The impact of smoke-free policies on the patronage of restaurants in Hong Kong 2001

July 2001

Report No. 9

The estimated impact of smoke-free policies on the patterns of dining out in a representative sample of the Hong Kong population

New information on eating out preferences from the 1999 survey of the general population

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What would be the weekly loss/gain in number of meals sold if Hong Kong had a comprehensive smoke-free policy for all restaurants?

If the 20% who would go out to eat more often only went 1 more time per week

and

If the 3% who would eat out less often went 4 times less per week

then

There would still be 455,328 additional meals sold per week in Hong Kong.

"Smoke-free policies in the Hong Kong catering industry would be good for business"
1. Introduction

Workers in the catering industry and their customers are harmed by exposures to second-hand smoke. Surveys of public opinion in 1995 and 1999/2000 which estimated exposure to second-hand smoke in restaurants and the public demand for smoke-free dining and catering facilities, clearly demonstrated that there is a large majority in Hong Kong which supports a comprehensive smoke-free policy. In the 1995 and 1999 surveys an average of 71.5% agreed or strongly agreed that restaurants should be smoke-free.

2. Impact on patronage

If all restaurants were smoke-free then 20% of the survey respondents would go to eat out more often. This was a consistent finding between the 1995 and 1999 surveys. A further 77% would not change their usual patterns of eating out and only 3% declared that they would go less often.

The majority rated the totally smoke-free restaurant concept as the cleanest (86%), as serving the cleanest food (61%) and as having the best image (76%).

Given a choice between two restaurants offering a similar type of service, 84% would choose the one with a non-smoking area. We now know that so-called "non-smoking areas" are unsatisfactory because they do not protect either workers or customers from exposure to second-hand smoke and so they are an unacceptable alternative to smoke-free policies. The public response in both 1995 and 1995 clearly indicates that most diners want to avoid smoke.

When respondents were accompanied by children, 82% would choose a smoke-free restaurant in preference to the alternative. Most members of the public appear to appreciate that second-hand smoke is particularly damaging to children.

Since the Government announced new proposals for legislation to prevent passive smoking in the workplace, including hotels, restaurants and bars, there have been many views expressed in opposition. One of these argues that catering businesses will lose trade and jobs because those smokers who prefer to smoke when dining out will stay away. However there is no evidence for this in other countries where smoke-free restaurants and bars have been introduced. The most detailed economic analyses in the USA have shown that taxable revenues in the hospitality industry were stable or rising following the introduction of smoke-free policies and had no impact on business from Asian tourists after smoking bans.

What can we predict will happen in Hong Kong?

This report uses new analyses of data from the 1999 survey of public opinion on smoking in restaurants.

3. Objectives

The aim of this report is to analyze the dining-out habits of the respondents to the 1999 survey, together with their preference for smoke-free eating places, to assess the possible impact of a comprehensive smoke-free policy on the business of catering facilities in Hong Kong.

4. Methods

Reference should be made to the COSH Report No. 6, March 2000, for details of the methods and basic findings.

The randomly sampled 1,078 subjects were demographically representative of the general population in Hong Kong aged 15 years or older.

In this new analysis, data on age, gender, smoking status, declared frequency of eating out and future intentions on eating out has been linked to determine what the effect would be if smoke-free dining was introduced in Hong Kong.

5. Findings

Overall, if all restaurants were smoke-free, a majority of the respondents (77%) stated they would not change their habit of dining out, 20% would dine out more, whereas only a small minority (3%) would dine out less frequently.

Social and demographic characteristics of subjects in relation to eating out preferences

Smokers: One hundred and fifty seven (14.6%) of the survey respondents were smokers. Seventy six percent of the smokers would not change their usual pattern of dining out, 21% would go less often and 3% would go more frequently.

Non-smokers: Among the 921 non-smokers, 763 were never- and 158 were ex-smokers. Among the never-smokers, 78% would not change and 22% would dine out more. Among the ex-smokers, 75% said they would not change their eating-out habits and 25% said they would go out more often to eat.

Gender: If all restaurants were to be smoke-free 34/1078 (3% of the sample) stated that they would eat out less frequently; 5.0% of males and 1.4% of females. The difference between the genders was statistically significant ($x^2 = 11.69; df 1, p=0.003$). The proportions of the genders in terms of those who would eat out more often, are similar with 18% of men and 21% of women opting to eat out more frequently.

Place of birth: The proportions who would eat out less frequently were similar among people whose birthplace was Hong Kong (2.9%) and Guangdong (3.7%); 1 out of 13 from Macau and none of the 63 born in the mainland said they would eat out less often if smoke-free dining was introduced.

Marital status: The intentions of eating out less frequently of the never married (3.7%) and currently married (3.0%) were similar. None of the 37 widowers would eat out less often but 21.6% said they would go more often.

Educational attainment: There was little variation in responses between educational groups and no trend. Those with tertiary education showed slightly less tendency to state that they would dine out less often under a smoke-free policy.
Effect of change in patterns of eating out

The 3 groups of respondents who stated that they would dine out more (20%), not change (77%) and dine out less (3%) were analyzed separately to estimate:

(a) The numbers of people represented by these proportions in the general population of Hong Kong, aged 15 years or older, who would eat out either more of less often.

(b) The total number of times the subgroups said that they currently eat out per week.

(c) The number of additional meals they would consume after smoking bans were introduced if 20% of the population eat out 1 or more additional times per week, or conversely the loss in number of meals consumed if 3% of the population eat out less often.

(d) From the above we are able to estimate the net change, either gain or loss, in restaurant business following the introduction of smoke-free policies, using different assumptions about the patterns of eating out.

Eating-out patterns in individuals: The impact of smoke-free dining policies on the whole population has been estimated using very conservative assumptions.

In December 2000 the estimated population of age 15 years or older in Hong Kong was 5,691,582 and this figure is used to illustrate the total numbers of members of the public who might change their usual patterns of eating out (Table 1).

The 20% who stated that they would eat out more often contribute a total of 6,260,740 dining out visits per week at their current average rate of 5.5 meals per week each. If this group increased their number of dining out visits by only 1 visit per week per person on average, this would lead to the consumption of 1.13 million additional meals. If the number of extra visits to restaurants was as high as 4 times a week then the additional meals would amount to about 4.5 million per week (Table 1).

The 3% of the public who stated that they would eat out less often currently contribute 1,639,175 dining out visits to the catering trade at an average of 9.6 meals per week each. If this group went to eat out, on average, 1 to 4 times less than before then the drop in meals consumed would be in the range of 170,700 up to about 683,000 per week.

What is the worst case scenario? Under the assumption of an extreme change in pattern of eating out, with the increase in dining visits only amounting to 1 per week (20% of the population) and the reduction in visits being 4 per week (in 3% of the population), then there would still be a net gain of 455,328 extra meals sold per week under a comprehensive smoke-free policy; a gain in business of at least 1.3%.

Eating-out patterns estimated on the basis of households: The estimates of eating-out patterns based on the responses of individuals will predictably under-estimate the actual numbers of additional meals either consumed or foregone because of smoke-free policies, because most diners are likely to eat with other members of their household or friends.

6. Comment

Is this survey representative of the Hong Kong population?

The random samples of members of the public, contacted by random digit dialling in the 1995 and 1999 COSH surveys, were shown to be strongly representative in their demographic features, including smoking pattern, of the general population in Hong Kong. This means that we can be confident that the estimates are free of bias.

Those who say they would eat out less often, have higher dining-out rates than the others but they comprise only 3% of the whole population sample. Smoke-free dining policies are even acceptable to the majority of smokers. Only 21% of all the smokers in the sample said they would eat out less while 79% said they would not change or would eat out more.

<table>
<thead>
<tr>
<th>Declared change in eating-out pattern</th>
<th>Current pattern of eating-out</th>
<th>Effect of change in eating-out pattern on number of meals gained or lost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would eat out more</td>
<td>5,691,582 population ≥15 years</td>
<td>+ 1 time/week = 1,138,316 extra meals</td>
</tr>
<tr>
<td>20% of the survey respondents who ate out on average 5.5 times per week</td>
<td>x 20% who would go more often</td>
<td>+ 2 times/week = 2,276,632 extra meals</td>
</tr>
<tr>
<td></td>
<td>5.5 times eating out per week now</td>
<td>+ 3 times/week = 3,414,948 extra meals</td>
</tr>
<tr>
<td></td>
<td>= 6,260,740 total current eating out visits per week</td>
<td>+ 4 times/week = 4,553,264 extra meals</td>
</tr>
<tr>
<td></td>
<td>Range: 1.13 million to 4.5 million additional meals consumed per week</td>
<td></td>
</tr>
<tr>
<td>Would eat out less</td>
<td>5,691,582 population ≥15 years</td>
<td>− 1 time/week = 170,747 fewer meals</td>
</tr>
<tr>
<td>3% of the survey respondents who eat out on average 9.6 times per week</td>
<td>x 3% who would go less</td>
<td>− 2 times/week= 341,495 fewer meals</td>
</tr>
<tr>
<td></td>
<td>9.6 times eating out per week now</td>
<td>− 3 times/week= 512,242 fewer meals</td>
</tr>
<tr>
<td></td>
<td>= 1,639,175 total current eating out visits per week</td>
<td>− 4 times/week= 682,988 fewer meals</td>
</tr>
<tr>
<td></td>
<td>Range: 170,000 to 683,000 fewer meals consumed per week</td>
<td></td>
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</tbody>
</table>
### Declared change in eating-out pattern

<table>
<thead>
<tr>
<th>Would not change</th>
<th>Current pattern of eating-out</th>
<th>Effect of change in eating-out pattern on number of meals gained or lost</th>
</tr>
</thead>
<tbody>
<tr>
<td>77% of the survey respondents who eat out on average 6.2 times per week</td>
<td>5,691,582 population ≥15 years × 77% who would not change × 6.2 times eating out per week now = 27,171,612 total current eating out visits per week</td>
<td>No change</td>
</tr>
<tr>
<td>All groups</td>
<td>Total number of eating out visits per week = 35,071,527</td>
<td>Under the conservative assumption that 20% would only eat out once more often and 3% would eat out 4 times less often, there would be a net gain of 1,138,316 minus 682,988 = 455,328 meals consumed per week; an increase in business of 1.3%</td>
</tr>
</tbody>
</table>

Notes:  
- The left hand column indicates the subgroups in the survey sample who responded that, under a smoke-free dining policy, they would go to eat out more often, would go less, or would not change.  
- The middle column calculates the total weekly number of eating out visits currently contributed to the restaurant business in Hong Kong.  
- The right hand column estimates the increase or loss in numbers of meals purchased under a smoke-free policy and then illustrates the possible effect on restaurant business using a very conservative approach.

Although being able to smoke is a factor influencing the declared future intentions of dining out, this only affects a small minority of smokers and may well be a temporary phenomenon.

**What impact on business can be expected from comprehensive smoke-free policies?**

In this analysis, assuming that 20% of the respondents would dine out only 1 more time per week and 3% would dine out on 4 fewer occasions per week. The gain would be 1,138,316 meals per week from 20% of the population and a loss of 682,988 meals from 3% of the population; a net gain of 455,328 meals per week.

In order to cancel out the benefit of 1 additional visit by 20% of respondents, 3% of the population would have to reduce their dining out visits by 7 meals each per week.

If, on the other hand, the 20% who favour smoke-free dining increased their patronage of restaurants by only 1.5 visits per week, and the 3% who favour unrestricted smoking ceased to dine out altogether, there would still be a net gain in meals sold of 68,000 per week.

**What is the experience of smoke-free policies elsewhere?**

In the US and other countries the tobacco industry consistently claims that legislation on smoke-free restaurants will damage revenues in the catering industry. These claims have been examined in detailed economic analyses.

Evidence from the USA and Australia strongly suggests that, overall, catering business will remain stable or increase under smoke-free policies. This is because substantial numbers in the population currently stay away from restaurants and bars because they wish to avoid second-hand smoke. In California and New York restaurants' taxable receipts did not show a downturn after the introduction of smoke-free dining.  

Surveys sponsored by the tobacco industry which purport to show that business was damaged have been discredited. On the other hand the finding that the patronage of restaurants is likely to increase following the introduction of smoke-free policies is consistent with reports from the USA, Australia and Canada of either predicted or actual increases in business.

In a comparison of hotel room and overall hotel revenues in 3 states and 6 cities in the US, it was found that tourism was either unaffected or increased after smoke-free bars were introduced.

Have any objective, independent studies shown that restaurant and bar revenues will suffer from smoke-free regulations? No; but the reports by Dunham and Marlowe received widespread publicity as a result of their dissemination by the tobacco industry. They claim to show that although there are no effects on revenues it still hurts businesses. The problems with these reports, which are co-authored by a Philip Morris executive, include:

- the analysis is based on asking bar and restaurant owners what they predict will happen if they are required to be smoke-free  
- they predicted 38% of businesses would lose money and only 6% would gain. However studies based on sales taxes show no such effect.
The State of California found that the legislation on smoke-free bars did not adversely affect business but was associated with an increase in trade. The tobacco industry then claimed that the reason why revenues are not affected is that the regulations are unenforceable and are widely ignored in a campaign of "civil disobedience". However in May 2001 COSH contacted the Tobacco Control Section of the California Department of Health (CDH) for information on compliance with both the restaurant and bar smoke-free regulations. They reported strong satisfaction with progress of the regulations. Currently 95% of restaurants comply with the regulation and 70% of the bars do so. The regulations governing smoke-free bars were introduced more recently and the CDH is confident that this figure will improve.

Between 1983 and 2000, 34 studies in the US and Canada examined the impact of smoking restrictions on restaurants and bar sales. The investigators used taxable sales receipts, number of restaurants, employment rates, proprietor estimates of changes in sales, consumer estimates of patronage, patron estimates of changes in number of customers, estimates of gratuities received and costs of regulating smoking to assess the effect on restaurant and bar businesses. Thirty one out of the 34 studies demonstrated an absence of any negative impact on sales. Eleven of these actually found a positive effect with revenues increasing. Of the remaining 3 studies which claimed to show an adverse effect on trade, all were based on expectations of future behaviour and 2 of them were associated with the tobacco industry. The firm conclusion is therefore that bans on smoking do not negatively affect sales in restaurants and bars.

Will any catering business in Hong Kong be affected by smoke-free policies?

It is to be expected that comprehensive smoking bans will lead to a transition period in which the patronage of some restaurant and bar businesses will change. It is possible that some restaurants which are now heavily dependent on a selected group of smoking customers will experience an adjustment in their pattern of business. However this is a very small proportion of the customers who currently patronize restaurants in Hong Kong and there is no reason to suppose that they will permanently abstain from using restaurants in the future.

Even at the lower end of the market there are many customers who prefer smoke-free dining and who will increase their patronage if they have access to smoke-free restaurants.

The 1995 and 1999 COSH surveys of public opinion clearly indicate that 1 in 5 of the general population is currently deterred from eating out because of tobacco smoke exposures in restaurants. In 1999, 52% of the respondents said they had left a restaurant because of tobacco smoke. This indicates a loss of business, on at least one occasion, from 5,691,582 x 0.52 = 2.96 million members of the general population. Even if the loss was less than one tenth of this estimate it strongly suggests that there is considerable potential for the catering industry to increase its market if smoke-free dining is introduced and enforced. Tobacco smoke contamination of the air in restaurants causes damage to the economy as well as to the health of workers and patrons.

In Sydney, Australia, smoking in restaurants was banned before the Olympic Games. A recent survey showed that 79% of restaurants received favourable comments from patrons about the smoke-free legislation. Eighty one percent of staff interviewed supported the law. Ninety percent reported normal or increased trade.

Overall, based on local and overseas data from rigorously conducted surveys by credible scientists, we take the view that the catering industry in Hong Kong will strongly benefit from smoke-free policies.

Much of the present debate about the harm to the catering industry from smoke-free policies has been fuelled by the tobacco industry's deliberate attempts to distort public opinion. The tobacco industry's internal documents show that it has been aware that its public campaigns, predicting dire economic consequences for restaurants, were disingenuous. A 1994 Philip Morris internal document states:

"The economic arguments often used by the industry to scare off smoking ban activity were no longer working, if indeed they ever did. These arguments simply had no credibility with the public, which isn't surprising when you consider that our predictions in the past rarely came true."

The simple truth is that the tobacco industry has tried to use the hospitality industry to undermine environmental and public health policies in Hong Kong in order to protect its vested interest in promoting smoking in public venues. Further evidence of this in Hong Kong is the Philip Morris funded "Courtesy of Choice" programme, which is used by several restaurants and hotels at the higher end of the market and designed to create the false impression that smoking in designated areas within a common air space will not harm others.

The need to protect workers and customers

It is important for all parties involved in the debate about the introduction of smoke-free policies to remember that the underlying reason for the introduction of new legislation on smoke-free catering facilities is the prevention of serious health damage to both the workforce and customers. It is now imperative that the public health objectives of the proposed measures are achieved without further delay.

The health of workers in the catering industry will improve immediately and also benefit in the longer term, by prevention of acute respiratory symptoms and the avoidance of chronic health problems later, such as heart disease, stroke and cancer.

This health protection will be paralleled by the economic benefits of increased demand for and patronage of smoke-free catering.
7. Summary and conclusions

- Tobacco smoke in the catering industry damages both the health of workers and the economy of the business.
- In the future restaurant owners will want to avoid liability, as employers, for health problems caused by passive smoking in their workplace.
- The responses from a demographically representative sample of the Hong Kong population, aged 15 years or over, provide a clear indication that comprehensive smoke-free policies would be popular and would lead to increased business in the catering industry.
- Ninety seven percent of respondents either would not change their eating out patterns (77%) or would go to eat out more often (20%). The increased business generated by smoking bans is likely to exceed any loss of business by a considerable margin. It is estimated that, as a minimum, about 450,000 additional meals would be sold per week.
- Studies in overseas countries with higher smoking prevalence rates than Hong Kong have shown no adverse effect on taxable receipts in the hospitality industry, including restaurants, bars, hotels and tourist business.
- The health of workers, the economy of catering businesses and the satisfaction of customers will all be improved by the introduction of smoke-free policies in Hong Kong.

8. References


