CHAPTER 1

INTRODUCTION[1]

1.1 In the beginning…

Tobacco was first used by the Mayans and Aztecs in Central America. Christopher Columbus introduced it to the Western world in the late fifteenth century, after his pioneering voyage to the West Indies (Brooks, 1952). During the next three centuries tobacco use waxed and waned, depending on the habits of the ruling elites. Tobacco has certainly not been without controversy. The Church in Europe sporadically banned its use, declaring smoking a sin. Opposition to tobacco was based primarily on religious grounds. The first recorded, and often quoted, condemnation of tobacco was made by King James I in *Counterblast to Tobacco* (1604), in which he described the "filthy novelty"

> "a custom loathsome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs, and in the black stinking fume thereof nearest resembling the horrible Stygian smoke of the pit that is bottomless."

Many European monarchs found tobacco a handy source of excise revenue, despite religious and moral objections to tobacco use. In fact, even King James I set aside his previous objections and sought ways for the crown to profit from the tobacco trade (USDHHS, 2000: 29). By the eighteenth century tobacco use, and tobacco taxation, were so entrenched in European and North American society that Adam Smith (1776[1937]: 889) argued that

> "sugar, rum, and tobacco, are commodities which are no where necessaries of life, which are become objects of almost universal consumption, and which are therefore extremely proper subjects of taxation."

Before the twentieth century tobacco was used predominantly for chewing, pipe smoking, inhaling (as snuff) and cigar smoking (Fourie, 1992: 55). Cigarettes were developed early in the nineteenth century but became popular only after the production process was mechanised in the 1880s. Large capital intensive companies, that were able to realise economies of scale by

1. A shortened version of this chapter has been published in the South African Journal of Economic History, entitled "Tobacco control in South Africa in the 1990s: A mix of advocacy, academic research and policy". This chapter has benefited much from comments from Yusuf Saloojee, Murray Leibbrandt, Simon Millson and a referee of the Journal.

using cigarette-rolling machines, rapidly displaced cigarette companies that employed manual labour.

In the developed countries cigarettes rapidly replaced other forms of tobacco during the first quarter of the twentieth century. Some religious and civic groups strongly opposed cigarette smoking, and some states in the US even prohibited its use.[2] The anti-cigarette crusaders argued their case on moralistic and unsubstantiated and often exaggerated medical grounds. However, before the 1940s professional medical opinion was generally ambivalent about the health impact of cigarette smoking (USDHHS, 2000: 34).

The First World War provided a major impetus to cigarette smoking. Cigarettes were typically part of soldiers' rations, and when the war ended their use spread rapidly to the rest of society. Between 1920 and the mid-1960s per capita cigarette consumption increased about five-fold in the US and most other developed countries (USDHHS, 2000: 33).

The first epidemiological studies that linked smoking to lung cancer were performed in the 1930s (Brooks, 1952: 311-316). Using increasingly more sophisticated epidemiological research techniques, the evidence that smoking causes lung cancer mounted in the late 1940s and 1950s. The UK's Royal College of Physicians' report of 1962 and the US Surgeon-General's report of 1964 were the first comprehensive medical survey reports on the detrimental impact of cigarette smoking (Royal College of Physicians, 1962 and US Department of Health, Education and Welfare, 1964). The policy impact of these reports was immense and resulted in major tobacco control interventions in many developed countries.[3] Since these early studies were published, more than 50 000 articles on tobacco and health have been published in the biomedical literature (Davis, 1992:1). According to the US Surgeon-General "smoking represents the most extensively documented cause of disease ever investigated in the history of biomedical research" (USDHHS, 1990).

Primarily as a result of these medical findings, many developed countries introduced a range of tobacco control measures. These measures included the following: increases in the excise tax on tobacco; restrictions on smoking in public and work places; restrictions on advertising and sponsorship; publishing of health warnings on packaging and advertising material; disclosure

2. An excellent account of the rise of the cigarette and the associated controversy is provided by Brooks (1952: 228-278). Amongst other things, he described how cigarette smoking by women, first regarded as abhorrent (to men), became more socially acceptable after the First World War, how advertising was used to increase the size of the market, create brand awareness and stimulate the social acceptance of cigarette smoking, and how the large international cigarette companies were established at the start of the twentieth century. By 1952 "the cigarette is popularly regarded as part of the normal standard of living almost everywhere on the globe. Its value as a nervine has been accepted by a large part of mankind. There need hardly be discussion about its social acceptability. Its permanence as a mode of smoking has largely been taken for granted…." (Brooks, 1952: 278).
3. The 1964 Surgeon-General report is often described as a pivotal point in the anti-tobacco movement. In recognition of the then Surgeon-General, Luther Terry, the Terry Awards are conferred on individuals or institutions that have made a significant contribution to tobacco control at the triennial World Conference on Tobacco or Health.

of, and restrictions on, tar and nicotine contents; the broadcasting of anti-smoking messages; health promoting educational strategies; restrictions on access to tobacco; and even lawsuits at individual, class and state level. As a result, tobacco use in many developed countries has been decreasing since the 1970s, and especially the 1980s (World Bank, 1999: 14).

Tobacco use has, however, been increasing dramatically in the developing world. Per capita consumption in developing countries has increased from 900 cigarettes per year in the early 1970s to about 1 420 cigarettes per year in the early 1990s (Gajalakshmi et al., 2000: 21). The associated medical impact is substantial (see Peto et al., 1996). According to the World Bank (1999: 22-23), tobacco-related diseases in developing countries are likely to claim seven million lives annually by 2030, compared to two million lives in 2000.

The World Health Organisation (WHO) has made tobacco control one of its primary focus areas. As tobacco consumption has been decreasing in the developed world, the industry has shifted its attention to the developing world. In an attempt to curb global tobacco consumption, but particularly in developing countries, the WHO initiated discussions on a Framework Convention on Tobacco Control (FCTC) in 2000. The FCTC calls for international co-ordination of tobacco control and requires signatory governments to impose certain minimum tobacco control interventions in their countries. The Framework Convention was open to signature between June 2003 and June 2004, and has been signed by 168 countries. The FCTC came into force on 27 February 2005, 90 days after the fortieth country ratified the treaty.

Against this international background the focus now shifts to South Africa.

1.2 The rise of the tobacco industry in South Africa

Tobacco was first cultivated in South Africa after the arrival of the Dutch settlers in the seventeenth century (The Golden Leaf, 1970: 11). By the start of the twentieth century the main production area had shifted from the Western Cape to the Transvaal, with small production pockets in the Eastern and Western Cape, and in the Little Karoo. Currently most tobacco in South Africa is produced in the North-West and Limpopo Provinces.

Between 1937 and 1996 the Tobacco Board controlled the production and marketing of leaf tobacco through a single channel marketing arrangement. The Tobacco Board formalised and gave legal power to a co-operative culture that had its genesis in 1909 when the first co-operative association was founded (Fourie, 1992: 32). By managing prices and production volumes, the Tobacco Board has helped to make South Africa more or less self-sufficient in the supply of leaf tobacco. Between 1930 and 1950 tobacco production increased from nearly 10 000 tons to 19 000 tons (The Golden Leaf, 1970: 11). Tobacco leaf production peaked at more than 40 000 tons in 1979 (Tobacco Board, various issues). By 1996, when the Tobacco Board was disbanded, tobacco production had decreased to 27 000 tons (Tobacco Board, 1996).

Nearly all tobacco grown in South Africa is of the Virginian type. A small and decreasing quantity of oriental tobacco (also known as Turkish tobacco) is grown in the Western Cape. The most common classification of leaf tobacco is by the type of curing of the product. The relative share of flue-cured tobacco, used nearly exclusively in the production of cigarettes, has increased from less than 1 per cent in the 1930s to nearly 50 per cent in 1950 and to about 90 per cent currently. The other 10 per cent of leaf tobacco is air-cured (Tobacco Board, various issues). Within the latter category, tobacco leaf can either be light air-cured (for use in cigarettes and some pipe tobacco mixtures) or dark air-cured (to manufacture dark pipe tobacco, snuff and roll tobacco) (The Golden Leaf, 1970: 17-18).

Flue-cured tobacco generally requires more intensive farming, and makes more exacting demands with regard to management, soil and nutritional and moisture requirements (The Golden Leaf, 1970: 14). The more stringent demands that flue-cured tobacco places on producers may explain the rapid decrease in the number of tobacco farmers in the past decades. According to the Tobacco Board, there were about 5000 tobacco farmers in the early 1970s, and less than 700 in 1995. During the same period the average tobacco yield has increased from about 800 kg/hectare to about 1800 kg/hectare. This suggests that more efficient tobacco growers have survived while less efficient growers have been forced out of the industry. Despite the decrease in total tobacco production during most of the 1980s and 1990s, the average acreage of tobacco farms has increased from 8 hectares in the early 1970s to about 25 hectares in the early 1990s. According to the annual reports of the Tobacco Board, the number of people directly employed by the tobacco industry (of which the majority are employed in the agricultural sector) has decreased from about 76 000 in 1985 to 35 000 in 1995.[4]

Compared to the cigarette manufacturing sector, many more people are employed on tobacco leaf farms, albeit at much lower wage and skills levels. However, judging by the number of media reports, tobacco farmers do not seem to have much political influence, especially compared to the cigarette manufacturing industry. The statistics indicate that the past twenty years have been tough for tobacco leaf farmers. However, it is important to note that tobacco production and the number of tobacco farmers had been decreasing long before the first tobacco control policies were mooted in the early 1990s. Tobacco control policies, and the associated decrease in smoking, simply added impetus to a process that had been initiated at least a decade earlier.

4. If one considers the annual employment data, the data seem unrealistic. For example, after remaining constant at around 60 000 for six years (1988-1993), the Tobacco Board suggested that the number of people employed by the industry dropped to 52 000 in 1994 and 35 000 in 1995. As is pointed out in chapter 5, the Tobacco Board has an incentive to highlight the economic importance of the tobacco industry, and may thus have exaggerated the employment figures. However, even though the absolute number of people employed by the tobacco industry might be too high, even the Tobacco Board indicates that employment has decreased significantly in the past number of years.

In South Africa the story of cigarette manufacturing is essentially the story of the Rembrandt Group. In 1940 Anton Rupert established the Voorbrand Tobacco Company in Johannesburg, the predecessor of Rembrandt. In 1948 the Rembrandt Group was incorporated, and in 1956 it was listed on the Johannesburg Stock Exchange (Rembrandt Group Limited, 2000: 14). Rembrandt quickly became Afrikaners' symbol of economic, and specifically industrial, liberation. Before the 1940s the mining and emerging industrial sectors were nearly exclusively owned and controlled by the white English-speaking community, and the economic influence of the white Afrikaans-speaking community was restricted primarily to the poor and underdeveloped agricultural sector.

The rapid growth of Rembrandt can be attributed solely to the business acumen of Anton Rupert. He forged many strategic partnerships, and was able to grow his company rapidly, not only in South Africa, but especially abroad. In the early years Rembrandt made an agreement with Rothmans in London to exchange technical knowledge (Esterhuyse, 1986: 45). Through "industrial partnerships" with a large number of foreign companies, the company was able to rapidly expand around the world.[5] This entailed the sale of half the shares to the local community in each country where the company established a new enterprise (Fourie, 1992: 61). Also, this expansion strategy usually meant that local citizens were appointed to serve as chairmen and directors of boards. By 1961, Rembrandt was selling cigarettes in 120 countries (Rupert, 1967a: 19). According to Esterhuyse (1986: 45) the secret of the company's success was its strong emphasis on quality ("Each cigarette a masterpiece") and innovation. For example, Rembrandt was the first company, worldwide, to produce king-size filter cigarettes and menthol filter cigarettes (Rembrandt, 1976). The company became the fourth largest international cigarette company (i.e. excluding the state monopolies in countries like China and the former USSR) (Rembrandt, 1976: 4). Given the unprecedented amount of advertising of cigarettes in the first half of the twentieth century (Brooks, 1952: 269), it was very difficult for new companies to enter this market. According to Peter Drucker, author of *Innovation and Entrepreneurship* (cited in Esterhuyse, 1986: 45), "there has only been one major newcomer in the world's cigarette industry since the 1920s, the South African Rembrandt Group".

Rupert held remarkably liberal views for a white Afrikaans-speaker of that period. He introduced minimum wages in his company in 1961 at much higher levels than the average wage at the time. His views on racial issues, especially in the labour context, placed him in

5. In his many public appearances as the "self-made Afrikaner industrialist", Anton Rupert often spoke about "industrial partnerships" as a model for other South African businesses to enter the international arena (Rupert, 1967b). He based his business philosophy on the following doctrine:
    1. He who covets all, loses all;
    2. Help others to help themselves;
    3. Nobody can trade with paupers;
    4. Goodwill or wealth cannot be created by a give-away policy;
    5. Progress is contagious and shared prosperity leads to greater prosperity;
    6. Always place yourself in the other man's shoes;
    7. Confidence begets confidence. To trust is a risk, but to mistrust is an even bigger risk that can lead to disaster (Rembrandt, 1976).

occasional confrontation with the government, and especially Prime Minister HF Verwoerd (see Rupert, 1967b). However, during the 1970s and 1980s the relationship between Rembrandt and the government seems to have been much friendlier.

In due course Rembrandt diversified its interests away from tobacco, although tobacco remained the mainstay of the company. Currently the company, renamed Remgro in 2000, is classified as an investment holding company, and derives its income from its investments in tobacco products (about 48 per cent of the group's headline earnings in 2001), wine and spirits (2 per cent), mining (26 per cent), industry (12 per cent), financial services (7 per cent) and industries like medical services and telecommunications (5 per cent) (Remgro Limited, 2001).

By the late 1990s Rembrandt had 85 per cent of the cigarette market in South Africa, compared to 10 per cent in 1951, 30 per cent in 1958 and 60 per cent in 1962 (Fourie, 1992: 61). In the 1990s the only other competitor of any note was British American Tobacco, trading under the name of United Tobacco Company (UTC). UTC had been in South Africa since the 1880s and, although dominating the market in the first half of the twentieth century, had been rapidly losing its market share to Rembrandt after 1948 (Fourie, 1992: 56).

More consolidation in the cigarette manufacturing industry took place in 1999 when Rembrandt sold Rothmans International to the UK-based British American Tobacco plc (BAT), the world's second largest and geographically most diversified cigarette producer. Rothmans International had been listed on the London Stock Exchange in 1972 and represented Rembrandt's non-South African tobacco interests. In 1988 Rembrandt's local and overseas interests were further separated with the founding of Compagnie Financière Richemont AG (Richemont), a Swiss-based luxury goods group, which also had significant tobacco interests (http://www.venfin.co.za/comhistory.asp). As a result of the merger between Rothmans International and BAT, Remgro and Richemont currently hold slightly less than 30 per cent of BAT's shares (Remgro Limited, 2001: 7).

As a result of the Rothmans/BAT merger, BAT South Africa now has a 93 per cent share of the cigarette market in South Africa. The only other cigarette company with any influence in South Africa is Japan Tobacco International, whose main brand is Camel (Castillo, 1994: 3). In April 2004 the Marlboro brand, owned by the US Altria Group (formerly known as Philip Morris), was launched in South Africa. There are early indications that Marlboro has negatively affected the market share of Camel, more than any other brand, but significant changes in market shares would presumably require more time to develop.

1.3 Opposition to tobacco by the medical community in South Africa

As was the case internationally, the medical community drove the opposition against tobacco in South Africa. The first South African studies that linked smoking to lung cancer were by

Oettlé (1963a, 1963b and 1963c). The *South African Medical Journal* (SAMJ) became the main vehicle for publishing tobacco-related research and opinions in South Africa. In 1963 the editor of the SAMJ argued that

> the educational campaign should be the main weapon in the fight against cigarette smoking, but some restrictive legislation will also be necessary. There should be no hesitation about banning smoking in public places and on public transport. Here the discomfort and disease of the non-smoker must be considered before the convenience of the smoker. The law about providing cigarettes to children must be more strictly enforced and automatic vending machines must be banned. Cigarette advertising should at first be restricted in quantity and content with a view to its eventual complete limitation. It might also be advisable to insist that each cigarette packet should carry a notice to the effect that the contents are potentially dangerous to health.
>
> The Minister of Health may also attempt further restrictions of smoking by increasing the taxation on cigarettes.... The matter is important and urgent (cited in Saloojee, 1994: 162)

The editorial stance of the SAMJ has been consistently, and sometimes aggressively, anti-tobacco (e.g. Seftel, 1981, MASA, 1981 and 1985, Brink, 1988). Together with the Medical Research Council, they have called for the long-term abolition of the tobacco industry (Brink, 1988: 385 and SAMRC, 1988: 100). South African tobacco-related studies, published mainly, but not exclusively in the SAMJ, often focused on smoking prevalence. The SAMJ also published some studies on the relationship between smoking and the risk of contracting specific tobacco-related diseases, but these fall beyond the scope of this thesis and are not discussed here. Since the early 1980s, economic aspects regarding tobacco use started receiving more attention, even in the medical literature.

Prevalence studies can be categorised into two groups: (1) national surveys and (2) surveys on specific subpopulations. Table 1.1 provides a summary of national smoking prevalence among the adult population (generally 16 years and older), subdivided by race and gender. In nearly all instances a person would be classified as a smoker if he/she smoked at least one cigarette per day.[6] Overall, there is some evidence that smoking prevalence is decreasing for all population groups, and for males more than females. However, the trend is not monotonic, and irregularities in the trend (e.g. in February 1996) are more likely the result of survey design and statistical errors, than actual changes in smoking behaviour. In chapter 2 an analysis of smoking prevalence, based on a different methodology and data source, is presented. The

6. More recent studies (Martin et al., c.1992, Reddy et al., 1996, Meyer-Weitz et al., 1997) expressly defined a smoker as a person who smokes one or more cigarettes per day. The older studies (Van der Burgh, 1979, Coetzee, 1978, Yach, 1982, Yach and Townshend, 1988 and SAMRC, 1992) did not expressly define a smoker, although in most studies suggested that it referred to daily smoking. Only Steyn et al. (2002) used a different definition of "regular smoking". Regular smokers were defined as people who smoked "daily or occasionally" (Steyn et al., 2002: 162), which means that the smoking prevalence rates obtained from this study exaggerate smoking prevalence, when compared to the preceding studies.

results of that analysis confirm the trends in Table 1.1, namely that smoking prevalence has been decreasing over time.

Of the various racial groups, coloureds have by far the highest smoking prevalence, followed by whites, Indians and Africans, in that order. For all racial groups, smoking prevalence among males is higher than among females, but the gender difference is smaller for whites and coloureds than Africans and Indians. In fact, a typical comment in prevalence studies (e.g. Yach et al., 1992: 273, Steyn et al., 2002: 168-169) is that Indian and African women have a very low smoking prevalence, and that this makes them a specific marketing target of the tobacco industry. The low smoking incidence is generally ascribed to cultural factors (Steyn et al., 2002: 169). Despite an apparent increase in smoking among Indian women in the 1990s, smoking incidence among these two groups of females is still much lower than the population average.

During the 1990s a number of national prevalence surveys also investigated people's knowledge of the health implications of smoking and their attitudes towards tobacco control interventions (Martin et al., c.1992, Reddy et al., 1996 and Meyer-Weitz et al., c.1997). These studies generally found that most people, often more than 80 per cent of the population, knew that smoking is harmful to one's health, but that many people did not know which diseases are associated with smoking (Reddy et al., 1996: 1391). Furthermore, these surveys found that a majority of people supported tobacco control interventions.[7] Tobacco control advocates frequently cited the results of these studies when the Tobacco Products Control Amendment Bill was debated in the late 1990s.

Prevalence studies of subpopulations have focused on specific racial groups (Yach and Joubert, 1988a, Steenkamp et al., 1988, Strebel et al., 1989, and Steyn et al., 1994), occupations (Griffiths and Koa-Peng, 1980 (teachers), Coetzee, 1981 (doctors), and Callander and Rocke, 1986 (anaesthetists)), school children (Prout and Benatar, 1983, and Flisher et al., 1993), women (Martin et al., no date, and Marks et al., 2001) and specific communities (Yach and Joubert, 1988b).

7. Martin et al. (c.1992) found that nearly 60 per cent of respondents wanted tobacco advertising banned, 75 per cent wanted tobacco sales to children banned, 56 per cent believed that tobacco taxes should be increased and 44 per cent wanted sport sponsorships by tobacco companies banned.

   Reddy et al. (1996) found that 62 per cent of respondents believed that tobacco sales to children should be illegal, 61 per cent of respondents wanted tobacco advertising on radio banned (41 per cent for cinema advertising, 53 per cent for TV advertising, and 43 per cent for printed media advertising), 78 per cent of respondents supported the local authority regulations which prohibited smoking in public places, 54 per cent of respondents wanted smoking regulated in all public places, and 50 per cent of respondents supported an increase in the excise tax if the revenues were to be used for health promotion.

Table 1.1: Smoking prevalence in percentages of population in South Africa, based on a variety of prevalence studies

Year	White			Coloured			Indian			African			Total population		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1975/6/7 (1)	58	31	*44.5*	79	52	*65.5*	68	5	*36.5*	70	20	*45*	*69*	*25*	*47*
1977 (2)															29.3
1980/81 (3)	44	36	40	62	48	55	62	na	na	57	16	36.5	*55*	*23*	*39*
1984 (4)	40.6	29.3	34.9	49.7	33.0	41.1	55.4	3.2	29	49.5	6.2	27.7	*48*	*13*	*31*
1989/90 (5)			33.7			48.7			27.6			28.4			31.0
c.1992 (6)			31.0			52.1			37.1			28.3	49.0	17.5	31.5
Feb 1995 (7 & 8)	43	27	35	58	59	59	62	7	35	53	10	31	52	17	34
Feb 1996 (8)	37	35	36	53	51	52	61	9	35	42	13	27			31
Oct 1996 (8)	44	32	38	67	43	52	63	11	37	50	10	32			34
1998 (9)	39.0	26.6	*32.8*	57.0	40.0	*48.5*	54.2	9.0	*31.6*	40.0	5.3	*22.7*	42.3	10.7	*26.5*

Numbers in italics are not published in the original studies, but have been derived using the following principles: male: female ratio = 50:50 and appropriate racial composition is derived from the appropriate year's Statistics South Africa.

(1) Van der Burgh, 1979: 976 (Note: ages restricted to 20-59).

(2) Coetzee, 1978: 425-26.

(3) Yach, 1982: 168. Estimates provided by Rembrandt Tobacco Corporation.

(4) Yach and Townshend, 1988: 392 (The results are duplicated in SAMRC, 1988).

(5) SAMRC, 1992: 4 (The results are duplicated in Yach et al., 1992: 273).

(6) Martin et al., c.1992 (Note: age limit = 18 years).

(7) Reddy et al., 1996: 1390. (Age limit = 18 and older).

(8) Meyer-Weitz et al., 1997: 10-11 (Note: although there is nothing obviously wrong in the experimental design of this set of surveys, and the authors do not acknowledge any specific errors, other than pointing out that "the drop in smoking prevalence in the February 1996 survey can be attributed to the fact that it followed the introduction of tobacco control legislations and people might have been more reluctant to admit that they smoke" (1997: 3), the prevalence percentages are too unstable to be believable).

(9) Steyn et al., 2002: 164.

1.4 The medical community enters the economic debate

Yach (1982) was the first to attempt to quantify the economic costs of tobacco use in South Africa. Costs were limited to lost earnings from tobacco-related premature death and illness, and the direct cost of hospitalisation. The financial gain from tobacco was defined as the sum of tobacco excise revenue, the salaries of people employed in the tobacco sector, and the value of cigarettes sold. On the basis of his results, Yach contended that "when one compares the monetary and non-monetary costs that result from smoking, it becomes readily apparent that the 'benefits' are dwarfed by the total social and economic costs of the industry" (1982: 169). Interestingly, although he recommends that the tax on cigarettes be increased, he proposes that the government should "find alternative sources of excise revenue and decrease the reliance on tobacco/cigarette revenue" (Yach, 1982: 169). The reality, clearly demonstrated in South Africa and other countries in the following twenty years, is that an increase in the excise tax increases government revenue.

In 1988 the South African Medical Research Council published the first of two comprehensive reports on tobacco in South Africa, the second report being published in 1992 (SAMRC, 1988

and 1992).[8] The 1988 report summarised most of the existing medical and epidemiological research that had been published to date[9], and provided updated estimates of the economic costs and benefits of tobacco, based on Yach's (1982) earlier study. Estimates of economic costs were again restricted to the direct health care costs of smoking-related diseases and the loss of productivity caused by smokers' increased illness and premature death. Other costs associated with tobacco, such as fire hazards, disability grants, and the medical and other costs of environmental tobacco smoke were acknowledged, but no estimates were provided. Given the methodological framework and the available data, the report clearly indicated that the costs of tobacco outweigh the benefits.

In 1992 the SAMRC updated its cost-benefit analysis of tobacco, using more recent data but essentially the same methodology. It found that the most conservative estimate of the cost of tobacco amounted to R3.64 billion (1.82 per cent of GDP), while the benefits of tobacco amounted to R0.99 billion (0.49 per cent of GDP) in 1988 (SAMRC, 1992: 11).

The 1992 report appealed for strong action by the government. It distinguished between what it called "popular" and "unpopular" interventions. "Popular" interventions were defined as low-key education programmes, posters, leaflets, and other "cosmetic" activities aimed at reducing smoking, but that are not effective and thus not opposed by the industry. On the other hand, "unpopular" interventions would entail the passing of tobacco control legislation and require the political will to take on a powerful industry. In the 1992 report the SAMRC urged the government to ban tobacco advertising[10] and to increase the excise tax on cigarettes, arguing that this would reduce cigarette consumption and raise government revenue at the same time.

Other than banning tobacco advertising and increasing the tobacco excise tax, the 1988 and 1992 reports made a large number of recommendations on how to decrease tobacco consumption, specifically through legislation. These recommendations are shown in Table 1.2. If one compares the situation in 1988 to that in 2004, it is obvious that the country has made

8. Large portions of the 1988 SAMRC report were published in the SAMJ under Yach and Townshend (1988), Townshend and Yach (1988) and McIntyre and Taylor (1989).

9. Amongst other things, the report noted that, in 1984, about 100 000 potential life years of people aged 35-64 were lost due to premature tobacco-related mortality, primarily as a result of ischaemic heart disease, followed by lung cancer and chronic obstructive lung disease. The report also summarised a number of prevalence studies, of which the most consistent results were the following: (1) smoking prevalence increased as people's incomes increased, but past a certain income level (which varied from one racial group to another) smoking prevalence decreased slightly, (2) people with post-matric training had lower smoking prevalence, and (3) there was wide support for tobacco control interventions from a diverse range of social groups.

10. The rationale for an advertising ban is based on the assertion that "the battle between these manufacturers of ill-health and health educators is an unequal one. The tobacco industry commands massive resources and has access to sophisticated techniques of persuasion in maintaining and promoting smoking as a desirable activity. They are effective because they tie risk behaviours such as smoking to dominant cultural themes and images. Consequently, it is inaccurate to talk of freedom of choice when considering such behaviours. Individual choice is shaped and limited by environmental factors and commercial interests which profit from unhealthy lifestyles. Because free choice does not operate in these situations, legislation is required to curb the activities of the manufacturers of illness" (SAMRC, 1992: 16).

some huge strides in its tobacco control strategy. Tobacco control advocates around the world regard South Africa as a model for tobacco control in the developing world (Ken Warner, Professor in Economics, University of Michigan, personal communication, 2003). As will be pointed out in chapters 2 and 4, tobacco consumption has decreased dramatically in the past decade. The medical benefits take longer to manifest themselves (Nkuchia, 1996: 74), but in due course one can expect a decrease in tobacco-related disease and death.

Table 1.2: Policy and legislative recommendations in the 1988 and 1992 SAMRC reports

Proposal	Situation in 1988	Situation in 2004
Control of advertising and sales promotion	No government-decreed ban; voluntary agreement that direct cigarette advertisements are not televised	Complete ban of all tobacco advertising and sponsorship (Tobacco Products Control Amendment Act of 1999)
Requirements for health warnings and statement of tar and nicotine contents	Packets carry a small health warning "Smoking is a health risk"; tar and nicotine contents are stated on packet by voluntary agreement	Eight rotating health warnings, covering 20 per cent of front and 30 per cent of back of packet; tar and nicotine contents are stated on packet (Tobacco Products Control Act of 1993). Pictorial health warnings are proposed in Amendment Bill of 2003
Limits on tar and nicotine contents	No legislation; in 1978 ranges were as follows: 12-39 mg tar/cigarette and 0.5-2.4 mg nicotine/cigarette	Restricted by law (TPCAA of 1999); current maximum tar = 15 mg/cigarette and maximum nicotine = 1.5 mg/cigarette, to reduce to 12 mg/cigarette and 1.2 mg/cigarette, respectively, by June 2006
Restrictions on sales	Sales to minors are not prohibited	Sales to children under 16 is prohibited (TPCAA of 1999). Age limit to increase to 18 years according to Amendment Bill of 2003.
Taxation and price policy	Cigarettes are taxed, but real tax level had been eroded by 70 per cent since 1970	Rapid increases in excise tax since 1994; excise taxes are increased annually to maintain a 50 per cent tax incidence
Economic incentives to substitute other crops for tobacco	None	None
Restrictions on smoking in public places	No national legislation; provincial and municipal by-laws prohibit smoking in certain public places	Prohibited in terms of the TPCAA of 1999; hospitality industry may set aside a maximum of 25 per cent of their floor space to smokers, provided it is separated from the main area of the establishment
Restrictions on smoking in the workplace	No dedicated national legislation; the Machinery and Occupational Safety Act (1983) may be applicable in certain instances	Prohibited in terms of the TPCAA of 1999
Mandating health education	No comprehensive national programme, but government does not want young people to smoke; educational material is made available to schools	Comprehensive health education is part of Life Skills curriculum
Establishing a national organisation for policy development and co-ordination	No government agency; voluntary anti-tobacco groups exist	Department of Health has strong tobacco control focus; NGO sector (especially National Council Against Smoking) actively supports the DoH

Source: SAMRC, 1988: 104-116; Townshend and Yach, 1988: 413; Yussuf Saloojee (Director: National Council Against Smoking), personal communication, 2004.

1.5 Tobacco control policy in practice in the late 1980s and early 1990s[11]

Despite the medical evidence that tobacco was hazardous to people's health, and despite sporadic pleas from medical associations to impose effective tobacco control measures, the South African national government for many years did practically nothing to curb tobacco use. The only national tobacco control measures introduced before 1990 were a voluntary agreement not to directly advertise tobacco on television (1975), the introduction of a weak and very small health warning (1987), and the banning of smoking on domestic flights (1989). The turning point came in 1991 when the official opposition in Parliament accused the then newly-appointed Minister of Health, Rina Venter, of "protecting the vested interests of the powerful tobacco industry, and not the people of the country" (Malan and Leaver, 2003: 127). The background to this accusation was the SAMRC's 1988 report that highlighted the high cost of tobacco in terms of life years lost and the implied financial cost. In response to the opposition's attack, the Minister promised to look into the possibility of introducing tobacco control legislation.

The Minister was urged on in her tobacco control efforts by the Tobacco Action Group (TAG), an anti-tobacco alliance consisting of the Heart Foundation of Southern Africa, the Cancer Association of South Africa and the National Council Against Smoking. According to Saloojee (1994: 163) the role of TAG was to mobilise extra-parliamentary support for the proposed tobacco control bill. The Tobacco Products Control Bill was published for comment in March 1992 and provided for the control of smoking in public places, the printing of prominent rotating health warnings and nicotine and tar content on tobacco packaging and advertising, and the prohibition of sales to minors (Saloojee, 1994: 163). By international tobacco control standards, even at that time, the legislation was mild. For example, the bill did not contemplate a ban on tobacco advertising or promotions, nor did it intend to prohibit smoking in the workplace.

In 1992 a survey was conducted for the Minister of Health, which indicated that about two thirds of people acknowledged the harmful effects of active and passive smoking, and that most people supported the tobacco control measures that were being proposed (Martin et al., c.1992). The bill received the full support of Nelson Mandela, the president-in-waiting, in May 1992.

The tobacco bill was strongly opposed by the industry. Saloojee (1994: 165) argued that initially the industry tried to kill the proposed legislation, but after Mr Mandela's endorsement, changed tactics by trying to water down, rather than doing away with, the legislation. The industry might have argued, quite correctly, that the new government, which came to power in 1994, would have implemented much stronger tobacco control legislation, had there not been any legislation in place. They made a number of presentations to the Minister of Health and,

11. For a detailed history of tobacco control in South Africa, see Malan and Leaver (2003: 121-153).

together with some strong support in the cabinet, were able to water down the draft legislation (Saloojee, 1994: 164-165). When the bill was introduced into Parliament in March 1993 the clause restricting smoking in public places had disappeared and radio advertising was exempted from the need to broadcast health warnings. This was a major disappointment to the tobacco control lobby, and at one point they considered rejecting the bill completely (Saloojee, 1994: 165), but eventually decided to make representations to Parliament to strengthen the bill instead. As a result, even though the legislation did not explicitly prohibit smoking in public places, the Minister of Health and local government authorities were given the power to restrict smoking in public places. The Tobacco Products Control Act was approved by Parliament in June 1993, and became effective in May 1995.

Even though the legislation was comparatively weak, Yussuf Saloojee, who was actively involved in lobbying for strong tobacco control legislation, was very complimentary towards Rina Venter, the Minister of Health, on the way she handled the legislative process. She certainly had a difficult job. On the one hand, medical research and the tobacco control lobby groups persuaded her that tough legislation was required. On the other hand, she had to persuade her colleagues to take action against an industry with which the ruling party had historically had very close ties. Her strategy in getting the legislation through the legislative process was to be as "democratic" and "encompassing" as possible. She listened to the appeals of the tobacco industry, and there are strong indications that they were able to water down the proposed legislation. In retrospect, this "encompassing" approach might have been a mistake, although the political imperatives and the historical relationship between the industry and the ruling party may have forced her to take this line. In contrast, her successor, Nkosazana Zuma, did not engage much with the tobacco industry when the Tobacco Products Control Amendment Bill was debated in 1998, and the result was a much more comprehensive and rigid piece of legislation. Nevertheless, the Tobacco Products Control Act of 1993 represented the "first major dent in what has until now been a solid wall of vested interest" (Saloojee, 1994: 166).

The 1993 legislation had a major influence on the power of local government councils to impose restrictions on smoking in public places. Already in 1989 the Cape Town city council had attempted to restrict cigarette advertising and smoking in public places, but this attempt failed because the administrator of the then Cape Province refused to pass the necessary bylaws needed to enforce the council's plans (Malan and Leaver, 2003:123-125). Through its sponsorship of, amongst others, the Cape Town Symphony Orchestra, Rembrandt was able to exert pressure on the Cape Town mayor and the administrator of the Cape Province to veto any attempt by the city council to restrict smoking.

In other metropolitan areas the anti-tobacco lobby was more successful than in Cape Town. In 1991 the city councils of Johannesburg and Port Elizabeth passed bylaws that restricted smoking in restaurants, despite fierce opposition from chambers of business and pro-tobacco

groups (Malan and Leaver, 2003: 127). The success of Johannesburg, in particular, emboldened the Cape Town medical officer to launch a new offensive against smoking in 1992, but again the administrator of the Cape Province refused to pass the proposed bylaw, thus thwarting the attempt.

The Tobacco Products Control Act of 1993 effectively removed the administrator's veto power in tobacco-related matters. The Cape Town city council applied to the Department of Health for permission to promulgate their own laws controlling smoking (Leaver, 2003: 23-24). In 1995, the Cape Town city council passed a bylaw that restricted smoking in many public places, and public transport, despite vehement criticism by some people in the hospitality industry and a local newspaper *(Cape Times)*. With the benefit of hindsight, it is evident that the public generally complied with the restrictions on smoking in public places, but that the restrictions on smoking on public transport were often disregarded.

1.6 Professional economists enter the debate

During the 1990s the tobacco control debate in South Africa entered a new dimension with the entrance of professional economists. The first shots were fired by Reekie and Wang (1992) and Reekie (1994).

1.6.1 Reekie and Wang (1992)

Reekie and Wang (1992) criticised the cost-benefit analysis of the SAMRC (1988) report on the grounds that smokers have already discounted the hazards associated with smoking. They argued that a person's decision to smoke or not to smoke is influenced by the expected utility obtained from smoking and the probability of smoking-induced illness or death. On the basis of the perceived risk and benefits, people will then decide to smoke or not. Using a state dependent approach to standard decision making (i.e. where the outcome or consequence of an action is uncertain and dependent on the state of nature), they showed that, given people's different preferences, it is possible that smoking confers benefits on (some) consumers.

In a related article in *Business Day*, Reekie (1992) asserted that all costs associated with smoking are internalised by smokers. He argued that "public policy on smoking – or anything else – is necessary only if there are external costs which cannot be internalised", implying that government intervention in the form of tobacco control policy was not necessary or desirable. He dismissed the notion that smoking was addictive, claiming that the large number of people who had successfully given up smoking suggests that smoking is no more than a bad habit.

In response, Saloojee and Yach (1992) argued that Reekie's claims that smoking is a "free choice" and that smoking is not addictive were untrue and at odds with scientific evidence. According to them, Reekie did "not take cognisance of the need to smoke to allay withdrawal

symptoms, of the desire of most smokers to stop, and of their failed attempts to quit". They dismissed Reekie's analysis on the basis that it was based on false assumptions.

Abedian and Dorrington (1994) strongly contested Reekie and Wang's "façade of technical, empirical and scientific sophistication", arguing that the latter's theoretical approach and empirical research methodology were flawed. Abedian and Dorrington proposed that consumers are not as rational and capable of processing information as the standard theory would lead one to believe. They argued that this, together with the addictive nature of smoking, rendered Reekie and Wang's "contrived" results unacceptable.

1.6.2 Reekie (1994)

In a subsequent paper, Reekie (1994) set out to show that the cost benefit analysis performed by the SAMRC (1988 and 1992) was flawed, and that the benefits obtained from smoking, in fact, exceeded the costs. Firstly, he argued that the SAMRC understated the monetary benefits received from smoking. If total expenditure on tobacco is a cost (as the SAMRC assumes), then the equivalent amount, transferred to the factors of production, must be a benefit to society. He argued that, "the 'balance sheet', as presented, fails to meet the principles of double-entry bookkeeping and fails … to define social costs and benefits. It is tautological and provides scope for (false) policy inferences only because it is incomplete" (Reekie, 1994: 224). Should one apply this methodology to other goods and services, none would ever provide a net benefit to society, he argued.

Reekie contended that the "social costs" that the SAMRC ascribes to smoking are in fact *private* costs, and that when people decide to smoke, they weigh up and trade off the costs and benefits to *themselves* of their intended action (1994: 225, italics in the original). Included in the cost of cigarettes is the risk of disease-induced death. Reekie (1994: 232) argued that smokers carry the burden of smoking-induced medical costs and lost productivity from ill health or premature death, not society as a whole.

Secondly, according to Reekie (1994: 224), the SAMRC assumed that smoking provides consumers with zero satisfaction. While the SAMRC (1988: 87) grudgingly admits that smoking provides some satisfaction to smokers, it does not attempt to measure its magnitude, and thus this benefit did not enter the SAMRC's cost benefit analysis. This is a clear shortcoming in the SAMRC's analysis. Using the well-known concept of consumer surplus, Reekie's primary aim was to quantify the benefit that smokers derived from smoking.

Since the consumer surplus is the area below the demand curve, above the equilibrium price, Reekie started by estimating a relatively unsophisticated demand equation. Per capita quantity demanded was specified as a function of the real price of cigarettes and per capita real disposable income for the period 1970 to 1989. Advertising expenditure was excluded from the regression equation on the grounds that, firstly, it rendered an insignificant coefficient and,

secondly, only twelve observations (1978-1989) were available. The regression equation was estimated in linear and logarithmic form, and the logarithmic model was chosen because it was "statistically superior to the linear 'fit'" (Reekie, 1994: 229), although this is not apparent from the paper, nor well explained. The price elasticity of demand was estimated at –0.88, which is high in comparison with most international studies performed up to that point.

In calculating the consumers' surplus, the logarithmic specification is problematic, because it results in an infinitely large consumers' surplus, which is clearly unrealistic. Using some fairly arbitrary assumptions about the shape of the demand curve at high prices[12], Reekie estimated the consumers' surplus at nearly R2 billion. Since the consumers' surplus is greater than the SAMRC's estimate of the health care cost of smoking, Reekie concluded that "on the most pessimistic of assumptions … the data suggested that consumers still receive substantial net benefits from smoking" (1994: 231).

1.6.3 Van Walbeek (1996)

Using Reekie's (1994) approach of measuring the consumers' surplus, Van Walbeek (1996) tried to determine how much additional revenue the government would be able to generate, should it set the tax rate at a revenue-maximising level. A product-specific tax reduces the consumer surplus of that product. Since the tax revenue potential depends on the magnitude of the consumer surplus, the crucial aspect in this study was to get a realistic estimate of the consumers' surplus. Using a linear, rather than a logarithmic demand specification, he forced the consumer surplus to be finite and measurable. Data on tobacco consumption were obtained from three sources, and demand equations were estimated for each of these. The short-run price elasticity of demand (at the mean price and quantity) was estimated at between –0.32 and –0.99, depending on the data used.

On the assumption that the supply of tobacco products was perfectly elastic, he used the estimated demand equations to determine how increases in the excise tax would affect tobacco consumption, prices, and government revenue. His main conclusions were as follows:

> 1. The government can raise the excise rate to at least 110 per cent of the "producer price" of tobacco if it wishes to maximise its excise revenue.....[13]

12. In order to get the demand curve to touch the price axis, he assumed a spliced demand curve: for prices above a certain value (58 per cent above the actual price of 1988), a linear demand curve is assumed, while for prices below that value a logarithmic specification is assumed. This gives a conservative estimate of the consumers' surplus, but the fact of the matter is that its magnitude is quite arbitrary. Had Reekie decided to use a linear specification – and there is no good statistical or econometric reason why he should not have – the size of the consumers' surplus would have been bigger (which would have enhanced his case) and the accusation of using an arbitrary approach would not have been made against him.
13. The "producer price" is defined as the "tax-free" or "pre-tax" price. Using a VAT rate of 14 per cent, this implies that the excise tax would comprise 46 per cent of the VAT-included retail price of cigarettes.

2. The government can expect to double (at least) its revenues from tobacco if it increases the excise rate to these levels.

3. The analysis suggests that raising the tobacco excise rate to the proposed levels could lead to a reduction in consumption of between 41 and 46 per cent.

4. The real retail price of cigarettes should rise by between 44 and 122 per cent from their 1989 levels, if the government were to maximise excise revenues from tobacco (Van Walbeek, 1996: 35).

In June 1994 the newly-elected Government of National Unity announced that it would increase the excise tax on cigarettes to 50 per cent of the retail price, to be phased in over a number of years. This decision was the result of many years of lobbying by the medical community (e.g. Yach, 1982: 169, and SAMRC, 1988:120 and 1992: 20-21) and reversed the previous 25 years' trend of rapidly eroding tobacco excise taxes. As will be pointed out in more detail in chapter 4, the excise-induced increases in the real price of cigarettes have had a profound effect on cigarette consumption and on government revenue.

Since the policy prescriptions of Van Walbeek's (1996) study closely correspond to the actual policy imposed by the government, one can retrospectively evaluate his predictions against actual experience. The results are shown in Table 1.3. Van Walbeek did not attach a time dimension to his predictions, but a comparison of the actual changes in the variables between 1989 (the year for which the study was done) and 2003 indicates that the predictions were generally quite accurate.

Table 1.3: Predicted and actual changes in some tobacco measures, based on Van Walbeek (1996)

Variable	Prediction by Van Walbeek (1996)	Actual outcome (1989-2003)	Comments
Excise tax as percentage of retail price	Revenue maximising excise tax rate = 46 per cent of retail price	2003: excise tax equalled 33 per cent of retail price; total tax incidence (i.e. VAT included) = 45 per cent of retail price	Despite claims by the Minister of Finance that its self-imposed target of 50 per cent tax incidence has been achieved, this is not so, for technical reasons. See chapter 4.
Real government revenue from tobacco	At least 100 per cent increase	139 per cent increase	Increases in the population and real disposable income increase tobacco consumption, which raised government revenue by more than the predicted amounts.
Consumption	Decrease of between 41 and 46 per cent	33 per cent decrease	Adult (15+) per capita consumption decreased by 51 per cent.[14] Other factors (especially legislation of 1993 and 1999) are likely to have had an additional depressing impact on tobacco consumption, over and above the price impact.
Real retail price	Increase by between 44 and 122 per cent	142 per cent increase	Retail price increased not only because of excise tax increases, but because the industry rapidly increased the "industry price" since the mid-1990s. See chapter 5.

Sources: Van Walbeek (1996), Republic of South Africa (various years)

1.6.4 Economics of Tobacco Control in South Africa Project (1996-1998)

In 1996 the Economics of Tobacco Control in South Africa (ETCSA) Project was established at the Applied Fiscal Research Centre of the University of Cape Town, funded by the International Tobacco Initiative. Whereas earlier economic studies with a tobacco control agenda (SAMRC, 1988 and 1992, Abedian and Dorrington, 1994 and Van Walbeek, 1996) were generally limited in focus, the aim of the ETCSA Project was to perform a comprehensive investigation into the economic impact of tobacco control policies.

The ETCSA Project steered clear of a full cost-benefit analysis of smoking, arguing that there are so many monetary and non-monetary costs associated with tobacco that it is near-impossible to come to a satisfactory conclusion. Rather they accepted tobacco as a fact of life, and similarly, accepted taxation as a fact of life (ETCSA, 1998: 48). The focus of the Project was on "finding the level of taxation that will best meet government's competing objectives,

14. As will be pointed out in chapter 6, some substitution towards roll-your-own tobacco has taken place in the latter half of the 1990s, especially among poor households. This would then imply that the reduction in tobacco consumption, as opposed to cigarette consumption, is smaller than the figures indicated here. Also, a representative of BAT points out that an increase in smuggling and other illicit trade would have caused true cigarette consumption to be higher than the official figures quoted here (Simon Millson, Director, Corporate and Regulatory Affairs, BAT South Africa, personal communication: 2004).

and not jeopardise the economy in any way" (ETCSA, 1998: 48). In line with international experience, the Project found that, of all tobacco control instruments available, rapid increases in the real price of cigarettes would be most effective in reducing cigarette consumption. Using cointegration analysis, the price elasticity of demand for cigarettes was estimated at about -0.6, which is typical for a developing country.

Other significant findings of the ETCSA Project were the following:

- An increase in the excise tax increases government revenue. Even though an increase in cigarette taxes reduces cigarette consumption, the decrease in consumption is much smaller than the increase in the tax per cigarette, with the result that government revenue increases.
- By allowing the real excise tax to decrease by about 70 per cent between the mid-1970s and the early 1990s, real government revenue decreased, despite a rapid increase in cigarette sales over this period. Using demand analysis, the opportunity cost (in the form of foregone government revenue) of not raising the level of excise tax in line with inflation was measured and found to be substantial.
- It was found that advertising expenditure has a small but positive impact on cigarette consumption. On the basis of this result, it was argued that an advertising ban would reduce cigarette consumption.
- Using a social accounting matrix, the researchers investigated the likely employment impact of a reduction in the demand for cigarettes. It was found that the decrease in employment in tobacco-related sectors would be more than compensated for by increased employment in other sectors, because consumers would switch their expenditure on cigarettes to other goods and services.
- In comparison with some Mediterranean and Eastern European countries, South Africa did not have a significant cigarette smuggling problem. The researchers speculated that, based on a court case between two major cigarette manufacturers, Rembrandt and Philip Morris, there are indications that the industry may be involved in cigarette smuggling.

The policy implications of the ETCSA Project's research were important. Together with inputs from the medical community and other anti-tobacco lobby groups, this research was used to urge the South African Ministry of Health to impose more comprehensive tobacco control legislation than the Tobacco Products Control Act of 1993.

One of the ETCSA Project's most publicised findings was that "a 1 per cent increase in the growth in advertising expenditures will increase growth in demand for cigarettes by between 0.18 and 0.24 per cent" (ETCSA, 1998: 77). At first glance, this finding provides the empirical justification for an advertising ban: if advertising expenditure increases tobacco consumption, then a ban on tobacco advertising will, presumably, reduce tobacco consumption, ceteris paribus. The typical industry argument is that advertising has little, if any, impact on aggregate tobacco consumption, but that it has a marked impact on market shares (High, 1999: 18-22). The international literature on the determinants of demand for tobacco is split on this issue.

Studies that have an apparent bias towards the industry tend to find insignificant relationships between advertising and consumption, while studies with an apparent bias towards tobacco control interventions tend to find a positive relationship (see surveys in High, 1999: 23-70 and Saffer and Chaloupka, 2000:1120).

The ETCSA Project's finding on the positive relationship between advertising expenditure and consumption was severely criticised by Leach (1998) and High (1999: 65-69). They pointed out that the consumption[15] and advertising expenditure[16] data were incorrect, that the relationship is only marginally significant, and only in certain sub-periods of the period being investigated. In the public hearings in October 1998, Leach and High submitted their reservations about the ETCSA Project's results to the Portfolio Committee on Health. Their submissions did not receive much media attention, possibly because of the technical nature of their reservations. Despite their criticism, the legislation was passed, but certainly not because of the rigor of the ETCSA Project's econometric work on this issue.

Given their large vested interests, it goes without saying that research perceived as a threat to the tobacco industry will be critically analysed and scrutinised, and discredited if possible. In their eagerness to support the proposed tobacco control legislation, the ETCSA Project made some serious errors for which they were justifiably criticised. Had the researchers been more circumspect and rigorous in their data collection and more modest in presenting their results, it would have saved them this embarrassment.

Despite these criticisms, the overall impact of the ETCSA Project, both nationally and internationally, was profound. Nationally, it provided the anti-tobacco lobby, and the Minister of Health in particular, with the empirical research to show that the economic impact of the proposed tobacco control legislation was not as detrimental to the economy as the tobacco and related industries wanted people to believe.

Internationally, the Project had a significant impact as well. In February 1998 an international conference on the economics of tobacco control, organised by the ETCSA Project, was held in Cape Town. At this conference the main research results of the ETCSA Project, together with international research into the economics of tobacco control, were presented (Abedian et al., 1998). This conference also provided additional impetus to World Bank officials to review their policy on tobacco and tobacco control. The World Bank's official stance on tobacco control was published the following year, and in this document the Cape Town conference was

15. Leach (1998) and High (1999) point out that the ETCSA Project's data on cigarette consumption is much higher, and shows a much more rapid growth rate in the early 1990s, than is actually the case.

16. According to the ETCSA Project, "prior to 1990, reliable data [on advertising expenditure] was only available for 1980, 1986 and 1989. However, tobacco advertising for these years was a consistent 5 per cent of total advertising expenditure. Therefore, for the remaining observations, total advertising spend was multiplied by 0.05" (1998: 57). This implies that for 17 of the 25 observations on which the analysis was based, the values for cigarette advertising were "basically made up" (Leach, 1998). As is pointed out in chapter 7, data on cigarette advertising in the 1970s and 1980s did exist; it just had to be collected.

acknowledged as an important catalyst in the development of this document (World Bank, 1999: xi).

1.6.5 Economics of Tobacco Control in South Africa Project, Phase II (2000-2003)

After the first phase of the ETCSA Project was completed in 1998, a second phase was initiated in 2000, and completed in 2003 (ETCSA, 2002 and 2003). Whereas the first phase of the Project had much impact on local tobacco control policy, the second phase has had a much stronger international focus. The aim of the second phase was to extend the economic analysis and policy implications of the original study, based on the idea that South Africa could act as a role model in tobacco control for other developing countries.

One of the main focus points in the second phase of the Project was to consider the impact of excise tax increases on the regressivity of the excise tax. This thesis is based to a large extent on the research performed for the second phase of the ETCSA Project.

1.7 Tobacco control policy in practice after the democratic transition in 1994

In April 1994 the first democratic elections were held in South Africa, after a turbulent transition period that was initiated when the African National Congress was unbanned and Nelson Mandela was released from prison in February 1990. After the 1994 elections the ANC became the dominant party in the Government of National Unity.

In contrast to the outgoing National Party (NP) government, the ANC had no historical ties with the tobacco industry. The long and close relationship between the NP and the tobacco industry had resulted in a hesitant and cautious tobacco control policy. Coming into power with a clean slate, the ANC was not bound by the informal agreements of the past. Even before assuming power, the ANC made its position clear on tobacco control. In May 1992, on World No-Tobacco Day, Nelson Mandela committed the ANC to a strong tobacco control policy and publicly supported the Tobacco Products Control Bill that was being debated at the time. In November 1993, at the All Africa Conference on Tobacco or Health, Nkosazana Zuma, the future Minister of Health, confirmed the ANC's anti-tobacco stance. She argued that a comprehensive tobacco control programme would be an important component of the new government's commitment to improve the health of the population (Yach and Harrison, 1994: 9).

It did not take long for the new government to start implementing its tobacco control policy. In June 1994, less than two months after the ANC took power, the Minister of Finance announced that

> "The increase in the excise duty on tobacco products is a special case [compared to other excisable products]. Arguments from the health community indicated a preference for an

> increase in the excise duty to fifty per cent of the retail price, which is the order of impost in many other countries. After consultations with all interested groups and taking into account industry-specific limitations and market conditions, Government has opted for a phased approach, which is reflected in the announced increase. Future budgets will have to deal with the remainder of the issue" (Republic of South Africa, 1994: 5.7).

This announcement was a clear victory for the health community, even though they were disappointed with the size of the tax increase in that year and the following two years. However, in 1997 the new Minister of Finance, Trevor Manuel, announced a 52 per cent increase in the excise tax, which would, he claimed, raise the expected total tax incidence to 50 per cent of the average retail price (Republic of South Africa, 1997: 7.16). Since 1997, the annual increases in the excise tax on cigarettes have been quite predictable, with the government adjusting the excise tax in line with the average cigarette price increase, so as to maintain the 50 per cent tax incidence.[17] In the 2004 budget speech the tax incidence was increased to 52 per cent of the retail price, to be maintained for at least the following three years.

As one would expect, the "excessive" excise tax increases were strongly opposed by the tobacco industry (Leaver, 2003: 20). They argued that they were a legitimate industry and that the excise tax increases unfairly discriminated against them. Also, they claimed that the rapid excise tax increases would exacerbate the smuggling problem, which, in their opinion, was already out of control, and that this would negatively affect government revenue (Rembrandt Group, 1996).

As will be pointed out in chapter 4, a long-term view of cigarette taxation indicates that the rapid tax increases in the mid- and late 1990s were simply a reversal of a 20-year trend of decreasing excise taxes. Between 1970 and the early 1990s the real level of excise tax fell by 70 per cent. This happened because the government allowed inflation to erode the real value of the excise tax. Despite the rapid increases of the preceding years, the level of real excise tax on cigarettes in 1998 was still about a third less than in the 1960s and early 1970s.

As will be pointed out in chapters 4 and 6, the rapid increase in the real price of cigarettes, more than anything else, has driven the decrease in cigarette consumption in South Africa in the past decade.

Other than a war of words between the tobacco industry and the Ministry of Health about health warnings on advertising material in 1996 (Malan and Leaver, 2003: 143), the next major tobacco control move came in January 1998 when the Minister of Health announced that a Tobacco Products Control Amendment Bill would be tabled in Parliament that year. The

17. As will be pointed out in chapter 4, the ex post tax incidence is much less than 50 per cent, because, in calculating the excise tax increase, the government does not take into account the fact that the change in the tax will result in a change in the retail price of cigarettes. The retail price is the denominator in calculating the tax incidence, and when this increases, the tax incidence, of necessity, will decrease.

rationale, she argued, was to "protect children and to prevent them from being bombarded with pro-smoking messages" (Leaver, 2003: 25). The two most important and controversial provisions of the bill were the banning of all tobacco advertising and sponsorship, and the prohibition on smoking in all public and work places. The other provisions of the bill – prohibiting the free distribution of cigarettes and the sale of single cigarettes, and the prescription of the maximum yields of tar, nicotine and other constituents in tobacco products – were relatively uncontroversial and did not receive much attention.

The cabinet approved the bill six months after the Minister had announced her plans. Shortly after the bill was published for public comment a few weeks later, the tobacco industry applied for an urgent interdict to stall the legislation, citing "a lack of consultation" in the bill's drafting process and wanting access to the documents on which the legislation was based (Malan and Leaver, 2003: 148). Throughout the legislative process, the industry complained that the Minister of Health would not consult with them. In what the Minister described as a "victory in the parliamentary and legislative process", the industry's application was dismissed a few days later (Leaver, 2003: 28). The National Council of Provinces approved the bill in October 1998. Public hearings into the proposed legislation were held later that month. The hearings before the Portfolio Committee on Health attracted much media attention and were the climax of many weeks of intense lobbying by both supporters and opponents of the proposed legislation.

Opponents of the proposed legislation were against the banning of tobacco advertising and sponsorship on the grounds that: (1) advertising for products that have achieved the "mature" stage of the product life cycle (like cigarettes) is aimed primarily at increasing and maintaining a brand's market share, rather than increasing the overall size of the market (High, 1999: 20), (2) there is no empirical evidence to support the hypothesis that advertising increases tobacco consumption, (3) the ban on advertising is an infringement of the right to free speech, (4) the ban on advertising would have a very detrimental impact on the advertising business, and, similarly, the ban on sponsorships would jeopardise many sports bodies, and (5) should the government decide to ban tobacco advertising on the grounds that it is potentially harmful, before long the advertising of other products, like alcohol, cars and unhealthy foods, would be prohibited as well (the so-called slippery slope argument) (Van Walbeek, 2001).

Proponents of the legislation, on the other hand, argued that tobacco advertising falsely presents smoking as a pleasurable and glamorous activity. They argued that advertising distorts the consequences of smoking and, rather than informing, prohibits people, and especially children, from making an informed choice about it (Seidel Marks, 1998). It was argued that tobacco advertising, rather than being an expression of free speech, in fact creates its own censorship; many magazines and newspapers are so dependent on tobacco advertising that they would not publish anything that would anger the industry, out of fear of losing their tobacco

accounts. Furthermore, they argued that, despite the tobacco industry's claims that they do not target children in their marketing endeavours, secret documents reveal the opposite.[18]

Arguments against the prohibition of smoking in public places and workplaces were primarily based on financial grounds. The hospitality industry claimed that, should this bill become law, they would lose a large proportion of their customers. According to the International Hotel & Restaurant Association, a survey among Cape Town restaurant operators indicated that the proposed legislation would decrease their turnover by 32 per cent (cited in Van Walbeek, 2001). They argued that the government should not be allowed to decide how hospitality establishments should run their businesses, and that this decision should be left to each individual operator. On a technical point, opponents argued that the definitions of "public places" and "workplaces" were vague and unclear, and that it could possibly be interpreted that people would not be allowed to smoke in their own homes (Van Walbeek, 2001).

Proponents of the "clean indoor air" legislation argued that the rights of non-smokers had to be protected. They argued that medical science had shown beyond reasonable doubt that environmental tobacco smoke (ETS) is more than just a nuisance, but is in fact harmful to non-smokers. Whereas previously smokers had the right to pollute the air with ETS, this legislation would grant non-smokers the right to smoke-free air. Proponents of the legislation rejected the claims that the legislation would have a detrimental impact on the turnover of hospitality establishments. They quoted the research from the US, which indicated that the passing of clean indoor air legislation had had no detrimental effect, and may even have had a positive effect, on the revenues of restaurants and other hospitality establishments[19] (Van Walbeek, 2001).

Despite strong opposition – about three quarters of the submissions at the public hearings were against the proposed legislation – the Minister of Health was undeterred. After the Portfolio Committee on Health approved the bill, it was presented to Parliament's House of Representatives, where it was approved with 213 votes in favour and 106 against (Leaver, 2003: 30). The ANC and the African Christian Democratic Party voted in favour of the legislation. The final hurdle was for President Mandela to sign the bill into law. However, the bill was subject to an unexpected delay when President Mandela requested that some definitions in the bill be rephrased because they were too vague, and might be subject to a legal challenge. This was done and after both houses of Parliament had approved the amendments,

18. In 1997, a US court ordered that millions of tobacco documents be made available for public scrutiny. Numerous anti-tobacco organisations have trawled through these documents and have compiled summary reports that indicate that the tobacco industry has, over a long period of time, been guilty of dishonest and unethical conduct. A particularly thorough report, "Trust us, we're the tobacco industry", can be accessed at http://www.ash.org.uk/html/conduct/html/trustus.html (Hammond and Rowell, 2000).

19. Unfortunately, references to these studies were not provided. However, Glantz and Charlesworth (1999) show that bans on indoor smoking have not had a negative impact on the hospitality business in the cities where these regulations have been implemented.

the President signed the Tobacco Products Control Amendment Act (Act 12 of 1999) in April 1999 (Leaver, 2003:30).

If one compares the legislative process followed by the Amendment Act of 1999 to the original Tobacco Products Control Act of 1993, a number of differences are clearly evident. Firstly, the 1999 legislation was much more comprehensive than the 1993 legislation. The industry was easily able to exploit loopholes in the 1993 legislation. For example, advertisements that promoted tobacco-sponsored events were not required to carry health warnings, on the grounds that this was "indirect" advertising. Predictably, after 1993 there was a rapid increase in the advertising of sponsored events (see chapter 7). Having learnt from her predecessor's experience of the 1993 legislation, the Minister of Health took a much harder line in 1998. Despite industry pleas for "appropriate" and "reasonable" legislation (which could, presumably, be easily circumvented) the Minister made the restrictions on smoking in public places and on tobacco advertising as watertight as possible.

The second difference was the way in which the two Ministers allowed the industry to influence the legislative process. In 1993, the Minister of Health, Rina Venter, allowed the industry to make representations to her, and they successfully slowed down the process and watered down the legislation. In 1998 the new Minister, Nkosazana Zuma, largely ignored the industry's pleas to consult with her, arguing that they had no constructive role to play. At one point she remarked: "What is consultation? We did consult them, but consultation does not mean consulting until they agree. They will never accept tobacco restrictions no matter how long we speak to them" (*The Star*, 7 August 1998, cited in Leaver, 2003: 32). Even though this "non-consultative" approach allowed her to push the legislation through Parliament, it reinforced the public opinion that she was arrogant and autocratic.

The third difference was the support that the two Ministers of Health received from their colleagues in the cabinet. Rina Venter had the odds stacked against her: many colleagues, including the President, FW de Klerk, were chain smokers and only grudgingly supported her tobacco control efforts; the Minister of Agriculture openly supported tobacco farmers in their fight against the proposed legislation (Leaver, 2003: 14-15); and by "buying favour" with the governing party, the industry was able to place a "moral indebtedness" on the government (Malan and Leaver, 2003: 123). On the other hand, Nkosazana Zuma was operating in a much more favourable environment: President Mandela openly supported tobacco control measures, the ANC's focus on primary health care implied a strong focus on tobacco control, and the ANC did not have any long-term relationship with the tobacco industry that could possibly influence its policy decisions.

After a delay of more than a year, during which period the Department of Health experienced a number of personnel changes, the regulations enforcing the Act were published in September 2000. The Act came into effect in January 2001. As a result of continuous pressure, the new Minister of Health, Mantombazana Tshabalala-Msimang, allowed the hospitality industry to

set aside a maximum of 25 per cent of their floor space to smokers, provided the smoking area was enclosed and separately ventilated. According to Saloojee (personal communication, 2004) this was a reasonable compromise to "guarantee non-smokers the right to clean air, while taking account of the need of smokers".

The degree of compliance with the new legislation has been relatively high. All visible tobacco advertising and sponsorship has disappeared, although there has been an apparent increase in "below the line" cigarette advertising. According to a small survey performed in October 2002 in three of the nine provinces, more than 90 per cent of respondents indicated that their workplaces have some form of smoking restrictions; 30 per cent of hospitality establishments are completely smoke-free, 30 per cent have a separate smoking section, and 40 per cent (mainly small and rural establishments) do not comply with the legislation (Steyn et al., 2003: 45 and 48).

In October 2003 the Ministry of Health announced further amendments to the legislation. Other than closing some loopholes in the Amendment Act of 1999 (e.g. by disallowing "below the line" advertising in the form of cigarette parties, and product stacking at the point of sale) and increasing penalties, the amendment bill aims to, amongst other things, (1) introduce pictorial health warnings, as has been done in Canada and Brazil, (2) ban "misleading" descriptors like "mild", "light" and "low tar", (3) ban the sale of "Duty-Free" and "Tax-Free" tobacco products, and (4) ban smoking in certain outdoor public places and within five metres of doorways and entrances (http://www.doh.gov.za/docs/pr/2003/pr1016.html). According to the Minister of Health this amendment will bring the country in line with the provisions of the Framework Convention on Tobacco Control, of which South Africa is a signatory.

To conclude, what has been the impact of these legislative changes? Empirically, it is very difficult to measure their impact on tobacco consumption. Given the paucity of appropriate tobacco data in South Africa and the fact that it is practically impossible to separate the effects of the various legislative interventions, one cannot determine accurately by how much cigarette consumption has decreased as a result of these legislative interventions, *ceteris paribus*. Even the international literature suggests that the direct impact of legislative interventions is much smaller than changes in the tax on and price of cigarettes.

So why are tobacco control advocates so partial to legislative interventions? Primarily because it creates a social environment where tobacco use is no longer regarded as normal and acceptable. There is nothing glamorous about smoking in the cold outside or between the pigeon droppings. When smoking is denormalised, it creates a platform where economic disincentives to smoke (i.e. price increases) are more effective in encouraging people to quit smoking and in preventing youngsters from starting to smoke. Also, through "clean indoor air" policies property rights are transferred from smokers to non-smokers. Whereas previously the right to pollute the air with environmental tobacco smoke rested, by social convention, with smokers, non-smokers have now been granted the right to smoke-free air. Even though the

legislation allows for fines to be imposed on offenders of the "clean indoor air" legislation, this is not the primary point. The point is that non-smokers can now demand smoke-free air, and have a law to back up their demand.

1.8 Structure of the thesis

The thesis consists of eight chapters. Chapter 2 aims to measure some recent trends in smoking prevalence in South Africa. Although it is difficult to measure the impact of the various tobacco control instruments (e.g. advertising bans, no indoor smoking, banning sales to minors, increased taxes, and social pressure) individually, the overall strategy has clearly been extremely effective. In this chapter it will be shown that there has been a significant decrease in smoking prevalence for most demographic groups during the 1990s.

Chapter 3 reviews the substantial international literature on the demand for cigarettes. Despite major differences in countries' smoking histories, data sets, time periods, and research methodologies, most studies conclude that the demand for cigarettes is price inelastic, but certainly not perfectly inelastic. This literature underpins the strategy to use excise tax increases as an effective tobacco control policy. It also forms the theoretical base on which this thesis is built.

In chapter 4 the focus is on the relationship between the price of cigarettes and the quantity demanded. The government can influence the retail price of cigarettes by increasing the excise tax. In order to investigate these relationships, econometric techniques are used to investigate the demand for cigarettes in South Africa, and to determine the future cigarette excise tax potential for the government. It will be shown that the government has dramatically increased its revenue from cigarette taxation over the past decade.

The external environment has become quite hostile to the tobacco industry since the early 1990s, and especially after 1994. Rapid excise tax increases, for example, succeeded in considerably reducing cigarette consumption. Such external threats significantly altered the marketing strategy of the cigarette manufacturing industry. In chapter 5 the pricing strategy of the cigarette manufacturing industry is analysed. The real retail price of cigarettes has generally increased at a much more rapid pace than the increase in the tax rate, or any of the main input costs. This suggests that the industry has increased its profitability despite the fact that cigarette consumption has decreased. In the circumstances it was a clever and appropriate strategy, but may lead to a more rapid long-run decline of the industry than would otherwise have been the case. From a tobacco control perspective this is a positive development.

While tax increases are extremely effective in reducing cigarette consumption, a point of concern is that, because poor households generally spend a higher proportion of their income on cigarettes vis-à-vis the rich, cigarette tax hikes might increase the tax burden on the poor. In chapter 6 the focus is on the regressivity of cigarette taxes. While it is generally agreed that

cigarette taxes are regressive (i.e. that they fall disproportionately heavily on the poor), it has been argued by some tobacco control economists (Chaloupka and Warner, 1999) that tax increases may decrease the regressivity of the tax. The reason is that the poor are more likely to change their smoking habits in response to a change in the price of cigarettes than the more affluent. In this chapter these arguments are investigated empirically, and it will be shown that price increases in the period 1990-2000 have in fact reduced the regressivity of the cigarette excise tax.

Around the world, cigarette advertising is a contentious issue in the tobacco control debate. As indicated in this introductory chapter, the industry argues that cigarette advertising is not meant to persuade non-smokers to start smoking, but to persuade smokers to either switch brands or to remain loyal to their brand. Tobacco control advocates reject this argument, claiming that cigarette advertising is meant to enhance the social acceptability of smoking, and is often focused on "vulnerable groups", especially the youth. The government has rejected the industry's argument and passed the Tobacco Products Control Amendment Act of 1999, to, *inter alia*, ban tobacco advertising in South Africa. The aim of chapter 6 is to analyse historical trends in cigarette advertising. Factors that will be analysed include (1) the relative importance of different media in cigarette advertising, (2) changes in advertising strategies, and (3) changes in the relative importance of the most important brands. Among other things, it will be shown that cigarette advertising was already in the process of being phased-out over a number of years, before it was formally banned at the end of 2000. This would presumably have given advertising agencies enough opportunity to find replacements for the lost cigarette business.

Chapter 8 is the concluding chapter, presenting the main policy conclusions, as well as potential avenues for future research.