still notice smoking advertisement or promotion despite the advertising and promotion bans.

3. Low-income respondents are more likely to notice smoking promotion, suggesting tobacco companies are targeting this income group.

4. Thirteen percent (13%) of smokers and 18% of non-smokers report that they often see actors smoking on TV shows.

Recommendations:

1. The government should regulate and enforce the point of sale advertising ban legislated in 2011, and furthermore develop new legislation to ban the display of cigarette packs where they are sold.

2. Educate retailers about deceptive tactics used by industry to promote products among youth such as displaying the cigarettes in attractive illuminated cases.

3. Regulate the appearance of smoking in movies and on TV through such avenues as prohibiting the use of tobacco brands or imagery, requiring certification that no benefits have been received for tobacco depictions, and requiring anti-tobacco advertisements in programs that portray smoking.
“The policies that promote smoke-free places in Rio de Janeiro, São Paulo, and Porto Alegre resulted in over 80% of workplaces being totally free of smoking, and less than 10% of smokers and non-smokers have reported noticing people smoking in restaurants in these three cities. These numbers could be even better if Law no. 12,546 of 2011, which prohibits smoking in public places around the country was put into practice, regulated, and enforced.”

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REFERENCES


The International Tobacco Control Policy Evaluation Project

The ITC Project
Evaluating the Impact of FCTC Policies in...

20+ countries • 50% of the world’s population
60% of the world’s smokers • 70% of the world’s tobacco users

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