When a tax increase fails as a tobacco control policy: the ITC China project evaluation of the 2009 cigarette tax increase in China

China ratified the WHO Framework Convention on Tobacco Control (the WHO FCTC) in 2006 and thus has the obligation to increase the prices and taxes of cigarettes. In May 2009, China increased the excise tax on tobacco products, which was cited by a Chinese government official as a measure of FCTC implementation. Researchers noticed that cigarette retail prices in China did not change after the 2009 tax adjustment; however, their conclusion was based on observations but not survey data. We used the International Tobacco Control Survey (the ITC survey) data to examine trends in cigarette prices in China after the 2009 tax adjustment. The ITC survey is a prospective survey of tobacco use. Its overall objective is to measure the effects of key tobacco control policies. In China, the first three waves of the ITC survey were conducted in six cities: Beijing, Shenyang, Shanghai, Changsha, Guangzhou and Yinchuan. In each city, 800 smokers and 200 non-smokers were surveyed. To date, three waves of the ITC China survey have been conducted: wave 1 (April to August 2006), wave 2 (October 2007 to January 2008) and wave 3 (May to October 2009). In July 2010, a short phone survey was conducted among the wave 3 respondents to examine changes in cigarette prices. During each survey, smokers were asked about the brand and cost of cigarettes they bought last time. Typical brands of cigarettes were bought by the study team via test purchases from three typical cigarette stores in each city during each survey, and the retail prices of those cigarettes were recorded. Two indicators were used to examine trends in cigarette prices in the six ITC China cities: (1) the average self-reported cost of 18 top brands of cigarette in the six cities (the top three brands in each city) from 2007 to 2010 (wave 2, wave 3 and the phone survey); and (2) the average retail prices (Yuan/pack) of 18 cigarette brands that have been purchased in all the retail store surveys from 2007 to 2010. As shown in the table 1, both indicators remained almost unchanged during the study period. After adjusting for inflation, both indicators decreased from 2007 to 2010.

Table 1 Prices of cigarettes in six cities in China from 2007 to 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Average self-reported cost of 18 top brands of cigarettes (Yuan/pack)</th>
<th>Real prices in 2007 Yuan</th>
<th>Average retail prices of 18 cigarette brands that were purchased in all the three retail store surveys (Yuan/pack)</th>
<th>Real prices in 2007 Yuan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>7.80</td>
<td>7.80</td>
<td>6.26</td>
<td>6.26</td>
</tr>
<tr>
<td>2009</td>
<td>7.79</td>
<td>7.44</td>
<td>6.40</td>
<td>6.12</td>
</tr>
<tr>
<td>2010</td>
<td>7.83</td>
<td>7.30</td>
<td>6.28</td>
<td>5.85</td>
</tr>
</tbody>
</table>

(1) In total, we purchased 280 packs of cigarettes (28 brands x 10 packs) in 2007, 928 packs in 2009 and 713 packs in 2010.
(2) Numbers of smokers who completed each wave of the International Tobacco Control China surveys were: 4,627 in wave 2 (2007), 4,410 in wave 3 (2009) and 1,190 in the phone survey (2010).

That is, the nominal prices of cigarettes did not change after the tax adjustment and the real prices of cigarettes in China decreased from 2007 to 2010.

Theoretically, if an increase in the cigarette excise tax is not transferred to cigarette retail prices, then cigarette consumption will not decrease. Thus, the 2009 cigarette excise tax adjustment cannot be considered as a measure of FCTC implementation at this time. China is home to one-third of the world’s smokers. One of the major reasons for the high smoking prevalence in the nation is the low price of cigarettes. China needs to make further progress to increase tobacco prices, as the WHO FCTC has been in effect in China for more than 5 years.

Acknowledgements The authors would like to acknowledge the Chinese Center for Disease Control and Prevention and the local CDC representatives in each city for their role in data collection.

Giang Li,1,2 Teh-wei Hu,3 Zhengzhong Mao,4 Richard J O’Connor,5 Geoffrey T Fong,1,6 Changbao Wu,7 Jingjing Zhang,2 Anne C K Quah,1 Yuan Jiang2

1Department of Psychology, University of Waterloo, Waterloo, Ontario, Canada; 2Tobacco Control Office, Chinese Center for Disease Control and Prevention, Beijing, China; 3School of Public Health, University of California, Berkeley, California, USA; 4Department of Health Economy, Sichuan University, Chengdu, China; 5Department of Health Behavior, Roswell Park Cancer Institute, Buffalo, New York, USA; 6Ontario Institute for Cancer Research, Toronto, Ontario, Canada; 7Department of Statistics and Actuarial Science, University of Waterloo, Waterloo, Ontario, Canada

Correspondence to Dr Yuan Jiang, Tobacco Control Office, Chinese Center for Disease Control and Prevention, 27 Nanwei Rd., Beijing 100050, P R China; jiangyuan88@vip.sina.com

Funding The International Tobacco Control China Policy Evaluation Project was supported by grants from the US National Cancer Institute (R01 CA125116 and the Roswell Park Transdisciplinary Tobacco Use Research Center (PSO CA111236)), Canadian Institutes of Health Research (79551), Chinese Center for Disease Control and Prevention and the Ontario Institute for Cancer Research. The cigarette store survey and the phone survey were supported by a grant from the US NIH Fogarty International Center (R01-TW059398).

Competing interests None.

Patient consent Obtained.

Ethics approval Ethics approval was provided by the Research Ethics Board at the University of Waterloo and the Institutional Review Boards at the China National Centers for Disease Control and Prevention.

Contributors T-wH, ZM, GTF and YJ contributed to the conception of the study. QL, T-wH, ZM, RJO, GTF, ACKQ and YJ contributed to the design of the study. QL was involved in data collection. JZ contributed to the fieldwork implementation, data cleaning and along with QL, CW and YJ contributed to data analysis. QL drafted the article and along with T-wH, ZM, RJO, GTF, CW, ACKQ and YJ revised drafts of the article.

Provenance and peer review Not commissioned; externally peer reviewed.

Accepted 16 November 2011

Tobacco Control 2011;20:1–5.
doi:10.1136/tobaccocontrol-2011-050111

REFERENCES
When a tax increase fails as a tobacco control policy: the ITC China project evaluation of the 2009 cigarette tax increase in China
Qiang Li, Teh-wei Hu, Zhengzhong Mao, Richard J O’Connor, Geoffrey T Fong, Changbao Wu, Jingjing Zhang, Anne C K Quah and Yuan Jiang

*Tob Control* published online December 23, 2011

Updated information and services can be found at:
http://tobaccocontrol.bmj.com/content/early/2011/12/22/tobaccocontrol-2011-050111

These include:

**References**
This article cites 1 articles, 0 of which you can access for free at:
http://tobaccocontrol.bmj.com/content/early/2011/12/22/tobaccocontrol-2011-050111#BIBL

**Open Access**
This is an open-access article distributed under the terms of the Creative Commons Attribution Non-commercial License, which permits use, distribution, and reproduction in any medium, provided the original work is properly cited, the use is non-commercial and is otherwise in compliance with the license. See: http://creativecommons.org/licenses/by-nc/2.0/ and http://creativecommons.org/licenses/by-nc/2.0/legalcode.

**Email alerting service**
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Topic Collections**
Articles on similar topics can be found in the following collections

Open access (259)

**Notes**

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/