

Regulating Tobacco Use

Role of Taxes

The design of tax instruments for controlling tobacco consumption is a complex process impacting as it does on the livelihoods of millions of people engaged in activities related to tobacco production, sale and distribution. Tax instruments can only be one component of a broad-based approach to controlling tobacco use.

ATUL SARMA

Numerous scientific studies have brought out several types of health hazards of tobacco consumption.¹ Policy-makers all over the world have come, therefore, to realise the need for the control of tobacco consumption. Many countries, particularly developed ones, have, in fact, introduced a number of policy measures to control tobacco consumption with varying degrees of success. These policy measures relate to public education, regulation and public finance instruments.

But an appropriate policy design to control tobacco consumption is not easy. More so, in a tobacco producing country where millions eke out their living from activities relating to tobacco production, manufacturing, sale and distribution. This article does not attempt to deal with all the aspects of tobacco consumption control policy. Such a comprehensive approach will require multidisciplinary efforts. Here an attempt is made to bring out some of the complex issues involved in the design of tax instruments and their effective implementation in the context of tobacco producing developing countries. It also identifies some specific research issues the understanding of which will provide basic insights for designing effective tax instruments for tobacco consumption control policy in a developing country.

Tobacco is a short-term cash crop cultivated in more than 100 countries. Developing countries accounted for more than 80 per cent of the world's tobacco production in 1996 – compared with 53 per cent 30 years ago (Table 1). Experts have projected a 1.5 per cent to 2 per cent annual increase in production and consumption during the remaining years of the 20th century [ITGA 1998:10]. Tobacco provides employment to some 33 million people through growing

and early stages of processing. If all tobacco-related industries and processes are included, the estimated employment rises to at least 100 million – nearly 90 per cent of which is in developing countries [ITGA 1998: 15-16]. In India the cigarette and bidi segments of the tobacco industry contributed 6.54 million jobs and generated income to the tune of Rs 126.3 bn in 1994-95 [Sen et al 1996].

Tobacco is also a significant foreign exchange earner in many developing countries. Developing nations received more than US \$ 1.7 bn in foreign exchange from tobacco sales in the international market in 1987 [Sen et al 1996:18]. Some countries like Malawi and Zimbabwe earned from tobacco exports as much as 74 per cent and 30 per cent of their respective foreign exchange earnings. India earned \$ 81.13 mn from the export of both unmanufactured and manufactured tobacco in 1994.

Similarly, numerous governments of both rich and poor nations rely on tobacco taxes as a significant source of revenue. In the Philippines, for example, tobacco taxes contribute around 20 per cent of the total government revenues. In India tobacco is the fourth largest contributor (10 per cent) to the union excise revenue collection, after textiles, petroleum products, and iron and steel products [Sen et al 1996].

All these have two important implications on designing instruments for tobacco consumption control in tobacco producing developing countries. First, any policy design has to recognise the conflict of interests that exist in public policy-making. In the interest of income, employment and government revenue generation as well as for foreign exchange earnings, governments of tobacco producing nations must encourage tobacco production by way of providing subsidised inputs

and price and marketing support. On the other hand, any tax instruments designed to curb tobacco consumption act precisely in the opposite direction. It is difficult to resolve such conflicts in a policy design.

Just to illustrate the point taking the Indian case, the ministry of agriculture and the ministry of commerce take various measures to encourage production² and exports of tobacco while the ministry of finance levies high taxes that nullify their positive effects. But then the government of India relies heavily on the cigarette sector leaving other tobacco products almost outside the tax net (Table 2).

Second, the countries with significant dependence on tobacco as a provider of income, employment, foreign exchange and government revenue will have to find viable alternatives before any effective tobacco consumption control policy is put in place.

Being placed in a situation of hard economic realities that conflict with the desirability of tobacco consumption control, a government finds it difficult to design tax and subsidy policies relating to this sector with a sharply defined objective function. In fact, these policies betray a varying degree of ambivalence.

Subsidies and Taxes

Just to highlight the kind of ambivalence that is inherent in government policy, we broadly indicate below the types of support that India provides to tobacco. In the Indian federation, agriculture comes under the jurisdiction of a state government. State governments of the tobacco producing states (Andhra Pradesh, Gujarat and Karnataka) encourage tobacco as a cash crop as part of their agriculture policy. Accordingly, to the extent tobacco is grown in irrigated areas (currently, it is grown largely in rain-fed areas in India), it receives highly subsidised water, fertiliser and power.

Even though tobacco comes under state subjects, the government of India plays an important role in the growth and development of the tobacco industry. In fact, at least six ministries – agriculture, rural development, industry, commerce, labour and finance – of the union government deal with one or another specified aspects of the industry.

Government interventions in support of the industry can broadly be classified into: (i) institutional and regulatory support; (ii) price and market support; (iii) export

promotion; and (iv) R and D in addition to direct fertiliser and credit subsidies. All these interventions involve explicit or implicit subsidies for the tobacco industry.

A few examples will illustrate the point. The directorate of tobacco development under the agriculture ministry looks after schemes for development of production, marketing, price stabilisation, etc. The Indian Tobacco Development Council is to advise the union and state governments and tobacco related organisations on matters relating to crop, grading, processing and marketing. One central tobacco research institute and 17 regional research institutes under the Indian Council of Agricultural Research conduct research on improvement in crop production technology, evolution of new varieties, efficient crop management techniques, etc.

The Tobacco Export Promotion Council is to recommend minimum export prices for different grades. The Tobacco Board set up in 1976 regulates production, marketing and exports of Virginia tobacco (FCV). For tobacco price stabilisation, the government has introduced minimum export prices as well as minimum support prices, two statutory measures.

With new thrusts in agro-processing industry in the wake of the current economic reform programmes, the tobacco industry has come to enjoy some added incentives. One very recent example is that the GOI has permitted 100 per cent foreign equity participation in cigarette manufacturing.

Similarly, tobacco exports along with other exports receive different types of incentives. For example, export incomes are exempt from income taxation. Similarly, credit at subsidised interest rate is available for tobacco exports (85.8 per cent of Indian tobacco exports are in unmanufactured form).

As is clear from the above, some of these interventions involve direct subsidies while others implicit ones. However, no estimate is available of the order of subsidies the tobacco industry enjoys although its knowledge could be important policy input. It is conceivable that other tobacco producing countries also provide some forms of subsidy to tobacco industry.

As mentioned earlier, the governments of both developed and developing countries levy several types of taxes at different stages. Excise tax-duty – basic, additional, special, auxiliary, etc – import tariff, sales tax, octroi-entry tax, and tax-cess on tobacco leaf are some of the common forms

of tobacco taxation. While the last is at the farm level, the others are on manufactured tobacco products.

In a federal country like India, all the levels of government – the union, state and local level (more commonly urban) governments – levy tax on tobacco. In 1956, a tax rental arrangement was worked out between the union and the state governments. According to this arrangement, the union government levied and collected additional excise duty over and above basic duty on tobacco and tobacco products in lieu of sale tax that used to be levied by states. The entire revenue therefrom is distributed among the states. This single point taxation on tobacco and tobacco products as embodied in the Additional Duties of Excise (Goods of Special Importance Act) was eroded in subsequent years following the levy of luxury tax on cigarettes and other tobacco taxes by some states. Incidentally, in a unitary system as well, there could be multiple forms of tobacco tax even if levied by one level of government.

Excise Duties

There are a few important features of excise duties on tobacco in the Indian context. First, all tobacco and tobacco products were gradually brought under the excise net by the end of 1975. But non-manufactured tobacco was exempted from the purview of the excise duty with effect from 1979-80.³ The consequent revenue loss from the exemption was more than

compensated by steep increases in tax rates on manufactured tobacco items.

The other important point is that the tobacco products produced in cottage industry (bidis, etc) are taxed at much lower rates than those applicable to tobacco products of organised industry (cigarettes). The tax differential between cigarette and non-cigarette tobacco was 3:1 in 1951 while it is now 35:1 (1993-94).⁴ As a result, revenue collection through excise duty on cigarettes accounted for 88 per cent while all other tobacco products⁵ together contributed only 12 per cent in 1993-94 [NCAER 1994:104]. On the other hand, only 19 per cent of tobacco consumption by weight was in the form of cigarettes in India while 81 per cent in other forms contributing only 12 per cent of the total excise revenue from tobacco in 1994-95. Again, in 1994-95 an estimated 13 per cent cigarette smokers contributed tax at the rate of Rs 383 per kg of tobacco while 87 per cent other consumers – smokers of bidi and the users of non-smoking tobacco products – at the rate of Rs 12 per kg of tobacco [TII 1998:4]. One important implication of this type of tax differentiation is that, to the extent, higher prices through tax route curb tobacco consumption, the current tax structure has lesser impact on the tobacco products, which are not taxed or lightly taxed.

The discussion on base and rate structure of tobacco taxation in the context of Indian realities brings into sharp focus the conflict between tax objectives: revenue

Table 1: Production, Area, Yield, Government Revenue, Employment and Export Earnings from Tobacco

Country	Production	Area	Yield	Government Revenue@	Employment	Export Earnings from Tobacco	
	1995	1995	1995	(US \$ bn) 1994	(in 000)*	(US\$1000) 1994	Share in Total Export (Per Cent)
World	6345	4157	1527	na	na	21473921	0.52
India	587	391	1501	0.866	7,400	81134	0.31
Bangladesh	38	36	1056	na	837	na	na
China	2327	1475	1577	6.548	na	686360	0.57
Indonesia	133	192	689	1.031	2,814	126422	0.32
Japan	7 ²	26	2671	19.401	na	273305	0.07
Malaysia	10	10	1043	0.331	607	31440	0.05
Pakistan	81	47	1706	0.351	1,265	na	na
Philippines	64	58	1100	0.388	892	32626	0.24
South Korea	84	32	2602	3.028	364	35701	0.04
Thailand	56	42	1312	0.663	1,530	87621	0.19
Turkey	200	236	850	na	592	423675	2.34

Notes: @ Government revenue from cigarette taxation.

* no year quoted in the source.

Sources: Tobacco Institute of India (1998): *Taxing the Faithful – Expert Views on Optimising Tax Revenue from Tobacco*, p 18.

For employment: International Tobacco Growers' Association (1998): *Tobacco in Developing World*, p 30.

For export: UN, *International Trade Statistics Yearbook*, Vol II, 1994.

maximisation and tobacco consumption control. For the ease of tax administration⁶ the narrow cigarette sector is taxed at increasingly higher rates to meet revenue needs while as much as four-fifths of tobacco consumption are either lightly taxed or kept outside the tax net. If the objective is to discourage tobacco consumption, the existing tax base and rate structure are not in alignment with the production and consumption patterns. At the same time, other macro considerations such as employment and income generation as also the nature of industrial organisation hinder any serious effort towards such an alignment. The end result is that tobacco taxation in India could pursue neither the objective of revenue optimisation nor that of tobacco consumption control. It will be useful to examine whether other tobacco producing developing countries have encountered similar conflicts in designing and implementing tobacco tax instruments. It is plausible that differential tax rates, heavy reliance on one or the other tobacco products produced in the organised sector and conflicts between desirable policies in the interest of producers and those for tobacco consumption restriction, in particular, exist in other tobacco producing countries as well.

A heavy reliance on narrow cigarette base for revenue mobilisation and/or for tobacco consumption control has an important consequence. Increasingly higher tax rates beyond a point may encourage cross-border illegal trade or smuggling. In such an eventuality, the government concerned would lose potential revenue while at the same time failing to achieve the objective of curbing tobacco consumption. Preventing such an outcome will call for tax harmonisation among the tobacco producing countries at least in a region, to begin with. The barriers to tobacco tax

harmonisation will, therefore, be worth identifying as a stepping stone for further progress in this direction.

Tax, Price and Consumption

The design of tobacco tax as an effective instrument for tobacco consumption control requires proper understanding of the relationship between tax and price, and between price and tobacco demand. The knowledge about the variations in responsiveness to price changes across several demographic, social and economic categories of people in a country provides a useful ingredient for policy-making.

The most relevant relationship is between price and quantity demanded for tobacco. Excise-sales taxation being a principal policy variable relevant to price, the relationship between excise-sales taxation and pricing as a subset needs careful examination. It is important to understand, for example, to what extent the nature of tobacco industry determines the shift of tax incidence to consumers. One can hypothesise that oligopolistic cigarette industry as is the case in India takes advantage of tax increases by raising retail prices by more than the amount of tax hike.⁷

The main question, however, is how price rise influences the decision of whether or not to smoke and the decision of how much to consume of a tobacco product, assuming that one continues to smoke. An understanding of price elasticity of tobacco products provides useful insights into tobacco consumer's behaviour. In major industrialised countries the price elasticity of demand for tobacco seems to be in the range of -0.4 to -0.5. In India the price elasticity of cigarette consumption is estimated at -0.67 during 1981-82 to 1992-93 [NCAER

1994:114]. Similar elasticity coefficient for other tobacco products is an equally useful policy input. The important point is that the elasticity of demand for tobacco being much lower than unit elasticity, tobacco tax policy should combine the insights of both optimal tax theory and tax reform analysis [for a detailed discussion, see Heady 1996:23-54].

The knowledge of price elasticity helps us address another important question: what elasticity value reflects price-induced decision to quit (or start) smoking and decision to reduce (or increase) the number-quantity of any tobacco product consumed. While an investigation of such questions in regard to cigarettes may not be too difficult, their extension covering other major tobacco products may be very challenging in terms of data availability in a developing country.

Price responsiveness has some other important dimensions. For example, does price responsiveness differ by age groups such as adolescents versus adults? Can higher tax, by its price impact, discourage children embarking upon a lifetime addiction to smoking? Do men and women respond differently to tobacco retail price changes? A clear insight into these and similar other questions is of special importance for developing countries where there has been noticeable demographic, social and economic transition in recent years.

Equally important is to know distributional implications of tobacco taxation. What is the relationship between price responsiveness and socio-economic status? More specifically, is price responsiveness significantly different across different socio-economic classes? Is it inversely related to the socio-economic status thus making cigarette taxes regressive? Insights into such questions will provide guidance for designing suitable tax instruments for curbing tobacco consumption.

Price-tax-demand relationship analysis can also help understand whether price increases influence the decisions of smokers to switch from lower tar and nicotine (t and n) cigarettes to higher t and n cigarettes. If this happens, increasing cigarette tax might diminish (or negate) health benefits. An analysis of such tax-price-demand relationship will provide insights into the impact of tax policy on smoking behaviour and thus a solid basis for policy decision-making.

Similarly, knowledge about questions such as how far tax-induced differences

Table 2: Consumption and Tax Patterns of Tobacco Products in India, 1994-95

	Cigarettes	Bidis	Others	Total
Number of users (mn)	25	100	75	200
Per cent share	12.5	50.0	37.5	100.0
Annual tobacco consumption (mn kg)	80	231	120	431
Per cent share	18.6	53.6	27.8	100.0
Annual consumption spending (Rs bn, less 10 per cent trade margin)	50	63.3	68.2	171.5
Per cent share	29.2	36.9	39.8	100.0
Annual Excise Revenue (Rs bn)	30.8	2.2	2.05	35.05
Per cent share	87.9	6.3	5.8	100.0
Revenue share of consumer spending (per cent)	61	4	3	20
Revenue yield (Rs per kg)	384	10	17	81

Source: Tobacco Institute of India, *Taxing the Faithful - Expert Views on Optimising Tax Revenue from Tobacco*, 1998, p 17.

in cigarette prices determine smuggling will provide a solid base for tax harmonisation.

There are some other public finance issues relating to smoking which deserve consideration. One such issue relates to the implication of smoking on medical costs a part of which fall on public health services. For example, a government has to enhance public health facilities including test laboratory and hospital beds, free medicine, etc, for the treatment of smoking-related diseases. To that extent the budgetary expenditure under health services will increase. It is no doubt difficult to partition public expenditure between the part due to smoking-related diseases and the part resulting from other public health obligations.

Another such issue concerns the incidence on pension and social security obligations arising from higher life expectancy. Higher longevity has also implications for medical cost. Against these, however, the higher medical cost for treating smoking-related diseases during the short span of smoker's life has to be assessed. The short point is that it is the net and not gross cost of smoking on public expenditure of a government that is of relevance.

There is also need for macro-level understanding of the impact of curtailment of tobacco consumption on employment, income and revenue. These impacts are not as straightforward as are usually made out by the tobacco interests. For, the money saved by the consumers after abandoning smoking is spent on other consumption or invested somewhere. The former induces higher demand while the latter adds to the productive capacity. This process also generates directly and indirectly income, employment as well as revenue. The basic issue, therefore, is to evaluate the net effect on employment, income and revenue of tobacco consumption curtailment. Only a carefully formulated macro modelling exercise can provide useful insights into this important question. [22]

Notes

[This is the revised version of the paper presented at the 'Project Planning Meeting: Tobacco and Public Finance in Asia' organised by Research for International Tobacco Control, IDRC, in Pattaya during November 9-13, 1998. The author gratefully acknowledges useful comments and suggestions made on the paper by the participants. The author is thankful to Pradeep Kumar Mehta for his research support.]

- 1 Tobacco is currently responsible for 3.5 million deaths all over the world each year. This figure is projected to rise by 1 million by the year 2030. Then tobacco will lead all other causes of death in the developing world as it does in the developed countries today [Warner 1998:1].
- 2 The GoI set up the Tobacco Board to regulate the level of production, and curing of Virginia tobacco, its marketing and exports in 1973. It also introduced regulations relating to minimum export prices which are fixed by the Tobacco Board after its formation and minimum support prices which are fixed by the commission for agricultural costs and prices. In addition to these two statutory regulations, there is also a regulation relating to voluntary minimum guaranteed prices.
- 3 This was primarily because the administration and collection of excise duty on non-manufactured tobacco necessitated a large network of excise range offices in the tobacco growing belt to keep watch on the area, production and movement of tobacco leaf. It was expensive as well as cumbersome to keep watch over a million growers and curers; yet the control was ineffective.
- 4 Even within different sizes of cigarettes excise duty rates vary, excise duty on tobacco products being shifted from ad valorem to specific basis. Incidentally, the reduction in excise on cigarettes smaller than 60 mm from Rs 120 to Rs 60 in 1994-95 has led to revenue growth but is feared to have affected bidi sales.
- 5 These include natu, bidi, cigar, hookah, cheroot, snuff and chewing tobacco, etc, accounting for about 80 per cent of the total production.
- 6 There are only four major cigarette manu-

facturers in India. These are: ITC (formerly Imperial Tobacco Co); VST Industries (formerly Vazir Sultan Tobacco Co); Godfrey Philips India; and GTC Industries (Golden Tobacco Co). There are a couple of smaller cigarette companies with manufacturing facilities. For lack of marketing infrastructure, they produce cigarettes for larger companies on contractual basis. In contrast the producers of other tobacco products are numerous and highly dispersed. This indicates the relative ease of implementation of cigarette tax as compared with other tobacco products.

- 7 Research in the US has found support in favour of such a hypothesis [Warner 1998:5].

References

- Heady, Christopher (1996): 'Optimal Taxation as a Guide to Tax Policy' in M P Devereux (ed), *The Economics of Tax Policy*, Oxford University Press.
- International Tobacco Growers' Association (ITGA) (1998): *Tobacco in the Developing World*, East Grinstead, England.
- NCAER (1994): 'Export Potential of Tobacco Sector', unpublished report.
- Sen, Anindya, Subrata Sarkar and Ajit Ranade (1996): 'Opportunities and Challenges in Tobacco', IDR study, Mumbai.
- Tobacco Institute of India report (TII) (1998): *Taxing the Faithful: Expert Views on Optimising Tax Revenues from Tobacco*, BK-12.
- Warner, K (1998): 'Economics of Tobacco and Health: An Overview', Conference on the Economics of Tobacco: Towards an Optimal Policy Mix, Cape Town, South Africa.

Note to Contributors

EPW welcomes original research papers in the social sciences. Articles must be not more than 8,000 words. They should not have been simultaneously submitted for publication in another journal or newspaper. If the paper has appeared earlier in an abridged version, we would appreciate a copy of this enclosed with the submitted paper. Please note that correct pagination and referencing and a copy complete in all respects will facilitate early processing of the article.

Contributions should be sent as hard copy accompanied by a floppy version. While it is possible for us to receive material by email, to avoid possible distortions and other problems, we prefer to receive material by mail. Graphs, charts and maps, even if available in the soft form, must be sent as clear hard copy.

EPW also invites short contributions to the 'Commentary' section on topical social, economic and political developments. These are ideally 2,000-3,000 words and must be exclusive to *EPW*. In all cases please include the contributors' name/s and mailing address. Short contributions may be sent as file attachments to epw@vsnl.com to facilitate timely processing and publication.

Articles will be acknowledged immediately on receipt. Quoting the reference number in inquiries will help.