

The Economics of Tobacco in Eastern Europe

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Overview:

The Economics of Tobacco in Eastern Europe

- The Eastern European Cigarette Market: Then & Now
- Economic Fundamentals of Demand for Tobacco
 - The economic relationship between price and consumption
- Price, Taxes and the Demand for Cigarettes
 - ▶ Responsiveness to Price Changes
 - differences by income and age
 - ▶ Unintended effects of tax and price increases
- Other Approaches to Tobacco Control: Advertising, Counteradvertising and Restrictions on Cigarette Use

Then and Now: The Cigarette Market in Eastern Europe

- Production

- ▶ Then: Government owned and operated tobacco facilities.
 - Now: Government factories have been bought out by large foreign enterprises and a few domestic investors.
- ▶ Then: Centralized government agency determined supply of cigarettes. Disbursement and allocation of cigarettes often associated with political disharmony not consumer demand.
 - Now: The cigarette market responds to consumer preferences. An functioning free and open market.

Then and Now: The Cigarette Market in Eastern Europe

- Demand

- ▶ Then: Prices for tobacco were fixed.
 - Now: Cigarette prices are determined by the equilibrium of supply and demand in the cigarette market.
- ▶ Then: Taxes implicit in price.
 - Now: Variety of taxes may be applied including: ad valorem, excise, sales and VAT taxes as well as import duties on foreign brands
- ▶ Then: Absence of economic choice due to availability constraints. Very limited availability of imported brands.
 - Now: Consumers choose which cigarettes to smoke from a large selection of variously priced domestic and western brands - independent of availability constraints.

Economic Fundamentals and the Demand for Cigarettes

- THEORY: As the price of a good rises, the amount of the good that's demanded by an individual decreases.
- In the past, economists believed that demand for cigarettes was unresponsive to price. (Primarily due to the addictive nature of tobacco products)
- Today, find evidence that demand for tobacco is sensitive to changes in price. Increase the price of tobacco and will decrease its use.

Economic Fundamentals and the Demand for Cigarettes

- **Policy Implication:**
By altering the price of cigarettes (taxation), governments can change cigarette use.
- **Economic Justification for Tobacco Taxes:**
 - ▶ a source of revenue to governments
 - ▶ a “user fee” to smokers which pays for the social costs associated with smoking
 - ▶ policy tool used to decrease smoking and the deaths/illnesses associated with smoking

Price, Taxes and the Demand for Cigarettes

- Relationship between Cigarette Prices and Taxes
 - ▶ Cigarette prices rise with taxes
 - ▶ Cigarette taxes in low and middle income countries are below taxes in higher income countries.
 - ▶ Market prices of cigarettes in low and middle income countries are well below prices in developed economies.
- Cigarette prices and taxes in Eastern Europe are below that of their Western European counterparts.

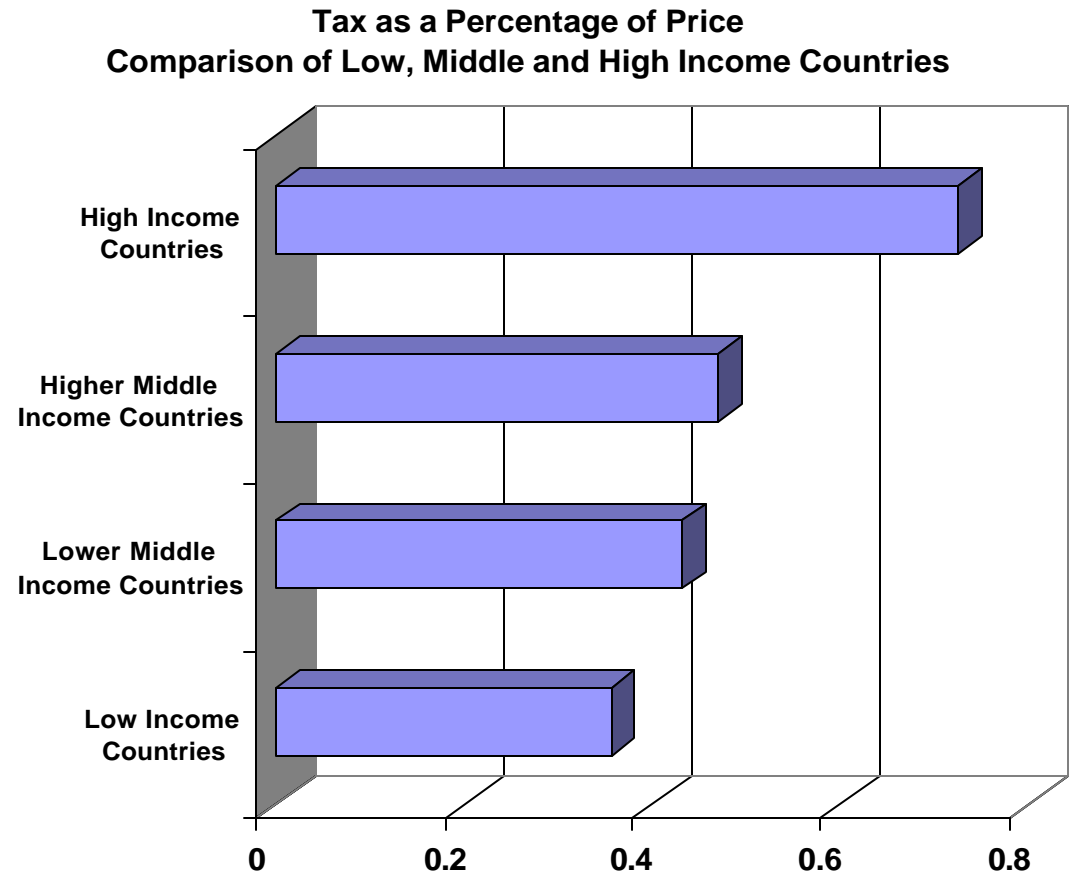
Price, Taxes and the Demand for Cigarettes

- Large inequality of cigarette prices and taxes between Eastern and Western Europe.

Country	Cigarette Price (US\$)	Tax (US\$)	Tax % of Price
<i>Low Income Countries</i>			
Bangladesh	0.09	0.03	33%
Cambodia	0.05	0.01	20%
China	0.2	0.08	40%
Armenia	0.2	0.1	50%
<i>Lower Middle Income Countries</i>			
Turkey	0.51	0.22	43%
Colombia	0.06	0.03	50%
Bulgaria	0.6	0.25	42%
<i>Higher Middle Income Countries</i>			
Argentina	1.38	0.97	70%
South Africa	1.32	0.44	33%
Hungary	0.52	0.22	42%
Poland	0.5	0.2	40%
Slovak Republic	0.58	0.2	34%
<i>High Income Countries</i>			
United Kingdom	4.16	3.24	78%
Australia	4.85	3.15	65%
Austria	2.96	2.16	73%
France	2.9	2.17	75%
Germany	3.38	2.43	72%
Italy	2.19	1.6	73%

Price, Taxes and the Demand for Cigarettes

- **Higher income countries:** Tax accounts for approximately 2/3 or more of price
- **Low to Middle Income Countries:** Tax accounts for about 1/2 or less of price
- Given small tax to price ratio, increases in cigarette taxes may produce both health benefits & tax revenues for Eastern Europe



Price, Taxes and the Demand for Cigarettes

- “Price Elasticity” of Demand

- ▶ the sensitivity or responsiveness of demand to changes in the price of a good
- ▶ the percentage change in consumption that results from a 1% change in the price of a given good

- Comparison of Price Elasticities

Country	Estimated Price Elasticity
<i>High Income Economies</i>	
UK	- 0.6
USA	- 0.4
<i>Developing Economies</i>	
Zimbabwe	- 0.85
South Africa	- 0.69
China	- .65 to -1.0

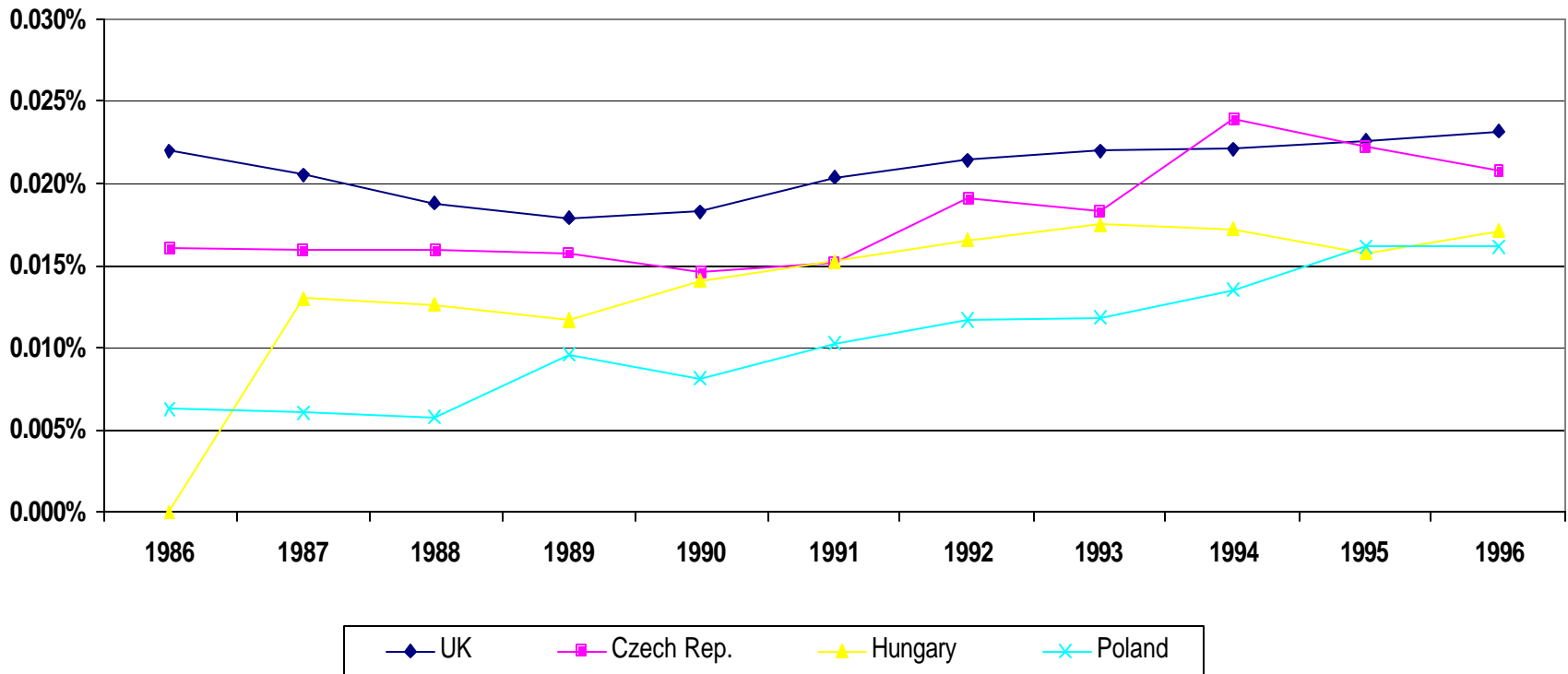
Price, Taxes and the Demand for Cigarettes

- Price Elasticity Comparisons - Income Differences
 - ▶ Price elasticity estimates for low income countries (Zimbabwe, South Africa, China) are almost twice as great as that of the (UK, US).
 - ▶ Economists suggest that the demand for cigarettes is likely to be more sensitive in developing economies versus high income countries - because of relatively low income levels.

Price, Taxes and the Demand for Cigarettes

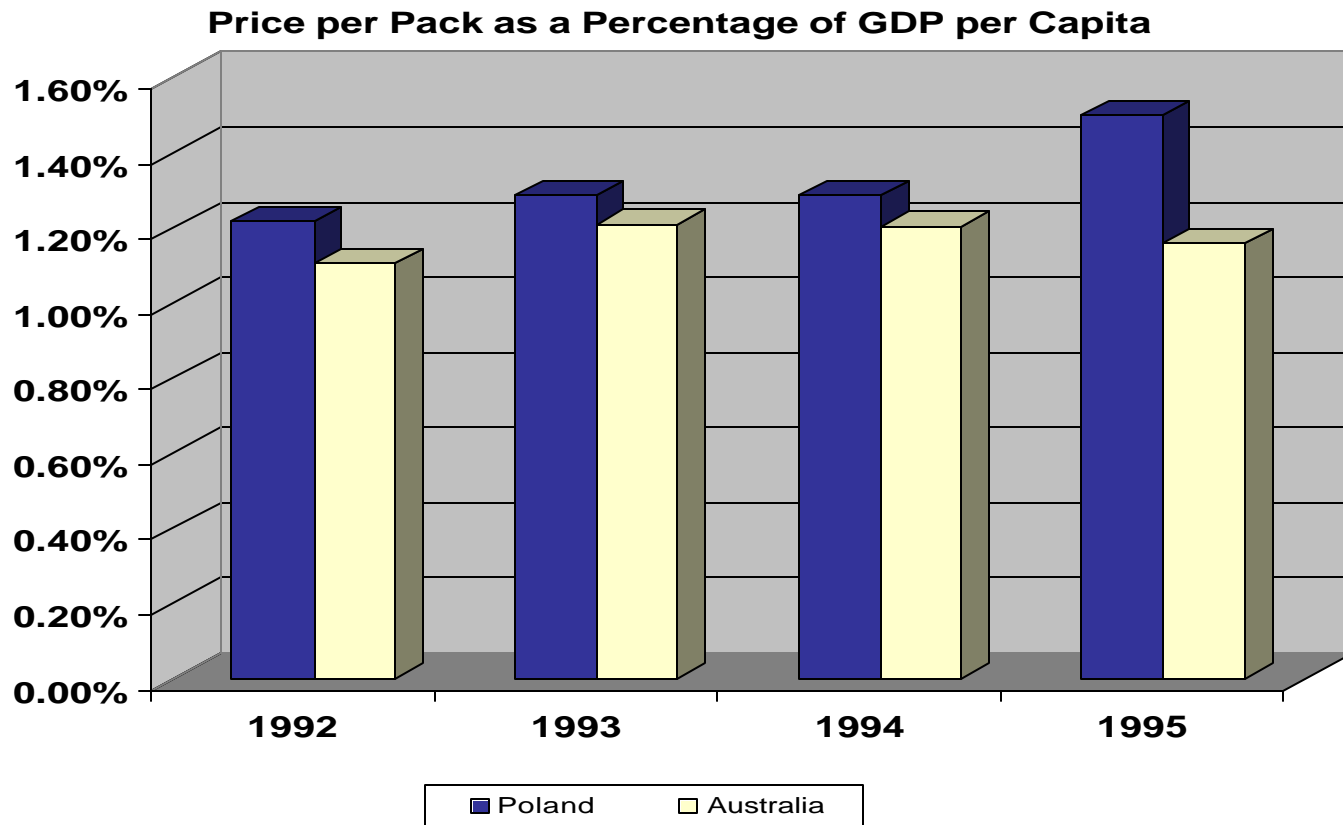
- Price is a relatively small fraction of GDP per capita throughout most of Eastern Europe

Cigarette Price as a Percentage of GDP per Capita



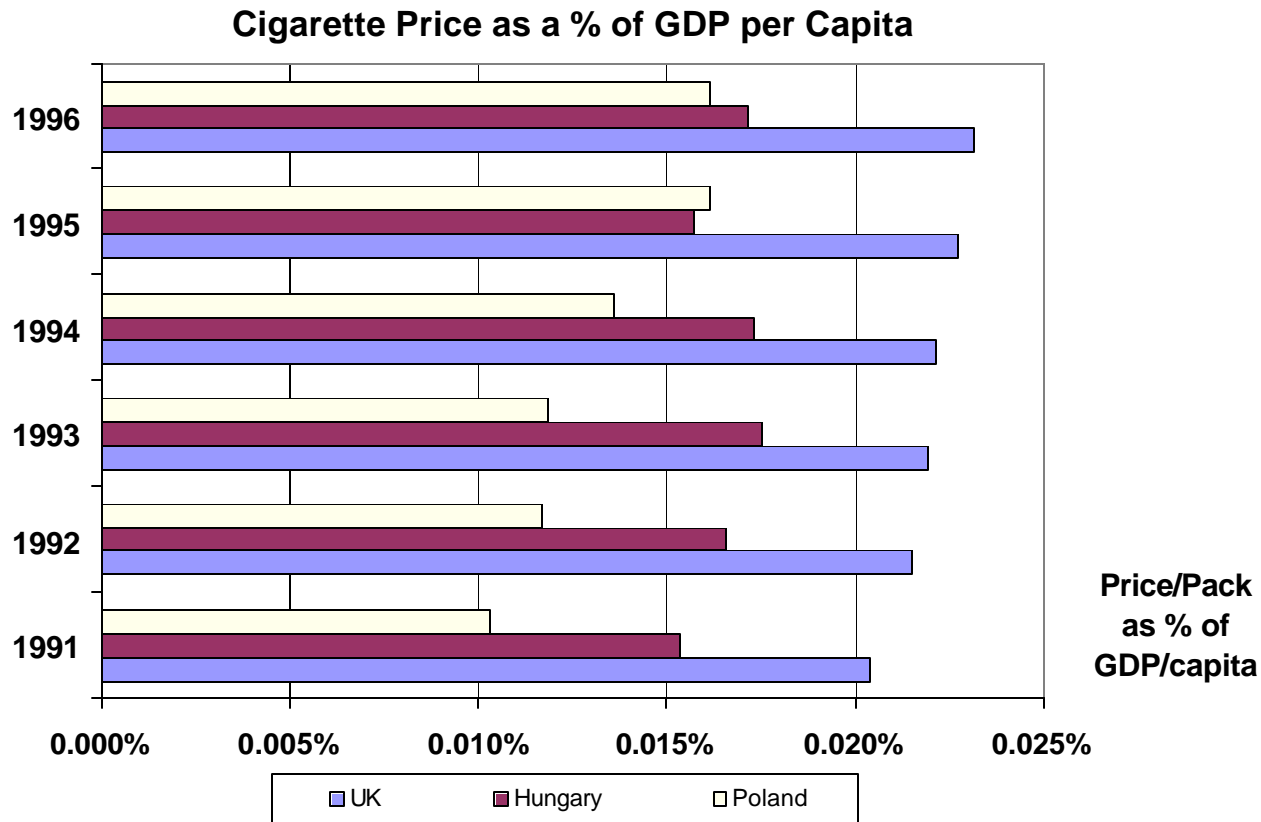
Price, Taxes and the Demand for Cigarettes

- Price is a relatively small fraction of GDP per capita throughout most of Eastern Europe



Price, Taxes and the Demand for Cigarettes

- Out of pocket price per pack is a relatively small fraction of GDP per capita in Eastern European countries when compared to U.K.



Price, Taxes and the Demand for Cigarettes

- Price Elasticities of Demand in Eastern Europe will fall in between those of low and highly developed country estimates.

Country	Estimated Price Elasticity
USA	-0.4
Eastern European Countries	Estimates
China	- .65 to -1.0
Zimbabwe	-0.85

Price, Taxes and the Demand for Cigarettes

- Price Elasticity Comparisons - Age Differences
 - ▶ Studies indicate an inverse relationship between age and price elasticity.
 - ▶ Youths are more responsive to price changes than older, adult smokers.
 - 1). are not long time smokers (less addicted)
 - 2). large multiplicative effect due to peer influence
 - 3). youths spend a relatively large fraction of their disposable income on cigarette purchases
 - 4). are more present oriented

Price, Taxes and the Demand for Cigarettes

- Policy Implication:

Today, Eastern European youths are key targets for cigarette producer mass media campaigns and promotional events.

- Considering:

- 1). the large price responsiveness of youth
- 2). absence of strong addiction to tobacco products

- Increases in tobacco taxes on cigarettes carry large, potential long run benefits for all future age groups of the Eastern European population.

Price, Taxes and the Demand for Cigarettes

- Change in cigarette price influences consumer choice:
 - 1). How much to smoke
 - Price Elasticity of Cigarette Demand
 - 2). To smoke/not smoke
 - Price Elasticity of Prevalence
- Change in cigarette price affects consumer behavior:
 - 1). Short Term (immediate future)
 - 2). Long Term - if tobacco taxes are sustained over time in real terms (regularly increased to account for inflation) then additional long run benefits from taxation may be obtained.

Price, Taxes and the Demand for Cigarettes

- Unintended effects of price and tax increases

High tax increases, which raise the price of cigarettes too drastically, may create incentives to:

- 1). Smuggle - Constraints of smuggling on tax increases can be minimized by other policy adaptations such as labeling in the home language.

- 2). Substitute -

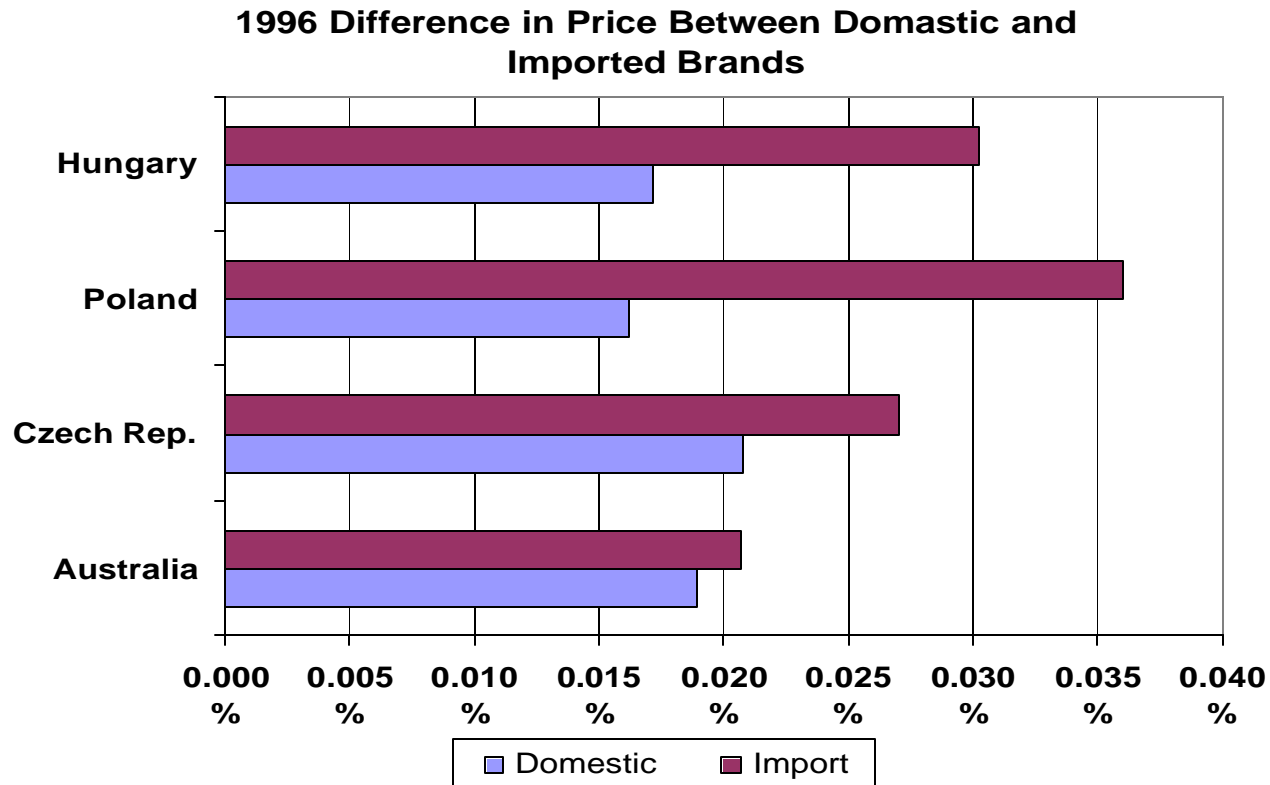
- a). from cigarettes to other tobacco products

- b). from usual imported or domestic cigarette brands to cheaper (often less healthy) domestic brands.

To prevent substitution to other goods, cigarette tax policy requires compatible increases in taxes on all tobacco products.

Price, Taxes and the Demand for Cigarettes

- Historically, due to large differences in price, demand for imported cigarettes in low to middle income countries has shown to be much more price sensitive than in high income countries.



Other Approaches to Tobacco Control

- Advertising: Bans

- A developing body of econometric literature
- Measurement problems: high levels of aggregate advertising vs. subtle effects on cigarette consumption
- Studies (partial and total bans) provide some evidence for the belief that cigarette advertising increases cigarette demand

- Counteradvertising: Health Warnings

- Labels on packages, billboards and other advertisements as well as new information on the health risks associated with smoking
- More consistent econometric evidence

Other Approaches to Tobacco Control

- Restrictions on smoking
 - Helps reinforce message of the negative health consequences of smoking
 - More consistent econometric findings

Price, Taxes and the Demand for Cigarettes

- Short and Long Term responsiveness to addictive goods
- ▶ Demand for tobacco differs from that of most other goods
- ▶ Tobacco products are addictive
- ▶ Economic models of addiction imply: the amount of current tobacco use is dependent on past tobacco consumption

