



Tobacco taxation and smuggling control: New Zealand

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Introduction

For over 100 years taxation has been a common method of revenue collection in New Zealand and the major policy instrument for reducing tobacco use since the comprehensive tobacco control programme began in 1985¹. Tobacco tax rates have been raised once or twice a year since that time². A comparison of cigarette prices in relation to income in the year 2000 showed that in New Zealand cigarettes were more costly than in 22 Organisation for Economic Co-operation and Development (OECD) countries, except for the United Kingdom³. During the 1986–1992 recession, the Government increased the tobacco tax to raise revenue.

Table 1. Smoking trends in New Zealand, 1976–1996

Years in which Census asked smoking question	All males % who smoke	All females % who smoke	Maori males, % who smoke	Maori females % who smoke	Cigarette consumption per smoker per day	Tobacco product consumption per adult cigarettes or grams per year	Estimated deaths from cigarette smoking (as % of all deaths)
1976	40	36	56	59	24	3154	4114 (16%)
1981	33	27	54	58	25	2905	4559 (18%)
1996	25	23	40	47	16	1512	4679 (16%)
% change 1976-1996	-38	-36	-29	-20	-33	-52	14

Sources: Prevalence: New Zealand Census. Consumption per adult age 15 years and over: Statistics NZ.

Attributable deaths: Peto et al. 1994; and thereafter by Laugesen M.

Note: Maori, the indigenous people of New Zealand, comprised 15% of the total population in 2001.

The lung cancer death rates fell from 1975 onwards for men, and from 1992 for women under 70.

The estimated number of cigarette deaths was still increasing in 1996, due to the ageing population, but the cigarette death rate continues to fall in line with the lung cancer death rate.

(See Surveillance and monitoring).

From 1985 to 1998, consumption of tobacco products fell more rapidly in New Zealand than in other OECD countries as a result of reliance on taxation to increase revenue¹. However, compared to some countries, prevalence did not fall as rapidly; before 1999 there was little support to help smokers quit (e.g. there was no quit advertising and no toll-free quit line).

The intervention—various types of tobacco taxation increases and policies

Tobacco excise contributed 1.9% of the Government's income in 2001.⁴

Periodic tax increases above the level of inflation (1800s to the present day). Since the 1800s the Government has

levied increases in tobacco tax when it needed revenue. In 1958, the Government increased cigarette prices 42% and also increased alcohol taxes heavily. Consumption fell by 13%; this was before health warnings were placed on

¹ Laugesen M, Swinburn B. New Zealand's tobacco-control programme 1985-1998. *Tobacco Control* 2000, 9: 155-162. www.tobaccocontrol.com

² Laugesen M. Tobacco Statistics 2000. Cancer Society of New Zealand. www.cancernz.org.nz

³ Health New Zealand international tobacco control database, 1960-2000. www.healthnz.co.nz

⁴ Budget revenue tables year to June 2001. www.treasury.govt.nz



cigarette packets. Such a low decrease in consumption response was good for revenue, but not so effective for health. The Government was defeated in the next election and forced to decrease cigarette prices slightly. By 1960 consumption was rising again, thanks to cigarette advertising, lack of health warnings, competition between transnational tobacco companies and the new filter cigarettes.

1960–1983. Without regular cigarette price increases, cigarettes became cheap relative to the price of other goods.

1984–1989. As inflation became more severe, keeping the real price from slipping became even more important. Large catch-up increases were needed.

1990–2002. Finance Minister Caygill had obtained changes to the Customs Act to require automatic regular annual increases in tobacco tax to adjust for inflation from 1990 onwards. The cigarette companies supported this reform. This added up to a 20% increase in tax over the decade 1990–2000, which health groups did not have to particularly ask for, releasing parliamentary time, and enabling health lobbyists to focus instead on periodic price increases over and above the level of inflation.

Annual or six-monthly adjustments of the tobacco tax rate for inflation (1990). These adjustments, which are almost always increases, maintain the real tax rate and price of tobacco products rather than increase these above the level of inflation.

A uniform tax rate across all tobacco products, according to tobacco content (1995). Before tobacco tax reform in 1989, tax was a mixture of *ad valorem* and specific tax rates. Finance Minister Caygill reformed this to a simple specific rate of tax, based on tobacco weight of the product. Thus the price remains high whether the smoker shifts to a lower-priced brand or to hand-rolled cigarettes. Today there are no extra levies in the form of import duty, and no farm subsidies: tobacco is no longer grown in New Zealand.

The uniform rate of tobacco tax when raised in December 2002 was NZ\$ 324.50 (approximately US\$ 175.00) per kilogram of tobacco, applied whether the tobacco is in cigars, pipes or cigarette tobacco. For manufactured cigarettes, which contain just under 0.8g of tobacco, the same rate also applies, as the tax rate per 1000 cigarettes is calculated as 80% of the tobacco tax rate per kilogram. In 2002, each cigarette was taxed currently at 26 cents per cigarette, which amounts to 60% of the current retail price of 43 cents for the Holiday brand, the most popular man-

ufactured cigarette. In addition, a goods and services tax is applied to all goods and services, at the rate of 12.5% of the final retail price.

Hand-rolled cigarettes made up 26% of all tobacco used in 2001. Pipes and cigars accounted for 1% of tobacco used, and oral tobacco is banned. But without the uniform rate of tobacco tax by tobacco weight in place, shifting to hand-rolled cigarettes would provide a way to avoid quitting, in the face of a tax or price increase on manufactured cigarettes.

A refinement of this method is to review the taxed weight of tobacco in manufactured cigarettes, and if it were, for example, to fall to about 0.6g tobacco as in Swedish or Finnish cigarettes, to decrease the rate of tax to 60%—not 80%—of the per kilogram rate.

The goods and services tax includes tobacco. It makes up one-ninth of the final retail price. As this tax is aimed at all goods and services, it does not increase the price of tobacco compared with other goods. However, any increase in tobacco tax causes follow-on increases the goods and services tax—a tax on a tax.

Tied-tobacco tax. Until 2002 there was no direct cents-in-the-dollar levy that was written into law in New Zealand for allocating tobacco taxation revenue to tobacco control or the treatment of smokers' diseases. The Treasury has traditionally opposed tied tax, though such levies are in place for alcohol and gambling.

Correction for increased affordability. There is no automatic upward correction of the tobacco tax rate for increased wages, which often tend to push up demand. However, raising tax periodically above the level of inflation should take care of income growth and increased affordability effects on demand.

Hazardous substances or toxicity taxes. Though not a policy in use in New Zealand, a "pollution tax" or toxicity tax, on hazardous chemicals in smoke could provide a financial incentive that could be rapidly applied, as an alternative to regulatory control over (independently tested) levels of leading hazardous substances in mainstream smoke. An example of this would be hydrogen cyanide gas, arsenic,

5 Fowles J, Barker M, Noiton D. The chemical constituents in cigarettes and cigarette smoke: Priorities for Harm Reduction. A report to the Ministry of Health, March 2000. Porirua: ESR. www.ndp.govt.nz

and the carcinogen 1:3 butadiene⁵. Taxing actual tar or nicotine yields is not helpful, but taxing the ratio of the hazardous substance to nicotine yield makes more sense, since smokers smoke up mainly to get more nicotine.

The key steps

Budget planning begins six months beforehand. The Treasury decides with the Minister of Finance whether the country's finances require extra revenue from tobacco. Specialist anti-smoking groups such as Action on Smoking and Health, the Smoke-Free Coalition and Heart, Cancer and Asthma charities, in their lobbying emphasize the premature death toll from tobacco, and urge the Minister of Health to support an increase in tobacco tax. In fact, the Minister of Finance is usually the prime mover, and the Minister of Health sometimes wins a share of the increased revenue for tobacco control programmes.

The tobacco companies, without publicity, also lobby the Minister of Finance to not increase the tobacco tax rate, emphasizing their huge current contribution of tobacco excise and corporate income tax to the Government coffers. Companies also have made contributions to political parties, though no New Zealand evidence has come to light that undue influence was obtained in this way.

The effect of the intervention

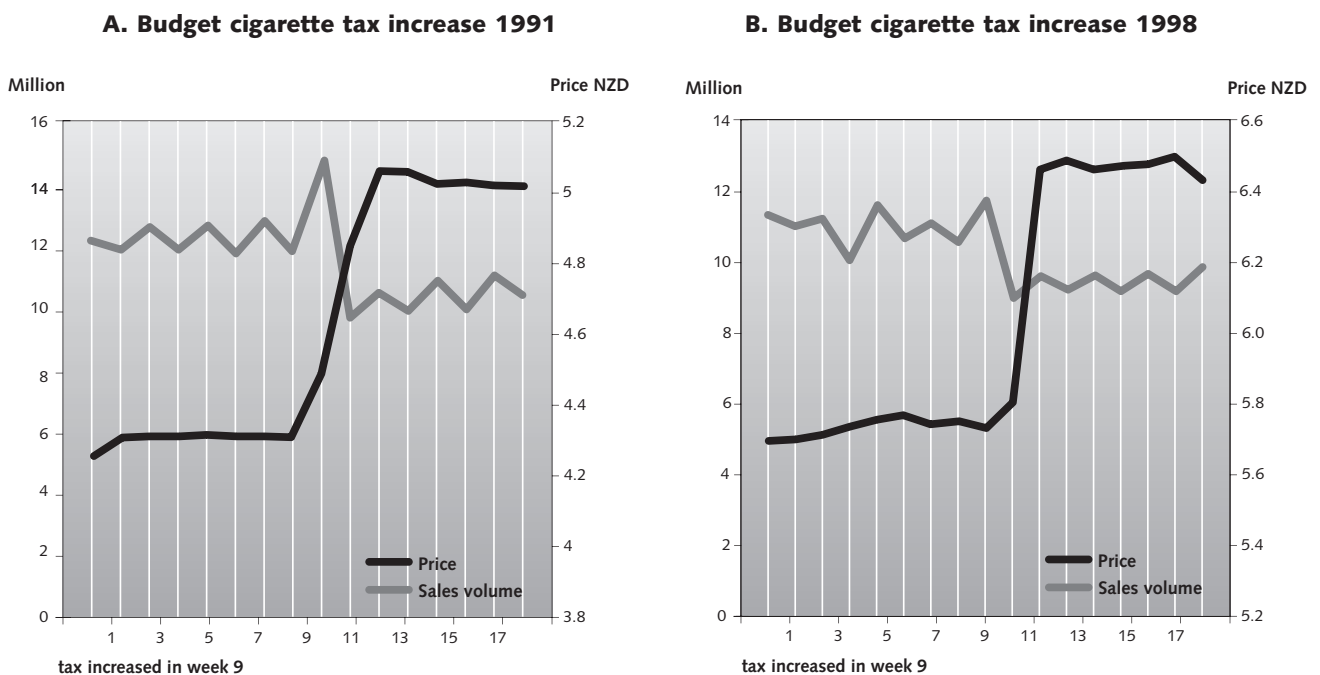
The effect of taxes on cigarette prices

In New Zealand after past tax increases, the tobacco trade (comprising manufacturers, wholesalers and retailers), traditionally raised its share of the cigarette price by as much as or almost as much as the tax increase. As tax made up over half of the retail price, a tax increase of 23% in 2000 resulted in a packet price increase of 20%. The cigarette companies increased their prices within a few days, and sales fell within a week of the tax increase (Figure 1).

The effect of taxation on consumption

As Figure 1 shows, in 1991, 1998, and in 2001, when the price rose by a dollar or more per packet, the number of cigarettes sold fell immediately after the price increased by approximately 2 million cigarettes a week. Cigarette prices in the years between these graphs increased in line with inflation, due to annual automatic adjustments of tobacco tax. This allowed for increases in the all-items consumer price index, which increased by 13.5% between graphs A and B, and by a further 1.2% between graphs B and C.

Figure 1. Weekly manufactured cigarette sales before and after tax-triggered price increases in 1991, 1998 and 2001, New Zealand



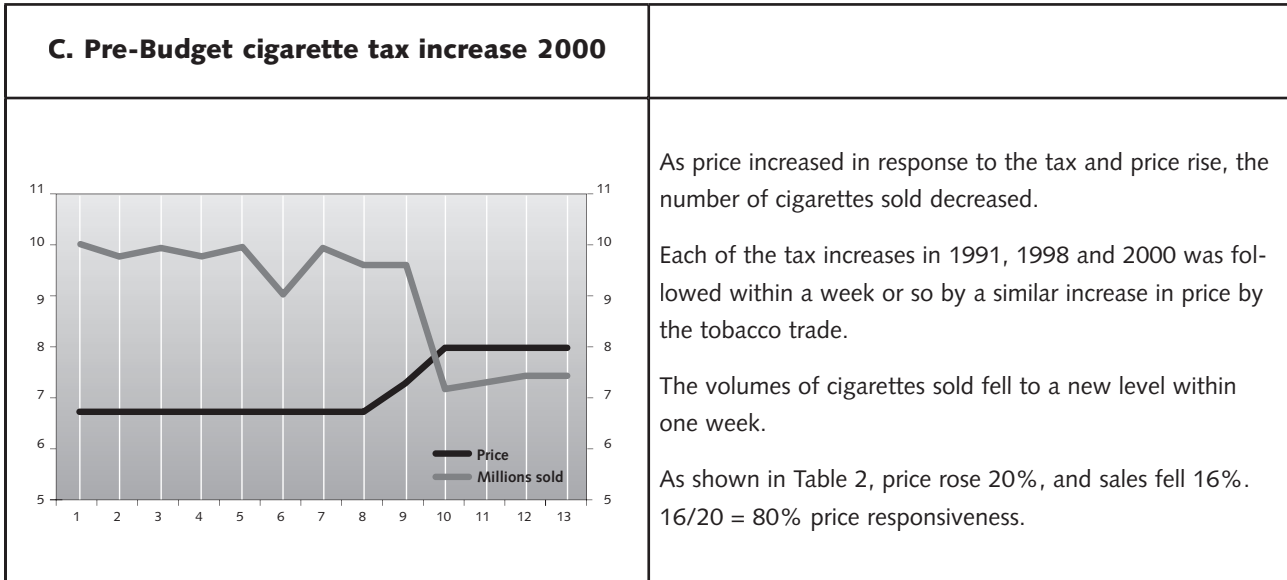
Source: Table 2, and AC Nielsen weekly supermarket national sales and retail price for 20 cigarettes in current dollars.²



Figure 1 shows that:

- the consumption falls dramatically after a well-publicized major price increase;
- the decrease is seen within a week of the price increase; and
- the smoking public's responsiveness to the price rise has increased over time.

When alcohol and socializing was at a holiday high, quitting was less likely. Health groups are not in the habit of emphasizing unpopular price-increase news to smokers. Governments do not wish to publicize their tax increases. Weekly sales data showed no decrease at all. Yet similar-sized increases in tax in 1988 at government budget time or soon after had resulted in decreased consumption—probably because of publicity surrounding the annual government budget.



Source: Table 2, and AC Nielsen weekly supermarket national sales and retail price for 20 cigarettes in current dollars.²

	Change in cigarette price (a)	Change in volume cigarette sales (b)	Price responsiveness (b)/(a)
1991	16.3%	-10.5%	0.64
1998	13.3%	-9.6%	0.72
2000	20.2%	-16.1%	0.80

Source: AC Nielsen weekly supermarket national sales and retail price data.²

No publicity, no quitting

Example 1: the effect of a notified but unpublicized tax increase. Smokers respond to the perceived rise in price. A 20-cent rise in tax per packet that had been notified by the Finance Minister six months before went unnoticed on 1 January 1989, during annual summer holidays.

Example 2: the effect of annual tax increases on sales.

These adjustments for inflation sometimes equal to a retail price increase of 2%–3%, and take effect on 1 December. The timing is not ideal for quitting as: retailers are starting to discount cigarettes before Christmas and New Year; smokers are pre-occupied with preparation for Christmas and vacations; and quit line advertising support tends to be less, due to higher television advertising costs during this season.

Example 3: trade-induced price increases. The consumer price index increased by 2.65% in the year to September 2002. As required by law, the tobacco tax rate was increased by 2.65% on 1 December. Within a week, the price of cigarettes increased not by 2.65%, but by 30–40 cents per pack, or to 3.6% to 3.9% above the previous price, as the manufacturers set a new recommended retail price to retain their percentage share of the packet price. The price increase occurred without publicity, and though some callers to the quit line mentioned price as a reason for calling, the number of calls to the quit line in the first week of the new price did not increase. We conclude that even if smokers noticed the unpublicized price increase at the beginning of the year-end busy holiday-shopping season, they were just too busy to think about quitting at this time.

The effect of tobacco taxation on smoking prevalence

Example 4: the effect of a sudden but well-publicized price increase (Figure 2).

On 12 May 2000, a sudden cigarette tax without prior warning triggered a cigarette price increase of 20%. The surprise timing was deliberate, to maximize revenue. Publicity was intense because of the size of the increase—approximately NZ\$ 1.40 for a packet of 20 cigarettes. Smokers were angry and unprepared to quit. Cigarette sales fell 16%. Prevalence fell three percentage points. An estimated 80 000 (one in eight) smokers quit smoking in the second quarter of 2000, but prevalence returned to “normal” after about four months. The Treasury did not warn the Quit Campaign since the tax increase came under budget secrecy. The Quit Campaign was not targeted to, or able to prevent the relapse of this large number of smokers. This occurred before the Government subsidized Nicotine Replacement Therapy (NRT).

Quitting even for four months by one in eight smokers is a major event. The challenge is to plan to help these smokers stay smoke-free for longer. The private pain of smokers grappling with addiction and the economic stress of smoking, may need to be converted into an annual staged planned-for community event with mass media and the media-promoted support of family and work colleagues, and with subsidized NRT available.

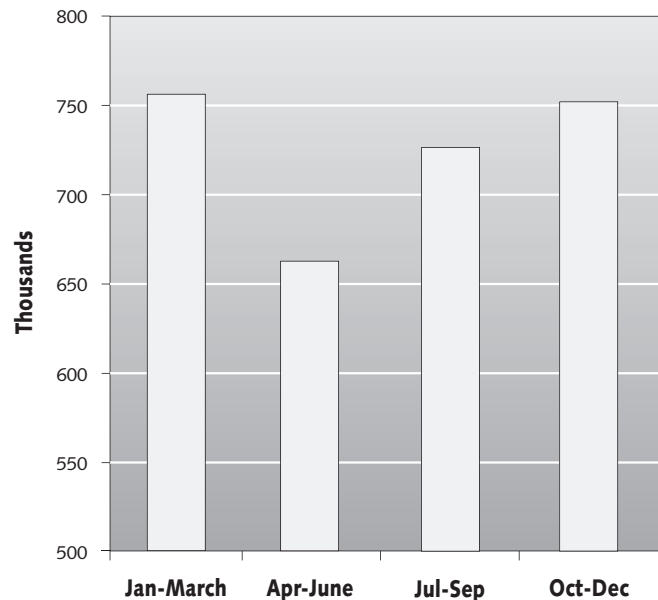
Effect of tobacco tax on revenue to the Government and the tobacco trade

From 1990 to 2001, measured in constant dollars, government tobacco tax revenues increased an estimated 15%,

while the gross revenue of the tobacco trade (retailers, wholesalers and manufacturers combined) decreased 18%.

Figure 2

Smoking population, any cigarette, New Zealand 2000, quarterly data



Source: AC Nielsen and Roy Morgan Research data combined.

Comment: From April to June the smoking population was significantly less than in the other quarters. ($p < 0.001$). In quarters 2 and 3 taken together, the smoking population was significantly less than for quarters 1 and 4 combined. ($p < 0.001$)

During this time, sales volumes (consumption) per adult fell 42%.

Revenue increases, smoking decreases

As tobacco tax rates were increased, tobacco tax revenue rose in real terms in New Zealand from 1980 onwards, and the number of cigarettes smoked decreased (Figure 3). Thus, tobacco taxation helped improve revenue and health at the same time.

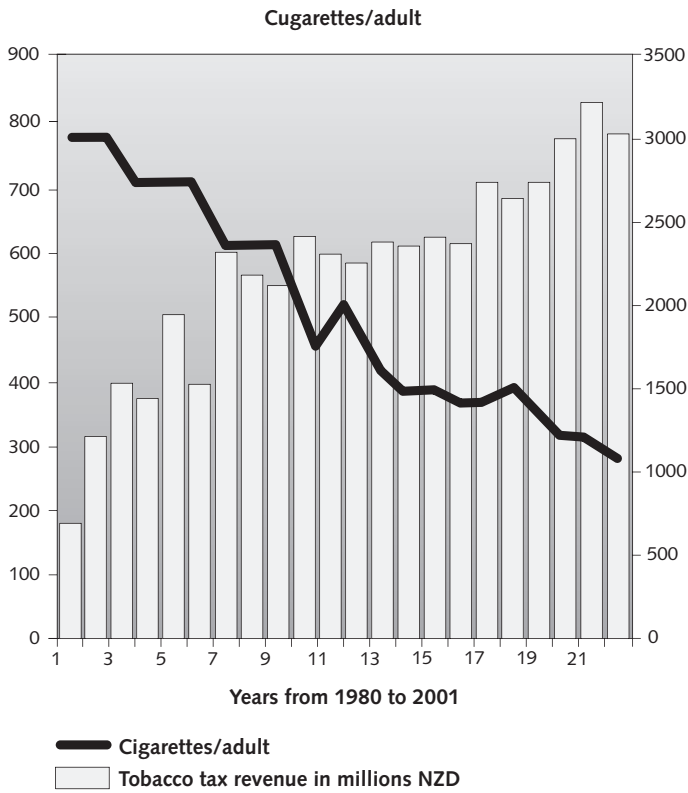
Tax for revenue or for health?

Major tobacco tax increases above the level of inflation were introduced for a combination of reasons:

- in 1986, 1988, 1989 and 1991 to increase revenue during a recession;
- in 1995 as part of policies to curb youth smoking;
- in 1998 to increase revenue; and
- in 2000 to increase revenue and to accompany, and possibly pay for, new expenditure on Maori quit-smoking programmes.



Figure 3
Tobacco products revenue and consumption, 1980-2002



Source: Treasury, letter of 5 July 2002, and *Tobacco Facts* www.ndp.govt.nz. Calendar year data with the exception being that 2002 data are for the 12 months to June. Excise revenue as well as customs revenue (an extra 5%) is included since 1995. Revenue was deflated to 1995 prices using the all-items consumer price index.

Decisions to use the increased revenue from any increase in the tobacco tax, to fund tobacco control programmes, as in 1995 and 2000, were made at the cabinet table, but not written into statute as a percentage of the increase in tobacco tax.

Effect on youth smoking

One of the main justifications for tobacco tax increases has been to discourage young people from smoking. At age

⁶ Scragg R. Cigarette-smoking, pocket money and socioeconomic status: results from a national survey of 4th form students in 2000. *New Zealand Medical Journal*, 26 July 2002; 115 (1158) www.nzma.org.nz under Journal.
⁷ Laugesen M, Sheerin J. *Tobacco Statistics*, 1991. Wellington: Department of Statistics, Department of Health.

14 to 15, students are price sensitive; those receiving more pocket money were more likely to be smokers⁶. The price of cigarettes may affect those youth smokers who feel the need to buy a packet of cigarettes every day or so, and an increase in price may delay these smokers' progression to adult consumption levels.

But from ages 15–24, despite low affordability for many in this age group, smoking rates are reaching their highest levels⁷.

Recent and planned policies for tobacco taxation

1 Making the policy more palatable to smokers

As cigarette prices rose in the 1980s and 1990s, further taxes became less attractive politically, as many people felt smokers were being taxed but not being helped to overcome their addiction. However, in 1999 the Government funded a Quit campaign and quit line and in 2000 subsidized nicotine patches and gum. These moves demonstrated to smokers that the Government and the national tobacco control programme were willing to assist smokers, and not just to regard tobacco tax as the best way to meet revenue needs.

In 2000, smokers phoned the quit line, angry because the price had risen. However, by later in the year 2000 they were offered a much cheaper way of accessing nicotine (gum or patches) for several weeks while they quit, thus hopefully avoiding the tax altogether in future. In 2000, 7% of all smokers called the quit line for advice on quitting.

2 Making the policy more health-effective: planned linkage of tax and quitting

- From 1970 when health was first mentioned by the Finance Minister as a reason to tax tobacco, to 1995 when the Health Minister actually introduced the tobacco tax bill into Parliament to help pay for youth smoking programmes, tobacco tax was increasingly regarded as a health issue. But more often than not, the primary purpose was revenue collection, and the health aim often used to justify taxing smokers to make up a revenue shortfall. Health groups did not object, because they knew that a higher price for tobacco was necessary to discourage adolescent smoking.
- Once the price has been raised to deter adolescents, and the Government aims to make the first goal of tobacco taxation smoking cessation and the second goal revenue, then a planned approach is necessary so that quitting services can be strengthened for



when the cigarette tax is raised. In addition, assuming a media campaign is established to persuade smokers to quit and stay quit and a well-publicized, toll-free quit line is in place, will this increase or decrease tobacco tax revenue?

- Figure 2 shows how a price increase induced a fall in prevalence for four months, after which the mass quitting led to mass relapse. With open planning for a notified future tax increase, more quitting support can be planned, to make every tax increase day into a mass quit day—for example, annually, on World No Tobacco Day. The United Kingdom has an annual No-Smoking day, but tobacco tax increases have never coincided with it.

3 Making the tax and quit policy more attractive to the Minister of Finance.

Periodic “Big bang” tobacco tax increases do lower consumption dramatically, at least for a while, as they attract media publicity. But smaller, more regular tax increases are also effective in proportionately lowering consumption – and in gaining revenue, with less political cost to the Government from smoker voters. Repeated smaller-tax increases give smokers more opportunities to quit, and quit line support is more likely to be able to cope.

A minister of finance who seeks increased revenue from tobacco tax can expect smokers to be angry when the price rises by a dollar a pack, as happened in 2000. This is the price of gaining the revenue, since all taxes are unpopular. Health groups and officials in other years sought more regular increases but by a smaller percentage, say 5% per year. Provided the tax rate is already adjusted for inflation, and the increase in publicized consumption will decrease, and if smokers are also provided assistance to quit, the political cost of taxing tobacco will be greatly lessened.

The World Health Organization (WHO) recently called for a 5%–10% annual increase in tobacco taxes. A 5% annual increase in price would double the price in 13 years.

The price responsiveness of tobacco consumption

- The price sensitivity of cigarette sales to increases in tobacco tax (sales percentage decrease divided by the price percentage increase) rose from 30% in 1958 (no warnings, no advertising restrictions, few health posters) to 80% in 2000 (Table 2). This change is

⁸ Smoke-free Environments Act 1990. www.ndp.govt.nz

usually attributed to price, but now smokers face cigarette packet warnings, the example of doctors not smoking, health advertising combined with no tobacco advertising⁸, and social pressures and government assistance through the quit line, to quit.

- Price increases are an essential part of an effective tobacco control programme. The huge peaks in quitting following a price increase suggest that unless there is already constant encouragement from mass media to quit, many smokers will wait for a price increase before quitting.
- A strong, comprehensive tobacco control programme is likely to increase the health effects of a given price increase, maximizing quitting and decreasing cigarette consumption, which translates into cleaner air to breathe at home and more money freed up for food. Thus, governments wishing to soften the harsh effects of raising the cigarette tax on poor smokers, assist most by strengthening other tobacco control measures.

Increased price responsiveness means more health gain, less revenue gain

From a revenue-gathering perspective, increased price responsiveness of smokers means that the tax level per cigarette has to be increased more than previously to collect the same revenue, since the new prices shrink the smoking tax base for raising the revenue.

Eventually, governments may have to rethink the purposes of tobacco tax, put less emphasis on revenue, and give more weight to the health gains, which continue to improve as the price increases.

Higher tobacco taxation levels have not yet decreased revenue in any jurisdiction.

Conclusion

New Zealand has had a long history of frequent tobacco tax increases. The following refinements have been put in place or have been proposed for consideration:

- Automatic adjustment of the tobacco tax rate for inflation is a feature of tobacco taxation in New Zealand and some other countries. If the inflation rate in the preceding year was 2%, the tax rate rises by that amount.
- A uniform tax per gram of tobacco, from 1995 across all tobacco products, represented another important improvement in tobacco tax policy, in decreasing smokers' tendency, when cigarette prices



rise, to shift to cheaper cigarette brands or to hand-rolled tobacco, instead of quitting.

- The reliance on a specific rate of taxation (dollars per 1000 or per kilogram) introduced around 1989 makes for decreased price differences between brands, thus discouraging brand-switching as a substitute for quitting.
- The provision of full quitting support to help smokers who face regular, planned tax increases and quit days, for example, every World No Tobacco Day, seems a logical and feasible next step, if tobacco tax is to be valued for its health-gain advantages, rather than for the revenue gain.

Smuggling—inbound and outbound

Compliance with revenue collection and smuggling of exports

With only two tobacco factories and few ports as well as a simple system involving a specific rate of tax, achieving compliance in collecting tax is not difficult. There is no provision at present to tax cigarettes intended for export and refund the tax once excise tax is paid in the country of final destination. The Canadian Finance Ministry has promoted such a scheme to discourage “disappearance” of exported cigarettes into illegal smuggling channels worldwide. New Zealand exports are small scale and mainly to the South Pacific.

Smuggling of imported cigarettes

New Zealand, separated by 2000 kilometres of ocean from other landmasses, seized over 2 million cigarettes in 2001–2002⁹, out of total sales of over 3388 million cigarette equivalents in 2001. As tobacco is no longer grown commercially, evasion of duty from local cultivation is easily detected, and of small scale.

⁹ Customs foils cigarette smuggling. News release, 6 June 2002, at web site: <http://www.customs.govt.nz>