



A STUDY ON LIABILITY AND THE HEALTH COSTS OF SMOKING

DG SANCO (2008/C6/046)

FINAL REPORT

December 2009

This is the final report for a study on liability and the health costs of smoking commissioned by DG SANCO of the European Commission under contract ref SANCO 2008/C6/046. This study was undertaken by the following:

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A study on liability and the health costs of smoking

DG SANCO

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A report submitted by GHK

in association with

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EXECUTIVE SUMMARY

E.1 This study

In its second implementation report on the application of the Tobacco Products Directive the European Commission announced that it would commission a study on the best ways forward to strengthen product liability of tobacco manufacturers and importers in the EU, as well as their liability for financing the health costs arising from tobacco consumption. This is a scoping study set in that context. It examines:

- The costs of smoking to EU society – summarising existing data and estimating the direct and indirect costs incurred by Member States' health systems together with the economic and social costs incurred across the EU as a whole;
- The potential mechanisms and policies either currently or potentially available to recover the external costs that smoking has and continues to impose on Member State healthcare systems and economies;
- The potential role of litigation – summarising liability law suits related to smoking and tobacco consumption in EU, looking at the differences in jurisdiction between the US and the EU law in general and with regard to the liability of the tobacco manufacturer, and outlining the potential areas for change in existing law to increase manufacturer liability in Europe;
- The potential role of other policy tools to internalise the external costs of smoking or to achieve cost recovery, considering their advantages and disadvantages.

The study was commissioned by DG SANCO and completed by a team led by GHK Consulting working with the support of the University of Exeter in the United Kingdom and the Public Health Advocacy Institute in the United States of America.

E.2 Estimating the costs of smoking to EU society (Chapter 2)

Estimates of various elements of the social cost of smoking in the European Union have been made for this scoping study. The model from which these estimates are derived covers three areas where active smoking, and to a lesser degree passive smoking, have been shown to create 'external' costs:

- Direct costs to European public healthcare systems, in terms of the estimated amount of healthcare expenditure attributable to smoking in a given year, financed from public resources;
- Productivity losses to the EU economy due to increased absenteeism and early retirement attributable to smoking; and
- Premature mortality attributable to smoking, expressed in monetary terms.

Data scarcity, especially in relation to treatment costs, is a significant issue but with the methods and assumptions used:

- Public healthcare expenditure on treating smoking attributable diseases suffered by smokers is estimated at around €36.6 billion in 2000, which corresponds to 6% of total healthcare spending in the EU27 and 0.4% of GDP;
- Public healthcare expenditure on treating ETS-related illnesses is estimated at around €1.2 billion in 2000, which corresponds to 0.2% of total healthcare spending in the EU27 and 0.01% of GDP;
- Smoking related productivity losses cost the EU economy an estimated €12.4 billion in the year 2000. This is the equivalent of 0.1% of EU 27 GDP for 2000.

Absenteeism accounted for 91% of the total productivity costs;

- Premature mortality attributable to smoking is estimated at €313 billion in 2000 on a willingness to pay basis, corresponding to 3.3% of GDP.

All together these estimates suggest a total cost of about €363 billion in 2000, about 3.4% of EU27 GDP.

Public healthcare expenditure on treating smoking attributable diseases

The costing model developed for this study was informed by a review of the existing literature on the cost of smoking, focusing on work conducted for the EU and in North America. Over 60 studies that estimated the external costs of smoking to society were reviewed. The health costs of smoking were estimated by reference to the impacts of medical conditions with a recognised causal link to smoking, drawing in particular on work by the US Surgeon General and the International Agency for Research on Cancer. The model considers; lung cancers; upper aerodigestive cancers; other forms of cancer; cardiovascular diseases; chronic obstructive pulmonary disease; and acute respiratory illnesses.

The concept of 'relative risk' – of a smoker developing a disease associated with smoking as compared to a non-smoker - was used in calculating the proportion of cases in each of the key disease categories that may be associated with smoking, i.e. the 'smoking-attributable fraction' (SAF). The SAF is a measure of what proportion and how severely the population was estimated to have been exposed to tobacco smoke. The number of cases of 'smoking attributable diseases' in individual EU Member States was calculated by multiplying the country SAF estimate with the total incidence of each disease for each country.

Development of an attributable factor to cover the health effects of environmental tobacco smoke on non-smokers was not possible due to a lack of data on which to base estimates of what proportion, and how severely, the population had been exposed to tobacco smoke. Instead an estimate by the Smoke Free Partnership was used - that approximately 1.5% of the EU mortality for health conditions associated with smoking could be attributed to ETS exposure in the non-smoking population. The different underlying assumptions of the methods used to estimate public healthcare costs of smoking related diseases to smokers and the costs of ETS effects on non-smokers mean that results are not directly comparable.

It is estimated that 26% (3.6 million) of the 14 million people in the EU27 suffering from the six main disease categories associated with smoking in 2000 fell ill directly as a result of smoking. In this population lower respiratory infections were by far the most common diseases, comprising 66% of all cases. Other smoking attributable illnesses with high prevalence were COPD (10%), cardiovascular diseases (CVD) (7%), asthma (8%) and lung cancers (6%). The modelling suggests that the disease profiles vary between Member States, particularly for respiratory conditions. These differences in incidence profiles have a significant impact on the estimated costs of smoking on both healthcare systems and the economy in general due to losses in labour productivity and premature death.

Public healthcare expenditure on treating smoking attributable diseases is estimated at around €36.6 billion in 2000, which corresponds to 6% of total healthcare spending in the EU27 and 0.4% of GDP. Public healthcare expenditure on treating environmental smoke-related diseases among non-smokers is estimated at around €1.2 billion in 2000, which corresponds to 0.2% of total healthcare spending in the EU27 and 0.01% of GDP.

An exhaustive review of national and international sources did not reveal suitable data on the costs of treating smoking attributable diseases (SADs). Estimates of the costs to public healthcare systems are therefore based on incidence data from the OECD and UK data on expenditure per case dating from 2004 (adjusted to reflect the relative levels of GDP per capita, healthcare expenditures, and public funding of healthcare in each Member State).

As spending data were not available for the year 2000, it was assumed that the proportion of spending per disease category was the same in 2003 as in 2000.

The estimated level of healthcare expenditure used to treat SADs was relatively consistent across Member States, varying between 4% and 12%. The estimates generated suggest that over 73% of all EU27 healthcare spending due to smoking in 2000 occurred in four countries: Germany, France, the UK, and Italy. However, the 12 'new' Member States, especially Estonia, Lithuania, Latvia and Hungary, seem to bear a heavier burden in terms of expenditure relative to total healthcare spending or to the country's GDP. The cost patterns are explained by smoking prevalence, incidence rates of individual SADs, and the estimated cost of treatment for various diseases in individual Member States.

83% of the estimated treatment costs for cases directly attributable to smoking were for three sets of conditions – cardio-vascular disease (32%), chronic obstructive pulmonary disease (CPD) (31%) and lung cancer (20%) cases. These three disease groups accounted only for 23% of the total incidence of smoking related disease but treatment costs are higher for these diseases. The EU average cost per year per patient for the selected diseases was estimated to be around €10,100 in 2000, based on relative treatment costs derived from data from the UK health system. The most expensive was CVD (€44,400 per case), followed by cancers (€35,300 per case) and COPD (€30,600 per case). Diseases in the “acute respiratory” disease group are estimated to cost only €700 per case to treat. It should be noted that such analysis is highly sensitive to baseline cost data. Few such data are in the public domain in the EU.

Smokers have a higher rate of workplace absenteeism than non-smokers. An estimated 462 million days were lost in 2000 by employed adults in the EU27 suffering from the six main disease categories that are associated with smoking. Around 28% of these days (128 million) may have been lost directly as a result of smoking. Amongst these cases of directly smoking-attributable absenteeism, most days were lost due to: CVD (39%), COPD (25%) and acute respiratory illnesses (25%).

Absenteeism is not evenly distributed across the smoking population, as not all smokers will become ill in a given year. The average person who contracted a smoking attributable disease lost an estimated 32 days of good health in 2000. The estimated number of days lost per person varied significantly between each of the disease categories. In the EU27 as a whole, smokers with non-COPD respiratory illnesses suffered only 12 days of health per smoker per annum. In contrast, the average smoker suffering from cancer, CVD or COPD suffered an estimated 92, 122 or 136 days of ill health per smoker due to SAD per annum. Such disparities in the number of days lost will have a strong impact on the earning potential of those suffering from more severe conditions (cancer, COPD, CVD).

Smoking attributable absenteeism cost the EU economy an estimated €11.3 billion in the year 2000, equivalent of 0.1% of EU 27 GDP for 2000. The estimated costs of smoking were concentrated in the higher wage Member States, with the EU15 accounting for an estimated 71% of days lost, but 92% of the costs of smoking attributable absenteeism. Earnings increased strongly in the new Member States after 2000, and we would expect that this would yield a significant increase in any estimate for subsequent years, assuming the same method had been used.

Total productivity cost due to smoking

Overall, it is estimated that smoking related productivity losses cost the EU economy €12.4 billion in the year 2000. This is the equivalent of 0.1% of EU 27 GDP for 2000. Absenteeism accounted for 91% of the total productivity cost to the EU27.

Monetised cost of premature mortality

Peer-reviewed estimates suggest that around 697,000 of the deaths recorded in 2000 in the EU27 (excluding Cyprus) can be attributed to smoking. Two approaches have been used

to value the cost of smoking-related premature mortality. One is a human capital approach focusing on lost labour market output; the second is based on willingness to pay.

To value the cost of premature mortality due to smoking, a 'willingness-to-pay'-based methodological approach has been used.

Societies are 'willing to pay' considerable amounts to save the life or to save one life year of an unidentified ("statistical") individual. A value applicable for the EU as a whole was established by ExternE, a Commission research project, at €52,000 per person, using a 'willingness-to-pay' approach. It is calculated that in 2000, about 10.4 million years were lost due to smoking-attributable premature mortality. Applying the estimate from the ExternE project, this loss amounted to a monetised value of €313 billion for the EU27, which corresponds to about 3.4% of the GDP.

65% of the monetised cost (€202 billion) is concentrated in the three most populous countries, i.e. Germany, the UK, France, Italy, Spain and Poland. The individual country estimates vary from 1.1% of GDP for Malta, Finland and Sweden to up to 6% in Hungary. In general, the burden on Member States that joined the EU in 2004 and 2007 is higher. The 9 Member States with the highest estimated cost-to-GDP ratio in the calculations are all members of the 12 newly accessed Member States group, as in the previous calculations.

E.3 Policy tools for tackling externalities (Chapter 3)

There are four principal approaches through which state intervention can tackle the market failures stemming from externalities - regulation, liability, Pigouvian taxes and tradable permits.

Under the **regulatory** approach, the state either directly sets the desirable level of production and/or consumption of goods or services, e.g. through quotas, or it exerts an indirect influence on the overall production and/or consumption through the regulation of the contextual factors. Direct regulation aims to eliminate or reduce the characteristics of the externality-causing product that causes the harm, and where that is not possible it sets limits on the level of production and/or consumption of an externality-causing product. For example, EC Directive 70/220/EEC has set limits on vehicles emissions to reduce the externalities they cause in terms of smog and climate change. Indirect regulation limits the exposure of individuals to externalities, rather than limiting the production or consumption of an externality-causing product. For example, congestion charging zones reduce the externalities caused by vehicle emissions, without limiting vehicle emissions at source.

Neither form of regulation directly internalises the costs that companies or individuals impose on others; rather they reduce the scale of the externality (though regulation may result in companies and/or consumers incurring costs or experiencing higher prices). In the absence of perfect information, authorities estimate the appropriate level of regulation. This can lead to situations of either too much or too little production or consumption. Direct regulation also limits people's freedom of choice.

The **liability** approach to internalising externalities rests upon the right of companies, individuals or the state to certain 'property'. For example, an individual has the right to expect the products that they purchase to be safe; society has the 'right' to access certain public goods, such as clean air. The party that violates the rights of the other party, and thereby causes damage to him, is required to pay compensation that is usually set by a court or negotiated in an out-of-court settlement. While harm caused to organisations and individuals is usually settled through civil law, public law is needed to define the claim of the state on the ownership of public goods. In civil law, the most prominent example of such settlements is general product liability. Modern environmental liability is an example of the principle being applied in public law.

The government - or any other third party with appropriate powers – can internalise external

costs or benefits by imposing a **tax** or an extra charge on the activity or specific good which is responsible for the externality. The aim is to set the price that the producer or user faces when consuming the product at a level that includes all the marginal costs imposed on society. Strict application of the Pigouvian approach requires detailed information on how social costs and benefits change at different levels of consumption, and how price, as influenced by tax, will influence supply and demand. This information is in practice rarely available. Nonetheless Member States have introduced many different taxes and charges for environmental purposes. Environment related taxes accounted for 2.56% of the EU27 GDP in 2006.

Ronald Coase showed trade in the externality is possible when ownership over the assets that are affected by the externalities of a specific action is clearly defined. When there are no transaction costs, bargaining will lead to an efficient outcome regardless of the initial allocation of property rights. Though these conditions are rarely met in practice, **tradeable permit** policies based on this approach are commonly used to govern the use of environmental resources using production and/or user rights.

It is usually the state who claims ownership over the resources affected or the related externalities. The state may then auction or give out permits free of charge to use an established quantity of the resources in question or to produce an established amount of externality-affecting output (e.g. greenhouse gas emissions). These permits are made transferable between actors, creating a market.

Tradable permit schemes are increasingly familiar to policy-makers because of their use in environmental policy. The first emission trading schemes were developed in the United States in the 1980s and 1990s, and were applied with success to cost-effectively reduce emissions of sulphur dioxide and nitrogen oxides. The use of trading schemes has expanded to include emissions of greenhouse gases including CO₂ and water pollution.

The various policy options vary in the way in which they interact with uncertainty. Pigouvian taxes provide price certainty but uncertain quantity outcomes. Tradable permit schemes provide certainty about the maximum quantity of (say) emissions but in the context of uncertainty about the price.

Policy instruments designed to achieve recovery of costs ought to be considered separately from those targeted at an externality problem. A user charge may have an incentive effect similar to that of a standard Pigouvian tax (by raising costs and thus influencing consumer behaviour), but the strategic intent and the basis in law may well be different. User charge schemes are normally designed for the purpose of recovering the cost of a service and are set at a level sufficient to achieve that aim. This is not necessarily the same level as is appropriate to a Pigouvian tax. Insurance schemes, which can combine cost recovery objectives with concepts of risk and uncertainty, may be considered in the same way.

E.4 The role of litigation – past experience and future potential (Chapter 4)

The European Community, as a signatory party to the Framework Convention on Tobacco Control, is subject to the commitments contained in the Convention to consider use of criminal and civil liability, including compensation where appropriate, as part of its tobacco control strategy. The Commission specifically requested that this study provide an evaluation of whether revising the Product Liability Directive could be envisaged to hold tobacco manufacturers liable for the financing of health costs arising from tobacco consumption.

Tobacco litigation allows smokers, their families or other victims of tobacco consumption to sue tobacco manufacturers in order to be compensated for the harm they have suffered. Potential benefits of lawsuits against tobacco manufacturers include compensation, strengthening regulatory activity, publicity, documents disclosure and changing company behaviour.

Tobacco litigation in North America

The United States of America have a 50-year history of litigation against the tobacco industry. Tobacco litigation has been a tool in tobacco control strategies aimed at limiting the activities of tobacco companies and providing redress to persons who have been injured as a result of their use of tobacco products. In recent years a movement away from classic assumption of the risk to comparative negligence defences has provided the opportunity for claimants to get to trial and produce evidence of tobacco wrongdoing.

The information released to the public during trials triggered new types of tobacco litigation. Personal injury law suits continued, but the claimants' lawyers had better evidence and could develop more complex cases. Law suits based on the development of "safer" cigarettes, environmental tobacco smoke and the marketing of "light" cigarettes became more common.

After several decades of development the US is now in an era of victorious claimant suits for personal injury and wrongful death, with awards of compensatory and punitive damages. The US saw class actions emerge, but also a shift in tobacco litigation from the private to the public sector as state government entities began to file consumer protection suits against the tobacco companies claiming unfair or deceptive commercial strategies, and attempted to recover the health care costs of treating diseases caused by smoking.

In 1994 Mississippi sued the tobacco companies to recoup its health costs. A settlement was reached, and then followed by Florida, Texas and Minnesota. In these settlements the tobacco industry agreed to pay USD 35.3 billion over 25 years. In 1998, the remaining 46 states and five territories signed the Master Settlement Agreement with the four largest tobacco companies, which agreed to pay over USD 200 billion over the same period, and to restrict outdoor advertising, sponsorship of public events, distribution of promotional merchandising, targeting underage smoking and political lobbying. Millions of industry documents were made public.

The US federal government subsequently sued the tobacco industry, accusing the major tobacco companies and its two trade organisations of conspiring to actively defraud the public about tobacco's addictive nature and adverse health effects in addition to the industry's collective practices such as manipulating tobacco levels, misleading the public about light or low tar cigarettes and targeting children. In August 2006, a District Judge ruled that the defendants had engaged in racketeering over the span of decades. The Court rejected the cigarette companies' long-standing strategy of stating that "everybody knew" that their products were dangerous while simultaneously claiming that "nobody knows" what causes lung cancer and other diseases. The Judge ruled that on a series of remedies, such as the prohibition of brand descriptors such as low tar, light, ultra light, mild, natural and any other words which could reasonably be expected to result in a consumer believing that smoking the cigarette brand using that descriptor may result in a lower risk of disease or be less hazardous to health. The judge's findings and most of the remedies were upheld by the DC Circuit in May 2009. Tobacco litigation is now seen in the United States as an important tool in tobacco control strategies aimed at limiting the activities of tobacco companies and providing redress for tobacco-related harm.

Litigation has also led to important legislative developments in Canada, as exemplified most strikingly by the Tobacco Damages and Health Care Costs Recovery Act adopted in 2000 by British Columbia. This permits the Province to sue in a single action based on its expenses for all tobacco-related diseases, without permitting defences based on specific facts about individual smokers. It also allows the use of epidemiological evidence to establish damages, and contains provisions facilitating private litigation.

Tobacco litigation in Europe

Tobacco litigation has had a much shorter history in Europe than in the United States, but

there is evidence that it is developing. Cases have been mounted against tobacco manufacturers in several EU Member States. Most of them have exempted the tobacco industry of all liability. Most prominent cases in the Member States have been individual claims - proceedings launched by aggrieved smokers or their families for wrongful death or personal injury suffered as a result of the detrimental effects which smoking has had on their health. Collective claims and claims mounted against tobacco manufacturers by health care bodies are less common and less successful than in the US.

Claimants have put forward arguments against tobacco manufacturers relating to: (i) the existence of a defect in cigarettes (product liability); (ii) to the existence of a blameworthy conduct of the defendant (fault-based liability); and (iii) to the failure of tobacco manufacturers to provide sufficient and reliable information to consumers regarding their products (failure to provide adequate information).

Product liability

Product liability is a specific liability regime derived from the Product Liability Directive (PLD), Directive 85/374 (as amended). This a regime based on the liability without fault on the part of the producer of a defective product: it is the defect in a product that triggers liability rather than the conduct of the defendant. The argument has been made in the context of tobacco litigation that cigarettes and other tobacco products are defective, that is "they do not provide the safety which a person is entitled to expect".

The definition in the PLD of the notion of defectiveness is therefore founded upon consumer expectations of safety. To date, the argument that cigarettes are defective as such has tended to fail. Member State courts have held that cigarettes could not be considered defective simply because they presented a danger to human health. Courts have accepted the argument that it is reasonable to expect that cigarettes and other tobacco products will be used for smoking and that consumers know that smoking entails certain health risks.

The role of information in determining whether a product is defective is paramount. Courts have noted that because warnings about the dangers related to smoking must now be printed onto cigarette packages, claimants cannot argue that they do not know that smoking has detrimental consequences on human health. US courts have adopted a similar reasoning. Courts have generally been unwilling to say that cigarettes are inherently dangerous and juries tend to blame the smokers unless given a reason to blame the cigarette companies more.

The PLD could be invoked for fire lawsuits. If a tobacco manufacturer designs a cigarette to burn in the absence of puffing and a victim is caught in a fire caused by the cigarette in question, there is a strong argument that the cigarette is defective, as it does not provide the safety which a person is entitled to expect. Beyond such narrowly defined circumstances, however, neither the PLD nor the Product Safety Directive is likely to offer much comfort to aggrieved smokers and other victims of tobacco.

Fault-based liability

Fault-based liability requires that the defendant has caused damage to the claimant and that the act which has caused the damage in question is blameworthy. The argument has been made that tobacco manufacturers have caused personal injury and/or wrongful death by selling their products to smokers but it has not been very successful in Europe.

National courts have not adopted a uniform approach to the question of the blameworthiness of the defendant's conduct. Some have ruled that, insofar as it is not forbidden to manufacture and sell cigarettes containing addictive ingredients, the business of tobacco companies does not amount to a faulty behaviour which would fall short of the requirements of tort law. This is all the more so as the detrimental effects smoking may have on smokers' health are well known.

There is, to our knowledge, just one exception in the case law of national courts in Europe to the rule that tobacco manufacturers should not be held liable, on the basis of national tort law, for the damage arising from smoking: the 2005 *Stalteri* judgment of the Court of Appeal of Rome. In this case experts determined that Mr Stalteri's death was attributable to smoking with a probability of over 80%, that no other potential defendants (other than BAT Italia) could have contributed as he had only smoked one brand of cigarettes for 40 years, and that the defendant had not fulfilled its duty of care towards Mario Stalteri, relying heavily on the defendant's level of knowledge of the effects of the product. To conclude that BAT Italia had not fulfilled its duty of care towards Mario Stalteri, the court relied heavily on its level of knowledge: as a tobacco manufacturer, it could not have ignored the scientific studies that tobacco contains toxic substances producing harmful effects on the lungs. The Rome Court of Appeal concluded that "because tobacco, having as its only destination consumption through smoking... contained a potentially harmful charge... the entity was obliged to use every precaution to avoid that the risk became a concrete injury". Article 2050 of the Italian Civil Code deals with the exercise of dangerous activities and reverses the burden of proof by requiring that the defendant should prove that it has adopted all appropriate measures to avoid the damage, which BAT Italia - the court concluded - had failed to do. The court added that the claimant's choice to smoke was irrelevant, since the defendant had not established that they had adopted a "conduct suitable to avoid the harm": Mr Stalteri should have received specific and direct information from BAT Italia. Finally, the court upheld the claimant's contention that there was a causal link between the failure of the defendant to warn Mr Stalteri of the dangers of smoking and his death of a lung cancer. BAT Italia was therefore condemned to pay EUR 200,000 damages (plus costs).

This interpretation of the duty of care of tobacco manufacturers stands in stark contrast with the approach adopted by other European courts, especially in Germany and in France, where companies are held to have fulfilled their duty of care once they have complied with the labelling requirements in force. The difference may be explained partly by the fact that French and German civil codes do not contain comparable provisions to Article 2050 of the Italian code, but also by the fact that most courts in EU member states have tended to hold smokers responsible for their loss. This is all the more so as the detrimental health consequences of smoking are widely known by smokers and the public at large, not only because of the compulsory warnings affixed on all cigarettes packages but also because of the information made widely available to the public on the media.

Lack of sufficient and reliable information

The need to provide adequate information to consumers on the products they buy is a recurring theme in tobacco litigation. The amount and the nature of the information provided to consumers shape product liability law and general tort law and are relevant in assessing both whether cigarettes are defective products as well as whether a tobacco manufacturer has failed to act towards its customers with sufficient care.

Prevention being better than cure, the "right to information" is central to the model of consumer protection set up at Community level. Requiring that information be both sufficient and reliable places the onus on consumers to decide what is best for them. Several legislative instruments therefore regulate the provision of information to consumers. They include Directive 2005/29 on unfair commercial practices (which introduces the first EU-wide ban on all unfair business-to-consumers commercial practices), Directive 2033/33 on the advertising and sponsorship of tobacco products and Directive 2001/37 on the manufacture, presentation and sale of tobacco products.

Sufficient information

In the cases based on facts which occurred before health warnings became compulsory, all national courts apart from the Rome Court of Appeal in the *Stalteri* case have tended to

reject arguments based on the failure of tobacco manufacturers to provide information on their products. Now that the Tobacco Products Directive is in force in all the Member States, tobacco manufacturers are under a duty to affix warnings to their products. If they fail to do so, they are in breach of statutory requirements. That does not necessarily mean, however, that causation between the damage and their failure to inform would be established. One could argue that this case law does not take account of the fact that the warnings required are not sufficient to allow consumers to fully grasp the detrimental health consequences of smoking. The standard of care expected of tobacco manufacturers could be redefined by reinforcing the information requirements laid down in the Tobacco Products Directive. One could further argue that the many addictive substances present in cigarettes may not even allow the already addicted smoker much choice and that information is unlikely to address the problems they encounter.

Reliable information

The question has arisen in many Member States whether tobacco advertisements for "light" cigarettes are misleading, insofar as they wrongly minimise the detrimental effects of tobacco on health. Courts have not adopted a uniform approach to this question: some of them have held that "light" cigarettes entail a smaller risk to health, notwithstanding evidence to the contrary, while others have accepted that smokers are misled by such claims and lose the opportunity to freely choose an alternative - though claims have tended to fail for lack of a causal link between the damage and the use of the word "light". The situation in Europe therefore differs markedly from the situation in the United States. Claims for "light" or "less toxic" cigarettes could be prohibited. The Tobacco Products Directive bans their use on the packaging of tobacco products. The Tobacco Advertising Directive bans all forms of tobacco advertising and sponsorship with cross-border effects. For all other forms of advertising and sponsorship, the Unfair Commercial Practices Directive provides a basis for prohibiting such claims.

Causation

Even if it was assumed that a tobacco manufacturer had acted in a blameworthy manner or that cigarettes were defective products, the claimant would still need to establish the existence of a causal link between the defendant's conduct or the existence of the defect and the damage suffered.

Causation has proven an insurmountable hurdle in most tobacco cases. Issues of causation may be extremely complex: several smoking-related diseases may be explained by a variety of factors, smoking being one of them (others include genetic predispositions, living environment, unhealthy diet, lack of exercise). There is no uniform approach to questions of causation in Europe. Some courts have been willing to accept the existence of a causal link, in particular in Finland and in Italy. Nevertheless, many of them have rejected the existence of such a link on the ground that the claimants' conditions could have been triggered by risk factors other than smoking. In the *McTear* case, the Scottish court even declined to accept epidemiological evidence to prove individual causation. This is in stark contrast with the approach of US courts which treat the efforts by the tobacco industry to deny the relationship between smoking and disease as an example of their pattern of fraudulent conduct. The Canadian Province of British Columbia has gone even further following the adoption of the Tobacco Damages and Health Care Costs Recovery Act in 2000 which exempts the government seeking to recover the cost of health care benefits on an aggregate basis from proving the cause of tobacco-related disease in any particular individual insured person.

The existence of causation may be all the more difficult to establish conclusively as courts in Europe have often held that what caused the damage was not so much the defect in the cigarette or the defendant's conduct as the excessive smoking of the claimant. By electing to smoke, smokers have been held to have taken a conscious health risk. Alternatively,

some courts have decided that the smoker has contributed to his own loss and that his contributory negligence should lead to the annulment, or the reduction in, the award made. In the United States, juries tend to blame the smokers unless given a reason to blame tobacco manufacturers more. Defence lawyers are generally successful in turning cases into trials of the claimant, unless the claimant has introduced damning evidence of industry misbehaviour. American lawyers experienced in tobacco litigation have drawn two conclusions: it is preferable to avoid going to trial unless, first, it is possible to adduce substantial evidence of industry wrongdoing and, secondly, the jury is permitted to find the claimant partially at fault.

Causation is even more difficult to establish in cases of passive smoking. Even though experts all concur that second-hand smoke exposure contributes to a range of diseases, that does not mean that a claimant can adduce conclusive evidence that the disease he suffers from has been caused by exposure to second-hand smoke. Consequently, regulation provides a more promising avenue than tort law, even though litigation (mainly against employers rather than tobacco manufacturers) has had a role to play in prompting regulatory change.

Possible changes to the existing Community legislative framework with a view to facilitating tobacco litigation

Some changes might facilitate tobacco litigation:

- *Amending the Product Liability Directive*: a provision could be inserted in the PLD stating that cigarettes and other similar tobacco products are defective, notwithstanding the information provided to consumers. However, this is unlikely to be productive in light of the fact that cigarettes are lawfully placed on the market and that the existence of a defect does not exempt the claimant from establishing the existence of a causal link between the damage and the defect.
- *Amending the General Product Safety Directive*: a provision could be inserted in the GSPD that cigarettes and other similar tobacco products are unsafe and shall therefore not be placed on the market. This would be highly charged politically and very unlikely to be accepted by Member States.
- *Shifting the burden of proof*: a less drastic proposal would be to shift the burden of proof and require that the manufacturer rather than the consumer establish that it has fulfilled its duty of care towards him, as Italy has done in relation to dangerous activities. The duty of tobacco manufacturers to disclose sufficient and reliable information could also be reinforced and the Tobacco Products Directive amended accordingly.

Procedural hurdles

Even if claimants manage to overcome hurdles of substantive law, they are still likely to face obstacles of a procedural nature which could limit their chances of success against tobacco manufacturers. The 50-year tobacco litigation history in the United States indicates that cases against tobacco manufacturers tend to be extremely onerous, first because of the costs involved in launching proceedings and, secondly, because of the difficulties involved in gathering the necessary evidence against them. The United States have certain procedural mechanisms in place intended to address these obstacles and ensure a better balance between the parties. They include the use of contingency fees, punitive damages and class actions (to address the issue of costs) and the use of pre-trial information tools such as discovery (to facilitate the gathering of necessary evidence).

Even though the Community does not have the required powers to adopt legislation harmonising the laws of the Member States in relation to all these aspects of litigation, it is necessary to bear their importance in mind if tobacco litigation strategies are to be effective. The legality of a Community intervention would have to be assessed in light of the Court's case law on the scope of Community competence. The discussions currently taking place

on the introduction of some form of collective redress for consumers could potentially play a part in improving the situation of smokers or their families involved in tobacco litigation.

E.5 Beyond litigation: alternative ways and means (Chapter 5)

Recognising that this is a scoping report that is intended to inject some innovative thinking into the policy process, consideration is given to how taxation, tradable permits, levies and regulation tools might be used to address the problem of smoking externalities. Some of the options outlined are radical, untested and may not be practically or politically feasible. But starting from a first-principles analysis of the problem, each has a theoretical potential to address some aspect of the problem.

Taxation

Use of a Pigouvian tax is, in practical terms, the most straightforward policy instrument for internalising the costs of smoking in the EU. The principle (i.e. of taxation of tobacco) is already established. The legislative base and associated systems for collection are already in place. The additional administrative burden on both business and public administration would be minimal.

As taxation remains a Member State competency, there is currently a set of national tobacco taxes (at widely different rates) rather than a single, pan-EU instrument. Some may be too low to fully internalise the costs of smoking at a national level. Progressively raising the minimum harmonised rate across the EU would have an impact equivalent to a centrally administered instrument.

There is a binding EU legislative structure in place regulating minimum levels of excise duty on tobacco products. Currently excise duties levied on cigarettes must account for at least 57% of price, and must be at least €64 per 1,000 cigarettes. But the level of excise duties still varies extremely widely. In 2008 there was a nearly 600% difference in the excise burden for cigarettes between the lowest and the highest taxing Member States.

Tax revenues accrue to central finance ministries for general purpose use and there is only an indirect link between tobacco taxes/duties and the funding of public health care systems. The financing of public health care is particular to individual Member States. Establishing a direct link between health care finance and smoking requires a different kind of policy. However, the infrastructure for application of a Pigouvian tax is already in place.

Further increases in excise tax could result in increased black market activities, though other policy instruments that raised market prices would provide similar incentive effects.

Tradable permits

Application of the tradable permit model to the European market for tobacco products would mean creation of tradable permits to either (i) consume, (ii) place on the European market or (iii) manufacture cigarettes (and other tobacco products). Under a hypothetical direct Coasian approach, permits establishing the 'right to smoke' a given amount of cigarettes would be auctioned amongst *consumers* of tobacco products, as it is the consumer who enjoys the benefit from consumption and inflicts at the same time the damage to himself and his environment. A more plausible option is an indirect, supplier-based, approach to the problem in which the EU or Member States issued permits to companies for the 'right to place on the market' a given amount of cigarettes or other tobacco products. These permits would be auctioned amongst manufacturers and importers.

This would in principle provide a mechanism for determining, and reducing, the total number of cigarettes etc. sold (excluding black market trade). The number of permits could be set with a view to reaching a permit price that matched the estimated external cost per cigarette placed on the market, or to achieve a common target for total cigarette consumption, which could change over time (e.g. to meet targets for reducing smoking prevalence by 2% per year as established in the European Strategy for Tobacco Control of

WHO Europe).

It would require new legislation and significant work would be required to further explore the implications and feasibility of the concept. Its net impact on price (and thus internalisation of externalities) would depend on factors such as the parallel changes in Member States' tobacco duty, and the level of scarcity of permits (which influences the price). The net impact on public revenues and incremental revenues available to finance tobacco-related healthcare expenditure would be influenced by permit scarcity and the level of permit auctioning. The efficiency of the system would be affected by the degree of competition in the marketplace. If markets are dominated by a few large companies they may be vulnerable to manipulation.

Levies and cost recovery mechanisms

An alternative to tax and permit models is to establish a more direct link between consumers of tobacco products and the systems that incur additional costs, such as public health care providers. These links already exist in private insurance and finance markets, where companies factor the impacts of smoking into their risk models, and thus into the prices available to smokers for particular products. Hypothetically it would be possible for public health care providers to achieve a similar outcome by establishing a direct financial link to smokers (or tobacco product manufacturers) via a levy or licence arrangement that was designed to recover the additional costs arising from smoking. This kind of levy/licence model is similar in effect to the tax and tradable permit systems discussed above but differs in that its principal purpose is the recovery of specified healthcare costs, rather than internalisation of a wider set of social costs; and it implies a direct compensating transfer to the health care system, rather than financial flows being mediated via government finance ministries and national budgeting processes. This is thus more in the nature of a 'charge' than a tax.

Under the levy model, a fee (levy) would be applied to tobacco products at point of sale or some other point of obligation higher up the supply chain (e.g. whether tobacco duties are currently applied). The levy applied to each unit sold would be set at a level sufficient to ensure that total levy income for the year was sufficient to cover the estimated additional health care costs attributable to smoking in the most recent year for which accounts had been prepared.

Under the licence model, licensed vendors of tobacco products would be required to pay a fee for that licence at a level linked to the quantity of products sold. The obligation to hold a licence could be placed at one of a number of points along the supply chain. Placing it higher up the supply chain (e.g. where excise duties are payable) would reduce the number of licences to be issued and facilitate auditing.

A key challenge for the cost recovery (and for any policy set with explicit reference to observed costs) is attribution of the disease burden and calculation of health care expenses. While there may be a firm statistical relationship between smoking and risk of contracting a particular disease, it is much more difficult, perhaps impossible, to attribute a specific person's disease to their smoking history. And at present, many European public health care systems seem to lack the activity-based costing models required to substantiate estimates of additional cost. The time-lags between smoking and the onset of smoking related disease create further difficulties. So, with both quantity and price open to dispute, the levy could be vulnerable to challenge. The model may also be difficult to reconcile with existing models of public health governance and public finance. There would be issues of how to determine the distribution of funds across the health care system, and the possibility of actors 'gaming' the system to increase income.

Regulation

A conventional approach elsewhere in the economy is to reduce the scale of harm caused

by a product by tightening regulatory controls on aspects of the product which causes damage. Thus vehicles are subject to tighter emissions standards, and chemicals are subject to higher standards of safety testing.

Today's tobacco control strategies embody an assumption that prohibition of tobacco on grounds of its health impacts is not a viable option at this point in time and that ultimately consumers have the right to make an informed choice (notwithstanding the addictive nature of the product).

As a general case, public policy can be used to reduce the social costs of products or processes by providing implicit or explicit encouragement to manufacturers to innovate and put cleaner, less damaging products onto the market. The discussion of policy options in this chapter has treated tobacco products of a particular kind as uniform goods, i.e. it has assumed that all cigarettes (for example) are equal in terms of their impacts and ultimate costs. However, if there was significant product differentiation in the market, with some cigarettes being less harmful than others, then the preferred policy mix might well be different.

The proposition of a 'healthier' cigarette is one that many in public health would struggle with. The historical precedents are not encouraging - in the 1970s and 1980s, the tobacco industry made claims that 'light' and low tar cigarettes were safer but these products were subsequently shown to be as dangerous as conventional cigarettes because of the way in which smokers used them. Proving that a new kind of cigarette is associated with lower levels of harm is problematic, much more so than showing that an industrial product generates lower levels of a pollutant. However, if such products came to market they might stimulate greater differentiation in policy. The issue of how public policy could (passively or actively) support a transition within the market to lower impact tobacco products could be further explored.

Justice and equity

The tax and tradable permit models are both grounded in the proposition that 'the polluter should pay', and that by making sure that the prices in the market reflect the full costs to society of consumption of the goods in question then overall efficiency, and social justice, are improved. The time-lags associated with smoking-related disease pose some challenges to this model. The burden on the health care system today is a consequence of decades of smoking history so if the costs (i.e. the tax level or permit price) are set with reference to current health and other costs then, in effect, today's smokers are compensating society for the costs of choices made by smokers in the past. But if the costs are set with reference to projected future health care costs associated with present smoking patterns then the revenues may not match current social costs.

E.6 Final remarks (Chapter 6)

Health costs in a world without smoking

The economic analysis presented in this report provides an estimate of the costs incurred by European public health systems when treating smoking-related diseases in a specific year (2000). This information is helpful in considering certain policy questions about, for instance, the relationship between tobacco duty revenues and observed health care costs, or the level of costs that health care providers might seek to recover from manufacturers.

But it is not possible to say with certainty whether health service costs would have been higher or lower had European society been free of smoking for the past 50 years with this model. For that, a detailed simulation of a set of hypothetical conditions would be required, including assumptions about longevity and disease prevalence among the people who would be alive today had they not died from smoking-related causes.

Forward-looking scenario studies, which combine known historical patterns of smoking with

scenarios for future smoking prevalence, are perhaps a more useful line of research in such cases – allowing estimation of the future health, pension and other costs under different conditions. This study does not, therefore, provide answers to questions about the ‘lifetime’ health costs of smokers as compared to non-smokers.

Health economics and data for better policy

Public domain information on the economics of public health care systems and the economic burden of individual diseases are surprisingly scarce given that the EU spends 7% of its GDP on health care services. The deficit of data on the costs of public health care services in the European Union is a severe impediment to construction of robust estimates of the cost of smoking. Exhaustive searches of the literature, combined with extensive consultations with national and international agencies, yielded very few examples of activity-based costing of the kind needed for this kind of analysis.

Demand for health and social care services is projected to rise substantially in the decades ahead as the demographic structure of the EU population changes. The total cost is set to increase substantially too. A better understanding of the economics of treatments and services seems essential.

1 INTRODUCTION

1.1 The purpose of the project

This study was commissioned by DG SANCO of the European Commission. It has been completed by a team led by GHK Consulting working with the support of the University of Exeter in the United Kingdom and the Public Health Advocacy Institute in the United States of America.

In its Article 19 on product liability, the Framework Convention on Tobacco Control (FCTC) asks all Parties to consider taking legislative action or promoting their existing laws, where necessary, to deal with criminal and civil liability, including compensation where appropriate. The Community is a Party to the FCTC, but has not yet really explored this article so far. In its recent resolution on the Green Paper "*Towards a Europe free from tobacco smoke: policy options at EU level*"¹, the European Parliament asked the Commission to apply product liability in respect of manufacturers and to introduce manufacturer liability for the financing of all health costs arising from tobacco consumption.

In response to both, the Commission announced in its second implementation report on the application of the Tobacco Products Directive that it would commission a study on the best ways forward to strengthen product liability of tobacco manufacturers and importers in the EU, as well as their liability for financing the health costs arising from tobacco consumption.

This is a scoping study set in that context. It examines:

- The costs of smoking to EU society – summarising existing data and estimating the direct and indirect costs incurred by national health systems in 27 Member States together with the economic and social costs (lost productivity and premature mortality) incurred across the EU as a whole;
- The potential mechanisms and policies either currently or potentially available to actors (Member State governments, NGOs or other organisations) to recover the external costs that smoking has and continues to impose on Member State healthcare systems and economies;
- The potential role of litigation – summarised liability law suits related to smoking and tobacco consumption in EU, looking at the differences in jurisdiction between the US and the EU law in general and with regard to the liability of the tobacco manufacturer, and outlining the potential areas for change in existing law to increase manufacturer liability in Europe; and
- The potential role of other policy tools to internalise the external costs of smoking or to achieve cost recovery, considering their advantages and disadvantages.

1.2 Approach and acknowledgements

This report draws on extensive desk-based research and consultations with specialists in law and health economics on both sides of the Atlantic. The economic analysis summarised in Chapter 2 benefited from inputs made by professional health economists in the EU and North America, and from the assistance offered with data and research by staff of a number of public health organisations, non-governmental organisations and government officials. The authors would like to acknowledge in particular the contributions and support received from Dr Jürgen Rehm of the Centre for Addiction and Mental Health, Toronto and the

¹ Adopted 24 October 2008.

University of Toronto, and Dr Jill Boreham of the Clinical Trial Service Unit (CTSU) at Oxford University, as well as from staff at the OECD, WHO Europe, Action on Smoking and Health (ASH), the Institute of Alcohol Studies, and from the “Health Evolution Monitoring (HEM) – Closing the Gap” project team at the Maria Skłodowska-Curie Memorial Cancer Centre and Institute of Oncology in Warsaw.

We are also grateful to Professor Vincenzo Zeno-Zencovich from the University of Roma Tre for sharing his tobacco litigation experience with us.

1.3 Structure of this report

This report sets out the analysis in the following order:

- Chapter 2 provides an estimate of specific social costs incurred in the European Union as a result of the health impacts of smoking, focusing on the treatment costs borne by public health care systems, the productivity losses suffered by the economy as a result of smoking-related illness, and the costs to society as a whole arising from premature mortality;
- Chapter 3 provides an introduction to a suite of policy tools available to policy makers for tackling externalities;
- Chapter 4 examines the present and future prospects for use of liability as a means of recovering, or internalising, the external costs of smoking by reference to experience in the European Union and North America;
- Chapter 5 explores the potential for use of other policy tools to internalise the external costs of smoking and for recovery of treatment costs by health care systems;
- Chapter 6 summarises the findings and offers some concluding remarks.

Annexes provide details of the literature used in the study, a detailed explanation of the method used to estimate the cost of smoking, background information on EU policies for addressing externalities and a summary of tobacco cases in EU Member States.

2 THE EXTERNAL COSTS OF SMOKING IN EUROPE

2.1 Introduction

This chapter presents estimates of the costs that smoking imposes on European healthcare systems, as well as on the wider EU economy. The second section outlines the concept of 'negative externalities' and provides a typology of the 'external costs' that may arise in relation to smoking. The third section summarises the existing literature on cost estimates for Europe. The fourth section introduces a costing model developed for monetising costs of smoking to Europe, and presents the estimates developed through the modelling process.

The model developed for this study includes an analysis of the three major cost factors of smoking:

1. The treatment of smoking related illnesses financed from public funds;
2. Loss of productivity in the economy due to smoking-related absenteeism; and
3. Premature death among the population attributable to smoking.

The estimates made in this chapter apply to the EU as a whole for the base year 2000, which is the most recent year for which a robust set of EU data are available. Although the model provides insight into the likely distribution of the costs across Member States, cost factors were not analysed separately on a country-by-country basis, because the data required to support such an exercise were not available. Country-level estimates, included as illustrations of the burden of smoking on societies, should be understood as interim steps in the overall calculations and not seen as an assessment of external costs for individual Member States.

2.2 Smoking as a negative externality

A large share of the social cost of smoking is 'internal', i.e. it is borne by consumers themselves. The direct financial cost is given by the price of the tobacco product and is very transparent. However, the indirect costs of smoking to the individual in terms of impacts on their health may be hidden. It is widely argued that many smokers are not fully aware of the health risks involved and they underestimate the impact of tobacco consumption on their health (Prabhat & Chaloupka, 1999). Some researchers refer to the fact that consumers often take up the habit in childhood or adolescence, when they lack the capacity to make informed decisions, whilst at later ages they might find it hard to give up smoking due to its addictive nature (Laux, 1999).

In addition to the internal costs to the individual, smoking also imposes 'external' costs that are borne by actors other than the smoker. Smoking thus creates a 'negative externality', meaning that its consumption "imposes costs on others which are not reflected in the prices charged for the goods and services being provided"².

There is broad agreement amongst social scientists that the total cost of smoking on the society is not fully taken into consideration when consumers make purchasing decisions. This view is shared by the European Commission³, World Health Organisation (WHO)⁴ and

² OECD definition of externalities: <http://stats.oecd.org/glossary/detail.asp?ID=3215>.

³ See e.g. the Green Paper "Towards a Europe free from tobacco smoke: policy options at EU level". DG SANCO: http://ec.europa.eu/health/ph_determinants/life_style/Tobacco/Documents/gp_smoke_en.pdf.

⁴ WHO's Tobacco Free Initiative (TFI): <http://www.who.int/tobacco/en/>.

the World Bank⁵. In addition to the cost directly borne by individual smokers (such as the price paid for cigarettes, or out-of-pocket payments later for medical treatment), tobacco consumption and specifically smoking imposes 'external costs' to society.

The external costs of smoking fall into two broad categories (Chaloupka, Tauras, & Grossman, 2000):

- **Physical externalities**, including health effects on 'passive' smokers, and nuisances smoking creates for non-smokers e.g. odour of tobacco in garments and rooms; and
- **Financial externalities**, which are costs of smoking that are at least partially borne by other parties. These costs include: the healthcare cost of treating the illness caused by smoking; losses to employers from increased absenteeism; and losses to society from premature mortality. The financial burden, borne by today's and tomorrow's taxpayers, on public health systems that supply treatment for both active and passive smokers, is significant (disregarding potential 'savings' in full life-cycle healthcare costs). All else being equal, healthcare treatment expenditure on an average smoker outweighs that of an average non-smoker in any given year, due to the higher proportion of their lives that smokers spend in ill health (Prabhat & Chaloupka, 1999). The most substantial cost to society however seems to be the economic costs associated with premature mortality.

According to economic theory, these substantial externalities cause a market failure in so far as the price of a cigarette does not reflect the full costs and/or benefits of production⁶ and consumption. If the total social cost of smoking was reflected in the price it would be possible to compensate those individuals and or organisations which are negatively affected by smoking (Prabhat and Chaloupka 1999). Additionally, charging the socially optimal price could potentially reduce the number of smokers, compared to a scenario where it was not.

The question of attribution is interesting. Is it the smoker or the manufacturer who causes the externality? Factors of knowledge, addiction and fault may be considered. Indeed the issues are similar to those worked through by the courts in establishing liability, as described later on in this report. The answer is less relevant to the quantification of external costs as undertaken here but it is relevant to the incidence question (i.e. who is directly affected by the policy measure and whether the balance of impact reflect the perceived balance of responsibility).

It could well be argued that there is some sharing of responsibility between the smoker and the manufacturer – one produces the offending product, the other consumes it and in so doing creates the smoke that causes the harm. But the 'pollution' is triggered by the consumption of the cigarette – so the action (internalisation of the external costs) acting at the point of purchase or on consumption itself should lead to efficient outcomes. By contrast air pollution arising as a by-product of cigarette manufacture would be internalised most efficiently by direct measures on the factory, not the cigarette consumer.

There are analogies to pollution from road vehicles. Are the externalities arising from car exhaust emissions attributable to the driver, the fuel manufacturer or the vehicle manufacturer? In Europe such externalities through a combination of 'fixed measures' – principally the emission standards applied to vehicles (and thus to manufacturers) and 'variable measures' applied through fuel duty (and thus to consumers). In most EU countries the duty or tax is now a very high proportion of the final sales price of the fuel and

⁵ The World Bank's "Curbing the Epidemic" initiative: <http://www1.worldbank.org/tobacco/reports.asp> .

⁶ Production is used here in an extended sense to include costs of operating the supply chain, such as expenditure on transport and storage.

may be held to address externalities such as air pollution and congestion. Fuel duties have a direct impact on sales of fuel (and thus on fuel companies), and an indirect impact on vehicle manufacturers (who may sell fewer cars, and/or proportionately small, more efficient cars on which they tend to make less profit than large vehicle).

Policy measures that reduce consumer purchases of cigarettes have impacts that are transmitted up through the supply chain and have an immediate financial impact on manufacturers, analogous perhaps to the impacts on petrol suppliers, and in due course on vehicle manufacturers, of road fuel price increases. In private health insurance markets the higher probability of a pay-out is reflected in the higher premiums that insurance companies charge the smoker compared to a non-smoker in the same circumstances. Private healthcare costs subsequently incurred may be inconvenient for the insurer but they are not really social externalities, being internal to the private health care market. By contrast, the European model of public health care has no equivalent direct means of signalling to the smoker the consequences that their choices have for health care expenditure. The consequential costs, when they arise, are met by society at large and an externality has been created. Similar arguments can be applied to other health conditions that are linked to lifestyle choices.

2.3 Previous estimates of the cost of smoking

The estimated costs of smoking to national level economies and healthcare systems in the literature vary significantly, based on the methodology used and the population(s) studied. The findings, methodologies and assumptions of over 60 studies⁷ that estimated the external costs of smoking to society were reviewed in the process of developing the costing model used in this study. Estimates of either the total, direct or indirect cost of smoking exist in the literature for 56 countries, 14 of which belong to the EU27⁸.

Direct healthcare costs

In their review of the economics of tobacco control, Prabhat and Chaloupka (1999) estimated the overall proportion of annual healthcare costs attributable to smoking to be between 6% and 15% of total annual healthcare expenditure in developed countries.

The ASPECT Consortium (2004) study estimated the aggregate external costs of smoking for all EU Member States. The study estimated the total costs for respiratory disease and cardiovascular disease⁹, attributable to smoking, to be between €98 billion and €217 billion (ASPECT Consortium, 2004).

A number of studies have examined the costs of smoking at individual country level. The majority of these studies focused only on estimating the direct healthcare costs of smoking rather than the total social cost. Estimates for individual EU Member States ranged from €26 million in Estonia (Taa, Kiiwet, & Hu, 2004) to €17 billion in Germany (Neubauer, 2006).

In general, as might be expected on the basis of the methodologies used, the estimated healthcare costs associated with smoking were highest in high income countries with large populations¹⁰. Estimates of the costs smoking imposes on the healthcare systems of populous and/or high income countries (Germany, Poland, France and the United Kingdom)

⁷ A full list of the studies and their key findings is given in Table A2-2.

⁸ Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Netherlands, Poland, Spain, Sweden, Ukraine, and United Kingdom.

⁹ See Figure 2-2: Diseases and adverse health effects caused by active and passive tobacco consumption.

¹⁰ Healthcare expenditure per capita tends to be higher in high income countries.

were dramatically - up to 100 times - higher than estimates generated for the other five European countries which were covered by comparable studies¹¹.

However these estimates are not directly comparable, due to differences in data sources, the medical conditions, cost and population coverage included, and differences in the structure of national healthcare systems. For example, a Polish study (KrzyŜanowska, 2004) estimated the annual healthcare costs for smokers rather narrowly, whilst an Icelandic study covered a wider range of costs, such as costs of nursing outside of hospitals (Sigillum Universitatis Islandia, 2000). Most studies focused on the treatment costs of current smokers but some, such as Kang's (2003) work on Korea, included both current and former smokers. The studies also varied in terms of whether or not they included passive smokers.

Indirect economic costs

We reviewed seventeen studies that had estimated both the direct healthcare costs and the indirect economic costs that smoking imposes at a national level. On average, the indirect costs of smoking for national economies were 2.7 times greater than the direct healthcare costs. However, the estimated ratio varied significantly across studies, and was as high as 25 and 14 in the Australian (Collins & Lapsley, 2008) and Korean studies (Kang, 2003), respectively. The estimates in these two studies were based on a much wider array of social costs, including addiction.

In general, the ratio of indirect to direct costs was higher in studies which included estimates of the economic costs of premature mortality, which emerges as a major cost factor. For example, a Hungarian study found that economic cost from lost income due to premature mortality from smoking was 4 times greater than the direct cost to the public healthcare system (Barta, 2000).

Productivity costs

Little information exists about the productivity costs of smoking in Europe. While there are estimates of productivity losses for 13 EU countries¹², the results of the studies are not easily comparable due to use of different methods. The review incorporated findings from both cross-sectional and longitudinal studies which focused either on several tobacco related conditions affecting a single population group or smoking in general on multiple population groups. However, generalising any of the study results to multiple countries is not possible, due to differences in economic and social environments, which affect both the studied predictors and the sick leave outcomes. A handful of studies have estimated the amount of unproductive work time spent by smokers, and non-smokers. These have mostly used self-reported subjective assessments, and have focused on a limited range of economic sectors. The individual assessments can vary significantly; thus all estimates carry a high degree of uncertainty.

Counter arguments

There are also studies that suggest that smoking does not impose additional costs to healthcare systems. For example, a study focused on the Czech republic that was commissioned by a tobacco company (Arthur D. Little, Inc., 2000) suggested that there would be a net gain to the public budget from tobacco consumption, as those who consume tobacco have shortened life expectancies. Their lifetime health cost is less than that of the non-smoking population, and state pensions and public housing need not be provided, 'saving' the Czech budget approximately €29.5 million¹³ (GBP£21.5million) in

¹¹ For instance Estonia, Iceland, Finland, Hungary, Spain.

¹² Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Netherlands, Poland, Spain, Sweden, and the UK.

¹³ £1=€1.40374 on 04/01/1999.

1999. Together with tax revenues from tobacco consumption, net government revenues were estimated to amount to about €156 million. The findings of this study have, however, been refuted by other authors (Ross, 2004) as, although smokers have shorter life spans, the proportion of their lives spent in ill health is significantly higher (Brønnum-Hansen & Juel, 2001).

2.4 The costing method used here

The costing model developed for this study was informed by a review of the existing literature on the cost of smoking, focusing on work conducted for the EU and in North America. In particular, it starts from the methodology developed in the seminal work by Peto *et al.* (1992), and takes into account the approach used in the Institute of Alcohol Studies report on the cost of alcohol in Europe (Institute of Alcohol Studies, UK, 2006), the 'Deaths From Smoking' project (Peto, 2006) and the study on the 'Cost of Tobacco Consumption in Europe' (ASPECT Consortium, 2004). It also benefits from consultations with a number of external experts and has been subject to a peer review process within the project team.

The model covers three areas where active smoking, and to a lesser degree passive smoking, have been shown to create 'external' costs:

1. **Direct costs to European public healthcare systems**, in terms of the estimated amount of healthcare expenditure attributable to smoking in a given year (i.e. full life-cycle health costs were not considered), financed from public resources;
2. **Productivity loss to the EU economy** due to increased absenteeism and early retirement attributable to smoking; and
3. **Monetised costs of premature mortality** to the European economy attributable to smoking.

The underlying cause-effect model is shown in Figure 2.1. The model focuses on harm to individuals from direct smoking¹⁴. It does not explicitly estimate harm due to exposure to environmental tobacco smoke (ETS)¹⁵ ('passive' smoking). The estimates of mortality attributable to smoking generated by the model include smokers who were exposed to ETS, but it does not differentiate between those smokers who became ill purely due to smoking and those who became ill due to ETS¹⁶. An alternative costing method has been developed to provide an additional estimate of the public healthcare systems costs arising from non-smokers being exposed to environmental tobacco smoke (ETS).

The model does not cover the following costs:

- **Unemployment costs** to state budgets such as incapacity benefits that might be ultimately attributable to smoking related ill health. These are heavily dependent upon Member States' benefit regimes and welfare systems. Changes to regulations governing unemployment or incapacity benefits would have a greater impact on the unemployment costs of smoking than any incremental changes in the prevalence of smoking related illnesses. In addition, extensive research on which to base cost estimates for each Member State, would be required to uncover the details of national social security systems.

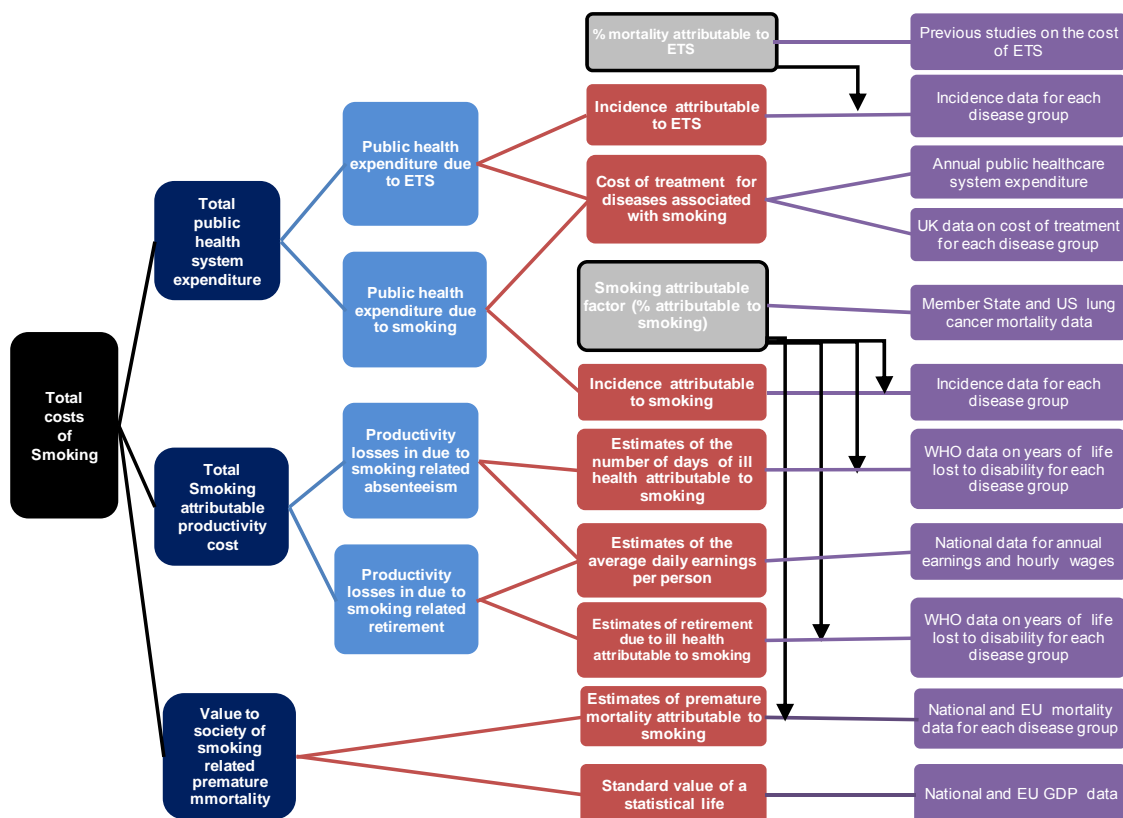
¹⁴ Although other forms of tobacco use could impose 'external' costs these costs were not taken into account in the construction of the model, due to a lack of information on which to base estimates of morbidity and mortality directly attributable to their use.

¹⁵ The costing model estimates the number of deaths attributable to smoking therefore includes smokers who were exposed to ETS. However, due to a lack of reliable data it was not possible to differentiate between those smokers who became ill purely due to smoking and those who became ill due to ETS.

¹⁶ Passive smokers are included in national morbidity and mortality data. However it was not possible to estimate the proportion of morbidity and mortality that could be directly linked to passive smokers, or the proportion of the population that was exposed to environmental tobacco smoke (ETS).

- **Costs to social care systems**, such as nursing homes or rehabilitation. These fall outside the scope of this study, which focused on direct healthcare costs, and are also heavily dependent on Member States' systems of in-kind welfare benefits. Extensive research would be required to uncover the details of national social security systems, on which to base cost estimates for each Member State.
- **Costs associated with crime.** Smuggling is the major criminal activity associated with tobacco. While it does impose tangible costs to the state budget in the form of lost tax revenue, law enforcement authorities and business facing such unfair competition, these costs do not originate from smoking *per se*, but from the high taxes on tobacco products. Also, in the absence of smoking, there would not be any tax revenue from tobacco products and no industry to be harmed by smuggling.
- **Intangible costs** such as pain and suffering, as the monetisation of these would raise methodological questions that would not be easily resolved. The price individuals attach to pain can be extremely variable, thus all estimates would carry a high degree of uncertainty. Willingness-to-pay (WTP) approaches that were robust enough to use for calculations were not found in the literature review conducted in this study.
- **Future health costs of current tobacco consumption.** There is a long time lag between smoking initiation and the onset of most smoking-related illnesses (ASPECT Consortium, 2004). Therefore, incidence and mortality data for any given year reflect past tobacco consumption. Additionally, it would be very difficult to calculate future costs of current consumption, as this would require assumptions on the evolution of medical science, prices and wages within the health sector, employee behaviour, future social benefit payments etc.

Figure 2.1 Map of the model for estimating the cost of smoking to EU society



2.5 Medical conditions caused by smoking

The model estimates the health costs of smoking by reference to the impacts of medical conditions with a recognised causal link to smoking. It excludes those conditions which are aggravated by smoking. The list of conditions used in this costing model was derived from a review of current medical evidence, the prime source being the summary list collated by the US Surgeon General (U.S. Department of Health and Human Services, 2006), and the International Agency for Research on Cancer (IARC) (IARC, 2004). Diseases where medical evidence is insufficient to conclusively prove that smoking increases the risk of developing such a disease were excluded from the model.

As medical research has advanced, the list of medical conditions found to be associated with tobacco consumption has increased. In 2004, as shown in a study by the ASPECT Consortium, tobacco consumption was considered as a proven risk factor for 16 different cancers (ASPECT Consortium, 2004), twice the number of cancers found to be associated with cigarette smoking in 1986 (WHO International Agency for Research on Cancer, 1986)

The health impacts of long-term effects of smoke during pregnancy were excluded from the model, as there is insufficient evidence to support a causal relationship between maternal smoking during pregnancy and negative impacts on the health outcomes of children.¹⁷ Additionally, there is also debate amongst those supporting a causal relationship as to the extent to which it was the mother's smoking during her pregnancy and not other compounding factors that lead to the children's poor educational/health outcomes¹⁸.

Figure 2.2 outlines the medical conditions with a proven causal relationship with active smoking and environmental tobacco smoke (ETS) exposure. This is an updated version of the list of diseases included in the original *Peto et al* 1992 study.

Figure 2.2 Diseases and adverse health effects caused by active tobacco consumption¹⁹ and environmental tobacco smoke (ETS) exposure

Cancers	Respiratory diseases and adverse health effects	Other diseases and adverse health effects	Cardiovascular diseases and adverse health effects
Lung	Chronic obstructive pulmonary disease (COPD)	Other medical causes, excluding liver cirrhosis	Vascular diseases
Upper aerodigestive	Asthma, pneumonia & other acute respiratory illnesses	Digestive diseases	Coronary heart disease
Other forms of cancer	Other non-acute respiratory disease ²⁰	Other conditions ²¹	Aortic aneurysm
		Reproductive problems	Peripheral arterial disease

¹⁷ There is a strong body of evidence that there is a relationship between maternal smoking during pregnancy and negative impacts on the health and educational outcomes of children. However, our understanding is that there is still a debate as to whether or not it is a causal relationship or instead reflects the influence of unmeasured characteristics that differ between smokers and non-smokers.

¹⁸ Maternal smoking has been used in a UK longitudinal study as a proxy for "other factors which may be a marker for her social status that is not measured by family income, her education, or her father's social class, and the association between prenatal smoking and education" (Case, Fertig, & Paxson, 2005). Findings from U.S longitudinal data suggest that previous studies may have overestimated the association of maternal smoking with offspring cognitive ability, as they did not adjust for maternal education and/or IQ (Batty, Der, & Deary, 2006). Other studies have found that if the mother had smoked during her first, but not second pregnancy, both offspring were at increased risk of poor school performance (LAMBE, 2006).

¹⁹ Note: shaded areas indicate the disease categories included in Peto et al 1992 study. Non shaded areas indicate disease categories where the causal link between smoking and incidence has been established after 1992.

²⁰ For adult smokers: premature onset of a decline in lung function, all major respiratory symptoms, poor asthma control, and respiratory effects in utero with maternal smoking. For adolescent smokers: impaired lung growth, early-onset of lung function decline, and respiratory symptoms.

²¹ Includes: cataract, hip fractures, Crohn's disease, age-related macular degeneration, tobacco amblyopia, osteoporosis, adverse surgical outcomes related to wound healing and respiratory complications.

Source: Peto, et al. (2006), Peto, Lopez and Boreham, et al. (1992) U.S. Department of Health and Human Services (2006) and IARC (2004), and IARC (2004)

The diseases shaded grey in the table above have formed the basis for several key studies calculating mortality and morbidity rates for smoking-related illness, particularly the 'Deaths From Smoking' project (Peto, 2006) and the ASPECT Consortium (2004) study.

The following disease categories associated with smoking²² and ETS exposure were included in the costing model developed in this study:

1. Lung cancers²³;
2. Upper aerodigestive (UAD) cancers²⁴;
3. Other forms of cancer;
4. Cardiovascular diseases (CVD)²⁵;
5. Chronic obstructive pulmonary disease (COPD); and
6. Acute respiratory illnesses²⁶.

The category "acute respiratory illnesses" is an amalgamation of several WHO disease categories that have links to smoking; it includes asthma, lower respiratory infections, and other respiratory diseases. However in order to be consistent with the disease categories used by Peto et al. (1992), the category excludes tuberculosis, upper respiratory infections and otitis media. The category "other medical causes, excluding liver cirrhosis", highlighted in Figure 2.2, although considered in some previous studies, was excluded from our costing model due to both a lack of consistent data as to which conditions to include in the category, and reliable healthcare spending estimates.

Although the most recent review of the medical evidence by the US Surgeon General has found smoking to be a causal factor in all the disease categories in Figure 2.2, reliable estimates of the smoking attributable factor (SAF), and/or the cost of treatment could only be made for those disease groups listed above.

The relative risk of a smoker developing a disease associated with smoking – as compared to a non-smoker – was quantified by Peto et al. (1992). This concept of 'relative risk' was used in this model in calculating the proportion of cases in each of the key disease categories that may be associated with smoking, i.e. the 'smoking-attributable fraction' (SAF). The SAF is a measure of what proportion and how severely the population was estimated to have been exposed to tobacco smoke. Using the methodology of the Peto et al. (1992) study, the SAF was estimated on the basis of observed lung cancer mortality. The number of cases of 'smoking attributable diseases' (SAD) in individual Member States was calculated by multiplying the country SAF figures with the total incidence in the respective disease categories. Relative risk and corresponding SAF figures for the most relevant disease categories are given in Figure 2.3.

²² See Table A2.1 for a full list of all the conditions included in the six disease categories included in the costing model.

²³ Includes trachea, bronchus and lung cancers.

²⁴ Includes mouth, oropharynx and oesophagus cancer.

²⁵ Includes ischaemic heart disease and cerebrovascular disease; but excludes rheumatic, hypertensive, and inflammatory heart diseases, and other cardiovascular diseases.

²⁶ Includes: asthma, lower respiratory infections, but excludes: tuberculosis, upper respiratory infections and otitis media.

Figure 2.3 Excess relative risk and smoking attributable fraction (SAF) for key smoking-related disease groups

	Member State	Lung cancer	UAD cancer	Other cancer	COPD	Acute respiratory	CVD
Excess relative risk	EU27	5.50	1.42	0.10	2.88	0.30	0.29
Smoking attributable fraction (SAF)	Austria	82%	54%	7%	70%	20%	19%
	Belgium	85%	58%	9%	74%	23%	22%
	Bulgaria	78%	48%	6%	65%	16%	16%
	Cyprus	85%	59%	9%	74%	23%	23%
	Czech Republic	88%	65%	11%	79%	28%	27%
	Denmark	88%	67%	12%	80%	30%	29%
	Estonia	86%	62%	10%	77%	26%	25%
	Finland	79%	50%	6%	67%	17%	17%
	France	83%	56%	8%	72%	21%	21%
	Germany	82%	55%	8%	71%	20%	20%
	Greece	85%	59%	9%	74%	23%	23%
	Hungary	90%	70%	14%	83%	33%	33%
	Ireland	87%	64%	11%	78%	27%	26%
	Italy	84%	58%	9%	74%	23%	22%
	Latvia	83%	55%	8%	72%	21%	20%
	Lithuania	83%	56%	8%	72%	21%	21%
	Luxembourg	85%	60%	9%	75%	24%	23%
	Malta	80%	51%	7%	68%	18%	18%
	Netherlands	88%	65%	11%	79%	28%	27%
	Poland	89%	68%	13%	81%	31%	30%
	Portugal	74%	42%	5%	60%	13%	13%
	Romania	83%	56%	8%	72%	21%	21%
	Slovakia	87%	64%	11%	78%	27%	27%
	Slovenia	85%	60%	9%	75%	24%	23%
	Spain	83%	55%	8%	71%	21%	20%
	Sweden	76%	45%	5%	63%	15%	14%
	United Kingdom	85%	59%	9%	74%	23%	23%
	EU27	84%	58%	9%	73%	23%	22%

Source: (Peto R, 1992:), GHK calculations

Due to a lack of data on which to base estimates of what proportion and how severely the population was estimated to have been exposed to tobacco smoke, it was not possible to develop an ETS attributable factor (EAF). However, a report by the Smoke Free Partnership (Jamrozik, 2006) has suggested that approximately 1.5% of the EU mortality for health conditions associated with smoking²⁷ could be attributed to environmental tobacco smoke exposure in the non-smoking population. This estimate was used as an alternative to the EAF. However, due to the different underlying assumptions of the methods used to estimate the public healthcare costs of smoking and ETS the results are not directly comparable.

The detailed methodology, including an explanation to the calculations done and underlying assumptions used, is outlined in Annex 2 of this report.

²⁷ Jamrozik (2006) estimated ETS associated mortality for the following four categories: ischaemic heart disease, stroke, lung cancer, and chronic non-neoplastic respiratory disease.

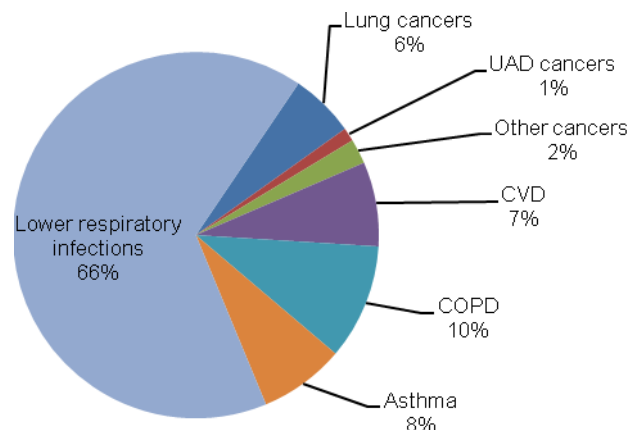
2.6 Model results for the costs of smoking²⁸

2.6.1 The cost to EU public healthcare systems

Public healthcare cost attributable to smoking

It has been well documented through clinical evidence²⁹ that smoking increases the risks of individuals contracting certain diseases. Based on WHO data, an estimated 14 million people in the EU27 suffer from the six main disease categories that are associated with smoking. Application of standard smoking attributable factors to this population suggests that around 26% of these people (3.6 million) may have fallen ill directly as a result of smoking. Amongst these cases of directly smoking-attributable diseases (SADs), lower respiratory infections were by far the most common, comprising 67% of all cases. Other smoking attributable illnesses with high prevalence were COPD (9%), cardiovascular diseases (CVD) (7%), asthma (7%) and lung cancers (5%).

Figure 2.4 Lower respiratory infections are the most common of the smoking-attributable diseases (SADs) in the EU27



Source: WHO, GHK calculations. Note: excludes estimates of ETS attributable incidence (EADs)

The results of the costing model suggest that the disease profiles vary between Member States, particularly for respiratory conditions. Chronic obstructive pulmonary disease (COPD) accounted for 15% of all cases of smoking attributable illness in the EU15, but only 4% of cases in the 12 Member States joining the Union between 2004 and 2007. These differences in incidence profiles have a significant impact on the estimated costs of smoking on both healthcare systems and the economy in general due to losses in labour productivity and premature death.

The estimates of the costs to public healthcare systems of treating SADs are based on incidence data from the Organisation for Economic Co-operation and Development (OECD) and per case expenditure based on data from the United Kingdom (UK), for 2004. UK data were used to estimate EU costs, as an exhaustive review of national and international sources did not reveal any other suitable sources. These UK costs were adjusted to reflect

²⁸ A base year was used in order to standardise the data. Estimates of the smoking attributable fraction (SAF) were a key component in calculating the proportion of deaths and illness that could directly be attributed to smoking. The most up to date estimates of the SAF were available for the year 2000. The SAF was also one of the most difficult data variables to transpose to a base year. The year 2000 was therefore used as a base year in order to align all other data variable sets to the SAF data.

²⁹ See "The health consequences smoking: a report of the Surgeon General", (2006) and "IARC Monographs on the Carcinogenic Risks to Humans: Tobacco Smoke and Involuntary Smoking" (2004) for summaries of clinical evidence.

the relative levels of GDP per capita, healthcare expenditures, and public funding of healthcare in each Member State, compared to the United Kingdom. The proportion of the total budget spent by the UK National Health Service (NHS) by disease categories was calculated for the 2003/04 financial year. As spending data were not available for the year 2000, it was assumed that the proportion of NHS spending per disease (SPD) category was the same in 2003 as in 2000.

Total expenditure on healthcare in the EU27 accounted for 8% of GDP in 2000, corresponding to approximately €669 billion³⁰. This includes spending by public social security funds and government 'public expenditure'³¹ as well as spending by individuals, charities, and companies 'private expenditure'³². On average, 74% of healthcare expenditure in the EU was financed from public resources³³. Public expenditure on healthcare,³⁴ as a share of national income, was fairly consistent across the EU27, usually ranging between 5% and 7% of national GDP, Germany (8%) and Romania (2%) being notable exceptions.

Figure 2.5 Estimated public spending on smoking attributable diseases (SADs) in 2000 by country (model calculations).

	Total healthcare spending All diseases		Public healthcare spending All diseases		Estimated public spending on SADs		
	As % of GDP	Million €	as % GDP	Million €	as % total healthcare spending	Million €	as % of GDP
Austria	8.0	16,602	5.6	11,572	5.8	668	0.3
Belgium	8.7	21,901	6.2	15,594	6.4	993	0.4
Bulgaria	3.9	534	3.0	415	4.0	17	0.1
Cyprus	7.9	796	4.3	428	3.6	15	0.2
Czech Republic	7.2	4,428	6.6	4,047	7.2	292	0.5
Denmark	8.3	14,409	6.8	11,829	7.5	887	0.5
Estonia	6.1	372	4.7	286	9.6	27	0.4
Finland	6.6	8,725	5.0	6,553	5.3	350	0.3
France	9.5	136,930	7.2	104,067	6.1	6,314	0.4
Germany	10.6	218,625	8.0	164,187	5.9	9,695	0.5
Greece	8.3	11,448	4.6	6,354	6.4	407	0.3
Hungary	6.8	3,533	5.1	2,675	11.9	318	0.6
Ireland	6.7	7,025	5.1	5,325	7.1	376	0.4
Italy	8.1	96,476	6.0	71,103	6.3	4,501	0.4
Latvia	5.9	501	3.5	301	8.1	24	0.3
Lithuania	6.0	743	4.3	538	8.3	44	0.4
Luxembourg	5.8	1,276	5.3	1,173	6.5	77	0.3
Malta	8.8	371	6.0	254	5.5	14	0.3
Netherlands	8.1	33,855	5.5	22,852	7.2	1,644	0.4
Poland	6.0	11,143	4.2	7,767	6.6	516	0.3
Portugal	8.2	10,026	5.8	7,139	4.5	324	0.3
Romania	2.9	1,179	1.9	752	5.0	37	0.1
Slovakia	5.9	1,300	5.3	1,165	6.1	71	0.3
Slovenia	8.6	1,843	6.8	1,454	6.6	95	0.4
Spain	7.7	48,530	5.4	33,923	6.0	2,024	0.3
Sweden	8.4	22,379	6.5	17,299	4.9	841	0.3
United Kingdom	7.3	116,963	5.9	94,740	6.4	6,076	0.4
EU27	8.0	669,034	5.4	593,790	6.2	36,649	0.4

Source: GHK calculations

Public healthcare expenditure on treating SADs is estimated at around €36.6 billion in 2000, which corresponds to 6% of total healthcare spending in the EU27 and 0.4%

³⁰ Calculations based on OECD figures.

³¹ Includes funding from external resources, social security contributions and tax-based health expenditure.

³² Includes out-of-pocket payments, private expenditure on health and prepaid plans.

³³ GHK calculation based on general government expenditure on health as % of total expenditure on health.

³⁴ Includes: curative and rehabilitative care, long-term nursing care, ancillary services to health care, medical goods dispensed to out-patients, prevention and public health services, health administration and health insurance, and capital formation of health care provider institutions.

of GDP (Figure 2.5). This is on the lower end of estimates published in previous studies³⁵, which have estimated that between 6% and 15% of total annual healthcare spending³⁶ in developed countries can be linked to smoking. However, the costing model used in this study did not include:

- healthcare spending of private individuals (out-of-pocket payments and private insurance); and
- the costs associated with treating diseases in the “other medical causes, excluding liver cirrhosis” category.

The estimated level of healthcare expenditure used to treat SADs was relatively consistent across Member States, varying between 4% and 8%. The estimated level of public healthcare spending due to smoking was the highest for Hungary (12%), and Estonia (10%).

The healthcare costs of smoking were concentrated in the most populous Member States. **Over 73% of all EU27 healthcare spending due to smoking occurred in four countries: Germany, France, the UK, and Italy.** However, in terms of expenditure relative to total healthcare spending or to the country’s GDP, the 12 newly accessed Member States, especially Estonia, Lithuania, Latvia and Hungary, seem to be bearing a heavier burden.

Several factors contribute to this pattern of overall spending, including: smoking prevalence, incidence rates of individual SADs within Member State populations, and the estimated cost of treatment for various diseases in individual Member States.

Figure 2.6 Estimated distribution of healthcare expenditure on SAD by disease groups

Member State	Total spending (all SAD) Million €	Distribution of spending (% of spending on all SAD)						
		Lung cancers	UAD cancers	All cancers	Acute respiratory	COPD	CVD	All SAD
		%	%	%	%	%	%	%
Austria	668	21	4	7	4	32	31	100
Belgium	993	20	4	8	5	31	32	100
Bulgaria	17	16	3	4	16	19	43	100
Cyprus	15	6	3	3	39	19	31	100
Czech Republic	292	18	4	9	5	29	35	100
Denmark	887	18	4	9	5	28	36	100
Estonia	27	11	3	5	7	15	59	100
Finland	350	22	4	7	4	33	29	100
France	6,314	21	4	8	4	32	32	100
Germany	9,695	21	4	7	4	32	31	100
Greece	407	20	4	8	5	31	33	100
Hungary	234	12	3	5	7	16	58	100
Ireland	376	19	4	9	5	29	34	100
Italy	4,501	20	4	8	4	31	32	100
Latvia	24	12	3	5	7	17	56	100
Lithuania	44	12	3	5	7	17	57	100
Luxembourg	77	20	4	8	5	31	33	100
Malta	14	22	4	7	4	33	30	100
Netherlands	1,401	12	3	5	18	15	48	100
Poland	516	11	2	5	18	14	49	100
Portugal	324	25	4	6	4	35	26	100
Romania	37	14	3	4	17	17	45	100
Slovakia	71	12	3	5	18	15	48	100
Slovenia	95	20	4	8	5	30	33	100

³⁵ See: Annex Table A2-3 for a list of studies reviewed in the process of developing the costing model used in this study.

³⁶ According to a number of studies the lifetime healthcare cost of smokers could be around or possibly be even lower than that of non-smokers due to smokers’ reduced life expectancy. The shorter lifespan of smokers also means smaller average pension and social benefit payouts and lower public expenditure on nursing homes and social care. These are best regarded as examples of ‘perverse’ positive financial externalities of smoking.

Spain	2,024	21	4	7	4	32	31	100
Sweden	841	24	4	6	4	34	28	100
United Kingdom	6,595	19	4	9	5	30	34	100
EU27	36,841	20	4	8	5	30	33	100

Source: GHK calculations based on costing data Hospital Episode Statistics (England) - 2004-05.

The majority (83%) of the estimated treatment costs for cases directly attributable to smoking (SADs) were concentrated in three disease categories: CVD (32%); COPD (31%); and lung cancers (20%). In contrast, these three disease groups accounted only for 23% of the total incidence of SADs. The difference between incidence and cost impact is due to higher cost of treatment for these disease categories. The average unit cost (estimated annual cost per individual suffering a certain disease) of treating the selected SADs in the EU27 was estimated – based on relative treatment costs derived from data from the UK health system – to be around €10,100 in 2000. However, costs of treatment for individual diseases varied significantly, with the most expensive being CVD (€44,000 per case), cancers (€35,300 per case) and COPD (€30,600 per case). In contrast, diseases in the “acute respiratory” disease group are estimated to cost only €700 per case to treat. It should be noted the analysis is highly sensitive to baseline cost data, which are scarce. This issue is discussed in more detail in the concluding chapter of this report.

Public healthcare costs attributable to environmental tobacco smoke

There is a strong body of evidence that exposure to environmental tobacco smoke (ETS) increases the risks of developing certain diseases³⁷ such as lung cancer, and chronic obstructive pulmonary disease (COPD). At an individual level, the magnitude of the reported risks associated with ETS is small when compared to other risk factors such as smoking (Jamrozik, 2006). However, large numbers of people are exposed to ETS in workplaces and enclosed public places in many countries³⁸, in aggregate, the potential harm caused is considerable. A report published by the Smoke Free Partnership, estimated that in 2002 19,510 non-smokers in the EU25 died as a result of ETS exposure (Jamrozik, 2006)³⁹. This equates to approximately 1.5% of the EU mortality from ischaemic heart disease, stroke, lung cancer and chronic non-neoplastic pulmonary disease.

In total, public healthcare expenditure on treating EADs is estimated at around €1.2 billion in 2000, which corresponds to 0.2% of total healthcare spending in the EU27 and 0.01% of GDP (Figure 2.7).

2.6.2 Costs of productivity losses to the economy due to smoking attributable absenteeism and retirement

Smoking attributable ill health will not only cause individuals to be absent from work while they are employed, but will also cause some individuals to take early retirement. These losses will have a negative impact on the productivity of the EU27 economy.

³⁷ See: *IARC Monographs on Tobacco Smoke and Involuntary Smoking* for a summary of the findings investigating the link between ETS and lung cancer.

See also: (NHMRC Working Party, 1997), (Scientific Committee on Tobacco and Health, 1998), (NHMRC, 1987), (California Environmental Protection Agency, 1997), (Leslie Stayner, 2007,) for links between ETS and other diseases.

³⁸ Of non-smokers in seven European countries, 45% exposed by a spouse who smoked, 8% exposed by a cohabitants other than spouses, 71% of men and 46% of women exposed in a workplace, 20% exposed in vehicles, and 29% exposed in a public indoor settings such as restaurants.

³⁹ Sum of ischaemic heart disease, stroke, lung cancer and chronic non-neoplastic pulmonary disease across the 25 countries of the European Union (EU).

Productivity cost of smoking-attributable absenteeism

Smokers have a higher rate of workplace absenteeism than non-smokers⁴⁰. The costing model developed for this study estimated the economic losses to the EU from absenteeism due to smoking from estimates of the number of days lost to disease (DLD) suffered by smokers that could be directly attributed to their smoking, and the average daily earnings rate for employed persons aged 15 to 65 in each Member State.

Figure 2.7 Estimated public spending on ETS attributable diseases (EADs) in 2000 by country (model calculations)

	Public healthcare spending		Estimated public spending on SADs and EADs				
	All diseases Million €	as % GDP	Million €	as % public healthcare spending	as % of GDP	as % of SAD	on
Austria	11,572	6	24	0.2	0.01	3.6	
Belgium	15,594	6	32	0.2	0.01	3.3	
Bulgaria	415	3	1	0.2	0.01	4.9	
Cyprus	428	4	1	0.1	0.01	3.7	
Czech Republic	4,047	7	8	0.2	0.01	2.9	
Denmark	11,829	7	25	0.2	0.01	2.8	
Estonia	286	5	1	0.3	0.02	3.5	
Finland	6,553	5	14	0.2	0.01	3.9	
France	104,067	7	216	0.2	0.01	3.4	
Germany	164,187	8	341	0.2	0.02	3.5	
Greece	6,354	5	13	0.2	0.01	3.2	
Hungary	2,675	5	9	0.3	0.02	2.8	
Ireland	5,325	5	11	0.2	0.01	2.9	
Italy	71,103	6	148	0.2	0.01	3.3	
Latvia	301	4	1	0.3	0.01	4.1	
Lithuania	538	4	2	0.3	0.01	4.0	
Luxembourg	1,173	5	2	0.2	0.01	3.2	
Malta	254	6	1	0.2	0.01	3.8	
Netherlands	22,852	5	47	0.2	0.01	2.9	
Poland	7,767	4	15	0.2	0.01	3.0	
Portugal	7,139	6	15	0.2	0.01	4.6	
Romania	752	2	1	0.2	0.00	4.0	
Slovakia	1,165	5	2	0.2	0.01	3.3	
Slovenia	1,454	7	3	0.2	0.01	3.2	
Spain	33,923	5	70	0.2	0.01	3.5	
Sweden	17,299	6	36	0.2	0.01	4.3	
United Kingdom	94,740	6	197	0.2	0.01	3.2	
EU27	593,790	5	1,237	0.2	0.01	3.4	

Source: GHK calculations based on estimates in Jamrozik (2006)

An estimated 496 million days were lost in 2000 by adults in the EU27⁴¹ suffering from the six main disease categories that are associated with smoking, based on WHO data. Analysis suggests that 26% of these days (128 million) may have been lost directly as a result of smoking⁴². Amongst these cases of directly smoking-attributable absenteeism (SAAs), days were lost due to: CVD (39%), COPD (25%) and acute respiratory illnesses (25%). The UK (21 million days), Poland (21 million days) and Germany (17 million days) had the highest number of working days lost due to smoking. On average, the productivity loss due to smoking equates to about 2.5 working days lost per smoker per year for every

⁴⁰ For a summary of clinical evidence, see: "The health consequences smoking: a report of the Surgeon General", 2006 and IARC "Monographs on the Evaluation of Carcinogenic Risks to Humans: Tobacco Smoke and Involuntary Smoking" Volume 83 (2004).

⁴¹ Cyprus excluded from estimates due to a lack of data on which to base estimates of the proportion of the total YLDs lost.

⁴² Calculated from estimates of the number of days lost to disease (DLD) suffered by smokers that could be directly attributed to their smoking, and the average daily earnings rate for employed persons aged 15 to 65 in each Member State.

smoker in the EU27 (excluding Cyprus). Overall, smoking-attributable absenteeism was higher in the 12 newly accessed Member States than in the EU15, with 2.0 and 1.2 days lost per smoker per year, respectively.

Absenteeism is not evenly distributed across the smoking population, as not all smokers will become ill in a given year. On average, a smoker who contracted one of the six SADs lost an estimated 36 days of good health in 2000. The estimated per capita number of days lost varied significantly between each of the SAD categories. In the EU27 as a whole⁴³, smokers with non-COPD respiratory illnesses suffered only 12 days of health per smoker due to SAD per annum. In contrast, the average smoker suffering from cancer, COPD or CVD suffered an estimated 92, 122 or 136 days of ill health per smoker due to SAD per annum. Such disparities in the number of days lost will have a strong impact on the earning potential of those suffering from more chronic diseases (cancer, COPD, CVD).

Overall, smoking attributable absenteeism cost the EU economy an estimated €11.3 billion in the year 2000 (Figure 2.8). This is the equivalent of 0.1% of EU27 GDP for 2000. The estimated costs of smoking were concentrated in the higher wage Member States, with the EU15 accounting for an estimated 71% of days lost, but 92% of the costs of smoking attributable absenteeism. Notably, earnings (both in terms of Purchasing Power Standard and market exchange rates) strongly increased in the new Member States after 2000, and we would expect that this would yield a significant increase in any estimate for subsequent years, assuming the same method had been used.

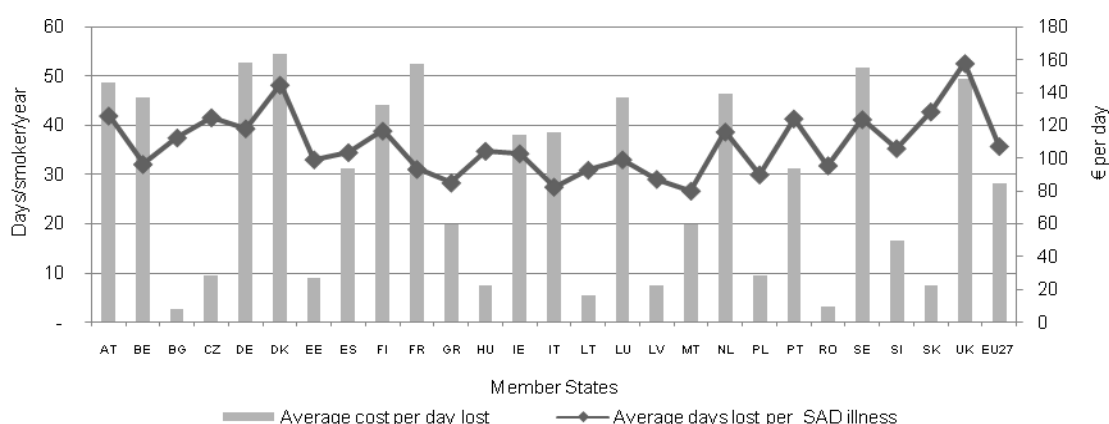
Figure 2.8 Estimated productivity losses due to absenteeism caused by smoking attributable diseases (SADs) by country (model calculations)

Member State	Employed population	Total days lost	Days lost due to smoking		Average daily earnings	Cost of absenteeism due to smoking
Austria	3.7	8.1	1.8	21.6	146	235
Belgium	3.8	8.1	2.0	24.3	136	271
Bulgaria	2.6	13.0	3.0	22.8	8	19
Cyprus	0.3	-			41	
Czech Republic	4.8	10.7	3.0	28.1	28	69
Germany	36.7	78.6	17.4	22.2	158	2,618
Denmark	2.8	6.5	1.9	29.3	163	297
Estonia	0.5	1.8	0.5	29.8	27	12
Spain	16.3	33.6	7.6	22.5	94	693
Finland	2.2	4.8	1.0	19.8	132	122
France	23.0	45.9	10.5	22.9	157	1,517
Greece	4.1	7.6	1.9	24.4	59	105
Hungary	3.7	10.8	3.8	35.6	22	59
Ireland	1.6	3.2	0.9	27.3	114	100
Italy	21.0	38.4	9.2	24.1 31.8	116	1,014
Lithuania	1.3	3.3	1.1	33.6	16	14
Luxembourg	0.2	0.3	0.1	32.4	136	11
Latvia	0.8	2.3	0.7	29.5	22	12
Malta	0.1	0.2	0.1	27.1	59	3
Netherlands	7.4	13.1	4.3	32.7	139	545
Poland	13.2	43.0	20.7	48.2	28	518
Portugal	4.7	6.3	1.6	25.4	94	151
Romania	7.8	20.7	8.9	43.1	9	81
Sweden	4.1	7.4	1.5	20.6	155	245
Slovenia	0.8	2.0	0.4	21.7	50	26
Slovakia	2.2	5.5	3.7	67.5	22	63
United Kingdom	26.6	77.3	20.8	26.9	148	2,535
EU27	196.4	495.7	128.4	25.9	84.4	11,331

Source: GHK calculations based on Eurostat, WHO, OECD and World Bank data.

⁴³ Figures exclude Cyprus.

Figure 2.9 Decomposition of annual smoking attributable absenteeism costs in 2000



Source: GHK calculations (note estimates for Cyprus not shown)

Productivity cost of smoking attributable retirement

Recent studies have linked smoking and smoking related ill health as risk factors for early retirement⁴⁴. Estimates of the economic losses to the EU from early retirement due to smoking were calculated based on estimates of the number of days lost to disease (DLD) suffered by smokers that could be directly attributed to their smoking, and the average daily earnings rate for employed persons aged 15 to 65 in each Member State.

For this study, “early” retirement was defined as all persons who retired for reasons other than reaching a legal or contractual retirement age. However, once an individual in early retirement reached the legal or contractual retirement age, they were reclassified as being retired. As there is no mandatory age for retirement in the EU, it was necessary to assume that persons over the age of 65 had reached retirement age⁴⁵. Here, as elsewhere, there are wide confidence limits around the estimates because of uncertainties and lack of data.

Figure 2.10 Estimated productivity losses due to retirement caused by smoking attributable diseases (SADs) by country (model calculations)

Disease Category	Due to all causes in 2000		Total Days lost	Attributable to smoking in 2000		
	Total Day lost All Adults 40-64	Total Day lost Adults in early retirement		Days lost per person in 2000	Number of persons retiring	Days lost to retirement EU27
Lung cancer	9,336,285	140,044	117,105	21	5,639	1,409,750
UAD cancer	9,024,539	135,368	77,434	67	1,162	290,614
Other cancer	134,336,292	2,015,044	175,111	92	1,897	474,301
COPD	103,350,961	1,550,264	1,130,487	136	8,342	2,085,501
Total vascular	234,904,051	3,523,561	766,362	122	6,297	1,574,313
Other respiratory	110,941,771	1,664,127	370,671	12		
Total	601,893,900	9,028,409	2,637,170	97	23,338	5,834,479

⁴⁴ See: “Early retirement due to permanent disability in relation to smoking in workers of the construction industry.” (Rothenbacher, Arndt, Fraisse, Zschenderlein, Brenner, & Fliedner, 1998) (Rothenbacher, Arndt, Fraisse, Zschenderlein, Brenner, & Fliedner, 1998) and “Smoking and subsequent risk of early retirement due to permanent disability.” (Husemoen, 2004)

⁴⁵ In 2006 40% of EU27 citizens aged 55 to 64 were economic active compared to 5.1% of those age 65 plus. (Eurostat Data).

Source: WHO YLD and incidence data, Eurostat population and labour force data: GHK calculations

Based on WHO data, in 2000 adults in early retirement in the EU27⁴⁶ suffered an estimated 9 million days of ill health (DLD) due to the six main disease categories that are associated with smoking. Analysis conducted for this study suggests that around 29% of these days (2.6 million) may have been lost directly as a result of smoking. Based on average number of days lost per person an estimated 23,300 people took early retirement due to smoking attributable illnesses⁴⁷. Amongst these cases of directly smoking-attributable retirement (SARs), the majority of persons retired due to COPD (36%) CVD (27%), and Lung Cancer (24%).

Overall, smoking attributable retirement cost the EU economy an estimated €1.1 billion in the year 2000. Similarly to the smoking attributable absenteeism, the estimated costs of smoking related retirement were concentrated in the higher wage Member States, with the EU15 accounting for an estimated 86% of retirees, but 92% of the costs of smoking attributable retirement.

Total productivity cost due to smoking

Overall, smoking related productivity losses cost the EU economy an estimated €12.4 billion in the year 2000. This is the equivalent of 0.1% of EU27 GDP for 2000. Absenteeism accounted for 91% of the total productivity costs.

Figure 2.11 Estimated economic impact of smoking related retirement caused by smoking attributable diseases (SADs) for the EU27 (model calculations)

Member State	Total retired population	Retirement due to smoking EU27		Average Earnings	Cost of retirement due to smoking
	Persons	Persons	% of total	€/day	€million
Austria	558,804	984	0.2%	169	41.6
Belgium	350,304	641	0.2%	158	25.3
Bulgaria	640,871	72	0.0%	8	0.1
Cyprus	11,193	N/A	N/A	N/A	N/A
Czech Republic	600,304	315	0.1%	29	2.3
Denmark	143,809	289	0.2%	189	13.7
Estonia	63,034	72	0.1%	27	0.5
Finland	125,046	231	0.2%	153	8.9
France	334,829	1,068	0.3%	182	48.7
Germany	5,001,820	12,470	0.2%	183	569.4
Greece	411,480	93	0.0%	68	1.6
Hungary	970,585	798	0.1%	22	4.4
Ireland	101,447	326	0.3%	132	10.7
Italy	3,454,514	3,969	0.1%	134	132.7
Latvia	200,420	177	0.1%	22	1.0
Lithuania	183,500	88	0.0%	16	0.4
Luxembourg	15,346	16	0.1%	158	0.6
Malta	14,782	34	0.2%	68	0.6
Netherlands	331,808	641	0.2%	159	25.4
Poland	1,000,795	916	0.1%	33	7.6
Portugal	305,877	717	0.2%	109	19.5
Romania	889,909	231	0.0%	12	0.7
Slovakia	438,316	204	0.0%	23	1.2
Slovenia	180,404	202	0.1%	73	3.7
Spain	686,955	1,525	0.2%	109	41.4
Sweden	218,447	502	0.2%	179	22.5
United Kingdom	1,319,682	2,591	0.2%	149	96.2
EU27	19,125,248	25,196	0.1%	99	1,080

Source: WHO YLD and incidence data, Eurostat population and labour force data: GHK calculations

⁴⁶ Cyprus was excluded from the model due to a lack of data on which to base estimates of the proportion of the total YLDs lost

⁴⁷ Due to the low number of DLDs suffered per person, it was assumed that "other respiratory" diseases would not prompt early retirement.

2.6.3 Monetised cost of premature mortality

Premature death of the population⁴⁸ due to smoking seems to be by far the biggest burden of tobacco consumption. In total, around 697,000 cases, or 15% of all deaths in the EU27 (excluding Cyprus) for those over 35, can be attributed to smoking according to peer-reviewed estimates by Peto, et al (2006)⁴⁹. for the year 2000 (Figure 2.12). The majority (78%) of premature deaths due to smoking were of men (543,000 total deaths).

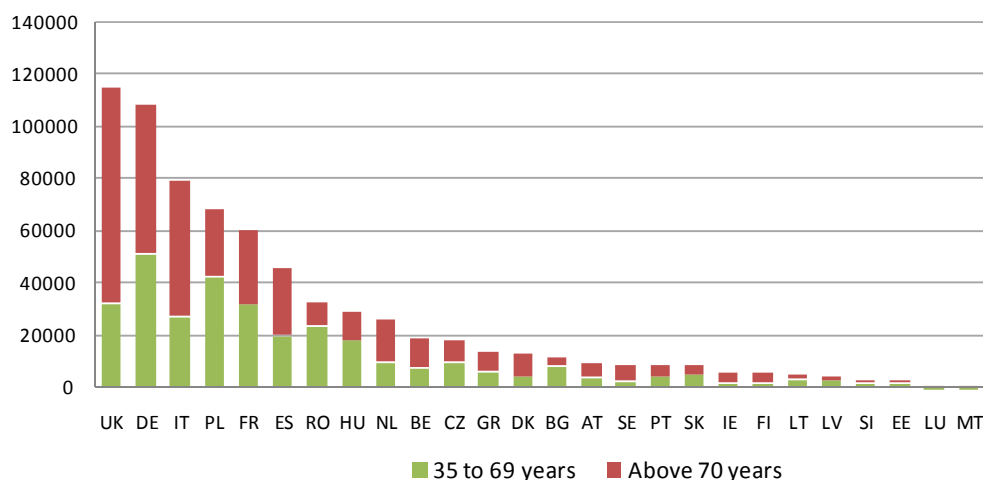
Figure 2.12 Overall mortality attributable to smoking in the EU27

Gender / age group	Total mortality (Eurostat)	Mortality attributable to smoking	As percentage of total mortality
Males	2,313,224	543,330	23.5%
35-69 years	867,689	272,075	31.4%
Older than 70 years	1,445,535	271,255	18.8%
Females	2,360,808	153,604	6.5%
35-69 years	444,487	48,461	10.9%
Older than 70 years	1,916,321	105,143	5.5%
Total	4,674,032	696,934	14.9%
35-69 years	1,312,177	320,536	24.4%
Older than 70 years	3,361,855	376,398	11.2%

Source: Peto et al. (2006) (www.deathsfromsmoking.net), Eurostat. Calculations exclude Cyprus

Around 477,000 cases of premature death (68.4% of the EU27⁵⁰ total) occurred in the six most populous Member States (Germany, the UK, France, Italy, Spain and Poland) in 2000. There are marked differences across countries with regards to the distribution of cases between younger and older populations.

Figure 2.13 Total mortality attributable to smoking by age cohort, 2000 (number of cases)



Source: Peto et al. (2006)

To value the cost of premature mortality due to smoking, a 'willingness-to-pay'-based methodological approach has been used. Societies are willing to pay considerable amounts

⁴⁸ Only adults above 35 years were considered in the calculations, in line with the age cohorts covered by the underlying estimates on premature death attributable to smoking (published on www.deathsfromsmoking.net).

⁴⁹ Peto et al. (2006), published on www.deathsfromsmoking.net. These are believed to be the most authoritative available data on mortality attributable to smoking.

⁵⁰ Total excludes data from Cyprus

to save the life or to save one life year of an unidentified (“statistical”) individual⁵¹. . The value of a statistical life (VSL) approach is used to help to inform and introduce consistency to the choices made in society about public investment in prevention of death – in the work place, in road/rail safety, healthcare, etc. Values are based on surveys or observations about the trade-offs people make between monetary gain and risk. The issue of whether the VSL approach is appropriately applied to statistics of lives lost as a result of people knowingly undertaking risky activities, and whether (if not) smoking would be considered such an activity, is a difficult one. The issues - of information, addiction, etc. - are similar to those debated in the courts during litigation against tobacco companies (see chapter 4). For the purposes of this exercise we have adopted that the standard valuation approach.

The value assigned has been estimated under several studies at national or international level. ExternE⁵², a research project of the European Commission has collected estimates and established a ‘typical’ range of €50,000 to €100,000 for the value of one life year (VOLY)⁵³. The median of estimates was €52,000. This value (together with the range) has been included in the Commission’s Impact Assessment guidelines as a recommendation for valuing human life years. Consequently, this study on the health cost of smoking valued each year of life lost for the total adult population above 35 at €52,000, irrespective of the age of the victim or of the country in which he or she lived⁵⁴.

With regard to the effect of smoking-attributable premature mortality expressed in life years, it is calculated that in 2000, about 10.4 million years were lost. Applying the estimate from the ExternE project, the loss amounted to a monetised value of €313 billion for the EU26⁵⁵, which corresponds to about 3.4% of the GDP. The majority of this burden (€202 billion, equating to 65% of the total) is concentrated (in decreasing order) in the six most populous Member States of the EU: Germany, Poland, France, the UK, Italy and Spain.

The relative cost of smoking related premature mortality varies considerably across Member States, from 1.1% of GDP in Sweden and Luxembourg to as much as 55-56% in Romania and Bulgaria. The extremely high figures stem from the method of assigning only one uniform value to the loss of one life year for the whole of the EU, irrespective of the wealth, and correspondingly, ability or ‘willingness’ to pay of individual countries. The statistical value of life figures used by individual Member State governments in support of road safety investment, health investments, etc. may vary from country to country.

⁵¹ It is a common assumption in studies exploring the willingness-to-pay of society to consider the individual in question as being unidentified. Experience shows that whenever a concrete person has to be saved in a concrete incident, the amount that society is willing to sacrifice is virtually unlimited.

⁵² <http://www.externe.info/>

⁵³ The value of a life year has been derived in the ExternE final study from citizens’ responses to questionnaires applied in France, Italy and the UK specifically on the topic of air pollution mortality. These results are transferable to the case of smoking, as smoking, very much like air pollution mortality, is causing “accelerated ageing”, the loss of a substantial number of otherwise healthy life years.

⁵⁴ An argument against the uniform valuation method would be that the willingness to pay for an unidentified individual in individual Member States may significantly differ due to differences in the financial means available for societies. In a country with a high GDP per capita and correspondingly higher disposable household income, citizens may be willing to pay more for one statistical life year lost.

Figure 2.14 Calculated cost of premature mortality due to smoking in the EU 27⁵⁶

Member State	Calculated monetary loss from premature mortality, 2000 (million euro)	As percentage of EU27	As percentage of country's GDP (at market prices)
Austria	4,168	1.3%	2.0%
Belgium	7,026	2.2%	2.8%
Bulgaria	7,579	2.4%	55.3%
Czech Republic	9,441	3.0%	15.4%
Denmark	3,947	1.3%	2.3%
Estonia	1,369	0.4%	22.4%
Finland	1,544	0.5%	1.2%
France	37,721	12.1%	2.6%
Germany	50,309	16.1%	2.4%
Greece	5,679	1.8%	4.1%
Hungary	17,157	5.5%	33.0%
Ireland	1,445	0.5%	1.4%
Italy	24,669	7.9%	2.1%
Latvia	2,507	0.8%	29.5%
Lithuania	2,754	0.9%	22.2%
Luxembourg	242	0.1%	1.1%
Malta	117	0.0%	2.8%
Netherlands	9,223	2.9%	2.2%
Poland	40,879	13.1%	22.0%
Portugal	4,452	1.4%	3.6%
Romania	22,891	7.3%	56.3%
Slovakia	4,596	1.5%	20.9%
Slovenia	1,410	0.5%	6.6%
Spain	20,206	6.5%	3.2%
Sweden	2,870	0.9%	1.1%
United Kingdom	28,676	9.2%	1.8%
EU27	312,878	100.0%	3.4%

Source: Peto et al. (2006), Eurostat population and mortality data, GHK calculations Note total excludes estimates for Cyprus

In general, the burden on Member States that joined the EU in 2004 and 2007 seem to be considerably higher. The 10 countries with the highest estimated cost-to-GDP ratio in our calculations were all newly accessed members of the EU. Only Malta was surpassed by a number of older Member States (Cyprus was not included in this estimate). This difference is likely due to these Member States having higher mortality at younger ages due to smoking, assumedly due to the impacts of: higher smoking prevalence; higher per capita tobacco consumption amongst men; and less effective prevention.

2.6.4 Chapter summary

Estimates of various elements of the social cost of smoking have been prepared for this scoping study. Data scarcity, especially in relation to treatment costs, is a significant issue but with the methods and assumptions used:

- Public healthcare expenditure on treating smoking attributable diseases suffered by smokers is estimated at around €36.6 billion in 2000, which corresponds to 6% of total healthcare spending in the EU27 and 0.4% of GDP.
- Public healthcare expenditure on treating ETS-related illnesses is estimated at around €1.2 billion in 2000, which corresponds to 0.2% of total healthcare spending in the EU27 and 0.01% of GDP.
- Smoking related productivity losses cost the EU economy an estimated €12.4 billion in the year 2000. This is the equivalent of 0.1% of EU27 GDP for 2000. Absenteeism accounted for 91% of the total productivity costs.

⁵⁶ Estimates exclude Cyprus.

- Premature mortality attributable to smoking is estimated at €313 billion in 2000 on a willingness to pay basis.

All together these estimates suggest a total cost of circa €363 billion in 2000, corresponding to 3.9% of EU27 GDP.

3 POLICY TOOLS FOR TACKLING EXTERNALITIES

3.1 Introduction

Chapter 2 explained that smoking can give rise to external costs – costs borne by society that are not factored into the consumption choices made by smokers. This chapter considers the tools available to the policy-maker to address those externalities and for recovery of smoking-related costs.

There are four principal approaches through which state intervention can tackle the market failures stemming from externalities⁵⁷. These are:

- Regulation;
- Liability;
- Pigouvian taxes;
- Tradable permits, after Coase;

These are summarised below. A brief illustration of how liability, Pigouvian taxes and tradable permits have been used in other policy areas is provided. Annex 3 describes the existing use of these approaches in more depth.

3.2 Regulation

Under the regulatory approach, the state either directly sets the desirable level of production and/or consumption of goods or services, e.g. through quotas, or it exerts an indirect influence on the overall production and/or consumption through the regulation of the contextual factors.

Direct regulation aims to eliminate (or reduce) the characteristics of the externality-causing product that causes the harm, and where that is not possible it sets limits on the level of production and/or consumption of an externality-causing product. For example, EC Directive 70/220/EEC has set limits on vehicles emissions, in order to reduce the externalities they cause in terms of smog and climate change.

Indirect regulation limits the exposure of individuals to externalities, rather than limiting the production or consumption of an externality-causing product. For example, congestion charging zones reduce the externalities caused by vehicle emissions, without limiting vehicle emissions at source.

Neither form of regulation directly internalises the costs that companies or individuals impose on others; rather they reduce the scale of the externality (though regulation may result in companies and/or consumers incurring costs or experiencing higher prices).

Determination of the appropriate level of production or consumption of a given externality-causing product requires an information-intensive analysis. In the absence of perfect information, authorities estimate the appropriate level of regulation. This can lead to situations of either too much or too little production or consumption. Direct regulation also limits people's freedom of choice. For example, a regulation that banned sale of alcohol would impose costs on the industry, and avoid the health impacts to society, but at the expense of people's individual 'freedom to drink'. Indirect regulation (e.g. regulating

⁵⁷ Not counting the case when the state itself is supplying the good or does the activity that produces the externality, e.g. basic infrastructure

drinking in public, or who can sell alcohol, and when) constrains choice to a lesser degree, but would typically have less impact on the externality.

3.3 Legal liability

The liability approach to internalising externalities rests upon the right of companies, individuals or the state to certain 'property'. For example, an individual has the right to expect the products that they purchase to be safe; society has the 'right' to access certain public goods, such as clean air. The party that violates the rights of the other party, and thereby causes damage to him, is required to pay compensation that is usually set by a court or negotiated in an out-of-court settlement.

While harm caused to organisations and individuals is usually settled through civil law⁵⁸, public law⁵⁹ is needed to define the claim of the state on the ownership of public goods. In civil law, the most prominent example of such settlements is general product liability. Modern environmental liability is an example of the principle being applied in public law⁶⁰.

Following the terminology in European legislation⁶¹, 'product liability' is the liability of the producer, or any person who imports the product into the Community, for damage caused by the defectiveness of his products. The product is regarded as 'defective' in this context if it does not provide the safety which a person is entitled to expect, taking all circumstances into account, including: (a) the presentation of the product; (b) the use to which it could reasonably be expected that the product would be put; (c) the time when the product was put into circulation. Under product liability legislation, the producer is obliged to pay financial compensation for any harm caused by the defective product to individuals, companies, or in some instances even the state.

The EU's liability regimes have been strengthened over the past 25 years through adoption of a series of legal instruments, and in particular:

- The *Product Liability Directive (85/374/EEC)*, amended in 1999. This established a scheme of strict product liability for damage arising from defective products in addition to any existing rights that consumers enjoy under domestic law. It imposed a concept of "joint and several" liability, allowing all parties throughout the production chain that produces a defective product that causes personal injury or property damage to be held liable. A producer can be held liable for damages arising from a defective product regardless of where the product is manufactured, and is liable for 10 years from the date on which the producer placed the product on the market (unless legal action is pending).
- The *General Product Safety Directive (2001/95/EC) (GPSD)*. This places a general duty on all suppliers of consumer goods to supply products that are safe in normal or reasonably foreseeable use. Safety takes into account factors such as the product's characteristics, instructions and warnings, and the categories of consumers at serious risk when using the product, particularly children. The GPSD

⁵⁸ In this context defined as law which regulates the private conduct between individuals, without direct involvement of the government.

⁵⁹ Defined as: Those laws which regulate (1) the structure and administration of the government, (2) the conduct of the government in its relations with its citizens, (3) the responsibilities of government employees and (4) the relationships with foreign governments. For example tax law, criminal law and especially constitutional law.

⁶⁰ Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage (ELD) establishes a strict liability framework based on the 'polluter pays' principle which is capable of dealing with "pure ecological damage", involving the powers of public authorities. The traditional civil liability system focused on "traditional damages" (damage to property, economic loss, personal injury).

⁶¹ Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31985L0374:EN:HTML>)

applies to all new and second-hand consumer products, except new products that are covered by specific European safety legislation, such as sectoral directives (BERR, 2009).

- *Regulation (EC) No 765/2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products.* This regulation, applicable from 2010, provides a common framework for accreditation activities in the European Union/EEA. The regulation lays down rules on the organisation and operation of the accreditation of conformity assessment bodies in Europe which assess the safety of products that are placed on the Community market. The regulation requires, *inter alia*, the creation of a single non-profit national accreditation body in all Member States and prescribes requirements for market surveillance bodies.

3.4 Pigouvian taxes

Arthur Cecil Pigou provided one of the classical economic remedies for the externality problem. The government - or any other third party with appropriate powers – can internalise external costs or benefits by imposing a tax or an extra charge on the activity or specific good which is responsible for the externality. The aim is to set the price that the producer or user faces when consuming the product (or engaging in the activity in question) at a level that includes all the marginal costs imposed on society, i.e. total cost to society from an additional unit of production or consumption, which may include the direct costs of production (raw material, depreciation of equipment and intellectual property, labour, etc.), logistical costs of bringing the good to the consumer, and externalities (air and water pollution, greenhouse gas emission, etc.). The price would of course also reflect the marginal benefit from consumption. At this price, the production and/or consumption would be either reduced to a level where the marginal costs to society are on par with the marginal benefits that users gain, or the revenues generated would be sufficient to compensate those who are suffering from the adverse impact of the externality. This system could also be used to subsidise an activity that produces a positive externality, in order to increase its social benefits.

Strict application of the Pigouvian approach requires detailed information on how social costs and benefits change at different levels of consumption, and how price, as influenced by tax, will influence supply and demand. This information is in practice rarely available, a knowledge problem acknowledged by Pigou himself⁶². Repeatedly amending tax rates in search of some 'optimal' tax rate is burdensome to business and reduces credibility of the policy.

EU policies have long promoted environment related taxes based on Pigouvian principles as a form of market based instruments (MBIs), because they provide a flexible and cost-effective means for reaching given policy objectives. The modern European approach rests on the application of the polluter pays principle, i.e. that the costs for avoiding or compensating for environmental damage should be borne by those who caused it: the polluters themselves should normally finance environmental remedial actions (given that they can be identified), not the general budget (see Footnote 60 above). Articles 174 and 175 of the Treaty⁶³ assign competence to the EU in environmental policy. Fiscal policies, and within these, environment related taxes, are one of the instruments propagated⁶⁴. EU harmonised environmental taxation policies exist already. These, however, are not centrally

⁶² Pigou. "Some Aspects of the Welfare State" (1954)

⁶³ Articles 191 and 192 in the new consolidated version of the Treaties, as amended by the Lisbon Treaty.

⁶⁴ E.g. common minimum rates have been adopted by EU Member States for the taxation of energy products and electricity.

managed taxation schemes but implemented in the Member States and to be adopted, they require the Council to act unanimously.

Member States have introduced many different taxes and charges⁶⁵ and, according to Eurostat data, have revenues under all broad categories of environmental taxation: energy, transport, and pollution or resource taxes. Environment related taxes accounted for 2.56% of the EU27 GDP in 2006. This corresponds to 6.41% of all tax and social contribution revenues.

3.5 The Coase theorem

Ronald Coase is widely known among economists for his theorem that 'the externality problem' can be resolved efficiently by bargaining between those involved, if specific conditions are met. His analysis showed that trade in the externality is possible when ownership over the assets that are affected by the externalities of a specific action is clearly defined. The asset in question may refer to private property, an individual's health or wellbeing, or a public good such as the environment. When there are no transaction costs, bargaining will lead to an efficient outcome regardless of the initial allocation of property rights. Though these conditions are rarely met in practice, policies based on this approach are commonly used to govern the use of environmental resources using production and/or user rights (the latter usually refers to the use of natural resources).

Theoretically, the optimal allocation of production or user rights could be settled purely via bargaining between private entities. If the property rights were well established, civil law would be adequate to govern the process. However, property rights are often very difficult to assign (e.g. in the case of noise emission: who has the right to 'quietness' and to what degree?), and the externalities arising from a specific action can affect many organisations and individuals, as well as future generations⁶⁶. Therefore, for practical reasons, it is usually the state who claims ownership over the resources affected or the related externalities. The state, based on its claim on the connected property rights, may then auction or give out permits (quotas) free of charge to use an established quantity of the resources in question (e.g. fish) or to produce an established amount of externality-affecting output (e.g. greenhouse gas emissions).

To ensure efficient allocation between different users and potential users, it is important to make these permits transferable between actors, creating a market. According to the theory, actors will buy and sell permits on the market up to the point where the individual marginal costs of the activity, including the price for the permit, equals the individual marginal benefits from pursuing it, resulting in an optimal allocation of permits between actors. The issuer of the permit, i.e. the state, makes a one-time decision about the number of permits to issue within each period (as is currently done with emission quotas, corresponding to a targeted reduction of emissions). This approach is used e.g. in the European Union Emission Trading Scheme (EU ETS): permits for CO₂ emissions are freely traded between a selected group of actors. Another example is the Total Allowable Catch (TAC) quotas introduced to the European Common Fisheries Policy, which are used to prevent individual species stocks from falling below a sustainable level, under which they would not be available to future generations of fisheries.

The fixed budget of permits may be adjusted between trading periods but normally not within one trading period. Theoretically however, the state might monitor the price level of permits and manage market by buying back or selling additional permits to keep the price within a pre-defined price range.

⁶⁵ A regularly updated database can be found at OECD/EEA (<http://www2.oecd.org/econinst/queries/index.htm>)

⁶⁶ The extinction of certain species or the destruction of specific habitats are examples where the loss mostly affects future generations, and where property rights may not be easily assigned.

Tradable permit schemes are increasingly familiar to policy-makers because of their use in environmental policy. The first emission trading schemes were developed in the United States in the 1980s and 1990s, the most significant being the scheme under the 'Acid Rain Programme',⁶⁷ which issued emission permits for sulphur dioxide (SO₂) and nitrogen oxides (NO₂). The use of trading schemes has expanded to include emissions of greenhouse gases (GHGs) including CO₂. Trading schemes have also been used to control water pollution.

Emissions trading is one of the main pillars of the Kyoto Protocol⁶⁸, which established legally binding 'quantified emission limitation and reduction commitments' for various greenhouse gases from 40 'Annex I' industrialised countries.⁶⁹ This example of a baseline and credit 'carbon market' allows those Annex I countries which emit less than their national quota to sell 'emission credits' to others. They may also implement projects reducing emissions in non-Annex I countries, thus creating 'certified emission credits' in countries which are not legally bound by quotas.

The Emission Trading Scheme of the European Union (EU ETS) was launched in January 2005, on the basis of Directive 2003/87/EC⁷⁰. Prior to the Kyoto Protocol, European climate change policies were based on technical standards, regulatory emission limitations and more recently environmental taxes, charges and voluntary agreements (European Commission, 1999). The EU ETS was intended to help the EU achieve its targets under the Kyoto Protocol in a cost-efficient way by introducing tradable emission permits to energy-intensive industries.

The EU ETS is the first, and currently the largest multi-country, multi-sector GHG emission trading scheme in the world^{71,72}. In each trading period (the first ran from 2005-2007, the second one runs from 2008-2012, whilst the third one will start in 2013), a fixed amount of permits for CO₂ emissions is given out to the polluters which are part of the scheme. The total quantity of permits is determined on the basis of National Allocation Plans (NAPs), which are drawn up by Member States with respect to the individual emission reduction target commitments they made under the UNFFC regime. Each Member State must decide how many allowances they intend to allocate in total for a trading period and how many each plant covered by the Emissions Trading Scheme will receive. The NAPs are assessed by the Commission, which looks (*inter alia*) at the Kyoto target for the respective Member State, the amount of emission credits these might have purchased through the Kyoto Protocols 'baseline and credit'-based international emission trade system, and actions proposed by the Member States in other sectors (housing and transport, for example) to reduce GHG emissions.

3.6 Internalising externalities versus recovering costs

Policy mechanisms intended to internalise externalities can raise revenues – such as through taxation revenue or auction of permits. The decision about the allocation of those revenues and whether the positive impact on government revenues is offset by compensating changes elsewhere is a discrete choice that can, in principle, be separated

⁶⁷ <http://www.epa.gov/airmarkets/progsregs/arp/basic.html>

⁶⁸ http://unfccc.int/kyoto_protocol/items/2830.php

⁶⁹ http://unfccc.int/essential_background/kyoto_protocol/items/1678.php

⁷⁰ Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0087:EN:NOT>)

⁷¹ It currently covers over 11,500 power generation and industrial plants in energy-intensive sectors. These plants are collectively responsible for close to half of the EU's emissions of carbon dioxide (CO₂).

⁷²

<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/05/84&format=HTML&aged=1&language=EN&guiLanguage=en>

from the design of the instrument for its primary purpose (even if the political economy of such schemes means there is often some degree of linkage).

Policy instruments designed to achieve recovery of costs ought to be considered separately from those targeted at an externality problem. A user charge may have an incentive effect similar to that of a standard Pigouvian tax (by raising costs and thus influencing consumer behaviour), but the strategic intent and the basis in law may well be different. User charge schemes are normally designed for the purpose of recovering the cost of some service (transport services, road maintenance, etc.) and are set at a level sufficient to achieve that aim. This is not necessarily the same level as is appropriate to a Pigouvian tax (the shape of the social cost curve is a factor here). Insurance schemes, which can combine cost recovery objectives with concepts of risk and uncertainty, may be considered in the same way.

According to the classic distinction made in public finance theory, 'taxes' are "compulsory, unrequited payments, in cash or in kind"⁷³, made by the private sector to government units (Shoup & Medema, 2005). These payments are unrequited because the government provides nothing in return to those making the payment, or the value of the service it provides – e.g. a public good available to anyone – is not proportionate to the payment raised (Määttä, 2006). 'Charges', on the other hand, are "compulsory required payments to either general government or to bodies outside general government". The payment levied is proportionate to the service generated (Borner, Bodmer, & Markus, 2004).

Some authors put the focus on the legal basis of these instruments: 'taxes' are defined by, and prescribed in, the tax law by the general government, while 'charges' are not - these are not necessarily imposed by general government, but by different government bodies or public and private bodies outside the government, and are usually prescribed by decrees or set by cost calculations.

Charges can be divided into 'administrative charges', which are fees to be paid to authorities for specific administrative services (e.g. chemicals registration), and 'user charges', which are payments, e.g. top-up fees above the normal price of a product or service, to meet the costs of a collective service or infrastructure treating environmental pollution (such as solid waste or wastewater).

The various policy options vary in the way in which they interact with uncertainty. Pigouvian taxes provide price certainty but uncertain quantity outcomes. Tradable permit schemes provide certainty about the maximum quantity of (say) emissions but in the context of uncertainty about the price.

⁷³ See the definition in OECD's statistical glossary: <http://stats.oecd.org/glossary/detail.asp?ID=2657>

4 THE ROLE OF LITIGATION – PAST EXPERIENCE AND FUTURE POTENTIAL

4.1 Introduction

Article 19 of the Framework Convention on Tobacco Control (FCTC) requires that Contracting Parties “consider taking legislative action or promoting their existing laws, where necessary, to deal with criminal and civil liability, including compensation where appropriate”, as part of their tobacco control strategies. This requirement is echoed in Article 4(5) which provides that “issues relating to liability, as determined by each Party within its jurisdiction, are an important part of comprehensive tobacco control”.

This section of the report discusses the measures which the European Community, a signatory party to the FCTC⁷⁴, could take to implement its commitments under Articles 4(5) and 19 of the FCTC. It:

- Documents the differences between the US and European jurisdictions as regards individual and collective liability claims;
- Summarises existing liability law suits (individual and collective claims) as regards the costs of smoking in Europe;
- Identifies areas of potential and/or possible changes to existing law, or the conditions under the present laws that would be required in order to create similar possibilities for individuals, but also for public bodies, to reclaim the health costs of smoking from manufacturers.

In particular, the Commission has requested an evaluation of whether revising the Product Liability Directive could be envisaged to hold tobacco manufacturers liable for the financing of health costs arising from tobacco consumption.

4.2 The potential benefits of tobacco litigation

Tobacco litigation allows smokers, their families or other victims of tobacco consumption to sue tobacco manufacturers in order to be compensated for the harm they have suffered.

Lawsuits against tobacco manufacturers offer several potential benefits:

- **compensation:** litigation offers the prospect of monetary awards which can help cover smoking-related medical costs and provide some compensation to government-financed health care systems or injured individuals;
- **strengthening regulatory activity** (Bitas & Barros, 2008): litigation against tobacco manufacturers attracts public attention, puts the industry on the political defensive (Daynard, Bates, & Francey, 2000). and highlights public health hazards that the industry has concealed or that government regulators have failed to address; they can also stimulate legislative efforts to create smoke-free workplaces and public spaces (Framework Convention Alliance, 2009);
- **publicity:** tobacco litigation can attract substantial media coverage, which can kick off public debate and energise tobacco control efforts (Miura, Daynard, & Samet, 2006); it also tends to de-glamorise the tobacco industry and exposes corporate

⁷⁴ Council decision 2004/513 concerning the conclusion of the WHO FCTC, OJ 2004 L 213/8.

wrongdoings, which can be helpful in the effort to change social attitudes towards smoking (Miura, Daynard, & Samet, 2006);

- **documents disclosure:** where legal systems permit substantial “discovery”, as in the United States – by which litigants can demand relevant internal information and documentation from other litigating parties – lawsuits and state settlements (Miura, Daynard, & Samet, 2006) have uncovered internal tobacco industry documents that have shed light on public health dangers and tobacco industry strategies. Such documents can both assist litigation (Daynard R. , 2003) and support regulatory efforts;
- **changing company behaviour:** the US experience shows that states have been able to negotiate some changes in tobacco marketing practices during settlement discussions (LaFrance, 2000).

4.3 Methodology

The United States of America already have a 50-year history of litigation against the tobacco industry. In the last decade in particular, tobacco litigation has been a tool in tobacco control strategies aimed at limiting the activities of tobacco companies and providing redress to persons who have been injured as a result of their use of tobacco products. Consequently, the first step in our enquiry was to summarise relevant cases and identify the issues that have arisen before US courts (Section 4.4).

Using US cases as a reference point, the next two sections identify and assess similar cases which have been handed down by courts in EU Member States, highlighting the obstacles of both a substantive (Section 4.5) and a procedural (Section 4.6) nature, which claimants have tended to encounter when claiming against tobacco manufacturers. It concludes by assessing whether liability law suits could play a more prominent role in tobacco control strategies at Member State and Community level (Section 4.7).

Particular consideration is given to the situation in Finland, France, Germany, Italy, Ireland and the United Kingdom (Spain and the Netherlands are considered as well, though to a lesser extent). The cases have been classified according to the questions of law they raise, and the most significant have been summarised in a table provided in Annex 3.

The typology we have established does not purport to rely on an exhaustive list of the cases mounted in Europe against tobacco manufacturers. There is at present no database of such cases.⁷⁵ The cases relied upon have been selected on the basis of their relevance and the linguistic knowledge of the legal research team (Amandine Garde, Frederic Geber and Marta Viegas-de Monteiro). The cases summarised in the Annex have all been read in their original version. To ensure that we have not omitted crucial information, our documentary review has been complemented by interviews and/or email exchanges with consumer organisations, lawyers involved in tobacco litigation and members of the World Health Organisation (from the Regional Office in Copenhagen and the Headquarters in Geneva).

⁷⁵ There are useful reference points, but none presents an exhaustive picture of the situation as of July 2009. See in particular, (Pedersen, 2002).

4.4 The development of tobacco litigation – from a US to a worldwide phenomenon

US tobacco litigation history can be divided into three main stages.⁷⁶

4.4.1 First and second waves of US cases

During the first wave of claims (cases filed in 1950s and 1960s) lawsuits have generally failed. No document discovery was done, and courts naively concluded that lung cancer was an idiosyncratic reaction to smoking or that the tobacco companies knew nothing about the dangers before the general public did. The tobacco industry's success was largely due to the claimant's struggle to prove causation because of the lack of adequate medical evidence showing that cigarette smoking caused cancer and other diseases. In 1964, however, the first Surgeon General's Report reached the conclusion that smoking caused several diseases (United States. Surgeon General's Advisory Committee on Smoking and Health, 1964). Its release presented the starting point of a developing body of medical evidence that could be used in court to prove causation.

During the second wave of cases (cases filed in the 1980s), the tobacco industry attempted to shift the focus of the cases onto the claimant rather than the company or the product. The claimants, who were suing tobacco companies individually, could not achieve a judgment in their favour as the respondents successfully invoked the "blame the smoker for smoking" defence. In 1965, the Federal *Cigarette Labelling and Advertising Act* was enacted, requiring all cigarette packaging and advertisements to contain a warning label. The tobacco industry used this act to strengthen its argument that because of the labels the claimant knowingly and voluntarily "assumed the risk of" or negligently "contributed to causing the harms of smoking" (Krugman, Fox, & Fischer, 1999) i.e. the claimant caused his or her own loss by choosing to smoke despite the detrimental effects smoking was likely to have on his or her health. However, claimants' attorneys added the new theories of failure to warn and strict liability to their suits – strict liability involving liability without fault, as discussed more fully below.⁷⁷ Strict liability helped shift the focus from the parties to their product. In addition, the courts began to apply the theory of comparative fault to strict product liability. This dampened the defence's strategy of focusing on the claimant's actions, because it allowed in certain jurisdictions to apportion the fault between the claimant-smoker and the defendant-tobacco company. Therefore, despite the defence's strategy of focusing on the claimant's conduct and his/her alleged freedom of choice to smoke, the claimant could have a partial victory with a damages award based on the defendant's share of fault. As more cases against the tobacco companies were filed, claimants' lawyers and the health movement began to organise and pool resources. This sharing of materials, including internal tobacco company research documents identifying the carcinogenic components in cigarettes and discussing the addictive nature of nicotine, has proven extremely useful. *Cipollone* was the first case in which a jury was allowed to view the tobacco companies' internal documents that detailed the industry's concerted effort to mislead the public about the dangers of smoking. The jury found that the tobacco companies had some comparative fault for breaching its express warranty that the product was safe for the period prior to the 1965 Act. It awarded USD 400,000, the first financial award ever made against a tobacco company in a products liability case.⁷⁸

⁷⁶ For more information on the evolution of tobacco litigation in the United States, see in particular (Miura, Daynard, & Samet, 2006) See also: (Bitas & Barros, 2008); (Rabin, 2001); (LaFrance, 2000); (Molitoris, 2004); (Daynard R., 2001); (Kelder & Daynard, 1997); (Daynard R., 1992) and , (Daynard R., 1988).

⁷⁷ The use of the theories of strict liability and contributory negligence in the case law of national courts in Europe are discussed in sections 4.5.1 (under the heading "product liability") and 4.5.2 (under the heading "Contributory negligence and risk apportionment") respectively.

⁷⁸ However, the jury found that the claimant's decedent had caused 80% of the damage. In accordance with state law, which barred any recovery under product liability law if the contributory negligence exceeded 50%, the

4.4.2 Third wave of US cases

The *Cipollone* case and the evidence produced during the course of the trial provided the impetus for the third wave of tobacco litigation. Since the mid-1990s, it has become apparent that the cigarette industry secretly researched the effects of nicotine and other cigarette components, while it publicly maintained that it did not believe that cigarettes were addictive. As a result, the industry's traditional "blame-the-smoker-for-smoking" defence began to lose its effectiveness. In the 1996 *Castano* class action, Liggett & Myers became the first cigarette company ever to settle a case against them. In addition to monetary damages and improving warning labels on their packaging, Liggett & Myers agreed to produce even more evidence against the tobacco companies, thus providing further evidence of their internal practices.

The movement away from classic assumption of the risk to comparative negligence defences has provided the opportunity for claimants to get to trial and produce evidence of tobacco wrongdoing. The third wave of cases therefore began an era of victorious claimant suits for personal injury and wrongful death, with awards of compensatory and punitive damages.⁷⁹

Moreover, the information released to the public during the first and second waves brought new types of tobacco litigation during the third wave. Personal injury law suits continued, but the claimants' lawyers had better evidence and could develop more complex cases. Law suits based on the development of "safer" cigarettes, Environmental Tobacco Smoke (ETS, also referred to as second-hand smoke or passive smoking) and the marketing of "light" cigarettes became more common (Sweda, Gottlieb, & Banthin, 2007).

Cigarette fire cases are a type of product liability suit. Claimants suffer damage as a result of fires caused by cigarettes. These are often blameless victims – children and non-smokers – who get caught in the blaze. Litigation has shown that manufacturers design cigarettes to burn in the absence of puffing in order to boost sales, as users find it convenient not to have to relight the cigarette, and as the product is used more quickly. In 2003, after nearly nine years in court, Philip Morris paid USD 2 million to settle a cigarette fire lawsuit.⁸⁰

Non-smokers exposed to ETS began to bring class action suits not only against the tobacco companies but also against other entities that allowed them to be exposed to ETS. The most well known is the *Broin v Philip Morris* case, filed in Florida by flight attendants who suffered from smoking-related diseases or disorders from exposure to ETS while working in airplanes. The case went to trial, but the parties entered into a settlement before a verdict was delivered. The tobacco companies agreed 1) to pay USD 300 million to establish a scientific research foundation dedicated to the early detection and cure of smoking-related diseases, and 2) to support federal legislation to prohibit smoking on international flights, and 3) to facilitate individual flight attendants' lawsuits.

Studies show that light and low tar cigarettes are just as harmful as regular cigarettes (Thun & Burns, 2001). Many smokers who smoked light and low tar cigarettes under the mistaken assumption that they were not as dangerous as ordinary cigarettes have mounted individual suits and class actions against the tobacco companies for fraud, negligence and other

claimant did not receive damages on this ground. However, the jury did permit recovery for breach of express warranty, for which the comparative negligence defence did not apply.

⁷⁹ See for example, the case of *Boeken* in which the jury awarded USD 5.54 million in compensatory damages and around USD 3 billion in punitive damages (subsequently reduced to USD 100 million); the case of *Williams* in which Philip Morris was condemned to pay USD 821,485 in compensatory damages and USD 79.5 million in punitive damages.

⁸⁰ Before this settlement, approximately 15 cigarette fire cases had been dismissed in the US before ever going to trial.

violations. In 2002, a jury decided that Philip Morris had lied to the public in marketing its “light” cigarettes as an alternative to quitting smoking on the basis of internal industry documents revealing that cigarette manufacturers intentionally deceived the public by targeting smokers who felt anxious about their health but were too addicted to stop smoking. In December 2008, the US Supreme Court rejected the attempt by Philip Morris to have all “light” cigarette lawsuits dismissed, on the ground that these suits were not pre-empted by the Federal Cigarette Labelling and Advertising Act.⁸¹

The third wave of tobacco cases also saw the emergence of class actions, with claimants’ lawyers beginning to pool their resources. The most prominent example and first class action involving tobacco litigation is the *Engle* case, filed in 1994 in Florida on behalf of all nicotine dependent Florida residents who acquired tobacco-related diseases. The jury found that the defendants made a deadly product, which is the legal cause of 20 diseases and awarded three named smokers representing the class USD 12.7 million in compensatory damages and USD 145 billion in punitive damages (Gottlieb, 2003). That historic award of USD 145 billion made headlines worldwide. The Florida Supreme Court eliminated this award.⁸² This decision nonetheless amounted to a major legal setback for the tobacco company defendants, insofar as it allowed all of the findings of liability to stand and as it upheld punitive damages as an option for future claimants. Furthermore, it left the jury verdict on smoking as a cause of 20 diseases untouched, and it allowed members of the *Engle* class to bring individual actions within one year of the judgment.⁸³

Finally, the third wave has marked a shift in tobacco litigation from the private to the public sector. As litigation began to be viewed as an effective public health tool, state government entities began to file consumer protection suits against the tobacco companies. These suits claimed that the tobacco companies practiced unfair or deceptive commercial strategies. The states also sought recovery for the health care costs of treating diseases caused by smoking. State claimants have greater resources than the individual claimants and can therefore more readily oppose the industry’s tactics of exhausting its opponents (Daynard, Bates, & Francey, 2000). In 1994, Mississippi became the first state to sue the tobacco companies to recoup its health costs. A settlement was reached, which was followed by three others with Florida, Texas and Minnesota. These settlements resulted in the tobacco industry agreeing to pay a total of USD 35.3 billion over 25 years. In 1998, the remaining 46 states and five territories signed the Master Settlement Agreement with the four largest tobacco companies, which agreed to pay over USD 200 billion over the same period.⁸⁴ They also undertook to restrict outdoor advertising, sponsorship of public events, distribution of promotional merchandising, targeting underage smoking and political lobbying. As a result of these settlements, millions of previously secret industry documents have been released, thus providing the world with a valuable, searchable database, which can also be used for European lawsuits (currently containing 10 million documents and over 50 million pages, and including information about tobacco industry activity throughout the world) (Francey & Chapman, 2000).

Less than a year after the state lawsuit settlements, the US federal government also initiated litigation to stop the tobacco industry’s concerted efforts to deceive the public about

⁸¹ On 16 March 2009, the Massachusetts Supreme Judicial Court gave the green light to the claimants who are suing Philip Morris in its light cigarette scam.

⁸² SC03-1856 *Howard A Engle M. D. et alii v Liggett Group Inc. et al ii*
<http://www.floridasupremecourt.org/decisions/2006/sc03-1856.pdf>

⁸³ *Engle* progeny cases include the *Hess* case (USD 8 million in damages, including 3 million in punitive damages) and the *Ferlanti* case (USD 750,000) of March 2009.

⁸⁴ Settling States and Participating Tobacco Manufacturers, “Master Settlement Agreement”,
http://www.naag.org/backpages/naag/tobacco/msa/msa-pdf/1109185724_1032468605_cigmsa.pdf

the dangers of smoking. In September 1999, the US sued the tobacco industry under the Racketeer-Influenced and Corrupt Organizations Act (RICO), accusing the major tobacco companies and two trade organisations of conspiring to actively defraud the public about tobacco's addictive nature and adverse health effects in addition to the industry's collective practices such as manipulating tobacco levels, misleading the public about light or low tar cigarettes and targeting children.

In August 2006, US District Judge Gladys Kessler ruled that the defendants had engaged in racketeering over the span of decades. "For approximately forty years, the defendants publicly, vehemently, and repeatedly denied the addictiveness of smoking and nicotine's central role in smoking. They made these denials out of fear that public acknowledgement of what was so well documented and widely accepted internally within their corporate offices and scientific laboratories could result in governmental (i.e. FDA) regulation, adverse liability judgments from addicted smokers suffering the adverse health effects of smoking, loss of social acceptability of smoking, and the ultimate loss of corporate profits."⁸⁵

The Court also rejected the cigarette companies' long-standing strategy of stating that "everybody knew" that their products were dangerous while simultaneously claiming that "nobody knows" what causes lung cancer and other diseases: "if everybody knew that smoking and nicotine were addictive, then why were the defendants publicly, vehemently, and repeatedly denying it? [...] After reassuring the smoker that smoking was not bad for her health, and was not addictive, the defendants then blamed her for being unable to stop using the product they had so successfully marketed with false information".⁸⁶ The Court has the power to issue remedial orders to prevent and restrain the defendants from committing future violations of the RICO statute under which the lawsuit was filed. Within the constraints, which the DC Circuit Court of Appeal issued,⁸⁷ Judge Kessler ruled that the remedies should include:

- the prohibition of brand descriptors such as low tar, light, ultra light, mild, natural and any other words which could reasonably be expected to result in a consumer believing that smoking the cigarette brand using that descriptor may result in a lower risk of disease or be less hazardous to health;
- the issuance of corrective statements dealing with the adverse health effects of smoking, the addictiveness of smoking and nicotine, the lack of any significant health benefits from smoking low tar, light, ultra light, mild or natural cigarettes, the defendants' manipulation of cigarette design and composition to ensure optimum nicotine delivery, and the adverse health effects of exposure to ETS;
- making all litigation documents and key evidence available on the Defendants' websites until 2016;
- disclosure of disaggregated marketing data to the Government;
- paying the Government's costs associated with the litigation.

Judge Kessler's findings and most of the remedies she awarded were upheld by the DC Circuit in May 2009 (United States of America vs Philip Morris , 2009).

⁸⁵ At Section 1959 of Judge Kessler's Opinion.

⁸⁶ At Section 1361 of Judge Kessler's Opinion.

⁸⁷ The remedies ultimately imposed are not as broad as the ones originally envisaged by Judge Kessler. A controversial 2-1 decision by a panel of the DC Circuit Court of Appeal issued in February 2005 found that the remedy of disgorgement, the taking of ill-gotten gain, was not available and that remedies needed to be forward-looking and seeking to prevent new violations rather than backward-looking and seeking to punish or correct past misconduct.

4.4.3 Tobacco litigation as part of the tobacco control strategies

Tobacco litigation is now seen in the United States as an important tool in tobacco control strategies aimed at limiting the activities of tobacco companies and providing redress for tobacco-related harm.

Litigation in the United States has led to significant legislative developments. On 11 June 2009, the US Senate voted to allow the Food and Drug Administration (FDA) to regulate the content of cigarettes and other forms of tobacco for the first time. It will thus become able to impose potentially strict controls on the making and marketing of tobacco products. The Congressional Budget Office has estimated that the new law would reduce youth smoking by 11% and adult smoking by 2% over the next decade.

Litigation has also led to important legislative developments in Canada, as exemplified most strikingly by the Tobacco Damages and Health Care Costs Recovery Act in the Canadian Province of British Columbia which was adopted in 2000. The Tobacco Damages and Health Care Costs Recovery Act permits the Province to sue in a single action based on its expenses for all tobacco-related diseases, without permitting defences based on specific facts about individual smokers. It also allows the use of epidemiological evidence to establish damages, and contains provisions facilitating private litigation. Section 2(5) of the Act is particularly striking, insofar as it exempts the government seeking to recover the cost of health care benefits on an aggregate basis from proving the cause of tobacco-related disease in any particular individual insured person. Section 3(2) further provides that the court must presume that the population of insured persons who were exposed to the type of tobacco product, manufactured or promoted by the defendant, would not have been exposed to the product but for the breach of common law, equitable or statutory duty or obligation owed to persons in British Columbia who have been exposed or might become exposed to the type of tobacco product.

In 2009 the Ontario Government filed a Medicare cost recovery lawsuit against the tobacco industry for USD 50 billion (which represents the health care costs borne by Ontario taxpayers since 1955), thus joining British Columbia and New Brunswick in having done so. The Tobacco Damages and Health Care Costs Recovery Act 2009 has the following effects:

- Ontario can directly sue tobacco companies for alleged wrongdoing;
- Ontario can recover past, present and on-going tobacco-related damage;
- It creates a method to determine health care cost damage incurred by taxpayers arising from tobacco-related illnesses;
- It establishes the burden of proof required to link exposure to tobacco products to tobacco-related disease; and
- It allocates liability among tobacco companies by market share.

It is noteworthy that, while the legislation clarifies the process, the government still has to prove its allegations in a court of law. In other words, the legislation does not reverse the burden of proof, as the British Columbia legislation does.

These developments are fully in line with Articles 4(5) and 19 of the FCTC, which encourage litigation as part of the strategies of State Parties on tobacco control (Framework Convention Alliance, 2009).

4.4.4 Tobacco litigation in the European Union

Tobacco litigation has had a much shorter history in Europe than in the United States, but there is evidence that it is developing. Cases have been mounted against tobacco manufacturers in several EU Member States. Most of them have exempted the tobacco

industry of all liability. The *Stalteri* case provides a notable exception, insofar as it led to the condemnation by the Court of Appeal of Rome of British American Tobacco Italia to the payment of damages to the family of Mario Stalteri following his death of a lung cancer caused by smoking.

4.5 Trends observed in cases delivered by courts in Europe

As far as the claimants are concerned, most prominent cases in the Member States have consisted of proceedings launched by aggrieved smokers or their families for wrongful death or personal injury suffered as a result of the detrimental effects which smoking has had on their health – i.e. individual claims. Collective claims and claims mounted against tobacco manufacturers by health care bodies have not been as forthcoming and successful in the EU as they have been in the United States.⁸⁸ The cases delivered by courts in EU Member States have therefore been classified according to the legal arguments relied upon, rather than the claimant(s) involved. It is not suggested, however, that collective claims or claims initiated by health care bodies could not develop at a future date.

For the purpose of this study, we have distinguished between strict liability and fault-based liability. Strict liability requires that the product be defective, whereas fault-based liability requires that the defendant's conduct be blameworthy. In both cases, liability may only be established if there is a causal link between the damage suffered and the defect of the product or the defendant's conduct. Both constitutive elements of liability – the existence of a defect or the blameworthy conduct on the part of the defendant and the existence of a causal link – have turned out to be extremely difficult for claimants to prove in tobacco cases.

4.5.1 The standard of liability of tobacco manufacturers

Claimants have put forward three main categories of arguments against tobacco manufacturers:

- arguments relating to the existence of a defect in cigarettes (product liability);
- arguments relating to the existence of a blameworthy conduct of the defendant (fault-based liability); and
- arguments relating more specifically to the failure of tobacco manufacturers to provide sufficient and reliable information to consumers regarding their products (failure to provide adequate information).

These arguments have been relied upon either separately or simultaneously.

Product liability

The term “product liability law” refers to the law dealing with civil action brought to obtain compensation for losses and injuries resulting from defective goods. It defines the circumstances in which a manufacturer or supplier of a product is liable to compensate a “consumer” – whether a purchaser, subsequent title holder, family member, employee, user or bystander – for loss caused by a defective product (Kellam, 2000).

⁸⁸ For example, in France, a health care body – the Saint-Nazaire CPAM – launched proceedings against Altadis (ex-Seita), Philip Morris, Reynolds and Rothmans seeking the reimbursement of part of the health care costs attributable to smoking of 1000 of its members (EUR 18.66 million). The *Tribunal de Grande Instance* (High Court) of Saint-Nazaire rejected the claim in 2003 on the ground that it was inadmissible due to procedural irregularities. The court did not deal with the merits of the case. Similarly in Germany, health insurance companies planned to lodge a claim but they have never done so. Collective proceedings were launched in the UK and in Ireland, but they failed as a result of certain procedural difficulties. In the UK, the Limitation Act was successfully invoked in the *Hodgson* case (*Hodgson v Imperial Tobacco and others* [1999] C.L.Y. 459). In Ireland, the *Manning* case was dismissed on the ground of “inexcusable and inordinate delay” (*O'Connor v John Player and Sons Ltd. and others* [2004] IEHC 99; *Manning v Benson & Hedges* [2004] IEHC 316).

Product liability is a specific liability regime deriving in EU Member States from Directive 85/374 (as amended).⁸⁹ The Product Liability Directive establishes a regime based on the liability without fault on the part of the producer of a defective product: it is the defect in a product that triggers liability rather than the conduct of the defendant.⁹⁰ Product liability law is therefore different from the general system established under tort law based on the fault of a tortfeasor. The rationale for introducing a regime of strict liability is that the producer makes profits on the sale of its products and should therefore bear the burden of the defects these products may have, thus ensuring a higher level of consumer protection.⁹¹ Liability for a defective product rests with the “producer”, that is the manufacturer of a finished product, the producer of any raw material or the manufacturer of a component part.⁹² Tobacco manufacturers therefore fall within the personal scope of the Directive.

The argument has been made in the context of tobacco litigation that cigarettes and other tobacco products are defective,⁹³ that is “they do not provide the safety which a person is entitled to expect”.⁹⁴ The Product Liability Directive requires that the assessment of the defectiveness of a product should take all the circumstances into account, including:

- the presentation of the product;
- the use to which it could reasonably be expected to be put; and
- the time when the product was put into circulation.⁹⁵

The definition in the Product Liability Directive of the notion of defectiveness is therefore founded upon consumer expectations of safety. Moreover, it is not because a better product is subsequently put into circulation on the market that a product is defective: the product must achieve a relative level of safety (Weatherill, 2005).

To date, the argument that cigarettes are defective as such has tended to fail. Courts in EU Member States have held that cigarettes could not be considered defective simply because they presented a danger to human health.⁹⁶ Moreover, courts have accepted the argument that it is reasonable to expect that cigarettes and other tobacco products will be used for smoking and that consumers know that smoking entails certain health risks.

The role of information in determining whether a product is defective is paramount. Consequently, courts have noted that because warnings about the dangers related to smoking must now be printed onto cigarette packages, claimants cannot argue that they do not know that smoking has detrimental consequences on human health. For example,

⁸⁹ Directive 85/374, OJ 1985 L 210/29, as amended by Directive 99/34, OJ 1999 L 141/20. On the Product Liability Directive, see in particular: (Hodges, 1993); (Hodges, 1998); (Mildred & Howells, 1998); (Micklitz, 2009); (Reimann, 2003); (Weatherill, 2005); (Kellam, 2000)

⁹⁰ Article 1: “the producer shall be liable for the damage caused by a defect in his product”.

⁹¹ This could in turn provide a strong incentive for manufacturers to increase the level of safety of their products.

⁹² Article 3. Persons that present themselves as producers also fall within the scope of the Directive. Any person who imports into the Community a product for sale, hire, leasing or any form of distribution in the course of his business shall be deemed to be a producer and shall be responsible as such.

⁹³ It is clear that cigarettes and other tobacco products fall within the definition given by Article 2 of the key notion of “products”: “For the purpose of this Directive, ‘product’ means all movables even if incorporated into another movable or into an immovable. ‘Product’ includes electricity.”

⁹⁴ Article 6.

⁹⁵ Article 6.

⁹⁶ Cour de Cassation 1^{ère} civ. 8 novembre 2007, *Suzanne X*.

Finnish courts declined to deem tobacco products defective in light of the extensive labelling requirements in force.⁹⁷

The safety expectations of consumers must indeed be determined on the basis of the information provided to them. This is all the more so as some courts have held that the general knowledge of a country's population must be considered in the assessment of consumer expectations. For example, the District Court of Amsterdam held that the effects of smoking on smokers' health were common knowledge in 1963 when the Plaintiff started to smoke. These findings were not altered in light of the evidence adduced by the Plaintiff that the tobacco industry had made public statements undermining common knowledge on the dangers of smoking. The Plaintiff, an "average consumer", had sufficient information at his disposal to come to his own decision whether or not to take up smoking.⁹⁸

US courts have adopted a similar reasoning and pure defective product claims, without evidence of industry misconduct, have been almost uniformly unsuccessful in the United States (DeLuca v Liggett & Myers, Inc., et al., 2003). This is a result of two factors. First, courts have, with a few exceptions, been unwilling to say that cigarettes are inherently dangerous. Secondly, juries tend to blame the smokers unless given a reason to blame the cigarette companies more, and defence lawyers try to turn these cases into trials of the claimant and are generally successful in doing so unless the claimant has introduced damning evidence of industry misbehaviour. The exception to this line of case law is the *Haglund* case in Massachusetts, where the highest state court held that it was not a defence in a cigarette product liability case to say that the claimant was unreasonable in smoking the cigarette, since that was the only use for which it was designed.⁹⁹ No cases have yet been tried under *Haglund* (including *Haglund* itself).

There is one type of case for which the Product Liability Directive could be invoked successfully: fire lawsuits. If a tobacco manufacturer designs a cigarette to burn in the absence of puffing and a victim is caught in a fire caused by the cigarette in question, there is a strong argument that the cigarette is defective, as it does not provide the safety which a person is entitled to expect, taking all the circumstances into account, including the presentation of the product, the use to which it could reasonably be expected to be put and the time when the product was put into circulation. It is likely that such a product would also be considered unsafe within the meaning of the Product Safety Directive and would therefore have to be withdrawn from the Community market.¹⁰⁰ Beyond such narrowly

⁹⁷ KKO:2001:58.

⁹⁸ Decision of 17/12/2008. The role of information is discussed in more fully below.

⁹⁹ *Brenda Haglund, executrix, vs. Philip Morris Inc*, 446 Mass. 741: "because no cigarette can be safely used for its ordinary purpose, smoking, there can be no nonunreasonable use of cigarettes. Thus the Correia defense, which serves to deter unreasonable use of products in a dangerous and defective state, will, in the usual courts, be inapplicable." (*Haglund*, 743). The Correia defence can be summarised as follows: "[Tempering the manufacturer's burden to safeguard consumers] is the duty of the consumer 'to act reasonably with respect to a product which he knows to be defective and dangerous' (*Correia v Firestone Tire and Rubber Co.*, 388 Mass. 342, 355)" (*Haglund*, 749). The Correia defence presumes that the product at issue is, in normal circumstances, "reasonably safe and capable of being reasonably safely used, and therefore that the consumer's unreasonable use of the product he knows to be defective and dangerous is appropriately penalised. Here, however, both Philip Morris and the plaintiff agree that cigarette smoking is inherently dangerous and that there is no such thing as a safe cigarette (*Haglund*, 743).

¹⁰⁰ Directive 2001/95, OJ 2002 L 11/4. A safe product is defined as "any product which, under normal or reasonably foreseeable conditions of use including duration [...] does not present any risk or only the minimum risks compatible with the product's use, considered to be acceptable and consistent with a high level of protection for the safety and health of persons" (Article 2). If a product does not meet this essential requirement, it is considered to be dangerous and shall not be placed on the market (Article 3). If, by error, dangerous products find their way onto the market, the system of cooperation which the Directive has established between designated national contact points and the Commission is intended to avoid that they cause harm to consumers (Articles 11 to 15).

defined circumstances, however, neither the Product Liability Directive nor the Product Safety Directive¹⁰¹ offers much comfort to aggrieved smokers and other victims of tobacco.¹⁰² The question therefore arises whether general tort law could offer a better avenue to obtain compensation for their losses.

Fault-based liability

Fault-based liability requires, first, that the defendant has caused a damage to the claimant and, secondly, that the act which has caused the damage in question is blameworthy.

The argument has been made that tobacco manufacturers have caused personal injury and/or wrongful death by selling their products to smokers. Overall, this argument has not been very successful in Europe on the grounds that one or two of the constitutive elements of tortious liability were missing: the fault of the tobacco manufacturer and/or the existence of a causal link between the fault/negligence and the personal injury/wrongful death suffered. This section focuses on the question of fault.¹⁰³

National courts have not adopted a uniform approach to the question of the blameworthiness of the defendant's conduct. Some of them have ruled that insofar as it is not forbidden to manufacture and sell cigarettes containing addictive ingredients, the business of tobacco companies does not amount as such to a faulty behaviour which would fall short of the requirements of tort law.¹⁰⁴ This is all the more so as the detrimental effects smoking may have on smokers' health are well known.

To our knowledge, there is one exception in the case law of national courts in Europe to the rule that tobacco manufacturers should not be held liable, on the basis of national tort law, for the damage arising from smoking: the 2005 *Stalteri* judgment of the Court of Appeal of Rome.¹⁰⁵

The facts of the case were relatively straightforward. Mario Stalteri died of a lung cancer in 1991 at the age of 64. He had smoked 20 cigarettes a day of the same brand for 40 years, until he stopped in 1987 – i.e. four years before the manufacturer issued certain warnings following the entry into force of Italian legislation making such warnings compulsory.¹⁰⁶ His

¹⁰¹ Article 2(b) of the Directive requires that the safety of a product be determined taking into account the following factors in particular:

- a) the characteristics of the product, including its composition, packaging, instructions for assembly and, where applicable, for installation and maintenance;
- b) the effect on other products, where it is reasonably foreseeable that it will be used with other products;
- c) *the presentation of the product, the labelling, any warnings and instructions for its use and disposal and any other indication or information regarding the product* [our emphasis];
- d) the categories of consumers at risk when using the product, in particular children and the elderly.

It therefore appears that information is an integral part of the definition of what constitutes a safe product. This is reinforced by Article 5(1) which requires that producers “provide consumers with the relevant information to enable them to assess the risks inherent in a product [...]”. Bearing in mind that cigarettes and several other tobacco products are lawfully marketed, it seems incoherent to argue that these products are *per se* unsafe and therefore fall foul of the provisions of the General Product Safety Directive.

¹⁰² More generally, the Product Liability Directive is rarely used before national courts: COM (95) 617 final, p.2; COM (2000) 893 final, 8; COM (2006) 496 final, 5.

¹⁰³ The question of fault is understood so as to cover intentional, as well as negligent, behaviour.

¹⁰⁴ Germany: *Landgericht* Bielefeld, Decision of 15/01/2000, 8 O 411/99, (2000) *Neue Juristische Wochenschrift*, 2514, §3 a; *Landgericht* Arnsberg, Judgment of 14/11/2003, 2 O 204/02, (2004) *Neue Juristische Wochenschrift*, 232, §57. Finland: KKO:2001:58.

¹⁰⁵ For an assessment of the state of tobacco litigation in Italy, see (Poddighe, 2008).

¹⁰⁶ Law n°428/1990, 29 December 1990.

wife and son claimed that the cigarette manufacturer had not made him aware of the risks smoking entailed and that he was therefore unable to assess the detrimental effects which smoking could have on his health. The *Tribunale* (Court of First Instance) of Rome dismissed the claim in 1997. The Stalteri family subsequently lodged an appeal.¹⁰⁷ A panel of experts, appointed by the Rome Court of Appeal, decided in 2002 that the lung cancer that caused Mr Stalteri's death was attributable to smoking with a probability of over 80%. In 2005, the court confirmed the panel's findings.

On the question of whether BAT Italia should be held liable for the death of Mario Stalteri, the Rome Court of Appeal noted, as a preliminary remark, that no other potential defendants could have contributed to his lung cancer as he had only smoked one brand of cigarettes for 40 years.¹⁰⁸ To reach the conclusion that the defendant had not fulfilled its duty of care towards Mario Stalteri, the court relied heavily on its level of knowledge: a company which manufactures and sells tobacco cannot ignore the health risks involved for consumers; the defendant knew that tobacco contains toxic substances that are released when smoked and that produce harmful effects on their primary targets, namely the lungs. This was particularly so in light of the fact that as an entity interested in manufacturing and selling tobacco, BAT Italia could not reasonably have ignored the scientific studies that, since at least 1950, have had as their subject the effect of smoking on human health and which have shown ever more convincingly that smoking causes health damage and is responsible for high rates of lung cancer. This allowed the Court of Appeal to conclude that "because tobacco, having as its only destination consumption through smoking... contained a potentially harmful charge, being it possible that smoking caused a threat to health... the entity was obliged to use every precaution to avoid that the risk became a concrete injury" and that manufacturing and selling tobacco amounted to a dangerous activity.

The exercise of dangerous activities is covered by Article 2050 of the Italian Civil Code. This provision reverses the burden of proof and requires that the defendant should prove that it has adopted all appropriate measures to avoid the damage.¹⁰⁹ The notion of dangerousness is different from the notion of defectiveness. An activity is dangerous if it involves a high degree of risk with a significant likelihood of causing harm to others. Italian courts used to interpret this expression restrictively, and only applied it to activities expressly described as such by law. In more recent years, however, its scope has been extended to cover any activity that is intrinsically dangerous by virtue of the means or procedures used to carry it out.¹¹⁰

Once it had established that manufacturing and selling tobacco was a dangerous activity, the court focused on whether BAT Italia had discharged the burden of proof resting on them. This would have required that BAT Italia establish that they had used every effort to

¹⁰⁷ The first instance decision has been commented upon in (Cafaggi F. , 1997).

¹⁰⁸ The claimant may have smoked cigarettes produced by different manufacturers. Certain US States have introduced the notion of market share liability, which allows each manufacturer to pay damages in proportion to its market share (see for example, the decision in *Brown v Abbott Laboratories* delivered by the Californian Supreme Court on 31st March 1989). The Product Liability Directive provides for joint and several liability of the producers responsible for defective goods: Where, as a result of the provisions of this Directive, two or more persons are liable for the same damage, they shall be liable jointly and severally, without prejudice to the provisions of national law concerning the rights of contribution or recourse" (Article 5). Nevertheless, joint and several liability is not a general principle of tort law in all European systems. Note however §830 BGB in Germany. On the question of apportionment of liability, see V. Zeno-Zencovich, "Il danno da produzione di tabacco: problemi teorici e aspetti applicativi", (2002) Resp. civ. 2002, 949.

¹⁰⁹ "2050 Responsabilità per l'esercizio di attività pericolose. Chiunque cagiona danno ad altri nello svolgimento di un'attività pericolosa, per sua natura o per la natura dei mezzi adoperati, è tenuto al risarcimento, se non prova di avere adottato tutte le misure idonee ad evitare il danno".

¹¹⁰ Examples of dangerous activities also include the handling of explosives, camping gas, weapons or medicines, as well as blood transfusion (Alpa & Zeno-Zencovich, 2007).

avoid harm. On the facts of the case, however, they had failed to do so. To reach this conclusion, the court stated that the right to health was protected by Article 32 of the Italian Constitution, which reinforced the company's obligation "to use every precaution in order to avoid that the hazard should transform itself in actual injury", and in particular to inform customers of the health hazards of smoking. Simply asserting that no laws have been infringed does not discharge the burden of proof under Article 2050. The court also held that the smoker's choice to smoke was irrelevant, since the defendant had not established that they had adopted a "conduct suitable to avoid the harm". Mr Stalteri should have received specific and direct information from BAT Italia.

The court also upheld the claimants' contention that there was a causal link between the failure of the defendant to warn Mario Stalteri of the dangers of smoking and his death of a lung cancer. BAT Italia was therefore condemned to pay damages of EUR 200,000 to his family, plus EUR 20,000 of legal costs.¹¹¹

To our knowledge, the *Stalteri* case is the only liability lawsuit which has been successfully mounted against tobacco manufacturers in Europe. It relies on a specific provision of Italian law which reverses the burden of proof and consequently reinforces the duty of care owed by tobacco manufacturers to their consumers. Liability is not strict. BAT Italia's fault lay in its failure to ensure that Mario Stalteri could take an informed decision. This case therefore illustrates how general tort law can ensure that tobacco manufacturers are made accountable even in the absence of specific legislative provisions.

This interpretation of the duty of care of tobacco manufacturers stands in stark contrast with the approach adopted by other European courts, especially in Germany and in France. German courts only oblige tobacco companies to provide basic information, a duty which is fulfilled if the companies comply with labelling requirements.¹¹² Part of the explanation for this difference in the scope of the duty of care resting on tobacco manufacturers' may lie in the fact that the mechanism established under Article 2050 is specific to Italian tort law: §§823 et seq. BGB (German Civil Code) and Articles 1382 et seq. of the French Civil Code do not contain any comparable provision to Article 2050 of the Italian Civil Code allowing for the reversal of the burden of proof. Nevertheless, the explanation also lies in the fact that most courts in EU Member States have tended to hold smokers responsible for their own illnesses: they have chosen to smoke and should therefore bear the consequences of their loss, bearing in mind that the detrimental health consequences of smoking are widely known by smokers and the public at large. In the *Gourlain* case, for example, the French *Cour de cassation* (the Supreme Court in civil and criminal matters) stated that the claimant could not ignore the detrimental consequences smoking had on his health not only because of the compulsory warnings required on all cigarette packages since 1976 but also because of the information made widely available to the public on the media, and in particular on television, on the radio and in the press.¹¹³

¹¹¹ The Court awarded EUR 150,000 to Paola Stalteri for the pain and suffering related to the premature death of her husband and EUR 50,000 to Marcello Stalteri for the pain and suffering related to the premature death of his father. The claimants have challenged this award on the basis that it is insufficient and does not fully compensate them for their loss. They claim both patrimonial damages and a higher liquidation for their pain and suffering. In March 2007, the Corte di Cassazione remanded the case for a reassessment of the damages awarded (decision n°22884/07). The hearing is expected in September 2010.

¹¹² *Landgericht* Bielefeld, Decision of 15/01/2000, 8 O 411/99, (2000) *Neue Juristische Wochenschrift*, 2514, §3 d) aa); *Landgericht* Arnberg, Judgment of 14/11/2003, 2 O 204/02, (2004) (2004) *Neue Juristische Wochenschrift*, 232, §76.

¹¹³ *Cour de cassation*, 2^{ème} civ. 20 November 2003, *Gourlain*. See also *Cour de Cassation* 1^{ère} civ. 8 November 2007, *Suzanne X*; Finnish District Court, 10/10/2008, ongoing; German *Landgericht* (Regional Court) of Arnberg, judgment of 14/11/2003, 2 O 294/02, §76.

Lack of sufficient and reliable information

The need to provide adequate information to consumers on the products they buy is a recurring theme in tobacco litigation. As discussed above, the provision of information to consumers shapes product liability law (strict liability) and general tort law (focusing on the defendant's conduct), insofar as the amount and the nature of the information provided to consumers are relevant when assessing both whether cigarettes are defective products as well as whether a tobacco manufacturer has failed to act towards its customers with the care required of tobacco manufacturers. It is therefore logical that lack of sufficient and reliable information can be scrutinised by means of both product liability law and general tort law.¹¹⁴ Consequently, the failure to provide adequate information is not necessarily a separate mechanism of potential liability. Nevertheless, the question of information provision raises specific issues and is therefore discussed here under a separate heading.

Information as a central tool of EC consumer policy

Prevention being better than cure, the “right to information” is central to the model of consumer protection set up at Community level. Requiring that consumers be provided with sufficient and reliable information about a product or a service is a regulatory technique that has enjoyed considerable popularity in the development of EC measures affecting the protection of consumers’ interests.¹¹⁵ It places the onus on consumers to decide what is best for them, expecting them to take their personal circumstances into account.¹¹⁶

Directive 2005/29 regulates the provision of information to consumers by introducing the first EU-wide ban on all unfair business-to-consumer commercial practices (UCP Directive).¹¹⁷ To be considered unfair, a practice must meet two criteria: it must be contrary to the rules of professional diligence and materially distort or be likely to materially distort the economic behaviour of a consumer,¹¹⁸ that is “to appreciably impair the consumer’s ability to make an informed decision, thereby causing the consumer to take a transactional decision which he would not have taken otherwise.”¹¹⁹ The UCP Directive then focuses on one category of unfair commercial practices: misleading commercial practices. Under Articles 6 and 7, a practice is misleading if it contains false information, omits material information or presents it in an unclear, unintelligible, ambiguous or untimely manner, or otherwise deceives or is likely to deceive the average consumer. These provisions therefore confirm that the information provided to consumers must be both sufficient and reliable.

¹¹⁴ For example, see German cases: *Landgericht Bielefeld*, Decision of 15/01/2000, 8 O 411/99, (2000) *Neue Juristische Wochenschrift*, 2514 (tort law); *Landgericht Arnsberg*, Judgment of 14/11/2003, 2 O 204/02, (2004) *Neue Juristische Wochenschrift*, 232, §76 (Product Liability Law).

¹¹⁵ For example, the Commission’s Communication on the EU Consumer Policy Strategy for 2007-2013 – incidentally entitled “Empowering consumers, enhancing their welfare, effectively protecting them” – states that “empowered and informed consumers can more easily make changes in lifestyle and consumption patterns contributing to the improvement of their health, more sustainable lifestyles and a low carbon economy”: COM (2007) 199 final, 11.

¹¹⁶ As Stephen Weatherill has noted, the approach of improving transparency by providing enough reliable information has the advantage of minimising interference with private autonomy. The provision of information is therefore seen as a compromise: protection is provided as a result of the introduction of duties on traders to inform consumers of the qualities of their goods and services, while avoiding intrusive controls, such as a ban on particular types of contract, which may unduly diminish consumer choice: S. Weatherill, *EU Consumer Law and Policy*, Elgar, 2nd edition (2005), 84.

¹¹⁷ OJ 2005 L 149/22. Directive 2005/29 entered into force on 12 June 2005 and Member States should have adopted the necessary implementing measures by 12 June and ensured that they are fully complied with by 12 December 2007.

¹¹⁸ Article 5.

¹¹⁹ Article 2(e).

The UCPD is a framework directive which only applies when no more specific legislation applies.¹²⁰ It therefore “complements the Community *acquis* on commercial practices harming consumers' economic interests” and “provides protection for consumers where there is no specific sectoral legislation at Community level and prohibits traders from creating a false impression on the nature of products” (Howells, Micklitz, & Wilhelmsson, 2006).

It is arguable that Community legislation on consumer information has an important role to play in the tobacco control strategies of the EU and its Member States and that tobacco litigation should support its enforcement. In particular, the question arises as to how the UCP Directive interacts with Directive 2003/33, which bans all forms of cross-border advertising and sponsorship for tobacco products¹²¹ and Directive 2001/37 on the manufacture, presentation and sale of tobacco products (the Tobacco Products Directive).¹²²

Sufficient information

In the cases based on facts which occurred before health warnings became compulsory, national courts have tended to reject arguments that tobacco manufacturers have a duty to provide information to consumers, in the absence of legal requirements to this effect, on the unhealthy nature of cigarettes and the dangers of smoking for human health.¹²³ Only the *Stalteri* case adopted a different approach.

Now that the Tobacco Products Directive is in force in all the Member States, tobacco manufacturers are under a duty to affix warnings to their products.¹²⁴ If they fail to do so, they are in breach of statutory requirements. By contrast, if they label their products as required by law, courts have held that they have fulfilled their obligation to inform. They are under no further obligation to warn against any damage which tobacco may cause.¹²⁵ Moreover, the fact that the damage caused by tobacco is known among the general public may shape the scope of the duty to inform.¹²⁶ In any event, even if tobacco companies failed to comply with labelling requirements, this would not necessarily mean that causation between the damage and their failure to inform would be established.¹²⁷

This case law could be criticised on the grounds that the warnings required under the Tobacco Products Directive are not sufficient to allow consumers to fully grasp the detrimental health consequences of smoking. The FTC states that “cigarettes are highly engineered so as to create and maintain dependence and that many of the compounds they contain and the smoke they produce are pharmacologically active, toxic, mutagenic

¹²⁰ Article 3(4).

¹²¹ OJ 2003 L 152/16.

¹²² OJ 2001 L 194/26.

¹²³ The United States have seen cases with mixed outcomes. While the *Cipollone* Case (505 U.S. 504 (1992)) seemed to pre-empt all actions based on post-1969 lack of information and while in *Rogers v American Tobacco* (1996) a jury did not hold the respondent liable for not disclosing the addictive nature of nicotine, the opposite was the case in *Carter v Brown & Williamson* (August 1996).

¹²⁴ Article 5.

¹²⁵ German *Landgericht* Bielefeld, Decision of 15/01/2000, 8 O 411/99, (2000) *Neue Juristische Wochenschrift*, 2514, §3 d) aa); *Landgericht* Arnsberg, Judgment of 14/11/2003, 2 O 204/02, (2004) *Neue Juristische Wochenschrift*, 232, §75.

¹²⁶ Germany: *Landgericht* Bielefeld, Decision of 15/01/2000, 8 O 411/99, (2000) *Neue Juristische Wochenschrift*, 2514, §3 d) aa); *Landgericht* Arnsberg, Judgment of 14/11/2003, 2 O 204/02, (2004) *Neue Juristische Wochenschrift*, 232; Finland – KKO:2001:58.

¹²⁷ Cour de Cassation, *Suzanne X*, 2007. Causation is discussed in the following section.

and carcinogenic, and that tobacco dependence is separately classified as a disorder in major international classification of diseases”.¹²⁸ Consequently, the standard of care expected of tobacco manufacturers on the provision of information on tobacco products should be redefined by reinforcing the information requirements laid down in the Tobacco Products Directive. This would avoid diverging interpretations from one national court to another while improving the functioning of the internal market. Tobacco litigation would ensure that such requirements are properly enforced rather than determine the standard of care expected of tobacco manufacturers.

It is further arguable that the many addictive substances present in cigarettes may not even allow the already addicted smoker much choice, and that information is unlikely to address the problems they encounter. US courts have generally cited the addictiveness of nicotine as a reason why smokers may not be found to have behaved unreasonably in continuing to smoke after they should have become aware of the dangers (Standish-Parkin v. Lorillard Tobacco Co., et al., 2004).

Finally, certain specific substances found in cigarettes raise particular problems. For example, in 2008, the American Journal of Public Health published an analysis based on more than 1500 internal tobacco industry documents, that suggested that tobacco manufacturers knew that tobacco leaves, cigarettes and smoke contained polonium 210 (210Po), a dangerous radioactive and carcinogenic substance (Proctor, 2006).

Many would argue that consumers have the right to be informed about the presence of such substances in cigarettes and their level of toxicity. However, the Tobacco Products Directive only requires that “the tar, nicotine and carbon monoxide yields of cigarettes [...] shall be printed on one side of the cigarette packet [...]”.¹²⁹ It is true that Member States must “require manufacturers and importers of tobacco products to submit to them a list of all ingredients and quantities thereof, used in the manufacturer of those tobacco products by brand name and type”¹³⁰ and that they may also require them to carry out any other tests “in order to assess the yield of other substances produced by their tobacco products on a brand-name-by-brand-name basis and type-by-type-basis and in order to assess the effects of those other substances on health, taking into account, *inter alia*, their addictiveness”.¹³¹ Nevertheless, this information may never reach the consumer.

One could therefore argue that if tobacco manufacturers fail to disclose the presence of such substances as polonium 210 to consumers, they have not provided enough information with a view to allowing consumers to make an informed choice and have therefore fallen short of their duty of care towards them. Alternatively, such cigarettes could be classified as defective products insofar as they fall short of consumer expectations – a finding of liability would however also require a loss and a causal link between the defect/fault and the loss. Finally, such cigarettes could also be considered unsafe within the meaning of the Product Safety Directive and be withdrawn from the Community market.

Reliable information

The other issue relating to information is misleading advertising. In particular, several courts in EU Member States have been called upon to adjudicate on whether tobacco advertisements for “light” cigarettes are misleading, insofar as they wrongly minimise the detrimental effects of tobacco products on health.

¹²⁸ Preamble to the FCTC.

¹²⁹ Article 5(1).

¹³⁰ Article 6.

¹³¹ Article 4(3).

Finnish claimants have argued that tobacco advertisements have misled them and, more specifically, that the advertisements for “light” cigarettes have wrongly minimised the detrimental effects of tobacco products on health.¹³² To date, Finnish courts have declined to acknowledge a generally misleading character of the advertisements, on the grounds that such advertisements do not contravene any particular duty to inform about the risks related to smoking. Concerning the marketing of “light” cigarettes more specifically, the courts have ruled that they are not misleading and upheld the argument put forward by the tobacco companies that “light” cigarettes entail a smaller risk of diseases. However, there is evidence that “light” cigarettes do not in fact entail a smaller risk of diseases (National Cancer Institute, 2001), (Goodman, 2004).

The Italian *Corte di Cassazione* adopted a different approach to the issue of light cigarettes. A smoker had initiated proceedings against BAT Italia on the grounds that he had been misled into believing that light cigarettes were not as detrimental to his health as “normal” cigarettes and that he had therefore lost the opportunity to freely choose an alternative solution to his smoking problem. The Court accepted that the wording “light” was misleading. Nevertheless, the claimant lost the case on the grounds that it was not sufficient to establish the misleading character of the claim that a cigarette is “light”; the claimant should also have established the existence of a causal link between the damage allegedly suffered and the use of the word “light” (Suprema Corte di Cassazione, 2009).

In the US, a smoker prevailed before a jury on the basis that she was deceived into believing that “light” cigarettes were less dangerous than normal cigarettes. The jury awarded the survivors USD 160,000 in compensatory damages and USD 150 million in punitive damages. An appellate court reversed the punitive damages award and remanded for a new trial on that issue, but the Oregon Supreme Court granted plaintiff’s permission for review, with arguments scheduled for November 2009.¹³³ Many state-wide consumer class actions have been filed based on the light cigarette fraud: in December 2008, the US Supreme Court ruled in *Altria Group Inc. v Good* that federal law posed no obstacles to proceeding with the cases.

Claims for “light cigarettes” or “less toxic” tobacco should all be prohibited, insofar as they give a false impression that they may not have detrimental effects on human health. First of all, Article 7 of the Tobacco Products Directive prohibits the use on the packaging of tobacco products, as of 30 September 2003, of texts, names, trademarks and figurative or other signs suggesting that a particular tobacco product is less harmful than others. As far as other forms of marketing are concerned, Community law bans tobacco advertising and sponsorship with cross-border effects.¹³⁴ For other forms of advertising and sponsorship, Articles 5 to 7 of the UCP Directive provide a basis for prohibiting the advertising and sponsorship of “light” or “less toxic” cigarettes, on the basis that these give a false impression and are therefore unfair. A further option is to require that all claims made voluntarily by tobacco manufacturers on their products with a view to gaining a competitive advantage should be supported by independent scientific evidence and that the burden of proving that they are not likely to mislead and are scientifically sound should not rest on consumers but on tobacco manufacturers which have all necessary information to

¹³² KKO:2001:58.

¹³³ *Estate of Michelle Schwarz v Philip Morris Incorporated*, number S053644.

¹³⁴ Article 15 of Directive 89/552 (as amended by Directive 2007/65) bans tobacco advertising, sponsorship and product placement in audiovisual and media services, whereas Directive 2033/33 bans all other forms of cross-border advertising.

discharge the burden of proof. Inspiration could be drawn from the legislation adopted in the area of food information on the use of nutrition and health claims.¹³⁵

4.5.2 Causation

Multifactorial conditions

Causation has proven an insurmountable hurdle in the vast majority of tobacco cases. Even if it was assumed that a tobacco manufacturer had acted in a blameworthy manner or that cigarettes were defective products, the claimant would still need to establish, if the claim was to succeed, the existence of a causal link between the defendant's conduct or the existence of the defect and the damage suffered. Under Article 4 of the Product Liability Directive, "the injured person shall be required to prove the damage, the defect and the causal relationship between defect and damage"; similarly, under the general tort law of Member States.

In personal injury cases such as the ones involved in tobacco litigation, issues of causation may be extremely complex. Several smoking-related diseases, such as heart attacks, may be explained by a variety of factors, smoking being one of them. The claimant may be a smoker, but he may also have a genetic predisposition to certain health conditions, he may live in a polluted environment, his lifestyle may be unhealthy because he eats too much and nutritionally poor foods, he drinks too heavily and/or he does not engage in enough physical activity... Nevertheless, epidemiological findings have established that lung cancer occurs almost exclusively amongst smokers or those exposed to second-hand smoke; emphysema and chronic bronchitis come close.¹³⁶ While in a sense every disease is multifactorial – even infectious diseases require susceptibility in the victim – these diseases are essentially caused by smoking. Hence, the conclusion of many European courts that causation cannot be proven may be difficult to sustain.

In Germany, France, the UK and Spain, courts have ruled that "[it] is not always possible to establish that smoking was the actual cause for the claimant's disease/death".¹³⁷ In particular, courts have attempted to determine whether the claimant's condition could have been triggered by risk factors other than smoking.¹³⁸ Determining that smoking had caused the damage suffered by a smoker or his family is all the more difficult when courts decline to accept epidemiological evidence to prove individual causation, as happened in the *McTear* case.¹³⁹ One could respond that this approach is too simplistic: all diagnoses depend upon beliefs about how phenomena are generally related, and epidemiology is a

¹³⁵ Regulation 1924/2006, OJ 2007 L 12/3. Detailed provisions on the claims (broadly defined) which tobacco manufacturers could make would circumscribe their freedom to rely on misleading assertions or omissions and would therefore put flesh on the bones of the Unfair Commercial Practices Directive, going beyond the scope of the Tobacco Products Directive which covers only claims on tobacco packaging and the Tobacco Advertising Directive which bans cross-border advertising and sponsorship of tobacco products.

¹³⁶ WHO Report on the global tobacco epidemic, 2008, 14 ("Smoking in any form caused up to 90 % of all lung cancers and is a significant risk factor for strokes and fatal heart attacks."); Surgeon General's report – The Health Consequences of Smoking, 43 ("Cigarette smoking is by far the largest cause of lung cancer, and the worldwide epidemic is attributable largely to smoking.")

¹³⁷ German *Landgericht Arnsberg*, Judgment of 14/11/2003, 2 O 204/02, (2004) *Neue Juristische Wochenschrift*, 232, §55.

¹³⁸ France: Court of Appeal, Paris 18 /11/2008; Germany: Regional Court Arnsberg, Judgment of 14/11/2003, 2 O 294/02, §70; Spain: Supreme Tribunal, July 2006, *Crespo v Altadis*, Judgment of July 2006 and Seccion Sexta de la Sala de lo Contencioso Administrativo (administrative court), *Crespo v Ministry of Economy and Finance*, May 2009.

¹³⁹ *McTear v Imperial Tobacco Ltd*, 2005 2 S.C. 1. This case stands in stark contrast with other cases establishing liability even if multiple factors caused a damage (*Fairchild v Glenhaven Funeral Services Ltd*, [2003] 1 A.C. 32) and those acknowledging that tobacco causes lung cancer (*Badger v Ministry of Defence* [2005] EWHC 2941 (QB), §15).

scientific approach to determining which of these beliefs are valid.¹⁴⁰ Consequently, epidemiological evidence should not be systematically discarded

The situation in the US is entirely different. While US courts are very sceptical of scientifically shaky assertions,¹⁴¹ they actually insist on epidemiological evidence and treat efforts by the tobacco industry to deny the relationship between smoking and disease as an example of their pattern of fraudulent conduct. Juries occasionally find lack of causation in specific cases, especially those involving second-hand smoke, but in the general run of cases, the issue is no longer even contested. The Canadian Province of British Columbia has gone even further following the adoption in 2000 of the Tobacco Damages and Health Care Costs Recovery Act which exempts the government seeking to recover the cost of health care benefits on an aggregate basis from proving the cause of tobacco-related disease in any particular individual insured person.¹⁴²

We should not conclude too hastily, however, that there is a uniform approach to questions of causation in Europe. Some courts in other Member States, and in particular in Finland and in Italy, have been more willing to accept that a causal link existed between smoking and diseases such as lung cancer.¹⁴³ In the *Stalteri* case, for example, the Court of Appeal of Rome held that the existence of causation between lung cancer and smoke was established beyond any reasonable doubt, on the basis of criteria of serious scientific probability. Thus, the court confirmed the findings of the panel of scientific experts that it was highly unlikely that the mutation could have been produced by factors other than active smoking.

Nevertheless, the successful outcome for the claimants in the *Stalteri* case should not hide the fact that causation is extremely difficult to establish. It is notable, in particular, that the Court of Appeal of Rome insisted on the fact that the mutation at stake was so specific that it excluded the assumption that it could have been caused either by the effects of pollution from pesticides or the effect of a metastasis of a tumour of the colon, as BAT Italia had suggested. The factual circumstances surrounding this case were indeed particularly favourable to the claimants: no factor other than smoking could have explained Mario Stalteri's lung cancer. Moreover, not only did he smoke cigarettes of the same brand for forty years, but there was during that time hardly any information was made available to smokers for lack of labelling obligations. Finally, there was no need to exhume Mario Stalteri's body to carry out the analysis required to determine the cause of his cancer. This case may therefore be of limited use for future claims against tobacco manufacturers. This is reinforced by the fact this decision was not delivered by the *Corte di Cassazione* but by a Court of Appeal only. BAT Italia initially intended to appeal against the decision delivered in favour of the Stalteri family in 2005, but withdrew its appeal shortly before the hearing. A favourable decision of the *Corte di Cassazione* would have conferred a stronger precedent value to the principle that manufacturing and selling tobacco is a dangerous activity warranting a reversal of the burden of proof.

The difficulties surrounding causation explain why there is relatively limited prospect of successful collective claims in Europe. Even though some issues may be common to a class of claimants and collective actions would allow them to pull their resources together, each member of the class will have different personal circumstances characterising his or her claim. An individualised assessment of both the damage suffered and causation will

¹⁴⁰ The *McTear* judgment has been vividly criticised: (Friedman & Daynard, 2007) and ; (Davis, 2005)

¹⁴¹ See (Daubert v Merrill Dow Pharmaceuticals, 1993)

¹⁴² As stated above (section 4.4.3), courts must presume that the population of insured persons who were exposed to the type of tobacco product manufactured or promoted by the defendant would not have been exposed to the product but for its breach.

¹⁴³ Finland: KKO:2001:58; Italy: *Stalteri* case of 2005.

therefore be required to determine whether a tobacco manufacturer should be held liable and, if so, to which extent it should indemnify a claimant for the loss suffered.

Contributory negligence and risk apportionment

The existence of causation is all the more difficult to establish conclusively as courts may decide that what caused the damage was not so much the defect in the cigarettes or the defendant's conduct as the excessive smoking of the claimant himself. For example, the French *Cour de cassation* held in the case of *Gourlain* that, even though health warnings were not compulsory in France before 1976, the claimant would not have adopted a different attitude (i.e. he would have kept on smoking). The damage would therefore have occurred even if the tobacco manufacturer had acted in breach of its duty of care. Consequently, the causal link between the breach and the damage was missing and it was not necessary to discuss whether the tobacco manufacturers had effectively failed to act with sufficient care.¹⁴⁴ Similarly, Spanish courts have ruled that the claimants had freely undertaken to smoke notwithstanding the health warnings on cigarettes packs in place for more than 20 years and that they had therefore taken a conscious health risk with their immoderate tobacco consumption.¹⁴⁵ Alternatively, some courts may decide that the smoker contributed to his own loss and that his contributory negligence should lead to the annulment of, or a reduction in, the award made.¹⁴⁶

In the United States, juries tend to blame the smokers unless given a reason to blame the cigarette companies more. Defence lawyers try to turn these cases into trials of the claimant, and they are generally successful in doing so, unless the claimant has introduced damning evidence of industry misbehaviour. Even where the doctrines of assumption of the risk or contributory negligence do not apply, the jury (with the defence attorney's guidance) will find another route to a verdict for the defence. Thus, in the Mississippi case of *Wilks*, the trial judge decided that strict liability would apply and that the only defence was lack of medical causation; the jury in June 1993 obliged by finding lack of such causation.¹⁴⁷

American lawyers experienced in tobacco litigation have drawn two conclusions:

- First, it is preferable to avoid going to trial unless it is possible to introduce substantial evidence of industry wrongdoing;
- Secondly, it is preferable to avoid going to trial unless the jury is permitted to find the claimant partially at fault (comparative negligence). The rationale is that if the jury can deal with its victim-blaming impulses directly, it will do so rather than displace them on some other ground (e.g. medical causation) that denies the claimant any relief whatsoever.

Passive smoking

Causation is even more difficult to establish in cases of passive smoking. Evidence strongly suggests that there is no safe level of exposure to second-hand smoke. The Conference on

¹⁴⁴ Cour de cassation, 2^{ème} civ. 20 November 2003, *Gourlain*. See also Cour de Cassation 1^{ère} civ. 8 November 2007, *Suzanne X*.

¹⁴⁵ Barcelona Tribunal of First Instance (n°34), *Emilio Carramiña*; Supreme Tribunal, July 2006, *Crespo v Altadis*, Judgment of July 2006, and Sección Sexta de la Sala de lo Contencioso Administrativo (administrative court), *Crespo v Ministry of Economy and Finance*, May 2009.

¹⁴⁶ In particular, this possibility is explicitly provided for in Article 8(2) of the Product Liability Directive.

¹⁴⁷ (*Wilks v The American Tobacco Co., et al.*) Note that in the US any contributory negligence used to bar negligence claims, and assumption of the risk would do the same. All jurisdictions have now switched to comparative negligence, though most have a minimum threshold around 50% (i.e. if claimant is 50% - or in some jurisdictions more than 50% - at fault, he recovers nothing). Pure comparative negligence jurisdictions (including Florida) are thus greatly preferred by claimant's lawyers.

the Parties to the FCTC, the WHO International Agency for Research on Cancer, the US Surgeon General and the UK Scientific Committee on Tobacco and Health all concur that second-hand smoke exposure contributes to a range of diseases, including heart disease and many cancers.¹⁴⁸ Nevertheless, that does not mean that a claimant can adduce conclusive evidence that the disease he suffers from has been caused by exposure to second-hand smoke and that tobacco manufacturers should be liable to pay damages for his poor state of health.

In relation to smoke-free environments, regulation has proven a far better avenue than tort law, though litigation has had a role to play in promoting regulatory change. Not only are claims involving passive smokers in Europe generally lodged against employers rather than tobacco manufacturers, with claimants arguing that their employers have not fulfilled their obligation towards them to provide a safe and healthy work environment.¹⁴⁹ But they also tend to fail, on the grounds that no causal link can be established between the potential breach by an employer to provide a healthy working environment and the damage suffered by the claimant.¹⁵⁰ By contrast, many workers compensation,¹⁵¹ disability benefits,¹⁵² and similar claims against employers have succeeded elsewhere in the world, with some of the earliest claims being in England and Sweden.

4.5.3 Possible changes to the existing Community legislative framework likely to facilitate tobacco litigation

The discussion above suggests a number of possible changes to EU law that might facilitate tobacco litigation. These are reviewed and evaluated in this section.

i) Amending the Product Liability Directive: A provision could be inserted in the Product Liability Directive stating that cigarettes and other similar tobacco products are defective, notwithstanding the information provided to consumers. However, as discussed above, this is unlikely to be productive in light of the fact that cigarettes are lawfully placed on the market, provided they respect certain conditions relating both to their content and to their marketing (in particular, they must contain health warnings). Moreover, the existence of a defect does not necessarily mean that there is a causal link between the damage suffered and the liability of the producer to have sold a defective good (even if the liability in question is strict).

ii) Amending the General Product Safety Directive: A provision could be inserted in the General Product Safety Directive stating that cigarettes and other similar tobacco products are unsafe and shall therefore not be placed on the market.

¹⁴⁸ (WHO, 2008) For references on how the tobacco industry has attempted to minimise and even at times misrepresent scientific research on the health effects of second hand smoke, see J. Goodman (ed.), *Tobacco in History and Culture – An Encyclopedia*, Scribner Turning Points Library, 2004, 512.

¹⁴⁹ (Bland v Stockport MBC, 1993); Court of Session, Outer House, 7 July 1997, *Rae v Glasgow City Council* [1998] S.L.T. 292; Cour Administrative d'Appel, Paris, 19 June 2007, *Sénat v Roger X*, N°06PA02987. Cour d'Appel, Paris, 18 November 2008, *Olivier X*. These cases have all been dismissed, apart from the Bland case which ended up in an out of court settlement awarding GBP 15,000 to the claimant (2006) *Journal of Personal Injury Law* 4).

¹⁵⁰ (*Sénat v Roger X*, 2007). Cour d'Appel, Paris, 18 November 2008, *Olivier X* (in this latter case, the court relied in particular on the fact that the alleged victim of passive smoking lived in Paris and that the level of carbon dioxide was no valid evidence).

¹⁵¹ For example, an asthmatic woman who worked as a bartender/manager was hospitalised after suffering an asthma attack on the job due to high levels of tobacco smoke. She sued for workers compensation benefits and was awarded temporary total disability and permanent partial disability benefits: (*Cantaloupe v Veterans of Foreign Wars Club of Eureka*, South Dakota, 2004).

¹⁵² In a landmark case in the early 1980s, the US Court of Appeals for the Ninth Circuit ruled that a government worker who was hypersensitive to smoke is "environmentally disabled" and thus eligible for disability benefits, when working in a smoke-filled environment: (*Parodi v Merit Systems Protection Board*, 1983)

In this respect, one should note that if the Tobacco Products Directive does not in itself contain product safety rules, it nonetheless informs the interpretation which must be given of the General Product Safety Directive by setting standards which tobacco manufacturers must uphold in terms of the composition of their products and the information they must provide on them. If manufacturers comply with these standards, it is likely that their products will not be found “dangerous” and will therefore be “safe” within the meaning of the General Product Safety Directive – even though they present inherent risks for human health.

Consequently, the only possibility to ensure that cigarettes and other tobacco products are ‘unsafe’ is to insert a provision to this effect in the General Product Safety Directive. This would amount to banning tobacco products from the Community market – a decision which would be highly charged politically and very unlikely to be accepted by Member States.

iii) Shifting the burden of proof: A less drastic proposal would be to adopt the solution Italy has adopted by shifting the burden of proof and requiring that the manufacturer rather than the consumer establishes that it has fulfilled its duty of care towards him (Article 2050 Codice civile). Community legislation on information requirements could also be complemented to include more detailed provisions ensuring that tobacco manufacturers may not rely on any misleading claims; the Tobacco Products Directive could be amended accordingly.

4.6 Procedures likely to facilitate tobacco litigation

Even if claimants manage to overcome hurdles of substantive law – and in particular if they establish fault on the part of the tobacco manufacturers or the existence of a defect, on the one hand, and a causal link between the faulty behaviour or the defect and the damage suffered, on the other – they are still likely to face obstacles of a procedural nature which could limit their chances of success against tobacco manufacturers. The 50-year tobacco litigation history in the United States indicates that cases against tobacco manufacturers tend to be extremely onerous, first, because of the costs involved in launching proceedings and, secondly, because of the difficulties involved in gathering the necessary evidence to support one’s case. The question arises whether the procedural tools in existence in the United States to address these obstacles could be relied upon in Europe.

4.6.1 The cost of bringing a case

The deterrent effect of the costs involved

As discussed above, tobacco litigation may be worthwhile. For example, on 31st March 2009, the US Supreme Court decision upheld in the *Williams* case the USD 79.5 million punitive damages verdict (now USD 145 million with interest, 10 years after the original verdict). Nevertheless, litigation against big tobacco companies that refuse to settle is extraordinarily expensive. In the US some see this as a result of deliberate tactics on the part of the industry - ensuring that cases are so expensive that they cannot succeed, slowing down procedures and appealing to all possible instances.¹⁵³ As a result, almost no claimant is able to afford the costs involved.

In Germany, some proceedings could not be launched on the grounds that claimants were both too poor to pay for litigation costs themselves and too well-off to be granted legal aid. Moreover, the only case ever tried on the merits¹⁵⁴ was made possible after the German

¹⁵³ “The way we [tobacco companies] won these cases, to paraphrase Gen. Patton, is not by spending all of Reynolds’ money, but by making the other son of a bitch spend all of his”: (Daynard, Bates, & Francey, 2000)

¹⁵⁴ Such actions are excluded from the scope of legal aid – see: (Regional Court Arnsberg, Judgment, 2003); The appeal against this judgment has been rejected: (Decisions of 14/06/2004 and 14/07/2004, 2005)

highest civil court ordered the claimant's legal expenses insurance to bear the cost of the proceedings.¹⁵⁵ The claimants' advocates in the *Stalteri* case acted on a *pro bono* basis.

The disequilibrium between a profitable tobacco company and an aggrieved smoker or his family is unavoidable. Nevertheless, certain procedural mechanisms are used in the United States and have facilitated tobacco litigation. They include:

- Contingency fees;
- Punitive damages; and
- Class actions.

Contingency fees and other alternative funding methods

Contingency fees are payments to the claimant's lawyer which are only due if the claimant wins the case. The lawyer's wages are usually deducted from the money awarded and tend to make up around a third of the award (Civil Justice Council, 2008), (Ashurst, 2004) . Contingency fees therefore support claimants who are not eligible for legal aid but cannot afford their lawyer's fees and thus greatly increase access to justice (Civil Justice Council, 2008). This is particularly important in order to eliminate or significantly reduce the cost risk associated with bringing a novel claim (Hodges, 1999). Some have argued, however, that contingency fee arrangements diminished the impartiality of lawyers both concerning their advice and concerning the acceptance of a case (Gore, 2006) as such arrangements give them a direct financial interest in the outcome of the case (Hodges, 1999), (Hodges, 2007) .

In the United States, it would be hard to imagine robust tobacco litigation on behalf of individuals without contingency fees. This is all the more so as the profits made by lawyers in one action are often used to fund new and novel cases (Civil Justice Council, 2008), (Hodges, 1999), (Gibbons, 2008) and (Ashurst, 2009) .

In Europe, there is currently no harmonised approach regarding fee arrangements between clients and lawyers. They are prohibited in most jurisdictions and rather heavily regulated in others. However, contingency fees can significantly facilitate the initiation of legal proceedings, and some countries have been discussing the introduction of contingency fee agreements in recent years (Renda, 2007). Several Member States already use innovative funding methods, including conditional fee agreements in the UK, third party funding by private companies in Germany and Austria, as well as risk agreements in Sweden (Study Centre for Consumer Law, 2007).¹⁵⁶ Their potential should not be underestimated in enhancing the effectiveness of tobacco litigation. Opportunities for litigation would be enhanced if Member States adopted such alternative funding methods (Storskrubb, 2008). Moreover, the loser-pays principle, which obliges the defeated party to pay the other party's costs, arguably provides sufficient deterrence against frivolous claims (Hodges, 1999). However, this rule ought to be adapted to accommodate the tobacco industry's strategy of 'making the opponent poor', as US researchers have described it (Daynard, Bates, & Francey, 2000).¹⁵⁷ Thus, the rule could be complemented by a cap in the sums recoverable from a losing claimant.

Punitive damages

Secondly, it is argued in the United States that the high costs involved in tobacco litigation mean that, even with contingency fees, compensatory damages without punitive damages,

¹⁵⁵ Federal Court of Justice, Decision of 19/03/2003, IV ZR 139/01, Neue Juristische Wochenschrift 2003, 1936-1938.

¹⁵⁶ On third party funding by private companies see: (Coester & Nitzsche, 2005); (Toggenburger, 2002); and (Grunewald, 2001) .

¹⁵⁷ R. Daynard, C. Bates and N. Francey, "Tobacco litigation worldwide" (2000) BMJ, 111–113, 111.

even if they are in the low seven figures, probably will not compensate the claimant's lawyer for the total of his firm's out-of-pocket and opportunity costs. This is why there is a perceived need to add substantial punitive damages (around twice the amount of compensatory damages), or some way to make the bringing of such cases routine - increasing their number, and lowering their average cost.

Punitive damages, as opposed to compensatory damages, are intended to punish the other party rather than compensating the victim for an incurred loss (Glaberson, 2001). Such damages tend to be awarded in addition to compensatory damages if the party inflicting the damage has acted in aggravating circumstances, e.g. humiliation or fraud. Damages multipliers make sense when the unlawful conduct is difficult to detect and therefore the expected value of a violation is positive even if an award of damages would take away all of the profits from the violation (Renda, 2007). Such damages therefore have a strong deterrent effect. Only about 5% of cases in the United States result in punitive damages awards, (Toggenburger, 2002) and their amount are often significantly reduced on appeals (Hodges, 1999).

The 5th and the 14th amendments of the US Constitution provide that nobody shall be deprived of his property without due process. Consequently, punitive damages exceeding a single-digit ratio compared to the compensatory damages award are rarely constitutional.¹⁵⁸ However, there are exceptions to this rule. For example, the US Supreme Court refused to hear an appeal against a punitive damages award against Philip Morris USA Inc which exceeded the compensatory damages award by almost 100 times.¹⁵⁹

Some jurisdictions, such as the UK, Ireland and Cyprus, have systems in place allowing for the award of punitive damages.¹⁶⁰ It is arguable that Article 1 of the First Protocol of the European Convention on Human Rights, which protects the peaceful enjoyment of one's property, as well as Article 6(1) of the ECHR, which has affinities with the due process clause, will oblige the courts to constrain very large punitive awards (Tettenborn, 2004); but the ECHR does not prevent the award of such damages. Supporters of punitive damages argue that they are needed to encourage lawyers to pay the sometimes substantial upfront cost of litigation (Berryman, 2004). Furthermore, if novel claims are to be funded by means of revenue generated in other cases, punitive damages provide an effective mechanism to generate enough revenue for that purpose.

Nevertheless, punitive damages are not part of the legal cultures of most EU Member States. It is argued that they blur the distinction between punishment of a wrongdoer and compensation of a victim.¹⁶¹ Since most European jurisdictions adopt the harm-based method as a general rule in tort law, punitive damages are considered incompatible with their public policy and/or basic principles of tort law (Renda, 2007). It is therefore not surprising that Community institutions have been reluctant to suggest that punitive damages should be adopted in all EU Member States. For example, the Impact Assessment Report accompanying the 2008 White Paper on Damages action for breach of EC antitrust rules¹⁶² cautiously noted that if punitive damages may be acceptable under

¹⁵⁸ See (State Farm Mutual Automobile Insurance Co. v Campbell et al., 2003).

¹⁵⁹ *Philip Morris USA, Inc v. Mayola Williams, personal representative of the estate of Jesse D. Williams, deceased*, <http://www.supremecourtus.gov/opinions/08pdf/07-1216.pdf>. See (Sweda & Gottlieb, 2009) .

¹⁶⁰ See in particular (Decision of the House of Lords in *Kuddus v Chief Constable of Leicestershire Constabulary*, 2002).

¹⁶¹ It has also been highlighted that they may lead to the bankruptcy of a defendant: see (Berryman, 2004)

¹⁶² COM (2008) 165 final See in particular at paragraph 2.5 where it is stated that the victim of an antitrust infringement should receive "full compensation of the real value of the loss suffered".

Community law, as the Court clarified in its *Manfredi* judgment,¹⁶³ this did not imply that such particular damages should be introduced in every Member State. Introducing punitive damages does not seem like a feasible option in light of the high harmonisation costs it would entail (SEC, 2008).

Class actions and other aggregate procedures

Thirdly, plaintiffs involved in tobacco litigation have relied on class actions to increase their chances of success and limit the cost of proceedings against tobacco manufacturers.

Class actions are a form of aggregate procedures. Such procedures enable either a large number of claimants to file lawsuits in groups to defend their own interests (group actions) or they enable representative bodies to bring forward legal actions to defend usually a collective consumer interest (representative actions).¹⁶⁴

The US class action allows a representative to litigate in court on behalf of a class of unidentified individuals for whom the judgment is binding, unless members of the class have expressly opted out of the proceedings.¹⁶⁵ Class actions therefore put private individuals into the position of private attorneys general in order to enforce regulatory law as counterbalance to public enforcement bodies which the US public deems under-funded and dependent on “political or regulated interest”.¹⁶⁶

The advantage of aggregate procedures is that they tend to be more efficient than individual actions. A whole group of claimants can be dealt with on one single occasion, thus allowing courts, lawyers (European Economic and Social Committee, 2008) and even defendants to spare their resources as a result of economies of scale (Polverino, 2006). Moreover, aggregate procedures contribute to legal certainty by avoiding conflicting judgments (European Economic and Social Committee, 2008). Furthermore, the aggregation of several claimants limits the risk inherent in bringing a claim, as potential cost risks are shared among all claimants (Hodges, Factors influencing the incidence of multiple claims, 1999), (Polverino, 2006). Finally, aggregate proceedings are likely to exert pressure onto the defendant: if the litigating group is sufficiently large or the litigating representative body sufficiently strong, a defendant may decide to settle a case rather than litigate (Gibbons, 2008), as a settlement is cheaper than court proceedings (Hodges, 2009).

In the 1980s, three New Jersey law firms filed 6 – 8 cases, hoping to develop a line of practice that would be lucrative even if the first couple of cases were not. The extremely high costs of the *Cipollone* case (which made several trips to the US Supreme Court, and generated dozens of published opinions) put a damper on this strategy – in the end, the

¹⁶³ Joined Cases C-295/04 to C-298/04 *Manfredi* [2006] ECR I-6619: “in accordance with the principle of equivalence, it must be possible to award particular damages, such as exemplary or punitive damages, pursuant to actions founded on the Community competition rules, if such damages may be awarded pursuant to similar actions founded on domestic law” (paragraph 93).

¹⁶⁴ This is a very simplified explanation of the multitude of aggregate proceedings which exist in Europe, see: (Study Centre for Consumer Law, 2007) See also (Cafaggi & Micklitz, 2007).

¹⁶⁵ (Polverino, 2006). Legal basis for federal class actions is Federal Civil Procedure Rule 23 which is mirrored in many US states and has been modernised by the Class Action Fairness Act (CAFA) in 2005: <http://thomas.loc.gov/cgi-bin/query/C?c109:./temp/~c109HcJMJK>. Class actions usually start as ordinary actions. If the claimant’s counsel wishes to proceed on the basis of a class action, he can file a motion for class certification during the litigation. All cases (apart from narrowly defined tax and administrative cases) can be adjudicated by means of the class action procedure. Rule 23 of the Federal Civil procedure Rules puts in place the conditions of numerosity, commonality, typicality, and appropriate representation which have to be fulfilled if the class is to be certified, i.e. if the proceeding is to be conducted on behalf of the class. See (Pace, 2007)

¹⁶⁶ (Hodges, 2009). Supporting the argument that Americans do not trust enforcement authorities as Europeans do, see also (Hodges, 2008); and (Berryman, 2004).

litigation involved whether the firms would be permitted to withdraw from these cases despite the objections of their clients!

In the *Engle* Florida litigation, there are now over 8,000 cases on file following an invitation by the Florida Supreme Court to file such cases by January 11, 2008 to obtain the advantages of applying the jury's findings in the class action via *res judicata*. There are probably a couple of dozen law firms pursuing these cases, though one firm has half the cases. In the first seven trials, none of which took more than two weeks, there were five plaintiffs' verdicts (ranging from \$25 million to \$8 million including punitive damages, and \$800,000 with no punitive damages) and two defence verdicts. If a substantial number of claimants' verdicts continue to be generated, this would provide a viable model, allowing for common issues to be resolved first in some type of group proceeding, followed by individual assessments of fault/defect, the causal relationship between fault/defect and the loss suffered and damages. This could also lead to a settlement of all pending *Engle* follow-on cases.

The *Engle* class action is so far the only one which yielded judgments obliging tobacco companies to reimburse claimants. The *Broin* class action on the other hand, in which 60,000 non-smoking flight attendants sued tobacco companies for the damages caused by passive smoking in airplanes, ended with a settlement which provided for the donation of USD 300 million to establish the "Flight Attendants Medical Research Institute" with a goal of seeking cures for diseases attributed to tobacco smoke and to develop methods of early detection, and for the possibility of individual members of the class to bring forward actions without their being barred by the statute of limitations. A similar outcome, although not through a settlement but through a judgment, could be seen in the *Scott* class action, which ended with a verdict in favour of the class, obliging the respondents to pay USD 591 million to institute a state-wide fund for smoking cessation (*Gloria Scott et al. v Philip Morris Inc et al*, 2004).

These successes are just one side of the coin. The other side is that before a class action can actually be tried, it is necessary to undergo time consuming and nerve-racking litigation until the class has been certified. This can take as long as five years (as was the case in the *Broin* class action) or fail altogether (as was the case in *Castano* – a class comprising all nicotine dependent persons in the US who purchased and smoked cigarettes manufactured by the respondent.¹⁶⁷ A failure to have a class certified may be particularly detrimental for the presumed members of the class if it entails that they lose the opportunity to pursue claims individually due to the expiry of limitation periods, though the general rule in the US is that the pendency of a class action proceeding tolls the statute of limitations for each class member.

The European legal landscape has shifted in the last few years so that forms of group litigation are increasingly available. Amongst others, the UK, Sweden, Spain, Germany, and the Netherlands all allow for some form of group litigation. France, Ireland, Italy, Finland, Denmark and Norway are all considering or have recently introduced legislation that facilitates certain kinds of group actions, though countries have so far adopted different solutions (Renda, 2007).

A number of consumer law directives already acknowledge the role of representative actions,¹⁶⁸ and the EU has recognised that collective actions have the potential to strengthen the effective enforcement of consumer rights more generally. It published a

¹⁶⁷ US Court of Appeals 5th circ 84 F.3d 734

¹⁶⁸ Article 7 of Directive 93/13; Article 11 of Directive 2005/29. See (Hodges, 2008)C. See also Article 4 of Directive 2004/48 on the enforcement of intellectual property rights, OJ 2004 L 195/16; Article 12 of Directive 2004/35 on environmental liability with regard to the prevention and remedying of environmental damage, OJ 2005 L 143/56.

Green Paper on Consumer Collective Redress¹⁶⁹ in November 2008, launching a public consultation on how to facilitate redress in situations where large numbers of consumers have been harmed by a single trader's practice which is in breach of consumer law. This consultation goes beyond tobacco litigation but is nonetheless relevant, not least because the violations of the consumer rules concerned include rules on misleading advertising or failures to provide compulsory information. The rationale for Community intervention is that illegal practices, if they occur to a large number of consumers, can cause considerable damage to consumers, generate unfair competition and distort the proper functioning of the internal market. The Green Paper identifies barriers to effective consumer redress in terms of access, effectiveness and affordability and presents various options to close the gaps identified. The options set out in the Green Paper range from no action to the adoption of binding Community measures for collective judicial redress and seek to ensure that consumers who are victims of illegal commercial practices can get compensated for their losses, while avoiding unfounded claims (Commission of the European Communities, 2008). The adoption of an EU-wide tool for collective redress, as envisaged by policy option 4, would arguably facilitate tobacco litigation, insofar as it would lay down at least a minimum level of harmonisation of aggregate procedures in all EU Member States, thus minimising risks of forum shopping (European Economic and Social Committee, 2008), (Pace, 2007).

If collective actions were harmonised so as to allow for awards to all group members, then they could facilitate tobacco litigation by, among others, allowing lawyers to represent several hundreds or thousands of clients simultaneously and creating incentives for private companies to finance lawsuits, however novel and complex these may be. To overcome problems of access to court, collective actions could consist of opt-in rather than opt-out actions. As discussed above, however, causation requires a careful assessment of the specific circumstances of each claimant: his genetic predisposition, his lifestyle, his overall state of health, his environment. Collective actions therefore have unavoidable limits: they cannot dispense with the scrutiny required of the factual circumstances of each aggrieved party.

In any event, it must be noted that the paragraphs above are only intended to make some tentative suggestions. The literature on collective redress is very large and this report is not the place to fully assess the impact harmonisation would have on the enforcement of consumer rights.

4.6.2 The time required to gather evidence

The problems of limitation periods

The time required to gather evidence has also proven an insurmountable hurdle in several cases. In the UK, the *Hodgson* group action was barred due to the Limitation Act. The proceedings were initiated too long a time after the claimants had realised that they had suffered a loss as a result of smoking tobacco.¹⁷⁰ Similarly, in Ireland, the Plenary Summons of *Eileen O'Connor and others*¹⁷¹ and the case of *Mary Manning and Mary McNevin*¹⁷² were dismissed because of the "inordinate and inexcusable delay" of the claimants who had failed to deliver their statements of claim five years after the commencement of the proceedings.

¹⁶⁹ European Commission, "Green paper on Consumer Collective Redress", COM (2008) 794 final.

¹⁷⁰ *Hodgson v Imperial Tobacco and others III* [1999] C.L.Y. 459.

¹⁷¹ [2004] IEHC 99.

¹⁷² [2004] IEHC 316.

Some of the difficulties stem from the rather short limitation periods in force.¹⁷³ In particular, the issue is not facilitated by the Product Liability Directive which states that “Member States shall provide in their legislation that a limitation period of three years shall apply to proceedings for the recovery of damages as provided for in this Directive.”¹⁷⁴ Three years is very short indeed, even though the Directive mitigates this rule by specifying that “the limitation period shall begin to run from the day on which the plaintiff became aware, or should reasonably have become aware, of the damage, the defect and the identity of the producer.” Limitations periods should not start to run until the plaintiff knew or should have known of the wrongdoings of tobacco manufacturers if they are to gather the necessary evidence of such wrongdoings in the limited amount of time granted to them.

Discovery and other tools for pre-trial information

Tobacco proceedings are often quite complex and time-consuming, and obtaining the relevant evidence of the alleged infringement is considered to be one of the main problems claimants have to solve. In many cases the relevant evidence is not publicly available and is held confidentially by tobacco manufacturers. Consequently, the extent to which the claimants can obtain the disclosure of relevant documentary evidence entails important consequences as regards their incentive to sue, their probability of winning their case and the overall litigation costs they are likely to incur. In addition, rules on access to documentary evidence also substantially affect the settlement rate (Renda, 2007).

Pre-trial discovery has become the very focal point of US civil procedure (Subrin & Woo, 2006). It is extensive in scope and is intended to provide an “equality of arms” between the parties, as it gives them all the information which is relevant to prepare their case.

There are five basic types of discovery (Study Centre for Consumer Law, 2007): Depositions and interrogatories are respectively testimonies outside courts and (written or oral) questions which the other party has to answer. Parties can also require each other to produce documents or things, and they can ask each other to admit certain matters of fact or of application of law to fact (“admissions”). Finally, a party can require the other side to undergo physical/mental examinations. Beyond those five basic types, Federal Civil Procedure Rule 26 urges the parties to automatically disclose all key documents e.g. documents relied upon and witnesses’ statements. The discovery even extends to such material which is not admissible before trial but whose discovery can lead to the finding of admissible material.¹⁷⁵ By contrast, material generated in the preparation of a trial, as well as privileged material, does not have to be disclosed.

Discovery spares the resources of the court, insofar as this privately-led system of information gathering is conducted between the parties. It has been argued, however, that discovery may lead to abuse, insofar as it allows claimants to drown their opponent under costly and lengthy discovery requests and thus pressurises the other party into settling.

As discussed above, US tobacco litigation has greatly benefited from the substantial amount of information made available during trials (Rabin, 2001) and made public through the Master Settlement Agreement (Miura, Daynard, & Samet, 2006) .

In Europe, the situation is far from homogeneous. As noted by Renda *et al*, the issue of access to evidence is a major obstacle to private enforcement due to the limited scope for ordering disclosure of documents that exists in most Member States. “Accordingly, there

¹⁷³ Limitation periods for tortious claims based on the general provisions of national tort laws vary considerably from one Member State to another.

¹⁷⁴ Article 10.

¹⁷⁵ Federal Civil Procedure Rule 26(b)(1).

seems to be widespread agreement in Europe that actions to encourage private antitrust damages actions should include some measures on access to evidence” (Renda, 2007).

In its White Paper on Damages actions for breach of EC antitrust rules, the Commission took up this suggestion by inviting Member States to provide for a minimum level of disclosure between parties to antitrust damages cases:

“Competition cases are particularly fact-intensive. Much of the *key evidence* necessary for proving a case for antitrust damages is often *concealed* and, being *held by the defendant* or by third parties, is usually not known in sufficient detail to the claimant.

Whilst it is essential to overcome this structural *information asymmetry* and to improve victims’ access to relevant evidence, it is also important to *avoid the negative effects of overly broad* and burdensome disclosure obligations, including the *risk of abuses*.

The Commission therefore suggests that across the EU a *minimum level of disclosure inter partes* for EC antitrust damages cases should be ensured. Building on the approach in the Intellectual Property Directive (Directive 2004/48/EC), access to evidence should be based on *fact-pleading* and *strict judicial control* of the plausibility of the claim and the proportionality of the disclosure request. The Commission therefore suggests that:

- national courts should, under *specific conditions*, have the power to order parties to proceedings or third parties to *disclose precise categories of relevant evidence*;
- *conditions* for a disclosure order *should include* that the claimant has:
 - *presented all the facts and means of evidence* that are *reasonably available* to him, provided that these show *plausible grounds* to suspect that he suffered harm as a result of an infringement of competition rules by the defendant;
 - shown to the satisfaction of the court that he is *unable*, applying all efforts that can reasonably be expected, *otherwise to produce the requested evidence*;
 - specified sufficiently *precise categories* of evidence to be disclosed; and
 - satisfied the court that the envisaged disclosure measure is both *relevant* to the case and *necessary and proportionate*;
- adequate protection should be given to corporate statements by leniency applicants and to the investigations of competition authorities;
- to prevent *destruction of relevant evidence* or *refusal* to comply with a disclosure order, courts should have the power to impose sufficiently *deterrent sanctions*, including the option to draw adverse inferences in the civil proceedings for damages.”¹⁷⁶

A similar rationale applies to tobacco litigation and a similar solution might therefore be adopted with a view to facilitating the disclosure of evidence against tobacco manufacturers in all EU Member States.

One could even argue that the suggestion put forward in the White Paper on Damages actions for breach of EC antitrust rules is too limited for tobacco litigation, insofar as what claimants often lack is access to all relevant facts and means of evidence. In Germany, for

¹⁷⁶ COM (2008) 165 final, paragraph 2.2 quoted in full. Emphasis in the original.

example, courts are reluctant to grant claimants' requests for information provision due to the fact that there is no free-standing obligation to provide information.¹⁷⁷ In Italy, it is possible to order the disclosure of documents, but it is necessary to specify with precision what documents are required. If the document in question is not disclosed, this may be used against the party which has failed to disclose, but the effectiveness of such technique is limited bearing in mind that the specific content of the document is not known either to the claimant or to the court. A system of disclosure similar to the system in place in the UK may be more effective to support smokers and other victims of tobacco against tobacco manufacturers. In the UK, each party draws up a list of documents which are relevant for the case; the other party is then entitled to inspect the documents mentioned in the list (apart from privileged documents which do not have to be disclosed).¹⁷⁸

4.6.3 **Tobacco litigation and Community competence**

The principle of attributed competence limits the extent to which the Community may take legislative action to facilitate tobacco litigation. Even if cigarettes and other tobacco products were to be considered defective or unsafe in all the Member States, a further obstacle would remain: there is no suitable Treaty basis (at least at present) allowing for an extensive harmonisation of national rules relating to procedural requirements and remedies.

The principle of national procedural autonomy has traditionally allowed Member States to lay down the procedures which should apply and to decide on the damages which should be awarded in their jurisdictions, and imposing a specific litigation model would go beyond the limits set by the EC Treaty to permissible Community action. The length of limitations periods, as well as the availability of contingency fees and/or punitive damages could not be harmonised at Community level on the basis of Article 95 EC, as it would be difficult to argue that differences in national rules either impede the free movement of goods or eliminate appreciable distortions of competition. Nothing would however prevent the Commission from emphasising the importance of such procedural tools in tobacco cases and facilitating the exchange of best practice and its dissemination at Community level in accordance with Article 152 EC.

The principle of national procedural autonomy is nonetheless subject to the twin principles of equivalence and effectiveness. In particular, it could be argued that the requirement of effectiveness requires the harmonisation of certain aspects of law enforcement at Community level. Such an approach has gained momentum in the last decade in the field of consumer protection. In particular, there may be an argument that consumers will only assert their Community rights if they are able to claim these rights collectively and that the Community should therefore introduce some form of consumer collective redress at Community level – hence the debates currently taking place on this issue.

Ultimately, each proposed measure would need to be carefully assessed on the basis of the Court's case law on the scope of Community competence, and Article 95 EC more specifically.

¹⁷⁷ *Landgericht Bielefeld*, 8 O 411/99, NJW 2000, 2514, §III; *Oberlandesgericht Hamm*, 3 U 16/04, NJW 2005, 295, §17. See as well: Krüger in Münchener Kommentar zu BGB, 5, ed. 2007, München, C.H.Beck, § 260 BGB, §4.

¹⁷⁸ Part 31 of the Civil Procedure Rules ("Disclosure and Inspection of Documents"), and more specifically Rule 31.6, http://www.justice.gov.uk/civil/procrules_fin/contents/parts/part31.htm. On disclosure in the UK, see (Sime, 2008).

5 BEYOND LITIGATION: ALTERNATIVE WAYS AND MEANS

5.1 Introduction

Chapter 3 described the standard 'menu' of options available to policy-makers seeking to address the external costs of smoking. Chapter 4 examined the first of those in detail - the potential for manufacturer and product liability to be used as a mechanism to address the external costs of smoking. This chapter considers the rest of the menu, exploring each of the policy options, their advantages and disadvantages.

Recognising that this is a scoping report that is intended to inject some innovative thinking into the policy process, some of the options outlined are radical, untested and may not be practically or politically feasible. But starting from a first-principles analysis of the problem, each has a theoretical potential to address some aspect of the problem described in Chapter 2.

This chapter considers each of the following options in turn: (1) Taxation; (2) Tradable permits; (3) Levies and insurance schemes; and (4) Regulation.

5.2 Taxation

5.2.1 *The principle*

Application of the principle of a Pigouvian tax to the problem of smoking's external costs would imply a unit tax that reflected (and internalised) the full social cost of that consumption decision.

The competence of the EU to act here is given by Article 152 of the Treaty, stipulating that a high level of human health protection shall be ensured in the definition and implementation of all Community policies and activities. This may include fiscal policies. Also, the European Union is party since 2005 to the WHO's Framework Convention on Tobacco Control (FCTC), Article 6 of which recommends that tax policies should be used to contribute to health objectives aimed at reducing tobacco consumption. Tobacco tax might be even considered as a form of environmental tax, as the smoke emitted is perceived as harm to air quality.

5.2.2 *The hypothetical case of a Pigouvian tax on sale of tobacco products*

The appropriate level of the Pigouvian tax, as described in Chapter 3, is difficult to determine because of the uncertainties of the science and economics.

A key decision is whether the tax should be held at a common level across the EU. A theoretical justification for such a position could be constructed, but the dominant arguments are likely to be practical – i.e. that a harmonised tax level reduces distortions in the European single market. Indeed, such discussions already take place – there is a binding EU legislative structure in place regulating minimum levels (and technical details of harmonisation) of excise duty on tobacco products¹⁷⁹. Currently, per Directive 92/79/EEC¹⁸⁰, excise duties levied on cigarettes must account for at least 57% of price, and must be at least €64 per 1,000 cigarettes (for products falling under the "most popular price category" in that country). But the level of excise duties still varies very widely (as

¹⁷⁹ See Council Directive 92/79/EEC of 19 October 1992 on the approximation of taxes on cigarettes (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0079:en:HTML>)

¹⁸⁰ Council Directive 92/79/EEC of 19 October 1992 on the approximation of taxes on cigarettes

illustrated in Figure 5.1 In 2008, there was a nearly 600% difference in the excise burden for cigarettes, expressed in Euros, between the lowest and the highest taxing Member States (European Commission, 2008)

Figure 5.1 Tobacco duties and taxes in the European Union

Member State	Specific excise (1000 pieces)			Ad valorem excise	VAT %	Ad valorem (including VAT)	Total tax (including VAT)	Overall minimum excise duty
	€	% of TIRSP*	% of total taxation**	% of TIRSP	% of TIRSP	% of TIRSP	% of TIRSP	% of TIRSP
Austria	26.7	14.8	19.9	43.0	16.7	59.7	74.5	57.8
Belgium	15.9	6.7	8.8	52.4	17.4	69.8	76.5	59.1
Bulgaria	21.0	28.3	33.1	40.5	16.7	57.2	85.5	68.8
Cyprus	20.5	14.5	20.2	44.5	13.0	57.5	72.1	59.0
Czech Republic	42.0	34.9	44.3	28.0	16.0	44.0	78.9	62.9
Denmark	85.3	39.8	54.2	13.6	20.0	33.6	73.4	53.4
Estonia	32.0	31.1	39.5	31.0	16.7	47.7	78.8	62.1
Finland	15.1	6.9	8.9	52.0	18.0	70.0	76.9	58.9
France	16.0	6.0	7.5	58.0	16.4	74.4	80.4	64.0
Germany	82.7	35.2	46.4	24.7	16.0	40.6	75.8	59.8
Greece	5.5	3.7	5.0	53.8	16.0	69.8	73.5	57.5
Hungary	34.8	29.6	38.0	28.3	20.0	48.3	77.9	57.9
Ireland	183.4	43.4	54.7	18.3	17.7	36.0	79.4	61.7
Italy	7.0	3.8	5.0	54.7	16.7	71.4	75.2	58.5
Latvia	31.7	30.4	37.0	34.5	17.4	51.9	82.3	64.9
Lithuania	27.5	31.2	43.2	25.0	16.0	41.0	72.1	56.2
Luxembourg	16.9	9.8	13.9	47.8	13.0	60.9	70.7	57.7
Malta	22.0	12.2	16.1	48.7	15.3	64.0	76.2	60.9
Netherlands	87.2	36.8	50.0	20.9	16.0	36.8	73.7	57.7
Poland	41.0	48.2	49.4	31.4	18.0	49.4	97.6	79.6
Portugal	65.7	38.6	49.3	23.0	16.7	39.7	78.3	61.6
Romania	35.1	36.4	48.3	23.0	16.0	39.0	75.4	59.4
Slovakia	52.4	50.0	55.6	24.0	16.0	40.0	90.0	74.0
Slovenia	17.7	15.1	20.0	43.6	16.7	60.3	75.4	58.7
Spain	10.2	6.8	8.8	57.0	13.8	70.8	77.6	63.8
Sweden	31.9	12.7	17.6	39.2	20.0	59.2	71.9	51.9
United Kingdom	144.4	39.1	51.3	24.0	13.0	37.0	76.1	63.1
EU27	53.4	28.7	36.9	39.1	15.9	54.9	77.7	61.8

Source (KPMG, 2005) and (DG TAXUD, 2008) * TIRSP = Retail selling price, all taxes included. ** Includes specific duty, ad valorem tax and VAT

A debate is currently underway within the EU institutions about a proposal to raise the minimum level of excise duty on tobacco and tobacco products. In July 2008, the Commission (DG TAXUD)¹⁸¹ proposed increasing the above percentage to 63% of the weighted average price for all cigarettes, and to at least €90 per 1,000 cigarettes¹⁸². It has been estimated in the Impact Assessment to the proposal that - based on the estimation of the World Bank for the price elasticity of -0.43 for cigarettes - a price increase of approximately 25% will be needed to deliver a targeted 10% decrease in tobacco consumption in most Member States within the next 5 years¹⁸³. This target is in line with the Regional Committee for WHO Europe European Strategy for Tobacco Control¹⁸⁴, which aims at a reduction of smoking prevalence of 2% per year. The plan is to be understood as a continuation of an ongoing process of increasing tobacco taxes and reduced smoking. Over the last five years, consumption of cigarettes has already declined by more than 10%, in combination with an increase in excise duties of more than 30%.

¹⁸¹ See press release IP/08/1149
(<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1149&format=HTML&aged=0&language=en&uiLanguage=en>)

¹⁸² This proposal has been adopted by the Council in November 2009.

¹⁸³ See the summary of the Impact Assessment accompanying the Commission's proposal, SEC(2008)2266
(http://ec.europa.eu/taxation_customs/resources/documents/common/whats_new/tobacco-20080716/SEC2267_en.pdf)

¹⁸⁴ www.euro.who.int/document/e77976.pdf

From a consumer perspective, these duties and taxes have the same functional (price) effect as a pure Pigouvian tax. They also transmit signals along the supply chain: the quantity of externality generated is reduced by virtue of manufacturers selling fewer cigarettes (due to the effect of the higher price). They do not, however, necessarily bear any direct relationship to the present or future burden of social costs associated with smoking. In the debate discussed above, an increase in excise tax levels would be a step towards internalising a larger share of external costs, but no calculations were made on the extent to which the additional revenue raised¹⁸⁵ would offset - or maybe exceed - higher health expenditure on smokers.

Tax revenues accrue to central finance ministries for general purpose use and there is only an indirect link between tobacco taxes/duties and the funding of public health care systems. It has been argued, for example, that the tax-type payments enforced under the US Tobacco Master Settlement Agreement have been seen as a source of state revenues, rather than funding focused on mitigating externalities (Tauras, 2005). The financing of public health care is particular to individual Member States. Establishing a direct link between health care finance and smoking requires a different kind of policy (see below). However, the infrastructure for application of a Pigouvian tax is already in place.

Figure 5.2 Member State levels of healthcare spending and taxation relative to the EU27 average

	Estimated public healthcare spending attributable to smoking (2000)		Total tobacco tax (incl. specific excise duty, ad valorem excise duty and VAT (per 1000 cigarettes) (2007)	
	€ per capita	Rank index (€ per capita relative to the EU average)	as % of TIRSP	Rank index
Austria	11.7	109%	75	97%
Belgium	13.6	127%	77	101%
Bulgaria	0.3	3%	85	111%
Cyprus	3.6	34%	72	94%
Czech Republic	4.0	37%	79	103%
Denmark	23.4	218%	73	95%
Estonia	2.8	26%	77	100%
Finland	9.5	88%	78	101%
France	14.6	136%	77	100%
Germany	16.5	154%	76	98%
Greece	5.2	49%	80	104%
Hungary	3.2	30%	74	96%
Ireland	14.0	130%	79	103%
Italy	11.1	103%	75	98%
Latvia	1.4	13%	82	107%
Lithuania	1.8	17%	68	88%
Luxembourg	24.8	231%	70	91%
Malta	5.2	48%	76	99%
Netherlands	13.2	123%	74	96%
Poland	2.0	19%	94	122%
Portugal	4.4	41%	78	102%
Romania	0.2	2%	72	94%
Slovakia	2.0	18%	90	117%
Slovenia	6.7	63%	75	97%
Spain	7.1	66%	73	95%
Sweden	13.3	124%	72	93%
United Kingdom	15.8	147%	77	99%
EU27	10.7	100%	77	100%

Source: GHK calculations, based on data from OECD and (Taxation and Customs Union, 2009) (DG TAXUD, 2008) In July 2008, the European Commission announced amendments to Directive 92/79/EEC, which would increase the EU minimum taxation levels, change the way that minimum tax is calculated, and give Member States the flexibility to levy a minimum excise

¹⁸⁵ Calculating with a price elasticity of -0.43, revenues from excise tax would rise by 11-12% approximately.

tax higher than 100% of the total excise on the most popular price category (European Commission, 2008). The amendments were meant to support the EU policy to reduce tobacco consumption and narrow the differences in price levels of tobacco products within the EU¹⁸⁶.

The sale of cigarettes generated approximately €72.2 billion in excise tax revenue in 2007, i.e. excluding VAT (see Figure 5.3)

Figure 5.3 Revenues from tobacco duties and taxes in the Member States of the European Union, 2007

Member State	Cigarettes consumed ¹⁸⁷ (millions)	Excise yield for MPPC ¹⁸⁸ (€/1000 cigarettes)	Implied average excise yield (revenue per consumption) (€/1000 cigarettes)	Total excise revenue (million €)
Austria	13,800	104.09	104.79	1446.16
Belgium	18,300	124.87	85.22	1559.46
Bulgaria	18,000	50.94	38.19	687.39
Cyprus	1,435	83.25	125.71	180.39
Czech Republic	24,240	75.14	68.77	1666.91
Denmark	8,150	114.52	112.14	913.91
Estonia	2,275	63.83	42.33	96.31
Finland	5,000	129.53	112.69	563.46
France	54,945	169.60	170.72	9380
Germany	92,700	140.72	138.75	12861.91
Greece	32,250	86.25	80.04	2581.29
Hungary	16,200	67.49	59.06	956.78
Ireland	5,650	249.32	208.40	1177.48
Italy	92,800	105.30	107.09	9938.32
Latvia	4,300	67.73	24.58	105.71
Lithuania	3,300	37.36	35.59	117.45
Luxembourg	4,550*	91.30	91.22	415.03
Malta	515	109.50	110.17	56.739
Netherlands	14,650	136.65	116.71	1709.77
Poland	69,770	64.45	50.47	3521.57
Portugal	13,980	104.75	86.49	1209.19
Romania	33,000	49.06	27.84	918.69
Slovakia	7,780	77.60	88.15	685.804
Slovenia	5,100	64.00	58.74	299.58
Spain	89,876	95.70	79.71	7164.16
Sweden	6,770	130.62	121.68	823.77
United Kingdom	47,900	227.44	232.73	11147.74
EU27	687,236	112.77	105.04	72,184.97

Source: GHK calculations, based on data from (Taxation and Customs Union , 2009) * Estimated

Assuming the number of cigarettes for which taxes were not paid remained the same after an increase of excise tax, the targeted 10% reduction of cigarette consumption (68,269 million cigarettes) would be reached entirely on the legitimate market. This, in effect, would mean a 10.8% decrease in consumption. Assuming the estimated price elasticity of -0.43 holds true, average prices will have to increase by 25.1%. This would correspond, on average, to a 32.4% increase in excise tax (VAT ex- or included) in the EU. Consequently, the Community could increase the amount of excise tax it raises by about 18.1%.

5.2.3 In summary

Use of a Pigouvian tax is, in practical terms, the most straightforward policy instrument for internalising the costs of smoking in the EU. The principle (i.e. of taxation of tobacco) is already established. The legislative base and associated systems for collection are already in place. The additional administrative burden on both business and public administration would be minimal.

¹⁸⁶ László Kovács, Commissioner for Taxation and Customs Union 16/087/2008
<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1149>

¹⁸⁷ (ERC, 2007)

¹⁸⁸ (Taxation and Customs Union , 2009)

As taxation remains a Member State competency, there is currently a set of national tobacco taxes (at widely different rates) rather than a single, pan-EU instrument. Some may be too low to fully internalise the costs of smoking at a national level. Progressively raising the minimum harmonised rate across the EU would have an impact equivalent to a centrally administered instrument.

Further increases in excise tax could result in increased black market activities, though other policy instruments that raised market prices would provide similar incentive effects.

5.3 Tradable permits

5.3.1 *The principle*

The use of tradable permits to manage external costs is increasingly commonplace in the environmental policy arena. By example, the European Union Emissions Trading Scheme is an important part of the EU's strategy to tackle climate change by reducing CO₂ emissions. What are, in effect permits to pollute, are allocated or auctioned to registered sources of emissions. Buyers and sellers are able to trade amongst themselves via a carbon market.

Tradable permits are also used in other markets where supply is limited by physical constraints (e.g. take-off and landing slots at airports) or where some limits to supply are deemed socially desirable (e.g. taxi licences are tradable in many cities around the world) and policy-makers have looked for ways of allocating that supply efficiently.

The hypothetical case of a tradable permit system governing sale of tobacco products

Application of the tradable permit model to the European market for tobacco products would mean creation of tradable permits to either (i) consume, (ii) place on the European market or (iii) manufacture cigarettes (and other tobacco products)¹⁸⁹.

Under a hypothetical direct Coasian approach to smoking, permits establishing the 'right to smoke' a given amount of cigarettes would be auctioned amongst *consumers* of tobacco products, as it is the consumer who enjoys the benefit from consumption and inflicts at the same time the damage to himself and his environment.

An alternative indirect, supplier-based, approach to the problem would involve the EU or Member States issuing permits to companies for the 'right to place on the market' (following production or import of) a given amount of cigarettes or other tobacco products. These permits would be auctioned amongst manufacturers and importers.

Operating a permit scheme would involve new administration and control tasks from public authorities. The system could be introduced by a directive similar to Directive 2003/87/EC¹⁹⁰ establishing the EU ETS.

The scope of the market

A system governing sale of products in the EU Internal Market would need to be consistent with Community legislation and the Treaty. This would imply a single system for the EU as a whole, as with the EUETS. The system ought in principle to cover all tobacco products, though cigarettes would be the most important.

¹⁸⁹ In this discussion, the term 'cigarettes' is used as a short-hand for all tobacco products placed on the market.

¹⁹⁰ Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0087:EN:NOT>.

The size of the market

A finite number of permits would be issued (for a given period) and they would be tradable. The internalisation of external costs comes from the consumers, who would ultimately have to pay the cost of these permits, whether directly by purchasing their own permits, or via permit costs passed on from higher up the supply chain (i.e. manufacturers and importers). Issuing permits would give control over the total amount of cigarettes consumed in the EU, (excluding cigarettes imported by wholesalers or retailers illegally or by consumers themselves, outside the permit system¹⁹¹). The number of permits issued would determine their scarcity and thus, through the market, would influence the price. The more scarce the permits, the higher the price would be. The number of permits could be set:

- With a view to reaching a permit price that matched the estimated external cost per cigarette placed on the market;
- To achieve a common target for total cigarette consumption, which could change over time (e.g. to meet targets for reducing smoking prevalence by 2% per year as established in the European Strategy for Tobacco Control of WHO Europe¹⁹²).

The point of obligation

The decision about what the permit is for (i.e. consumption, sale or production) determines the incidence and structure of the system, and has a large impact on its complexity and feasibility. The system would need to be enforceable, a consideration that would also influence the design. As noted in section 2, the point of incidence is less of a concern for the efficient internalisation of the external costs because of the linear relationship between harm, product consumption, its purchase and its manufacture.

Some advantages and disadvantages of alternative options are shown in Table 5-1. A preliminary scan suggests that placing the obligation to hold permits at the same place as the current incidence of tobacco excise duty is likely to be the preferred option.

A system that relied on consumers surrendering permits to retailers would be more costly and less straightforward to enforce than one that operated further up the supply chain (e.g. at the point where tobacco excise duties are currently applied). A permit to manufacture would be problematic because of the oligopolistic nature of the market and the need to adjust for tobacco products manufactured in the EU for export to third countries, and to have a parallel mechanism to control imports of tobacco products to the EU.

The efficiency of the system would be affected by the degree of competition in the marketplace. If markets are dominated by a few large companies they may be vulnerable to manipulation.

Table 5-1 Advantages and disadvantages of alternatives for the point of obligation

Point of obligation	Advantage	Disadvantage
Consumer	Large, liquid market	High transaction costs Problems of enforcement
Distributors	Established systems for collection of tobacco excise duty	Less visible to consumers
Manufacturers	Simple	Oligopolistic market Separate system required to manage imports

¹⁹¹ This portion is significant: contraband and counterfeit cigarettes are estimated to amount to over 10% of cigarettes consumed in the EU see e.g. www.tobaccocontrol.bmj.com/cgi/reprint/7/1/66.pdf.

¹⁹² See: www.euro.who.int/document/e77976.pdf

Revenues

If the permits were auctioned, there would be a new revenue stream for public authorities. Whether these revenues were all 'additional' would depend on how Member States adjusted their tobacco excise duty levels after introduction of the tradable permit scheme.

The distribution (across Member States) of new revenues raised would not necessarily match the distribution of smoking-related health costs (or indeed other social external costs associated with smoking). The time-lag in onset of many smoking-related illness means that today's patterns of smoking related ill-health reflects the smoking prevalence of the past. So there may be countries where sales of tobacco products are now much reduced, but whose health care systems are still dealing with heavy cost of previous decades' smoking habits.

In designing the system, a decision would need to be made on whether auctions were held nationally or at EU level. There would be issues of EU competence and national autonomy on tax analogous to those raised in relation to the EU ETS and the auctioning of permits (EUAs) in that system.

If permits were simply allocated on the basis of historical sales ('grandfathered') there would be no additional revenue to public authorities and the possibility of companies in the tobacco market experiencing windfall gains (of the kind that were enjoyed by some energy utilities in the first phase of the EU ETS).

The legal basis for such a measure

The Emission Trading Scheme of the European Union (EU ETS) is the most adequate role model for the hypothetical measure. The EU ETS was launched on the basis of a Directive issued by the Council and the European Parliament (co-decision procedure in the sense of Article 294 of the Treaty). Articles 191 and 192 of the Treaty set out the goals and competences of the European Union in the area of the environment. One of the objectives is "promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change" (Article 191(1)).

A similar Directive could be theoretically considered for establishing a system of permits for putting tobacco products on the market (i.e. the indirect approach for permits). However, if considered as a measure to promote public health¹⁹³, this option is only theoretical under the present legal basis. The competence for the European Union to act (as established by the Treaties) is much more restricted in the public health area than in environment and climate change. The European Union has always had limited competence in public health (Hervey & McHale, 2004). As defined in Article 168 of the treaty, it shall merely "complement national policies" in this area.

Theoretically, if the permit system would be considered as an element of environment protection a slightly different picture would emerge. Article 191 of the Treaty specifies "preserving, protecting and improving the quality of the environment; protecting human health; prudent and rational utilisation of natural resources" to be amongst the objectives of the EU. One could hypothetically argue that by limiting exposure to tobacco smoke, a potential EU measure would contribute to the prudent utilisation of a specific natural resource, i.e. clean air. By the same logic, it would also contribute to the protection of the quality of the environment and human health.

¹⁹³ Which it would be if the main rationale for its adoption would be derived from the need to reduce smoking prevalence and the burden on public health systems.

In summary

A system of tradable permits for placing tobacco products on the European market would in principle provide a mechanism for determining, and reducing, the total number of cigarettes etc. sold (excluding black market trade). To be applied at EU level it would require new legislation and significant work would be required to further explore the implications and feasibility of the concept. Its net impact on price (and thus internalisation of externalities) would depend on factors such as the parallel changes in Member States' tobacco duty, and the level of scarcity of permits (which influences the price). The net impact on public revenues and incremental revenues available to finance tobacco-related healthcare expenditure would be influenced by permit scarcity and the level of permit auctioning.

5.4 Levies and cost recovery mechanisms

The tax and tradable permit mechanisms discussed above could be used to internalise the social cost of smoking by raising the cost of tobacco products to the end-user by a margin that reflects the best estimate of that cost. The cost estimate might include a number of components, such as burden on the health care system, productivity losses and a value for premature mortality. Government income from such policy instruments is typically treated as general revenue.

An alternative option is to establish a more direct link between consumers of tobacco products and the systems that incur additional costs, such as public health care providers. These links already exist in private insurance and finance markets, where companies factor the impacts of smoking into their risk models, and thus into the prices available to smokers for particular products. For example, smokers will typically:

- Pay more than non-smokers for private medical insurance (because they are more likely to fall ill with certain diseases);
- Pay more than non-smokers for term life insurance (because the probability of premature death, and thus pay-out within the life of the policy, is higher); but
- Qualify for a higher annuity payment when surrendering a private pension fund¹⁹⁴ (because life expectancy is lower and thus the expected value of pension payments is also lower than that of a non-smoker, all else being equal).

In the UK several companies offer annuity products to those who smoked at least 10 cigarettes per day over the previous 10 years. Annuity payments are up to 30% higher than a non-smoker would receive (Anon, 2008).

With public health care systems generally being subject to rules about equity of access and being free (or heavily subsidised) at the point of use, the cost recovery mechanisms (and price incentives) employed by private health care providers are not available.

5.4.1 *The hypothetical case of a levy or licence to recover additional health care costs attributable to smoking*

It would in principle be possible for public health care providers to achieve a similar outcome by establishing a direct financial link to smokers (or tobacco product manufacturers) via a levy or licence arrangement that was designed to recover the additional costs arising from smoking. This kind of levy/licence model is similar in effect to the tax and tradable permit systems discussed above but differs in that:

- its principal purpose is the recovery of specified healthcare costs, rather than internalisation of a wider set of social costs; and

¹⁹⁴ Several such products exist in the UK for those who smoke at least 10 cigarettes per day, and have done so for the past 10 years see <http://www.pensionsandannuities.co.uk/smoker%20annuities.htm>

- it implies a direct compensating transfer to the health care system, rather than financial flows being mediated via government finance ministries and national budgeting processes.

This is thus more in the nature of a 'charge' than a tax (see discussion in Chapter 3 about the difference between charges and taxes).

Under the levy model, a fee (levy) would be applied to tobacco products at point of sale or some other point of obligation higher up the supply chain (e.g. whether tobacco duties are currently applied). The levy applied to each unit sold would be set at a level sufficient to ensure that total levy income for the year was sufficient to cover the estimated additional health care costs attributable to smoking in the most recent year for which accounts had been prepared.

Under the licence model, licensed vendors of tobacco products would be required to pay a fee for that licence at a level linked to the quantity of products sold. The obligation to hold a licence could be placed at one of a number of points along the supply chain. Placing it higher up the supply chain (e.g. where excise duties are payable) would reduce the number of licences to be issued and facilitate auditing (e.g. by cross-reference to excise duty returns).

A key challenge for the cost recovery (and for any policy set with explicit reference to observed costs) is attribution of the disease burden and calculation of health care expenses. The attribution issue has been explored in Chapter 4 and relates to the fact that while there may be a firm statistical relationship between smoking and risk of contracting a particular disease, it is much more difficult, perhaps impossible, to attribute a specific person's disease to their smoking history. The expense issue is highlighted by the discussion in Chapter 2 and relates to the fact that, at present, many European health care systems seem to lack the activity-based costing models required to substantiate estimates of additional cost. There are further challenges associated with the time-lags between smoking and the onset of smoking related disease, as discussed in more detail in Chapter 6. So, with both quantity and price open to dispute, the levy could be vulnerable to challenge.

The model may also be difficult to reconcile with existing models of public health governance, or models of public finance more generally. There would be issues of how to determine the distribution of funds across the health care system, and the possibility of actors 'gaming' the system to increase income (e.g. via increases in the estimates of smoking-related illness).

5.5 Regulation

A conventional approach elsewhere in the economy is to reduce the scale of harm caused by a product by tightening regulatory controls on aspects of the product which causes damage. Thus vehicles are subject to tighter emissions standards, and chemicals are subject to higher standards of safety testing.

Today's tobacco control strategies generally focus on:

- regulating where smoking can take place, thereby on protecting the rights of non-smokers to clean air, whether in the workplace or in social environments;
- providing information to consumers on the health impacts of smoking, such as through on-pack labels;
- regulating the presentation and sale of tobacco products, especially in locations where they may be bought by children;
- using the price mechanism to discourage consumption, by imposition of taxes and duties on tobacco products placed on the market;

- providing assistance and support to smokers that wish to quit.

These strategies embody an assumption that prohibition of tobacco on grounds of its health impacts is not a viable option at this point in time and that ultimately consumers have the right to make an informed choice (notwithstanding the addictive nature of the product).

As a general case, public policy can be used to reduce the social costs of products or processes by providing implicit or explicit encouragement to manufacturers to innovate and put cleaner, less damaging products onto the market. The environmental policy field is well populated with such measures, variously designed to shift the market towards more energy-efficient, resource-efficient or less polluting technologies.

The discussion of policy options in this chapter has treated tobacco products of a particular kind as uniform goods, i.e. it has assumed that all cigarettes (for example) are equal in terms of their impacts and ultimate costs. However, if there was significant product differentiation in the market, with some cigarettes being less harmful than others, then the preferred policy mix might well be different.

The proposition of a 'healthier' cigarette is one that many in public health would struggle with. The historical precedents are not encouraging - in the 1970s and 1980s, the tobacco industry made claims that 'light' and low tar cigarettes were safer but these products were subsequently shown to be as dangerous as conventional cigarettes because of the way in which smokers used them.

As the 'low-tar' experience showed, proving that a new kind of cigarette is associated with lower levels of harm is problematic, much more so than showing that an industrial product generates lower levels of a pollutant. Nonetheless, recent press reports suggest that there is research ongoing in the industry into the less damaging cigarettes¹⁹⁵. If these come to market they may stimulate greater differentiation in public policy. The issue of how public policy could (passively or actively) support a transition within the market to lower impact tobacco products could be further explored.

5.6 Other issues

5.6.1 Justice and equity

The Pigouvian tax and tradable permit models are both grounded in the proposition that 'the polluter should pay', and that by making sure that the prices in the market reflect the full costs to society of consumption of the goods in question then overall efficiency, and social justice, are improved.

The time-lags associated with smoking-related disease pose some challenges to this model. The burden on the health care system today is a consequence of decades of smoking history. So:

- if the costs (i.e. the tax level or permit price) are set with reference to current health and other costs then, in effect, today's smokers are compensating society for the costs of choices made by smokers in the past;
- if the costs (i.e. the tax level or permit price) are set with reference to projected future health care costs associated with present smoking patterns then the revenues may not match current social costs.

¹⁹⁵BAT clinical trial for 'less toxic' tobacco'. *Financial Times*. 9 May 2009. (Cookson, 2009)

6 CONCLUDING REMARKS

6.1 Conclusions on the costing of smoking

Tobacco consumption imposes considerable cost upon society, including public healthcare systems due to the increased healthcare costs of smokers and the economy due to absenteeism and premature death.

The costing model in this study covers three areas where smoking has been shown to create 'external' costs: the direct costs to European public healthcare systems in a given year; productivity loss to the EU27 economy due to increased absenteeism; and the monetised cost of premature mortality.

Taking the three main cost factors together, the loss to the EU in 2000 is estimated to be at approximately €363 billion. This figure corresponds to about 3.4% of the EU27 GDP.¹⁹⁶

The biggest cost factor to the EU comes from premature mortality due to smoking.

Around 697,000 citizens of the EU27 (excluding Cyprus) died in 2000 directly as a result of smoking - 15% of all deaths within the age group above 35 years. 78% of them were men. Considering normal life expectations, this translates to a loss of about 10.4 million life years, 2 million years of which would have fallen into working age. The resulting cost to the European economy is estimated to be around €313 billion, 3.3% of GDP.

Total public expenditure to treat smokers for diseases that they contracted as a direct result of tobacco consumption is estimated at around €36.6 billion in 2000, which corresponds to 6% of total healthcare spending in the EU27 and 0.4% of GDP.

An estimated 128 million working days may have been lost in the EU27 in 2000 directly as a result of absenteeism attributable to diseases contracted because of smoking, which inflicted costs the economy of an estimated €11.3 billion for the year 2000, equivalent to 0.1% of GDP.

Additionally, an estimated 23,300 persons took early retirement in the EU27 in 2000 directly as a result of absenteeism attributable to diseases contracted because of smoking, which inflicted costs the economy of an estimated €1.1 billion for the year 2000. The total estimated productivity cost would be in the region of €12.4 billion, equivalent to 0.1% of GDP.

Public health care systems and the economy in general of New Member States seem to be bearing a heavier burden of smoking.

The outcomes of our costing model show that the costs relative to GDP in the Member States that joined the EU in 2004 and 2007, and especially Estonia, Latvia, Lithuania and Hungary are substantially higher than in most of the EU15 countries. This may be attributable to higher smoking prevalence and the higher occurrence of smoking leading to more severe conditions. Especially higher lung cancer mortality figures were responsible in the model for higher cost estimates for these countries.

6.2 Conclusions on litigation

National courts have adopted different approaches to the duties resting upon tobacco manufacturers, not least with regard to the information they must provide, and to the assessment of the causal link between the damage caused to smokers or their families and

¹⁹⁶ Cyprus excluded from estimates due to lack of data.

the liability of tobacco manufacturers. These differences are not surprising, bearing in mind that such considerations of liability and causation are determined at national level and require that a moral judgment be made as to who should bear the ultimate responsibility for the harm inflicted: smokers themselves, tobacco manufacturers, or the community at large through social security contributions.

The fear of tobacco litigation should oblige manufacturers to comply with the law. It is therefore regrettable that it is relatively rare in Europe and even, to some extent, in the United States, and that it does not as a practical matter threaten to reclaim all ill-gotten gains. Tobacco litigation also ensures that the requirement to fulfil a general duty of care acts as a fallback and prevents tobacco manufacturers from engaging in grossly unfair commercial practices and exploits the gaps in the regulatory framework in place without going unpunished. Nevertheless, tobacco litigation also exposes the limits of the regulatory framework currently in place at both Community and Member State levels.

The failure of most tobacco cases in Europe leads to the conclusion that tobacco litigation is unlikely to facilitate a shift in the costs arising from smoking in the foreseeable future. Tort law is arguably not the most adequate instrument to regulate the activities of tobacco manufacturers and reduce the health costs of smoking. It is probably even less so in Europe than in the United States, not only because of the procedural obstacles claimants tend to encounter in EU Member States, but also because the United States and EU Member States have chosen different paths to deal with the damage caused by smoking (and damage to health more generally).

While EU Member States rely on the social insurance model, in which social insurance pays for health care and loss of income, the United States rely on tort law, in which the responsibility of the person/company causing the injury is at stake.¹⁹⁷ The more people can rely on social insurance, the fewer incentives there are to litigate.¹⁹⁸ Moreover, there is a general reluctance in the United States more than in Europe to regulate. Consequently, tobacco litigation has filled in the gaps regulation could not.

The new American administration may herald a change with a new mandate given to the FDA. Similarly in Europe, rather than try and shift the costs of smoking, the EU and its Member States should maintain the momentum and pursue their efforts to regulate the manufacture and sale of tobacco products.¹⁹⁹ Litigation is time consuming and may consist in a piecemeal approach.²⁰⁰ In any event, the US experience shows that if the behaviour of tobacco companies is to be changed durably, lawsuits have to be accompanied by certain features such as a settlement to which companies adhere.²⁰¹

Alternatives to tobacco litigation have been put forward.²⁰² More health gains would result, for example, from requiring a phase-out of the most deadly forms of nicotine delivery,

¹⁹⁷ D. L. Rhode *Access to justice*, Oxford University Press, Oxford, 2004, 38. (Rhode, 2004)

¹⁹⁸ M. Faure and T. Hartlief, 'Social Security versus Tort Law as Instruments to compensate Personal Injuries: A Dutch Law and Economics Perspective', in: U. Magnus and F. Gómez Abelleira, *The impact of social security law on tort law*, Springer, Vienna, 2003, 53, 62, 70. (Faure & Hartlief, 2003)

¹⁹⁹ Similarly: S.D. Sugarman, "Doing Away with Tort Law", (1985) 73 *California Law review*, 555, 652 and 664 (Sugarman, 1985).

²⁰⁰ A. P. Morriss, B. Yandle and A. Dorchak, *Regulation by Litigation*, Yale University Press, 2007, 49 and 51 (Morriss, . Yandle, & Dorchak, 2007).

²⁰¹ R. A. Nagareda, *Mass Torts in a World of Settlement*, University of Chicago Press, 2007, Chapter X, 183. (Nagareda, 2007)

²⁰² In particular, the taxes levied on cigarettes could be used specifically to treat ill smokers: See the proposal put forward in the ongoing discussion in the United States on the reform of the health care system: <http://www.pr-inside.com/boost-cigarettes-tax-for-health-care-r1259406.htm>. See also V. Zeno-Zencovich, "Il danno da produzione di tabacco: problemi teorici e aspetti applicativi", (2002) *Resp. civ.*, 949, 954. (Zeno-Zencovich, 2002)

including cigarettes. Their compliance would prevent harm from occurring rather than try and compensate the victims once the harm has already occurred.

6.3 Conclusions on other instruments

Use of a Pigouvian tax is, in practical terms, the most straightforward policy instrument for internalising the costs of smoking in the EU. The principle (i.e. of taxation of tobacco) is already established, as are the legislative bases and associated systems for collection. Today, as taxation remains a Member State competency, there is currently a set of national tobacco taxes (at widely different rates) rather than a single, pan-EU instrument. Some may be too low to fully internalise the costs of smoking at a national level. But progressively raising the minimum harmonised rate across the EU would have an impact equivalent to a centrally administered instrument.

A system of tradable permits for placing tobacco products on the European market would in principle provide a mechanism for determining, and reducing, the total number of cigarettes etc. sold (excluding black market trade). To be applied at EU level it would require new legislation and significant work would be required to further explore the implications and feasibility of the concept. Its net impact on price (and thus internalisation of externalities) would depend on factors such as the parallel changes in Member States' tobacco duty, and the level of scarcity of permits (which influences the price). The net impact on public revenues and incremental revenues available to finance tobacco-related healthcare expenditure would be influenced by permit scarcity and the level of permit auctioning.

A key challenge for the policy models based explicitly on cost recovery (and for any policy set with explicit reference to observed costs) is attribution of the disease burden and calculation of health care expenses. There are further challenges associated with the time-lags between smoking and the onset of smoking related disease. So, with both quantity and price open to dispute, the levy could be vulnerable to challenge. The model may also be difficult to reconcile with existing models of public health governance, or models of public finance more generally. There would be issues of how to determine the distribution of funds across the health care system, and the possibility of actors 'gaming' the system to increase income (e.g. via increases in the estimates of smoking-related illness).

6.4 Other observations

The economic analysis informs some, but not all, of the questions present in the debate about smoking's net social cost, and its net impact on government revenues

The economic analysis presented in this report provides an estimate of the costs incurred by European public health systems when treating smoking-related diseases in a specific year (2000). This information is helpful in considering certain policy questions about, for instance, the relationship between tobacco duty revenues and observed health care costs, or the level of costs that health care providers might seek to recover from manufacturers.

But it is not possible to say with certainty whether health service costs would have been higher or lower had European society been free of smoking for the past 50 years with this model. For that, a detailed simulation of a set of hypothetical conditions would be required, including assumptions about longevity and disease prevalence among the people who would be alive today had they not died from smoking-related causes.

Forward-looking scenario studies, which combine known historical patterns of smoking with scenarios for future smoking prevalence, are perhaps a more useful line of research in such cases – allowing estimation of the future health, pension and other costs under different conditions. This study does not, therefore, provide answers to questions about the 'lifetime' health costs of smokers as compared to non-smokers.

Information on the economics of health care systems and the economic burden of individual diseases are surprisingly scarce given that the EU spends 7% of its GDP on health care services

The deficit of data on the costs of health services in the European Union is a severe impediment to construction of robust estimates of the cost of smoking. Exhaustive searches of the literature, combined with extensive consultations with national and international agencies, yielded very few examples of activity-based costing of the kind needed for this kind of analysis.

Demand for health and social care services is projected to rise substantially in the decades ahead as the demographic structure of the EU population changes. The total cost is set to increase substantially too. A better understanding of the economics of treatments and services seems essential.

A TECHNICAL ANNEXES

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ANNEX 2 METHOD FOR CALCULATION OF THE COST OF SMOKING TO EU PUBLIC HEALTH CARE SYSTEMS

Chapter 2 presented estimates of the costs that smoking imposes on European healthcare systems, and the wider EU economy. These estimates were based on a costing model developed for monetising the costs of smoking to Europe. This section presents the key assumptions that underpin the costing model developed for this study, and discusses the steps taken in developing the model.

A2.1 Estimated mortality attributable to smoking

Cigarette smoking is a causal factor in a broad range of diseases, at least 24 of which are fatal (ASPECT Consortium, 2004). Additionally, tobacco consumption is a causal factor in several chronic diseases. For example, smokers are not only more at risk of developing lung cancers, but they are up to 100 times more likely to develop other forms of cancer²⁰³, when exposed to environmental carcinogens such as asbestos (Darby and et al. 2005).

The relative risk is a way of quantifying the likelihood of a smoker developing a disease compared to a non-smoker (a non-smoker would have a relative risk of 1.0). It is used in calculating the smoking impact ratio (SIR) which is the likelihood of **all** smokers in a society developing a disease compared to the general population.

The relative risks of a smoking individual (vs. a non-smoker) dying from each of the six disease categories²⁰⁴ were sourced from Peto et al 1992. These data were used to calculate the population level risk ratios for each Member State. The risk ratios were assumed to be constant by age except for the category 'total vascular disease'. For each of the six conditions, a single risk ratio figure was calculated using a simple mean of gender and age strata figures (for the latter category).

The relative risk ratios for the given conditions for the country populations were then calculated as follows:

$$RR_{pop} = (ns \times 1) + (s \times RR_s)$$

Where

- RR_{pop} is the compound relative risk of mortality for a given condition for the whole population in a given country;
- ns is the (hypothetical) ratio of non-smokers in the given country (1 – SIR);
- s is the (hypothetical) ratio of smokers in the given country, equals to SIR²⁰⁵; and
- RR_s is the relative risk of mortality for a smoking individual a given condition as calculated from data from the Peto et al. (1992) study.

Based on these figures, the 'excess risk' for each condition and country was calculated by subtracting 1 from the results. Following the methodologies of previous studies²⁰⁶, the

²⁰³ Including: Lymphomas, leukaemia, and stomach, colon, rectum, liver pancreas, melanoma, breast, prostate, bladder, cancers.

²⁰⁴ Lung cancer, UAD cancer, other cancers, COPD, CVD, and other acute respiratory diseases.

²⁰⁵ Note that this figure also incorporates 'hidden' contextual factors.

²⁰⁶ ASPECT Consortium (2004), Peto, *et al.* (1992) and Peto, *et al.* (2006).

excess risk figures, for all disease categories except lung cancer were reduced by 30% to take account of confounding factors, and give a more conservative estimate.

The smoking impact ratio (SIR) is a measure of the impacts of past smoking behaviour on current mortality. It was calculated as the difference of lung cancer mortality in the individual Member State to that of a reference population. Theoretically, the SIR is 0 if the incidence of lung cancer (mortality) in the population equalled the incidence amongst those who never smoked. In contrast, a value of 1 would indicate a society where all citizens smoke.

The SIR is considered a better estimate of the number of lifetime smokers in a population than estimates obtained from surveys. Survey data is considered less accurate as individuals reporting they did not smoke could have recently quit or been exposed to environmental smoke, while those who recently started smoking will not immediately become ill.

The model used lung cancer mortality data for the reference population, sourced from the American Cancer Society's second cohort study (CPS II). Observed mortality figures (per 100,000) were obtained from OECD separately for 0-64 and 65+ year olds for 2000, population data in these age groups were obtained from Eurostat.

The formula used is:

$$SIR = \frac{C_{lc} - N_{lc}}{S_{lc}^* - N_{lc}^*}$$

Where:

- C_{lc} is the observed lung cancer mortality in the population (country) of interest;
- N_{lc} is the assumed lung cancer mortality in never-smokers in the population of interest (taken as equal to N_{lc}^*);
- S_{lc}^* is lung cancer mortality for smokers in the reference population (CPS II); and
- N_{lc}^* is lung cancer mortality for never-smokers in the reference population (CPS II).

The mortality figures in the reference population were summarised to cover the same age groups using the weighted average of five-year age group data from CPS II based on the age structure of the individual Member States. Mortality below 35 years was set to zero and mortality above 70 set to equal that of the 65-69 year olds. For Belgium and Estonia, mortality figures were not available, and the SIRs were calculated as the simple mean of the values for countries in the given WHO sub-region, EURO A and C respectively.

The SIR, as a consequence of the nature of its calculation incorporates the Member States' strengths and weaknesses in lung cancer prevention (e.g. screening); their effectiveness of treatment; the average toxin content of their cigarettes and other contextual factors (e.g. severity of environmental smoking). Mortality (as well as morbidity) figures should be higher in countries where screening and treatment is less effective and cigarette consumption patterns are more health-damaging.

The inclusion of this 'hidden' variable is acceptable because one can assume that Member States will show similar effectiveness or ineffectiveness in preventing and treating other smoking-related conditions. Crude 'smoking prevalence' data from surveys will not adequately reflect the actual risk for smokers to acquire (severe, even lethal) health conditions; hence this modification is needed to yield more realistic results.

The ‘Smoking Attributable Fraction’ (SAF) is a key component of the costing model developed for this study. The SAF is an estimate of the proportion of those, who died due to a given condition that can be attributable to smoking. It is based on the fact that smokers are more likely to develop certain life-threatening conditions.

It is calculated using the following formula:

$$SAF = \frac{ERR_{pop}}{1 + ERR_{pop}}$$

Where:

- ERR_{pop} is the excess relative risk (ERR) of mortality for a given condition for the population in a given country.

Alternatively, the SAF can be calculated using the following formula:

$$SAF = \frac{SIR(RR - 1) * X_{OF}}{SIR(RR - 1) * (X_{OF} + 1)_{OF}} D_{IC}$$

Where:

- RR is the ratio of Relative risk of smoker developing vs. a non-smoker developing a disease
- SIR is the smoking impact ratio (SIR) which is a measure of the impacts of past smoking behaviour on current mortality.
- X_{OF} is an estimate of the extent to which smokers are involved in other risk factors (e.g. poor diet, lack of physical activity) compared to non-smokers.
- D_{IC} is the total number of deaths from lung cancer in the population of interest

The steps involved in calculating the Relative risk ratio (RR) and the smoking impact ratio (SIR) are described in detail in the following subsections.

A2.2 Healthcare cost of smoking

Estimates of the healthcare cost of smoking were calculated based on incidence rate data sourced from the WHO global burden of disease programme²⁰⁷ and the OECD “European Health for All” database. Although more recent estimates were available, data from the year 2000 were selected to minimise the need to extrapolate data on the smoking attributable fraction (SAF).

A2.2.1 Incidence that can be attributed to tobacco use

Incidence attributable to smoking

Incidence of the diseases categories was calculated based on WHO regional incidence rates for 2000 and OECD incidence rates²⁰⁸. The overall incidence for each of the three WHO regions was allocated to Member States and non Member States on the basis of their population size. The SAF was then applied to the calculated incidence in order to estimate the number of people who required treatment due to smoking.

²⁰⁷ Annual incidence ('000s, %) for selected causes by WHO sub region, 2000 Version 2.

²⁰⁸ Annual incidence ('000s, %) for selected causes by WHO sub region, 2000 Version 2, tobacco related conditions. OECD European health for all database (HFA-DB), WHO/Europe.

Incidence attributable to Environmental Tobacco Smoke (ETS) exposure

The total mortality and morbidity estimates generated by the study costing model **do** implicitly include ETS related deaths of smokers. Notwithstanding the above, the WHO approach of calculating the health cost of smoking excludes ETS-related deaths of non-smokers. The estimates in this study of the number of deaths attributable to smoking therefore implicitly include smokers who were exposed to ETS. However, it was not possible to differentiate between those smokers who became ill purely due to smoking and those who became ill due to ETS. The exclusion of non-smoker ETS mortality does generate numbers which slightly underestimate the full cost of smoking to EU healthcare systems. Previous studies (Jamrozik, 2006) estimated that the proportion of deaths of non-smokers directly attributable to ETS would be approximately 1.5% of EU deaths from lung cancer, heart disease and chronic non-respiratory diseases.

Of course non-smokers are also subject to ETS exposure, and are therefore at a higher risk of developing certain diseases. However, it was not possible to estimate the number of non-smokers who died of the six diseases due to ETS, using the WHO incidence based methodology. The reasons for this are:

- The underlining assumptions in studies estimating relative risk (RR) of ETS exposure did not correlate well to available data on smoking patterns, age distribution etc. of the EU population;
- Although there are RR estimates available for ETS it was not possible to calculate the Excess RR, or an ETS impact ratio (EIR), due to a lack of baseline data;
- The American Cancer Society's Baseline Cohort Publications (CPSII) used in calculation of the SIR did not publish data on the number of lung cancer deaths in the non smoking population which were due to ETS exposure. It was therefore not possible to estimate an EIR;
- Reliable estimates of the extent to which other risk factors contribute those exposed to ETS developing selected diseases were not available; and
- On the basis of discussions with those who had developed similar models, we concluded that applying the smoking impact ratio (SIR) and for smokers would not reveal accurate estimates of the proportion of overall deaths/illness that could be attributed to ETS.

Additionally, although estimates of the number of deaths attributable to ETS existed in the literature, these estimates were generated using estimates prevalence of current smoking, rather than the incidence of current deaths. Therefore these estimates were not directly comparable to mortality and morbidity estimates generated by the costing model developed for this study. Incidence based models are preferable to prevalence based models as they are not based on survey data and take into account past smoking behaviour.

It would in principle be possible to account for ETS deaths in non-smokers by assuming e.g. that an additional x% (this figure is likely to be low, in the magnitude of circa 1%) of the EU mortality linked to the above health conditions would have occurred due to ETS exposure. The costing estimates would then be applied to the supplemented mortality estimates, using the following formula.

Incidence of the diseases categories was calculated based on WHO regional incidence rates for 2000 and OECD incidence rates²⁰⁹. The overall incidence for each of the three WHO regions was allocated to Member States and non Member States on the basis of their population size. Due to a lack of data on which to base estimates of what proportion and

²⁰⁹ Annual incidence ('000s, %) for selected causes by WHO sub region, 2000 Version 2, tobacco related conditions. OECD European health for all database (HFA-DB), WHO/Europe.

how severely the population was estimated to have been exposed to tobacco smoke, it was not possible to develop an ETS attributable factor (EAF). However, a report by the Smoke Free Partnership (Jamrozik, 2006) has suggested that approximately 1.5% of the EU mortality for health conditions associated with smoking²¹⁰ could attribute to ETS exposure in the non-smoking population. This estimate was used as an alternative to the EAF.

$$Death_x^{ETS} = (I_x * ETS_x^{NS})$$

Where:

- I_x is the number of deaths from a disease
- ETS_x^{NS} is the percentage of deaths in the EU which could be attributed to non-smokers being exposed to ETS.

A2.2.2 Estimates of the costs of treatment for the six disease categories

The model assumed that the average cost of treatment for each of the six disease categories would be the same regardless of whether the disease was caused due to the individual smoking or not. Data on Member State health system expenditure on different categories of disease was unavailable for the year 2000. Data on the public healthcare system spending by disease category was only available for the UK and was sourced from the "Total gross UK National Health Service (NHS) expenditure by programme" budgeting category for 2003/04. UK data were used to estimate EU costs as an exhaustive review of national and international sources did not reveal any other suitable sources.

The proportion of the total budget spent by the UK NHS by disease categories was calculated for the 2003/04 financial year. As spending data was not available for the year 2000, it was assumed that the proportion of NHS spending per disease (SPD) category was the same in 2003 as 2000. The ratios for 2003 were then applied to the UK public healthcare budget for 2000.

The cost per person treated (CPT) in the UK was calculated by dividing the SPD by the overall incidence for each disease category. Data for spending on treating individual forms of cancer were not available; it was therefore assumed that the average cost of treatment for cancers would be the same for all cancers. Data for overall spending in the UK were not available for individual respiratory diseases. The overall level of UK spending on COPD and other acute respiratory diseases was estimated based on data sourced from the European Lung Foundation (ELF, 2008).

Estimates for the SPDs for the remaining 26 Member States were made by first adjusting the UK CPT by the individual Member State's level of GDP per capita and healthcare spending relative to the UK, as well as its relative ratio of public to total healthcare funding.

A2.2.3 Estimates of the public healthcare system costs of treatment of SADs and EADs

This adjusted CPT was multiplied by the estimated number of people ill with each SAD, and EAD to give the level of spending per disease category per Member State.

A2.3 Cost of productivity losses due to smoking

The total productivity loss to the EU27 economy from smoking is the sum of the losses due to absenteeism and retirement.

²¹⁰ Jamrozik, (2006) estimated ETS associated mortality for the following four categories: Ischaemic heart disease, Stroke, Lung cancer, and Chronic non-neoplastic respiratory disease.

A2.3.1 Productivity losses to the EU27 economy due to smoking attributable absenteeism

The productivity loss to the EU27 economy from absenteeism because of smoking related ill health was calculated as the sum of absenteeism due to each of the six smoking related disease categories. The calculation for the cost of each disease category is outlined below.

$$Cost_x^{absent} = \left(\left(DLD_x^{Adult} * \frac{emp^{Adult}}{pop^{Adult}} \right) * SAF_x \right) * d^{Adult}$$

Where:

- DLD_x^{Adult} is the number of days of good health that were lost by all adults aged 15 to 64 because of contracting one of the six diseases, regardless of cause
- $\frac{emp^{15-64}}{pop^{15-64}}$ is employment rate for each age group
- SAF_x is the percentage of deaths in the EU which could be attributed to smoking and is used as a proxy for the percentage of DLD in the EU which could be attributed to smoking
- d^{Adult} is the average daily wage rate.

Days of life lost due to disability (DLDs)

The number of days of life lost due to disability (DLDs) was calculated based on Years Lived with Disability (YLD)²¹¹ data from illnesses in each of the six disease categories for the three WHO regions EURO A, B and C²¹² for the year 2000, sourced from the WHO Global Burden of Disease 2000 (WHO, 2000) YLDs for each WHO region were allocated to individual countries based on the size of their labour force relative to that of their corresponding WHO region.

Data on the size of the individual Member State's labour force were sourced from the 2001 Census for EU27 Member States. Estimates of the size of Non Member State countries were made based on population age 15-64, unemployment rate, percent female labour force data sourced from the World Bank for the year 2007(best available data). When available, population growth rates were used to adjust the overall population to 2000 levels. The estimated YLDs for non Member States were excluded from the calculation.

The remaining YLDs for Member States were converted into days of ill health per year (DLD), by multiplying the YLD data by 365. DLDs for those over 65 and under 15 were also excluded from the calculations. The total number of DLDs for the employed population of the EU27 was calculated based on the percentage of the total population aged 15 to 65 who were employed. DLDs for those outside the labour force and those who were unemployed were excluded from the calculation.

Smoking attributable Days of life lost due to disability (DLDs)

The smoking attributable fraction (SAF) was then applied to the calculated DLD for employed persons, in order to estimate the number of people who were absent from work due to smoking.

Average daily wage rate

²¹¹ Note: data was not available for Cyprus.

²¹² See Table A2 2 for a list of countries included in each WHO Region.

The average daily wage for each Member State was calculated using the average wage data for all economic sectors (NACE C-O), in each of the five age brackets²¹³. Data used in the calculation of the average cost of a day of lost productivity were sourced from annual earnings data from EuroStat,²¹⁴ and Labour Compensation per hour data from the OCED²¹⁵ for the year 2000. Data from the OCED was converted into € using exchange rates for 01/01/2000, or the most recently available exchange rates. The data from the OCED was multiplied by the number of hours per day (7), while data from EuroStat was divided by the number of working days per year (220). Estimates for the five remaining Member States²¹⁶ were estimated based on average daily earnings for their respective WHO Regions (EURO A, B and C).

A2.3.1 Productivity losses to the EU27 economy due to smoking attributable absenteeism

Ill health attributable to smoking will not only cause individuals to be absent from work while they are employed, but will also cause some individuals to take early retirement. The costing model employed by the study includes a methodology for estimating the impacts of early retirement attributable to smoking on European productivity. The model – for reasons of data availability – approximates the costs of smoking-related early retirement on the basis of the ‘stock’ of people being in early retirement in 2000 rather than the ‘flow’ of people *entering* early retirement in 2000. Our implicit assumption is that the number of people entering early retirement and their age structure (therefore the time spent in early retirement) do not differ across years. Thus a cross-sectional stocktaking appropriately reflects the expected early retirement pattern of all those who enter early retirement in any given year.

The productivity loss to the EU27 economy from retirement because of smoking related ill health was calculated as the sum of retirement due to each of the six smoking related disease categories. The calculation for the number of persons who took retirement due to each disease category is outlined below.

$$Retl_{Smoking} = \left[\frac{((DLD_{40-64}^{40-64} * Retl_{Health}) * SAF_x)}{DLD_{40-64}^{40-64} * SAF_x} \right]$$

Where:

- DLD_{40-64}^{40-64} is the number of days of good health that were lost by all adults aged 40 to 64 because of contracting one of the six diseases, regardless of cause
- $Retl_{Health}$ is proportion of the population aged 40 to 64 which is in early retirement due to ill health
- SAF_x is the percentage of deaths in the EU which could be attributed to smoking and is used as a proxy for the percentage of DLD in the EU which could be attributed to smoking

²¹³ 15 to 29, 30 to 39, 40 to 49, 50 to 59 and 60 plus.

²¹⁴ CZ, SI,NL, IE, UK, BG, RO, SK, pl, LT²¹⁴ Czech Republic, Slovenia, Netherlands, Ireland, United Kingdom, Belgium, Romania, Slovakia , Poland, Lithuania.

²¹⁵ CY, GR, ES, IE, IT, FI, AT, se, FR, DE, DK, EE, HU, national currencies converted to € using exchange rate on 01/01/200 or best available.

²¹⁶ BE,LU MT, PT, LV.

- I_{x}^{40-64} is the number of persons aged 40 to 64 that have contracted one of the six diseases, regardless of cause

$$Cost_{RetiSmoking}^{40-64} = (Reti_{Smoking} * days_{work}) * d^{40-64}$$

Where:

- $Reti_{Smoking}$ is the estimated number of people who took early retirement due to smoking attributable ill health
- $days_{work}$ is the maximum number of days that an individual could work during a calendar year.
- d^{40-64} is the average daily wage rate for adults who could take early retirement

Days of life lost due to disability (DLDs)

The number of days of life lost due to disability (DLDs) was calculated based on Years Lived with Disability (YLD)²¹⁷ data from illnesses in each of the six disease categories for the three WHO regions EURO A, B and C²¹⁸ for the year 2000, sourced from the WHO Global Burden of Disease 2000 (WHO, 2000). YLDs for each WHO region were allocated to individual countries based on the size of their population aged 60 plus, relative to that of their corresponding WHO region.

Data on the size of the individual Member State's population age structure were sourced from the 2001 Census for EU27 Member States. Estimates of the size of Non Member State countries were made based on total population, and proportion of population over 60 data sourced from the World Bank for the year 2007(best available data). The estimated YLDs for non Member States were excluded from the calculation.

The YLD data is not subdivided on the basis of the economic activity status of those in each age category (e.g. employed, unemployed, retired). In order to estimate the number of YLD lost due to health related early retirement, we have assumed that the YLDs are distributed equally throughout the population.

Early retirement due to ill health

The proportion of EU27 adults aged 40 to 64 who retired due to ill health was estimated using data available from Eurostat. Early retirement was defined as the period of time persons who retired for reasons other than reaching a legal/contractual retirement age spent in retirement prior to reaching the legal/contractual retirement age. Once an individual in early retirement reaches the legal/ contractual retirement age, they are no longer in early retirement and therefore would not cause any net additional productivity loss for the EU27 economy. As there is no mandatory age for retirement in the EU, it was assumed that persons over the age of 65 would have reached retirement age and therefore should be excluded from the calculation, based on:

- The majority of adults in the EU27 start to retire in their late 50s after working an average of 36 years²¹⁹. The average retired person in the EU27 began receiving a

²¹⁷ Note data was not available for Cyprus.

²¹⁸ See Table A2-**Error! Main Document Only**, for a list of countries included in each WHO Region.

²¹⁹ Eurostat: DS-074330-table: Ifso_06yrspnpr - Not employed persons, average number of years spent working - by sex and economic activity (previous job, NACE Rev. 1.1)

pension at age 58. However this varied from a low of 55 in France to a high of 63 in Germany²²⁰.

- The proportion of adults who are employed (economic activity rate) declines significantly with age from 40% of all 55 to 64 year olds to 5.1% of those aged 65 plus. This would imply that the majority of those over 65 would have chosen to have retired at that age.
- While those aged 65 plus could have previously taken early retirement, their period of early retirement, and the corresponding economic costs, would have occurred in the 1990s.

The next step was to estimate the number of people aged 40 to 64 who are retired, based on the number of people aged 40 to 64 who are not actively employed²²¹ and the proportion of the economically inactive population which is retired²²².

Eurostat data on the reasons for retirement was used to tease out those persons who would have preferred to remain in the work force, from those who wanted to retire at the age they did. The retired population was then divided into those who retired due to:

1. Health or care-related or financial reasons (22%)
2. Reached retirement age or preference to stop working (61%)
3. Job lost or job-related problems (17%)

Data from the second category was excluded as they were not considered to have retired "early". Data from the third category was excluded as our costing model excludes unemployment costs.

In total, an estimated 2.9% of the population aged 40 to 64 took early retirement due to either health or financial reasons. Unfortunately it was not possible to differentiate between these two categories, based on the available data. The total proportion of the population aged 40 to 64 which retired due to ill health is therefore between 0% and 2.9%. Taking the mean value it is estimated that 1.5% of adults aged 40 to 64 retired due to ill health.

Early retirement due to smoking attributable ill health

Estimates of the smoking attributable factor (SAF), derived from WHO data, were used to estimate the proportion of YLDs in the adult population that that could be attributed to smoking.

Early retirement due to smoking attributable ill health

The average daily wage for those aged 40-64 for each Member State was calculated using the average wage data for all economic sectors (NACE C-O), in each of the three age brackets²²³. Data used in the calculation of the average cost of a day of lost productivity were sourced from annual earnings data from EuroStat,²²⁴ and Labour Compensation per hour data from the OCED²²⁵ for the year 2000. Data from the OCED was converted into €

²²⁰ Eurostat: DS-074310-table: Ifso_06finiagps - Average age at which employed persons started receiving a retirement pension - by sex and main financial incentive to stay at work

²²¹ Eurostat: DS-071612-table: Ifsa_igan - Inactive population by sex, age groups and nationality (1000)

²²² Eurostat: DS-071613-table: Ifsa_igar - Inactive population - Main reason for not seeking employment - Distributions for a given sex and age group (%)

²²³ 40 to 49, 50 to 59 and 60 plus.

²²⁴ CZ, SI,NL, IE, UK, BG, RO, SK, pl, LT²²⁴ Czech Republic, Slovenia, Netherlands, Ireland, United Kingdom, Belgium, Romania, Slovakia , Poland, Lithuania.

²²⁵ CY, GR, ES, IE, IT, FI, AT, se, FR, DE, DK, EE, HU, national currencies converted to € using exchange rate on 01/01/200 or best available.

using exchange rates for 01/01/2000, or the most recently available exchange rates. The data from the OCED was multiplied by the number of hours per day (7), while data from EuroStat was divided by the number of working days per year (220). Estimates for the five remaining Member States²²⁶ were estimated based on average daily earnings for their respective WHO Regions (EURO A, B and C).

A2.4 Cost of premature mortality

Mortality estimates for Member States attributable to smoking were taken from the 'Death from Smoking' project and fitted to Eurostat data on the age structure of deceased men and women in 2000. It was assumed that the proportion of people dying as a result of smoking is even for deceased persons above 70 years, and that the proportion of smoking-attributable deaths decreases evenly for each age cohort in the category between 35 and 69 years, with the 69-year olds to approximately reach the level of 70+ year olds (the proportion of deaths from smoking is thus higher at younger ages, alternative causes of mortality being more sparse).

It was furthermore assumed that persons dying in 2000 as a result of smoking would have had the same survival patterns then the rest of the population if they hadn't been smokers. Thus, to estimate the number of the number of life years lost by smokers, the number of expected life years at the age of X as calculated by Eurostat was assigned to all smokers who died at the age of X.

This figure was multiplied by an estimated amount of societies' 'willingness to pay' for one saved life year of an unidentified (statistical) person. This value of a life year (VOLY) has been uniformly established as being €52,000 for all EU citizens on the basis of the ExternE final study, and has **not** been adjusted for individual Member States to take into account differences in national wealth.

²²⁶ BE, LU MT, PT, LV.

Table A2-1 Diseases included in costing model disease categories

Smoking Attributable (SAD)		Non Smoking Attributable (NSAD)	
Disease Group	Specific Conditions/Diseases	Disease Group	Specific Conditions/Diseases
Lung and UAD Cancers	C00-C14 Malignant neoplasm of liporal cavity and pharynx	Infectious diseases	A00-A99
	C40-C41 Malignant neoplasm of bone and articular cartilage	Viral infections	B00-B99
Other Cancers	C15-C26 Malignant neoplasm of digestive organs	In situ & benign neoplasms	D00-D48
	C30-C39 Malignant neoplasms of respiratory & intrathoracic organs	Endocrine	E00-E90
	C43-C44 Malignant neoplasms of skin	Mental illness	F00-F99
	C45-C49 Malignant neoplasms of mesothelial and soft tissue	Other degenerative diseases	G00-G83
	C50 Malignant neoplasm of breast	Sense organ disorders	H00-H99
	C51-C58 Malignant neoplasms of female genital organs	Digestive system	K00-K93
	C60-C63 Malignant neoplasms of male genital organs	Dermatitis	L00- L99
	C64-C68 Malignant neoplasms of urinary tract	Musculoskeletal system disorders	M00-M99
	C69-C72 Malignant neoplasms of eye, brain & other parts of CNS	Disorders of the genitourinary system	N00-N99
	C73-C80, C97 Malignant neoplasms. neoplasms. of thyroid and other endo. Glands etc.	Perinatal period conditions	O00-P96
	C81-C96 Malignant neoplasms of lymphoid, haematopoietic & rel. tissue	Congenital disorders	Q00-Q99
	Cardio Vascular Diseases (CVD)	I00-I09 Rheumatic heart disease	Unspecified causes of morbidity
I10-I15 Hypertensive diseases		Injuries	S00-T99
I20-I25 Ischaemic heart diseases		Potential health hazards	Z00-Z99
I26-I28 Pulmonary heart disease & diseases of pulmonary circulation			
I30-I52 Other forms of heart disease			
I60-I69 Cerebrovascular diseases			
I70-I79 Diseases of arteries, arterioles & capillaries			
I80-I89 Diseases of veins & lymphatic system nec.			
I95-I99 Other & unspecified disorders of the circulatory system			
Respiratory	J00-J06 Acute upper respiratory infections		
	J10-J18 Influenza & pneumonia		
	J20-J22 Other acute lower respiratory infections		
	J30-J39 Other diseases of upper respiratory tract		
	J40-J47 Chronic lower respiratory diseases		
	J60-J70 Lung diseases due to external agents		
	J80-J99 Other diseases of the respiratory system		

Source: The Information Centre (England), Hospital Episode Statistics - 2004-05. Ungrossed data. Please see the Explanatory notes files on the HES online website for more details

Table A2-2 Countries included in the WHO EURO sub regions

WHO European Sub-regions	EU27 Countries	Non EU27 Countries	
EURO A	Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland,	Italy, Luxembourg, Malta, Netherlands, Portugal, Slovenia, Spain, Sweden, United Kingdom	Andorra, Croatia, Iceland, Israel, Monaco, Norway, San Marino, Switzerland
EURO BB	Bulgaria, Poland, Romania, Slovakia,	Albania, Bosnia and Herzegovina, Georgia, The Former Yugoslav Republic of Macedonia, Turkey, Yugoslavia Armenia, Azerbaijan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan	
EURO C	Estonia, Hungary, Latvia, Lithuania,	Belarus, Kazakhstan, Republic of Moldova, Russian Federation, Ukraine	

. Source: WHO Data

Table A2-3 Studies reviewed in the development of the costing model used in this study

Location	Author	Title	Country covered	Estimated cost of smoking		Assumptions made by study			
				Direct (million €)	Indirect (million €)	Total Million €	Health	Indirect	Total
EU	(Sanner, 1991)	What does cigarette smoking cost society?	Norway			1,170			Total Cost Of Smoking
EU	(Bolin & Lindgren, 2007)	Smoking, healthcare cost, and loss of productivity in Sweden 2001.	Sweden	150		580			Total Cost Of Smoking.
EU	(Barta, 2000),	Economic impact of smoking and tobacco control in Hungary	Hungary			1,072			the direct and indirect costs
EU	(Pekurinen, 1999)	The Economic Consequences of Smoking in Finland 1987–1995.	Finland	173			Gross health care costs		
EU	(Szilagyi, 2004)	Tobacco Control in Hungary: past present, future.	Hungary			4% of national GDP			
EU	(Ahn & Molina, 2001.)	Smoking in Spain: Analysis of Initiation and Cessation.	Spain	159			Health care costs.		
EU	(Ross 2004)	Critique of the Philip Morris study of the cost of smoking in the Czech Republic.	Czech Republic			269 8% of the national GDP			Total cost of smoking to government
Europe	(ASPECT Consortium, 2004)	TOBACCO OR HEALTH IN THE EUROPEAN UNION PAST, PRESENT AND FUTURE	EU/EFTA countries	105,830 to 130,310	70,550 to 86,870		costs of informal care, the cost of treating reproduction problems, and SHS are not included	2/3 of the health costs of smoking	Direct + indirect
Europe	(ASPECT Consortium, 2004)	TOBACCO OR HEALTH IN THE EUROPEAN UNION PAST, PRESENT AND FUTURE	EU/EFTA countries	49,830	47,870	97,700	Chronic Obstructive Pulmonary Disease COPD, lung cancer, stroke, coronary artery disease, cancer of the mouth and larynx, and atherosclerotic occlusive disease		Direct + indirect
Europe	(Wegner, 2004)		Germany		14,480			Mortality+ Morbidity+ Work days Lost+ Early retirement	
Europe	(Neubauer, 2006)	Mortality, morbidity and costs attributable to smoking in Germany: update and a 10-year comparison.	Germany	6,093	11,033	17,126	Cost to health care	Mortality, Morbidity, Work days lost, early retirement	Direct+ indirect.
Europe	(Fenoglio, Parel, & Kopp, January 2003)	The Social Cost of Alcohol, Tobacco and Illicit Drugs in France, 1997.	France	3,334	6,235	11,032	Cost to health care	Social costs of smoking.	Direct+ indirect
Europe	(Krzyśanowska, 2004)	"Nikotynizm na świecie:Następstwa ekonomiczne" The Global Nicotine Addiction and its Economic Consequences.	Poland	3,554	2,962	6,516	Health care costs associated with treating tobacco related diseases	Lost productivity;	Direct + indirect
Europe	(Ross, Shariff, & ., Economics of Tobacco Taxation in Ukraine 2008, 2008)	Economics of Tobacco Taxation in Ukraine 2008.	Ukraine		2,164			Lost Productivity.	
Europe	(Riper, 2007)	The World's Heaviest-Smoking Countries.	Serbia & Montenegro		2,019			Lost Productivity	
Europe	(Rasmussen, et al. 2004)		Denmark	1426 per smoker/year	€1,999.per smoker/year				
Europe	(Barta, 2000)	Economic Impact of Smoking and Tobacco Control in Hungary.	Hungary	185	730	915	Hospital care Outpatient visits Medicine subsidy	Lost income due to mortality	Direct+ indirect.
Europe	(Madden, 2003)	The Cost of Employee Smoking in Ireland.	Ireland		707			Absenteeism, Injury, Lost Wages And Time Lost To Smoking Breaks.	

Location	Author	Title	Country covered	Estimated cost of smoking		Assumptions made by study				
				Direct (million €)	Indirect (million €)	Total Million €	Health	Indirect	Total	
Europe	(Riper, 2007)	The World's Heaviest-Smoking Countries.	Bosnia And Herzegovina		652				Lost Productivity	
Europe	(Sigillum Universitatis Islandia, 2000)	Cost of Smoking in Icelandic Society 2000: Report to Tobacco Control Task Force	Iceland	49	104	153	Ambulances, pharmaceuticals, hospitalization, Nursing in private households, nursing homes	Lost Productivity		Not Including Intangible Costs.
Europe	(Parrott G. R., 2000)	Costs of employee smoking in the workplace in Scotland	Scotland		55			smoking related absence in Scotland Survey data		
Europe	(Brønnum-Hansen and Juel 2001)	Abstinence from smoking extends life and compresses morbidity: a population based study of health expectancy among smokers and never smokers in Denmark.	Denmark		expected lifetime years good health of a 20 year old : man non-smoker=48 man heavy-smoker =36 female non-smoker==46 female heavy-smoker=34			Indirect = Morbidity+ Healthy life lost Health expectancy based on long standing illness is reduced for smokers when compared with never smokers.		
Europe	(Taa, Kiivet, & Hu, 2004)	The Economics of Tobacco in Estonia	Estonia	10	16	26	Gross health care costs	Productivity lost		Total costs
Europe	(The Age Australia, 2008.)	. Switzerland remains smoking haven, 2008.	Switzerland			3,004	Medical bills	Premature deaths Absenteeism, invalidity		Direct + indirect
Europe	(Genugten, et al., 2000)	Future burden and costs of smoking-related disease in the Netherlands: a dynamic modeling approach.	Netherlands			2,112				Total Cost Of Smoking.
Europe	(Guindon, 2006)	The cost attributable to tobacco use: a critical review of the literature. Geneva,	Germany	5,467			Health care costs.			
Europe	(Parrott & Godfrey, 2004)	Economics of smoking cessation.	United Kingdom	1,915			Health treatment of smoking related diseases a year	Morbidity Work days Lost Lower productivity		
Europe	(Peto, Lopez and Boreham, et al. 2006)	Annual tobacco-related health-care costs estimates for 2006	EU27 (excluding Cyprus)					Estimates of mortality		
Outside Europe	(Iglesias R, 2005)	Tobacco Control in Brazil.	Brazil	40	-		Hospitalization attributable to smoking 1996-2005			
Outside Europe	(Kyaing, 2003)	Tobacco Economics in Myanmar. 2003.	Myanmar	10	-	-	Gross health care costs.			
Outside Europe	(McGhee, Ho, & Lapsley, 2006)	Cost of tobacco-related diseases, including passive smoking, in Hong Kong..	Hong Kong	489 (total) 377 (active) 112 (passive)	166	497	Gross health care costs;	Lost productivity, other tangible annual cost		Total of smoking
Outside Europe	(Max, Rice, Sung, Zhang, & Miller, 2004)	The economic burden of smoking in California	United States	6,200	5,200	11,400		lost productivity indirect costs due to premature deaths were		
Outside Europe	(Warner, Hodgson, & Carroll, 1999;)	Medical costs of smoking in the United States: estimates, their validity, and their implications	the United States	6-8% of national GDP			health care resources to treating people made ill by smoking			
Outside Europe	(Pongpanich, 2006.)	Analysis between Present and Future Tobacco related Health Care Costs in Thailand:	Thailand	705	-	-	Health care costs due to COPD, CHD and lung cancer.			
Outside Europe	(Quah, Tan, Saw, & Yong, 2002;)	The Social Cost of Smoking in Singapore.	Singapore	36	271	307	Health care costs;	Lost productivity;		Direct + indirect
Outside Europe	(WHO., 2007)	Tobacco-related illnesses Impact of in Bangladesh.	Bangladesh		471		Cost to the health care system public	Lost income tobacco-related illnesses		

Location	Author	Title	Country covered	Estimated cost of smoking		Assumptions made by study			
				Direct (million €)	Indirect (million €)	Total Million €	Health	Indirect	Total
Outside Europe	(Ministry of Health and Family Welfare, Government of India., 2004)	Report on Tobacco Control in India.	India	5,193			Projected health care costs for the 3 major diseases caused by smoking using 1999 data		
Outside Europe	(Mexican Social Security Institute)	The total annual cost of medical care attributed to tobacco use	Mexico	453			Annual cost of medical care attributed to tobacco use for the Mexican social security institute.		
Outside Europe	(Cevallos, 2008)	Health-Latin America: Tobacco Regulations as Solid as Smoke.;	Chile	822			Public health costs of smoking		
Outside Europe	(Cevallos, 2008)	Health-Latin America: Tobacco Regulations as Solid as Smoke.	Argentina	1,587			Health related costs.		
Outside Europe	(Carbajales AR, 2004.)	Study of The Tobacco Section in Uruguay	Uruguay			94			Total Cost Of Smoking.
Outside Europe	(Prenzle, Mittendorf, & Schulenburg, 2007)	Modelling of the costs of productivity losses due to smoking in Germany for the year 2005.			9,600			Mortality+ Morbidity+ Work days Lost+ Early retirement;	
Outside Europe	(Daramola, 2007)	Hailed Over Move Against Tobacco Coys.	Nigeria	426			Health care cost due to tobacco.		
Outside Europe	(Bureau, 1998)	Cost–benefit Analysis of Smoking.	Venezuela	295			Gross health care costs.		
Outside Europe	(Guindon, 2006)	The cost attributable to tobacco use: a critical review of the literature. Geneva,	United States,	58 0.98% of national GDP			Health care costs.		
Outside Europe	(Guindon, 2006)	The cost attributable to tobacco use: a critical review of the literature. Geneva,	Australia.	0.7			Health care costs.		
Outside Europe	(Ross, Trung, & Phu, 2007)	The costs of smoking in Vietnam: the case of inpatient care..	Viet Nam	56	-	-	Total cost of inpatient health care.		
Outside Europe	(The Economics of Tobacco Control Project School of Economics University of Cape Town., 1998)	The Economics of Tobacco Control in Southern Africa.	South Africa	235	391	626	Hospitalization and out-patient treatment Smoking illness	Lost productivity due to premature death/hospitalization	Direct + indirect
Outside Europe	(Cancer Society of New Zealand, 2004)	What Smoking Costs. New Zealand:	New Zealand	119			Tax payers costs to smoking-related health care, calculation based on a 1990 figure.		
Outside Europe	(Ross S. G., 2008)	Economics of Tobacco Taxation in Russia:	Russian Federation		17,813			Lost Productivity.	
Outside Europe	(Lwegaba, 2004)	Excess health care cost associated with a low smoking prevalence	Barbados	15			Excess cost to health care system public		
Outside Europe	(Riper, 2007)	. The World's Heaviest-Smoking Countries	Guinea		211			Lost Productivity	
Outside Europe	(Centers for Disease Control and Prevention, 2002)	Annual smoking-attributable mortality, years of potential life lost, and productivity losses--United States, 1995-1999,	United States	54,450	66,349 Or 1% of national GDP	120,439	Annual tobacco-related health-care costs estimates for 2006	Lost earnings and productivity estimates for 2004	Total costs from 1997.
Outside Europe	(Centers for Disease Control and Prevention, 2005.)	Annual smoking-attributable mortality, years of potential life lost, and productivity losses – United States, 1997–2001.	United States			66,349			Total costs of smoking
Outside Europe		Recommendations for Tobacco Control Policy: Tobacco Free Japan.	Japan	8,238	36,753	44,991	Health care costs	Loss due to fire such as property damage, death loss of income due to hospitalization	Direct + indirect
Outside Europe	(Rehm J, 2006.)	. The costs of substance abuse in Canada 2002:	Australia	175	4,401	4,576	Gross health care costs	Tangible social cost of smoking e.g. fire lost productivity	Direct+ indirect

Location	Author	Title	Country covered	Estimated cost of smoking		Assumptions made by study			
				Direct (million €)	Indirect (million €)	Total Million €	Health	Indirect	Total
Outside Europe	(Collins & Lapsley, 2008)	The costs of tobacco, alcohol and illicit drug abuse to Australian society in 2004/05:	Philippines	619	3,741	4,360	Direct health care costs	Total annual economic cost of smoking.	Calculated total = Direct + indirect
Outside Europe	(Quimbo SLA, 2007)	The Economics of Tobacco and Tobacco Taxation Philippines:	China	1,226	2,380	3,606	Gross health care costs	Lost productivity	Direct+ indirect
Outside Europe	(Hu T-w. 2007)	Tobacco Taxation and Its Potential Economic Impact in China:	Korea, Republic Of	140	1,992	2,132	Direct medical costs using the disease specific approach for current and ex-smokers;	Transportation to get healthcare, caregivers , absence from work, premature death	Direct + indirect
Outside Europe	(Kang, 2003)	Economic burden of smoking in Korea.	Egypt	366	534	900	Health care estimates from 2003	Loss due to premature mortality estimates from 1981/82 adjusted for 2003	Direct+ indirect
Outside Europe	(Nassar, 2003)	The Economics of Tobacco in Egypt: A New Analysis of Demand	Australia			3.4% of national GDP			net social costs that included the social costs of unwanted nicotine addiction
Outside Europe	(Collins & Lapsley, 1991)	Estimating the Economic Costs of Drug Abuse in Australia.	Australia			2.1% of national GDP			
Outside Europe	(Melvin, 2000)	Costs of smoking during pregnancy: development of the Maternal and Child Health Smoking Attributable Mortality, Morbidity and Economic Costs MCHSAMMEC software							
Outside Europe	Barber S, Adioetomo SM, Ahsan A, Setyonaluri D.	Tobacco economics in Indonesia 2008.	Indonesia		607			Total Costs Of Tobacco-Related Mortality And Morbidity	
Outside Europe	(Riper, 2007)	The World's Heaviest-Smoking Countries.	Kenya		1,082			Lost Productivity	
Outside Europe	(Riper, 2007)	The World's Heaviest-Smoking Countries.	Mongolia		114			Lost Productivity.	
Outside Europe	(Riper, 2007)	The World's Heaviest-Smoking Countries.	Namibia		332			Lost Productivity	
Outside Europe	(Riper, 2007)	The World's Heaviest-Smoking Countries.	Nauru		4			Lost Productivity Cost In Total National Income GNI.	
Outside Europe	(Riper, 2007)	The World's Heaviest-Smoking Countries.	Sao Tome And Principe		5			Lost Productivity	
Outside Europe	(Tsai, 2005)	Workplace smoking related absenteeism and productivity costs in Taiwan.pdf	Taiwan		720 (total indirect) 133 (Active smoker absenteeism) 58 (passive smoker absenteeism) 529 (smoking breaks)			Morbidity+ Work days Lost+ Lower productivity Average sick days: 4.36 (male smokers) 3.30 (male non-smokers) 4.96 (Female smokers) 3.75 (Female non-smoking)	
Outside Europe	(Riper, 2007)	The World's Heaviest-Smoking Countries.	Turkey		16	-		Lost Productivity.	
Outside Europe	(Kristein, 1983)	How much can business expect to profit from smoking cessation?	United States		€433 per smoker/year				
Outside Europe	(Riper, 2007)	The World's Heaviest-Smoking Countries.	Yemen		721	-		Lost Productivity.	

ANNEX 3 EXAMPLES OF HOW EXTERNALITIES ARE ADDRESSED IN EU POLICY

A3.1 Introduction

Externality problems are not uncommon in public policy. European policy-makers have turned to a variety of approaches to deal with externality issues in relation to the environment, transport and other areas of policy. There are many more examples at national level, within the EU and beyond.

This annex examines the variety of legal instruments that have been used to internalise externalities across a range of policy areas. The regulatory approach, which is not considered an 'internalising' approach in the conventional sense, is not further explored.

The discussion considers:

- general product liability as an example of private law based legal liability;
- environmental liability as an example of partly public-law based liability;
- environmental taxes as examples of Pigouvian taxation, alongside a discussion of charging schemes (e.g. for road use) and excise duties; and
- the European Union Emission Trading Scheme (EU ETS) as an example of the tradable permit approach.

A3.2 Product liability in practice

A3.2.1 *Role of product liability in allocating costs*

Product liability is a tool used to compensate victims for the damages that they have suffered because of a defective product. It may also function as a deterrent from putting such products on the market - by imposing punitive fees upon those who have inflicted damage.

The damages that have been awarded take one of three forms:

- **material damages** intended to compensate victims for the losses that they have actually suffered (as well as future losses);
- **moral damages** which are intended to compensate victims or their families for the losses they have suffered and which cannot be quantified; and
- **punitive damages** intended to punish producers who impose externalities on their victims through their acts (with the exception of the UK, the legal systems of EU Member States do not allow for the use of punitive damages).

The definition and dividing line between material and moral damages does vary significantly between countries and legal systems. However, the use of moral damages in product liability cases is generally symbolic within Member State legal systems. Under the principle of full compensation, product liability is restricted to compensating victims as closely as possible; only up to the point where they would have been had the damage not occurred (Rouhette, 2007).

The common law system of, among others, the UK and US allows for the use of punitive damages. There is, however, significant variation in the extent to which they are used and the amount of the damages awarded.

The existence of product liability acts as a deterrent to producers from placing defective products on the market. As such, it therefore requires producers to consider the

externalities that could occur in the future. However, the preventive capability of product liability is arguably stronger in countries whose legal systems allow for the use of punitive damages.

A3.2.2 Systems of product liability systems in place at the Community level

Product Liability Directive (85/374/EEC)

The Product Liability Directive was established to create a scheme of strict product liability for damage arising from defective products in addition to any existing rights that consumers enjoy under domestic law. Originally, primary agricultural products and game were excluded. However, the Directive was amended in 2000 to include all products. A product²²⁷ is defective when it does not provide the safety, which a person is entitled to expect, taking all circumstances into account²²⁸. This lack of clarity has left the definition open to interpretation by national courts (Ashurst, 2006).

The Directive imposes the concept of "joint and several" liability, allowing all parties throughout the production chain that produces a defective product that causes personal injury or property damage can be held liable to be held liable. A producer²²⁹ can be held liable for damages arising from a defective product regardless of where the product is manufactured. A producer is liable for 10 years from the date on which the producer placed the product on the market (unless legal action is pending).

The Directive does not allow producers to limit their liability through contractual clauses with other producers or with users of the product²³⁰, which is common practice in other countries, particularly the US. However, when the damage occurred because of both a defect in the product and the fault of the injured person or any person, the producer's liability may be reduced or disallowed. Additionally, the Directive contains a "development risk" defence which producers may invoke to escape liability by showing that the defect in their product was unknown or unknowable. In order to avoid liability is required to prove "that the state of scientific and technical knowledge at the time when he put the product into circulation was not such as to enable the existence of the defect to be discovered."

Anyone in Europe who is injured by a device may seek to obtain damages, within three years of their becoming aware of, or should reasonably have become aware, of their injury, if they can prove the damage; the defect in the product and the causal relationship between the two.

However, the standard of proof that the claimant is required to meet varies depending on the approach adopted by Member State national courts (Ashurst, 2006). The injured party is not required to prove that the producer was negligent, as the burden to prove non-negligence is borne by the producer (NIST, 2000).

Damages are awarded by national courts and are based on the principle of full compensation. The Directive does not include non-material damages such as pain and suffering, nor does it require member countries to offer them. However, non-material damages may be awarded in Member States with provisions for such damages in their national law.

²²⁷ The products covered by the Directive comprise all movables even if incorporated into another movable or into an immovable.

²²⁸ Article 6: These include: (a) the presentation of the product; (b) the use to which it could reasonably be expected that the product would be put; and (c) the time when the product was put into circulation"

²²⁹ A producer is defined as: The manufacturer of a finished product; The producer of any raw material; The manufacturer of a component part; The importers of the finished product or component part; Any person who, "by putting his name, trade mark or other distinguishing feature on the product presents himself as its producer" and/or; Any person supplying a product whose producer cannot be identified.

²³⁰ Article 12 "The liability of the producer arising from this Directive may not, in relation to the injured person, be limited or excluded by a provision limiting his liability or exempting him from liability."

Other supporting consumer directives in place at the Community level

The EU product liability system derives from several consumer law directives adopted on the basis of Articles 94 and 95 of the European Commission Treaty (previously Articles 100 and 100a respectively). These directives have increased the level of consumer protection available in the 27 EU Member States, in particular by allowing those who have suffered harm or those acting on their behalf to seek redress. They have also decreased the probability of products causing harm by requiring that only safe products should be placed on the EU market, by and by requiring that businesses should not engage in unfair commercial practices, including misleading and aggressive practices.

General Product Safety Directive (2001/95/EC) GPSD

The GPSD came into force on 15 January 2004, and represented a fundamental shift away from "silent" recall of consumer products in the EU²³¹. The Directive places a general duty on all suppliers of consumer goods to supply products that are safe in normal or reasonably foreseeable use. Safety takes into account factors such as the product's characteristics, instructions and warnings, and the categories of consumers at serious risk when using the product, particularly children (BERR, 2009).

The GPSD is both a framework directive, which applies to all products in the absence of more specific provisions, and a horizontal directive, which applies irrespective of the sector of activity concerned.²³²

The GPSD applies to all new and second-hand consumer products, except new products that are covered by specific European safety legislation, such as sectoral directives (BERR, 2009). Some product categories subject to sectoral directives will also be subject to aspects of the GPSD (Ashurst, 2005). The Commission decision of 25 March 2008 declared cigarettes to be a dangerous product due to the risk of fire that they cause, and required manufactures to reduce the ignition propensity of cigarettes (European Commission, 2008).

Under the GPSD, each Member State sets the penalties, for example in the UK there are fines of up to £20,000 (€21,900)²³³ and/or 12 months' imprisonment. Although the value and applications of the fines may not be sufficient to be a deterrent for producers, as it ultimately cheaper to risk paying fines (Docekal, Kolba, Micklitz, & Rott, 2005).

It would also appear that the GPSD penalties are a weaker deterrent than those of the Product Liability Directive. Other Community legislation further emphasises the duty of professionals to provide sufficient, clear and reliable information to consumers on their products; this is particularly true of Directive 2005/29.

Unfair Commercial Practices Directive (2005/29/EC):

This Directive aimed to harmonise consumer protection laws across Member States. It was formally adopted in May 2005. The deadline for transposition was 12 June 2007. As of November 2008, 17²³⁴ Member States have passed national transposition measures²³⁵.

The Directive prohibits unfair business-to-consumer commercial practices²³⁶ that would be misleading to consumers or aggressive. To be considered unfair, a practice must meet two

²³¹ International Comparative Legal Guide Series: Product Safety: The New EU Regime
http://www.iclg.co.uk/index.php?area=4&show_chapter=865&ifocus=1&kh_publications_id=37

²³² Directive 2001/95, OJ 2002 L 11/4.

²³³ Based on an exchange rate of 1£=1.09€ on 03/04/09

²³⁴ Austria, Bulgaria, Cyprus, Denmark, Estonia, France, Greece, Ireland, Italy, Latvia, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Sweden, United Kingdom

²³⁵ http://ec.europa.eu/consumers/rights/index_en.htm

criteria: it must be contrary to the rules of professional diligence and materially distort or be likely to materially distort the economic behaviour of a consumer, that is “to appreciably impair the consumer’s ability to make an informed decision, thereby causing the consumer to take a transactional decision which he would not have taken otherwise.”²³⁷

However, the definition of a transactional decision is not defined in the Directive, and is left to the interpretation of national courts.

After laying down this extremely broad prohibition, the Directive identifies two main categories of unfair commercial practices: misleading and aggressive practices. Under Articles 6 and 7, a practice is misleading if it contains false information, omits material information or presents it in an unclear, unintelligible, ambiguous or untimely manner, or otherwise deceives or is likely to deceive the average consumer. Under Articles 8 and 9, a practice is aggressive if by harassment, coercion, including the use of physical force, or undue influence, it significantly impairs or is likely to significantly impair the average consumer’s freedom of choice or conduct with regard to the product

Annex I of the Directive lists 31 commercial practices which are considered unfair in all circumstances. The list, which is applicable in all the Member States and can only be modified by revision of the Directive, is not exhaustive. The Directive places the burden of proof on those making claims against unlisted practices.²³⁸

Penalties for infringements and enforcement of penalties are the responsibility of Member States but must be “effective, proportionate and dissuasive”²³⁹.

Implementation and interpretation of the Directives

In general, the implementation and interpretation of key elements of discussed Directives has occurred at the Member State level. For example; under Product Liability Directive²⁴⁰, the definition of an acceptable burden of proof has been based on rulings by national courts in various Member States²⁴¹. Under article 249(3) EC, implementation of the directives is required to take place at national level. The question of interpretation is not as straightforward; national courts will apply community law (and therefore will often interpret it), but this is subject to article 220 EC which entrusts the European court of justice with the interpretation of community law and article 234 EC which authorises or requires national courts to ask for questions of interpretation of community law to the European court of justice (ECJ).

With the exception of the Directive on Injunctions for the Protection of Consumers’ Interests (IPCI), the Directives set a minimum standard to which Member States adhere. However, the IPCI also allows Member States to designate qualified entities and appropriate measures to implement it (Docekal, Kolba, Micklitz, & Rott, 2005). This homogenous adoption of the Directives makes it likely that citizens in some Member States will have a higher level of access to redress than others.

The EU product liability system is informed by Community policy documents, including the Green Paper on Consumer Collective Redress, which incorporated aspects of the:

²³⁶ Article 2(d) any act, omission, course of conduct or representation, commercial communication including advertising and marketing, by a trader, directly connected with the promotion, sale or supply of a product to consumers;

²³⁷ Article 2(e).

²³⁸ Article 5(5).

²³⁹ Preamble 22

²⁴⁰ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52000DC0893:EN:HTML>

²⁴¹ It has been based on: probability (Sweden); balance of probabilities (UK); judicial inference (France, Belgium); assumptions (Spain) or it can be overthrown (Denmark, Netherlands).

- **Commission Consumer Policy Strategy:** which has the objective of promoting the retail internal market by making consumers and retailers as confident shopping cross border as in their home countries by 2013; and
- **OECD Recommendation on Consumer Dispute Resolution and Redress** (OECD, 2007) which encouraged OECD member countries to provide consumers with access to different means of redress, including collective redress mechanisms.

A3.2.3 Environmental liability in practice

Philosophy and overall approach to environmental liability

In modern environmental policy, liability has become a popular instrument to get polluters to internalise the costs of their actions (Bergkamp, 2001). Specifically, environmental liability law is intended to ensure that the laws governing trade and economic activities on the one hand and environmental issues on the other hand interact to support sustainable development (Basse, 2001). Environmental liability is based on the concept of strict liability, which is designed to force producers to internalise the external costs they impose on society, and ensure the social good of an activity outweighs the social harm it could cause. By being exposed to the real cost of potential environmental harm to society, producers have a financial incentive to engage in processes with the lowest risk of causing environmental harm (Coroner, 2006). As such, environmental liability is designed to act both as a market-based deterrent for current and future activities, and a legal tool to shift the burden for past pollution away from public bodies and the taxpayer. In principle, by forcing operators to internalise the environmental costs of their past polluting actions and/or damages occurring from any future potential polluting actions they will be less likely to engage in an environmentally risky manner and to avoid environmentally risky actions.

Polluters may be charged under three broad categories, namely (Scottish Parliament, 2000):

- the costs of cleaning up pollution (for example after an oil spill, or a mining accident);
- the economic cost that pollution causes to another's property; or
- the purchase of consents to discharge pollution.

Environmental liability regime in the European Union

Article 174(2)EC lays down the fundamental principles on which European Community environmental law and policy is based:

“Community policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Community. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.”

The polluter pays principle therefore is enshrined in the Treaty as a founding principle of Community environmental law. The party responsible for producing pollution is responsible for paying for the damage done to the natural environment resulting from their polluting activities.

In Europe, most organisations involved in any form of economic activity, including charities and public sector entities, are subject to environmental liability (Lloyd, 2009). European Community law may allow polluting activities and the use of common resources to take

place. However, the legal system is designed to induce operators to adopt measures and develop practices to minimise the risks of environmental damage.²⁴²

Legal basis for environmental liability in the European Union

The EU environmental liability system incorporates elements of the following international agreements:

- the **1972 United Nations Stockholm Conference**: which established both the definition of environment and an international forum for negotiating international environmental law (Basse, 2001);
- the **1989 United Nations Basel Convention** on the Control of Transboundary Movements of Hazardous Wastes and their Disposal: which has 172 parties and aims to protect human health and the environment against the adverse effects resulting from the generation, management, transboundary movements and disposal of hazardous and other wastes (Basel Convention, 2009);
- the **1993 Lugano Convention**²⁴³ on Jurisdiction and the Enforcement of Judgments in Civil and Commercial Matters: which developed a regime for strict liability that in principle covers all types of damage, including traditional and ecological damages caused by “dangerous activities” (Basse, 2001); and
- the **1992 Rio Declaration**²⁴⁴ on Environment and Development: which states that, national authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments.

The Community environmental liability system is outlined in Directive 2004/35/EC (ELD).²⁴⁵ This directive, which is based on Article 175 of the European Commission Treaty, establishes a framework for environmental liability throughout the EU.²⁴⁶ All Member States should have implemented its provisions by 30 April 2007²⁴⁷ which are without prejudice to more stringent provisions of either Community law²⁴⁸ or national law.²⁴⁹

The ELD aims to prevent future and remedy existing environmental damage²⁵⁰ to water, land and biodiversity “at a reasonable cost to society”²⁵¹ by holding financially liable those responsible for the damage, in accordance with the polluter pays principle, in order to induce them to adopt measures and develop practices to minimise the risks of environmental damage so that their exposure to financial liabilities is reduced.²⁵²

²⁴² However due to the environment being largely considered a public good, charges for rectifying environmental damage may not adequately reflect the true environmental cost (Scottish Parliament, 2000).

²⁴³ Defines the environment as “natural resources both abiotic and biotic, such as air, water, soil, fauna and flora and the interaction between the same factors; property which forms part of the cultural heritage; and the characteristic aspects of the landscape”

²⁴⁴ http://en.wikipedia.org/wiki/Rio_Declaration_on_Environment_and_Development

²⁴⁵ Directive 2004/35/EC, OJ 2004 L 143/56, as amended by Article 15 of Directive 2006/21/EC on the management of waste from extractive industries, OJ 2006 L 102/15. This directive was adopted following the publication by the Commission in February 2000 of the White Paper on environmental liability and whose purpose was to examine how the polluter-pays principle could be applied: COM (2000) 66.

²⁴⁶ Article 1.

²⁴⁷ Article 19.

²⁴⁸ Article 3(2): the ELD is a framework directive.

²⁴⁹ Article 16: the ELD is a measure of minimum harmonisation.

²⁵⁰ The ELD lays down a common definition of “environmental damage” in Article 2(1).

²⁵¹ Recital 3.

²⁵² Article 3, Recital 2 and Recital 18.

The ELD introduces two types of liability for operators²⁵³ in occupational activities²⁵⁴ posing an actual or potential risk for human health or the environment: a regime of fault-based liability and a regime of strict liability. For environmental damage resulting from the 'occupational activities' specifically mentioned in Annex III, the liability of the operator is strict: there is no need to prove fault or negligence.²⁵⁵ By contrast, environmental damage resulting from occupational activities other than those listed in Annex III is subject to fault-based liability.²⁵⁶ These two regimes are complementary. The system put in place ensures that operators engaged in the occupational activities which are most likely to cause environmental damage do not need to be found negligent to be held financially responsible.

In both fault-based and strict liability cases, damages can only be sought where:

- the environmental damage is/was caused by one or more identifiable polluters;
- the damage is concrete and quantifiable; and
- there is a causal link between the damage and the identified polluter(s).²⁵⁷

Under the ELD, operators are liable for environmental damage (i.e. damage to water, land or protected species or natural habitats). Their liability does not extend to cases of personal injury, to damage to private property or to any economic loss and does not affect any right regarding these types of damage.²⁵⁸ In the event of multiple-party causation, the ELD leaves it to Member States to determine how liability should be apportioned and costs allocated.²⁵⁹

The ELD does not place a limit on the damages that a liable party may be required to pay. The remedial measures (and cost thereof) are determined by the competent authority designated by each Member State²⁶⁰ based on submissions by operators and with the cooperation of the relevant operator, as required. However, the ELD states that the operator shall bear all the costs for the preventive and remedial actions taken pursuant to its provisions, including the cost of:

- assessing environmental damage, or an imminent threat of such damage;
- alternatives for action;
- data collection;
- administrating, and enforcing action;
- monitoring and supervision; and

²⁵³ In Article 2(6) the notion of "operator" is defined as covering "any natural or legal, private or public person who operates or controls the occupational activity or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of such an activity has been delegated, including the holder of a permit or authorisation for such an activity or the person registering or notifying such an activity".

²⁵⁴ An occupational activity is defined in Article 2(7) as "any activity carried out in the course of an economic activity, a business or an undertaking, irrespectively of its private or public, profit or non-profit character".

²⁵⁵ Article 3(1)(a).

²⁵⁶ <http://www.defra.gov.uk/environment/liability/index.htm>

²⁵⁷ Recital 13: "Not all forms of environmental damage can be remedied by means of the liability mechanism. For the latter to be effective, there need to be one or more identifiable polluters, the damage should be concrete and quantifiable, and a causal link should be established between the damage and the identified polluters. Liability is therefore not a suitable instrument for dealing with pollution of a widespread diffuse character, where it is impossible to link the negative environmental effects with acts or failure to act of certain individual actors." The requirement for a causal link is explicitly stated in Article 4(5).

²⁵⁸ Recital 14.

²⁵⁹ Article 9.

²⁶⁰ In Article 11 competent authority is defined as: such authority designated by the Member States which is responsible for fulfilling the duties provided for in the Directive.

- legal costs.

Observations on the ELD

Under the ELD private third parties, such as individuals or NGOs, cannot directly seek compensation. A private party adversely affected, or who is likely to be adversely affected, by environmental damage can only ask the competent authority to take action on their behalf. Alternatively, private parties can seek compensation through any relevant international agreement regulating civil liability. They therefore have only weak and indirect rights to ensure that the directive is implemented or that action is taken;

The ELD also gives a great degree of latitude to Member States over how they should transpose its provisions. The ELD is a measure of minimum harmonisation, allowing Member States to adopt more stringent standards to ensure a higher level of environmental protection on their territories (subject to the general Treaty provisions). This necessarily leads to a degree of regulatory diversity, which may be seen as a threat to uniformity. Arguably, however, such an approach is in line with the requirements of Article 176 of the European Commission Treaty that “the protective measures adopted pursuant to Article 175 shall not prevent any Member State from maintaining or introducing more stringent protective measures”, provided that such measures are compatible with this Treaty and are notified to the Commission; and

The ELD was not designed with insurance in mind (CEA, 2008). Article 14 only provides that “Member States shall take measures to encourage the development of financial security instruments and markets by the appropriate economic and financial operators”, without making insurance compulsory for operators. Moreover, there are gaps in the existing insurance market that would limit the ability of operators to protect against litigation and mixing civil liability and administrative one could lead to problems for the operator (CEA, 2008).

A3.3 Environmental taxation and charges in practice

Philosophy and overall approach to environmental taxation

Environmental taxes are levies imposed on a product or activity that is harmful to the environment. So called ‘ecotaxes’ and ‘green taxes’ are usually implemented in order to reduce the production or consumption of a damaging substance and/or to raise revenues in order to recover expenses incurred remedying the adverse effects thereof. In this sense, they are regarded as good examples of a Pigouvian approach to control negative externalities, as they try to internalise at least one part of the total cost to society.

According to the definition used by Eurostat²⁶¹, an environmental tax is a “tax whose tax base is a physical unit (or a proxy of it) of something that has a proven, specific negative impact on the environment.” Pigouvian taxes, including environmental taxes, are defined by the effect they have on actions producing externalities. The allocation of revenues can, in principle, be separated. The earmarking of, say, environmental tax revenues to environmental purposes is a political choice rather than something technically required to enable the tax to fulfil its primary function. Revenue allocation is part of the political economy of new measures of this kind.

The effect of an environmental tax comes primarily through the impact it has on the relative prices of environmentally related products and activities (OECD, 2000). When these products and activities become comparatively more expensive, their consumption will decrease. The extent of which will be determined by their price elasticity. In an ideal case, where user prices will adequately reflect environmental (and other) costs:

²⁶¹ Eurostat “Environmental taxes – a statistical guide”, 2001 edition (Available at: http://epp.eurostat.ec.europa.eu/pls/portal/docs/PAGE/PGP_DS_ENVACC/PGE_DS_ENVACC/TAB63667842/2.pdf)

- the full social cost will be internalised in the price that users face; and
- the revenue from the tax is in balances with the costs inflicted.

In this ideal case, it would be theoretically possible to fully compensate those who are harmed (e.g. owners of forests damaged by acid rain). But authorities do not necessarily impose the full environmental cost when setting the tax rate either because they cannot appropriately estimate it or because they also consider other factors such as business competitiveness when defining tax rates.

Of course, if the parties adversely affected by the negative externality in question were citizens in general (and citizens not yet born), paying compensation to all of them would involve extreme practical difficulties for authorities. However, the revenue raised from the polluters offsets potential additional taxes raised to cover government expenditure. Therefore it may be seen as 'compensating' citizens or more precisely, taxpayers.

The terms 'environmental tax' and 'charge' are often seen as interchangeable in everyday use²⁶², but scholars and policymakers make a distinction between them (see Chapter 3).

Main types of environmental taxes and charges

Many different types of 'green taxes', with many different goals, exist:

- The levies may be imposed by different authorities: general government (mainly through its tax policy), government bodies and bodies outside the government, such as an environmental fund, or even private entities (e.g. airlines).
- According to the overall function of the levy, we talk about 'pollution taxes', i.e. taxes and charges aimed at incentivising market actors reducing pollution and/or the implied cost to society is recovered, and about 'resource taxes', which aim at encouraging the sustainable use of natural resources. Some sources, such as Eurostat (2001), regard energy taxes and transport taxes as distinct categories.
- Taxes and charges may be levied on different actors. Subject to payment may be: the producer or seller of a good; the consumer or purchaser; or any actor who is undertaking a specific activity which is taxed
- A distinction may be made on the grounds of whether the levy is directly or only indirectly addressing the specific the substance or activity that is harmful to the environment. For example, the release of polluting gases into the air or wastewater into the sewage system is directly inflicting damage. They may be measured end-of-pipe (or at least estimated) and taxed. On the other hand, car fuel itself (when bought and properly stored) does not harm the environment except through the SO₂, NO_x and other emissions that occur when it is combusted.

The most straightforward categorisation of environmental taxes and charges relates to the specific product or activity that is taxed ('tax base'). Eurostat (2001) has defined a system comprising of nine overall categories:

- Emissions to air (NO_x, SO₂, others)
- Ozone depleting substances (e.g. CFC or halon)
- Effluents to water (point sources)
- Certain non-point sources of water pollution (e.g. pesticides, artificial fertilisers, manure)

²⁶² As per the definition of the Merriam-Webster Dictionary, a tax is "a charge usually of money imposed by authority on persons or property for public purposes."

- Solid waste (waste management in general, or individual products such as packaging material, beverage containers)
- Noise (e.g. aircraft take-off and landings)
- Energy products (petrol, diesel, oil, natural gas, electricity production and consumption, etc.)
- Transport (taxes on motor vehicles, registration fees, etc.)
- Natural resources (water abstraction, extraction of raw materials, etc.)

In addition to the above, there are certain borderline cases in other fields of taxation which may apply as 'green taxes' – e.g. reduced VAT rates for electric cars, or accelerated depreciation regimes for pollution-reduction investments in companies.

Environmental taxes and charges in the European Union

Introduction

Environmental taxes and charges are at the heart of European policies pursuing sustainable development. The European approach – as those of most developed countries – rests on the polluter pays principle'. This principle implies that the costs for avoiding or compensating for environmental damage should be borne by those who caused it: i.e. the polluters themselves should normally finance environmental remedial actions (given that they can be identified), not the general budget.

Articles 174 and 175 of the Treaty establishing the European Community²⁶³ provides for the competence of the EU to act in the field of environment, including fiscal measures (decisions to be unanimously in the Council). EU policies have long promoted environment related taxes as a form of Market Based Instruments (MBIs), because they provide a "flexible and cost-effective means for reaching given policy objectives"²⁶⁴, i.e. to correct market failures in connection with negative environmental externalities. The EU endorses the more intensive use of MBIs in general, including environment related taxes, as stipulated in its current 6th Environment Action Programme (6th EAP)²⁶⁵ for the period of 2002 to 2012 and its renewed Sustainable Development Strategy²⁶⁶.

Legal basis for environmental taxes and charges in the European Union

Articles 174 and 175 of the Treaty assign competence to the EU in environmental policy. Fiscal policies, and within these, environment related taxes, are one of the instruments used. Two directives are of particular significance in this field: the 'Energy Taxation Directive' and the 'Eurovignette Directive'.

Energy Taxation Directive

The Energy Taxation Directive²⁶⁷ of 2003 sets out high-level requirements to Member States for the taxation of energy products and electricity. A system of minimum excise tax rates applicable to mineral oils, coal, natural gas and electricity has been set up. An

²⁶³ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2006:321E:0001:0331:EN:pdf>

²⁶⁴ Green paper on market-based instruments for environment and related policy purposes, SEC(2007)388 (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0140:FIN:EN:PDF>)

²⁶⁵ Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:242:0001:0015:EN:PDF>)

²⁶⁶ <http://register.consilium.europa.eu/pdf/en/06/st10/st10917.en06.pdf>

²⁶⁷ Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:283:0051:0070:EN:PDF>)

important objective for the EU to act here was to eliminate distortions of competition on the internal market resulting from different levels of environmental taxes on energy products. Defining minimum levels for these products (when used as motor or heating fuel), promotes energy-efficiency in agriculture, industry and transport, thus limiting greenhouse gas emissions.

The tax rates imposed upon these products may be differentiated, e.g. for products differing in quality, for different consumption levels, or for public transport uses. Tax advantages may be given to businesses that take specific measures to reduce their emissions. The Directive also allows Member States to differentiate between commercial and non-commercial use of gas and oil used as propellant,

Eurovignette Directive

The Eurovignette Directive²⁶⁸ harmonises a number of taxes and charges levied on heavy goods vehicles (gross laden weight above 12 tonnes) by defining minimum rates. The taxes concerned include vehicle taxes and user charges for road infrastructure. Heavy lorries are damaging roads disproportionately, and they also emit much more harmful gases in the air than smaller vehicles. The objective of the Directive is to ensure that adequate charges are levied to cover expenses for which these heavy vehicles are responsible. Additionally, it aims at creating a level playing field for hauliers on the internal market.

Member States are responsible for adopting procedures for levying and collecting the taxes defined in the Directive, which are charged by the Member State in which the vehicle is registered. The minimum rates are prescribed in the Directive, but Member States may grant exemptions under certain circumstances.

A3.3.2 The advantage and problems of environmental taxes and charges

Environmental taxes and charges have long been used extensively around the world to deal with damages inflicted on the environment – primarily from agricultural and industrial activities, traffic and transport and the production of waste. Member States have introduced many different taxes and charges²⁶⁹ and, according to Eurostat data, have revenues under all broad categories of environmental taxation: energy, transport, and pollution or resource taxes. Overall, environment related taxes accounted for 2.56% of the EU-27 GDP in 2006. This corresponds to 6.41% of all tax and social contribution revenues.

Environmental taxation has many advantages over direct or indirect regulation of negative externalities:

- It corrects price signals, giving a clear economic incentive that can change the behaviour of polluters without the administrative burden of extensive controls as under a regulatory approach; it can help to achieve environmental goals in an economically efficient way;
- It exerts a more persistent pressure on reducing emissions than pre-set regulatory levels, but allow polluters greater flexibility in meeting objectives; it may therefore research and strengthen innovation and contribute to a long-term shift towards energy-efficient and less polluting technologies; and
- Revenue is raised which may be earmarked for remedying the environmental damage, or used for other purposes.

Potential problems in connection with environmental taxes are as follows:

²⁶⁸ Directive 1999/62/EC of the European Parliament and of the Council of 17 June 1999 on the charging of heavy goods vehicles for the use of certain infrastructures (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1999:187:0042:0050:EN:PDF>)

²⁶⁹ A regularly updated database can be found at OECD/EEA (<http://www2.oecd.org/ecoinst/queries/index.htm>)

- It is difficult to set the tax at the level where external costs are fully internalised. Extensive research is required, but uncertainty will remain. Also, the approach involves putting a monetary value on externalities that do not easily lend themselves to valuation (e.g. the value of a species endangered by extinction). In practice, governments may influence activities in the right direction but cannot be sure to have achieved a socially optimal outcome.
- Taxation of any kind has the potential to harm economic competitiveness if applied on a unilateral basis rather than on a common basis with trading partners. This objection is sometimes used in relation to environmental and energy taxes (e.g. threats of relocation by energy-intensive industries). These claims require careful scrutiny and solutions are usually available where needed (e.g. ensuring that environmental taxes are revenue neutral at least at sector level – with green taxes imposed offset by corresponding reductions in other taxes).
- Environmental charges are particularly not appropriate to internalise the full external costs. Here, the principle of ‘prime cost’ is normally applied by law: the charges may cover the expenses on the service provided but nothing more (Määttä, 2006). Consequently, the levels of charges may be too low to provide adequate incentives for market actors.

A3.4 Emission Trading Schemes

A3.4.1 *Philosophy and overall approach to emission trading schemes*

Under trading schemes, a central authority (e.g. a government) issues permits amongst certain categories of polluters, allowing them to emit a given amount of emissions in a specified time period. Consequently, a strict limit will be set for total emission from this category of polluters (a so-called ‘cap’), ensuring that pre-defined emission reduction targets will be automatically achieved. The permits are freely tradable amongst actors on an emissions trading market, and the price of the permits is influenced by the interaction of supply and demand on the market.

Emissions trading systems (ETSs) can achieve a given emission reduction target with a lower economic cost than directly regulating the emissions of individual polluters. As the marginal abatement cost²⁷⁰ can vary significantly between individual polluters, a trading system allows those with a disproportionately higher cost of reduction to purchase credits from those who are able to abate emissions more cheaply. According to this theory, any participant whose profit from economic activity producing a given amount of emission is less than the current price of the permit will be willing to reduce its activities and sell the permit to participants who are pursuing more profitable activities. This trade in permits would be continued up to the point where no actor will remain who could reduce emission at a lower cost than others. The market mechanism will thus yield an optimal allocation of emission rights.

Emissions trading systems have been designed to reduce the emissions of energy-intensive industries, (steel and iron, glass or cement manufacturing) or national economies (for international schemes), which in turn may implement a second level of trading scheme within their borders to allocate their emission permits. However, emissions trading schemes have been less effective in targeting the emissions of industry sectors where emissions come from many, relatively small emitters, such as the transport and housing sectors. The lack of a ‘critical mass’ does not allow for a sensible trading mechanism, as the transaction costs relative to the value of the permits is high.

²⁷⁰ The cost of reducing air pollution or GHG emissions by one unit.

There are two forms of ETS (Tietenberg & Johnstone, Ex Post Evaluation of Tradeable Permits: Methodological Issues and Literature Review, 2004):

1. **cap and trade:** where all emitters face an emission 'cap' and must trade amongst themselves; and
2. **baseline and credit:** where only certain participants face an emission 'cap'. Those facing the cap can either trade the permits allocated to them amongst themselves or create credits by reducing the emissions of those not facing the cap.

However, an emissions trading scheme does not explicitly ensure that polluters will bear the full social cost of their emissions. Under an either emission trading system, the initial allocation of permits can either be given out free of charge or auctioned. When they are auctioned, the revenues can be directed towards compensating society. However it is not guaranteed that these revenues will be sufficient to fully shift the cost of emissions on to polluters.

Origin of emission trading schemes

The first emission trading schemes were developed in the United States in the 1980s and 1990s, the most significant being the scheme under the 'Acid Rain Programme'²⁷¹. This programme issued emission permits for sulphur dioxide (SO₂) and nitrogen oxides (NO₂). The use of trading schemes has expanded to include emissions of greenhouse gases (GHGs) including CO₂. Trading schemes have also been used to control water pollution. Increasing attention from politicians, market actors and academics at these new policy instruments, as well as first results of implementation from the United States led to their incorporation in the United Nations Framework Convention on Climate Change (UNFCCC). Emissions trading is one of the main pillars of the Kyoto Protocol²⁷², which established legally binding 'quantified emission limitation and reduction commitments' for various greenhouse gases from 40 'Annex I' industrialised countries.²⁷³ This example of a baseline and credit 'carbon market' allows those Annex I countries which emit less than their national quota to sell 'emission credits' to others. They may also implement projects reducing emissions in non-Annex I countries, thus creating 'certified emission credits' in countries which are not legally bound by quotas.

The European Union's Emission Trading Scheme (EU ETS)

The Emission Trading Scheme of the European Union (EU ETS) is one of the market based instruments the EU has devised in the area of environmental protection²⁷⁴. It was launched in January 2005, on the basis of Directive 2003/87/EC²⁷⁵, as a new European policy instrument in the fight against climate change, and for the EU to meet its commitments under the Kyoto Protocol²⁷⁶. Prior to the Kyoto Protocol, European climate change policies were based on technical standards, regulatory emission limitations and more recently environmental taxes, charges and voluntary agreements (European Commission, 1999).

²⁷¹ <http://www.epa.gov/airmarkets/progsregs/arp/basic.html>

²⁷² http://unfccc.int/kyoto_protocol/items/2830.php

²⁷³ http://unfccc.int/essential_background/kyoto_protocol/items/1678.php

²⁷⁴ Green paper on market-based instruments for environment and related policy purposes SEC(2007)388 (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0140:FIN:EN:PDF>)

²⁷⁵ Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0087:EN:NOT>)

²⁷⁶ The protocol also established a separate target commitment from the European Union to reduce emission by 8% as compared to 1990 levels.

The EU ETS is intended to help the EU achieve its targets under the Kyoto Protocol in a cost-efficient way by introducing tradable emission permits to energy-intensive industries. The EU ETS is the first, and currently the largest multi-country, multi-sector GHG emission trading scheme in the world^{277,278}.

In each trading period (the first ran from 2005-2007, the second one runs from 2008-2012, whilst the third one will start in 2013), a fixed amount of permits for CO₂ emissions is given out to the polluters which are part of the scheme. The total quantity of permits is determined on the basis of National Allocation Plans (NAPs), which are drawn up by Member States with due respect to their individual emission reduction target commitments they made under the UNFFC regime. Each Member State must thus decide how many allowances they intend to allocate in total for a trading period and how many each plant covered by the Emissions Trading Scheme will receive. The NAPs are assessed by the Commission, which looks (*inter alia*) at the Kyoto target for the respective Member State, the amount of emission credits these might have purchased through the Kyoto Protocols 'baseline and credit'-based international emission trade system, and actions proposed by the Member States in other sectors (housing and transport, for example) to reduce GHG emissions.

After the allocation process is completed, the final allocation of permits is registered in an electronic registry system and participants are allowed to start trading. The companies may trade either directly with each other, or via an intermediary (bank, broker), or on an emission exchange market. The transactions (if they result in an effective change in the ownership of allowances) have to be notified and these will be recorded in the electronic registry systems.

The Commission does not interfere in the market and does not wish to influence the price of permits at any given time. The price is thus a function of supply and demand.

²⁷⁷ It currently covers over 11,500 power generation and industrial plants in energy-intensive sectors. These plants are collectively responsible for close to half of the EU's emissions of carbon dioxide (CO₂).
²⁷⁸

<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/05/84&format=HTML&aged=1&language=EN&guiLanguage=en>

ANNEX 4 SUMMARY TABLE OF TOBACCO CASES IN EU MEMBER STATES

Significant cases involving tobacco manufacturers in Finland, France, Germany, Ireland, Italy and the United Kingdom

Case Reference	Background	Outcome
Finland		
<p>7 June 2001</p> <p>Supreme Court</p> <p>Aho v BAT Nordic</p> <p>KKO:2001:58</p>	<p>The claimants had smoked cigarettes between 1941 and 1986 which were imported, manufactured and marketed by BAT Nordic and Oy Rettig. He suffered from laryngeal cancer and other diseases associated with smoking. He initiated proceedings against BAT Nordic and Oy Rettig Ab. When he died of his cancer in 1992, his beneficiaries claimed damages.</p> <p>They relied on Section 1, Chapter 2, of the Tort Liability Act 1974 which provides that a person who deliberately or negligently causes injury or damage to another shall be liable for damages.</p> <p>They put forward the following arguments:</p> <ul style="list-style-type: none"> • Even though the respondents were aware of the diseases caused by smoking they had failed to warn consumers about the health risks involved. • The respondents had deliberately or at least negligently caused the damage suffered by the claimant. • The respondents could not plead that Mr Aho had contributed to his damages by using the product in full awareness of the risks, insofar as they had themselves denied any connection between smoking and the diseases suffered by the claimant. • The respondents had advertised their products misleadingly as they had not informed on the health risks involved in their adverts. <p>The claim was dismissed by the District Court on 6 February 1992 and by the Court of Appeal on 31 December 1998.</p>	<p>The Supreme Court dismissed the appeal with a majority of 4-1.</p> <p>On whether the limitation period had expired, the court held that the claim was not statute-barred as it had been filed within 10 years from the occurrence of the damage (Mr Aho's diseases had been discovered in 1980 and 1986) in accordance with Section 2, Chapter 2, of the <i>Tort Liability Act</i>.</p> <p>The court noted that liability depended on whether the respondents had acted negligently and whether this negligent action was in connection with the diseases suffered by A.</p> <p>The court accepted that, in this case, a connection between the diseases and tobacco was proved.</p> <p>On the question of fault, the court held that the respondents had not manufactured and marketed tobacco against the legislation in force and had not concealed the health risks involved in smoking or otherwise provided any misleading information. The court held that the respondents had followed the law as it was during the claim period (1941-1986). The court found the evidence given to support the claimant's arguments on the respondents having given misleading information insufficient.</p> <p>On the question whether the respondents had an obligation to inform about the health risks involved with tobacco – the court held that a manufacturer and marketer of a product is liable to inform about any dangers known to them in a way so that the consumer will know to be cautious and so that consumers who are unaware of the danger will not suffer any harm. However the court took into consideration the extent of the general discussion about the risks involved in smoking during the whole claim period and held that the respondents had not breached any precautionary measures which could have influenced consumer behaviour. The court held that there were no matters related to this claim, which could have justified a different approach to the question.</p> <p>On the question of the respondents' misleading advertising – the court held that as the respondents were not required to inform about the risks, their advertisements could not be held misleading on the grounds argued by the claimant.</p> <p>The claimant had not provided sufficient evidence against the respondents having committed any marketing crimes.</p> <p>The court held that some of the tobacco adverts published by Oy Rettig Ab in mid 1950s and in 1964 had been misleading. This action would have had to be in connection with the damage caused to the claimant as a precondition for the damage claim in question. The court held that it was not credible that the claimant had relied on these adverts as he had been aware of the general discussion on the health risks involved with tobacco during the period of the claim and had therefore taken a conscious risk with the possibility of tobacco causing serious diseases. Therefore the court did not find that the diseases were a consequence of the adverts.</p>
<p>10 October 2008</p>	<p>Three claimants who suffered diseases such as nicotine addiction, chronic obstructive pulmonary diseases and lung cancer: Ninja Schröder (N.S.), Majja Salminen (M.S.) and</p>	<p>On the argument that the claim was statute-barred, the court held that the expiration of the limitation period is counted from the diagnosis of the disease and not from when the claimants had begun</p>

Case Reference	Background	Outcome
District Court	Ursula Lindroos (U.L.). They claimed against Amer Sports Oyj and BAT Nordic. The claims were dealt within one trial and the District Court gave three judgments on the 10 October 2008	smoking). Here the claims had been filed within the time limit and the claims were not statute-barred.
The "light cigarette case"	The claims were dismissed by the District Court and the claimants lodged an appeal on 11 December 2008. The case is pending.	The court held that in this case the claimants had established a connection between tobacco and their diseases (including cancer, chronic obstructive pulmonary disease and nicotine addiction) but the court held that the claimants had not established that passive smoking had a significant relation to the diseases.
KKO:2008	<p>The claimants relied on the following arguments:</p> <ul style="list-style-type: none"> • The respondents manipulated the nicotine levels of cigarettes in order to bring about an addiction to the users of tobacco and that they concealed this intentionally. • The respondents concealed and denied any health risks involved with active smoking although they had certain knowledge about the risks since the 1950s. • The respondents concealed and denied any health risks involved with passive smoking which they already knew in the 1970s. • The respondents marketed light cigarettes as health products even though they knew already in the beginning of 1970 that these products were as lethal as 'strong' cigarettes. • The claim is based on the general rule of negligence, which is embodied in the Tort Liability Act 412/1974; on strict liability under the Product Liability Act 694/1990 (Section 3 provides that damages must be given for harm which has been caused by a product not being as safe as there had been grounds for believing it to be) since its entry into force. • In relation to passive smoking the claim is based on product liability for the whole period of duration of the claim 1968-2003 and on the Product Liability Act 694/1990 following its entry into force (1991-2003). 	<p>On the question of putting tobacco into circulation, manufacturing and marketing – the court decided to follow the judgment of the Supreme Court 2001:58 (Pentti Aho) as it did not find any significant reason to depart from this previous decision.</p> <p>On the argument of marketing for under aged – the court found that although selling tobacco in small packaging (10 cigarettes) could be morally questionable, the respondents had not acted in the matter against rules and regulations.</p> <p>On the argument about deliberately manipulating the contents of tobacco and cigarettes – the court found that this 'nicotine manipulation' was not proved except from Amer Oy's part and the activity practiced by Amer Oy was not found to be against any rules or regulations.</p> <p>On the question of misleading consumers to use 'light' cigarettes as healthier than normal ones – the court found that this could not be held to amount to a negligent activity as evidence had been provided by the respondents to support the argument that light cigarettes contained a slightly lesser risk than normal ones.</p> <p>On the argument based on the failure to inform consumers about the possible risks of the product – the court held that the manufacturer has an obligation to inform the consumers; however, it is necessary to take into consideration the claimants' own contribution to the damage suffered.</p> <p>On the claimants having taken a conscious risk by smoking – the court held that the question was whether the obligation to inform the consumer was fulfilled by the general knowledge on the characteristics of the product and whether the claimants therefore had taken a conscious risk of developing serious diseases when they began smoking. The court was satisfied by evidence given by the respondents on the level of health education given by health authorities throughout the claim period (in the 1950s and 1960s). The court held that the claimants had taken a risk at least when they decided to continue with smoking although the risks became generally known in the 1960s (at the latest). In other words the claimants did not prove that their diseases were caused by smoking before the health risks of tobacco became known generally to the public. The court held that the claimants were free to quit smoking, which they had not chosen to do.</p> <p>On the damages claim based on the Product Liability Act – the court held that damages could be claimed on the basis of the 1991 Act only for harm suffered after the enactment of the act on 1st September 1991. The court held that the claimants had not proven that their diseases were caused by smoking which occurred only after this date. The court nonetheless decided to comment on the application of the Product Liability Act to the facts of the case and held that considering the strict regulation relating to tobacco products (the Act on Measures to Restrict Tobacco Smoking 693/1977) and the package labels on the dangers of the product, it had to be considered that consumers have had, since the enactment of the Product Liability Act 1991, objectively speaking, sufficient knowledge about the risks involved with tobacco products. Therefore, even if the respondents had not told about the risks themselves, the product did not contain any safety defect.</p> <p>Therefore, the respondents were not responsible for the diseases caused by smoking to the claimants.</p>
France		

Case Reference	Background	Outcome
<p>22 October 2003</p> <p>Cour de cassation</p> <p>2^{ème} chambre civile</p> <p>Gourlain v SEITA</p>	<p>Richard Gourlain, who had smoked at least two packets a day of unfiltered cigarettes since he was 13, suffered a lung cancer and a tongue cancer. He initiated proceedings with his wife and children against the SEITA (now Altadis) for damages. He died during the proceedings which his wife and children continued as his heirs.</p> <p>The claimants argued that the tobacco manufacturer should have informed consumers of the detrimental effects smoking has on public health. They invoked Article 1382 of the French Civil Code which provides that "who causes a loss to another is under an obligation to compensate". They also argued that cigarettes were dangerous goods and should have been governed by Article 1384 of the Civil Code.</p> <p>Their claim was dismissed and they challenged the decision before the Cour de cassation.</p>	<p>The Court rejected the appeal.</p> <p>It ruled that the SEITA was not under a duty towards smokers to issue warnings prior to the entry into force of legislation to this effect (Act of 10 July 1976).</p> <p>In particular, the court noted that Richard Gourlain was 27 years old in 1976 and could not have ignored the detrimental health effects of excessive tobacco use, particularly due to the information given to all on the media.</p> <p>Mr Gourlain was a heavy smoker. He was the only one who could have taken the necessary decisions.</p> <p>If a health warning could have had an effect on a person who had recently taken up smoking, or someone who was considering taking up smoking, it was improbable, even in light of the addictive nature of tobacco which the claimants had stressed. On this basis, the court concluded that Mr Gourlain would not have acted differently had the SEITA provided more information. It was therefore not established that the behaviour of the SEITA complained of had any role to play in his decision to continue to smoke.</p> <p>The court added that the SEITA had produced cigarettes in conformity with legal requirements and could not be criticised for selling them.</p>
<p>8 novembre 2007</p> <p>Cour de cassation</p> <p>Première chambre civile</p> <p>Suzanne X</p>	<p>Suzanne X died of cancer. Her husband and three daughters claimed that her consumption of Gauloises brunes cigarettes since the age of 13 had caused her cancer and consequently her premature death. They initiated court proceedings against the SEITA (now Altadis).</p> <p>The claim was dismissed (Tribunal de Grande Instance de Béziers and Court of Appeal of Bordeaux, decision on 22 March 2006). The claimants appealed to the Cour de cassation. They relied on Articles 1382, 1135 and 1147 of the French Civil Code and Article L. 221-1 of the French Consumer Code as interpreted in light of the Product Liability Directive. They invoked two grounds:</p> <p>The manufacturer must inform consumers of the dangers associated with the consumption of its products; Article 1382 of the Civil Code has been infringed.</p> <p>- The cigarettes were defective. Article L. 221-1 of the Consumer Code and Articles 1135 and 1147 Civil Code have therefore been infringed.</p>	<p>The Cour de cassation rejected the appeal.</p> <p>In 1973-1974, when Mrs X started to smoke, it was already widely reported in the media that tobacco consumption increased the risks of cardio-vascular diseases. Moreover, Mrs X must have been informed by her parents who had parental authority when she was a teenager (with a reference to Article 371-2 civil code on parental authority); furthermore, she had three children and her doctor taking care of her during her pregnancy must have drawn to her attention the risks involved.</p> <p>From this assessment of the facts, the Court of Appeal was right to conclude that there was no causal link between the conduct of the SEITA and the death of Suzanne X, who could not legitimately expect that the product would be safe</p>
Germany		
<p>25 January 2000</p> <p>Landgericht Bielefeld</p> <p>X (a smoker) v Philip Morris and R.J. Reynolds</p> <p>8 O 411/99, NJW 2000, 2514</p>	<p>The claimant seeks legal aid in order to launch proceedings against the respondent to obtain DM 100,000 in damages for pain and suffering (I) and a declaration that the respondent should reimburse the claimant for future material and non-material damage (II).</p> <p>The claimant argues that the respondent has added addiction-raising ingredients to their products without warning their customers.</p> <p>The claimant invokes § 1 UWG (Unfair Competition Act), the Produkthaftungsgesetz (the Product Liability Act) and § 823 I, II, §§ 826, 847 BGB (German Civil Code) as legal bases.</p>	<p>The Landgericht refused legal aid on the ground that the action lacked any prospect of success (I and II).</p> <p><u>On the first claim:</u> § 1 UWG presupposes a situation in the field of competition law between claimant and respondent (Section I 1 of the judgment).</p> <p>The Produkthaftungsgesetz does not cover damages for pain and suffering (Section I 2 of the judgment) (<i>NB: the Act has now been amended to cover such damages, see Law of 19/07/2002, BGBl. I 2674</i>)</p> <p>§ 823 I, II, §§ 846 and 847 BGB are no valid legal basis. The respondent did not engage in a prohibited activity. The addition of addiction raising ingredients is not illegal because the additives are allowed by law (Section I 3 b aa)). The respondent was not obliged to warn consumers about them because addiction is a common side effect of smoking and no warning is therefore required (Section I 3 d aa)).</p> <p><u>On the second claim:</u> Cigarettes are not defective under the Produkthaftungsgesetz. The manufacturers</p>

Case Reference	Background	Outcome
		did not fail to provide adequate information (there is no instruction error) and they did not fall short of the expected level of safety (Section II a) aa) and bb)).
<p>14 July 2004</p> <p>Oberlandes-gericht Hamm</p> <p>Heine v Reemtsma</p> <p>3 U 16/04, NJW 2005, 295</p>	<p>The claimant sought EUR 213,000 damages (EUR 125,000 as compensation for non-pecuniary damage + EUR 88,000 for loss of earnings)</p> <p>The claimant argued that the respondent had failed to warn adequately about the dangers of its products, that the respondent had deliberately manipulated its products, and that cigarettes were defective.</p> <p>The claimant invoked § 823 I, II, §§ 826, 847 BGB and § 1 Produkthaftungsgesetz as legal bases.</p> <p>The Landgericht Arnberg dismissed the action (14 November 2003, 2 O 294/02, NJW 2004, 232). The claimant appealed to the Oberlandesgericht.</p>	<p>The Oberlandesgericht rejected the appeal on the ground that the claim lacked any prospect of success (§ 522 II 1 ZPO).</p> <p>The Produkthaftungsgesetz could not cover the claimed damage because the claimant had already suffered damage to health when the Produkthaftungsgesetz entered into force on 15 December 1989.</p> <p>Even if the Produkthaftungsgesetz was applicable, cigarettes were not manufactured with a fault (which also prevents § 823 I, II, §§ 846, 847 BGB from being successfully invoked). Smokers cannot expect cigarettes to be manufactured in such a way that they suppress the risks smoking typically entails.</p> <p>The use made in cigarettes of legally allowed addiction-raising additives does not trigger liability because a product is not defective when consumers accept avoidable risks. The court refused to decide whether the adding of illegal addiction-raising additives would trigger liability (as the Landgericht indicated but declined to assess because of insufficient evidence – see the judgment’s §§ 60-64) because even if such additives have been used, the claimant could have smoked less. Furthermore, the claimant had failed to sufficiently support his submission on this point.</p> <p>The producer is not liable to have committed an instruction error as it has fulfilled the mandatory labelling requirements. No stricter requirements have to be fulfilled. There is no obligation to inform consumers as far as common knowledge is concerned.</p>
Ireland		
<p>12 March 2004</p> <p>High Court</p> <p>Eileen O'Connor v John Player and Sons Ltd., Rothmans of Mall (Ireland) Ltd. and Benson and Hedges (Dublin) Ltd.</p> <p>2004 IEHC 99</p>	<p>The plaintiff sought to set aside an order of dismissal of the claimant’s action because of want of prosecution. She wanted to pursue her action for damages for personal injury, loss and damage. The claimant pursued one of 138 similar claims against the defendant by way of plenary summons.</p> <p>The plaintiff argued that the defendant had exposed her to the risk of injury by causing or permitting her to smoke cigarettes while they knew (or ought to have known) that smoking was dangerous. She further argues that the defendant manufactured and sold cigarettes without adequate warnings about the dangers inherent in smoking.</p> <p>The plaintiff invoked negligence, breach of duty and breach of contract as legal bases.</p>	<p>The High Court dismissed the claim on the ground that the claimants were liable of “inordinate and inexcusable delay”. They started their claim on 23 December 1997 but failed to deliver a statement of claim before 22 December 2002 although they had all relevant data by the end of 2000 (p. 17).</p> <p>For a similar outcome, see <i>Mary Manning and others v Benson & Hedges Ltd. and others</i>, High Court, 30 July 2004 [2004] IEHC 316; <i>Shanaghan and others v P J Carroll, The Minister for Health and Children Ireland & Others</i>, High Court, 24 April 2007 [2007] IEHC 229.</p>
<p>5 April 2006</p> <p>Supreme Court</p> <p>Margaret Delahunty v Player & Wills (Ireland) Ltd. and Gallaher (Dublin) Ltd. and the Minister for Health and Children Ireland and the Attorney General</p> <p>[2006] IESC 21</p>	<p>Gallaher appealed against the decision of the High Court of 15 October 2004 ([2004] IRLHC 331) not to grant the order to dismiss Ms Delahunty’s action as disclosing no reasonable cause of action (as regards Player & Wills) and as having no reasonable prospects of success (as regards Gallaher).</p> <p>Gallaher argued that its cigarettes were lawfully marketed and sold and that the plaintiff was injured before she ever smoked cigarettes manufactured by Gallaher. Furthermore, Gallaher submitted that it was not responsible for the claimant’s addiction.</p> <p>The claimant replied that the question whether cigarettes were defective had to be resolved at the trial rather than at the pre-trial phase. She also argued that the cigarettes manufactured by Gallaher caused new damage. Finally, she claimed that the appellant’s brand “Silk Cut Extra Mild” was targeted at people (such as the claimant) who were already addicted but were concerned about health risks.</p>	<p>The Supreme Court dismissed the appeal.</p> <p>Neither the question whether cigarettes are a defective product (as defined by the defective products act) nor the question whether liability for defective products under common law arises can be answered at this stage of the proceedings (p.6). These difficult questions of law and fact have to be resolved at a full hearing before the court.</p> <p>The proceedings are ongoing.</p>

Case Reference	Background	Outcome
	<p>The motion was originally sought (and dismissed, see above) after Ms Delahunty commenced proceedings against the defendants named above.</p> <p>She sought damages from the companies for injuries caused by their cigarettes and from the state defendant for its refraining to effectively regulate the sale of tobacco products.</p> <p>She argued that cigarettes were defective because they were addictive and inherently dangerous to health and that the defendants used additives triggering addiction.</p> <p>She based her claim on negligence, breach of duty, and breach of statutory duty including, in particular breaches of the Liability for Defective Products Act 1991 and the Product Liability Directive.</p>	
Italy		
<p>10 March 2005</p> <p>Court of Appeal, Rome, Civil division</p> <p>Stalteri v BAT Italia</p>	<p>Mario Stalteri died of a lung cancer in 1991, aged 64. He had smoked 20 cigarettes a day of the same brand for 40 years, until he stopped in 1987 – i.e. four years before the entry into force of Italian legislation making health warnings on cigarette packs compulsory.</p> <p>The victim's heirs claimed that the cigarette manufacturer should have made their husband and father respectively aware of the risks smoking involved for human health. They founded their claim upon Article 2050 of the Italian Civil Code.</p> <p>They started proceedings against BAT Italia. The court of first instance dismissed the claim in 1997. Paola and Marcello Stalteri appealed. In March 2002, the panel of experts appointed by the Rome Court of Appeal released its expert witness opinion what caused Mario Stalteri's lung cancer. In March 2005, the Court of Appeal confirmed the panel's findings.</p>	<p>The court allowed the appeal and condemned the BAT Italia to pay EUR 200,000 to the family of Mario Stalteri for the pain and suffering resulting from his death of a lung cancer.</p> <p>On causation: the court upheld the findings of the panel of expert that the probability that smoking had caused Mario Stalteri's lung cancer was at least 80% because of:</p> <p>Profession: teacher of agriculture, not dealing with pesticides (contrary to what the Defendants had suggested)</p> <ul style="list-style-type: none"> • Living conditions: always lived in small cities with less pollution • Family history: no history of carcinomas in parents or brothers • Genetic background <p>The court concluded that the existence of a causal link between lung cancer and smoking of cigarettes was established beyond any reasonable doubt.</p> <p>On the defendant's conduct:</p> <p>As Mario Stalteri had only smoked one brand of cigarettes for 40 years, there were no issues regarding other potential defendants who might have contributed to the damage he suffered.</p> <p>The court relied heavily on the defendant's level of knowledge: BAT Italia which manufactures and sells tobacco could not have ignored the risks for health on consumers. It knew the composition of tobacco and the toxic substances it contained. This was all the more so as research had been carried out since the 1950s on the effects of tobacco on human health; BAT was fully aware that smoking causes injuries, and in particular leads to high rates of lung cancer".</p> <p>Consequently, the court held that manufacturing and selling tobacco products amounted to a dangerous activity falling within the scope of Article 2050 of the Italian Civil Code which reverses the burden of proof. The defendant was therefore required to use every precaution to avoid that the risk involved in using tobacco products became a concrete injury.</p> <p>In particular, the first elementary rule was to inform consumers, even in the absence of legislation making health warnings compulsory.</p> <p>BAT had not met the onus of proof resting on them: they had not proven that they had used any effort to avoid harm by simply asserting that no laws had been infringed. Moreover, the fact that smokers were free</p>

Case Reference	Background	Outcome
		to choose whether to smoke or not was held irrelevant, since the defendant had not proven any "conduct suitable to avoid the harm".
<p>5 January 2009</p> <p>Suprema Corte di cassazione, Civil unit</p> <p>BAT Italia</p>	<p>S.L. initiated proceedings against BAT Italia on the ground that the tobacco manufacturer had produced, sold and advertised "light" cigarettes, which had misled him into believing that light cigarettes were less dangerous and toxic than "normal" ones.</p> <p>The tribunal of Naples upheld the claim and condemned BAT Italia to pay damages for depriving the plaintiff of the choice to choose freely an alternative solution "with regard to the problem of smoking".</p> <p>BAT seized the Corte di cassazione. Among others, it relied on:</p> <ul style="list-style-type: none"> Articles 26 and 27 of the Italian Consumer Code (as amended following the implementation of Directive 2005/29 on unfair commercial practices), Legislative Decree n°74 of 1992 (on the definition of misleading advertising) and Article 2043 of the Civil Code (the general provision of Italian tort law) 	<p>The Corte di cassazione accepted BAT's line of reasoning and upheld the appeal.</p> <p>On whether the use of the word "light" for cigarettes, the court held that it may be misleading, insofar as it may give the false impression that light cigarettes are less damaging to health than normal ones. This is so even though Article 7 of Directive 2001/37 which prohibits its use entered into force in September 2003 only and notwithstanding the absence of any explicit prohibition beforehand.</p> <p>Nevertheless, the court stated that consumers claiming that they have suffered a loss as a result of a misleading advertisement must establish the existence of their damage, the causal link between the advertisement and the damage and the fault of the person transmitting the advertisement.</p>
United Kingdom		
<p>4 February 1999</p> <p>Queen's Bench Division</p> <p>Hodgson and others v Imperial Tobacco and others</p> <p>[1999] C.L.Y. 459</p>	<p>The claimant and eight other lead claimants sought a declaration that the Court should disregard section 11 of the Limitation Act 1980 by using its discretion under section 33 (1).</p> <p>The claimant together with 46 others had brought a group action against the defendants.</p> <p>They had argued that smoking the defendant's cigarettes caused lung cancer.</p> <p>The Court of Appeal upheld an interlocutory decision to refuse to grant the claimants an order restraining the respondents to apply for an order that the claimant's legal representatives be held legally responsible for the costs of the action; The Court of appeal did not uphold an interlocutory decision to grant an order preventing the parties or their legal representatives to make comments about the case to the media (12 February 1998, [1998] 1 W.L.R. 1056).</p> <p>The High Court's Queen's Bench Division had refused the claimants' motion for an order to regulate cost sharing (23/06/1998, [1998] 2 Costs L.R. 27).</p>	<p>The applications were dismissed.</p> <p>The proceedings were not commenced within the statutory three year limitation period of section 11 of the Limitation Act 1980.</p> <p>Moreover, the claims are speculative because causation will be difficult to prove. Further difficulties include counteracting the defence of volenti non fit injuria and counteracting allegations of contributory negligence.</p>
<p>31 May 2005</p> <p>Court of Session</p>	<p>The plaintiff sought damages of GBP 500,000 from the defendant.</p> <p>She argued that her husband had suffered from lung cancer due to him</p>	<p>The Court rejected the claim.</p> <p>It is not proven that cigarette smoking can in general cause lung cancer (§ 6.171 of the</p>

Case Reference	Background	Outcome
<p>(Outer House)</p> <p><i>McTear v Imperial Tobacco Ltd</i> Also known as: <i>McTear's Executrix v Imperial Tobacco Ltd</i></p> <p>2005 2 S.C. 1</p>	<p>smoking cigarettes manufactured by the defendant.</p> <p>She argued that the defendant was negligent in manufacturing and selling the cigarettes and negligent in not providing adequate warning labels on the cigarettes. She did not base her action on the Consumer Act 1987, c.43, because this act did not apply due to a special exemption for cigarettes (Section 10 (7) (f)).</p>	<p>judgment). The judge lacks knowledge about epidemiology. Thus, he could not check the accuracy of the epidemiological studies cited by expert witnesses (§ 6.155). The primary literature needed to assess the expert witnesses has not been put forward by the pursuer (§ 6.163) and the judge was prohibited to rely on it on his own motion (§ 1.37)</p> <p>There was no lack of information on the part of the defendant because the dangers of smoking were known among the general public (§ 7.176).</p> <p><i>Donoghue v Stevenson</i> did not apply: this case may only apply to latent defects in products; however, cigarettes do not contain latent defects; they only contain substances which the public would normally expect.</p>

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