

III Effects of Alcohol tax cuts in Finland in 2004¹

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There were significant changes in Finnish alcohol control in 2004. Quotas on the tax-free imports of alcoholic beverages of travellers arriving in Finland from other European Union (EU) countries were abolished on 1 January 2004. This had great significance after Finland's southern neighbour, Estonia joined the European Union on 1 May 2004. Estonian prices for cheap vodkas were one-fifth of the Finnish ones, prices for beer were one-third and for wine two-thirds of the Finnish prices. Visiting Estonia is relatively easy for Finnish residents: the 5 million inhabitants of Finland made 2.5 million trips to Estonia each year at the turn of the millennium.

Related to these changes, alcohol taxes were cut in Finland on average by one-third on 1 March 2004 with aims of curbing the expected growth of travellers' alcohol imports, maintaining the tax base of alcoholic beverages and jobs created by the alcohol industry in Finland and preventing the emergence of grey markets based on travellers' alcohol imports. The Government anticipated that the tax cuts would increase alcohol-harms, but emphasized that, due to much greater travellers' imports, they would increase even if no cuts were made in alcohol taxes.

¹ This is a shortened version of the article Mäkelä P, Österberg E: Weakening of one more alcohol control pillar: a review of the effects of the alcohol tax cuts in Finland in 2004. *Addiction* 104(4):554-563, 2009.

In the following we use published research and routinely available data to examine the effects of 2004 tax cuts on alcohol consumption and related harm

Weakening pillars of alcohol control policy

Nordic alcohol control has rested on three pillars: strict control of the physical availability of alcohol, a comprehensive state monopoly on alcohol production and trade that prevented private profit-seeking on alcoholic beverages, and high prices of alcoholic beverages.

In Finland, the physical availability of alcoholic beverages was very strictly controlled until 1969 when new liberal alcohol legislation was introduced. During the following decades, physical alcohol availability was further increased.

In 1995, when Finland joined the EU, the state monopoly on the production, import, export and wholesale of alcoholic beverages was dissolved. However, the off-premise retail alcohol monopoly, Alko, was maintained for alcoholic beverages with an alcohol content exceeding 4.7% by volume.

During the second half of the twentieth century, real prices of alcoholic beverages were held at the high level they had reached in 1951. In March 2004, however, excise duty rates for alcoholic beverages were lowered. The relative decrease in alcohol prices was higher for distilled alcoholic beverages than for beer and wine (Table 1). Nevertheless, the prices of the most inexpensive vodkas and other alcoholic beverages in Estonia in late 2007 were still only one-third of the Finnish level.

Table 1
Reductions in alcohol excise duties and prices of alcoholic beverages in Alko (the off-premise retail alcohol monopoly) stores, 1 March 2004

Beverage category	Tax reduction	Decrease in off-premise price
Vodkas	44%	36%
Other distilled spirits	44%	28%
Intermediate products	40%	25%
Long drinks	37%	17%
Wine	10%	3%
Cider	23%	7%
Beer	32%	13%

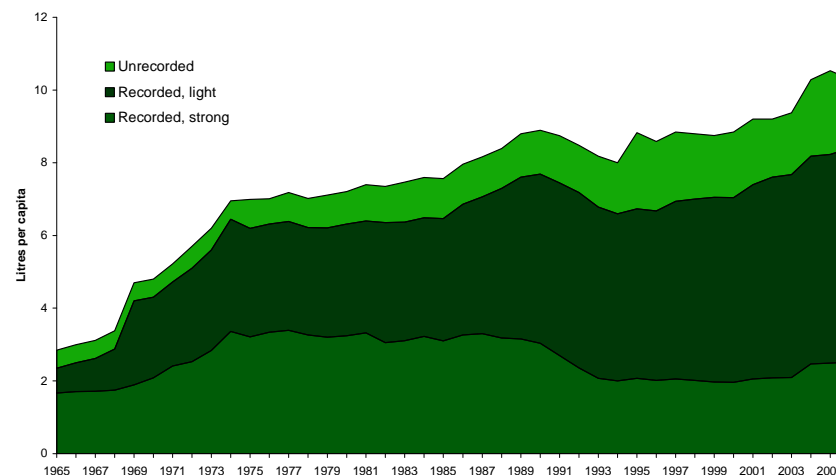
Note: Long drinks are a popular type of pre-mixed drink

Source: Government Bill 80/2003; Alko Inc

Effects of the 2004 changes on alcohol consumption

In the mid-1960s, total per capita alcohol consumption (both recorded and estimated unrecorded) was around 3 litres. This increased to almost 5 litres in 1969 after legislative changes and increased to just over 9 litres in 2003 (Figure 1). In 2004, consumption increased by 10% and has since kept at that level. Recorded alcohol consumption increased 7% over the previous year, and unrecorded consumption by about one-quarter. The increase was the largest where the effect of the taxes on price level was the largest: retail sales increased more than on-premise sales, and the increase in sales of strong beverages exceeded that of beer, while table wine sales did not increase at all in 2004.

Chart 1: Trends in alcohol consumption in Finland, 1965 - 2006



According to a survey conducted by the National Public Health Institute, the proportion of people with moderate to heavy alcohol consumption increased the most in the group with the lowest level of education from years 2000-2003 to years 2004-2005. An analysis by age group revealed a distinct division of the male population into two groups: drinking among persons over 45 increased clearly whereas no increase was observed in the age group under 45. For women, the differences between age groups were similar in direction but less pronounced.

Trends in alcohol-related harms

In Finland, some 70% of assaults are committed while under the influence of alcohol. However, the changes in 2004 had no permanent effect on manslaughters and murders or attempted manslaughters and murders.

Table 2
Trends in alcohol-related harms in 2000s

	2003	2004	Change from "before" (2001-03) to "after" (2004-06), %		
			2006 Observed ¹	Expected ²	
CRIMINALITY & OTHER POLICE DATA					
Manslaughters and murders total	103	144	111	-5	-46
Attempted manslaughters and murders	347	334	271	-12	-9
Assaults	28,862	29,806	30,885	8	9
Arrests for drunkenness	95,275	105,819	99,559	7	-1
Drink driving total	22,858	24,861	22,929	4	1
Drink driving	8,721	9,368	8,664	-1	-11
Aggravated drink driving	14,137	15,493	14,265	8	10
ALCOHOL-RELATED DEATHS					
<i>All alcohol-related deaths</i>					
Total	2,456	2,826	3,033	23	6
Men	2,015	2,285	2,464	21	6
Women	441	541	569	31	5
<i>Alcohol attributable disease or poisoning</i>					
Total	1,560	1,860	2,032	31	9
Men	1,233	1,477	1,599	31	10
Women	327	383	433	33	6
<i>Accidental and violent deaths with alcohol intoxication as a contributory cause</i>					
Total	896	966	1,001	9	1
Men	782	808	865	7	0
Women	114	158	136	24	5
ALCOHOL-RELATED DEATHS BY CAUSE					
Liver diseases caused by alcohol	643	831	978	46	8
Alcohol cardiomyopathy	108	116	102	13	25
Pancreatic diseases caused by alcohol	88	100	117	52	127
Poisoning, alcoholism	677	756	767	16	6
ALCOHOL-RELATED HOSPITALISATIONS					
Total	24,491	26,673	26,016	7	-2
Men	19,544	21,338	20,531	7	-2
Women	4,947	5,335	5,485	9	-2
ALCOHOL-RELATED HOSPITALISATIONS BY CAUSE					
Alcohol dependence	6,153	6,354	6,001	-3	-9
Other disorders caused by alcohol	4,619	5,370	6,060	24	-3
Liver diseases caused by alcohol	2,491	2,885	3,220	33	17
Intoxication	7,142	8,009	7,255	6	-4
Other alcohol diseases	3,744	3,780	3,451	-5	-2
SERVICE USE					
A-clinics: clients	41,710	42,977	44,443	4	-1
Detoxification centres: clients	9,223	10,091	10,569	10	-1
Detoxification centres: care days	97,129	106,204	105,519	10	7
Rehabilitation centres: clients	6,774	6,848	6,979	4	0
Rehabilitation centres: care days	278,082	300,288	301,114	12	10

Notes:

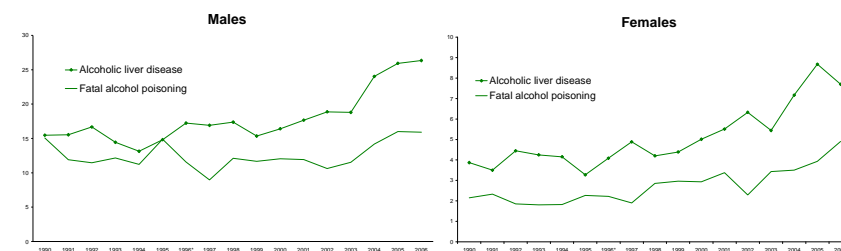
¹ The observed change is from the mean of 2001, 2002 and 2003 to the mean of 2004, 2005 and 2006. To keep the table concise, only years 2003, 2004 and 2006 are shown.

² Expected on the basis of pre-existing trend

The observed number of assaults increased somewhat after 2004, but the growth rate was no greater than before 2004 (see Table 2). Arrests for drunkenness and the total number of drink driving cases recorded by the police increased after 2004 by 7% and 4%, respectively, which was more than expected on the basis of the pre-existing trend. Despite the 10% increase in cases of aggravated drink driving in 2004, these cases seemed not to have increased more than expected on the basis of the trend in the early 2000's, while for non-aggravated drink driving, year 2004 may have marked an end to the decreasing trend in early 2000s.

The 2004 increase in consumption resulted in An unexpectedly high increase in deaths from alcohol-attributable diseases and poisonings in both men and women (Table 2, Figure 2). The increase was 19% between 2003 and 2004, and 31% from 2001-2003 to 2004-2006.

Chart 2: Age adjusted alcohol related mortality



The greatest increase occurred in deaths from alcohol-induced liver diseases. The increase in 2004 was 29% on the previous year, and the number of such deaths in 2004-2006 was 46% higher than in early 2000's. Deaths from alcohol poisoning and alcohol dependence also increased more than expected.

The relative increase was similar among men and women, but the absolute number of deaths increased much more among men. The growth in alcohol-related mortality was largest among the 50-70 year age group. Additionally, the increase in alcohol-related deaths in 2004-2005 did not concern people in active employment or people with underage children, but it was concentrated in the worst-off parts of the population. It is possible that better-off parts of the population also increased their consumption, but because the time lag between increased drinking and death from an alcohol-related cause for a healthy working adult may be several years, the effects would only be visible in a longer follow-up.

Alcohol-related hospitalisations increased by 7% in contrast to the downward trend observed before 2004. The same was true for the number of clients and care days in specialised services for substance abusers, the great majority of whom abuse alcohol, which increased by 4-12% from 2001-2003 to 2004-2006.

Summary and discussion

In 2004, Finland's quotas for travellers' tax free imports of alcoholic beverages from other EU countries were abolished, Estonia joined the EU, and excise duties on alcoholic beverages were reduced. In that year alcohol consumption increased more than it had in early 2000's. The reaction of Finnish consumers to the changes in March 2004 was immediate insofar that alcohol consumption stabilized to the new, higher level by autumn 2004.

This finding, based on a natural experiment, confirms what has earlier been known on the basis of time series and pooled cross-sectional time series analyses about the effects of taxes and prices

on alcohol consumption: changes in prices of alcoholic beverages have an impact on consumption.

The increase in consumption, in its turn, was followed by an increase in a wide spectrum of alcohol-related harm: arrests for drunkenness, non-aggravated drink driving, and alcohol-related deaths and hospitalizations all increased. For assaults, and for some causes of death or hospitalization, the increase was no larger than could be expected on the basis of the pre-existing trend. In principle, something other than the alcohol policy change under scrutiny could have caused the changes in consumption and harms. Indeed, third factors, like police control or the supply of treatment, are known to have affected trends in some alcohol-related harm series.

The decrease in alcohol prices was expected to manifest itself as an increase in drinking among the population at large, but even more so among people on low incomes, including young people. In Finland in 2004 it was the middle-aged and older segments of the population whose consumption and related harms increased the most. This contrasts with results in the econometric literature suggesting a higher price responsiveness among younger than among older drinkers.

The largest increase in harm was observed for deaths from alcoholic liver cirrhosis and other liver diseases, which were in 2005 at a nearly 50% higher level than they were in the first years of the millennium. Because liver cirrhosis takes a long time to develop, this sudden increase can only mean that alcohol consumption rose considerably among heavy drinkers who had damaged their livers already before 2004. Hence, the Finnish experience confirms the results from studies showing that heavy drinkers are especially

responsive to price, although opposite results have also been reported in the literature.

Published results show that the changes in alcohol policy in 2004 resulted in dramatic increases in severe alcohol-related harm among those parts of the population that are worst off: the unemployed, early pensioners, and people living alone. Hence it can be said that high alcohol prices are a good tool to protect the health of the worst-off parts of the population.

In the EU, economic issues tend to be guided by "hard law", or binding legislation, and public health issues by "soft law", like recommendations and strategies, which is problematic from a public health point of view. The EU has recognized this, and it adopted a Health in All Policies approach in 2006. The fact that the EU, aiming to remove barriers to trade, has forced member states to abolish travellers' import quotas of alcohol and tobacco is a prime example of this conflict of interests. In Finland the removal of import quotas, mediated largely by the reduced taxes, resulted in severe public health consequences, a finding that should be taken into account in future trade policy decisions.

Postscript

After writing the original article, alcohol excise duties have been increased in Finland three times. On 1 January 2008 excise duty rates of distilled spirits were increased by 15%. For all other alcoholic beverages the increase was 10%. On 1 January 2008 taxes of all alcoholic beverages were increased by 10% and the same increase was repeated on 1 October 2008. The two first increases were motivated by social policy and public health arguments, the third by increasing state alcohol income.