

Effective Tobacco Tax Reform: Evidence from China

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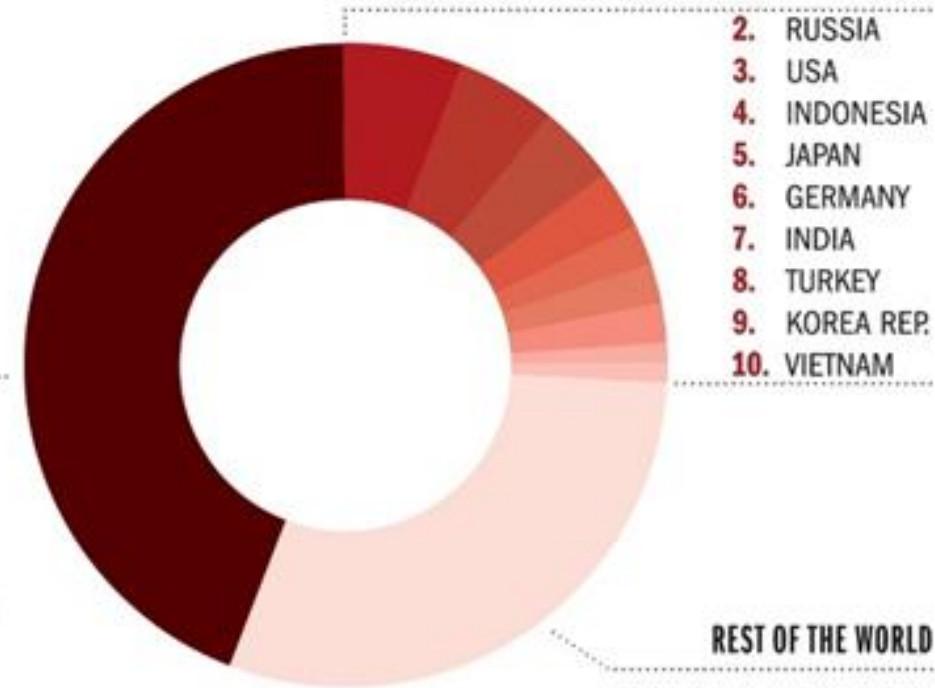
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1. Tobacco industry and cigarette market in China

China is the largest producer and consumer of tobacco products in the world, where thirty percent of the world's cigarettes are consumed.

1. CHINA

More cigarettes are now smoked in China than in the next top 29 cigarette-consuming countries combined.



Source: tobaccoatlas.org

Figure 1: Cigarette consumption in China

Cigarette production and consumption(2000-2016)

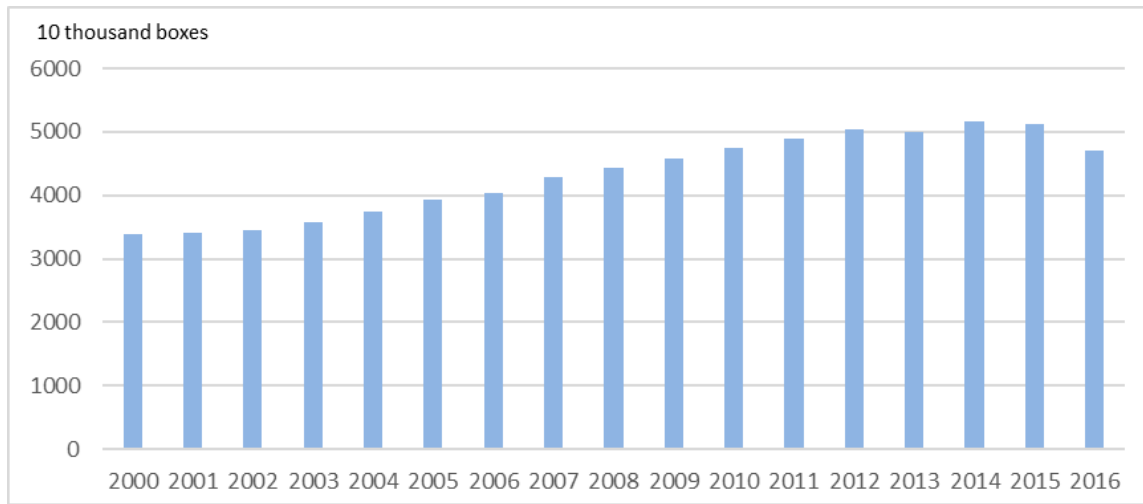


Figure 2 Cigarette production volume (2000-2016)

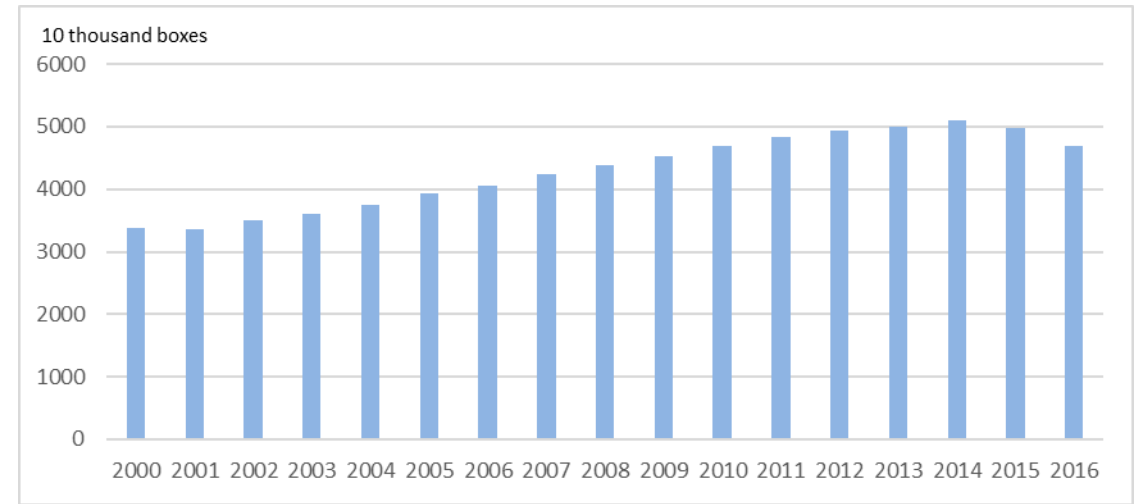


Figure 3 Cigarette sales volume (2000-2016)

In 2016, CNTC produces **89 cigarette family brands** which provide **870 different domestic produced cigarettes** with the price varying between 2.5RMB (0.4 USD)/ Pack to 100RMB(15.4USD) /Pack.



ClassI: Baisha (Hetianxia)
160RMB/pack



ClassII: Baisha (Tezhijingping)
(9RMB/pack)

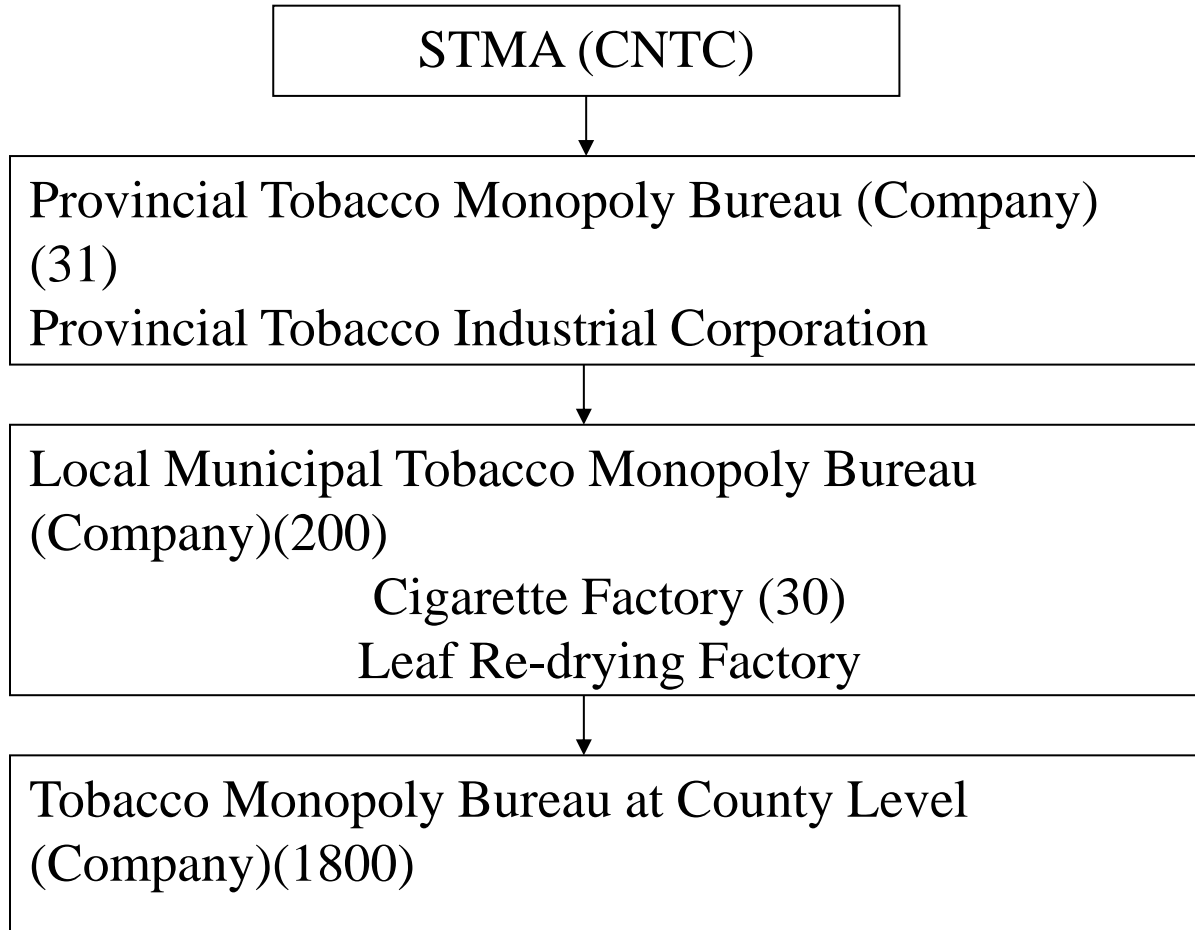


ClassIII: Baisha (Yingchunxiang)
(7RMB/pack)



ClassIV: Baisha (Ruan)
(5RMB/pack)

State tobacco monopoly system



China tobacco industry is controlled by a government run monopoly STMA. STMA also functions as the state owned company CNTC, which operates almost entirely in China with little competition from other companies.

2. China Tobacco Tax Structure

Table 1 China tobacco tax structure				
Type of Tax	Tax level	tax base	Tax Rate	Revenue Beneficiary
Tobacco leaf tax	agriculture	value of tobacco leaf	20%	100% local government
Value-added tax at cigarette manufacture (VAT)	Produce, wholesale and retail	added value at each level	17%	75% central government
				25% local government (50%-50% since 2016)
Specific excise tax (* Tax increase in 2015)	produce		0.06 RMB/pack	100% central government
	wholesale		0.10RMB/pack *	
Ad valorem excise tax (* Tax increase in 2015)	produce, wholesale	allocation price(without VAT)		
	≥ 70 RMB per carton		56%	
	< 70 RMB per carton		36%	
	wholesale		5% → 11% *	
Urban maintenance and construction tax and extra charges of educational fee (C&E Tax)	produce, wholesale, retail	tax amount of VAT and excise tax	12% in average	100% local government

3. Cigarette Price (weighted average price), 2001-2016

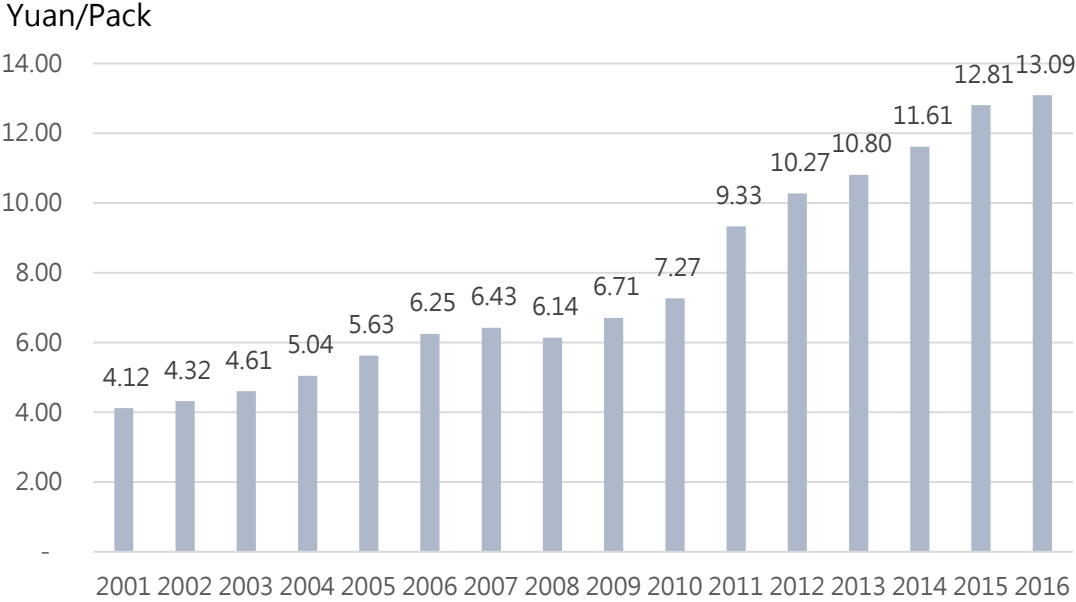


Figure 4 Cigarette nominal weighted average retail price (2001-2016)

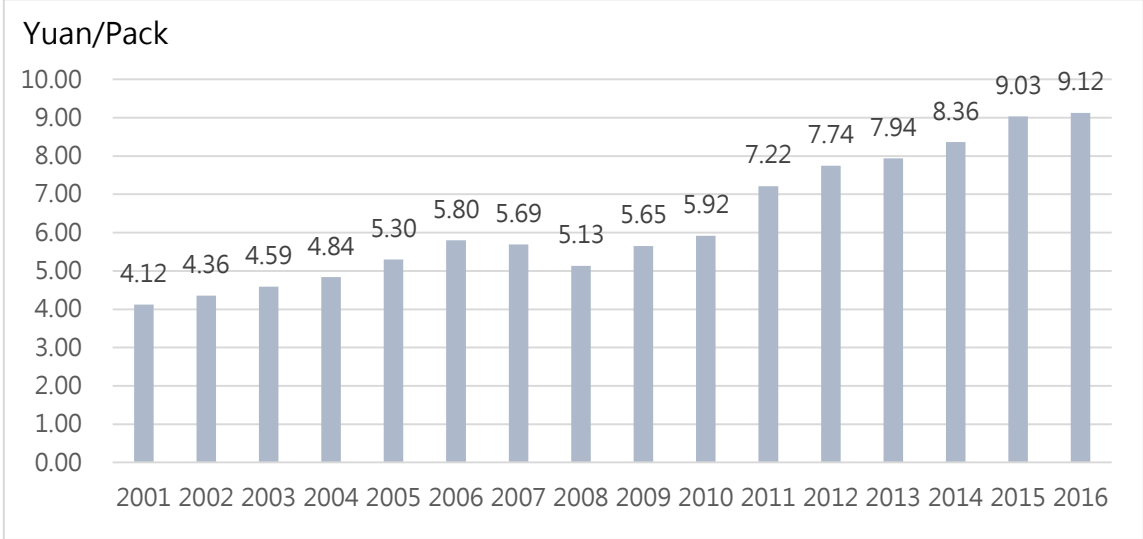


Figure 5 Cigarette real weighted average retail price (2001-2016)

4. Cigarette affordability

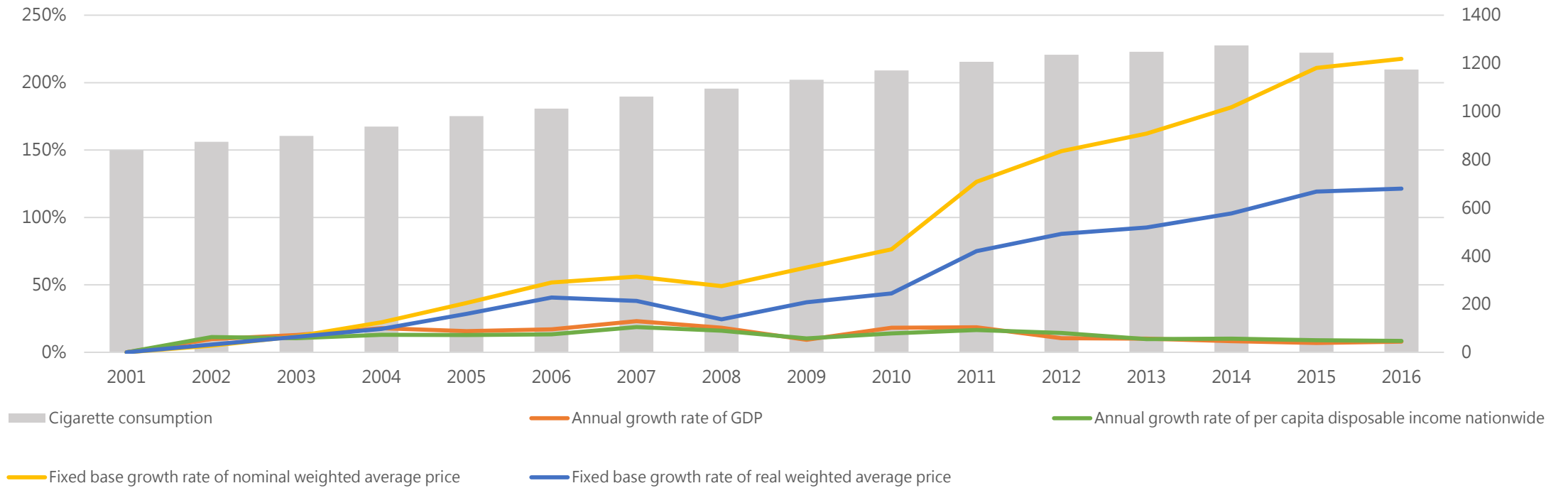


Figure 6 Cigarette consumption, prices, GDP and per capita income growths

Cigarette affordability trends presented by RIP method

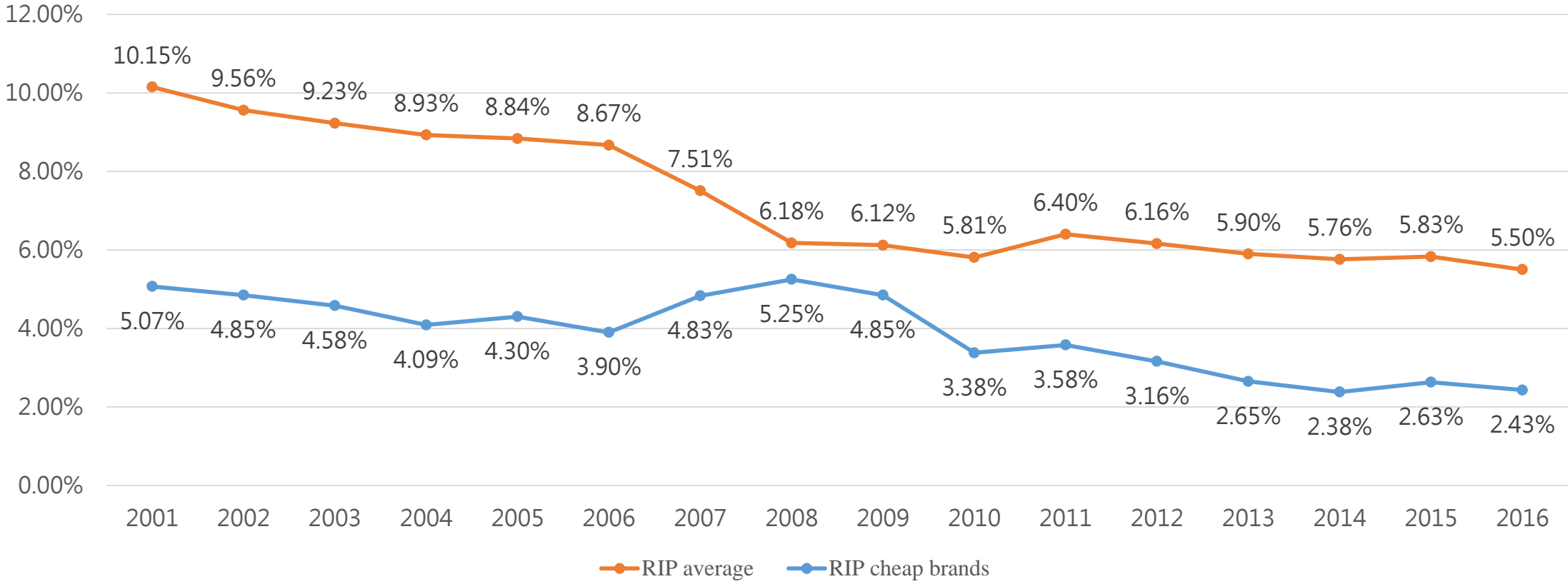


Figure 7 RIP average and RIP cheap brands

5. Tax as % of retail price (Tax incidence)

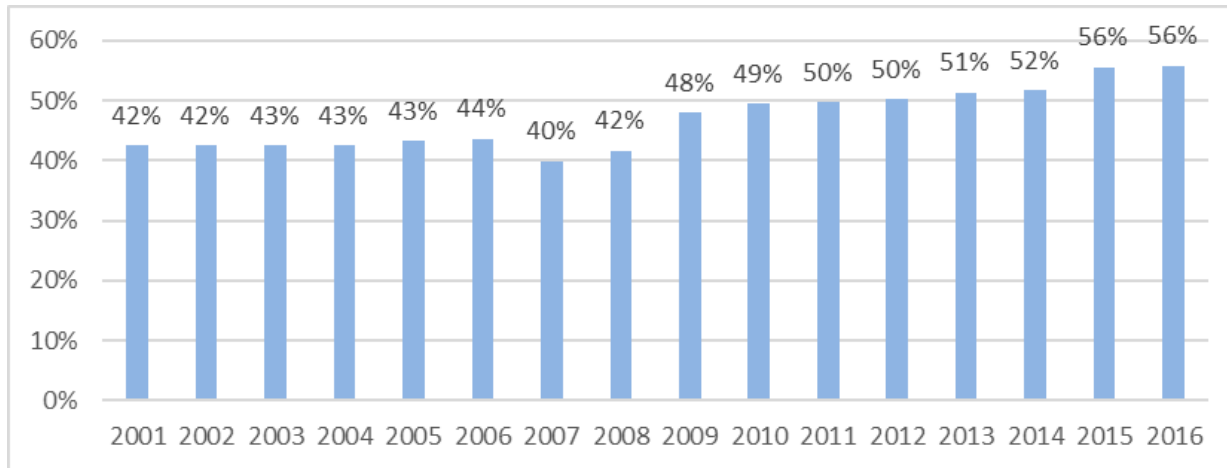


Figure 8 Tax as % of retail price (2001-2016)

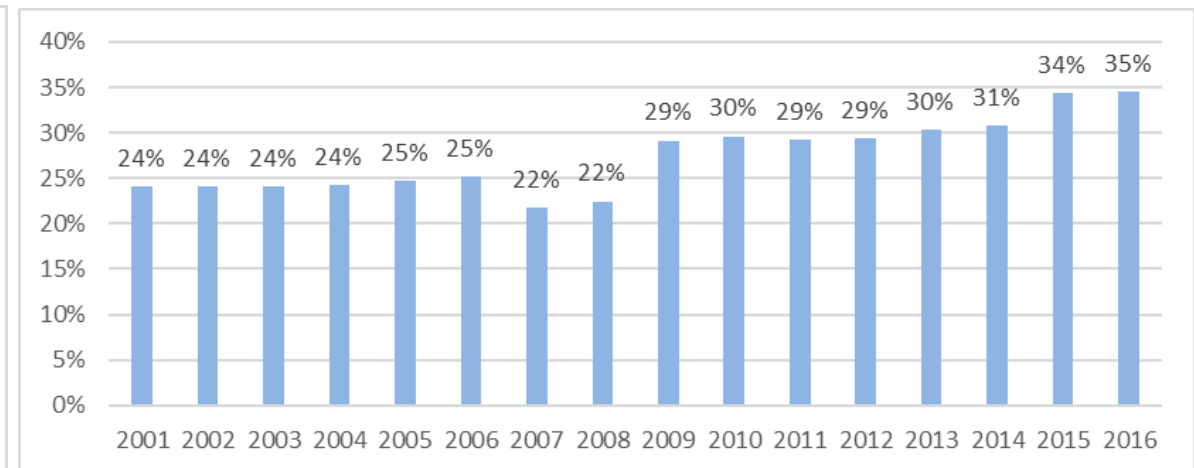
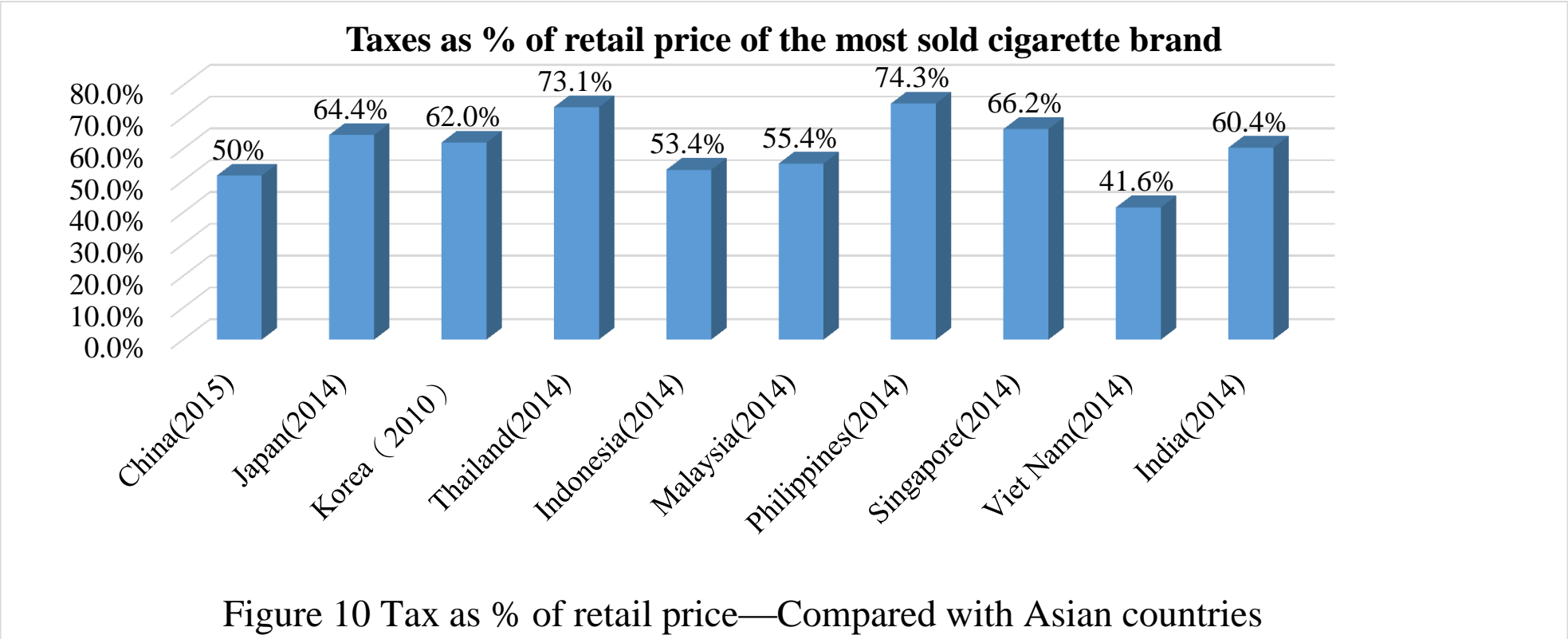


Figure 9 Excise as % of retail price (2001-2016)



Data source: WHO Tobacco control country profiles
http://www.who.int/tobacco/surveillance/policy/country_profile/en/

6. Cigarette consumption

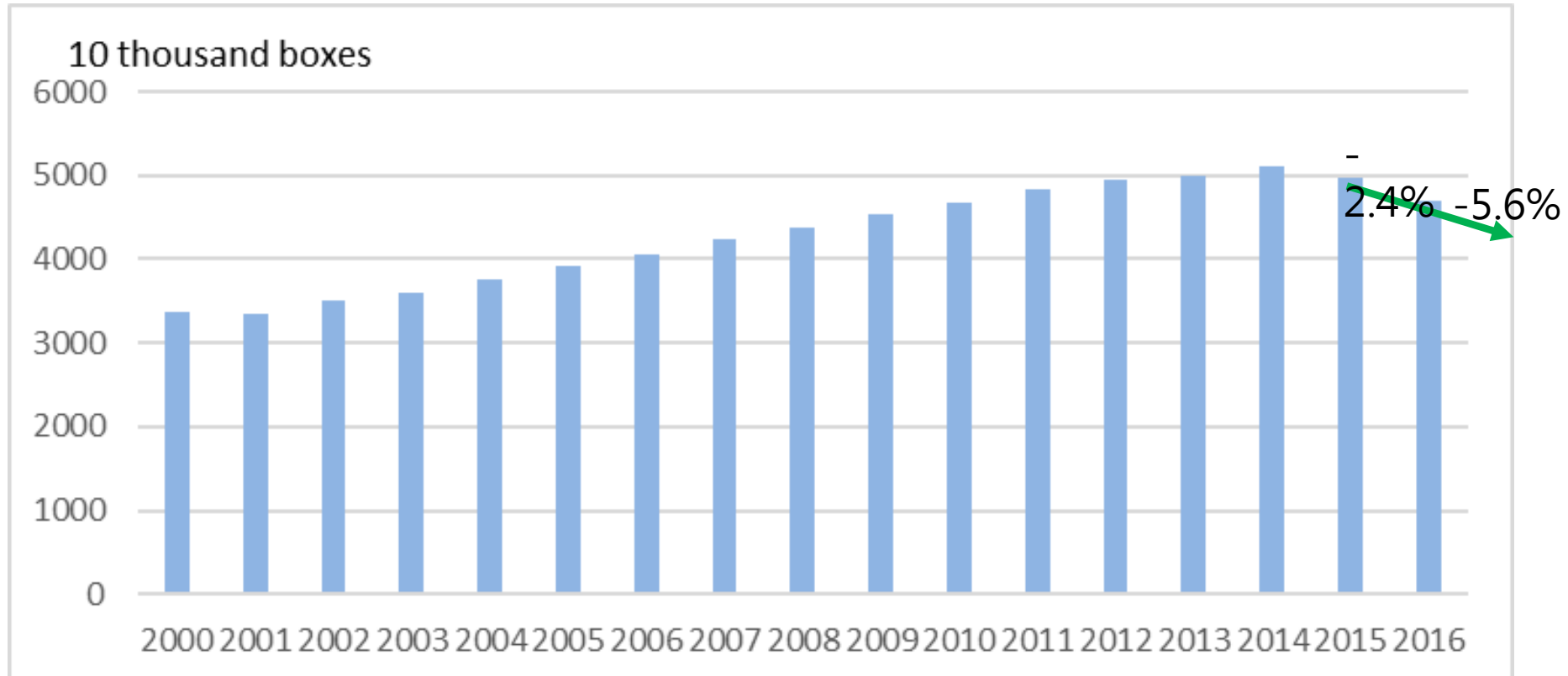


Figure 11 Cigarette sales volume (2000-2016)

Cigarette consumption keeps decreasing over time

Table 2 Impact on consumption					
		Simulated	8 months later	12 months later	19 months later
price elasticity		-0.4	-0.23	-0.45	-0.52
Retail price 2014	RMB/pack	11.61	11.61	11.61	11.61
Retail price 2015	RMB/pack	12.81	12.81	12.81	12.81
Δ (price)	RMB/pack	1.19	1.19	1.19	1.19
% Δ (price)	%	10.29%	10.29%	10.29%	10.29%
% Δ (sales volume)	%	-4.11%	-2.35%	-4.61%	-5.6%

Government's revenue---Revenue generated from tobacco industry as % of government's total fiscal revenue (2000-2016)

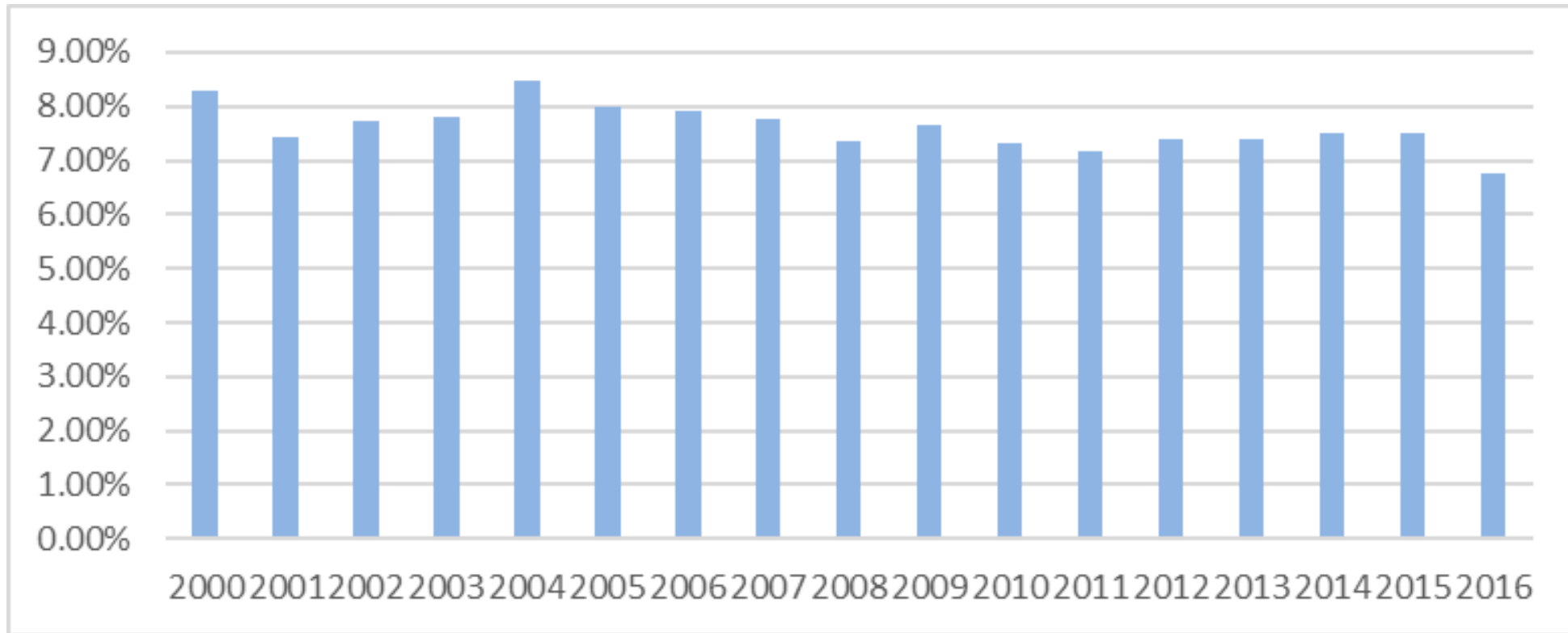


Figure 12 Tobacco tax and tobacco profit contribution as % of fiscal revenue (2000-2016)

7. Impact of 2015 tax adjustment on public health

Within 12 months followed by the 2015 tax increase, the total number of smokers would decrease by about 5 million, the expected smoking attributable deaths would decrease by about 1 million.

Table 4 Impact on public health

		2014	2015	△	% △
Real retail price adapted by inflation	¥/Pack	11.61	12.43	0.82	7.07%
Adult smokers	Million	318.92	313.84	-5.08	-1.59%
Smoking rate (all)	% adults	28.0%	27.5%	-0.44%	-1.59%
Smoking rate (age 15-19)	%	8.60%	8.46%	-0.14%	-1.59%
Future smokers	Million	1.40	1.38	-0.02	-1.59%
Total smokers	Million	320.32	315.22	-5.10	-1.59%
Expected SADs	Million	106.77	105.64	-1.13	-1.06%

8. Does the tobacco industry interfere tax increase by pricing strategy? –YES! Wholesale level: There was absorption for each category

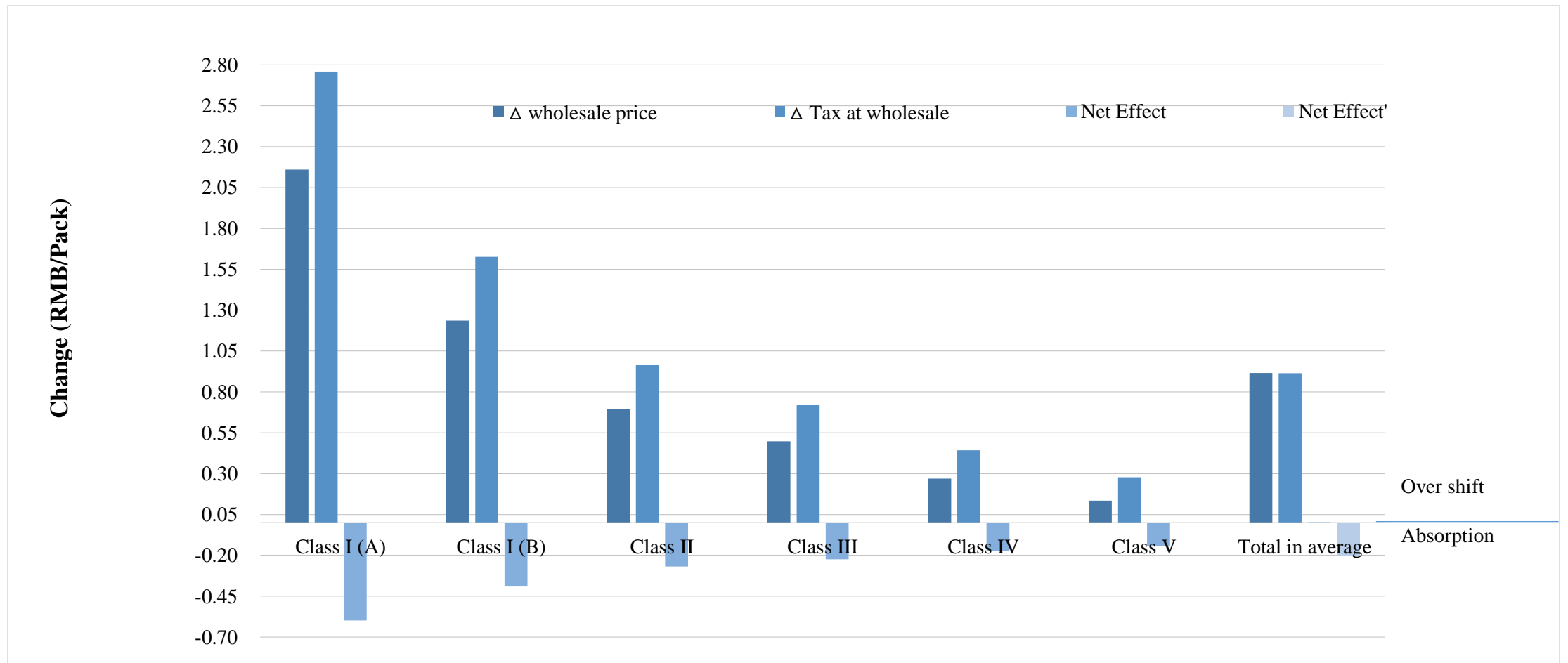


Figure 14 Net effect at wholesale level

Consumer level: Over shifting for most price categories, absorption for middle price category

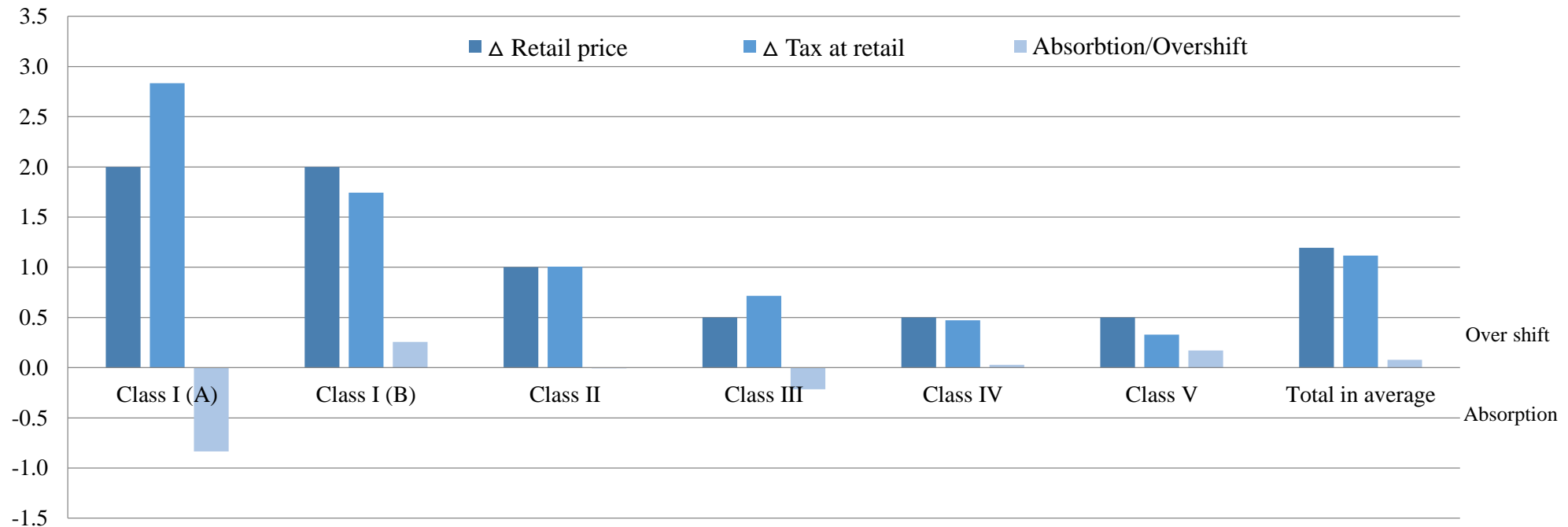


Figure 15 Net price effect for consumers

9. Conclusions

- (1) Raising tobacco tax and price proves to be a win-win strategy
- (2) The effectiveness of tobacco tax increase is enhanced when implemented as part of a comprehensive tobacco control strategy. - Beijing
- (3) Tax increases should reduce the affordability of tobacco products.- Shenzhen

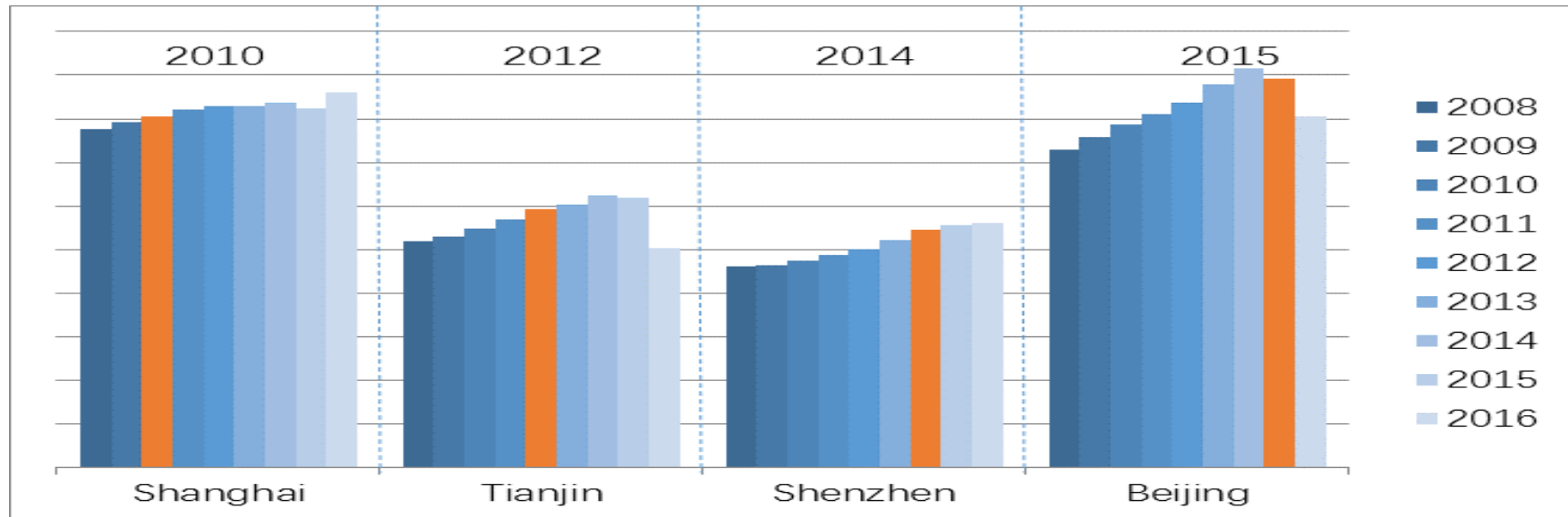


Figure 16 Cigarette sales volume before and after smoking free legislation in 4 cities

10. Challenges

- (1) Cigarette price is still very cheap and becomes more affordable over years, the tax as % of retail price still very low compared to WHO recommended standard
- (2) The state monopoly STMA and company CNTC have super pricing power and profitability to interfere with tobacco tax policy
- (3) The complicated tobacco excise structure provides the industry incentives and possibilities for price manipulation.

11. Next steps

(1) Sustained tax and price increase, particularly to optimize excise structure by:

➤ Lean more on specific tax

➤ Unify two tiered ad valorem tax rates into an unified rate for all price categories

(2) To introduce automatic adjustments mechanism to address inflation and affordability

(3) Earmark tobacco tax to support public health and SDGs

(4) Fundamental research such as employment /the low income/smoking burden... help to provide supportive evidence for policy makers.

THANK YOU!

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