

---

# The linkage between tax burden and illicit trade of excisable products: the example of tobacco

*Adrian Cooper and Daniel Witt*

## Abstract

---

Illicit trade in tobacco is now a global phenomenon. Experience across both advanced and developing economies demonstrates that the key economic drivers influencing the illicit tobacco trade are excessive tax levels, usually resulting in a sharp decline in cigarette affordability, and organised crime's willingness to supply given the opportunity to gain large profits from tax avoidance. However, when cigarette affordability is taken into account, excise levels and revenues can be increased while consumption is reduced and the illicit trade is kept in check. The clear implication is that recommendations for a 'one size fits all' global excise tax incidence target of 70%, as proposed by the World Health Organization (WHO), would be very destabilising if implemented. Excise incidence is flawed as the basis for setting tax policy, as the WHO has acknowledged in its own country research. International experience, including that of the European Union (EU) accession countries, clearly shows that countries which have implemented the sort of substantial tax increases that the WHO's proposals would imply have seen a sharp rise in illicit trade in cigarettes, damaging the long-term tax base and undermining public health objectives.

---

## 1. Introduction

The World Health Organization's (2003) *Framework Convention on Tobacco Control* defines the illicit trade in tobacco as: 'any practice or conduct prohibited by law and which relates to production, shipment, receipt, possession, distribution, sale or purchase including any practice or conduct intended to facilitate such activity'.<sup>1</sup>

Illicit trade in tobacco is now a global phenomenon, covering all continents, and high- and low-income countries alike. According to the Framework Convention Alliance (2008), approximately 11% of the world cigarette market in 2006 was illicit, resulting in annual government revenue losses of over USD40 billion. KPMG (2012) estimates that 10.4% of all cigarettes consumed in the European Union (EU) in 2011 were illicit, with the annual EU-wide tax loss due to cigarette smuggling reaching approximately EUR11.3 billion.

The illicit trade in tobacco not only undermines government tax revenues. It also weakens public health initiatives to curb tobacco consumption by making cheaper cigarettes available in an unregulated environment where they may be sold to minors. Legitimate manufacturers and suppliers of tobacco products are impacted as, in addition to lost income, illicit trade distorts competition in the market, undermining investment in innovation, distribution, brand equity and employment. Moreover, the development of the illicit market for cigarettes strengthens the infrastructure that can be used to support increased illicit activity in other markets. The World Economic Forum (2012, p. 5) indicates that increases in illicit activity foster the development of additional criminal activity, through expansion driven both by

profits gained and by ‘competitive violence with rival groups and with law enforcement’ to protect illicit markets. As Shelley notes, terrorists are increasingly drawn towards illicit cigarettes for funding as ‘it commands limited attention from law enforcement [and] terrorists seek to secure funding in ways that draw the least attention to themselves’ (Shelley 2009, p. 4).

The International Tax and Investment Center (ITIC) and Oxford Economics have analysed global excise taxation issues since 1996. Our research has focused on excise taxation structures and rates, the relationship to compliance rates, the development of legitimate versus illegitimate markets, and government revenues. ITIC regularly brings together government and parliamentary officials with independent experts and industry representatives to discuss the findings of our studies and their implications for policy reforms.

In this paper, we draw on that research to examine the linkage between tax burden and illicit trade of excisable products, using tobacco as an example. In section 2 we begin by discussing the important influence that the affordability of cigarettes – which is heavily influenced by the excise burden – has on illicit trade. We then illustrate this with case studies in section 3. The destabilising impact of sharp increases in excise burden and the resulting deterioration in affordability has not prevented some organisations, such as the World Health Organization (WHO 2011a), from recommending that excise taxes should be increased in all countries to at least 70% of retail prices. We set out some of the key flaws in this ‘one size fits all’ proposal in section 4, and in section 5 highlight lessons in this regard from the experience of the accession countries which have joined the EU since 2004. Our conclusions are in Section 6.

## **2. The influence of affordability of illicit trade in tobacco**

In a January 2003 ITIC-Oxford Economics study, *The relationship between taxation, consumption and smuggling of tobacco*, we introduced the concept of ‘affordability’ as a key underpinning principle for tobacco tax policy design. This study measured the overall affordability of cigarettes as a proportion of daily disposable income per capita required to purchase one pack of 20 cigarettes. Further ITIC-Oxford Economics studies on the EU (2006) and the ASEAN (2005) region utilised the affordability concept as a means of evaluating the appropriate weight of tobacco taxation to ensure countries at different levels of development are not forced to apply the same level of excise burden.

Building on these analyses, the ITIC publication, *The Illicit Trade in Tobacco Products and How to Tackle It* (2011) further explored the linkage between excise tax levels, affordability, tax collections and illicit trade in tobacco. The major finding of this study is that the economic drivers influencing the illicit tobacco trade are excessive tax levels, usually resulting in a sharp decline in cigarette affordability prompting consumers to switch to cheaper illegal alternatives, and organised crime’s willingness to supply given the opportunity to gain large profits from tax avoidance.

Often the extent of cigarette smuggling in a country is explained by the extent of corruption, and weaknesses in governance and law enforcement. We would challenge the claim that these factors are more important in influencing smuggling than consumer affordability. As we show in the next section, the experiences of the UK, Germany, France, Canada, Ireland and Singapore – some of the least corrupt countries in the world with very effective law enforcement and administration (Transparency International 2011) – demonstrate that high excise tax burdens which lead to a decline in affordability can generate a serious problem with illicit trade.

Whilst strong penalties for large-scale smuggling and heightened enforcement are key devices to tackle the illicit trade in high-tax countries, it is also necessary to monitor tax and price levels in neighbouring countries to limit cross-border flows which, due to their low-quantity/high-frequency nature, are particularly difficult to control.

Using affordability as a measure of the effect of cigarette taxation is advantageous for policymakers as it provides a guide to the potential effect of excise policies on market stability (which can be measured by the level of illicit trade in a market). In theory, governments continuously monitor the scale of the illicit trade when increasing excise taxes, enabling them to act quickly if the illicit market shows signs of growth by, for example, slowing or suspending tax increases while implementing stronger enforcement measures. However, the past experiences of most countries indicate that governments tend to act only after the illicit trade has become endemic – a point when such action is too late.

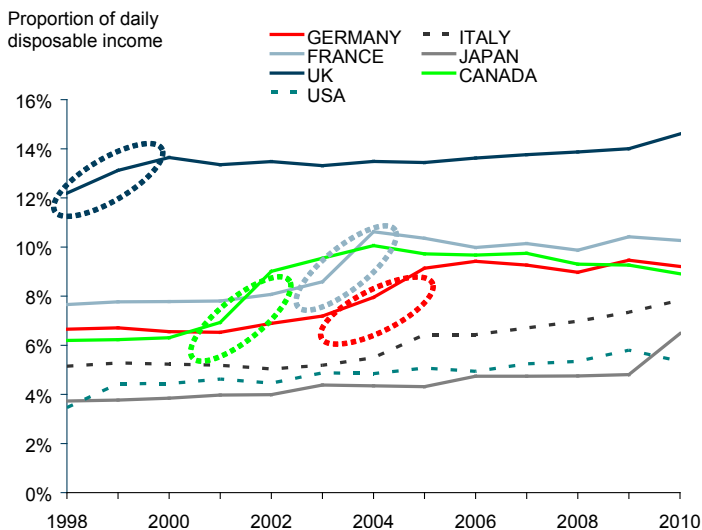
### 3. International experience illustrating the linkage between affordability and illicit trade

The experiences of countries and regions around the world provide a broad bank of evidence as to how different approaches to tobacco taxation can result in different outcomes for the tobacco market. In this section, we look first at the contrasting experience of the so-called G7 economies (US, Japan, Germany, France, UK, Italy and Canada), and then present case studies from Malaysia, Singapore and Ireland.

#### 3.1 G7 country experiences

Between 1995 and 2010, there was diversity in the rate at which G7 nations increased their excise duties levied on tobacco. The cigarette markets of Canada, France, Germany and the UK have all experienced marked increases in excise duty and prices. This resulted in a marked deterioration of affordability and an expansion of illicit trade (see Figures 1 and 2).

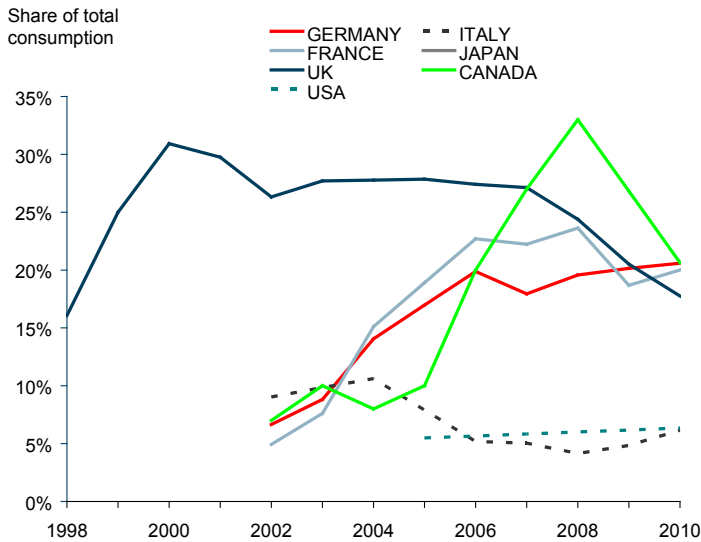
Figure 1: Evolution of cigarette affordability in selected G7 countries, 1998-2010



Source: Oxford Economics; European Commission; 'The tax burden on tobacco, smoking and health'; Action Foundation Statistics Canada; Industry Data for Japan

Note: Prices are MPPC (most popular price category) for all except Canada and US, where WAP (weighted average price) data are used (for Canada prices are for Ontario and Quebec provinces).

Figure 2: Development of non-duty-paid market in selected G7 countries, 1998-2010



Source: Oxford Economics; Euromonitor; KPMG; GFK; German Industry Association; Physicians for a smoke-free Canada

Between 1995 and 2000 the UK had a policy of very marked above-inflation excise duty increases, raising the tax burden on cigarettes by 50%. This policy caused a rapid decline in the affordability of cigarettes, with the cost of purchasing a pack of 20 cigarettes increasing to over 13.5% of daily disposable income in 2000. These duty increases, coupled with the introduction of the EU Single Market (free movement of goods and people), caused the non-domestic duty-paid (NDDP) market to double to 31% of all consumption in 2000, up from 16% in 1998 (although notably this increase did not occur until 1998, rather than immediately after the initial excise increase was implemented). During the period of rapid excise increases, smoking incidence in the UK remained relatively unchanged – falling only marginally, from 28% of the population in 1998 to 27% in 2000 (Office for National Statistics 2010). From 2000 until 2010, the government reverted to a policy of limiting excise increases to inflation, ensuring affordability remained stable. At the same time, it implemented a strategy to tackle tobacco smuggling raising penalties and investing in significantly increased enforcement activity – spending almost GBP100 million annually on wages and salaries for 2,000 anti-smuggling staff (Taylor 2009). As a result, the illicit share of the market fell to 12% for cigarettes and 60% for fine-cut (an average of 20% of consumption) by 2010. Since 2000, smoking incidence has also declined, falling to 21% by 2009.

In a similar manner, the French and German governments both increased excise duty rapidly between 2003 and 2005. Over the period, French excise duty rates increased by 35%, reducing cigarette affordability by 21%, while German duties also increased by 35%, causing cigarette affordability to fall by 27%. As a result, the NDDP sector increased dramatically to reach 23% of total consumption in France and 20% in Germany by 2005, while smoking incidence remained unchanged in Germany (Statistisches Bundesamt 2012) and increased in France (Institut national de prévention et d'éducation pour la santé 2012). In recent years excise increases have been more restrained with Germany introducing a five-year inflation-linked tax plan in 2011. Consequently, little change has been witnessed in affordability and the NDDP market share has stabilised (albeit at a much higher level than before the initial excise increases).

Sudden increases in excise duty in Canada drove a similar rapid decline in the affordability of cigarettes between 2001 and 2002, with the cost of cigarettes rising by 30% relative to incomes. The impact of the deterioration in affordability was not immediate, with the illicit sector not starting to expand rapidly until 2005; however, it did expand to a point where almost one-third of consumption was illicit. Euromonitor (2011) points to the presence of Native American reservations, and their tax-free status, as a

primary conduit for this growth. Since peaking in 2008, the illicit market share has dropped back to 20% as a result of increased enforcement measures, including legalisation of previously illegal production facilities and greater internal border enforcement.

In contrast, the other three G7 countries adopted different approaches over the same period. The US, Italy and Japan have implemented excise increases that have had less sudden impact on the affordability of cigarettes. All three have seen affordability declines over the period but their gradual nature has mitigated any adverse consequences. Therefore, despite a doubling of excise duties (in the US's case excise rates in some states increased more than fourfold over the period), the illicit sector in the US and Italy has remained small, while industry reports no illicit market in Japan. Furthermore, all three saw smoking incidence decline significantly between 1995 and 2010, by one-fifth to 19% in the US (Centers for Disease Control and Prevention 2011), by 9% to 23% in Italy (ISTAT 2011), and by a third to 24% in Japan (Japan Tobacco Inc. 2010).

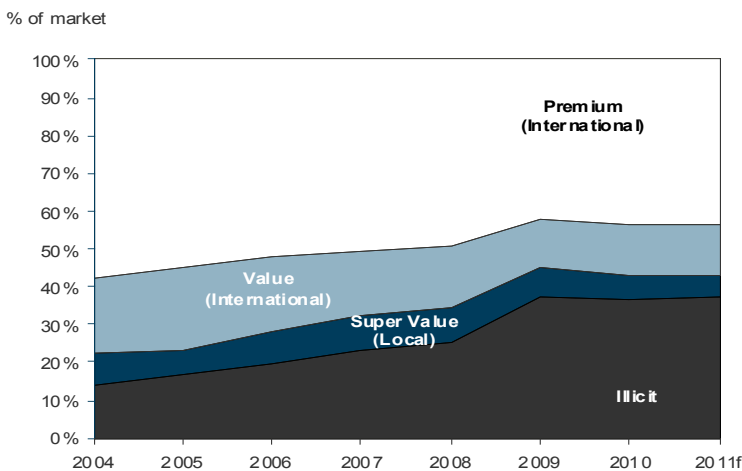
The experience of the G7 countries highlights that rapid increases in the excise rates levied on tobacco have not dramatically reduced smoking prevalence, and have resulted in substantial increases in illicit trade. The experience of the G7 countries also shows that once the illicit trade is established, slowing the growth of excise rates is not sufficient to reduce it – where countries have been successful in tackling the illicit trade, such as in the UK, significant resources have been required.

### 3.2 Malaysia

In 2002, excise duty on 1,000 cigarettes in Malaysia stood at MYR43.2. Subsequently, the Malaysian government began to increase excise taxes sharply. By 2010, excise duty had been increased over 430% to MYR230 per 1,000. As a result of the increases in excise duty, excise tax incidence on cigarettes increased from 19% in 2001 to 45% in 2010, and the average price of legal cigarettes has more than doubled from MYR4.14 per pack in 2001 to MYR8.90 per pack in 2010.

The increase in the price of legal cigarettes prompted consumers to switch to illicit sources of supply (see Figure 3). In 2002, Malaysian smokers consumed 19.5 billion legal cigarettes. By 2010, this had declined 31% to 13.5 billion. The decline in legal sales was mainly driven by the surge in consumption of illicit cigarettes, which reached 8.8 billion in 2010. As a result, the illicit market share rose from 21% in 2002 to 39% in 2010.

Figure 3: The composition of the Malaysian cigarette market



Source: Nielsen 2011

Tackling the growth in the size of the illicit market is a priority of the Customs department. Neither has it gone unnoticed by the Health Ministry. Health Minister, Datuk Seri Liow Tiong Lai, said: ‘We need to address the sale of counterfeit cigarettes as it is an emerging scourge in the country. Apart from evading taxes, the distribution of such contraband could pose a serious health risk to smokers’. He continued, ‘We will intensify our crackdown of such illicit cigarettes by also roping in relevant enforcement agencies’ (*The Star* 2011).

Acknowledging the massive illicit trade problem and the impact of excessive cigarette taxation, the government decided to halt the trend of steep excise hikes by freezing excise in its 2012 budget. The Malaysian Prime Minister made the following statement on 9 October 2011, the day after the budget announcement: ‘We can’t increase the price of cigarettes sharply when the use of illegal cigarettes has reached 40%. This level is too high. If there is a sharp increase in the price of cigarettes, the percentage of those who smoke illegal cigarettes will continue to rise’.<sup>2</sup>

### 3.3 Singapore

The Singaporean experience with cigarette excise tax over the past ten years can be broken down into two distinct periods:

- 2000 to 2005 was a period of sharp excise increases
- since 2005 there has been no excise increase.

Between 2000 and 2005, Singapore’s government increased excise duty on cigarettes from SGD150 per 1,000 cigarettes to SGD352 (the highest in Asia) – an average increase of 19% a year, with the excise tax incidence reaching close to 65% in 2005. Driven by these increases, the average price of duty-paid cigarettes rose dramatically over the period (62%).

In response to the price changes, duty-paid volumes fell from 3.2 billion sticks in 2000 to 2.0 billion in 2005 (or by 37%). Excise duty receipts initially rose by 48% but declined by 20% between 2003 and 2006. Equally significant was the growth in the illicit trade and, although no official statistics are available, it is evidenced by the government’s subsequent response.

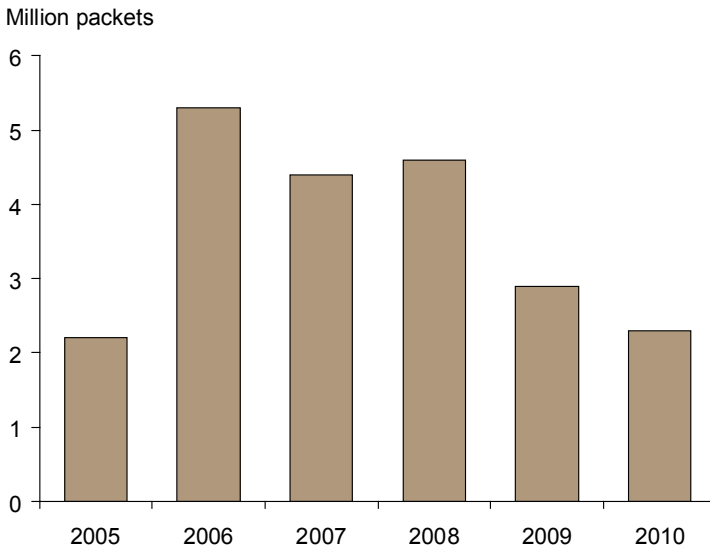
To curtail the growth in the illicit market, the government opted to hold excise duty constant in nominal terms. In his 2006 Budget Speech, Prime Minister and Minister for Finance Lee Hsien Loong commented: ‘I seriously considered raising tobacco duties, but have reluctantly decided against it because we are already seeing revenues declining, not because people are smoking less but because smuggling has gone up’ (Loong 2006, paragraph 2.75).

In addition, the government began to implement more stringent penalties for those caught in possession of illicit cigarettes. In 2008, Singapore Customs began enforcing a minimum SGD500 fine per package of illicit cigarettes found in consumers’ possession. Singapore Customs also recognised that public education must accompany enforcement for it to remain sustainable. It has run awareness road shows and campaigns to counter illicit cigarette trading in the country (Singapore Customs 2008).

Singapore Customs (2011) shows seizures of illicit cigarettes reached a peak of 5.3 million packets in 2006. They have subsequently been on a downward trend, standing at 2.3 million cigarettes in 2010 (57% below the 2006 peak, see Figure 4). Although little is known about the success rate of enforcement efforts, the downward trend in seizures is consistent with a decline in the size of the illicit market.

Duty-paid volumes reached their nadir in 2006 at 1.8 billion sticks. The tax freeze at 2005 levels, coupled with investment in strong enforcement, has led to a recovery in duty-paid volume and a decline in smuggling. The illicit trade market share fell to 15.9% in 2010 from 22% in 2006. However, it is still much higher than in the years prior to the steep tax increases.

Figure 4: Singapore Customs seizures of non-duty-paid cigarettes



Source: Singapore Customs

### 3.4 Ireland

Between 2000 and 2009, the Irish government increased excise duty on cigarettes by 76%, from EUR148 to EUR261 per 1,000 cigarettes. Consequently, the price of a packet of 20 premium cigarettes rose from EUR4.83 in 2000 to EUR8.45 in 2009 when the excise tax incidence reached 62%.

The increase in the price of legal cigarettes led to a sharp fall in demand. Economists at the Office of the Irish Revenue Commissioners – Reidy and Walsh (2011) – have recently estimated the price elasticity of demand for duty-paid cigarettes to be minus 3.6, meaning that a 1% increase in price results in a 3.6% decline in the consumption. They argue: ‘At first glance, the high elasticity estimated might seem like a clear sign that higher taxation is effective at reducing cigarette consumption. However, a detailed reading of the analysis suggests this is not the case. ... It is quite likely that price increases cause consumption of taxed cigarettes to decrease and the consumption of untaxed cigarettes to increase’ (Reidy & Walsh 2011, p. 24).

The impact of the increases in the price of legal cigarettes is evident in Irish Tobacco Manufacturers Association (2011) data which shows that the illicit market in Ireland has increased from 0.5 billion cigarettes in 2005 to 1.8 billion in 2010. With the volume of legal cigarettes declining by 23% over the same period, the illicit cigarette market share has increased from 8% in 2005 to 30% in 2010.

The growth in the illicit consumption of cigarettes has prompted a response from the authorities. In the December 2009 Budget speech, citing his responsibility to protect the tax base, Minister for Finance Brian Lenihan said: ‘I have decided not to make any changes to excise on tobacco in this Budget because I believe the high price is now giving rise to massive cigarette smuggling’ (Lenihan 2009, p. A18).

## 4. The WHO proposal for excise incidence for cigarettes of at least 70 per cent of retail prices

Despite the clear link between excise burden, affordability and the illicit trade in tobacco, some major global institutions, including the World Bank and WHO, have long argued that ‘tax increases are the single most effective intervention to reduce demand for tobacco (Jha & Chaloupka 2000). To this end, the World Bank, WHO and the Bloomberg Initiative to Reduce Tobacco Use recommend applying excise taxes to achieve a given incidence target (the excise burden as a proportion of total sales price). The WHO’s recently published *Technical Manual on Tobacco Tax Administration* promotes what it claims is best practice in tobacco tax policy, recommending that ‘countries should set excise tax incidence to be at least 70% of the retail price of a packet of cigarettes’ (WHO 2011a, p. 11).

Even allowing for the WHO’s misguided belief that one tax policy is suitable for all countries independent of their stage of economic and social development or their fiscal priorities, the policy of achieving an excise incidence of 70% is flawed for several key reasons:

### 4.1 It contradicts WHO policy recommendations

While the *Technical Manual* recommends a minimum excise tax incidence target for tobacco tax policy, this is not an issue on which the WHO is itself consistent in its advice. For example, in *Tobacco Policies on Tobacco Products in Thailand: The Way Forward*, published by the WHO, it argues: ‘... it is the retail price of cigarettes that affects the consumption decision of smokers, not the share of tax in the retail prices. Thus, the focus on the level of retail prices is more important than the share of all taxes in retail prices’ (WHO 2011b, p. 10). It goes on to set out evidence to show that ‘... the share of all taxes in the retail price of cigarettes is not important for tobacco control’ (WHO 2011b, p. 11). And it concludes, ‘... there is no reason why the shares of all taxes in the cigarette retail prices have to be in a particular range. The focus should be on the increase in the retail price of cigarettes rather than the share of all taxes in the retail price’ (WHO 2011b, p. 26).

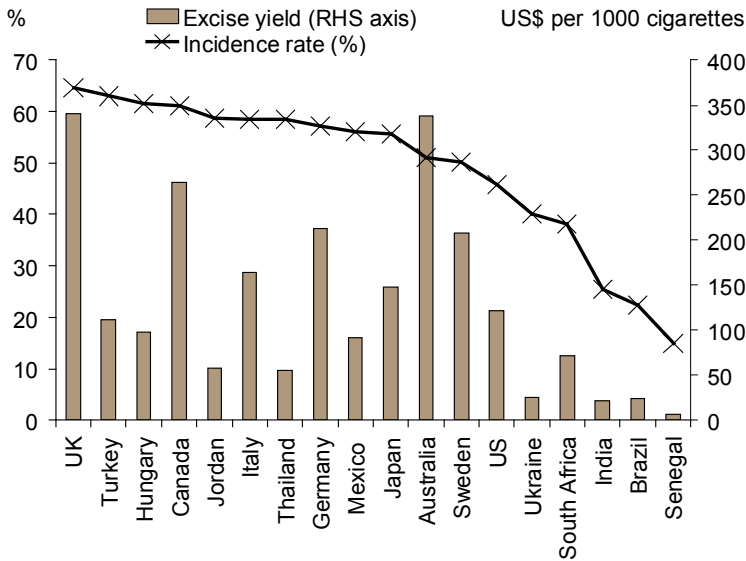
So, the WHO’s own research, when applied at a country level, directly contradicts the general recommendations that it makes in its *Technical Manual*. That in itself illustrates the problems with the type of global tax policy that the *Technical Manual* advocates, as well as raising questions about the WHO’s own commitment to the proposals set out in its *Technical Manual*. More importantly, the WHO’s country research underlines the weaknesses of excise tax incidence as a basis for framing tobacco taxation. It therefore directly contradicts the recommendations of the *Technical Manual* – and for good reason.

### 4.2 Tax incidence is no guide to the tax yield, retail price or affordability of cigarettes

An excise tax incidence target does not provide a useful guide to the tax yield on cigarettes (that is, the absolute amount of tax levied in cash terms). This is because very different levels of excise yield on cigarettes can be consistent with apparently very similar levels of excise tax incidence.

This problem with excise tax incidence is clear when we look at the relationship between excise tax incidence and yield across different countries, as illustrated across a broad sample in Figure 5. Among the countries shown, excise tax incidence ranges from 65% in the UK (left hand side of Figure 5) to 15% in Senegal (right hand side of Figure 5), but shows no correlation with the excise yield. For example, Australia has the second highest excise yield but its excise incidence rate is around the mid point of the countries included.



Figure 5: Excise tax incidence vs excise yield on comparable international brand cigarettes in 2011Q1<sup>3</sup>

Source: Industry data

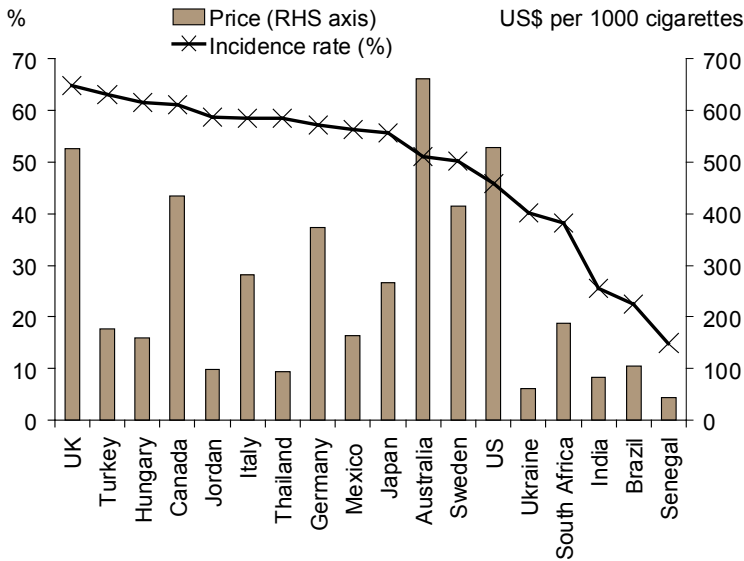
Note: Data for excise incidence in the charts only include excise taxes and exclude other taxes.

Similarly, there is no correlation between excise tax incidence and the retail price of cigarettes, as shown in Figure 6. The countries with the highest excise incidence (left hand side of Figure 6) do not have the highest cigarette prices. Indeed, some of the countries with significantly lower excise incidence are among those with the highest cigarette prices. This can be due to the fact that many developed countries also apply VAT on top of the excise tax, sometimes at very high rates. In Sweden the nominal rate of VAT is 25%, which multiplies any excise tax increase or manufacturer price increase. Its excise tax incidence is 50.2% and the total tax incidence is 70.2%, while the retail price is USD8.06 per pack. In comparison, in Cuba there is no VAT and the excise tax is fully specific so there is no multiplier effect of tax increase passing through to price increases. Although the excise tax incidence and total tax incidence in Cuba are both 87%, the retail price is only USD0.30 per pack.

The absence of a simple relationship between excise tax incidence and either the monetary excise yield or the retail price of cigarettes led the EU to move away from a tobacco taxation policy focused primarily on an excise incidence target (set at 57% of retail selling price). The European Commission noted, 'However the 57% rule has not prevented the perpetuation of wide differences in rates and retail price levels. Since it became clear that application of a minimum percentage alone would not bring about greater approximation, an additional minimum of EUR64 per 1000 cigarettes of the most popular price category (MPPC) (EUR60 until July 2006) was introduced by Directive 2002/10/EC' (European Commission 2007).

This 2002 Directive also introduced an exemption from its 57% excise incidence requirement for countries in which the excise yield on cigarettes exceeded EUR95 per 1,000 sticks (now EUR101 per 1,000 sticks). In doing so, it recognised the absurdity of a policy that implied that Sweden was failing to meet its obligations under the EU tobacco tax Directive<sup>4</sup> even though it had one of the highest monetary excise tax yields on cigarettes among EU Member States; and it effectively acknowledged that the main focus in tobacco tax policy should be on the excise yield rather than on the excise incidence. This was reconfirmed in the 2011 Directive<sup>5</sup> which set a minimum excise yield of EUR64 per 1,000 for all cigarettes irrespective of their retail selling price.

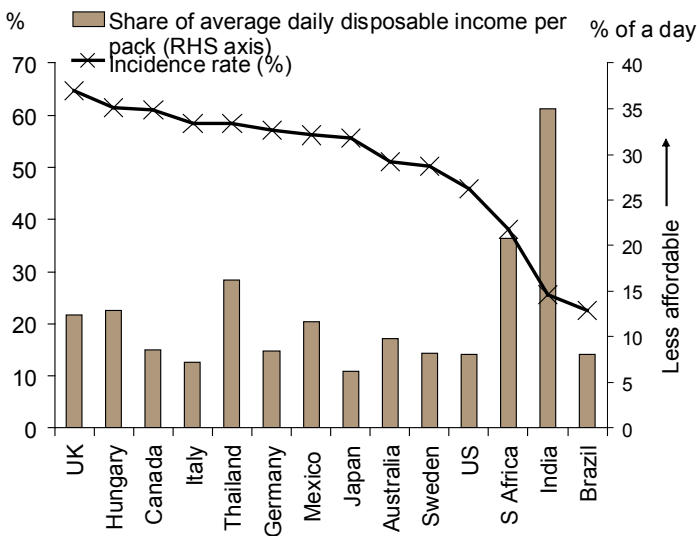
Figure 6: Excise tax incidence rate and retail price for comparable international brand cigarettes in 2011 Q1



Source: Industry data

It is also worth emphasising that there is no relationship either between excise incidence and the affordability of cigarettes. This is clear from Figure 7, which compares excise incidence and cigarette prices using data from the *Technical Manual*. It then combines these with Oxford Economics’ data on daily disposable income per head to calculate a measure of the affordability of cigarettes based on share of daily disposable income required to purchase a pack of cigarettes. It shows that cigarettes are more affordable in, for example, Canada and Italy, which have very high levels of excise tax incidence, than they are in India and South Africa, where excise incidence is lower.

Figure 7: Relationship between excise incidence and affordability of international brand cigarettes in 2011Q1



Source: Industry data for excise incidence rate and Oxford Economics calculations for affordability

This analysis, therefore, again demonstrates that excise tax incidence is of no real value as a guide to the implications of tobacco tax policy. It also shows the inconsistency in the *Technical Manual's* analysis, since one of its recommendations is to increase tobacco taxes by enough to reduce the affordability of tobacco products, but there is no link between such an objective for affordability and the 70% excise incidence target it recommends.

### 4.3 Why 70% excise incidence?

So, excise tax incidence is not a sound basis for establishing tobacco tax policy. But what should we also make of the *Technical Manual's* proposal that excise tax incidence should be at least 70% of the retail prices for tobacco products?

The basic economic justification for the recommendation that excise tax incidence should be at least 70% – as opposed to any other figure – is not clearly set out in the *Technical Manual*. Research by Ross, Shariff and Gilmore (2008, 2009) is cited in support of the target. However, their analysis focuses on just two countries, Ukraine and Russia, which for a variety of reasons may be of limited relevance for the rest of the world. Moreover, Ross, Shariff and Gilmore (2009, p. 37) advocate an incidence target of 70% for total tax on cigarettes (excise + VAT), rather than a 70% target for excise incidence alone, as proposed in the *Technical Manual*. For example, the recommendation by Ross, Shariff and Gilmore for Ukraine would imply excise incidence of 53%, far below the minimum 70%.

The second justification in the *Technical Manual* is that 'A 70% benchmark does seem to be a feasible target given that it has already been reached by a few countries around the globe, including some developing countries' (WHO 2011a, p. 53).

The data the *Technical Manual* uses show that excise duty exceeded 70% of the MPPC price in nine countries out of 183 in 2008 – Bulgaria, Brunei Darussalam, Cuba, Fiji, Myanmar, Poland, Seychelles, Slovakia and Venezuela. This, of course, is a very weak and arbitrary basis for a recommendation for global tax policy.

First, it is important to note that the data used in the *Technical Manual* are not entirely reliable. In particular, for both Bulgaria and Poland, the data in the *Technical Manual* substantially overstate the level of excise incidence. Second, to base a global policy recommendation on so few countries is remarkably unscientific. Excluding the three EU countries, the remaining six are only 3% of the countries for which the WHO publishes data in its *Technical Manual* – the vast majority of countries have excise tax incidence well below 70%.

Even taken together, the six countries have a share of just 1.3% of world population.<sup>6</sup> Strikingly, three of them are very small, island economies. It is very difficult to understand the basis on which the *Technical Manual* extrapolates their experience to create a recommendation for a global tax policy.

In reality, what the data in the *Technical Manual* illustrate is that there is huge variability in excise tax incidence internationally. Indeed, it shows that the incidence level is not a reflection of the tax burden or retail price level. That variability reflects a number of factors, such as stage of economic development, geographical location, fiscal and social policies, the availability of substitute products and the extent of illicit trade. It is vital to reflect the different circumstances that countries face in their tobacco tax policy – which is the situation as they currently set their own policy. Countries would lose this freedom if they were to follow the *Technical Manual* recommendations.

What the *Technical Manual* fails to do, however, is recognise the scale of increases in taxes and prices it is seeking to impose and the destabilising impact such changes would have on the tobacco markets and government revenues in many countries.

Using the information provided in the *Technical Manual* on the price and tax rates of cigarettes in 183 countries in 2008, it is possible to calculate how much the price of a packet of cigarettes would have

to rise if each country were to impose a tax to meet its current shortfall from the 70% excise incidence target. We find that:

- Overall, this ‘one size fits all’ approach will have a different impact in each country. However it would imply very marked declines in the affordability of cigarettes and a probable surge in illicit trade.
- While high-price markets would generally face a smaller proportionate increase in retail prices than low-price markets, the absolute size of the increases would in many cases be larger. That implies that price gaps between markets would widen in absolute terms, further fuelling cross-border purchasing and smuggling.
- In the six WHO 70%+ excise sample countries, it will have no impact, enabling Cuba, for example, to keep its USD0.30 pack price, one of the lowest in the world.

The experience of accession countries in the EU illustrates these risks. Excise taxes on cigarettes have been increased sharply in recent years without reaching a 70% excise incidence level but nevertheless with seriously adverse consequences. We examine that experience in the next section.

### **5. The 40-year EU region harmonisation experience**

The notion of harmonised tobacco taxation was first legislated in the 1972 Council of European Communities Directive 72/464/EEC, agreed by the founding six members of the EEC. However, it was not until 1992 that the EU set requirements with regard to the minimum level of excise incidence on cigarettes and not until 2002 that it set minimum requirements with regard to excise yield. The current EU tax rules require excise duty should be at least EUR64 per 1,000 cigarettes applied to all cigarettes and that excise incidence should not be less than 57% of the weighted average retail selling price (unless excise yield exceeds EUR101 per 1,000 cigarettes) (European Union 2011). These EU-wide targets have been intended primarily to reduce the risk that a large scale cross-border trade in tobacco would undermine Member States’ revenues in the context of the establishment of the single market.

Despite having Excise Directives for over 40 years, as the European Commission itself has acknowledged, these common targets have not led to a convergence in excise duty or price, within either the older EU-15<sup>7</sup> or the wider EU-27<sup>8</sup> Member States (Commission of the European Communities 2001). Indeed, since 2002 the excise differential per thousand cigarettes within the old 15 Member States has stayed at virtually the same level; the excise differential within the wider EU-27 decreased by only EUR16 per 1,000 cigarettes from EUR202 to EUR186 since the old Member States continued to increase excise levels despite their existing high base (Figure 8). Consequently, the regime has not achieved the convergence of retail selling prices for cigarettes. Moreover, since 2002 retail price spreads have actually widened across both the EU-15 and the EU-27 markets (from gaps per pack of EUR4.69 in the EU-15 and EUR6.14 in the EU-27 in 2002, to EUR6.09 and EUR6.45 in 2011 within the EU-15 and EU-27, respectively).

Although, the poorest EU countries have rapidly increased excise duties to EU minima, their incomes remain far below those in the rest of the EU (Figure 9). Consequently, consumers in these countries have experienced significant declines in the affordability of cigarettes, and have switched towards illicit sources of supply in large numbers.

Figure 8: Excise gap in the EU, 2002 and 2011 (Euro per 1,000 cigarettes)

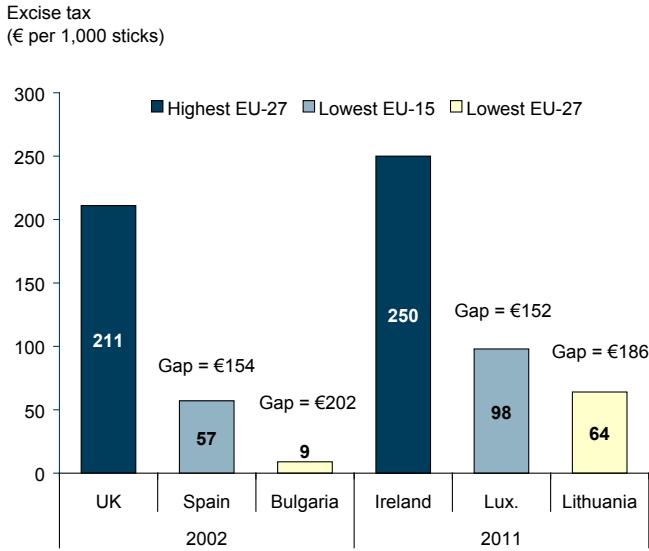
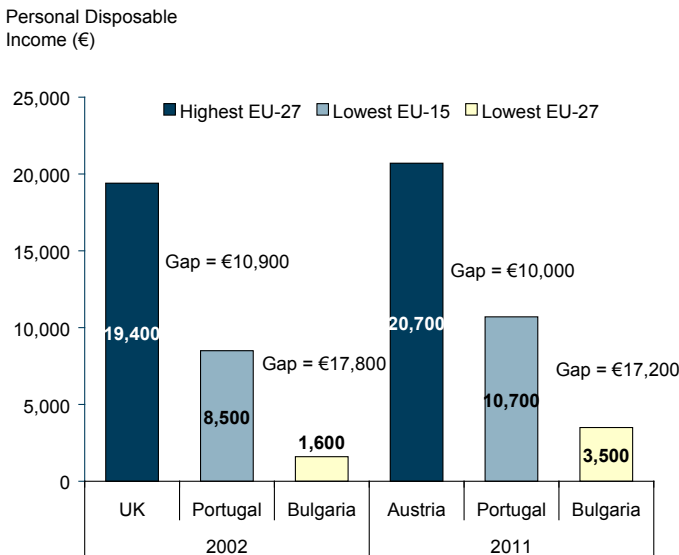
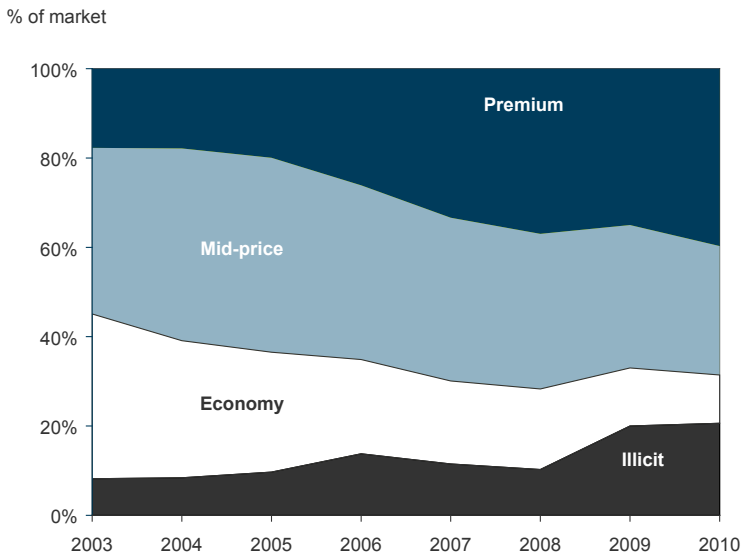


Figure 9: Disposable income gap in the EU, 2002 and 2011



In Romania, excise taxes on cigarettes have been increased by more than 800% in nine years – a very marked rise in a relatively short time period. Not surprisingly, the rapid transition in the excise duty rate has stimulated the illicit cigarette market (Figure 10). Between 2005 and 2010, KPMG (2011) estimates indicate the illicit cigarette market share more than tripled in size to almost 20%; at the same time, the excise incidence was 63% in 2010. The latest estimates indicate that the illicit trade may have fallen back to around 11% of total cigarette consumption in 2011, driven by lower inflows from Moldova, Serbia and Ukraine. However, despite this decline, the level of illicit activity is more than 50% larger than in 2007.

Figure 10: Composition of the Romanian duty-paid cigarette market



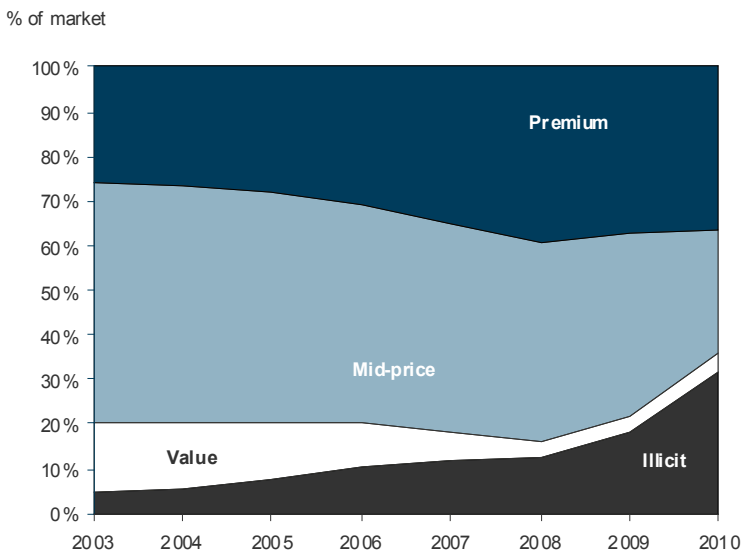
Source: Euromonitor; Goldman Sachs estimates (2010); KPMG (2010)

But Romania is not alone among the accession countries in experiencing such problems. So, for example, in Bulgaria, the excise duty on 1,000 cigarettes in 2003 was BGN26. By 2010, it had been increased by nearly 500% to BGN154. In response, the average price of cigarettes rose by 280%. This prompted a significant proportion of consumers to switch to the illicit market (Figure 11). KPMG Star Report (2012) suggests the illicit market share is now 20%, while the excise incidence is 67%. Although, the illicit market share has dropped dramatically since 2010 (reported to be 31%), it still remains almost double the level witnessed in 2007. Similarly, in Latvia, the authorities increased excise duty on 1,000 cigarettes from LVL19 in 2007 to LVL50 (or 165%) in 2010, causing excise incidence to rise from 54% to 63%. Over that time, the volume of duty-paid cigarettes consumed declined by 65%, with excise revenues increasing by just 24%. KPMG Star Report (2012) estimates the illicit market comprised 32% of consumption in 2011, up from 6.5% in 2006.

By not combating, and in some cases exacerbating, differences in affordability, EU policy has contributed to the growth in the non-duty-paid market within almost two-thirds of its members. Despite the aim of reducing the illicit market share, the period of excise approximation has seen a modest increase in the non-domestic duty-paid share of the EU market, from 12.8% in 2006 to 13.6% in 2010 – a level of activity estimated to cost EU governments over EUR10 billion per annum (Europol 2011). The failure of the system is highlighted by the fact that 35% of non-tax paid product originated within the EU itself (both legally and illegally), thus nullifying a primary objective of the Excise Directive. In 2010, the EU reported that, cigarettes were the second most valuable illicit product in the Union (European Commission 2011b).

The experience of the accession countries clearly illustrates the destabilising impact that sharp increases in excise taxes on cigarettes can have on the legitimate market, and how rapidly the illicit trade can expand once the incentives are created for smugglers and counterfeiters. In all these markets, excise incidence, while increased, still remained below 70%. If the governments had applied the *Technical Manual's* recommended 70% level of excise tax incidence, experience shows that the problems of illicit trade would have reached even more severe levels.

Figure 11: Composition of the Bulgarian duty-paid cigarette market



Source: Euromonitor; Goldman Sachs estimates (2010)

## 6. Conclusions

Over the past two decades, countries around the world have adopted an array of tobacco taxation policies. Some countries, such as Canada, the UK, France, Germany, Malaysia, and the EU Accession countries, have implemented rapid increases in duties. Others, such as Japan, Italy and the US, have adopted a more gradual approach with few (if any) sudden jumps in excise. Despite representing a range of markets with different underlying characteristics, a common lesson can be drawn from all of these experiences: increasing excise levels without regard for consumers' purchasing power is detrimental to the tobacco market, undermines the sustainability of government revenues, and is likely to result in the development of large, unregulated illicit markets. However, when cigarette affordability is taken into account, excise levels and revenues can be increased while consumption is reduced and the illicit trade is kept in check.

Recommendations for a global excise tax incidence target of 70%, as proposed by the WHO, would be very destabilising if implemented. Excise incidence is flawed as the basis for setting tax policy – the changes that the EU has made to its tobacco tax Directives directly reflect these problems. Moreover, the *Technical Manual's* recommendation that excise tax incidence should be at least 70% is based on incorrect data and extrapolates unreliable evidence from a very small number of relatively small economies – including a number of remote island states – to a global tax policy. International experience, including that of the EU accession countries, clearly shows that countries which have implemented the sort of substantial tax increases that the *Technical Manual's* proposals would imply have seen a sharp rise in illicit trade in cigarettes, which damages the long-term tax base and undermines public health objectives.

## References

- Centers for Disease Control and Prevention 2011, *Morbidity Mortality Weekly Report*, 9 September, US Department of Health and Human Services, Atlanta, GA, [www.cdc.gov/mmwr/](http://www.cdc.gov/mmwr/).
- Commission of the European Communities 2001, *Proposal for a Council Directive amending Directive 92/79/EEC, Directive 92/80/EEC and Directive 95/59/EC as regards the structure and rates of excise duty applied on manufactured tobacco*, COM (2001) 133 Final, Brussels.
- Council of European Communities 1972, *Directive 72/464/EEC*, 19 December, Brussels.
- Euromonitor 2011, *Illicit trade in tobacco products*, December, London.
- European Commission 2007, 'Consultation paper on the structure and rates of excise duty applied on cigarettes and other manufactured tobacco', European Commission, Brussels.
- European Commission 2011a, *Excise duty tables: Part III manufactured tobacco*, 1 July, European Commission, Brussels.
- European Commission 2011b, *Report on EU Customs Enforcement of Intellectual Property Rights: Results at the EU Border 2010*, European Commission, Brussels.
- European Union (EU) 2011, *Council Directive 2011/64/EU of 21 June 2011 on the structure and rates of excise duty applied to manufactured tobacco (codification)*, EU, Brussels.
- Europol 2011, *Europol review: general report on Europol activities*, The Hague, The Netherlands.
- Framework Convention Alliance (FCA) 2008, 'How eliminating the global illicit cigarette trade would increase tax revenue and save lives', INB3 fact sheet, FCA, Geneva.
- Institut national de prévention et d'éducation pour la santé 2012, *Baromètre santé 2010*, April, St Denis, France.
- International Tax and Investment Center (ITIC) and Oxford Economics 2003, 'The relationship between taxation, consumption and smuggling of tobacco', January, ITIC, Washington, DC.
- International Tax and Investment Center (ITIC) and Oxford Economics 2005, 'The affordability of cigarettes in the ASEAN countries: implications to tax policies', July, ITIC, Washington, DC.
- International Tax and Investment Center (ITIC) and Oxford Economics 2006, 'Addressing the EU cigarette excise regime review 2006', September, ITIC, Washington, DC.
- International Tax and Investment Center (ITIC) 2011, *The illicit trade in tobacco products and how to tackle it*, September, ITIC, Washington, DC.
- Irish Tobacco Manufacturers' Advisory Committee (ITMAC) 2011, 'Revenue losses from non-Irish duty paid tobacco', ITMAC, Dublin.
- Istituto Nazionale di Statistica (ISTAT) 2011, *Annuario statistico Italiano*, December, ISTAT, Rome.
- Japan Tobacco Inc. 2010, *Annual Report*, 24 June, Tokyo.
- Jha, P & Chaloupka, FJ 2000, 'The economics of global tobacco control', *British Medical Journal*, August, vol. 321, pp. 358-61.
- KPMG 2011, *Project STAR 2010 report*, August, KPMG, London.
- KPMG 2012, *Project STAR 2011 report*, 19 June, KPMG, London.
- Lenihan, B 2009, Financial statement of the Minister of Finance, Department of Finance, 9 December, Dublin, Ireland.
- Loong, L 2006, Budget speech 2006, Ministry of Finance, Singapore Government, 17 February, Singapore.
- Office for National Statistics 2010, *The general lifestyle survey*, UK Statistics Authority, London, [www.ons.gov.uk](http://www.ons.gov.uk).



- Reidy, P & Walsh, K 2011, *Economics of tobacco: modelling the market for cigarettes in Ireland*, Revenue Commissioners, February, Dublin.
- Ross, HZ, Shariff, S & Gilmore, A 2008, *Economics of tobacco taxation in Russia*, International Union Against Tuberculosis and Lung Disease, Paris.
- Ross, HZ, Shariff, S & Gilmore, A 2009, *Economics of tobacco taxation in Ukraine*, International Union Against Tuberculosis and Lung Disease, Paris.
- Shelley, L 2009, 'Illicit trade: a security challenge: a case of cigarette smuggling', ITIC Conference Paper, December, Washington, DC.
- Singapore Customs 2008, Singapore Customs' annual enforcement results, Media Release, Singapore.
- Singapore Customs 2011, *Singapore Customs' annual enforcement results 2010: contraband cigarettes situation improves with record low seizure and continuous growth of revenue*, 15 February, Singapore.
- Statistisches Bundesamt 2012, [www.destatis.de](http://www.destatis.de).
- Taylor, D 2009, Daily Hansard: Written Answers, 10 June, [www.publications.parliament.uk/pa/cm200809/cmhansrd/cm090610/text/90610w0010.htm](http://www.publications.parliament.uk/pa/cm200809/cmhansrd/cm090610/text/90610w0010.htm).
- The Star* 2011, 'War against illicit cigarettes', Malaysia Online, 7 June, <http://thestar.com.my/news/story.asp?file=/2011/6/7/nation/8849098&sec=nation>.
- Transparency International 2011, *Corruption perceptions index*, viewed 25 July 2012, <http://cpi.transparency.org/cpi2011/results/>.
- World Economic Forum 2012, Global Agenda Council on Illicit Trade, Davos Annual Meeting, January, Davos, Switzerland.
- World Health Organization (WHO) 2003, *WHO Framework Convention on Tobacco Control* (WHO FCTC), WHO, Geneva.
- World Health Organization (WHO) 2011a, *WHO technical manual on tobacco tax administration*, WHO, Geneva.
- World Health Organization (WHO) 2011b, *Tax policies on tobacco products in Thailand: the way forward*, WHO Regional Office for South-East Asia, New Delhi.

## Notes

- 1 Article 1 of the WHO FCTC.
- 2 Malaysian Prime Minister speaking on TV3, Sunday 9 October.
- 3 Data in Figures 5, 6 and 7 refer to 2011Q1 except for the US which is May 2010. US data uses an average of States' taxes rather than select a particular one.
- 4 Council Directive 92/79/EEC of 19 October 1992 on the approximation of taxes on cigarettes.
- 5 Council Directive 2011/64/EU of 21 June 2011 on the structure and rates of excise duty applied to manufactured tobacco.
- 6 Population data taken from United Nations Population Statistics available sourced from Haver Analytics.
- 7 The EU-15 consists of the 15 countries that were members of the EU prior to 2004. These were: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, and the UK.
- 8 The EU-27 consists of the EU-15 plus the 12 accession countries have joined the EU since 2004. Ten countries joined the EU in 2004: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. Bulgaria and Romania both joined the EU in 2007.

### **Adrian Cooper**



Adrian Cooper is responsible for coordinating and managing Oxford Economics' global economic analysis, forecasting and consultancy activities. He leads Oxford Economics' work on an array of consultancy projects, ranging from policy advice to governments throughout the world to detailed analysis of the economic impact of particular industries and investment proposals.

### **Daniel A Witt**



Daniel A Witt is President of the International Tax and Investment Center (ITIC), which he helped found in September 1993. He has led over thirty delegations to hold meetings with senior finance, taxation, customs, and parliamentary officials in a wide range of countries. Daniel is the co-founder of the Asia Tax Forum that regularly brings together top tax policy officials from the Asia-Pacific region.