

Issues in the smuggling of tobacco products

*Luk Joossens, Frank J. Chaloupka, David Merriman,
and Ayda Yurekli*

This chapter reviews several issues related to the smuggling of cigarettes and other tobacco products. First, the health and other consequences of cigarette smuggling are described, emphasizing the potential for cigarette smuggling to undermine tobacco-control efforts. This is followed by a description of the various legal, quasi-legal, and illegal activities that are broadly described as smuggling. The factors that create incentives for and/or facilitate these activities are reviewed, noting that non-price factors, such as the presence of corruption, organized crime, and widespread street-selling, can be as, or more, important than the levels of taxes and prices and the differentials between these in different jurisdictions. The impact of smuggling on tobacco tax revenues is then discussed, highlighting the experiences of Canada and Sweden, where cigarette taxes were reduced in response to the perception that cigarette smuggling was draining revenues. The role of the tobacco industry in smuggling is then discussed. Finally, a set of policy measures that can be used to counter cigarette smuggling is presented.

16.1 Introduction

The effects of cigarette price increases on cigarette consumption have been studied extensively and provide clear evidence that increases in cigarette taxes and prices lead to significant reductions in cigarette consumption (see Chapter 10). Some have argued, however, that higher cigarette and other tobacco taxes will contribute to increased smuggling and associated criminal activity. In jurisdictions that raise their tobacco taxes, sales will fall, they argue, but in nearby jurisdictions with lower taxes, sales of smuggled cigarettes and cross-border shopping will increase. Therefore, they argue, cigarette consumption will remain high and tax revenues will fall.

Several issues related to cigarette smuggling and cross-border shopping are described in this chapter; the previous chapter contains quantitative estimates on the magnitude of the cigarette smuggling problem and its determinants. This chapter begins with a discussion of the health concerns arising from smuggling. This is followed by definitions of the various types of smuggling, and a discussion of the incentives for, and factors that facilitate, each type. Next is a discussion of the effects of smuggling on sales and tax revenues that highlights the experiences of Canada and selected other countries. The role of multinational tobacco companies in smuggling is then described. Finally, recommendations for tackling the smuggling problem are presented.

16.2 Health, and other, consequences of cigarette smuggling

Cigarette smuggling raises several health-related concerns. First, because smuggled cigarettes compete with legal cigarettes, cigarette consumption in the face of smuggling can be higher and cigarette prices may be lower than they would be in the absence of smuggling. Similarly, the threat of smuggling can discourage governments from raising cigarette and other tobacco taxes, or can lead others to reduce their taxes, resulting in lower prices than would exist in the absence of smuggling. In Canada (1994) and Sweden (1998), for example, cigarette taxes were significantly reduced in response to what was perceived to be significant cigarette smuggling, while proposals for substantial tax increases in the United States (1998) were defeated, in part, by the threat that a black market would result. Given the evidence on the effects of price on tobacco use (see Chapter 10) and the well-documented health consequences associated with smoking (see Chapter 2), the resulting higher consumption will lead to greater smoking-related morbidity and mortality. Given the greater price sensitivity of youth and persons with lower incomes, the availability of lower-priced smuggled cigarettes will have the greatest impact on smoking and health among children and the poor.

Second, a black market in cigarettes can undermine efforts to limit youth access to tobacco products and other approaches to reducing overall availability of these products. While tobacco retailers may comply with national or local policies that prohibit the sale of tobacco products to underage persons and otherwise limit availability, it is much less likely that vendors of smuggled cigarettes will comply with these policies. Moreover, the presence of smuggled cigarettes can put legitimate retailers at a competitive disadvantage, leading some to be less compliant with tobacco-control laws than they would be in the absence of competition from a black market. The resulting increased availability of tobacco products to youth can lead to significant increases in youth smoking and its consequences. This is compounded by the fact that much of the black market in cigarettes consists of the multinationals' products that are likely to be favored by young people in low-income and middle-income countries, where Western products are regarded as sophisticated and stylish (Joossens and Raw 1998).

Third, contraband cigarettes generally avoid other restrictions and health regulations, such as requirements for health-warning labels in the local language, regulations on additives, and others. To the extent that health-warning labels and other policies reduce smoking by informing potential smokers about the health consequences of smoking, the lack of appropriate local warnings can lead to increased consumption and its consequences.

Finally, the potential profits associated with large-scale cigarette smuggling create incentives for organized crime networks to develop, bringing with them a number of problems (FIA International Research Ltd 1999a). Cigarette smuggling can be a relatively low-risk source of revenues for these networks, which can be used to help support their more high-risk activities. In addition, the growth of these networks can increase the general level of corruption in a country, both among its citizens who purchase cigarettes in the black market and among public officials who facilitate black-market activities. Finally, the presence of organized crime networks in black markets in cigarettes can place additional pressures on legitimate distributors and retailers, reducing their profitability and/or leading them to join in the black market.

16.3 Types and causes of cigarette smuggling and cross-border shopping

There are a wide variety of activities that fall into the broad categories of smuggling and cross-border shopping. To some extent, policies to reduce these activities are hindered by ambiguity about important concepts. The following definitions of these activities emphasize the distinctions between personal use versus commercial resale, legal versus illegal behavior, and small versus large quantities.

16.3.1 Legal circumvention

Legal cross-border shopping

This involves the purchase of cigarettes at a price that includes all relevant local taxes in neighboring lower-tax jurisdictions for an individual's personal consumption. For example, smokers living in Windsor, Ontario, during the time when Canadian taxes were relatively high, had a strong incentive to cross the border into Detroit to purchase cigarettes at prices that included all United States and Michigan excise and sales taxes. Similarly, cross-border shopping can take place within a country in response to significant differences in sub-national taxes. For example, in the United States, Californian smokers living near the border with Nevada have an incentive to purchase their cigarettes in Nevada where taxes are more than US\$0.50 lower per pack.

The smoker's incentives for this type of cross-border shopping depend heavily on the differences in taxes and prices between neighboring countries or other taxing jurisdictions, the distance the individual lives from the lower cost area, and the costs of traveling between the two. Buck *et al.* (1994), for example, examined the incentives for cross-border shopping between France and Britain in 1994, concluding that the savings on 800 cigarettes bought in France for consumption in Britain would not have been sufficient to cover the costs of the trip. In practice, it is unlikely that smokers would be willing to travel long distances at high cost in order to save relatively modest amounts by doing so. Instead, it is more likely that much of the cross-border shopping in cigarettes occurs when smokers are already across the border for other reasons.

Estimates suggest that cigarette sales resulting from cross-border shopping can account for a significant share of total cigarette sales in some countries. For example, Luxembourg, because of its low taxes, has long been a source of lower-priced cigarettes for Belgian, French, and German smokers. Up to 85% of total cigarette sales in Luxembourg have been estimated to result from cross-border shopping (Joossens and Raw 1995).

Legal tourist shopping

This is similar to legal cross-border shopping, but involves purchases of tobacco products in non-neighboring jurisdictions in amounts that are allowable under customs regulations. The incentives for this type of legal activity depend on the magnitude of the differences in prices among countries and the extent of international travel among

countries. Much lower cigarette prices in countries that are popular destinations for travelers can lead to much cigarette tax evasion of this type.

For most countries, this is a relatively minor problem. For example, Trackray (1998) estimated, based on survey data from over 48 000 international travelers to and from the United Kingdom, that legal tourist and cross-border shopping amounted to approximately 0.5% of cigarette sales and 3.0% of hand-rolling tobacco sales. In some countries, however, where prices are relatively high and international travel by residents is extensive, the scale of this problem can be larger. In Finland, for example, Piha (1998) estimated that legal cigarette imports by international travelers were approximately 12% of total domestic cigarette sales. Similarly high legal imports have been observed in Norway (Lund 1990).

Legal duty-free sales

These are related to legal tourist shopping, but involve tax-free purchases of tobacco products in amounts that are within specific allowances (200 cigarettes or 100 cigarillos or 50 cigars or 250g of smoking tobacco). Most duty-free sales occur in airports and on airlines, with ferries the next largest source. As with the other forms of legal circumvention, differences in prices (in this case the net-of-tax price in the country visited and the price inclusive of taxes in the home country) and the extent of international travel are key determinants of the extent of duty-free cigarette and other tobacco-product sales.

Estimates indicate that more than 45 billion cigarettes per year were sold duty-free in recent years, with the absolute number rising over time as international travel increases even though tobacco's share of the duty-free market has fallen sharply over the past 15 years (Market Tracking International Ltd (MTI) 1998). While a significant number, total duty-free sales account for less than 1% of global cigarette consumption. This will probably be significantly reduced as a result of the elimination of duty-free shopping between European Union (EU) countries in July 1999. In recent years, the EU had accounted for nearly half of global duty-free sales (MTI 1998).

16.3.2 Quasi-legal circumvention

Internet sales

This is a relatively new phenomenon that, at least in some jurisdictions, may become a significant form of circumvention of cigarette and other tobacco taxes. In the United States, for example, Native American reservations are treated as sovereign nations and are not required to impose federal and state tobacco excise taxes on tobacco products sold on the reservations. In the past, this contributed to the type of cross-border shopping described above, with US smokers living near reservations avoiding taxes by purchasing cigarettes on these reservations. Moreover, many Indian tribes have set up sites on the Internet to sell tax-free cigarettes; the Seneca Indians, for example, have created more than three-dozen such sites (Beebe 1999). While US court rulings have held that tax-free sales to non-Indians are illegal, enforcement has been difficult. However, other sites created by private businesses in low-tax states that include federal and state taxes

in their prices can legally sell cigarettes and other tobacco products over the Internet at a significant discount over retail prices in high-tax states. For example, given that state cigarette taxes range from US\$0.025 per pack in Virginia to US\$1.00 in Alaska and Hawaii, discounts of nearly US\$10 per carton are possible. To date, little is known about the scale of legal and illegal Internet cigarette sales. Moreover, many governments are beginning to grapple with issues concerning the taxation of Internet sales. The growth of the Internet and increases in price differentials, however, suggest that this is an area that should be closely watched.

Gray-market cigarette sales

This is another relatively new phenomenon, which involves cigarettes that are produced domestically and exported to independent brokers, then re-imported into their country of origin for resale. Unlike the other forms of legal circumvention, these activities involve many more cigarettes and the resale of these cigarettes. The likelihood for a gray market to develop increases as the wholesale price differential for domestically produced cigarettes intended for domestic consumption and those intended for export increases. To date, this is something that is important only in the United States where the gray market in cigarettes has expanded rapidly over the past year (FIA International Research 1999b). This growth has largely resulted from wholesale cigarette price increases in the United States in late 1998 after the master settlement agreement (MSA) was reached between most US states and the tobacco industry. This price increase applied only to cigarettes produced for domestic consumption and raised prices by \$4.50 per carton at the wholesale level. When combined with existing, quality-related price differentials between US-produced cigarettes intended for US smokers and those meant for export, wholesale price differences of as much as US\$10 per carton result even after all relevant taxes have been paid (FIA International Research 1999b).

As noted by FIA International Research (1999b), the gray market in cigarettes raises a number of concerns, including its potential for manipulation by organized crime, its negative impact on industry payments to states under the MSA, and more. Currently, gray market cigarettes are legal in most states, as long as all relevant taxes are paid and other policies adhered to. A growing number of states, however, have adopted anti-gray market laws, and the US federal government recently adopted regulations that will make it illegal, beginning in 2000, to import and bring into domestic markets cigarettes that are intended for export only (FIA International Research 1999b). As with Internet sales, developments concerning gray markets in cigarettes should be observed closely.

16.3.2 Illegal circumvention

Bootlegging

This involves the purchase of cigarettes and other tobacco products in low-tax jurisdictions in amounts that exceed the limits set by customs regulations for resale in high-tax jurisdictions. While the number of cigarettes involved in this form of smuggling is

large relative to those resulting from the legal circumvention activities described above, it is relatively small compared to that involved in other forms of illegal smuggling. In general, bootlegging involves transporting cigarettes over relatively short distances (e.g. between neighboring countries or other nearby jurisdictions). As with the legal activities, significant price differentials between jurisdictions create incentives for bootlegging. In addition, greater corruption reduces the risks associated with bootlegging.

Bootlegging is a relatively 'low-tech' type of cigarette smuggling. It requires relatively little investment and is often organized by small gangs. Bootleggers often use specially made delivery vans and trucks whose structures have been altered to include false walls, roofs, floors, and other hiding places. Profits from bootlegging cigarettes, however, can amount to thousands of dollars per day (Groom 1998). Nevertheless, given its small scale, bootlegging accounts for a relatively small share of illegal cigarette smuggling (Joossens *et al.* 1992).

Large-scale organized smuggling

In contrast, large-scale organized smuggling involves the illegal transportation, distribution, and sale of large consignments of cigarettes and other tobacco products, generally avoiding all taxes. This type of smuggling usually involves millions of cigarettes that are smuggled over long distances, often involving large organized crime networks and sophisticated systems for distributing smuggled cigarettes at the local level. Large-scale organized smuggling is likely to account for the vast majority of cigarettes smuggled globally. As demonstrated by Merriman *et al.* (Chapter 15), tax and price differentials among countries are not the only determinants of this type of smuggling, and may not be the most important. In European countries with some of the highest taxes, for example, there is little evidence of smuggling, while in Spain, Italy, and many Central and Eastern European countries where taxes and prices are much lower, a sizable black market in cigarettes exists (Joossens and Raw 1998). Other factors that make large-scale cigarette smuggling more likely include corruption, public tolerance, informal distribution networks, widespread street-selling, and the presence of organized crime.

While there are regional and market-level differences, several characteristics are common in large-scale smuggling operations. First, large-scale smuggling typically involves international brands produced by the large multinational tobacco companies given that the demand for these products in most markets allows them to be sold nearly everywhere (Barford 1993).

Second, large-scale smuggling generally takes advantage of the 'in transit' system that has been developed to facilitate international trade. This system allows for the temporary suspension of customs duties, excise taxes, and VATs payable on goods originating from and/or destined for a third country, while in transit across the territory of a defined customs area. For example, cigarettes exported from the United States that are destined for North Africa will enter Belgium while en route. Once in Belgium, the cigarettes are transported over the road through Spain, from where they will be shipped to North Africa. As long as the re-export of the goods is confirmed, no taxes would be paid while the cigarettes are in transit through the EU. However, less than

adequate controls over the in-transit cigarettes result in substantial leakages, with many of the exported cigarettes failing to arrive at their intended destination. As described in the previous chapter, official trade statistics indicate that up to one-third of recorded cigarette exports do not reappear as recorded imports. Most of these are likely to be lost in transit, reappearing for sale in the black market. Godfrey (1997), for example, described how large shipping vessels would be loaded with cigarettes that had been imported into Hong Kong, with permits indicating that they were destined for SE Asian countries. When in international waters, however, small boats would meet the large vessels and cigarettes would be off-loaded and smuggled into China. Given that the cigarettes were officially exported, no import taxes, excise duties or VATs were paid while they were in Hong Kong.

Third, large-scale organized cigarette smuggling generally involves cigarettes that have passed through a wide range of owners (European Parliament 1997). The involvement of multiple separate buyers, usually over a short period of time, between the initial purchase of cigarettes and their eventual disappearance from legitimate circulation makes it much more difficult to identify where the leakages occur and who is responsible for them, hindering the enforcement of anti-smuggling policies.

Fourth, organized criminal networks play a significant role in large-scale cigarette smuggling. The European Commission (EC) (1998), for example, notes that over 50 criminal networks have been identified by investigations of large-scale smuggling of various products, including tobacco products. The EC goes on to note that these crime syndicates adapt quickly to smuggling counter-measures, and are very flexible when it comes to using different methods of transport, distribution, and money laundering. As described by Merriman *et al.* (Chapter 15), the corruption that often accompanies organized crime is a significant factor in explaining the extent of cigarette smuggling in many countries. As Transparency International (1997) describes, corruption is more pervasive in low-income and middle-income countries than in high-income countries, placing them at greater risk for large-scale smuggling activities.

Finally, large-scale smuggling requires a good local distribution network, most often involving extensive street-selling, through which the smuggled cigarettes can be easily and quickly sold. In Scandinavian countries where prices are high, street-selling is not widespread and cigarette smuggling is not a significant problem; in contrast, in Spain and Italy where prices are relatively low and street-selling is commonplace, smuggled cigarettes comprise a significant share of total consumption (Joossens and Raw 1998). Similarly, in Russia, a key feature of the retail system are the street sellers, typically older women, operating in front of transport stations and in markets; these 'Starushki-babushki' sell a limited selection of cigarettes, many of which are illegal imports (MTI 1997). In other countries, an informal distribution network in bars, pubs, and other outlets, also allows for the sale of contraband cigarettes. For example, Coleman (1998) concluded that most smuggled tobacco products consumed in the United Kingdom were sold in pubs. In general, however, unregulated street-selling is much more common in low-income and middle-income countries, implying that the potential for large-scale cigarette smuggling into these countries is greater than for high-income countries.

16.4 Cigarette smuggling and tax revenues

It has been argued, often by the tobacco industry, that higher cigarette taxes will not have their intended effect of raising revenues and, in some countries, discouraging cigarette consumption. This is largely based on the argument that higher taxes will lead to increases in all forms of legal and illegal circumvention in order to avoid the tax increases, thereby significantly reducing sales of the higher taxed cigarettes but not reducing overall consumption as legal and illegal substitutes are found. Some countries, most notably Canada and Sweden, have accepted these arguments, rolling back prior tax increases; others have foregone new increases given fears of increased cigarette smuggling. Others however, have increased tobacco taxes, achieving their goals of increasing revenues and/or reducing tobacco use.

While it is true that tax revenues are lower as a result of the presence of legal and illegal efforts to avoid taxes than they would be in their absence, this does not imply that cigarette tax revenues fall as a result of higher taxes. Additional discussions of the relationships between cigarette taxes and revenues are found elsewhere in this volume (Chapter 10, Chapter 15, and Chapter 17). This section provides additional descriptive evidence on the relationship between cigarette taxes and revenues based on the experiences in selected countries, most notably Canada and Sweden.

16.4.1 Canada

In 1980, cigarette prices in Canada were only slightly higher than prices in the neighboring United States. Between 1980 and 1984, this differential widened significantly as a result of a doubling of Canadian taxes. Subsequent provincial and federal tax increases further increased the differential, so that by 1994, average Canadian cigarette taxes per pack were more than five times the US average (Sweanor and Martial 1994). The large price differences that resulted led to significant smuggling of cigarettes from the US into Canada. Estimates suggest that the market share of smuggled cigarettes, which was low up to 1990, was nearly 30% at its peak in 1993 (Canadian Cancer Society *et al.* 1999). Several factors, including the long undefended border between the United States and Canada, relatively weak border controls, price differences along the border, the high concentration of the Canadian population near the US border, and the repeal of a Canadian tax on cigarette exports contributed to the magnitude of the smuggling problem (Sweanor and Martial 1994).

Much of the Canadian black market in cigarettes consisted of domestically produced cigarettes that had been exported to the United States and then illegally smuggled back into Canada. For example, cigarettes exported from Canada to the United States would end up on the Akwesasne reservation, parts of which were located in New York and the provinces of Ontario and Quebec, facilitating the 'round-tripping' of the cigarettes back into Canada, where the cigarettes would then be distributed throughout Canada for resale at significantly lower prices than cigarettes sold legitimately (O'Brien 1998).

The significant increases in Canadian cigarette taxes, coupled with other tobacco-control efforts, led to a more than 43% decline in per capita cigarette consumption from 1979 through 1993, after factoring-in the consumption of contraband cigarettes

(Canadian Cancer Society *et al.* 1999). Moreover, this decline continued even as smuggled cigarettes became increasingly important. Between 1990 and 1993, for example, while estimated contraband cigarette consumption rose from under 1.3 billion cigarettes to 14.5 billion cigarettes, per capita cigarette consumption declined by nearly 14%. In addition to the declines in per capita consumption, smoking prevalence also fell sharply as taxes were increased. This was particularly true for youth ages 15–19 years for whom smoking prevalence fell from 43% in 1981 to 23% in 1991 (Canadian Cancer Society *et al.* 1999). While total cigarette tax revenues fell somewhat from 1991 to 1993 as a result of the sharp upturn in cigarette smuggling, they were still well above tax revenues prior to the tax hikes of the late-1980s and early-1990s.

In response to an aggressive industry-sponsored campaign, the Canadian federal cigarette tax was reduced by CA\$5.00 per carton on February 9, 1994; federal tax cuts of up to CA\$10 per carton were added to match provincial tax cuts. In Quebec, for example, provincial taxes were cut by CA\$11 per carton, which, combined with the federal tax cuts, reduced taxes by \$26 per carton in Quebec. Several, but not all, provinces followed, leading to significantly lower cigarette prices in much of Canada. In addition, the roll-back of federal cigarette taxes was accompanied by the restoration of the tax on tobacco exports. As expected, average per capita cigarette consumption increased sharply in provinces where taxes were significantly reduced, with average per capita consumption over 27% higher in these provinces in 1998 than it was in 1993. In contrast, per capita consumption in the remaining provinces continued its downward trend, falling by 11% between 1993 and 1998. In addition, smoking prevalence among youth and adults has risen sharply since the tax roll-back, reversing the earlier downward trend associated with tax increases (Canadian Cancer Society *et al.* 1999). Finally, and somewhat surprisingly considering that several provinces continued to maintain high taxes and prices, the overall smuggling problem all but disappeared.

While the purpose of the tax cuts was to combat the smuggling problem and raise cigarette tax revenues, they have had the opposite impact, as more fully described by the Canadian Cancer Society *et al.* (1999). Federal tax revenues fell sharply after the tax cuts, from CA\$2.98 billion in 1992–93, the last full fiscal year prior to the tax cuts, to CA\$1.91 billion in 1994–95 the first full fiscal year after the tax cuts; revenues in the 1993–94 fiscal year were CA\$2.7 billion (somewhat lower than they would have been had the higher taxes remained in place through the end of the fiscal year in March). This drop in revenues occurred despite a surge in tax paid cigarette sales, which rose from 30.2 billion cigarettes in 1993, to 45.6 billion cigarettes in 1994. Even sharper declines in tax revenues were observed in the provinces that cut their taxes. Over the same period (fiscal 1992–93 to fiscal 1994–95), cigarette tax revenues in these provinces fell from CA\$1.55 billion to CA\$0.62 billion. In contrast, tax revenues remained relatively stable in the provinces where taxes remained high.

Interestingly, as noted by the Canadian Cancer Society *et al.* (1999), the direction of the flow of smuggled cigarettes has not been reversed as a result of the tax roll-backs. Cigarette prices in Quebec and Ontario are now well below cigarette prices in the United States, particularly those in bordering states. This is the result of the tax roll-backs in these provinces, and increases in industry prices and federal and state taxes

in the United States. There is no evidence, however, that significant cigarette smuggling has taken place from Canada into the United States.

16.4.2 Sweden

Sweden had much the same experience as Canada following two significant tax increases and their subsequent roll-back in the mid-1990s. Unlike Canada, Sweden's cigarette taxes and prices have historically been higher than those of most countries in the EU. Despite this, cigarette smuggling was not considered a problem in Sweden. Persson and Andersson (1997), for example, estimated that untaxed cigarettes accounted for at most 2% of the Swedish cigarette market in 1996. Two significant tax increases, in December 1996 and August 1997 raised average cigarette prices by approximately 43%, to approximately US\$6.00 per pack. The tax increases were effective in both increasing tax revenues and in reducing cigarette smoking in Sweden. Tobacco tax revenues rose by 9% in 1997 (Wendleby and Nordgren 1998). Smoking prevalence rates, based on annual survey data, fell sharply from 1996 to 1997, particularly among youth and young adults (Nordgren, personal communication).

At the same time, however, anecdotal reports and some very limited empirical evidence suggested that cigarette smuggling rose after the tax increases. Confiscations of cigarettes by customs authorities, for example, rose from 17 million cigarettes in 1996 to 39 million cigarettes in 1997 (Wendleby and Nordgren 1998). In response to the perception that smuggling was becoming a problem, as well as in response to the lack of public support for the tax increases, the August 1997 tax hike was repealed in August 1998. As a result, Swedish tax revenues from cigarettes decreased from SKE6313 in 1997 to SKE5770 in 1998, while tax paid sales per capita rose from 34 packs in 1997 to 51 packs in 1998 (Wicklin 1999).

16.4.3 Other countries

The experiences of many other countries mirror those of Canada and Sweden. That is, in country after country, with very rare exceptions, increases in cigarette and other tobacco excise taxes have led to increases in tax revenues and reductions in tobacco use. In South Africa, for example, cigarette excises were increased by 351% over the period from 1990 to 1997, increasing revenues by 177% and reducing tax paid sales by 22%. While smuggling increased from imperceptible levels to about 6% of the market, it fell far short of off-setting the impact of the tax increases (Salooje, personal communication). Similarly, estimates from the United Kingdom based on data from 1971 through 1993, imply a revenue elasticity for cigarette taxes of 0.6–0.9, indicating that a 10% increase in cigarette taxes raises cigarette tax revenues by between 6% and 9% (Townsend 1996). Likewise, France increased taxes and prices several times between September 1991 and December 1996, nearly doubling the nominal retail price of cigarettes. This led to a reduction of more than 14% in overall cigarette sales and reduced smoking prevalence by 15% (Baudier 1997). At the same time, tobacco tax revenues rose by nearly 80% while smuggling remained relatively unimportant.

16.5 The role of the tobacco industry

The tobacco industry could benefit from smuggling in several ways. First, cigarette smuggling is an effective way of introducing the industry's products into markets that would otherwise be closed by trade barriers and other restrictive practices (MTI 1996). In addition, the availability of lower-priced cigarettes via smuggling raises the overall consumption of cigarettes compared to consumption in the absence of smuggling, adding to the tobacco industry's sales. Furthermore, the threat of smuggling and the crime problems that accompany it can be effective in either discouraging governments from raising cigarette taxes or, as in the cases of Canada and Sweden, encouraging them to reduce taxes. The lower taxes that result keep prices lower and, consequently, tobacco industry sales are higher. A recent theoretical model by Thursby and Thursby (2000) provides additional support for this hypothesis, clearly indicating that some cigarette companies have an incentive to engage in 'commercial smuggling' in order to raise profitability. Their empirical application of this model to US state-level data for the period from 1972 through 1990 indicates that commercial smuggling accounted for a small, but statistically significant share of total US cigarette sales.

In addition, a number of recent criminal investigations and convictions in several countries provide evidence of tobacco companies' complicity in cigarette smuggling. For example, several criminal investigations arose from the smuggling between the United States and Canada in the early 1990s (Canadian Cancer Society et al. 1999). These investigations led to the convictions of former executives of several tobacco companies. Further investigations of a number of companies continue. Similarly, in Hong Kong, China, a former tobacco industry executive was found guilty in court for his role in an operation that smuggled cigarettes into China. Other investigations continue, spurred on, in part, by internal industry documents released in various lawsuits brought against tobacco companies.

16.6 Discussion

Theoretical, empirical, and descriptive evidence indicates that a number of factors contribute to cigarette smuggling. While tax levels and tax and price differentials are important factors, the evidence suggests that others, including the presence of informal distribution networks, organized crime, industry participation, and corruption, may be as, or more, important. In general, many of the factors that facilitate smuggling are more common in low-income and middle-income countries. Nevertheless, the magnitude of the cigarette-smuggling problem is generally overstated, particularly when it comes to the impact of smuggling on the changes in cigarette smoking and tax revenues that result from increases in cigarette excise taxes. The experiences from numerous countries clearly indicate that increases in cigarette taxes will lead to reductions in cigarette smoking and increases in cigarette tax revenues, even when they are accompanied by increases in cigarette smuggling, while reductions in taxes that are aimed at

reducing the smuggling problem will lead to reductions in tax revenues and greater smoking.

While cigarette smuggling and the crime that generally accompanies it can be significant problems, governments need not forego cigarette tax increases because of fears over them. Instead, the appropriate response to smuggling is to adopt policies that make it less profitable, more difficult, and more costly to engage in smuggling. Several options are available to accomplish these objectives.

Cigarette packs can be marked in several different ways to make it easier to detect smuggled cigarettes. Prominent tax stamps that are difficult to counterfeit can be placed on all packages under the cellophane (see Chapter 17 for further discussion of the use of tax stamps). Similarly, to the extent that duty-free sales are permitted, all relevant packages could require special markings to indicate tax-exempt status, making it easier to distinguish them from sales on which taxes are to be paid. For cigarettes that are destined for export, packages could be labeled to indicate the country of final destination and could include appropriate, country-specific health-warning labels. Manufacturers could be required to print a unique serial number on all packages of tobacco products, making it easier to identify the manufacturer of each. Similarly, a chain of custody mark could be attached to all packages at each step in the distribution chain, making it less difficult to identify the source of cigarettes that disappear while in transit.

In addition, more extensive computerized record keeping and tracking systems could be required in order to facilitate the monitoring of cigarette exports and imports from their original source to their final destination. Combined with labeling the country of final destination, and the serial numbers and chain of custody markings described above, this would make enforcement of anti-smuggling policies and the identification of those involved in smuggling much simpler. In addition, exporters could be required to post bonds on cigarette shipments that could only be released after all of the cigarettes reach their intended destinations. Similarly, all manufacturers, importers, exporters, wholesalers, transporters, warehouses, and retailers could be required to have a license for their tobacco-related activities. These licenses would help identify and monitor the different players in the tobacco-distribution network, and the suspension or revocation of these licenses for participation in smuggling could deter some would-be smugglers. Moreover, additional resources could be devoted to enforcing new and existing policies aimed at reducing smuggling. These could be combined with stronger penalties, so as to significantly raise the expected costs associated with engaging in smuggling. Furthermore, mass-media campaigns and other efforts could be used to raise public awareness concerning the problems associated with cigarette smuggling, something that is often viewed as a 'victimless crime'. Finally, efforts could be undertaken to coordinate tax rates among neighboring countries, so as to minimize the incentives for many of the legal and illegal circumvention activities described above.

Several governments have begun to adopt many of these strategies. Many countries, for example, require prominent tax stamps on tobacco products sold within their borders. Some, such as France and Singapore, require licenses for at least some of those involved in the cigarette manufacturing and distribution chain. Others, such as Hong Kong, employ sophisticated computer-tracking systems to monitor the move-

ment of cigarettes through the distribution chain. Germany engaged in an effective mass-media campaign to combat the view that cigarette smuggling was relatively harmless. Regional agreements, such as that governing the EU, set floors on tobacco taxes for member countries. Proposed agreements, such as the World Health Organization's Framework Convention on Tobacco Control, would further coordinate tobacco-control efforts across countries, including tobacco taxes and efforts to combat smuggling.

References

- Barford, M. F. (1993). New dimensions boost cigarette smuggling. *Tobacco Journal International*, **3**, 16–8.
- Baudier, F. (1997). Le tabagisme en 1997: etat des lieux. *La Sante de L'Homme*, **331**, 14.
- Beebe, M. (1999). Tobacco's new road. *Buffalo News*, December 12.
- Buck, D., Godfrey, C., and Richardson, G. (1994). *Should Cross Border Shopping Affect Tax Policy?* York: Centre for Health Economics.
- Canadian Cancer Society, Non-Smokers' Rights Association, Physicians for a Smoke-Free Canada, Quebec Coalition for Tobacco Control (1999). *Surveying the Damage: Cut-Rate Tobacco Products and Public Health in the 1990s*. Canadian Cancer Society, the Non-Smokers' Rights Association and Physicians for a Smoke-Free Canada, Ottawa.
- Coleman, T. (1998). Stuck in the middle. *Tobacco International*, March 26–28.
- European Commission (1998). *Fight Against Fraud*. COM(98) 276 Final. CEC, Brussels.
- European Parliament (1997). *Committee of Inquiry into the Community Transit System*. European Parliament, Brussels
- FIA International Research Ltd (1999a). *Organized Crime and the Smuggling of Cigarettes in the United States – The 1999 Update*. FIA International Research Ltd, Washington D.C.
- FIA International Research Ltd (1999b). *The Gray Market in Cigarettes in the United States: A Primer*. FIA International Research Ltd, Washington D.C.
- Godfrey, A. A. (1997). *Investigation and Prosecution of Smuggling*. Presentation at the 10th World Conference on Tobacco or Health, Beijing, August 1997.
- Groom, B. (1998). Battling bootleggers disturb Dover's calm. *Financial Times*, March 18.
- Joossens, L. and Raw, M. (1995). Smuggling and cross border trade of tobacco in Europe. *British Medical Journal*, **3**, 1393–7.
- Joossens, L. and Raw, M. (1998). Cigarette smuggling in Europe: who really benefits? *Tobacco Control*, **7**(1), 66–71.
- Joossens, L., Naett, C., and Howie, C. (1992). *Taxes on Tobacco Products: a Health Issue*. European Bureau for Action on Smoking Prevention, Brussels.
- Piha, T. (1998). *Conclusions and proposals for future measures*. Presentation at: Tourist Imports and Smuggling of Cigarettes: an International Seminar on Health Policy, Helsinki, January 1998.
- Lund, K. E. (1990). *A Note on the Changes in Tobacco Use Since 1970*. National Council on Tobacco and Health, Oslo.
- Market Tracking International (1996). *World Tobacco File 1996*. DMG Business Media, London.
- Market Tracking International (1997). *World Tobacco File 1996: Emerging Markets in Central and Eastern Europe*. DMG Business Media, London.
- Market Tracking International (1998). *World Tobacco File 1998*. DMG Business Media, London.
- O'Brien, J. (1998). Indians say they had help at front end; Akwesasne case could topple industry arguments against proposed cigarette tax. *Herald American*, June 7.
- Persson, L. G. W. and Andersson, J. (1997). *Cigarette Smuggling*. Swedish National Police College, Stockholm.

- Sweanor, D. T. and Martial, L. R. (1994). *The Smuggling of Tobacco Products: Lessons from Canada*. Ottawa: Non-Smokers' Rights Association/Smoking and Health Action Foundation. Ontario, Canada.
- Thursby, J. G. and Thursby, M. C. (2000). Interstate cigarette bootlegging: extent, revenue losses, and effects of federal intervention. *National Tax Journal*, **53**(1), 59–78.
- Townsend, J. (1996). Price and consumption. *British Medical Bulletin*, **52**(1), 134–42.
- Trackray, M. (1998). Customs and excise estimates of revenue losses and smuggling. Presentation at Tourist Imports and Smuggling of Cigarettes: An International Seminar on Health Policy, Helsinki, January 1998.
- Transparency International (1997). *1997 Corruption Perception Index*. Transparency International, Berlin.
- Wendleby, M. and Nordgren, P. (1998). Balancing the price: Sweden. Presentation at Tourist Imports and Smuggling of Cigarettes: An International Seminar on Health Policy, Helsinki, January 1998.
- Wicklin, B. (1999). *Tobacco Statistics*. Statistical Bureau VECA, Stockholm.