

Evaluation of public
tobacco control
work in Norway 2003 - 2007

Report 8 from HEMIL/SIRUS

The introduction of smoke-free hospitality venues in Norway. Impact on revenues, frequency of patronage, satisfaction and compliance

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Foreword

The Norwegian Institute for Alcohol and Drug Research¹(SIRUS) and the Research Centre for Health Promotion (HEMIL Centre) at the University of Bergen have been commissioned to evaluate the authorities' overall efforts from 2003 to 2007 to prevent tobacco-related diseases. The results will mainly be published as scholarly articles in national and international professional journals. In addition, selected elements of the results will be published on an ongoing basis in a series of reports intended to present the finds in a faster, more accessible form than is usually the case for scientific publications. The present report is part of that series. Invaluable comments were received from Leif Edvard Aarø, Jørn Hetland (both HEMIL), Jostein Rise (SIRUS), Hege Wang and Rita Lill Lindbak (both of the Directorate for Health and Social Affairs) and Tore Sanner (Department of Environmental and Occupational Cancer, The Norwegian Cancer Hospital). Thanks are due to Jann-Henrik Bardal, Mia Telstø, Marianne Lund and Elisabeth Larsen (all SIRUS) for searching and systematising media clippings and organising official statistics. Thanks also to Pia B. Lund for her help with references.

Oslo, July 2006

Karl Erik Lund

Contents

1. Summary

- 1.1 Background
- 1.2 Changes in sales, frequency of patronage, bankruptcies and employment in the hospitality industry
- 1.3 Changes in level of satisfaction when patronising hospitality venues
- 1.4 Changes in attitudes to smoke-free hospitality venues
- 1.5 Changes in air quality
- 1.6 Compliance and enforcement
- 1.7 Other consequences of the ban

2. Introduction

- 2.1 Reasons for evaluating smoke-free bars and restaurants

3. Earlier evaluations

- 3.1 Evaluations of the Tobacco Act of 1988
- 3.2 Evaluations of smoke-free areas in hospitality venues
- 3.3 Evaluations of smoke-free hospitality venues undertaken by other institutes
 - 3.3.1 The Tobacco Act and patrons at pubs, bars and taverns (NOVA)
 - 3.3.2 Air quality, health and job satisfaction among hospitality industry staff (HEMIL Centre)
 - 3.3.3 Smoking habits, attitudes to the introduction of smoke-free bars and restaurants, and the experience of enforcement problems among employees in the hospitality industry (HEMIL Centre)
 - 3.3.4 Lung function and exposure to nicotine among employees in the hospitality industry (STAMI)
 - 3.3.5 The media campaign for smoke-free hospitality venues in spring 2004 (SIRUS)
 - 3.3.6 Media coverage from 1 May – 15 July 2004 (Observer)
- 3.4 Current state of knowledge
- 3.3 Knowledge in demand

4. The normative climate for smoking upon the introduction of smoke-free bars and restaurants

4.1 Changes in the general public's attitude to passive smoking

4.2 A comparison of the support for the Act of 1988 with the support for the amendment to the Act in 2004

4.3 A comparison of the levels of conflict in 1988 and in 2004

4.3.1 Reasons for the lower level of conflict in 2004 than in 1988

4.3.2 Did the Acts establish new social practices?

5. Materials and methods

6. Changes in revenues, frequency of patronage, bankruptcies and employment in the hospitality industry

6.1 Sales from the breweries to the hospitality industry

6.1.1 Data

6.1.2 Results

6.2 Value added tax (VAT) reported by the hospitality industry to the county tax offices

6.2.1 Data

6.2.2 Changes in the revenues of pubs/bars

6.2.3 Changes in the revenues of restaurants

6.3 Changes in self-reported frequency of patronage among patrons

6.3.1 Data

6.3.2 Differences in frequency of patronage between smokers and non-smokers

6.3.3 Changes in the patronage of pubs/bars

6.3.4 Changes in the patronage of restaurants

6.3.5 Weaknesses in the way the question was posed

6.3.6 Changes in the frequency of patronage where the ban is named as the reason

6.3.7 Changes in frequency of patronage among young people

6.4 Changes in self-reported frequency of patronage made by employees

6.4.1 Data

6.4.2 Results

6.5 Changes in bankruptcies

6.5.1 Data

6.5.2 Results

6.6 Changes in employment

6.6.1 Data

6.6.2 Results

6.7 Climatic conditions

6.8 Foreign studies of economic consequences

7. Changes in guests' level of satisfaction when patronising hospitality venues

7.1 Data

7.2 Changes in the level of satisfaction at pubs/bars

7.3 Changes in the level of satisfaction at restaurants

7.4 Weaknesses in the way the question was posed

7.5 Changes in job satisfaction ascribed to the ban

7.6 Would patrons like to return to the old scheme?

7.7 Initiatives to raise the level of satisfaction for patrons of the hospitality industry

7.8 Foreign surveys of changes in satisfaction

8. Changes in attitude to smoke-free hospitality venues

8.1 Data

8.2 Changes in attitude among the general public

8.3 Support for the ban among young people

8.4 Support for the ban among employees

8.5 Do smokers experience the Tobacco Act as victimising?

8.6 Foreign studies of changes in attitude

9. Changes in air quality

9.1 Data

9.2 Changes in air quality at pubs/bars

9.3 Changes in air quality at restaurants

9.4 Has the ban led to more exposure to passive smoking among children?

9.5 Foreign studies of air quality changes

10. Compliance and enforcement

10.1 Data

10.2 Results

10.3 Foreign studies of compliance and enforcement

11. Other consequences of the ban

- 11.1 Street noise, complaints from neighbours, litter outdoors and cleaning indoors
- 11.2 The hospitality industry as a sales channel for snuff
- 11.3 Smoking habits of the general public: quitting and starting
 - 11.3.1 Smoking among young people

12. Conclusion

References

1. Summary

1.1 Background

After 16 years of exceptions from §6 of the Act relating to prevention of the harmful effects of tobacco, the so-called Tobacco Act, a smoke-free regime was introduced at all hospitality venues from 1 June 2004. The previous regulations regarding smoke-free areas in bars, pubs, cafés and restaurants were thereby superseded by an absolute ban on smoking indoors. The authorities' most important reason for revoking the exception was to afford employees in the hospitality industry the same protection against passive smoking as other employees had had since §6 of the Tobacco Act came into effect in 1988. Further, it is pointed out that hospitality venues, discotheques and the like were an important recruitment arena for smoking among young people. Importance was also attached to the fact that numerous individuals with asthma and allergies could not patronise hospitality venues due to the problems they suffered as a result of smoke-filled indoor air. Finally, it was pointed out that the regulations on smoke-free areas were difficult for the industry in terms of compliance.

The desire for an evaluation of the ban was expressed when the issue was discussed by the Storting's Standing Committee on Health and Social Affairs and was repeated during the subsequent parliamentary debate. The explanation was that the ban was controversial, and that there was doubt attached to the economic consequences for the hospitality industry as well as uncertainty associated with the general public's compliance and satisfaction. The evaluation was to be presented after three years at the latest. The Norwegian Institute for Alcohol and Drug Research (SIRUS) won the contract to conduct the evaluation as a link in a broader evaluation of the State's tobacco prevention work in Norway.

1.2 Changes in revenues, frequency of patronage, bankruptcies and employment in the hospitality industry

The evaluation has shown that the reported value-added tax (VAT) from the hospitality industry (restaurants, pubs and bars) to county tax offices was down by -0.8 per cent in the first 12 months after the ban was introduced compared with same interval the year before. In the restaurant segment of the industry, sales remained virtually unchanged (- 0.6%), while typical taverns such as bars and pubs, which have significantly lower sales than the restaurant industry, reported a somewhat more pronounced downturn (- 4.4%).

Food, wine, beer and soft drinks are the hospitality industry's best sellers. Figures for the sale of beer from breweries to the hospitality industry showed a decline of -6.2% after 17 months of smoke-free taverns, compared with a previous interval of the same duration. It has not been possible to obtain similar sales statistics for any of the other products. Since the change in the hospitality industry's total retail sales was marginal (-0.8%), the sale of these product groups has probably changed less than the decline in the sale of beer.

No major changes have been observed in breweries' sale of beer to food retailers subsequent to the ban. This may indicate that the decline in licensed serving of alcohol has not led to more consumption of beer in private settings. Nor was any pattern observed with a view to regional differences in the serving of beer between the northern and southern parts of the country, for example. Conversely, the decline in beer sales was somewhat higher during the coldest periods of the year.

It is difficult to determine how much of the decline in beer sales at taverns can be ascribed to the ban alone. Many conditions can affect the volume of beer served to

guests at hospitality venues, such as price, the customers' purchasing power, climatic conditions, the price of beer from alternative sources (retail price) and availability (number of bars and business hours). The Norwegian Meteorological Institute reports that the first summer with smoke-free dining was colder and wetter than normal – except in the northernmost regions of the country. The summer before, on the other hand, was warmer than usual in large parts of the country. The weather was very different in the two summers in the present comparison of beer sales. In the longer term, SIRUS will make analyses that may make it possible to isolate the effect of the ban on sales from other likely contributing factors.

Besides sales statistics, data is available from surveys (undertaken before and after the ban) on the public's frequency of patronage at hospitality venues. No significant differences were observed in self-reported frequency of patronage among smokers or non-smokers during the period before and after the ban. Nonetheless, it is possible that the reported stability in frequency of patronage on the part of the patrons may also be a result of the question being worded somewhat imprecisely.

A longitudinal survey among hospitality industry staff showed that no less than 70% were of the opinion that the ban had led to no change (39%) or minor changes (31%) in the frequency of patronage at their place of work. Thus these responses support what the sales statistics showed, i.e. a reduction of -0.8%. However, nearly one-third of the employees contended that the ban had led to far fewer guests. The responses to this question were strongly influenced by the attitude of the employees to smoke-free hospitality venues prior to the ban. Thus, as information on frequency of patronage, such data has limited validity.

The number of bankruptcies in the hotel and restaurant industry increased moderately during the two first quarters after the ban, then subsided. Meanwhile, the increase occurred during a season in which the number of bankruptcies has shown a rising tendency in previous years as well. Accordingly, it is not clear whether the observed increase is related to the introduction of smoke-free hospitality venues.

Employment in the hospitality industry displays seasonal variations. A slight decrease in the number of employees was observed in Q4 of the year in which the ban was introduced, compared with the same quarter in the two preceding years.

Employment has since returned to a normal level. It is difficult to say whether the temporary dip can be related to the ban.

A -0.8% decline in revenues in the Norwegian hospitality industry subsequent to the ban is in harmony with the results of a number of foreign surveys. Research literature has consistently shown that the introduction of smoke-free hospitality venues has had little impact on retail sales in the industry. Most of these surveys have nonetheless been performed in geographical units (countries, states, cities) where the percentages of smokers has been lower than in Norway, and where the climate has been warmer. With the somewhat less favourable starting point, it was therefore perhaps rather surprising that the ban on indoor smoking has had such a limited impact on the revenues of the Norwegian hospitality industry.

1.3 Changes in level of satisfaction when patronising hospitality venues

The reason the decline in sales has not been greater for the industry may possibly be that smokers failed to experience the expected reduction in satisfaction. Prior to the ban, 69% and 55% of those who smoke on a daily basis thought that smoke-free

hospitality venues would reduce their satisfaction when patronising pubs/bars and restaurants, but a mere 38% and 32%, respectively, reported an actual reduction in satisfaction 18 months after the ban. This indicates that the ban did not turn out to be as bad as smokers initially feared. The result must be seen in the light of large parts of the hospitality industry having paved the way for outdoor smoking by several types of initiatives to raise the level of satisfaction. Among non-smokers, 81% and 82%, respectively, reported a higher level of satisfaction with pubs/bars and restaurants after the ban. One year after the ban, no fewer than three of four respondents stated that they would retain the scheme of smoke-free hospitality venues if given a hypothetical choice.

1.4 Changes in attitudes to smoke-free hospitality venues

The general public's attitude to passive smoking has changed since the Tobacco Act was implemented in 1988, effectively banning smoking in all workplaces (minus the hospitality business) and enclosed public areas. By the time hospitality venues became smoke-free in 2004, far more people perceived passive smoking as a health problem than what had been the case in 1988. Support for the ban has increased steadily. The most recent survey (December 2005) indicated that three of four people were positive to smoke-free hospitality venues.

The views of smokers and non-smokers were largely in harmony about the Tobacco Act in 1988, but in 2004 it appeared to be considerable differences in views on smoke-free hospitality venues. In 2005, 84% of non-smokers were positive to smoke-free hospitality venues, while just 45% of those who smoke on a daily basis shared the same opinion. Two years earlier, however, only 25% of those who smoke

on a daily basis were positive to the idea, so support for smoke-free hospitality venues has grown quickly, not least among those in the most sceptical group.

Steadily growing support for smoke-free hospitality venues has also been observed in a number of international surveys of attitudes.

1.5 Changes in air quality

While just one of ten guests reported very good indoor air quality in pubs/bars during the scheme with smoke-free areas, six of ten reported very good air quality after the ban. Similarly, the percentage reporting very good indoor air quality at restaurants increased from about 40% before the amendment to 75% afterwards.

1.6 Compliance and enforcement

Prior to the ban, smokers had reported a high degree of intended compliance with the ban on smoking. The patrons did not observe many problems with smoke-free hospitality venues either. Among the individuals with the highest frequency of patronage to pubs/bars, a mere 3% had observed any serious enforcement problems during the 18 months of smoke-free venues. The comparable figure for restaurants was 2%. Even among smokers, only a very small percentage had observed or experienced any type of enforcement problems. Staff reported fewer unpleasant incidents and better compliance with the total ban of smoking than with smoke-free areas.

1.7 Other consequences of the ban

Nearly half the employees contended that the ban had led to more noise outside the premises. However, this had not entailed any more complaints from neighbours. There were also reports of more cigarette butts on the street near the front door, but it was not clear whether this represented a serious and unexpected problem. Employees pointed out that the advantages of the ban included easier cleaning, work clothes that did not reek of smoke, a better state of health and better air quality.

The evaluation has shown that since the ban, the hospitality industry has become a sales channel for snus (a Scandinavian type of moist smokeless tobacco) and an arena for snus use. It is likely that the ban has accelerated the use of snus here in Norway. It is also likely that the ban has accelerated the decline in the percentage of smokers among the general public, although it is difficult to isolate one particular effect. Among smokers, nearly half the demographic from ages 18 to 20 reported that the ban had caused them to cut back on cigarettes, but the responses were biased by the attitude young people had to the ban on smoking and are thus not entirely valid. However, a survey from the USA showed that the progression from experimentation to becoming a regular smoker was significantly lower in regions with a ban on smoking in hospitality venues. Our data is not appropriate for determining whether the ban has contributed to the reduction in recruitment to smoking observed in Norway the latest years.

2. Introduction

After 16 years of exceptions from §6 of the Act relating to prevention of the harmful effects of tobacco – the so-called Tobacco Act – a smoke-free regime was introduced at all Norway's hospitality venues as from 1 June 2004. The previous regulations regarding smoke-free areas in bars, pubs, cafés and restaurants were thereby superseded by an absolute ban on smoking indoors. The authorities' main reason for abolishing the exception was to afford employees in the hospitality industry the same protection against passive smoking as other employees had had since §6 of the Tobacco Act came into effect in 1988. Further, it is pointed out that hospitality venues, discotheques and the like were an important recruitment arena for young smokers. Importance was also attached to the fact that many individuals with asthma and allergies could not spend time in hospitality venues owing to the problems they suffered as a result of smoke-filled air. Finally, it was pointed out that the regulations entailing smoke-free areas caused problems for the industry in terms of compliance (Proposition No. 23 to the Odelsting, 2002-2003).

Several aspects of the ban have already been evaluated in other reports (see Chapter 3.3 for a summary of other evaluations). The main ambition of this report is to investigate whether the introduction of smoke-free hospitality venues has led to:

- * Changes in frequency of patronage, revenues, bankruptcies and employment in the hospitality industry*
- * Changes in satisfaction among smokers and non-smokers when patronising hospitality venues*
- * Changes in air quality as reported by patrons*
- * Changes in attitudes to the Act among smokers and non-smokers*

** A lack of compliance and enforcement*

** Other unforeseen consequences*

A subsidiary goal is to make a comparative analysis of the standard operating culture in terms of smoking in 2004 and upon implementation of the Tobacco Act in 1988. This ambition is limited to providing a relevant backdrop for understanding the different levels of conflict at the two points in time.

2.1 Reasons for evaluating smoke-free bars and restaurants

The desire for an evaluation of the ban was put forward by the Centre Party when the case was before the Storting's Standing Committee on Health and Social Affairs (Recommendation No. 72 to the Odelsting, 2002-2003). The suggestion was repeated by the Centre Party (Ola D Gløtvold) during the subsequent parliamentary debate, where it was supported by the Christian Democratic Party (Magne Aarøen). The idea of an evaluation also received subsidiary support from the Party of Progress (Harald T Nesvik) which, along with the Coastal Party, was initially opposed to the ban. The minutes of the debate state that:

These amendments to the Tobacco Act have engendered rather comprehensive discussions, and relatively many objections to the Act, especially on the part of hotel and restaurant owners. These consequences must be examined, but we must also consider the positive effects of the Act, and gauge the impact of the Act in the long term. For that reason, we would like the Tobacco Act, and specifically §6, to be evaluated three years at the latest after the amendments have come into force. (Parliamentary records, no. 7, 18 March – 8 April; 477-495)

There is considerable international interest in the effects of smoke-free hospitality venues. On the date of implementation, i.e. 1 June 2004, only four US states and Ireland had similar legislation. New Zealand, Sweden, Malta, Italy and several US

states and Canadian provinces enacted similar rules in 2004 and 2005¹. Political decisions have also been taken in Scotland, England, Northern Ireland, Uganda and Uruguay, among others. Depending on the experience garnered by these states, territories and countries, a ban on smoking could reach the political agendas in a number of other countries as well. There has been considerable foreign demand for evaluation data, not unlike what was registered after Norway became one of the first countries in the world to introduce an absolute ban on tobacco advertising in 1975 (Bjartveit 2003). As a pioneer nation in this field, it is expected that Norway will supply evaluation data to other countries' authorities as well as to the international research community.

A third reason for evaluation is that hospitality industry owners expressed concern about enforcement problems and feared negative economic consequences before the ban was introduced. The industry feared that smokers – who were presumed to frequent hospitality venues more often than others – would cut back on their patronage to an extent that would not be compensated by any rising influx on non-smoking patrons. These arguments were also put forward by the tobacco industry (Magzamen & Glantz 2001), who presented themselves in the US as an ally in the hospitality industry's struggle against smoke-free hospitality venues (Ritch & Begay 2001). Representatives of the tobacco industry were less visible in Norway.

A fourth reason is that an *ad hoc* group, *We Smokers*, was organised to obstruct the implementation of the ban, advocating sabotage. Their ambitions made it particularly relevant to evaluate enforcement issues. The group's website states:

¹ As of May 2006, the following U.S. states and territories had a ban on smoking at workplaces, including hospitality venues: California, Delaware, New York, Connecticut, Maine,

The organisation 'WE SMOKERS' is being organised to fight the most asocial act adopted by the Norwegian Storting in our time. We urge you as a smoker, or tolerant non-smoker, to join and help to generate a far-reaching, powerful public opinion to safeguard freedom in our everyday lives. 'WE SMOKERS' demand that the Storting reassess the Act and give us a Tobacco Act that we all can live with. The people's movement We Smokers urges pubs, bars and restaurants to declare that the cabinet ministers and MPs who voted for the new Tobacco Act will not be welcomed in their establishments.

A press release from the organisation stated that:

A total ban on smoking will destroy the bar and pub culture where many have their social lives. We would contend that this is Dagfinn Høybråten's real motive: 'The minister wants to place constraints on the type of social life he considers 'unwholesome and immoral'. The most effective way he can do that is by destroying the enjoyment of the half of the bar and pub patrons who are actually smokers. This is nothing but self-righteous moral revenge on 'disobedient' people who choose to ignore the authorities' health warnings. Høybråten has declared a 'holy war' to humiliate and punish people with different, more liberal values and ways of life.

Massachusetts, Rhode Island, Montana, Vermont, Washington, New Jersey, Arkansas, Utah, Colorado, Florida, Idaho, Hawaii, North Dakota, Puerto Rico, Guam and Washington, D.C.

3. Earlier evaluations

3.1 Evaluations of the Tobacco Act of 1988

The so-called Tobacco Act, intended to ensure smoke-free indoor air in areas accessible to the general public, entered into force on 1 July 1988. The Storting (Norwegian parliament) granted the hospitality industry a temporary exemption from the Act, but stated there would be a gradual transition. Although the authorities did not institute any extensive evaluation of the Tobacco Act at that time, some surveys were conducted nonetheless. A nation-wide survey conducted one year after the ban showed that one-fourth of employees stated that their place of work was still not in compliance with the order. Among those who reported new rules for smoke-free workplaces, the majority (69%) was of the opinion that the introduction had caused no problems, while 26% stated the rules had led to some problems and 2% cited serious problems. In the same survey, 61% contended that their job satisfaction remained unchanged after the Act, while 26% had a higher level of satisfaction and 10% stated they had a lower level of satisfaction (Lund 1990). At the same time, a survey among employees in the municipality of Bergen showed that the Tobacco Act was generally favourably received and respected, and had more frequently improved than reduced job satisfaction (Klepp & Solberg 1990).

3.2 Evaluations of smoke-free areas in hospitality venues

As of 1 July 1993, regulations were implemented requiring that at least one-third of the tables, seats and rooms in restaurants, hotels and other lodging and hospitality venues had to be non-smoking areas. Moreover, it was decided that restaurants and other hospitality venues that had open room solutions leading into adjacent premises used for purposes other than dining had to be totally smoke-free from 1 January

1996. As from 1998, the ban on smoking covered least 50% of the space in hospitality venues.

A series of annual nation-wide surveys conducted by Statistics Norway and commissioned by the National Council on Tobacco and Health (incorporated into the Directorate for Health and Social Affairs as from 2003) asked several questions designed to describe guests' experience of dividing premises into smoking and non-smoking areas. SIRUS has reanalysed these questions in connection with the current report.

In a survey performed about six months *prior to* these regulations being implemented in 1988, 88% (N=1816) reported that they welcomed the scheme with smoke-free areas in hospitality venues. Support was also high among those who smoke on a daily basis (85%, N=631). The investigation showed that nine of ten non-smokers wanted to eat in non-smoking areas, while seven of ten of those who smoke on a daily basis would prefer to eat in a smoking area.

A survey undertaken 18 months after partitioning was introduced asked the respondents about their experience. 66% (N=1950) stated that the scheme worked well or was satisfactory, while 24% felt it worked poorly. There was little difference in the evaluations of smokers and non-smokers. After six years of experience with smoking zones in the hospitality industry, in 1994, 43% (N=1944) felt that zones allowed cafés, restaurants and hotels to accommodate smoking and non-smoking guests alike, while 30% contended that smokers were still at an advantage and 18% felt that non-smokers were the more privileged.

In 1996, no fewer than 74% (N= 1306) reported that they wholly (55%) or partially disagreed (19%) with the statement *'The Act that regulates where smoking is allowed should be even stricter'*. In the same survey, 30% (N=1306) declared that they wholly (11%) or partially agreed (19%) with the statement *'The Act that limits where it is allowed to smoke is an undue encroachment on personal freedom'*. Nearly half of those who smoke on a daily basis considered this opinion of the Act as paternalistic.

The figures are indicative of an atmosphere in the mid-1990s when passive smoking was considered to be sufficiently regulated, while a significant minority considered the applicable regulations to be depriving them of freedom. The high degree of satisfaction with the rules for smoking zones must be seen in the light of what had been the alternative up to that time, i.e. no restrictions at all. The satisfaction with smoking zones may also be an expression of enthusiasm about a fresh transition to something better, and not necessarily simply a description of how people experienced way the scheme worked. The results of a survey conducted by MMI in 1999 indicated that satisfaction with separate smoking areas was not particularly high in any event. In that context, more than 70% agreed that there should be physical partitions between smoking and non-smoking areas (MMI 1999).

An evaluation of the inspection authorities' experience with zones also showed that compliance with these regulations varied considerably. There were especially many infractions of the regulations at pubs and bars (Knoff 1999). People in the industry also reported a lack of respect for smoke-free areas among the guests and problems with enforcement, especially at typical 'watering holes'. Restaurants, on the other hand, generally experienced compliance with the rules, and the size of the non-smoking areas were considered sufficient to accommodate the demand on the part of

the guests (Knoff 1999). The sanctions available for infractions were considered effective, but oversight practices were rather random.

3.3 Evaluations of smoke-free hospitality venues undertaken by other institutes

While the assessment of smoke-free areas took place somewhat unsystematically and in a desultory manner, the evaluation of totally smoke-free hospitality venues has been thorough. Thus far, six reports have been published, each of which has addressed different effects of the measure. One common trait of the issues studied in these reports is that they rarely touch on the fields of research addressed in this report. Accordingly, we will briefly review the results of the evaluations performed by other institutes.

3.3.1 The Tobacco Act and patrons at pubs, bars and taverns (NOVA)

With funding from the Research Council of Norway, Norwegian Social Research (NOVA) investigated *"What happened with the patrons of bars and taverns after the advent of the new Tobacco Act?"* (Pedersen 2005). A number of regular patrons at a number of bars and taverns were sought out and interviewed before and after the ban. The report showed that the guests felt that going out had changed as a result of the ban. It was stated that fewer frequented these taverns than before, and that the enjoyment value had been reduced. Notwithstanding, 'the same old gang' loyally kept up their patronage, despite their reported distaste for having to stand outdoors to smoke and expressions of irritation over the Act and its political mastermind. Loyalty to their haunts made most patrons willing to comply with the rules about smoking outdoors. None of them had stopped smoking as a result of the Act (Pedersen 2005). The report says very little about whether the ban had led to social isolation for this customer fraction.

3.3.2 Air quality, health and job satisfaction among hospitality industry staff (HEMIL)

Commissioned by the Directorate for Health and Social Affairs, the HEMIL Centre at the University of Bergen surveyed changes in employees' experience of air quality, self-reported state of health and job satisfaction. The panel study consisted of a preliminary survey and two follow-up surveys that were conducted five months and one year, respectively, after the introduction of smoke-free hospitality venues. A preliminary report has been made on the changes from the first to the second measurement based on responses from 847 employees in the hospitality industry (Hetland & Aarø 2005). The report concludes that there was a powerful reduction in the percentage of employees troubled by passive smoking (from 44% to 6%). Further, there was a clear reduction in air quality problems such as bad odours, dry air or stale air. During the period, there was also a distinct reduction in the percentage who reported general medical problems, and a moderate reduction in the percentage that had respiratory problems. Among the smokers, a moderate change was observed towards less job satisfaction.

3.3.3 Smoking habits, attitudes to the introduction of smoke-free bars and restaurants, and the experience of enforcement problems among employees in the hospitality industry (HEMIL)

Based on the same set of data described in 3.3.2, the HEMIL Centre also measured changes in the employees' smoking habits, attitudes to the ban and experience of enforcement problems before and after the ban. The report indicated that one of ten of those who smoked on a daily basis had quit smoking daily. Among those who still smoked, consumption had been reduced by 7 - 9% among those who smoke on a daily basis and somewhat more among occasional smokers. While 43% believed that many guests would not comply with the ban, a mere 7% reported that compliance was actually a problem. Compliance with the intention of the Act was reported to be

considerably higher with the total ban on smoking (90%) than with a partial ban (51%). The total ban of smoking also reduced all types of enforcement problems. On the other hand, the proportion who feared losing their jobs due to the ban increased by 8 percentage points. The support for the ban prior to its entry into force was greater than the scepticism, and the subsequent change of attitude favoured the ban on smoking.

3.3.4 Lung function and exposure to nicotine among employees in the hospitality industry (STAMI)

The National Institute of Occupational Health, Norway (STAMI) was commissioned by the Directorate for Health and Social Affairs to conduct a survey of air quality at 13 hospitality venues before and after the introduction of smoke-free hospitality venues. As part of the survey, 93 employees of the same hospitality venues were examined and their lung function measured. Moreover, their urine was tested for a residual metabolite of nicotine (cotinine). The amount of nicotine in the air was substantially lower after the ban was introduced compared with the amount measured prior to the ban. The total amount of dust in the air at hospitality venues was also substantially lower after the Tobacco Act was amended. The concentration of cotinine in the urine of employees who neither smoked nor chewed tobacco was statistically significantly lower after smoke-free hospitality venues were introduced. This applied both to urine samples taken right after their shifts and when measured the next morning. A substantial reduction in cotinine was also found in the urine of the individuals who smoked. This difference was statistically significant in urine samples taken right after shifts, but not in the tests taken the next morning. Measurements of the employees' lung function indicated that tiny obstacles to the air flow developed while they were working prior to the introduction of the ban on smoking in hospitality venues. This was found in non-smokers and in individuals

who stated that they have or have had a history of asthma. These changes were not found after the ban was introduced.

3.3.5 The media campaign for smoke-free hospitality venues in spring 2004 (SIRUS)

Commissioned by the Directorate for Health and Social Affairs, SIRUS evaluated the communication campaign that was conducted to prepare the public and the hospitality industry for the amendments to the Tobacco Act on 1 June 2004. The campaign was conducted during the period from 22 April to 20 June, and consisted of a wide range of very different components. Publicity, paid commercials and mass mailings through the post to relevant enterprises and organisations were the main elements of the campaign.

A survey conducted by MMI less than three weeks after the Tobacco Act was amended showed that the campaign attracted a level of attention that was comparable to previous campaigns that had been designated successful. Observers of the campaign were largely able to identify the main intentions of the Act. The emotional reactions among smokers indicated that the Act has been difficult to accept and can be an expression of reactance, rationalisation or defence of their social identity as smokers. A mere 5% of the smokers stated that they intended to defy the ban's intention by continuing to smoke at pubs/bars. The campaign was considered credible, enlightening and appropriate for facilitating understanding of the ban.

3.3.6 Media coverage from 1 May – 15 July 2004 (Observer)

Commissioned by the Directorate for Health and Social Affairs, Observer Norge made an analysis of the media coverage of the introduction of smoke-free hospitality

venues. The analysis began one month before the ban entered into force and ended ten weeks later. The analysis registered 846 remarks in 825 stories on the ban. 43% of the remarks expressed a supportive attitude to the initiative. The positive reports generally had two messages: *"Everyone has the right to work in a smoke-free environment"* and *"Passive smoking is harmful"*. The messages were most typically transmitted by volunteer organisations, asthmatics, allergy sufferers, the parents of young children and non-smokers. 28% of the headlines had a critical approach. The most prominent message in these was *"the Tobacco Act can lead to negative economic consequences and subsequent the loss of jobs"* and *"The problem can be solved by improved ventilation"*.

Supportive messages were particularly prominent in the editorial/commentary columns in the newspapers. This indicates that most media were positive to the ban. The critical objections were generally channelled through letters to the editor and feature articles, although they were also heard frequently in the broadcast media. As opposed to those behind the ban, who most typically mentioned a social perspective and used plain language, the negative reports focused more on individuals (empty tables, local lay-offs, personal consequences for smokers) and were characterised by colourful, strong language.

3.4 Current state of knowledge

The reports written thus far about the effect of the ban have already produced valuable knowledge. They have shown that the media campaign that introduced the ban on smoking received considerable attention and that its message helped facilitate social acceptance among the majority of the people, as well as reactance among smokers. Media coverage of the ban was high, and the angles were more frequently positive than negative. The reports have further ascertained that the patrons of so-

called 'brown' pubs (taverns) reported less enjoyment and less patronage. Employees have reported a high degree of compliance and few enforcement problems. Moreover, employees who smoke reported less consumption, and stated that their exposure to passive smoking has been virtually eliminated. They also report a better state of health, and a high degree of support for the Act. Every third employee was nonetheless afraid of losing his/her job as a result of anticipated negative consequences of the ban.

3.5 Knowledge in demand

Other than this knowledge, we aspire to respond to the following questions in our report:

- i) Has the ban led to a lower frequency of patronage, diminished revenues, more bankruptcies and less employment in the hospitality industry?*
- ii) Which changes in satisfaction can be observed among smoking and non-smoking guests who patronise hospitality venues?*
- iii) Has the ban caused guests to experience improved air quality?*
- iv) Have the changes in attitude to the Act been different in different demographic groups?*
- v) To what extent have patrons reported a lack of compliance and enforcement problems?*
- vi) Has the ban led to other unforeseen consequences?*

4. The standard operating environment for smoking culture upon the introduction of smoke-free bars and restaurants

The introduction of smoke-free hospitality venues was possible because the general public's attitude to smoking and passive smoking had changed. Before we begin to address the above-mentioned questions, Chapter 4 will show how this change in opinion has been expressed in surveys that have been made.

4.1 Changes in the general public's attitude to passive smoking

The illustration from 1928 (below) illustrates the literary critic Helge Krogh's relaxed attitude to smoking when surrounded by the authors Arnulf Øverland, Johan Bojer, Oscar Braathen and others. The fact that passive smoking was not a problem at that time is evident from the verse that accompanies the drawing: "*Smoking a Tiedemann will give pleasure to both you and your neighbour*".



Passive smoking was first identified as a concept in 1962 in an internal document from the tobacco industry. In the context of research, the term was first used in 1970. However, the subsequent international discourse used other concepts equally often; *environmental tobacco smoke (ETS)*, *second-hand smoke*, *involuntary smoking* and *tobacco smoke pollution*. While the industry has preferred the first term, there has been a debate on terminology usage on the health-conscious side (Chapman 2003).

Among the authoritative summaries of knowledge about smoking handed down by the US Surgeon General, the problems caused by passive smoking were first described in 1972. Incipient research indicated that inhaled smoke from others' cigarettes could also have an impact on the health of non-smokers, and that a growing percentage of the general public experienced discomfort from being in smoke-filled rooms (US Surgeon General 1972).

At about the same time, the first eventually very aggressive *non-smokers rights* movements were established. Fuelled by increasingly new epidemiological reports about possible health hazards of passive smoking, coalitions were formed to exert pressure on the authorities to introduce smoke-free public arenas.

The emergence of passive smoking as a social problem has previously been described by Lund (1996), and will not be discussed here. A stocktaking of the knowledge regarding the health risk inherent in passive smoking was also recently presented in Norwegian (Norwegian Public Report (NOU) 2000:16, Prop. No. 23 (2002-2003) to the Odelsting). The same applies to the criticism against this knowledge base (Nord 2004). The present report will briefly refer to some findings from the annual smoking habit surveys that illustrate that views on passive smoking have changed a great deal - not least in the very recent past.

Figure 1. Compared with breathing polluted city air, do you think breathing in a smoke-filled room is more harmful, equally harmful or less harmful to your health? The percentage that answered 'more harmful' in 1989 (N=2186), 1995, (N= 1411) and 2002 (N=1306). Source: Statistics Norway.

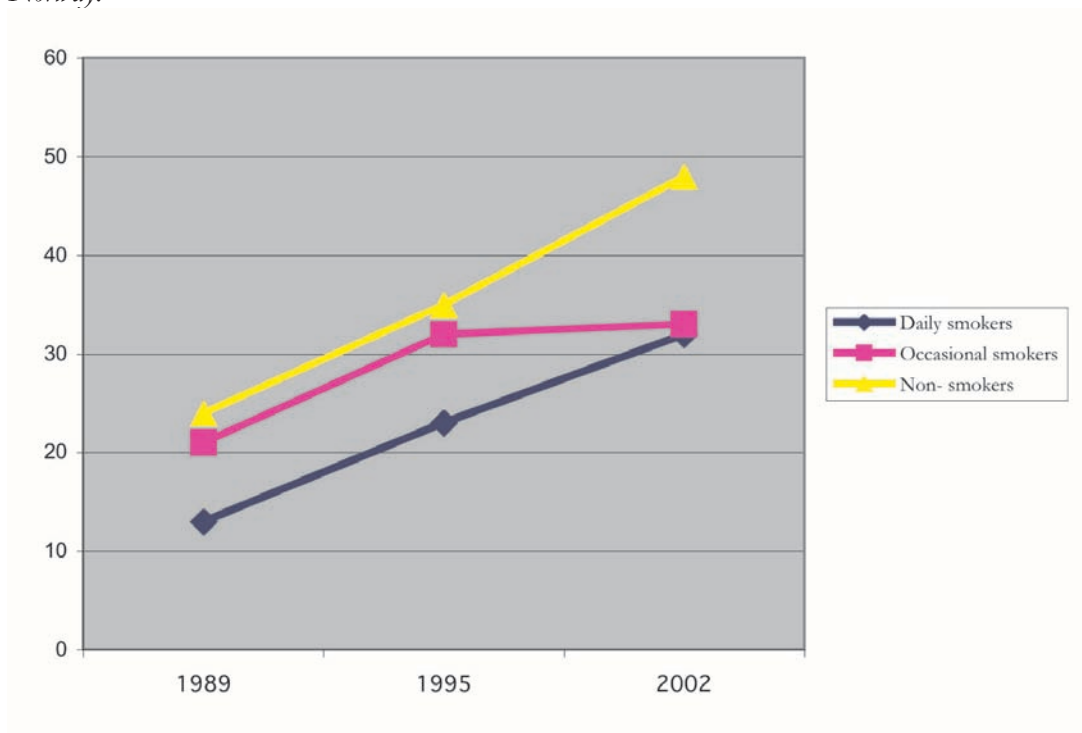


Figure 1 indicates that the proportion who asserts that breathing in a smoke-filled room is more harmful to health than breathing polluted city air almost doubled from 1989 to 2002. The proportion who reports discomfort from being in smoke-filled rooms increased from 48% in 1975 to 67% in 2002 (Lund & Lindbak 2004). A growing number of people have also placed restrictions on smoking in private homes. In 1993, 11% (N=1690) stated that they did not allow smoking in their homes. This figure had climbed to 52% in 2004 (N=1344) – the year in which the ban was introduced. In 1996, no fewer than 85% (N=1306) stated that they wholly

(54%) or partially agreed (31%) that "*Passive smoking can seriously harm your health*" (unpublished data, SIRUS 2006).

The figures indicate that more people construed passive smoking as a health problem when smoke-free hospitality venues were introduced in 2004, than when the original Tobacco Act was adopted in 1988. The conflict theoretician Randall Collins, who has studied smoking as a historical social ritual, asserts that the emergence of negative connotations attached to passive smoking is a social construction. He contends that passive smoking cannot be considered inherently negative, but that the phenomenon has been imbued with content by arbiters of norms wielding powerful models. Collins points out that the idea of passive smoking as a risk factor has been the most important requirement for social acceptance for placing constraints on smoking (Collins 2004).

4.2 A comparison of the support for the Tobacco Act in 1988 with the support for the amendment in 2004

Midway between 1988 and 2004, non-smoking areas were considered to afford sufficient protection against passive smoking, and the general public was not overly eager to expand constraints. As late as in 1999, only 30% completely (15%) or partially (15%) agreed that there should be a total ban on smoking in restaurants and other hospitality venues. No fewer than 65% completely (50%) or partially (15%) disagreed with this (MMI 1999).

Five months after the introduction of smoke-free hospitality venues in 2004, support was significantly higher, though, and not very different from the opinion registered five months after the Tobacco Act was adopted in 1988. At that time, 67%

(N=2199) stated that they were adherents of the Tobacco Act anno 1988. A poll on people's attitudes to smoke-free hospitality venues performed by NORSTAT in October 2004 showed that 62% welcomed the ban (N=1000).

Even though the support for the Tobacco Act in 1988 and the support for the amendment 2004 were more or less the same among the general public, important differences were observed. While a majority of those who smoke on a daily basis supported the Tobacco Act in 1988 (56%, N=851), the support for a total ban 16 years later was only on 23% (N=237) among smokers (NORSTAT 2004). Views on smoke-free hospitality venues were also divided, based on smoking habits, in a manner that did not exist in the evaluation of the Tobacco Act in 1988. Lund & Rise (2004) have previously pointed out that a total ban could have led to a more intense conflict between smokers and non-smokers. In the evaluation of the media campaign (Chapter 3.3.5) that introduced the total ban, researchers found that the message elicited more anger/irritation among smokers, a feeling of being deprived of freedom, little understanding and a low degree of empathy for hospitality industry employees exposed to smoke. The interpretation of these finds stated that:

..... the finds are indicative of an escalating group conflict. Not necessarily between smokers and non-smokers, but between the public health service and smokers. Smokers are increasingly facing social stigmatisation. They are obviously aware of this and even smokers generate more arguments against than for smoking. Their legitimacy is continuously being undermined by a rising level of restrictive measures that prevent them from engaging in legal, but socially stigmatised behaviour. Moreover, they are susceptible to a number of campaigns aimed not only at their smoking, but also at their identity. Smokers are in a situation in which their identity is questioned. One way to handle such a threat to their identity might be to leave the group of smokers and establish a more valuable social identity, i.e. become a non-smoker and thus restore their damaged self-image. This is a strategy chosen by many. The decisive factor is how strongly a smoker identifies with smokers as a group. The stronger this identification, the weaker is their intention to stop smoking, i.e. they will defend their identity. Accordingly, further restriction by introducing a ban on smoking in hospitality venues could lead smokers to respond by having an identity conflict that causes them to maintain their pattern of behaviour and activate strategies to defend their identity by not abstaining from smoking. The challenge for the public health service will be to identify the terms under which smokers accept that their identity is challenged in a manner that limits the conflict and does not

escalate it (increasing the probability they will quit smoking), and under which terms they will be put in a defensive position and feel forced to protect their identity (reducing the probability they will quit smoking).

4.3 A comparison of the levels of conflict in 1988 and in 2004

Even though smokers and non-smokers agreed more in 1988 and generally welcomed the Tobacco Act, the media debates at that time were more intense and more hostile than the advance reports on the ban in 2004 (Lund 1996, Observer 2004). This paradox may be related to the resistance in 1988 being headed by a strong, high-profile group of actors, lawyers, comedians, politicians and editors in the active *ad hoc* association known as the Smoke Ring. With financial support from the tobacco industry (Johnsrud 1991), the Smoke Ring dispatched letters to MPs, took out full-page commercial ads in newspapers and participated in debate programmes in the broadcast media. Their message was that the risk inherent in passive smoking had not been clarified, and that the 40% of those in Norway who smoked would be made into criminals. Letters to the editor written by smokers stated that they felt persecuted by a crusade of health fascists who degraded, discredited and harassed them. On behalf of smokers, representatives of the Smoke Ring wrote and talked about slander, libel, mockery and ridicule. The organisation politely declined well-intentioned paternalism which, supported by a liberalistic ideology, they felt raised associations with a 'caretaker' state. It was repeatedly contended that the contempt and debasement would provide fertile conditions for smoking in defiance (Lund 1996).

In the parliamentary debate, one MP described the bill as *unwholesome, criminalising, foolish, polarising, manipulating, and custodial* (Parliamentary records, 11 April 1988; 388).

The following quotation from the MP illustrates the level of conflict in 1988:

Personally, I quit smoking on New Year's Eve. I quit every New Year's Eve. I am tempted to start smoking again today just to show that if I quit, I will do so of my own free will and because I feel it makes sense, and not because the majority in this room are forcing me to protect me from myself. I also feel that the bill is anti-social, since creating legal barriers between smokers and non-smokers is tantamount to introducing social divisions into Norwegian society. It means a class distinction, i.e. between the good and the bad, between smokers and non-smokers.
(Carl I. Hagen. Parliamentary records, 11 April 1988; 388).

The malicious attacks may possibly have caused the popularity of the Tobacco Act to dwindle in the run-up to the decision in July 1988. Three years previously, the response had been 10 percentage points higher (77%, N=2084) than what was registered in 1988 (67%, N=2199). Among smokers, support was reduced by 16 percentage points (74%, N=968) (58%, N=1083) during the same period. A survey undertaken four years later showed the Act had regained that support. In 1992, 74% (N=1818) favoured the Act. The same was true of 68% (N=822) of the smokers.

4.3.1 Reasons for the lower level of conflict in 2004 than in 1988

There were several reasons for the lower level of conflict in 2004, as registered by Observer (Observer 2004), among others. First of all, the authorities had choreographed an extensive media campaign to pave the way for a smooth transition to totally smoke-free hospitality venues. The campaign had also been intended to ensure that the public was familiar with the health risks related to passive smoking and that the employees in this industry had the same right to protection against passive smoking as any other employees (Lund & Rise 2004).

In addition, there were 10 per cent fewer smokers than in 1988 (Lund & Lindbak 2004). A survey also showed that the remaining smokers as a group contained an overrepresentation of individuals with socio-demographic characteristics commonly considered unattractive. Based on a diffusion theory perspective, researchers were of

the opinion that smoking had reached the final stage in the historical diffusion model (Lund & Lund 2005). Given the situation, we must assume that the utility and change potential of defending smokers' rights were considered lower than in 1988. Those who opposed the ban had few leaders that could deliver their message with the same appeal as the celebrities in the Smoke Ring had done 16 years previously, and as the chair of the Party of Progress, Carl I. Hagen, had done from the Storting's rostrum. Any resistance on the part of MPs this time was characterised by more reluctant acceptance and surrender. In 2004, there were few attempts to garner voter support by raising objections to the ban. In the Storting, only the Party of Progress, the Coastal Party and two representatives of the Socialist Left voted against the ban.

The administration of the Norwegian Confederation of Trade Unions was among the most enthusiastic proponents of the ban on smoking, in contrast to the situation 15 - 16 years previously. In 1994, volunteer health-related organisations such as the Cancer Society, the Norwegian Association of Heart and Lung Patients, the National Association for Public Health, the Norwegian Asthma and Allergy Association and the Norwegian Olympic Committee and Confederation of Sports had formed a joint body called 'Tobacco Free' in collaboration with professional organisations such as the Norwegian Medical Association, the Norwegian Dental Association, the Norwegian Midwives' Association, the Norwegian Nurses' Association and the Norwegian Union of Municipal and General Employees. Tobacco Free worked to promote the ban in the Storting and the media.

A quote from the ban's most tenacious opponent, the health economist Erik Nord at the Norwegian Institute of Public Health, illustrates the climate of the debate and the absence of objections to the ban in 2004:

My reaction came from the pit of my stomach when the bill was announced, and it came with a fierce intensity. That made the incredible silence that met the bill even more frustrating. There were some letters to the editor, of course, and a couple of TV debates. But where were the organised, massive reaction and the storm of protests from the heart of the people? Where were all the enlightened, articulate, bright minds in the world of academia and the mass media who do not usually have to be asked twice to defend freedom and social justice? Where were the liberals? Where was the '68 generation'? Where were the guardians of our principles? Was it really the case that this matter was not important simply because they had never smoked themselves or had quit long ago?

(Nord E. 2004: 64)

A group of researchers in social medicine and epidemiology got together and wrote a letter to the editor that challenged the knowledge base about the health risks of exposure for passive smoking (Bakketeig, et al. 2003, Olsen & Nilsen 2003), but the initiative failed to result in any broad-based organised resistance. Repeated tirades against the ban came from Erik Nord, who, together with the comedian Per Inge Torkildsen, more than anyone else personified the resistance to smoke-free dining. As early as in 2002, Erik Nord withdrew from the National Council for Health Care Priorities in protest against the ban and attacked the Act from an ethical and social policy position, at the same time as he criticised the administrative procedure for having a professional bias. Nord gathered all his crass objections in his book *"Gun smoke & peace pipe. Epistles from the inside of the Smoke War"* (Nord 2004). Torkildsen engaged mainly in frivolous ridicule of Minister of Health Dagfinn Høybråten, the driving political force in the work to get the ban adopted. Two headlines in Dagsavisen on the days prior to the ban illustrated the absence of opposition. *No resistance remaining against the Tobacco Act (Dagsavisen 29 May 2004), Opposition up in smoke (Dagsavisen 28 May 2004).*

4.3.2 Did the Acts establish new social practices?

While 21% of gainfully employed people stated that they already worked in smoke-free workplaces when the Tobacco Act came in 1988 (Lund 1990), in 2004 several

restaurateurs had also voluntarily introduced the ban on smoking on their hospitality venues. This may possibly illustrate that both legislative amendments did not necessarily pioneer, but definitely accelerated social development in this area.

5. Materials and methods

Chapters 6 - 10 address five issues for investigation. Each of them required an adapted survey design. This made it necessary to use many data sources. Some data already existed in publicly available statistics. This includes sales statistics, the reporting of VAT (value added tax), bankruptcy statistics and employment statistics. However, the evaluation group still had to collect its own data for most of the questions for investigation. The most important were repeated surveys in a representative sample of the population undertaken by Statistics Norway before and after the ban. For certain questions, it was appropriate to obtain data from several sources such as the omnibus surveys undertaken by MMI, NORSTAT and Opinion. Information about collection methods, data and analyses will be provided in the introduction to each chapter.

6. Changes in revenues, patronage, bankruptcies and employment in the hospitality industry

Prior to the ban, a number of opinion polls indicated that resistance was stronger among smokers than non-smokers. The majority of the smokers expected diminished enjoyment at smoke-free hospitality venues, and roughly every third smoker expected to patronise hospitality venues less often. In a survey undertaken by NORSTAT in March 2004, 37% of all respondents were of the opinion that the ban would lead to less frequency of patronage, while only 10% believed more people would go out. In the same survey, 54% expected that the hospitality industry would see reduced revenues, while only 3% believed sales would pick up (NORSTAT 2003).

Supporters of the ban contended all the same that the industry had cause for concern as patronage would decline. They pointed out that smokers constitute a minority of the population and any decline in smokers' frequency of patronage would be offset by a relatively small influx from the non-smoking majority. The reasoning assumes the smoking habits of the guests are identical to those of the population at large. On the other hand, if smokers were overrepresented among the industry's best customers, i.e. those who regularly spent money at hospitality venues, and they intended to go out less often, the reasoning was not valid. Further, the reasoning assumed that the 25% of non-smokers who stated that they would be increasing their frequency of patronage, would actually follow through on their intention.

We surveyed changes in the industry's customer base in connection with the ban through self-reporting on frequency of patronage. In addition, we collected sales data from the hospitality industry.

6.1 Sales from the breweries to the hospitality industry

6.1.1 Data

Norwegian Brewers provided information about the number of litres of beer sold every month since January 2003. Sales statistics are divided by sales channels, tax class and type of packaging. It has not been possible to get sales figures from before 2003.

6.1.2 Results

If we compare the sale of beer to the hospitality industry in the first 17 months after the ban with the sale in the 17-month period prior to the ban, sales were down by 6.2%. As we will see, the decline was stronger during the winter months than in the summer months.

Sales changes in the early half of the year

Compared with the 6-month period from June to November 2003 (pre-ban), the breweries sold 1 207 000 litres of beer less to pubs, bars and restaurants in the same period after the ban. The decline in sales aggregated 3.8%. The interval encompasses the season for outdoor table service where smoking patrons have the best opportunity to light up cigarettes without having to leave their tables.

Sales changes latter half of the year

It was expected that the ban would hit sales harder in the subsequent 6-month period that covered the winter and spring months from December to May. Without additional heating, during this period a cold beer would be a very cold experience for patrons in most locations in Norway. The decline in sales in the winter/spring

actually accounted for 2 557 000 litres of beer – or 8.7% compared with the same pre-ban months.

Sales changes third half year

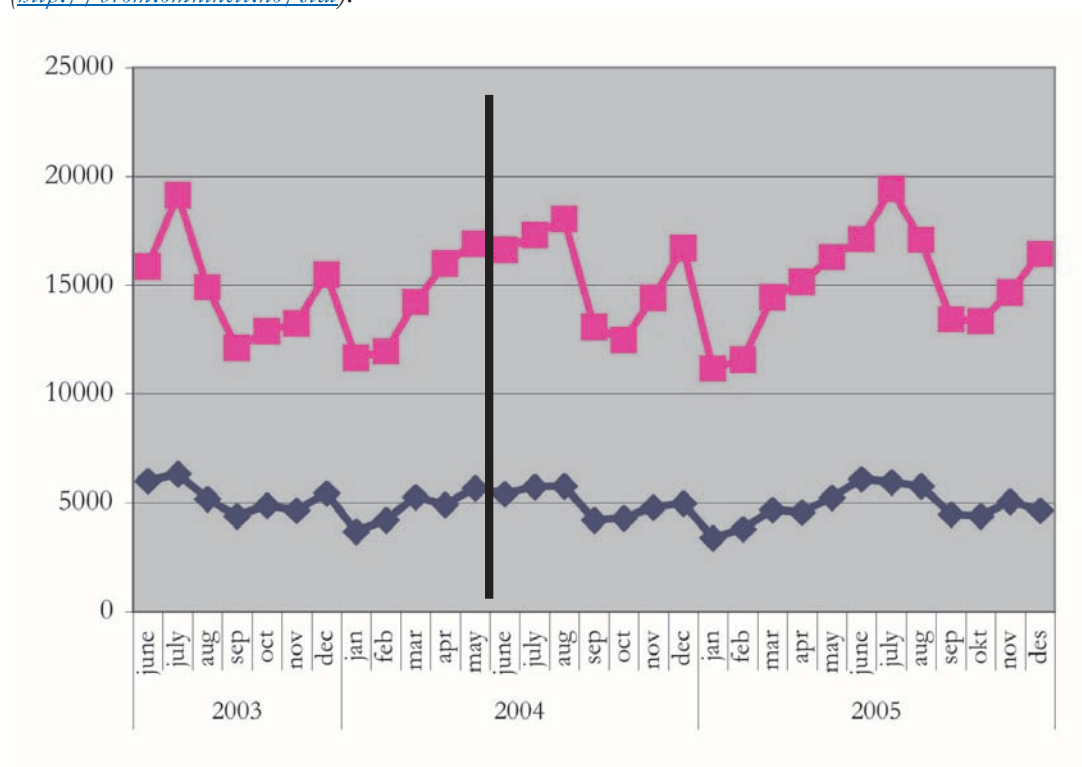
Meanwhile, sales picked up again in the subsequent summer and autumn season. From June to November 2005, sales were 284 000 litres higher (0.9%) than during the same period of 2003 (pre-ban), and 1 491 000 litres higher (4.9%) than in 2004. In December 2005, sales were nonetheless no less than 14.6% behind December 2003 and 6.5% behind December 2004.

It is difficult to determine how much of these sales fluctuations can be ascribed to the ban alone. Many factors could affect the volume of beer served to guests at hospitality venues, e.g. price, customers' purchasing power, the weather, the price of beer from alternative sources (retail prices) and availability (number of bars and business hours) (Norwegian Public Report (NOU) 1995: 24). In the long term, SIRUS plans to make econometric models that will allow us to isolate the effect of the ban on sales from other likely influential factors. Already at this point it is, however, clear that the decline in sales has not been dramatic (Figure 2) and that it mainly occurred at the coldest time of the year.

One possible consequence of the ban might be that potential patrons – primarily smokers - would stay away from the smoke-free hospitality venues, and instead sustain their consumption of beer by switching to other sources. In the event, this would mean that the ban would lead to an increase in the breweries' delivery of beer to food retailers, especially in the winter months when the decline in sales in the hospitality industry was greatest. In the cold months when the sale of beer from the breweries to hospitality venues dropped by 8.7%, beer sales to food retailers declined

by 1% compared with the same months the year before². The downturn in the demand for beer at pubs during the winter months does not appear to have translated into an increase in the demand for beer from food retailers. Figure 2 also shows that the sale of beer to food retailers has a far higher volume and greater periodic fluctuations than beer sales to the hospitality industry. Meanwhile, the seasonal effects coincide.

Figure 2. Sale of beer (in 1000 litres) from the breweries to the hospitality industry (blue line) and retail outlets (pink line) before and after the ban. Source: Norwegian Brewers (<http://brom.omninet.no/stat>).



² As shown in Figure 2, it was not a continuation of a downward trend that caused this reduction.

6.2 Value added tax (VAT) reported by the hospitality industry to the county tax offices

6.2.1 Data

Another source of information about changes in the retail sales of the hospitality industry is the reporting of the VAT (value added tax) from the hospitality industry to the county tax offices. Commissioned by SIRUS, Statistics Norway obtained and adapted these data, and has reported at regular intervals to the evaluation group three times a year. Each VAT reporting period lasts for two months. The ban was introduced in the middle of the third term (May/June) in 2004. When calculating changes in reported VAT, the third period of 2004 was precluded from the analyses since it is not possible to distinguish between the report for May (pre-ban) and the report for June (post-ban). Data from Statistics Norway is presented by county, and specified by industry group. This makes it possible to differentiate between sales trends in pubs/bars and in cafés/restaurants, as well as to study regional differences.

6.2.2 Changes in the revenues of pubs/bars

During the 12-month pre-ban period (from May 2003 up to and including April 2004), according to Statistics Norway, MNOK 882.6 in VAT were paid by pubs/bars. During the 12-month post-ban period (from July 2004 up to and including June 2005), reported VAT came to MNOK 844.2. The reduction of 4.3% in paid VAT harmonises with the decline shown when we studied the breweries' figures on the sale of beer to the hospitality industry.

As mentioned, the breweries reported the biggest decline in sales during the coldest season. On this basis, it is natural to suppose that any effect of the ban would be strongest in the regions of the country with the coldest climate. This does not appear

to be the case. If we combine data for Nordland, Troms and Finnmark counties, VAT payments from pubs/bars increased by 2.3%. In the supposedly warmest, sunniest counties, e.g. Vestfold, Telemark, Aust-Agder and Vest-Agder, the decline totalled 1.9%. This may be due to periodic differences in climatic conditions (cf. Chapter 6.4).

The greatest decline in sales was registered in Møre & Romsdal County (34%), followed by Finnmark County (18.7%), Rogaland County (15.5%) and Oslo (13.1%). Østfold County registered an increase of no less than 42%, Akershus County an increase of 35% and Nordland County saw an increase of 12.1% in the VAT paid. The changes were less than +/- 10% in the other counties. The county-specific effects do not appear to reflect any systematic regional tendency, since opposite sales trends can be observed in many neighbouring counties. Representatives of Statistics Norway contend that when statistics are broken down to the county level, they become vulnerable to the lack of compliance with deadlines for reporting VAT. This may possibly be one cause of the random fluctuations. There is a need for more comprehensive surveys of county-specific fluctuations.

6.2.3 Sales in restaurants

The café and restaurant segment registered a decrease in reported VAT of a mere 0.5%. As indicated by Figure 4, sales in this industry were significantly higher than in pubs and bars, owing to more units and additional earnings from the sale of food. Reported VAT before and after the ban were NOK 18.3 billion and NOK 18.2 billion, respectively. The changes during the period were small in all counties.

Figure 3. VAT receipts from pubs/bars (NOK 1000) in Norwegian counties during the period from May 2003-April 2004 (red column) and the period from July 2004-June 2005 (blue column). Source: Statistics Norway.

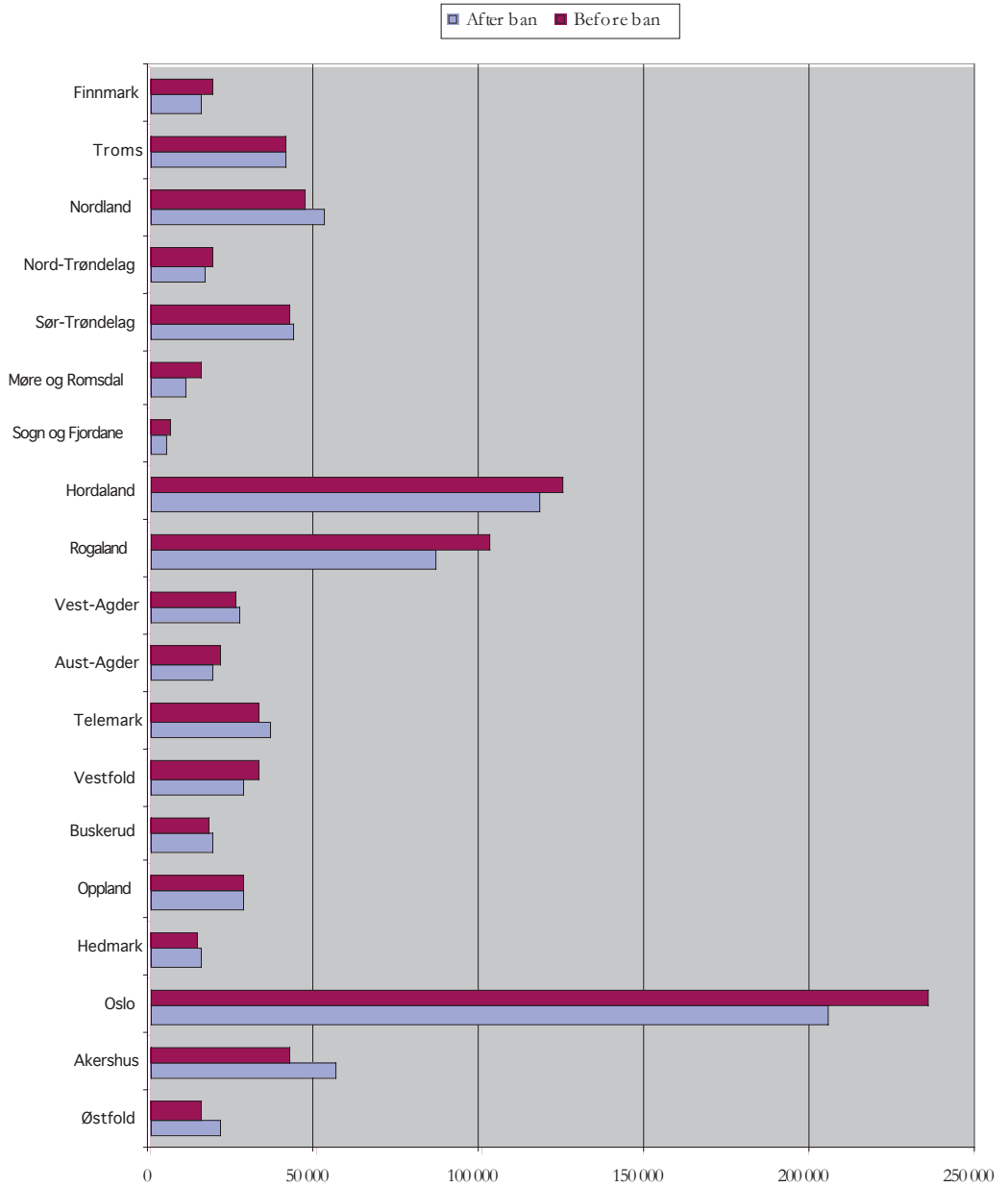
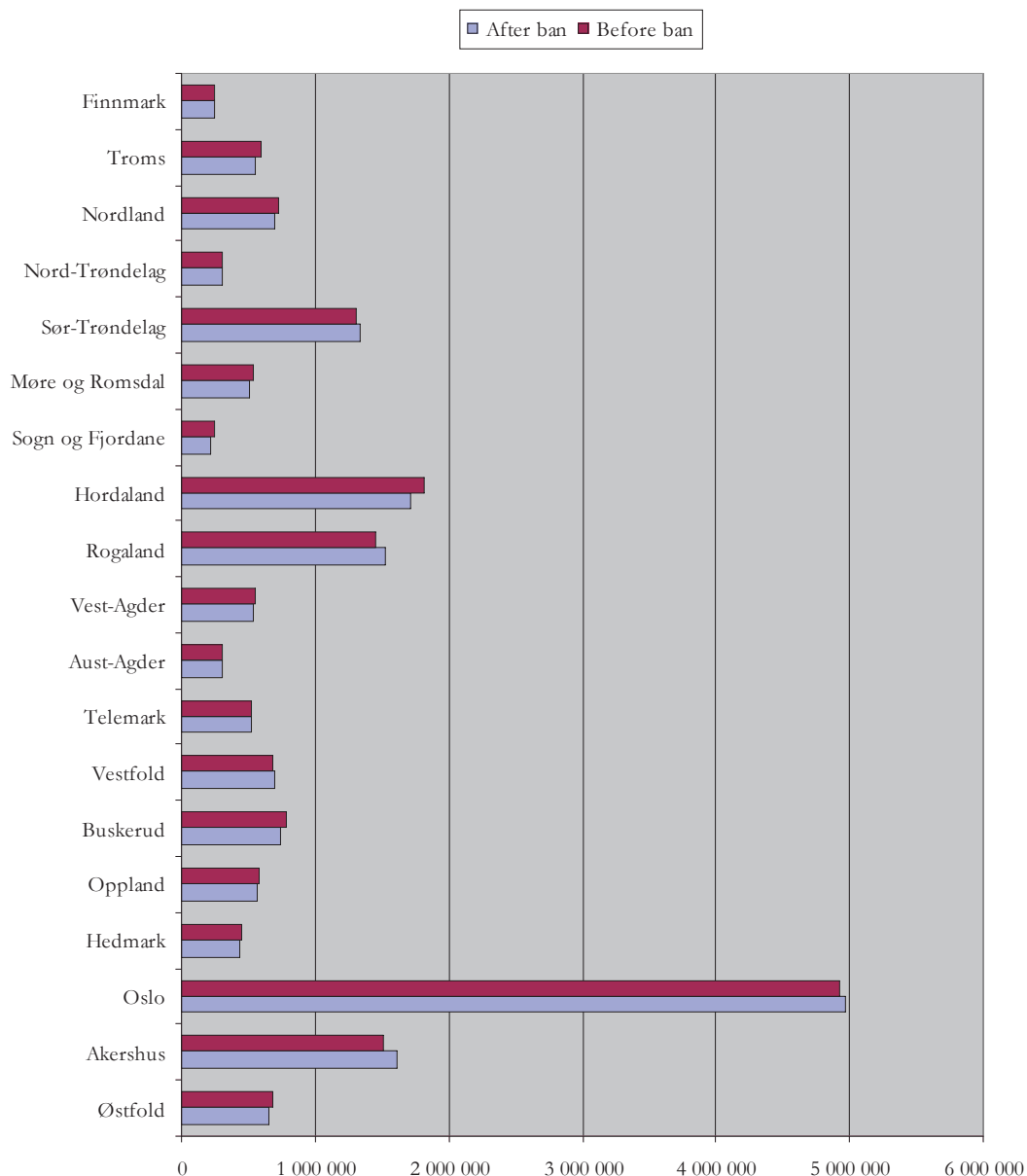


Figure 4. VAT receipts from restaurants (NOK 1000) in Norwegian counties during the period from May 2003-April 2004 (red column) and the period from July 2004-June 2005 (blue column). Source: Statistics Norway.



6.3 Changes in self-reported patronage among patrons

6.3.1 Data

Changes in self-reported patronage were measured with the question "*About how often do you go out to a) pub/bar and b) restaurant??*" The responses were given on an 8-point scale from 1 'daily' to 8 'never' as shown in Table 1. The question was posed to a nationwide sample of roughly 1 300 individuals in November 2003, and repeated in the same months in 2004 and 2005. Statistics Norway handled the collection of data, which was analysed by SIRUS. Individuals under the age of 18 and over the age of 74 were excluded from the analyses.

6.3.2 Differences in frequency of patronage among smokers and non-smokers

Table 1 shows that individuals with different smoking habits show significant differences in their patronage of pubs/bars, while the same variations cannot be observed in their patronage of restaurants. Among occasional smokers, 58% stated that they patronise pubs/bars every month or more frequently. This was the case for 41% of those who smoke on a daily basis and 33% of the non-smokers. 57%, 47% and 50%, respectively, of the same groups patronised restaurants on a monthly basis or more frequently.

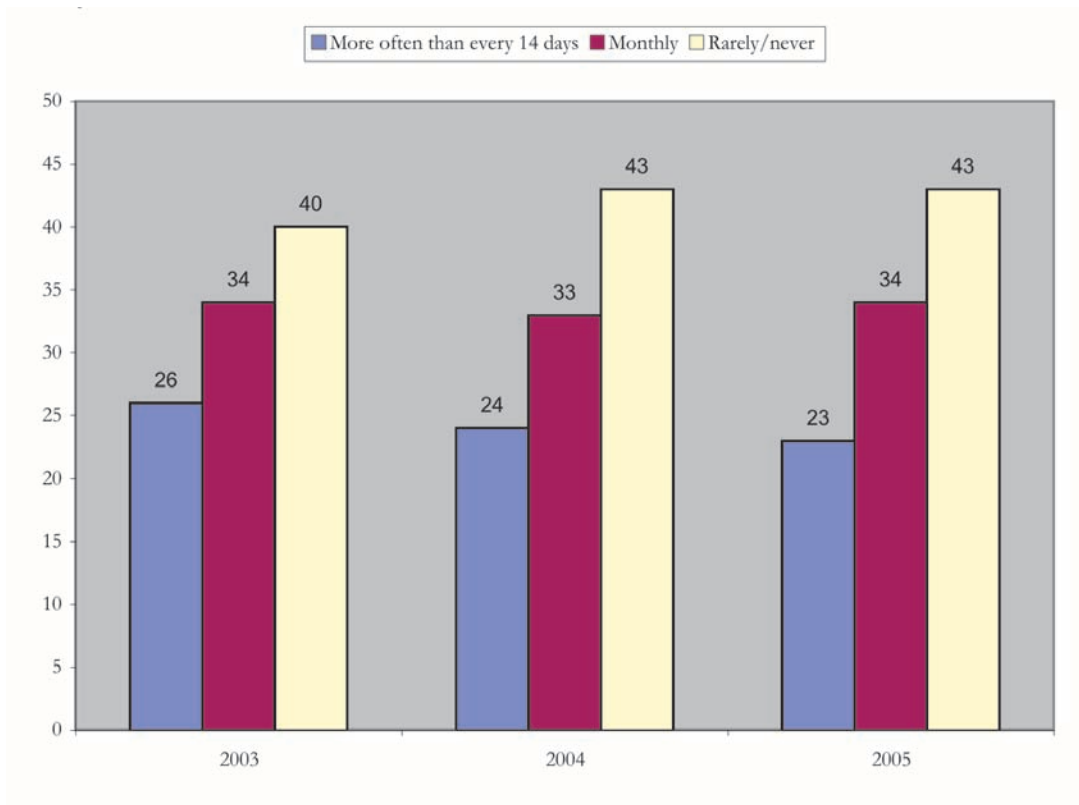
Table 1. Patronage of pubs/bars and restaurants for individuals ages 18-74 in different smoking categories. Data merged for 2003, 2004 and 2005. Source: Statistics Norway

Patronage	Pubs/bars			Restaurants		
	Daily smokers	Occasional smokers	Non-smokers	Daily smokers	Occasional smokers	Non-smokers
Daily	0	2	0	1	2	1
3-6 times/week	1	2	1	3	1	1
1-2 times/week	12	17	8	9	12	9
2-3 times/month	15	22	12	14	19	18
1 time/month	13	15	12	20	23	21
3-11 times/year	23	20	21	26	23	29
Rarely	20	15	24	21	17	18
<u>Never</u>	<u>16</u>	<u>8</u>	<u>22</u>	<u>6</u>	<u>4</u>	<u>5</u>
Total	100	100	100	100	100	100
N	919	328	2356	920	328	2356
Gamma=.187 ***			Gamma=.003 ns			

6.3.3 Changes in the patronage of pubs/bars

Figure 5 indicates that the hospitality industry's best customers, i.e. patrons who visit pubs or bars more frequently than once a fortnight, diminished from 26% in 2003 to 23% in 2005. However, this decline is not significant at the 5% level, and may therefore be a result of coincidences in the selection of the sample. The predominant impression is that self-reported patronage has been stable over these years.

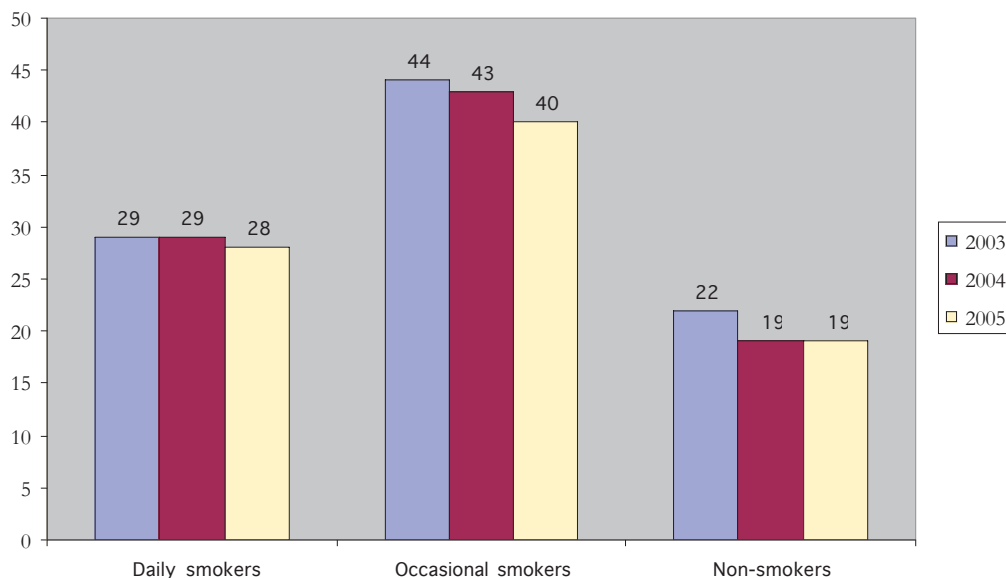
Figure 5. Self-reported patronage at pubs/bars in 2003 (N=1209), 2004 (N=1234) and 2005 (N=1162). Percentages of individuals from 18 to 74 years of age. Source: Statistics Norway/SIRUS



Prior to the ban, 37% (N=327) of those who smoke on a daily basis stated that they would be patronising pubs and bars less often as a result of the ban on smoking, while 18% (N=767) of non-smokers intended to visit these hospitality venues more frequently (cf. Chapter 3.2.3). Figure 5 indicates that these changes did not occur. No significant differences in patronage were observed either among those who smoke on a daily basis, occasional smokers or non-smokers during the period before and after the ban.

Like Table 1, Figure 6 illustrates that a significantly higher percentage of occasional smokers, followed by those who smoke on a daily basis, went to pubs or bars once every other week or more frequently than the percentage of non-smokers. The occasional smokers nonetheless accounted for a mere 9% of the potential customer base, while those who smoke on a daily basis accounted for 26%. No fewer than 65% of the population over the age of 18 were smoke-free. Consequently, even with the observed differences in patronage, non-smokers made up the largest part of the customer groups who most often spent money in pubs or bars. Based on percentages, it is possible to calculate that roughly 800 000 individuals visited a pub/bar at least once every fortnight or more frequently in 2005. Of that number, roughly 430 000 were smoke-free and 255 000 smoked on a daily basis, while 125 000 smoked occasionally.

Figure 6. The share who reported going to pubs/bars once a fortnight or more frequently by smoking habits. Individuals from ages 18 to 74, surveyed in 2003, 2004 and 2005.



6.3.4 Changes in the patronage of restaurants

The percentage who eats at restaurants more often than once a fortnight remained virtually unchanged from 2003 to 2005. Figure 7 shows that self-reported patronage at such venues has been quite stable over the years.

Figure 7. Self-reported patronage at restaurants in 2003 (N=1209), 2004 (N=1235) and 2005 (N=1162). Percentages of individuals, ages 18 to 74. Source: Statistics Norway/SIRUS

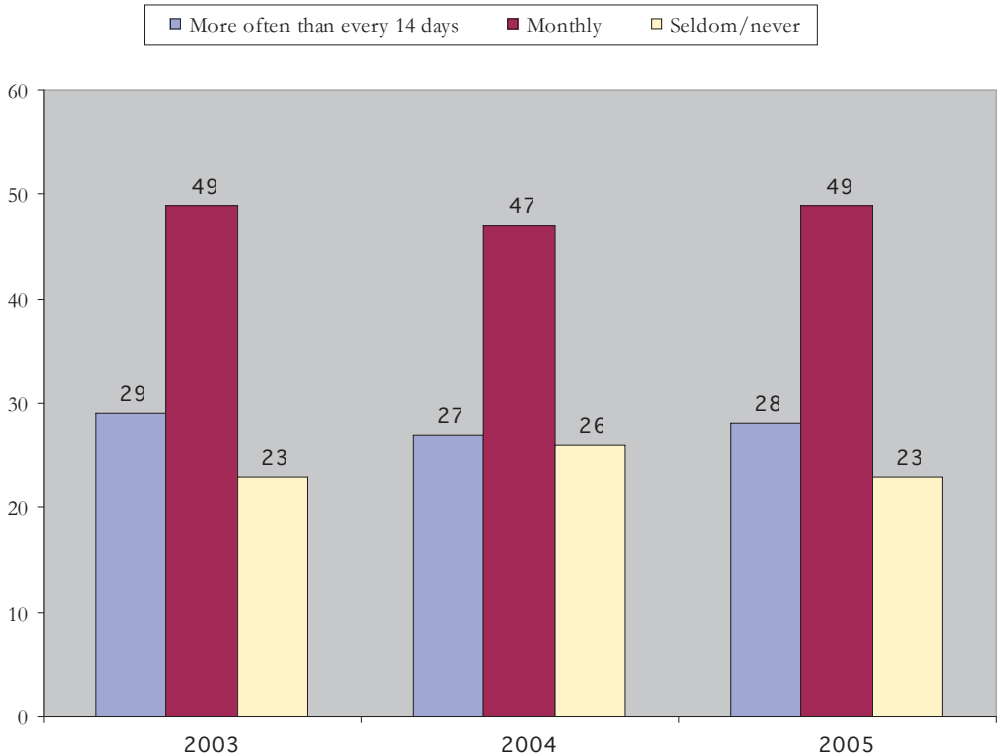
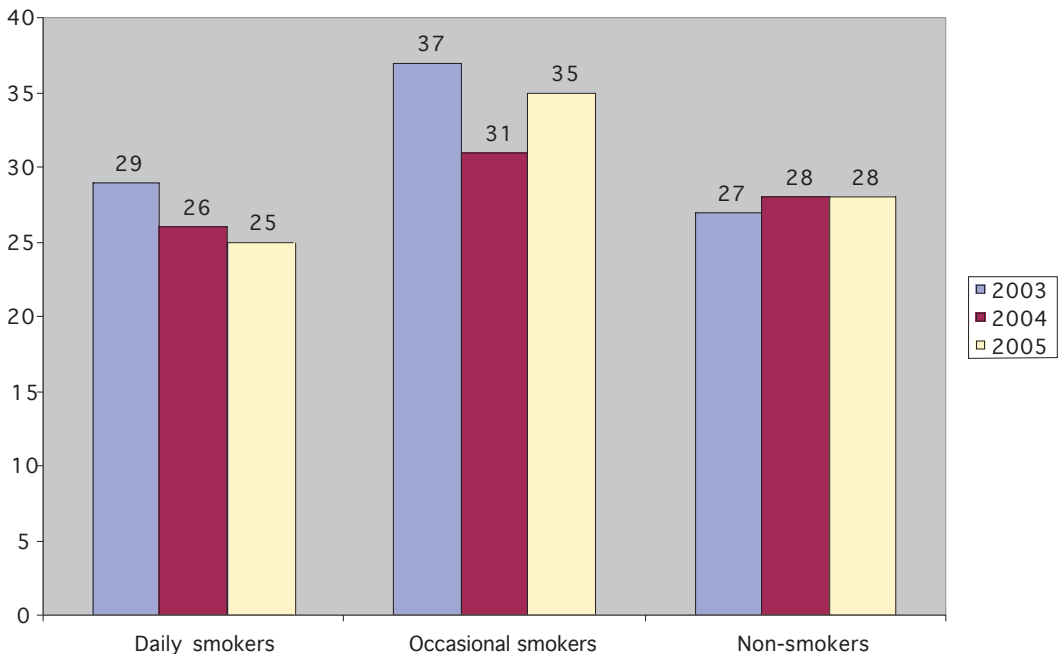


Figure 8 shows the percentage of those who smoke on a daily basis that eat at restaurants more often than once a fortnight decreased from 29% to 25% from 2003 to 2005. However, this decline is not significant. Nor were any significant differences

in patronage observed among those who smoke on a daily basis, occasional smokers or non-smokers from 2003 to 2005.

In contrast to what was the case for the patronage of pubs/bars, Figure 8 shows that there is no significant difference between smokers and non-smokers in the percentage that eats at restaurants once a fortnight or more frequently. At the population level, the customer group over the age of 18 who eat at restaurants/cafés at least once a fortnight consisted of roughly 1 million people in 2005. Of that number, roughly 650 000 were non-smokers and 230 000 smoked on a daily basis, while 120 000 smoked occasionally.

Figure 8. The share who reported going to restaurants once a fortnight or more frequently by smoking habits. Individuals from ages 18 to 74, asked in 2003, 2004 and 2005.



6.3.5 Weakness in the way the question was posed

In the above, we have assumed that the respondents' specification of patronage applies to a period of time not long before the survey. Interpreted this way, the differences in response frequencies between 2003, 2004 and 2005 will reflect a three-year periodic change. The wording of the question: *About how often are you at a) pubs/bars or b) restaurants?* is nonetheless open to an alternative interpretation. The responses can also express the respondents' patronage in a longer time perspective, possibly even in a life-cycle perspective. It is a weakness in the question that the responses offer room for interpretation.

6.3.6 Changes in the frequency of patronage where the ban is named as the reason

Six months prior to the ban – in December 2003 - the respondents were asked to answer the question: *"When all bars and restaurants become completely smoke-free, will you go out less frequently or more frequently or will your habits not be affected by such a ban?"* This question will probably have low validity since the respondents' attitude to smoke-free bars and restaurants will influence the response. Among those who smoke on a daily basis, which was the group with the most opponents to the ban (cf Chapter 8), 37% (N=327) stated that they would go out less frequently. In 2004 and 2005, the question was posed this way: *"Now that all hospitality venues are smoke-free, do you go out less frequently or more frequently, or has the ban not affected your habits?"* The proportions of those who smoke on a daily basis who stated that they would go out less frequently as a result of the ban were 43% (N=319) in 2004 and 37% (N=271) in 2005, respectively. This should have resulted in a large net decline in the frequency of patronage among those who smoke on a daily basis, since only a couple of per cent stated that they went out more frequently after the ban. In other words, the way the

question was worded produced a result that was not consistent with the information elicited when the wording in the questions regarding frequency of patronage was not related to the ban (cf Chapter 6.3.3 - 6.3.5).

Similarly, non-smokers also reported a result regarding increased frequency of patronage that was not consistent with the reply we got when the wording was neutral. Here, 11% (N=798) in 2004 and 15% (N=788), respectively, stated that they went out more frequently as a result of the ban. This would have led to a net influx in visits from non-smokers, since only a couple of per cent stated that they went out less frequently.

6.3.7 Changes in patronage among young people

Similar questions were posed to a nationwide representative selection of young adults, aged 18 to 20 in September 2004, i.e. about 3.5 months after the ban. Here, 68% (N=1404) stated that the ban had not affected their visits to hospitality venues, 17% went out less frequently than before while 16% stated that they went out more frequently. In this demographic, a mere 22% smoked on a daily basis. Among them, close to half (48%, N=305) reported fewer visits after the ban. No fewer than 65% of the young people were non-smokers. Of this group, 22% (N=912) stated that they went out more frequently.

6.4 Changes in self-reported frequency of patronage made by employees

6.4.1 Data

Commissioned by the evaluation group, MMI conducted a one-year panel investigation among employees in the hospitality industry with three dates of measurement. The first measurement took place in May 2004, the second measurement in September/October 2004, and the final measurement in May 2005. The data is discussed in other publications from the evaluation group (Hetland & Aarø 2005 a+b). During a telephone interview lasting about 10 minutes, the employees in rounds 2 and 3 were asked the question: "*After the introduction of smoke-free hospitality venues, have there been more,, fewer or roughly the same number of patrons as previously?*"

6.4.2 Results

The responses to the question depend largely on the respondents' attitude to the ban. Table 2 indicates that employees who basically professed a negative attitude to the ban in round 1, had a significantly greater propensity to report a decline in revenues in round 3. This indicates that the question was not a very valid measure of changes in patronage, since the responses were influenced by the respondent's attitudes.

It is nonetheless worthy of note that nearly one-third of all employees reported *far fewer* guests after the ban. The decrease in patronage was to a greater extent reported by employees of pubs/bars (36%, N=278) and cafeterias/roadhouses (35%,

N=243), than by employees of restaurants (23%, N=399). Again, this may be because employees in pubs/bars were more negative to the Act in the first place.

Table 2. Opinion about the post-ban change in patronage in the light of the respondent's attitude to the ban prior to its introduction. Source: MMI/HEMIL/SIRUS

Perception of the change in patronage one year post-ban	Attitude to the ban before its introduction			
	Positive	Neutral	Negative	All
Many more guests	4	2	1	3
A few more guests	8	4	3	6
Unchanged	46	36	28	39
Slightly fewer guests	24	26	25	25
Far fewer guests	17	33	44	29
Total	100	100	100	100
N	362	168	217	747

Gamma=0.294, sig= 0.000

6.5 Changes in bankruptcies

Even though sales in the industry as a whole did not change significantly post-ban, and thus cannot have caused dramatic changes in the number of bankruptcies, it is possible that the ban on smoking has had a different impact on different market segments. The newspapers have, among other things, reported special problems in establishments where access to outdoor smoking was difficult (second story locations), and in so-called 'brown (smoky) joints' where a large proportion of the guests smoked. The following list of headlines illustrates how the newspapers presented individual reports on the negative economic consequences of the ban.

Lights out for brown cafés (Ap 4 Oct. 2004)

Cobra closes its doors (Dbla 26 Oct. 2004)

Bankruptcy in the wake of the new Tobacco Act. (VG 14 Oct. 2004)

Brown cafés forced to make lay offs (VG 6 July 2004)

Pub jobs down the drain (VG 16 June 2004)

Beer kegs tapped out; Tobacco Act blamed (Dags 3 Dec. 2004)

Lost his job to the Tobacco Act (Dags 26 June 2004)

Restaurants give up the Tobacco Act (Dags 10 Apr. 2004)

Norwegian rock clubs struggle (Ap 7 Dec. 2004)

Doubts about mass dismissals (Ap 26 Oct. 2004)

Jazz festival with deficit (Ap 17 Aug. 2004)

Lay-offs and dismissals (Ap 22 June 2004)

Not happy about the Act (Ap 14 Apr. 2004)

Oslo's hospitality industry fears wave of bankruptcies (Ap 22 Jan. 2003)

Hospitality industry feels duped (Ap 29 Nov. 2002)

Regular customers gone (Bt 13 June 2004)

Fear of bankruptcies in the restaurant industry (Bt 7 May 2004)

Stable poor economy for hospitality industry in Stavanger (SA 11 Sept. 2004)

Fears of a long cold smoking winter (Bt 20 Sept. 2004)

A Christmas party tragedy (Ap 8 Dec. 2004)

These headlines are quoted from major Norwegian newspapers such as Stavanger Aftenblad (SA), VG, Dagbladet (Dbla), Aftenposten (Ap) and Bergens Tidende (BT)³, but Observer reports that this kind of focus on the fate of individuals had the most prevalence in local newspapers. The HEMIL Centre has previously reported that the share of employees in the hospitality industry who reported feeling anxiety about losing their jobs as a result of the ban has increased (Hetland & Aarø 2005). Perhaps exposure to this sort of highly evocative information caused the anxiety? Headlines that tell about positive economic consequences of the ban were far less

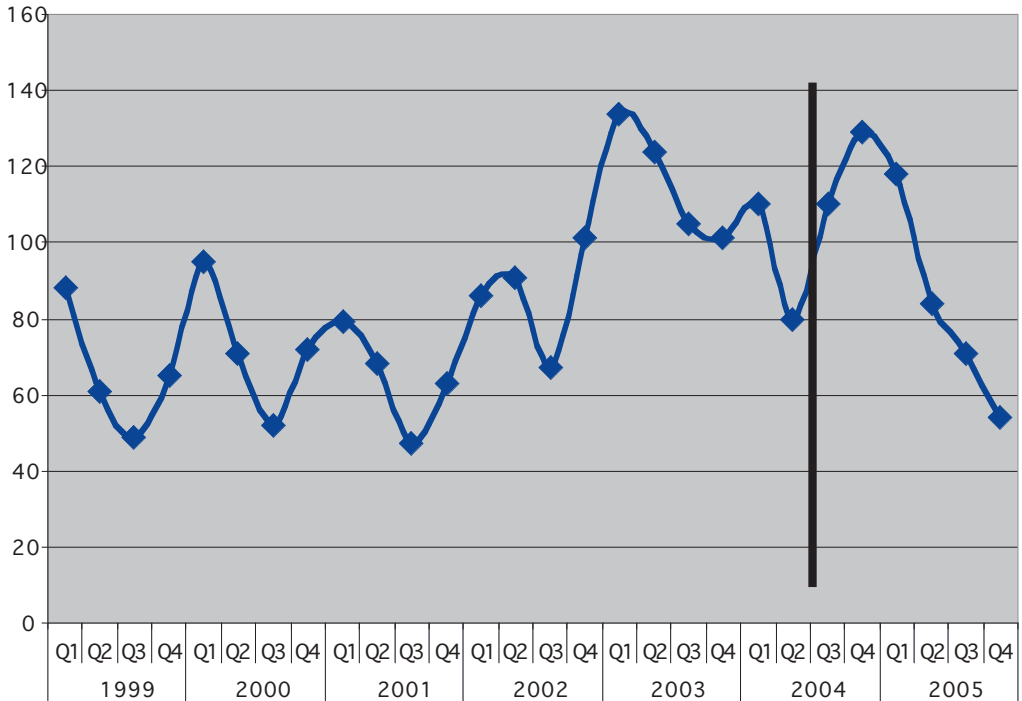
³ SIRUS has undertaken a categorisation of newspaper reports on smoke-free hospitality venues in Aftenposten, VG, Dagbladet, Bergens Tidende, Stavanger Aftenblad and Dagsavisen from 1 January 2002 to 31 December 2004. A total of 347 reports on the ban were registered on these five newspapers' websites during the three-year period. The newspaper headlines are attached to this report as Appendix 1.

frequent, and the skewed information may have led to inordinate unrest among the employees.

6.5.1 Data

The bankruptcy statistics for the hotel and restaurant industry have been taken from Statistics Norway's database of quarterly information broken down by industry, form of organisation, region and year of establishment⁴.

Figure 9. Number of bankruptcies in the hotel and restaurant industry from 1999 to 2005. Source: Statistics Norway.



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http://statbank.ssb.no/statistikkbanken/Default_FR.asp?tilside=selecttable/hovedtabellHjem.asp&KortnavnWeb=konkurs&PLanguage=0&nvl=true&direkte=1&PXSid=0

6.5.2 Results

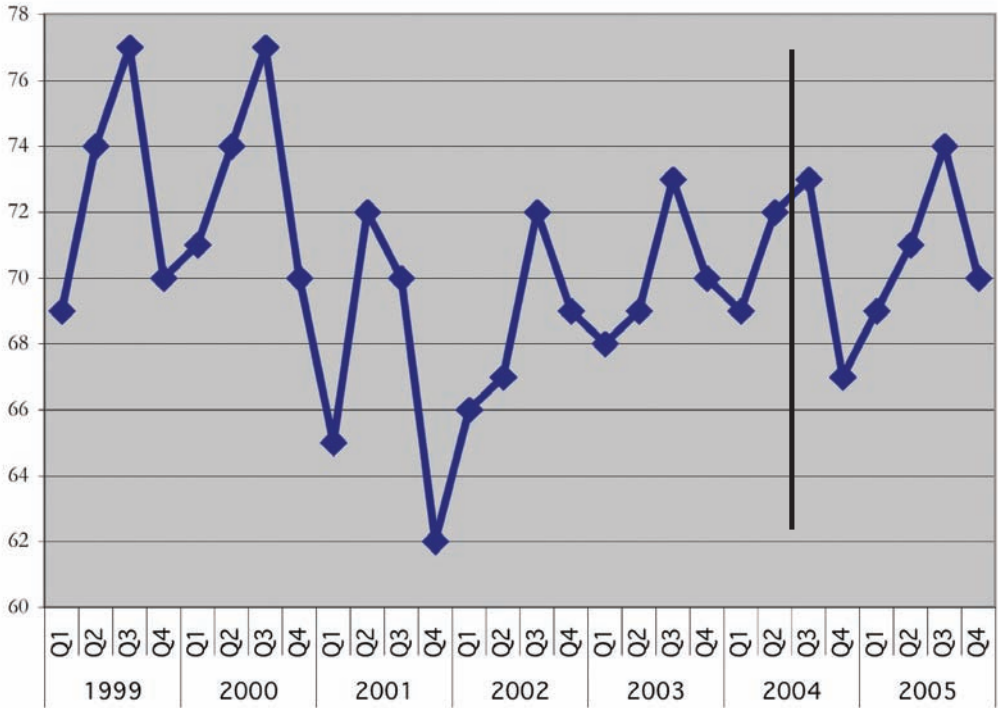
Figure 9 indicates that the number of bankruptcies in the hotel and restaurant industry increased during the two first quarters after ban was introduced and then subsequently diminished. Meanwhile, the increase occurred during a season in which the number of bankruptcies has shown a rising tendency in previous years as well. Accordingly, it is not clear whether the observed increase is related to the introduction of smoke-free hospitality venues, or whether it is a natural seasonal variation. Many other factors might also affect bankruptcy statistics, for example, earlier periods of over-establishment, interest level, the local authorities' allocation policy, level of indirect taxes, etc.

6.6 Changes in employment

6.6.1 Data

Information about employment from 1999 to 2005 was obtained from Statistics Norway, section for labour market statistics. The figures are based on interviews with 24 000 individuals each quarter in the so-called Labour Force Survey (AKU). Based on this, figures on employment in different industries are calculated for the general public from ages 16 to 74. The agency reports that care should be exercised in interpreting changes between two quarters in isolation, without also looking at the long-term development trend.

Figure 10. Number (1000s) of individuals employed in hotel and restaurant activities from Q1 1999 to Q4 2005. Source: Statistics Norway.



6.6.2 Results

Figure 10 shows that the employment rate in the hotel and restaurant industry has seasonal variations. The number of employees was highest in Q2 and Q3, while Q1 and Q4 generally have fewer employees. A slight decrease in the number of employees was observed in Q4 2004 compared with the same quarter in the two preceding years. However, already in Q1 2005 and for the rest of that year, the number of employees was back to the same level as in earlier years. It is difficult to say whether the temporary dip can be related to the ban, whether it is ascribable to other conditions that influence employment or whether it is ascribable to coincidence in the selection of the sample in the Labour Market Survey.

6.7 Climatic conditions

As mentioned, climatic conditions can have an impact on the hospitality industry's sale of beer – especially in the summer season. The Norwegian Meteorological Institute reports that the first summer of smoke-free dining was colder and wetter than usual, with the exception of in the northernmost regions of the country. (<http://met.no/observasjoner/maned/2004/index.html>). The summer before, on the other hand, was warmer than usual in large parts of the country. The average monthly temperature for Norway in July 2003 was, for example, 3.1 °C above normal. The country as a whole had the warmest July since measurements began in 1867. No fewer than 38 of the Norwegian Meteorological Institute's weather stations set new records for July, most of them along the coast from Agder County to Nordland County. August 2003 was also warmer than usual throughout the country, especially along the coast.

In other words, the weather was very different in the two summers in the comparison of beer sales. As mentioned, in the long term, SIRUS will make more comprehensive analyses of the correlation between sales in the hospitality industry and other conditions, including the weather.

6.8 Foreign studies of economic consequences

As with our approach, the international research literature indicates that the methods used to gauge the economic consequences of smoke-free dining have triangulated between *a) objective sales data*⁵, *b) subjective information provided by patrons about changes in*

⁵ Bartosch & Pope 1995, 1999, 2002, Bialous & Glantz 1997, Dresser 1999, Glantz & Charlesworth 1999, Glantz & Smith 1994, 1997, Glantz 2000, Goldstein & Sobel 1998, Haylett &

*frequency of patronage*⁶ and *c) self-reported impressions about changes in revenues provided by employees and owners*⁷. This triangulation method will also be used in the forthcoming evaluation in Scotland, which introduced a total ban on smoking at all workplaces in March 2006 (Haw et al. 2006).

There are formidable differences in the quality of the studies in the above-mentioned portfolio. Less than half the articles are published in peer-reviewed scientific journals, many have obvious methodological flaws and several of the investigations were funded by the tobacco industry or conducted by agencies that usually work on commission for the tobacco industry. Scollo et al. (2003) has undertaken a systematic review of the quality of 97 surveys published prior to August 2002. The researchers' results were sensational.

In studies concluding a negative impact, the odds of using a subjective outcome measure was 4.0 times (95% confidence interval (CI) 1.4 to 9.6; $p = 0.007$) and the odds of not being peer

Huang 2000, Huang et al. 1995, Hyland et al. 1999, Hyland 2002, Moroney et al. 1994, Pacific Analytics 2001, Pope & Bartosch 1997, Sciacco & Ratliff 1998, Styring 2001, Taylor Counseling 1993, Wakefield et al. 2002, California State Board of Equalization 1998, City of Bolder 1996, Fletcher 1998, Puboco 2002, Lilley et al. 1996, 1999, Masotti et al. 1991, Laventhol et al. 1990, Applied economics 1996, Glantz & Wilson-Loots 2003, Alamar & Glantz 2004, Mandel et al. 2005, CDC 2004, Cowling & Bond 2005, Luk, Ferrence & Gmel 2006.

⁶ Allen & Markham 2001, August 2000, Biener & Fitzgerald 1999, Biener & Siegel 1997, Corsun et al. 1996, Decima Research 2001, Dresser et al. 1999, Field Research 1997, Hyland & Cummings 1999, Lam 1995, McGhee 2002, Miller & Kriven 2002, Shapiro 2001, Styring 2001, Wakefield et al. 1999, Auspoll 2000, Decima Research 1988, Fabrizio et al. 1995, KPMG Barents 1997, Marlow 1999, National Restaurant Association 1993, Sollars et al. 1999, Martin Associates 1999.

⁷ Allan & Markham 2001, Cremieux & Oulette 2001, Dresser et al. 1999, Edward 2000, Huron County Health Unit 1999, Hyland & Cummings 1999, Jones et al. 1999, Markham & Tong 2001, Parry et al. 2001, Scacca & Eckram 1993, Sciacca 1996, Stanwick 1998, The Conference Board of Canada 1996, Yorkshire Ash 2001, Advantage Marketing Info 1997, Applied Economics 1996, CCG 1995, Chamberlain Research Consultants 1998, Dunham & Marlow 2000, EMRS 2001, Fabrizio et al. 1996, Gambee 1991, KPMG Peat Marwick 1998, KPMG 1998, Mason-Dixon Market Research 1996, Price Waterhouse LLP 1995, Roper Starch 1996, The Craig Group INC 1998, The Eppstein Group 1997.

reviewed was 20 times (95% CI 2.6 to 166.7; p = 0.004) that of studies concluding no such negative impact. All of the studies concluding a negative impact were supported by the tobacco industry. 94% of the tobacco industry supported studies concluded a negative economic impact compared to none of the non-industry supported studies. All of the best-designed studies reported no impact or a positive impact of smoke-free restaurant and bar laws on sales or employment.

Surveys published after Scollo et al. (2003) made their critical review of the literature have not changed their conclusion. All substantiate the main finding, i.e. that the introduction of smoke-free dining has little impact on revenues and patronage (Glantz & Wilson-Loots 2003, Alamar & Glantz 2004, Mandel et al. 2005, CDC 2004, Cowling & Bond 2005, Luk, Ferrence & Gmel 2006).

Our investigation is also in line with Scollo's in the sense that the subjective methods for measurement produced results that could indicate to some extent formidable negative economic consequences, while the use of objective methods produced results that indicate little or no economic consequences. However, none of our methods for measuring generated results indicative of positive economic consequences for the industry.

7. Changes in guests' level of satisfaction when patronising hospitality venues

In an earlier publication, Hetland & Aarø (2005) demonstrated that the ban led to a moderate change in the direction of less job satisfaction among smokers. Among non-smoking employees, the ban had little impact on well-being. We have investigated how patrons' sense of satisfaction changed after the introduction of smoke-free hospitality venues.

7.1 Data

Data on changes in satisfaction were obtained by Statistics Norway through repeated cross-section surveys among a nationwide sample of about 1300 individuals in November/December 2003 (pre-ban), 2004 and 2005. The analyses excluded individuals under the age of 18 and over the age of 74. Guests who patronised hospitality venues less frequently than once a month were also excluded. This was done so that data would contain informants with a high degree of experience-based perceptions. The questions about satisfaction were posed like this: *"When considering the following statements, please consider the environment and the surroundings. Score on a scale from 1 to 7, where 1 indicates a very low degree of agreement and 7 indicates a very high degree of agreement. I greatly enjoy going to a) pubs/bars b) restaurants"*.

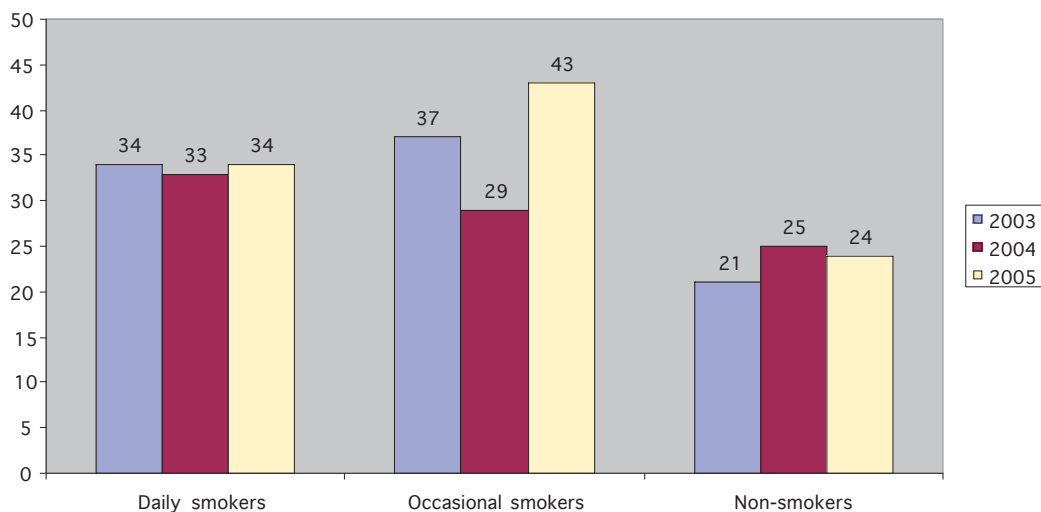
7.2 Changes in the level of satisfaction at pubs/bars

Figure 11 illustrates the percentage that has responded 7 (high level of enjoyment), and the result is broken down by smoking habits. Among individuals who go to

pubs/bars once a month or more frequently, no significant changes were observed in self-reported satisfaction among either smokers or non-smokers (Figure 11).⁸

Even though no changes in satisfaction were observed over time in some of smoking categories, the figure nonetheless indicates that both those who smoke on a daily basis (33.4%, N=593) and occasional smokers (36%, N=253) to a significantly greater degree than non-smokers (20.9%, N=1255) reported a high level of satisfaction at pubs/bars (data merged for all three years)⁹.

Figure 11. The percentage who state that they greatly enjoy going to pubs/bars in 2003, 2004 and 2005. Individuals aged 18 to 74 who go to pubs/bars monthly or more frequently by smoking status.



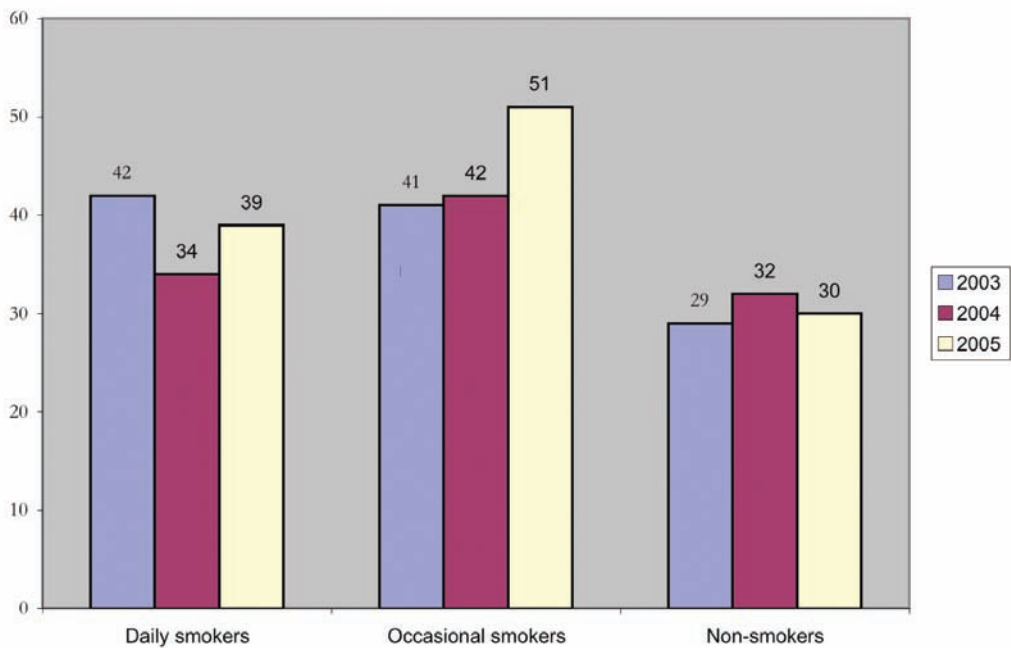
⁸ Nor were any changes in satisfaction registered among individuals who rarely or never go to pubs/bars (not shown in the figure), but these people are not very interesting in our context.

⁹ The differences emerged when we switched to using average scores on the satisfaction scale, and they remained even after being examined for frequency of patronage, age, urbanity, level of education and gender.

7.3 Changes in the level of satisfaction at restaurants

Nor were any significant differences in satisfaction with visits to restaurants observed before and after the ban (Figure 12). On the contrary, we found that the two groups of smokers were more prone to report great satisfaction. In the long term, SIRUS will try to determine the explanation for this difference in reporting between smokers and non-smokers.

Figure 12. The percentage who state that they greatly enjoyed going to pubs/bars in 2003, 2004 and 2005. Individuals aged 18 to 74 who go to pubs/bars monthly or more frequently by smoking status.



7.4 Weaknesses in the way the question was posed

In the above, we assumed that the respondents' specification of satisfaction applies to a period of time immediately prior to the survey. Interpreted this way, the

differences in response frequencies between 2003, 2004 and 2005 will reflect a three-year periodic change. However, the way in which the question is worded allows an alternative interpretation. The responses can also express the respondents' satisfaction in a longer time perspective, possibly even in a life-cycle perspective. It is a weakness in the question that the responses offer room for interpretation.

7.5 Changes in satisfaction ascribed to the ban

Six months prior to the ban – in December 2003 - the respondents were asked to answer the following question: *"The Act regarding smoke-free hospitality venues will be entering into force soon. Do you think your satisfaction with visits to a) pubs/bars or b) restaurants will be better, worse or unchanged??"* This question will probably have low validity since the respondents' attitude to smoke-free bars and restaurants will bias the response. Among those who smoke on a daily basis, which was the group with the most opponents to the ban (cf Chapter 8), no fewer than 69% (N=218) and 55% (N=250) stated that they feared less satisfaction with visits to pubs/bars and restaurants, respectively. In 2004 and 2005, the question was repeated with the wording adapted to the situation: *"The Act regarding smoke-free hospitality venues entered into force on 1 June 2004. Has your satisfaction with visits to a) pubs/bars or b) restaurants become better, worse or unchanged??"* The proportion of those who smoke on a daily basis who stated they get less satisfaction from visiting pubs/bars as a result of the ban had declined to 56% (N=199) in 2004 and 38% (N=176), respectively, in 2005. The proportion who stated reduced satisfaction with visits to restaurants was 51% (N=221) in 2004 and 32% (N=200) in 2005.

In other words, the hypothesis produced a result that is inconsistent with the information produced when the wording of the questions about satisfaction was not related to the ban (cf 7.2. - 7.4). On the other hand, it was also possible to interpret the result so that the reduction in satisfaction feared by smokers before the ban turned out to be less than what they themselves expected.

Similarly, non-smokers also reported a result involving higher satisfaction that was not consistent with the response we got when the wording was neutral. No fewer than 68% (N=419) and 64% (N=591) stated that they expected the ban to result in more satisfaction with visits to pubs/bars and restaurants in 2003. In 2004 and 2005, the figures climbed to 75% (N=420) and 81% (N=415) , respectively, for visits to pubs/bars. For restaurants, the proportion that reported improved satisfaction increased to 72% (N=600) in 2004 and 82% (N=615) in 2005. During this period, the ban garnered growing support among the general public (cf. Figure 13-15), and it is likely that it is this change in attitude and not necessarily a genuine increase in satisfaction that is reflected in these figures.

7.6 Would patrons like to return to the old scheme?

Another indication of satisfaction can be the degree of longing back to the old scheme featuring smoking zones in hospitality venues. In an omnibus survey conducted by MMI about one year post-ban, 1000 were individuals asked *"If you could choose today, would you go back to the scheme whereby smoking was allowed in hospitality venues?"*. 73% answered no and 25 % answered yes, while 2% had no opinion. A majority of 57% (N=253) among those who smoke on a daily basis would like to return to the

old scheme. This was the case for 38% (N=77) of the occasional smokers and 12% (N=670) of the non-smokers.

7.7 Initiatives to raise the level of satisfaction for patrons of the hospitality industry

In a survey among employees in the hospitality industry conducted by MMI three months after the ban entered into force, 68% (N=324) of those who worked in pubs/bars and 57% (N=448) of the restaurant employees stated that their hospitality venues had taken special steps to accommodate outdoor smoking. The most common measures were to apply to have outdoor table service and to upgrade or create outdoor seating, preferably combined with heaters, waterproof awnings, windscreens, etc. The newspapers conveyed the message this way:

Oslo filled with dangerous gas heaters (Ap 23 July 2004)

Many places to offer outdoor table service in winter (Ap 24 June 2004)

Don't mind sitting outdoors all year round (Ap 22 June 2004)

Now we can smoke without freezing (Ap 24 June 2004)

Sponsoring pubs/bars and restaurants by providing heaters (Ap 22 June 2004)

A port of refuge' for smokers (VG 4 June 2004)

Pubs/bars and restaurants serve smokers cold beers out in the cold (SA 29 Oct. 2004)

Going out can be like a camping trip for smokers (Ap 15 Jan. 2004)

Saved by the courtyard. (VG 22 Nov. 2004)

Wants to build an outdoor restaurant on the roof (Bt 3 May 2004)

Ready for outdoor pubs (VG 28 March 2004)

Outdoor beer-drinking record this summer (Bt 30 April 2004)

Out with the pub! (VG 28 March 2004)

*Tables and chairs out on the pavement (Bt 8
May 2004)*

*Earning money on outdoor ashtrays (Ap 24 June
2004)*

*New outdoor serving area at Wessel (Bt 26
march 2004)*

The hospitality industry's preparations for outdoor beer drinking have probably helped reduce the adverse financial impact of the ban.

7.8 Foreign surveys on changes in satisfaction

A number of foreign surveys have been conducted on changes in attitude to smoke-free hospitality venues (cf. Chapter 8.6), but the evaluation group has not managed to identify any surveys on changes in satisfaction among the general public.

8. Changes in attitude to smoke-free hospitality venues

8.1 Data

In recent years, many opinion polls have been conducted in Norway on people's attitudes to smoke-free hospitality venues. The wording of the questions and the response categories have varied, but in Figures 13 and 14 we have compared the results of surveys undertaken at different points in time using identical methods of measuring.

Among the many surveys conducted by MMI and NORSTAT (Fig 13), each time approx. 1 000 respondents over the age of 15 have been asked the question *"On 1 June 2004, smoke-free hospitality venues were introduced in Norway. What do you think about smoke-free hospitality venues? Are you generally positive, negative or neutral?"* In the previously mentioned surveys made by Statistics Norway (Fig 14-15), the question was worded somewhat differently. Here the respondents (ages 16 to 74) scored their evaluation on a scale from 1 'disagree completely' to 7 'agree completely'. In Figure 14 and 15, we have defined answers of 1 and 2 as 'negative', answers in categories 3, 4 and 5 as 'neutral', and answers 6 and 7 as 'positive'.

8.2 Changes in attitude among the general public

Figure 13. Attitudes to smoke-free hospitality venues in March and May 2004 (NORSTAT), October 2004, and May and October 2005(MMI).

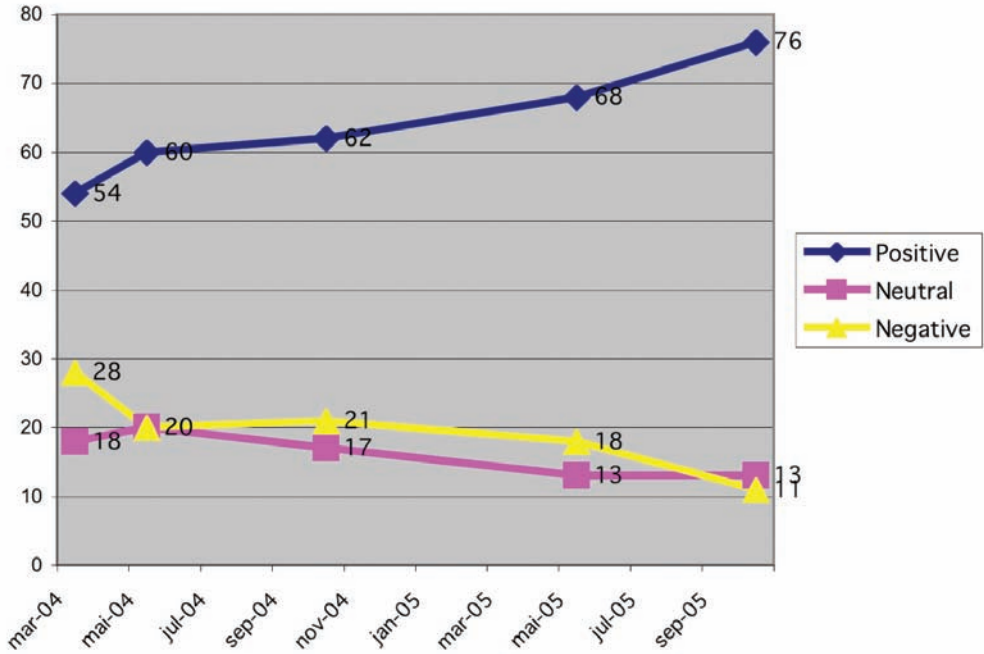
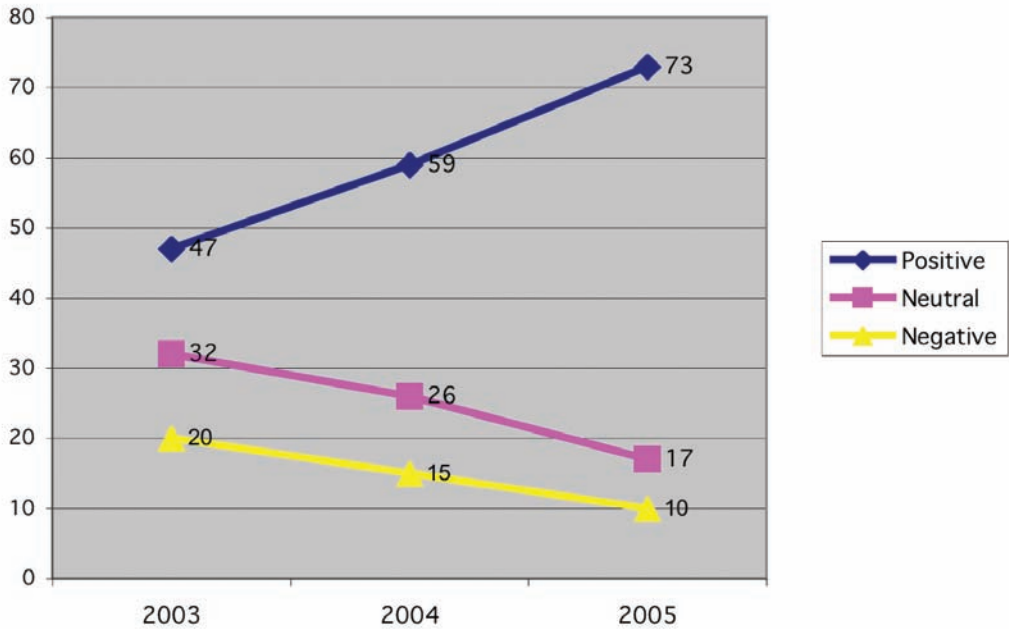


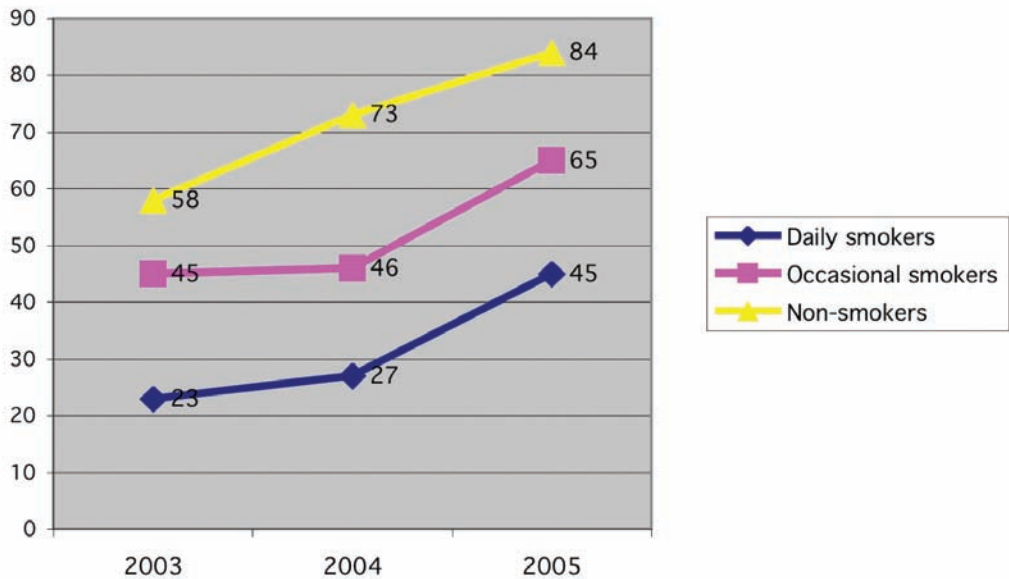
Figure 13 indicates a change in attitude towards more support for the ban, and that a large majority declares support. This is corroborated by Figure 14, which also illustrates more support for smoke-free hospitality venues, and that the percentage who were neutral or negative has declined. In the light of the limited time intervals shown in the two figures, the observed changes must be characterised as formidable.

Figure 14. Attitudes to smoke-free hospitality venues in November 2003 (N=1302), November 2004 (N=1302) and November 2005 (N=1267). Source: Statistics Norway.



Growing support for the ban was observed among smokers and non-smokers alike (Figure 15). Relatively speaking, the support increased most strongly among those who smoke on a daily basis. Nearly half of them (45%, N=290) were at the most recent observation adherents of the ban, while the responses among the occasional smokers and non-smokers were 65% (N=107) and 84% (N=868), respectively.

Figure 15. The percentage that were positive to smoke-free hospitality venues in different smoking categories in November 2003, November 2004 and November 2005. Source: Statistics Norway.



8.3 Support for the ban among young people

In a nationwide survey undertaken by Opinion among 16 to 20-year-olds in September 2004, 73% (N=2378) stated that they agreed completely (57%) or to a great extent (16%) that hospitality venues in Norway should be smoke-free. Even though the question and response categories were not entirely identical with the questions in surveys of the adult population, the support may indicate that the ban was even more popular among young people than among adults.

8.4 Support for the ban among employees

Hetland & Aarø (2005) found in a survey conducted among employees in the hospitality industry just before the ban entered into force, that the percentage that was positive to the ban on smoking (48%) was greater than the percentage who had a negative attitude to it (30%). In the light of the opinions that had been promulgated

in the media debate at that point, the authors felt this result was somewhat surprising. One year after the ban, the percentage who were positive had increased to 60% (N=834) and percentage who were negative was reduced to 23%. These changes will be analysed in more detail and discussed in an upcoming report from the evaluation group.

8.5 Do smokers experience the Tobacco Act as victimising?

SIRUS' portfolio of newspaper reports from 2003 and 2004 mentioning the ban contained a number of examples to indicate that the Tobacco Act in general and smoke-free hospitality venues in particular were presented as a licence to victimise others. They implied that the restrictions the authorities have placed on smoking have deprived smokers of their freedom and that the information campaigns were designed to imbue smoking with a negative symbolic content.

<i>Old Smokey. D Høybråten has taken the fun out of going out (VG 1 Dec. 2004)</i>	<i>Seven of ten more negative to smokers (Ap 26 May 2003)</i>
<i>Smokers flee prohibition Norway (VG 9 June 04)</i>	<i>The last feisty member of the Party of Progress (Ap 5 Feb. 2004)</i>
<i>Hysterical debate on the ban (Ap 10 March 2004)</i>	<i>Quite simply too ridiculous (Dags 14 Sept. 2004)</i>
<i>Those who just can't quit. The Tobacco Act is a class act (Klassek 4 March 2004)</i>	<i>Bumpkin on the pavement. Smokers party at home (VG 27 June 04)</i>
<i>'Mulla Høybråten' takes over (Bt 3 Dec. 2003)</i>	<i>Tricked the Tobacco Act (VG 7 June 2004)</i>
<i>It's a scandal (Ap 9 April 2003)</i>	<i>Lit up at Høybråten's 'smoke-free lunch' (VG 1 June 2004)</i>
<i>Taking away our hobby (Ap 9 April 2003)</i>	<i>Bingo is a smokers' haven (Dags 3 June 2004)</i>
<i>Provoked enough not to quit (Ap 18 June 2003)</i>	<i>Puffing away on the ferry to Denmark (Ap 30 May 2003)</i>

Our investigation has shown that the ban has not led to any changes in patronage or in self-reported satisfaction among smokers. Further, a mere 22% of those who smoke on a daily basis (N=290) and 10% of occasional smokers (N=107) were declared opponents of smoke-free hospitality venues in 2005. In a survey conducted by MMI one year post-ban, 56% (N=253) of those who smoke on a daily basis and 71% (N=77) of occasional smokers considered the Act successful, while 31% and 14%, respectively, considered the Act a failure. This indicates that the percentage of potential 'victims' among smokers must be limited.

8.6 Foreign studies of changes in attitude

A number of foreign surveys have documented growing support among the general public for smoke-free dining regulated by law. These have been performed e.g. in California (Friis & Safer 2005, Tang et al. 2003), Minnesota (Kottke et al. 2001), Massachusetts (Brooks & Mucci 2001), Hong Kong (Lam et al. 2002) and South Australia (Miller et al. 2002). Changes in attitude have also been registered among employees. A survey from California showed that the percentage of employees who wanted to work in smoke-free premises had increased from 17% in 1998 to 51% in 2002 (Tang et al. 2004). During the same period, the proportion who stated they were concerned about the health hazards of passive smoking climbed from 22% to 46%.

9. Changes in air quality

In a previous publication, Hetland & Aarø (2005) demonstrated that the ban led to a steep reduction in the percentage of employees troubled by passive smoking.

Further, there was a clear reduction in air quality problems such as bad odours, dry air or stale air. During the period, there was also a distinct reduction in the percentage who reported general medical problems, and a moderate reduction in the percentage that had respiratory problems. We obtained information on air quality from the patrons.

9.1. Data

Information on air quality was collected in connection with Statistics Norway's smoking habit surveys for the years 2003, 2004 and 2005. These have been described earlier. The question posed was: *"On a scale from 1 to 7, where 1 is very bad and 7 is very good, how was the quality of the indoor air last time you were at a a) pub/ bar and b) restaurant?"* The analyses excluded individuals under the age of 18 and over the age of 74. Only respondents who stated that they patronised the two arenas more frequently than once a year were included in the analysis.

9.2 Changes in air quality at pubs/bars

Figure 16. The percentage who reported very good quality of the indoor air during their last visit to a pub/bar. Individuals aged 18 to 74 with at least one visit per year. Source: Statistics Norway.

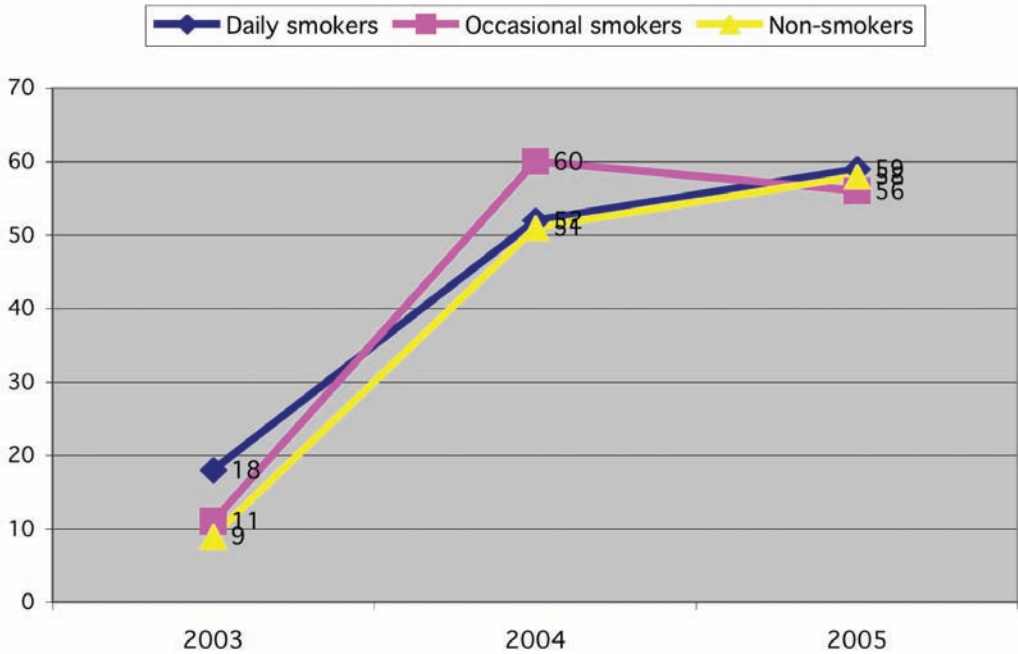
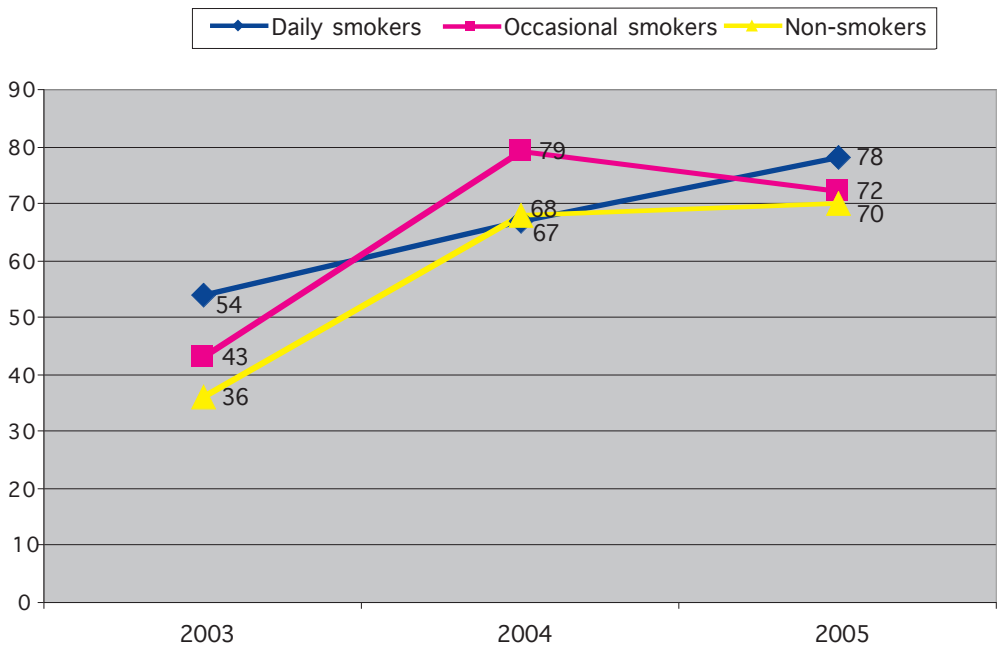


Figure 16 shows the percentages that answered alternatives 6 and 7 on the scale, and thus rated the air quality at pubs/bars as very good. Once the ban entered into force, the proportion of those who reported good indoor air quality was significantly higher among smokers and non-smokers alike. The rise was exceptional. The figure also shows a significantly higher percentage of those who smoke on a daily basis than non-smokers reported good indoor air when smoking was allowed in designated areas in pubs/bars. The same difference between groups of smokers was not observed after the introduction of smoke-free hospitality venues.

9.3 Changes in air quality at restaurants

Figure 17 indicates that the air quality at restaurants was to a significantly greater extent reported as being better after the ban. The initiative appears to have worked according to its primary intention. The results also show that the air quality in restaurants (fig 15) was generally considered better than in pubs/bars (Figure 14) when designated smoking areas were allowed. This find was also reported previously (Knoff 1999). At this point in time, we also observe the same pattern being repeated in pubs/bars, i.e. that a significantly higher percentage of those who smoke on a daily basis than non-smokers reported very good air quality. This is probably related to the fact that environmental tobacco smoke is not construed as unpleasant to the same extent by smokers as by non-smokers.

Figure 17. The percentage that reported very good indoor air quality during their last visit to a pub/ bar restaurant. Individuals aged 18 to 74 with at least one visit per year. Source: Statistics Norway.



9.4 Has the ban led to more exposure to passive smoking among children?

The evaluation group has sporadically received queries about any adverse side effects of smoke-free hospitality venues for children. The background is, among other things, a survey from the USA which indicates that exposure to passive smoking at home (measured by cotinine in body fluids) was higher among residents – especially children - living in the US states that had placed the greatest restrictions on smoking in recreational arenas such as hospitality venues (Adda & Cornaglia 2006)¹⁰. Besides drawing considerable media attention, the report has been used in attempts to impede political decisions in favour of smoke-free hospitality venues in England, Wales, Australia and Tasmania, among other places. The results run counter to the majority of research reports in this field, i.e. that the introduction of a growing number of smoke-free public arenas is accompanied by less smoking in private homes (Gilpin et al. 2002, Soliman, Pollack, Warner 2004).

Our data indicates that Norwegian smokers have not changed the frequency of their patronage of pubs, bars or restaurants after smoke-free hospitality venues were introduced on 1 June 2004. The data also showed that the sale of beer by food retailers, which is predominantly consumed at home, has not increased since the ban was implemented. In other words, there is nothing in our material to imply that smokers to a greater extent than before are staying home rather than patronising hospitality venues.

¹⁰ <http://econrsss.anu.edu.au/pdf/DP509.pdf>

Moreover, the annual surveys by Statistics Norway indicates that the proportion of households with a total ban on smoking at home has increased significantly - from 47% (N=1304) in 2003 to 59% (N=1271) in 2005, while the proportion that practises a ban on smoking in the presence of children saw non-significant increase from 76% (N=1302) to 81% (N=1265) during the same period. No significant changes were demonstrated in households with smokers. This means that children appear to be better protected against passive smoking than before, despite the fact that they - as opposed to all adult employees - have no statutory right to a smoke-free environment. SIRUS has previously surveyed the number of children who were exposed to tobacco smoke at home. From 1995 to 2003, the percentage of exposed children was reduced by half (Rise & Lund 2005, Lund & Helgason 2005). It is highly unlikely that the ban introduced in 2004 would have reversed this trend.

9.5 Foreign studies of air quality changes

Employees in the hospitality industry have been disadvantaged by exposure to tobacco smoke (Siegel 1993), and consequently most effect studies of smoke-free hospitality venues have been undertaken among them (Allwright et al. 2005, Farrelly et al. 2005, Hetland & Aarø 2005, Ellingsen et al. 2005). The measurements have most typically been taken through self-reporting or by analysing biochemical exposure markers in body fluids. Air particles have also been measured (CDC 2004). It has been less common for patrons to be used as informants on air quality, but it has occurred (Albers et al. 2004). The common denominator for the surveys is that they have all found indications of improved air quality.

10. Compliance and enforcement

The survey among employees conducted by Hetland & Aarø (2005) showed that compliance with the intention of the Act was reported to be a lot higher with a total ban on smoking than with smoke-free areas. The total ban of smoking also reduced all types of enforcement problems. We obtained information on compliance and enforcement from patrons.

10.1 Data

Information on enforcement and compliance was collected from the above-mentioned surveys conducted by Statistics Norway in 2003, 2004 and 2005. The question posed in 2003 was *"To what extent do you think it will be difficult to enforce the Act regarding smoke-free hospitality venues in a) pubs/bars and b) restaurants, respectively? Answer on a scale from 1 to 7, where 1 is a very small extent and 7 is a very great extent"*. In 2004 and 2005, the question was: *"To what extent have you yourself experienced problems related to the enforcement of the Act regarding smoke-free hospitality venues at a) pubs/bars and b) restaurants, respectively? Answer on a scale from 1 to 7, where 1 is a very small extent and 7 is a very great extent"*. The analyses excluded individuals under the age of 18 and over the age of 74. Only respondents who stated that they visited pubs/bars or restaurants on a monthly basis or more frequently were included in the analysis. This was done so that the informants insofar as possible would have an experience-based platform for their opinions. Figure 18 shows the share who answered 6 and 7 on the scale, i.e. those who have observed serious problems with enforcement.

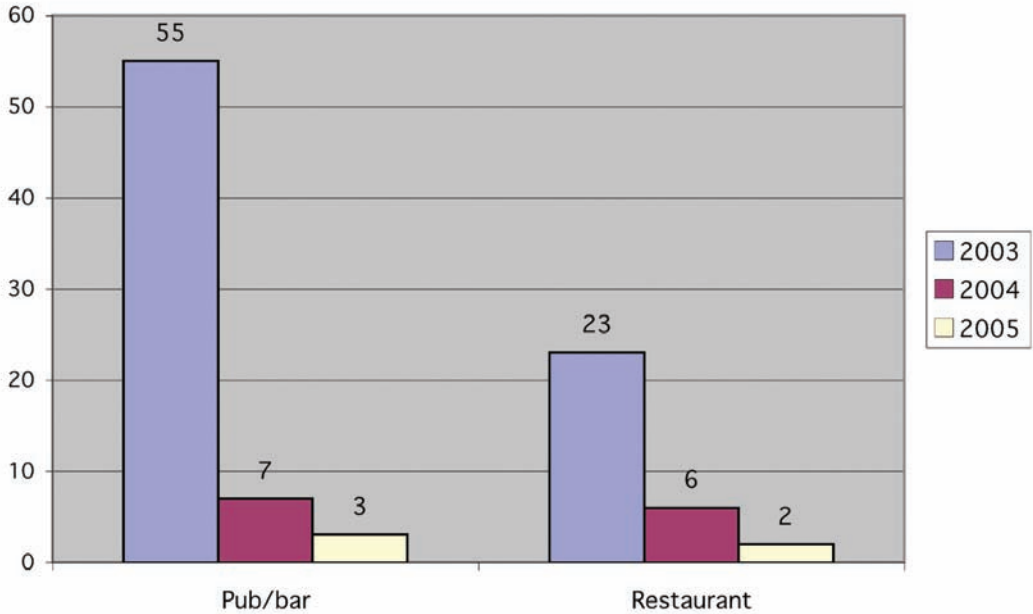
10.2 Results

In 2003, no fewer than 55% (N=726) believed that the Act regarding a smoke-free environment would cause formidable enforcement problems at pubs/bars (Figure

17). Two years after the ban, however, a mere 3% (N=664) of the regular clientele at pubs/bars had personally experienced serious enforcement problems. Among restaurant patrons, a mere 2% (N=890) had experienced problems with the enforcement of the statute. Fewer problems (23%, N=924) were actually anticipated there than in the pub/bar segment.

Even though the 2003 question elicited other information than the questions in 2004 and 2005, Figure 17 indicates that the enforcement of smoke-free hospitality venues has worked better than what patrons had feared beforehand.

Figure 18. The share of regular patrons who assumed in 2003 that the ban would lead to serious enforcement problems (blue column), and the share of regular patrons in 2004 (red column) and 2005 (yellow column) who had personally experienced serious enforcement problems. Source: Statistics Norway



There may be reason to believe that smokers to a greater extent than non-smokers have found themselves in situations where they have experienced enforcement problems at a hospitality venue. Nonetheless, no significant differences were observed between smokers and non-smokers in their degree of problem observation in either 2004 or 2005.

A survey conducted by MMI less than three weeks after the ban was introduced showed that about 9 of 10 smokers 'always' intended to abide by the law (Lund & Rise 2004). This demonstrates a high degree of intended compliance. The VG editorial board rang round to 16 hospitality venues in the largest cities in early July 2004, and concluded that the guests had a high degree of respect for the Act

(Eriksrud, Veibenstad, Lode 2004). The headlines from our newspaper material also suggest that compliance has been high at hospitality venues:

Tobacco Act working marvellously in the city (VG 27 March 2004)

We do not violate the Tobacco Act (Ap 29 June 2004)

Tobacco Act introduced without a hitch (SA 7 June 2004)

No one sneaking a puff (Ap 2 June 2004)

No breaches of the Tobacco Act (Ap 8 June 2004)

One fine after six months of the Tobacco Act (Ap 29 Dec. 2004)

Predictions put to shame (VG 31 May 2004)

The media reported a few incidents of demonstrations but none ever escalated into major episodes. In Porsgrunn, some 100 people marched in a 'People's Protest against the Tobacco Act' (Altmann 2004). A text messaging campaign was initiated by a group of anonymous individuals, urging the public to engage in civilian disobedience by defying the Act and smoking inside hospitality venues. Both the Norwegian Hospitality Association (RBL) and the Hotel and Restaurant Workers' Union (HRAF) quickly announced their opposition to the campaign (Press Release RBL 11 Nov. 2004). Four intoxicated individuals were arrested after smashing 1400 tomatoes on the door of the Storting in protest against the ban (VG Net 1 June 2004), and during a press lunch with Minister of Health Høybråten and LO leader Valla, several of those in attendance lit up cigarettes (Stenersen 2004). The association Friends of Smoke (<http://www.xn--rykensvenner-vjb.no/>) and the association 'A Social Life for Everyone' have worked to secure judicial recognition for private smoking compartments in hospitality venues (<http://www.dagbladet.no/kultur/2005/01/30/421839.html>),

(<http://www.aftenposten.no/helse/article797764.ece?service=print>), (Frydenlund 2004).

10.3 Foreign studies of compliance and enforcement

The California Smoke-Free Workplace Law imposed a total ban on smoking in bars and restaurants as from 1998. In an outreach survey of hospitality venues in Los Angeles County during the period 1998-2002, Weber et al. (2003) found a high degree of compliance with the Act on the part of employees and guests. A panel study of employees in the hospitality industry in California showed that the degree of intervention in response to illegal indoor smoking increased from 43% right after the ban was introduced in 1998 to 82% in 2002 (Tang et al. 2004). After three months of smoke-free dining in Boston, Skeer et al. (2004) also found a high degree of compliance. Similar findings were observed in California (Tang et al. 2003), New York (Hyland et al. 1999), New South Wales (Chapman et al. 2001) and South Australia (Miller et al. 2002).

11. Other consequences of the ban

11.1 Street noise, complaints from neighbours, litter outdoors and cleaning indoors

As shown in Chapter 7.6, the hospitality industry has increasingly made accommodations for outdoor smoking, providing heaters, parasols, windscreens and blankets. Moreover, many establishments have applied for and been granted a licence for outdoor table service. Two newspaper headlines from Aftenposten on 5 August 2004 illustrate that the ban could have an adverse side effect: "*Continuous party outside the windows*" and "*Noise can put a stop to outdoor table service*". Stavanger Aftenblad reported "*Smoking queues may cause problems outside*" (SA 1 June 2004). Table 3 shows that the employees in the hospitality industry also mention this kind of negative side effects of the ban.

Nearly half the employees at pubs/bars and approx. one-third of employees at restaurants reported that the ban led to more noise outside the premises. However, this does not appear to have increased complaints from neighbours (Table 3). A vast majority of the employees stated that the ban had led to more cigarette butts on the street outside. The survey does not say anything about whether this was construed as an unexpected problem or merely a natural consequence. Table 3 nonetheless indicates that the ban has led to cleaning dividends and work clothes that do not reek of smoke.

Table 3. The proportion of employees at pubs/bars and in restaurants who answered 'agree completely' to the following questions in September 2004 and May 2005.

Source: MMI

	Pubs/bars		Restaurants	
	2004 (N=344)	2005 (N=283)	2004 (N=481)	2005 (N=408)
<i>After the introduction of smoke-free hospitality venues....</i>				
...has there been more noise outside the premises?	45	48	30	35
...have there been more complaints from neighbours?	17	21	10	12
...have there been many cigarette butts on the street outside?	70	58	54	66
...has it been easier to keep the premises clean?	43	63	48	64
...have you work clothes stopped reeking of smoke?	58	73	61	74

11.2 The hospitality industry as a sales channel for snuff

Data collected by MMI at roughly the time the ban entered into force showed that 21% of male smokers under age 40 year reported that the ban largely (7%) or to some extent (14%) had increased their motivation to use snuff (Lund & Rise 2004). A survey performed by Statistics Norway in December 2005 showed that 20% of male smokers (N= 207) and 5% of female smokers (N=193) had used snuff as a nicotine substitute in places where smoking was banned (unpublished figures, SIRUS March 2006). By comparison, a mere 4-5% of either gender that had used nicotine chewing gum or other nicotine substitutes in smoke-free arenas. This demonstrates that snuff used as a nicotine substitute is to a greater extent (men) or to the same extent (women) preferred to nicotine chewing gum, and that the ban is perceived as a motivator for the use of snuff.

Against this background, we must appreciate the tobacco industry's efforts to make the hospitality industry into a new sales channel for snuff products. Table 4 indicates that approx. one-third of the employees at pubs/bars report on the post-ban sale of snuff, while this was less common prior to the ban on smoking. The table shows that the snuff industry has actively promoted sales. Employees in the restaurant industry reported less sale of snuff than in pubs/bars, although snuff distribution has also increase there after the ban.

Table 4. The proportion of employees at pubs/bars and in restaurants who answered the following questions in the affirmative in September 2004 and May 2005. Source: MMI

	Pubs/bars		Restaurants	
	2004 (N=344)	2005 (N=283)	2004 (N=481)	2005 (N=408)
Do you sell snuff at the bar or restaurant where you work?	30	28	17	14
Did you sell snuff prior to the introduction of smoke-free bars and restaurants?	6	11	5	7
Has your bar or restaurant been contacted by snuff manufacturers with a view to selling snuff?	27	35	15	21
Has your bar or restaurant been offered a refrigeration by snuff manufacturers for storing snuff?	9	16	4	8
Has your bar or restaurant been offered spittoons?	5	9	2	6

11.3 Smoking habits of the general public; quitting and starting

The annual surveys made by Statistics Norway on tobacco habits among the general public indicate that the percentage of smokers is diminishing continuously, while the share of snuff users is on the rise. However, these trends began before the ban came into effect. It is likely that the ban has fuelled an existing trend, but it is difficult to isolate the impact accurately. Over the past five years, the authorities have initiated a number of other anti-smoking measures that have probably also contributed to a more negative operating environment for smoking.

Two systematic reviews of the literature have shown that the introduction of smoke-free workplaces not only protects people from passive smoking, but also increases the percentage that quit and reduces consumption among the remaining smokers (Flictenberg & Glantz 2002, Levy & Friend 2003). This was also found among employees in the Norwegian hospitality industry (Hetland & Aarø 2005). It is likely, but not yet convincingly investigated, that smoke-free hospitality venues will also contribute to reducing smoking among the general public.

11.3.1 *Smoking among young people*

Pubs, bars, cafés, discotheques and the like are natural settings for experimentation with tobacco, and one explicit motive behind the ban was to eliminate recruitment arenas for smoking among young people (cf. Chapter 2). In a nation-wide survey among young people conducted by Opinion in September 2004, the following question was asked: *"Now that hospitality venues are smoke-free, do you smoke less than you used to, just as much or more than before?"*

In the 18 to 20 age group, 48% of the smokers (N=492) answered that they smoked less after the ban. Table 5 nonetheless indicates that the responses to some extent appear to be biased by the attitudes of the smokers to smoke-free hospitality venues.

This indicates that the question may not produce entirely valid responses. On the other hand, a similar result was also found in a two-year longitudinal survey of 2 623 adolescents ages 12 to 17 in Massachusetts (Siegel et al. 2005). In regions with smoke-free dining, researchers found that the progression from experimentation to regular smoking was significantly lower (odd ratio 0.39, confidence interval 0.24 – 0.66) than in regions with less stringent restrictions.

Table 5. Reported changes in smoking habits as a result of the introduction of smoke-free hospitality venues by attitudes to the ban. Young people from 18 to 20 years old who smoke daily or occasionally. Per cent. Source: Opinion

Smokes...	Attitude to the ban					Total
	Agree completely	Generally agree	Neither agree nor disagree	Generally disagree	Disagree completely	
...less than before	62	55	43	49	29	48
...same as before	31	41	53	45	65	46
...more than before	2	3	3	1	5	3
Does not apply	5	1	3	4	1	3
Total	100	100	100	100	100	100
N	161	78	40	69	144	492

Gamma = .310 sig < 0.005

12. Conclusion

The authorities' most important reason for banning smoking was to afford employees in the hospitality industry the same protection against passive smoking as other employees had had since §6 of the Tobacco Act came into effect in 1988. Other evaluations have already shown that the air quality has improved significantly for staff, and that this, in turn, has led to a reduction of respiratory problems and an improved state of health (STAMI 2005, Hetland & Aarø 2004). Our survey also indicates that patrons reported a dramatic improvement in air quality at hospitality venues.

The most important objection against the ban was that the ban on smoking could have negative economic consequences for the industry. Our investigation has shown that the reported value-added tax (VAT) from the hospitality industry (restaurants, pubs and bars) to county tax offices dropped by -0.8 per cent in the first 12 months after the ban was introduced compared with same interval the year before. In the restaurant segment of the industry, sales remained virtually unchanged (- 0.6%), while typical taverns such as bars and pubs, which have significantly lower sales than the restaurant industry, reported a somewhat higher downturn (- 4.4%). Self-reported patronage from guests showed a high degree of stability. The bankruptcy statistics and degree of employment show no major changes either. The ban does not seem to have caused substantial economic losses for the hospitality industry as a whole. Nonetheless, it cannot be ruled out that the ban on smoking has struck a special segment of the industry.

The evaluation further demonstrated that before the ban smokers expressed a high degree of intended compliance with the ban on smoking. After 18 months of smoke-free dining, a mere 2-3% of the guests had observed enforcement problems with the

ban. Staff experienced fewer unpleasant incidents and better compliance with the total ban of smoking than with smoke-free areas. The results indicate that smokers complied with the scheme and that enforcement problems were small.

Prior to the ban, 69% and 55% of those who smoke on a daily basis thought that smoke-free hospitality venues would reduce their satisfaction when patronising pubs/bars and restaurants, but a mere 38% and 32%, respectively, reported an actual reduction in satisfaction 18 months after the ban. Among non-smokers, 81% and 82%, respectively, reported a higher level of satisfaction with pubs/bars and restaurants after the ban. One year after the ban, no fewer than three of four respondents stated that they would retain the scheme of smoke-free hospitality venues if given a hypothetical choice. The results indicate that the ban did not turn out to be as bad as smokers had initially feared. This must be seen in the light of large parts of the hospitality industry having paved the way for outdoor smoking by several types of initiatives to raise the level of satisfaction.

The general public's attitude to passive smoking has changed since the Tobacco Act was implemented in 1988, effectively banning smoking in enclosed public areas. When hospitality venues became smoke-free in 2004, far more people perceived passive smoking as a health problem than what the case was in 1988. Support for the ban has increased steadily. The most recent survey (December 2005) indicated that three of four people were positive to smoke-free hospitality venues. The views of smokers and non-smokers were largely in harmony about the Tobacco Act at that time, even though there appeared to be considerable differences in people's views on smoke-free hospitality venues in 2004. 84% of non-smokers were positive to smoke-free hospitality venues in 2005, while a mere 45% of those who smoke on a daily basis held the same opinion. Two years earlier, however, only 25% of those who

smoke on a daily basis were positive to the idea, so support for smoke-free hospitality venues has grown quickly, not least among those in the most sceptical group.

Nearly half the employees contended that the ban had led to more noise outside the premises. However, it has not led to more complaints from neighbours. There have also been reports of more cigarette butts on the street near the front door, but it was not clear whether this represented a serious and unexpected problem. Employees pointed out that the advantages of the ban included easier cleaning, work clothes that do not reek of smoke, a better state of health and better air quality.

The evaluation has shown that after the ban on smoking, the hospitality industry has become a sales channel for snuff and an arena for using snuff. It is likely that the ban has accelerated the use of snuff here in Norway. It is also likely that the ban has accelerated the decline in the percentage of smokers among the general public, although it is difficult to isolate one particular effect. Among smokers, nearly half the demographic aged 18 to 20 reported that the ban had caused them to cut back on cigarettes, but the responses were influenced by the attitude young people had to the ban on smoking and are thus not entirely valid. A survey from the USA showed that the progression from experimentation to becoming a regular smoker was significantly lower in regions with a ban on smoking in hospitality venues. Our data does not lend itself to determining whether the ban has contributed to the reduction in recruitment to smoking observed here in this country.

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