

Impact of Tobacco Pricing and Taxation: Economic Analysis Using ITC Project Data

15th World Conference on Tobacco or Health Singapore, March 21, 2012



Countries of the ITC Project–2012



| | | Country | Mode | Current N (smokers ¹) | Current N (others ²) | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|-------|-----------------|----------|--------------------------------------|-------------------------------------|------|------|------|------|------|------|------|----------------|------------------|----------------|----------------|------|
| | 1 (| Canada | 2 | 1,581 * | | | | | | | | | | | | | |
| : | 2 I | United States | 2 | 1,520 * | Youth, former smokers-2013 | | | | | | | | S ¹ | S ¹ | | | |
| : | 3 l | United Kingdom | 2 | 1,325 * | | | | | | | | | | | | | |
| | 4 | Australia | 2 | 1,513 * | | | | | | | | | | | S ² | S ² | |
| 4 | 5 li | reland/Scotland | | 1,753 | 708 NS | | I. | I. | I | | | | | | | | |
| | 6 7 | Thailan d | 2 | 2,276 | 947 Youth | | | | | | | | | | | | |
| | 7 | Malaysia | 2 | 2,045 | 877 Youth 1,483 NS ° | | | | | | | | | | | | |
| 1 | 8 | South Korea | | 1,753 § | | | | | | | | | | | | | |
| 9 | 9 0 | China | 2 | 5,583 | 1,417 NS | | | | | | | | | | | | |
| 1 | 0 | Mexico | | 2,133 | | | | | | | | | | | | | |
| 1 | ן ו | Uruguay | | 1,411 Δ | | | | | | | | | | | | | |
| 1 | 2 | New Zealand | | 923 | | | | | | | | | | | | | |
| 1 | 3 F | France | | 1,704 | 515 NS | | | | | | | | | | | | |
| 1 | 4 0 | Germany | 1 | 1,002 | 819 NS | | | | | | | | | | | | |
| 1 | 5 1 | Netherlands | 2 | 2,101 ± | | | | | | | | 5 | waves i | waves in 4 years | | | |
| 1 | 6 E | Bangladesh | 2 | 3,054 | 2,453 NS+SL | | | | | | | | | | | | |
| 1 | 7 E | Brazil | | 1,215 | 610 NS | | | | | | | | | | | | |
| 1 | 8 1 | Mauritius | <u>.</u> | 602 | 238 NS | | | | | | | | | | | | |
| 1 | 9 E | Bhutan | 2 | 299 U | 1,541 NU | | | | | | | | | | | | |
| 2 | 0 1 | India | 2 | 8,000 U | 2,400 NU | | | | | | | | | Wave 201 | | Wave 201 | |
| 2 | 1 | Kenya | <u>.</u> | 1,500 | 600 NS | | | | | | | | | | | | |
| 2 | 2 | Nigeria | | 1,500 | 600 NS | | | | | | | | | | | | |
| 2 | 3 2 | Zambia | 2 | 1,500 | 600 NS | | | | | | | | | | | | |

¹ "Smokers" = cigarettes in all countries, but also includes bidi/biri smokers in Bangladesh and India.

² Other: NS = non-smokers; U = Tobacco users (all forms) in Bhutan & India; SL= smokeless in Bangladesh; NU= Non-users (all forms) in Bhutan & India.

* The ITC Four Country Survey began as a cohort survey of N= 2,000 in each country. For Wave 7 (Fall 2008): N= 1,750; For Waves 8–12: N=1,500.

S¹ The ITC Four Country Supplemental Wave 7.5 (November 2009 to January 2010) was conducted in the United States only.

S² The ITC Four Country Supplemental Wave 8.5 (September 2011 to February 2012) was conducted in Australia only.

1 The ITC Ireland/Scotland Survey only included Ireland for Waves 1 (2003-04) and 2 (2004-05). Both countries were surveyed in Waves 3 (2006) and 4 (2007).

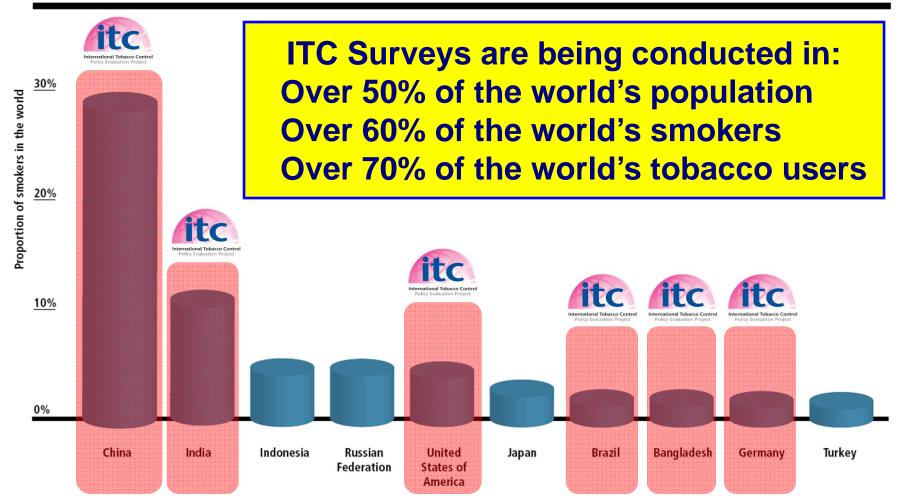
° The ITC Malaysia Survey includes non-smokers in Waves 1–3.

§ The ITC Korea Survey increased its sample size to 1,800 for Waves 2 (Fall 2008) and 3 (Summer 2010).

Δ The ITC Uruguay Survey increased its sample size to 1,500 for Wave 2 (2008).

± The ITC Netherlands Survey sampled 400 smokers by phone (random digit dialled, as in other ITC phone surveys) + 1,700 from a large Internet panel..

NEARLY TWO THIRDS OF THE WORLD'S SMOKERS LIVE IN 10 COUNTRIES



Source: The number of smokers per country was estimated using adjusted prevalence estimates (see Technical Note II and Appendix III). A limitation of this approach is that adjusted estimates used to estimate the number of smokers are sometimes derived from limited country data, and for some countries large adjustments are needed. In these cases the adjusted estimates can be different from actual surveys reported by countries. Brazil prevalence data were obtained from VIGITEL 2006.

The ITC Surveys

- Extensive surveys of probability samples of adult smokers in each country
- Longitudinal cohort design: strong advantages over repeat cross-sectional designs in evaluation
- Identical/similar methods/measures in all countries, defined by a theory-based conceptual model of policy impact. Allows strong cross-country comparisons
- Use "natural experiment" designs (also known as "quasiexperimental designs") for strong evaluation.



Content of the ITC Surveys

| | Content Domain¤ | Number of Qs¤ | |
|-------------------------|---|------------------|--|
| | Smoking History and Frequency → Age started, 100 cigs, 1 | 7 ¤ | |
| Surveillance content | Smoking Behaviour (current) and Dependence →Cigs/day, time to first, perceived addiction¤ | 7 ¤ | |
| | Quitting: ever tried, most recent attempt → Duration of last attempt, planning vs. spontaneous, ¤ | 6¤ | |
| Mixed Surveillance | Quitting: Beliefs, efficacy, intentions, motivation, reasons for | 21 ¤ | |
| and policy content | Knowledge: health effects, constituents | 22 ¤ | |
| | Health Warnings a | 13¤ | |
| | Anti-smoking campaigns | 14 ¤ | |
| Unique ITC | Cigarette brand →Choice, history, perceptions, last purchase: size, price paid | 35¤ | Throughout |
| Content: | Light/Mild and other supposedly reduced harm products → – Perceptions of brand, relative risk¤ | 7 ¤ | the policy sections |
| 170-200 Qs | Cessation assistance →Physician mention, type of assistance sought, effectiveness | 19¤ | there are |
| focusing on | ETS and Smoke-Free policies → – Personal policies (home, car), restaurants, bars, workplace (prevalence/support)¤ | 53¤ | measures relevant to |
| policy impact | Psychosocial beliefs about smoking (mediators) and moderators | 27 ¤ | monitoring |
| poney impact | Advertising/Promotion¤ | 25¤ | |
| | Tobacco industry beliefs and government role in TC beliefs → - Trust in industry, need for regulation, should govt do more?¤ | 8 ¤ | |
| | Individual difference variables → - Depression, time perspective, rebelliousness → | 18¤ | - |
| Surveillance | Demographics → - Age, marital status (also whether partner smokes), income, education¤ | 13¤ | itc |
| content | | 272 ¤ | International Yobacco Control Policy Evaluation Project |

ITC Cross Country Report on Price/Taxation

The International Tobacco Control Policy Evaluation Project Tobacco Price and Taxation

ITC Cross-Country Comparison Report



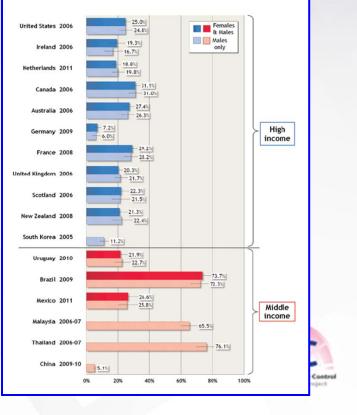
MARCH 2012



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 such as food?



Figure 2. Percentage of smokers who spent money on cigarettes instead of household essentials, such as food, in the last 6 months, by country



ITC Cross Country Report on Price/Taxation

Affordability of Cigarettes and Change in Affordability Per Year

ı.

| Country | Years | CPDIR Latest | AffInd Latest | • | — Cig | arettes b | ecame | LESS | affordabl | le C | ligarett | es beca | me MOF | RE afford | able — | |
|----------------|-----------|-----------------|------------------|----|-------|-----------|--------|--------|-----------|------|----------|---------|--------|-----------|--------|-----|
| United States | 2002-2010 | 0.055 | 18.18 | | | | | | -1.08% | | | | | | | |
| Ireland | 2004-2006 | 0.088 | 11.36 | | | | | -' | 1.46% | | | | | | | |
| Netherlands | 2008-2011 | 0.061 | 16.39 | | | | -2 | 2.66% | | | | | | | | |
| Canada | 2002-2010 | 0.053 | 18.87 | | | | | | | | +1 | .49% | | | | |
| Australia | 2002-2010 | 0.085 | 11.76 | | | | | | 1.32% | | | | | | | |
| Germany | 2007-2009 | 0.064 | 15.63 | | | | -3.78% | | | | | | | | | |
| France | 2007-2008 | 0.051 | 19.61 | | | | -2 | 2.71% | | | | | | | | |
| United Kingdom | 2002-2010 | 0.082 | 12.20 | | | | | - | 1.40% | | | | | | | |
| South Korea | 2005-2010 | 0.031 | 32.26 | | | | | | | | + | 1.69% | | | | |
| Uruguay | 2006-2010 | 0.111 | 9.01 | | | | | | | | +1 | .46% | | | | |
| Mexico | 2006-2011 | 0.128 | 7.81 | | | | | -2.26% | 6 | | | | | | | |
| Malaysia | 2005-2009 | 0.103 | 9.71 | | | | | | | | | +1.90% | | | | |
| Mauritius | 2010-2011 | 0.127 | 7.87 | | | | | | -0.73% | | | | | | | |
| Thailand | 2005-2009 | 0.089 | 11.24 | | | | | | | | | +2.06% | | | | |
| China | 2006-2009 | 0.075 | 13.33 | | | | | | | | | +1.86% | | | | |
| Bangladesh | 2009-2010 | 0.061 | 16.39 | | | | | | | | | | | | +7.63% | 6 |
| | | | -1 | 0% | -8% | -6% | -4% | | -2% | 0% | 2 | % | 4% | 6% | 8% | 10% |





ITC Project Research Support





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