

IMPACTS OF TOBACCO TAXATION ON INCOME EQUITY IN VIETNAM

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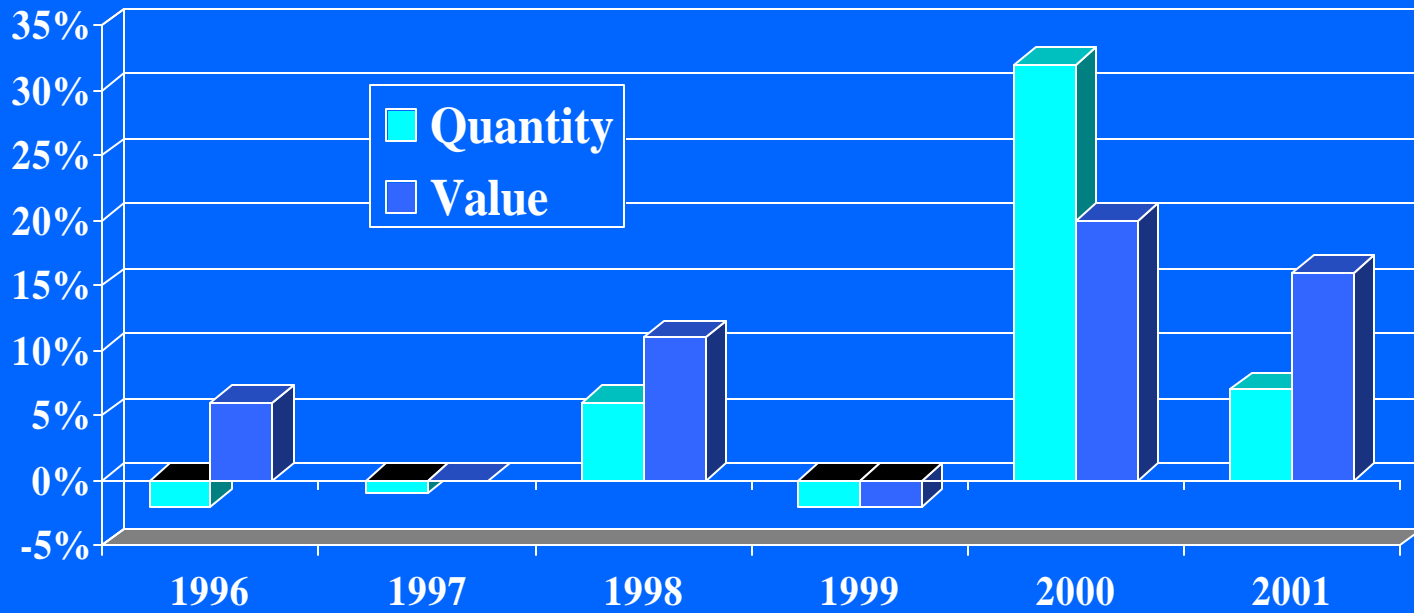
I. OVERVIEW TOBACCO PRODUCTION AND CONSUMPTION IN VIETNAM

Tobacco Production in Vietnam

- Vietnam's tobacco industry is an important industry in Vietnam in terms of output, budget contribution, and employment
- Tobacco production has experienced high growth rate

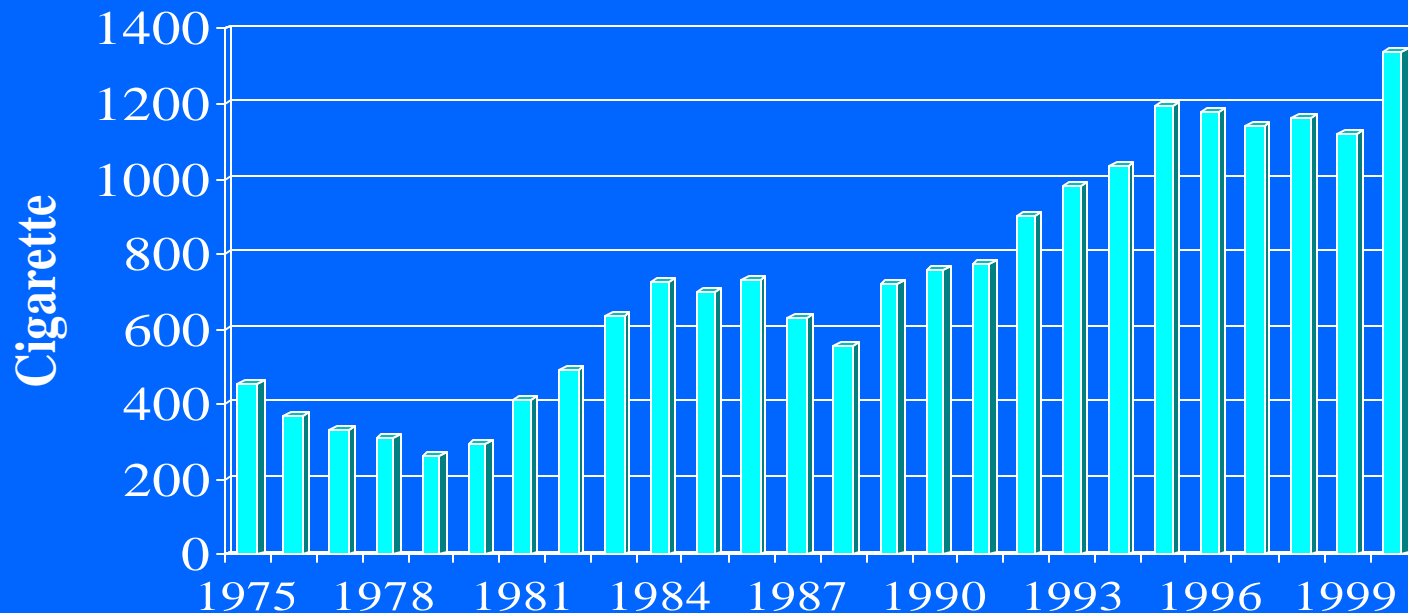
Tobacco industry had high growth rates in past few years

Annual growth rate of tobacco industry:
quantity and value

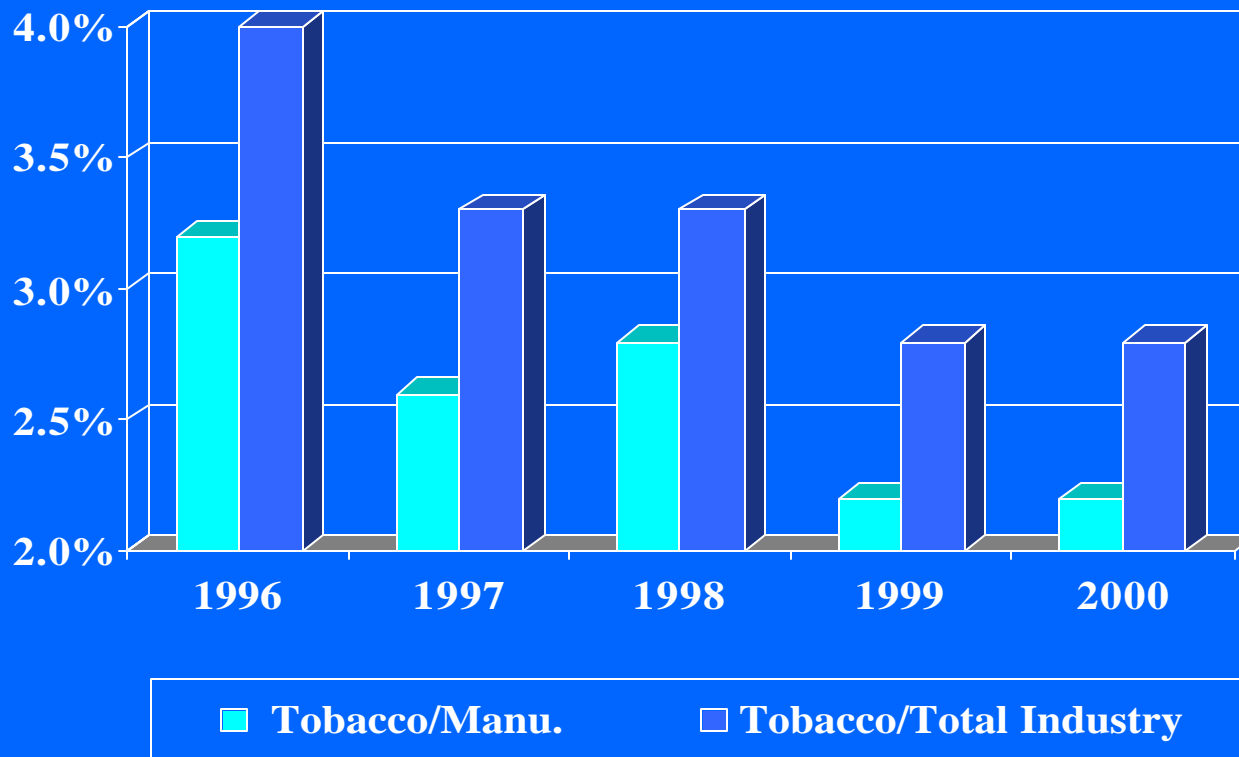


Number of cigarettes produced per smoker has been rising substantially

Number of cigarette per adult (over 15 years old)



The share of tobacco industry output to industrial output has been declining, but still significant



Tobacco producers

- Domestic producers are main supplier (98% in 2001) of which VNATABA (Vietnam National Tobacco Corporation): 60-65% cigarette supply



- Foreign companies: Phillip Morris, BAT (2 enterprises) supplying about 2% for local demand.

Tobacco industry contributes small share of employment, but huge share of government budget revenue

	<u>Employment (1999)</u>	<u>Tax (1997)</u>
Tobacco/total industry	0.37%	8.6%
Tobacco/Manufacturing	0.41%	15.8%

Source: General Statistical Office

Tobacco consumption in Vietnam

- Tobacco is consumed widely in Vietnam
- Tobacco use is habit of males rather than females and consumed by different ways: cigarette smoking, water pipe smoking, and chewing.



The young (shoe polishers)



The old (water-pipe)



Ethnic woman (water-pipe)



Ladies (chewing)

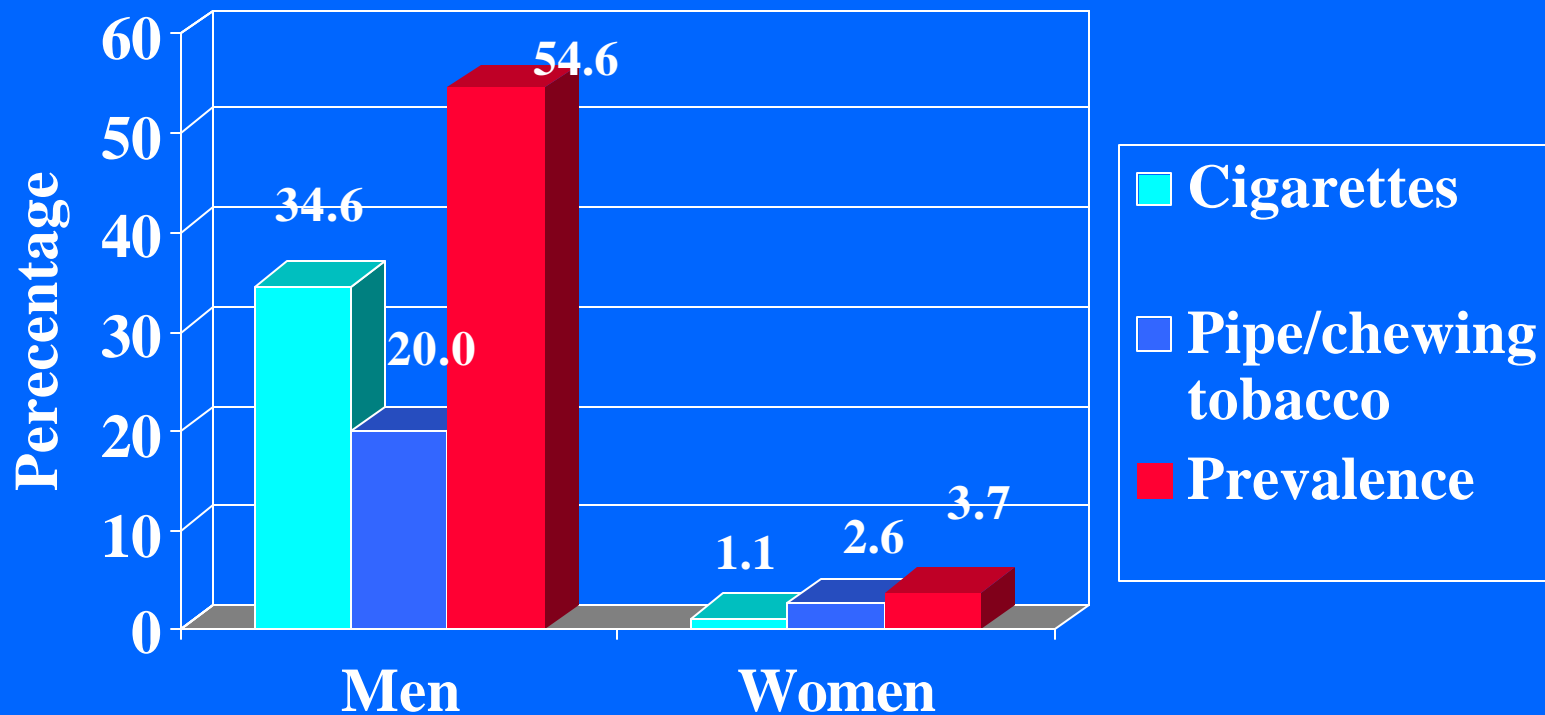


Farmer



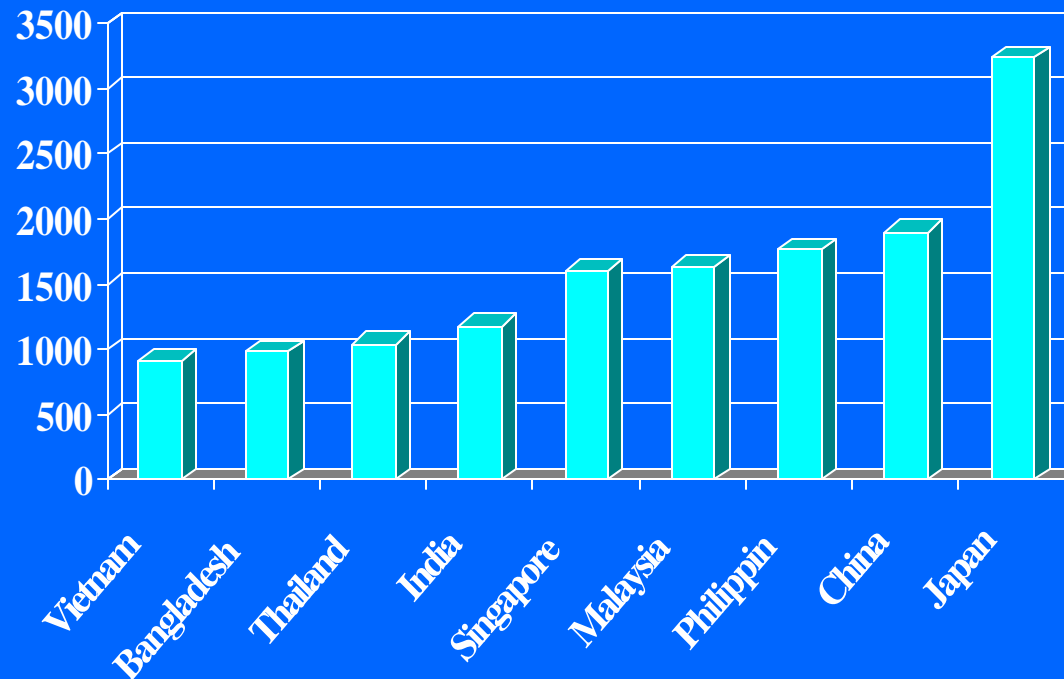
Workers (water-pipe)

Tobacco use incidence by males, females by different type of products



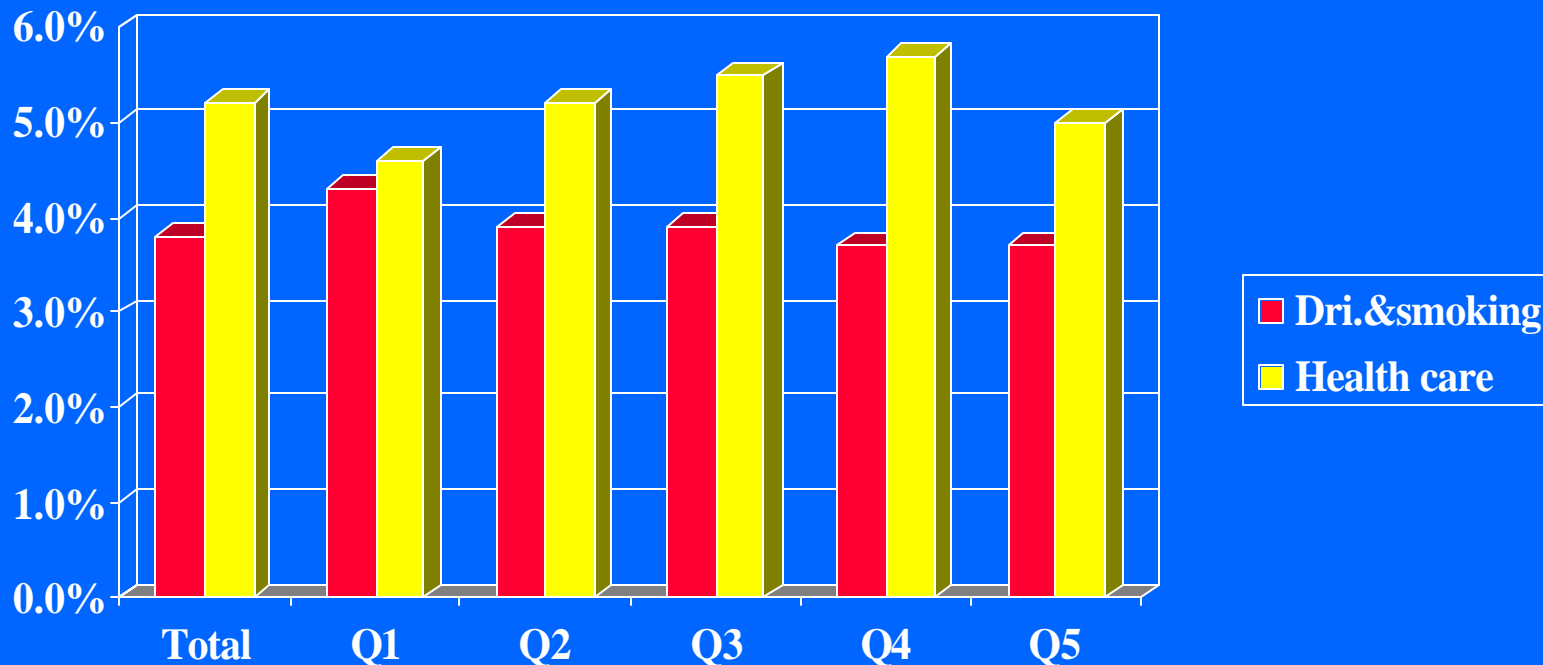
Tobacco prevalent rate is high, but number of cigarette consumed is rather low

Average number of cigarette consumed by an adult (over 15 years old) at some Asian Countries 1990-1998



The share of household expenditure for drinking and smoking is almost as much as for health care

Share of expenditure for drinking/smoking and health care 1997-1998 by Quintile (%) (VLSS 1997/98)



The share of household expenditure for drinking and smoking in rural area is higher than in urban area

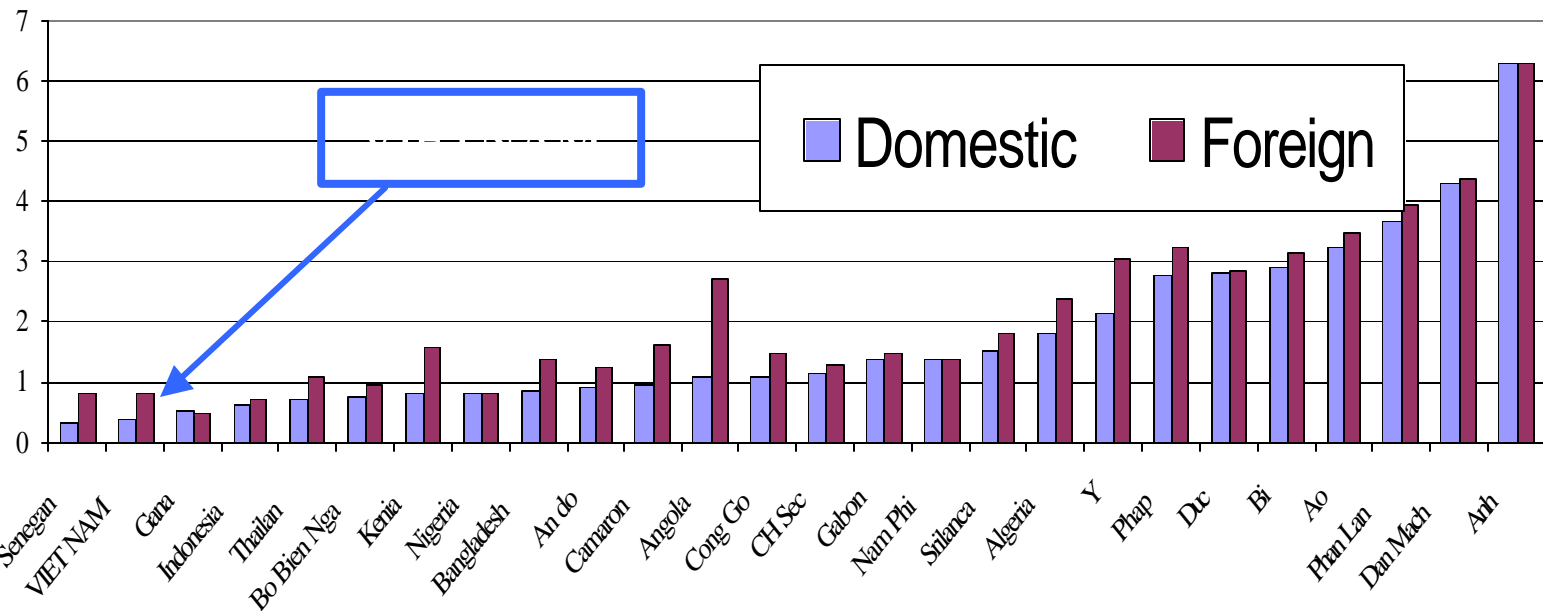
Share of expenditure for drinking/smoking and health care 1997-1998 by urban and rural area (%)

	Urban	Rural
Drinking and smoking	3.62	3.87
Health care	4.24	5.98

Source: VLSS 1997-1998

The high prevalence rate is due to low price of tobacco products

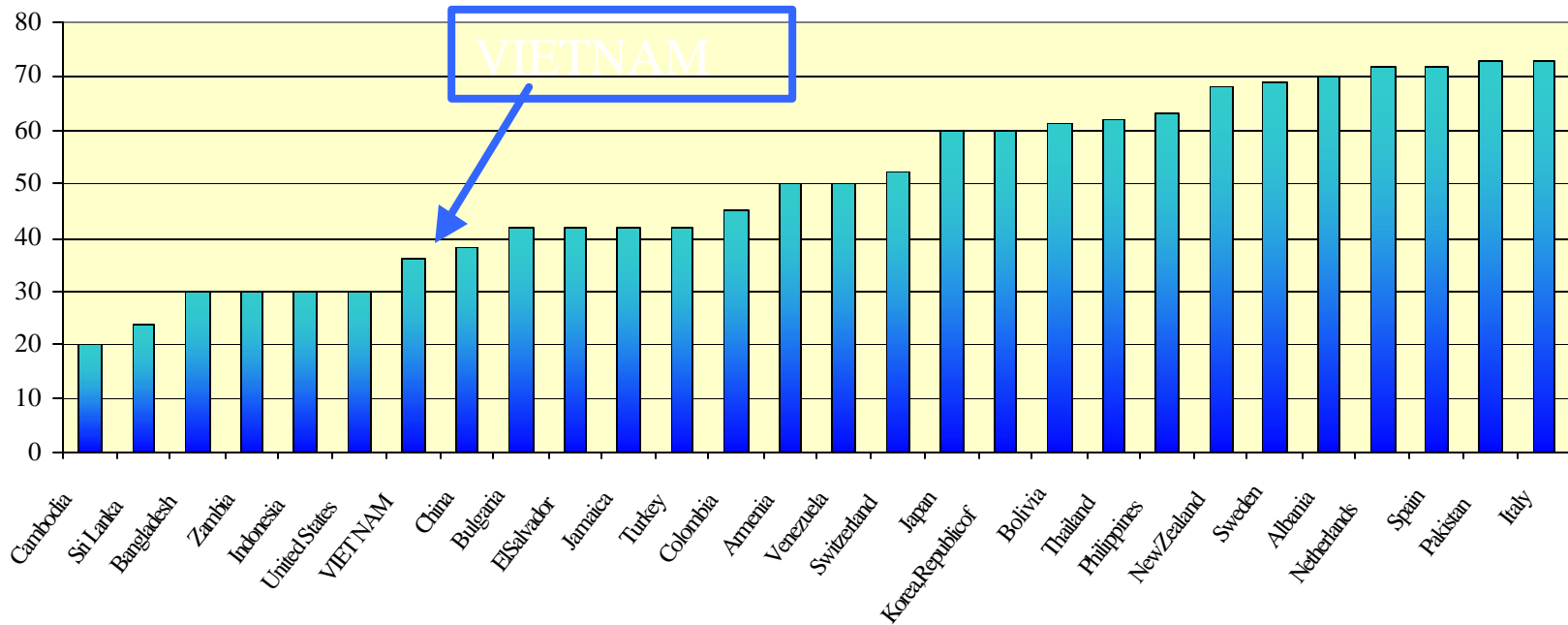
Prices of foreign and domestic cigarette per pack



Tobacco tax

- Tobacco products are subject to Special sale tax, and no VAT.
- The exercise tobacco tax in Vietnam is rather low comparing to other countries

Tax as percentage of price



Source: Frank J. Chaloupka, Teh-wei Hu, Kenneth E. Warner, Rowena Jacobs, and Ayda Yurekli, 2000

Tobacco Imports

- Since 1990, the cigarettes have been prohibited to import. The imports are tobacco leaves and auxiliaries for tobacco production with tariffs 5 – 15 percent.
- Smuggling amount is about 10 percent of total demand (some sources)
- Main exporters to Vietnam are Singapore, Thailand, China and Laos including material and smuggled cigarettes

OTHER POLICY CHANGES

- Advertisement is prohibited from mass media
- Smoking is prohibited in public place
- Strict control over smuggling

II. IMPACT OF TOBACCO TAX INCREASE TO INCOME EQUITY

THE OBJECTIVES

- To analyze the smoking pattern in Vietnam;
- To estimate the sensitiveness of Vietnam smokers to price change
- **To estimate the impact tax increase to income equity in Vietnam.**

METHODS AND METHODOLOGIES

- Use secondary data (1975-2000; and Vietnam Living Standards survey 1997/98)
- Estimate price elasticity (time series and cross sectional data)
- Estimate tax elasticity
- Simulate the impact of tax increase to income equity (Gini Coefficient)

Price Elasticity (Time series data): -0.57

Dependent variable: Consumption (Ln)				
Method: Least squares				
Number of obs = 26				
F(3, 22) = 61.68 ; Prob > F = 0.0000				
R-squared = 0.8937				
Adj R-squared = 0.8793				
Root MSE = .17324				
	Coeff.	Std. Err.	t-stat	Prob.
Price (Ln)	-.5725385	.2513313	2.28	0.033
Income (Ln)	.6036624	.2102463	2.87	0.009
Economic reform (dummy: 1 -2 - 3)	.265969	.0823357	3.23	0.004
_cons	10.37834	1.626091	6.38	0.000

Price elasticity by quintiles (VLSS 1997/98)

	Price elasticity	t-stat.	Number of obs.	R-square
Quintile 1	-.6414565	-9.65	308	0.3238
Quintile 2	-.4032372	-8.28	478	0.1544
Quintile 3	-.5755837	-14.61	638	0.2629
Quintile 4	-.4125045	-11.00	791	0.1760
Quintile 5	-.3249108	-10.15	983	0.1360
Whole sample	-.4381741	-23.94	3198	0.1727

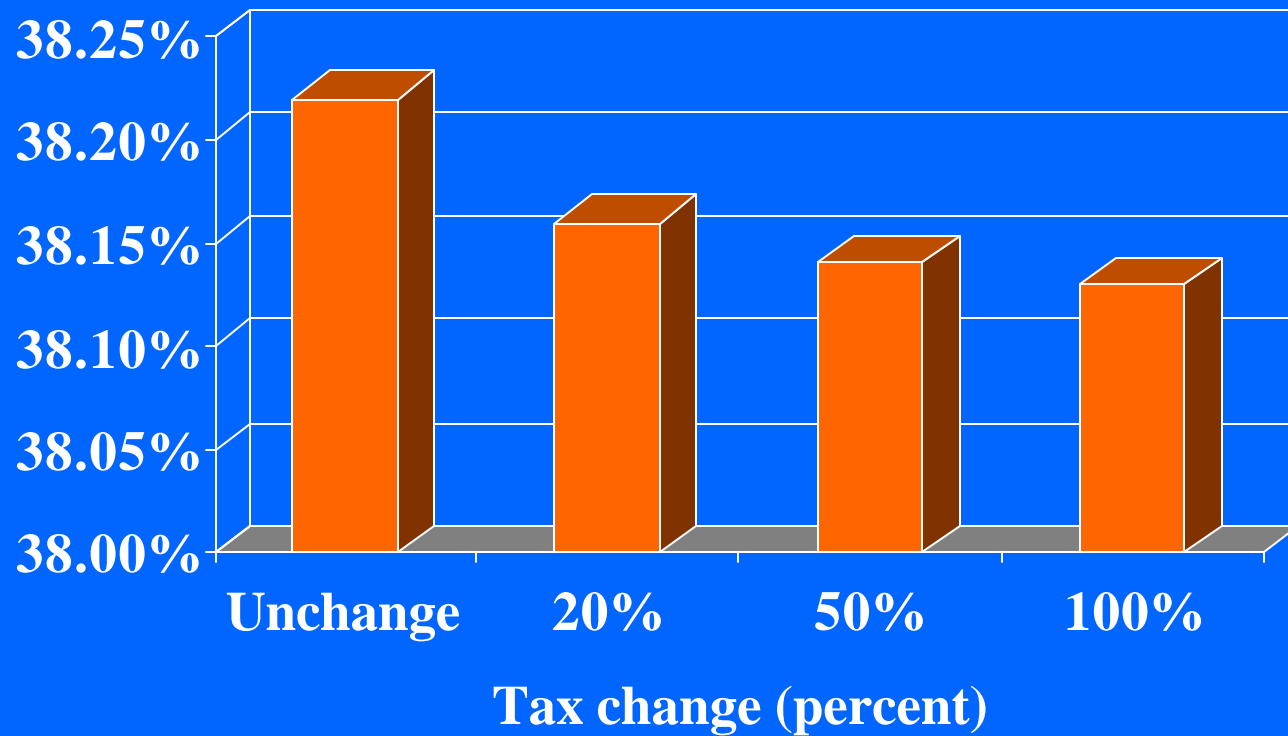
Tax Elasticity: 0.73

Independent variable: Price (Ln)				
Method: Least squares				
Number of Observations: 48				
F(2, 43) = 1224.04; Pro. > F: 0.0000				
R-squared = 0.9827				
Adj R-squared = 0.9819				
	Coef.	Std. Err.	t-stat.	P>t
Tax (Ln)	.7251404	.0151332	47.92	0.000
Advertisement ban (dummy 1= no, 0 = yes)	-.0468191	.0188326	-2.49	0.017
_cons	1.294243	.0501247	25.82	0.000

Gini Coefficients

- Scenarios: Exercise tax increase: 25%; 50%; and 100%
- Result: Although the Gini coefficients do not change very much, they show positive impact of tax increase to income equity.

Gini coefficients under scenarios of tax changes



Conclusion and Policy recommendations:

- Smoking prevalence rate in Vietnam is very high
- Anti-smoking campaigns have been launched out, and smoking prevalence has been reduced.
- Tobacco exercise in Vietnam is rather low, and tax rising could be an option to control smoking
- All price elasticity suggested that Vietnamese smokers are sensitive to price changes
- Tax increase does not harm income equity, but improve it.