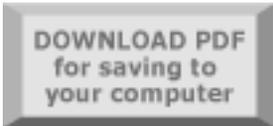


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► [Changes in alcohol consumption and beverage preference among adolescents after the introduction of the alcopops tax in Germany.](#)



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Müller S., Piontek D., Pabst A. et al.
Addiction: 2010, 105, p. 1205–1213.

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Concern that sweetened alcoholic drinks ('alcopops') seduced adolescents to start drinking more and sooner led Germany to impose a tax rise nearly doubling their price. It dented their consumption among teenage drinkers, but switching to spirits and other products eroded the overall drop in alcohol consumption.

Summary In the late 1990s concern grew in Germany and other European nations that that the sweet taste of bottled or canned products mixing soft drink such as lemonade with alcohol ('alcopops') masked their alcohol content and seduced adolescents, especially girls, to start drinking at a younger age and to drink more. These concerns led the German government to impose a specific alcopops tax in 2004 which nearly doubled the retail price. The featured study focused on one of the main targets of the tax – young drinkers – and assessed how their drinking habits changed in response to the tax rise.

School surveys either side of the tax rise in 2003 and 2007 in the same six of Germany's 16 states sampled about 10,500 pupils in ninth- and tenth-grade classes aged 15 and 16. The study was confined to the roughly 4 in 10 who in their questionnaire responses said they had drunk alcohol in the past seven days – current drinkers. They were asked how many drinks they had consumed in that time of beer, wine, spirits and alcopops. These were converted to [quantities](#) of alcohol, enabling total past-week consumption to be calculated. Which type of drink each individual 'preferred' was defined as that which contributed most alcohol to their intake.

Differences between the samples in the two years might have accounted for changes in drinking patterns which could be falsely attributed to the tax rise. To try to eliminate this possibility, results were adjusted for age, sex, school type and the state where the school was located. Additionally, 2347 pupils from the 2007 survey could be closely matched one-to-one with pupils from 2003 in terms of a range of variables including how available they perceived alcohol to be, their expectations of good and bad effects from drinking, how many of their friends drank, past-month binge drinking, smoking or cannabis use, when they started drinking, and other family and lifestyle variables. This 'matched' sample, with results also adjusted for age, sex, school type and the state, offered the securest basis for assessing the effects of the tax rise after other influences had as far as possible been equalised.

Main findings

The raw figures across the entire samples of pupils and unadjusted for differences between them showed a significant drop in average per-pupil past-week alcohol consumption from nearly 91g to just over 78g, but these figures were vulnerable to differences across the years apart from the imposition of the tax rise. After pupils had been matched and the results adjusted for differences between the samples, they revealed no significant drop in total consumption, but that its composition had changed; after the tax rise, teenage drinkers consumed less alcohol in the form of alcopops and more as spirits, but not so much more that the alcopop fall was cancelled out. A rise in consumption of alcohol mainly in the form of beer meant total consumption had not changed to a statistically significant degree.

In detail, average past-week alcopop alcohol intake had nearly halved from just over 25g to nearly 14g, while spirit alcohol had risen from 14g to just over 19g. Beer alcohol intake too had increased slightly and non-significantly from just over 43g to nearly 47g, while wine was virtually unchanged. These figures summed to an average near 89g alcohol intake in 2003 versus near 83g in 2007, not a statistically significant drop.

When these consumption figures were converted to 'preferences' in terms of the largest source of alcohol, preference for alcopops had more than halved from 27% to 12%, while spirit preference doubled from 8% to 16%; there were also lesser increases in the proportions preferring wine and in particular beer, the latter up from 44% to nearly 50%. In relation to the change in alcopop preference, all the other changes in preference were statistically significant.

In general the change in the pattern of drinking was similar for both boys and girls.

The authors' conclusions

The authors interpreted these findings as evidence for a partial substitution of alcopops by spirits in response to the tax rise, which did not result in a significant reduction in total consumption due to a small increase in beer drinking. Reinforcing this interpretation was evidence from a similar school survey in Switzerland of switching from alcopops to spirits after an alcopop tax rise, and a survey of adolescents in Germany in 2005, which found that nearly two thirds said expense was the reason they were now buying fewer or no alcopops. Increase in spirits consumption among young people was considered a "negative side effect of the alcopops tax", because a preference for spirits is associated with riskier drinking patterns and more problems.

Remaining unaccounted differences between the environments and pupils in the two years, and broader trends unrelated to the tax rise, might have caused some of the observed differences in drinking patterns. Also the measure of preference meant that as one drink became a lesser source of alcohol, others automatically moved up the scale, and not necessarily because they were actually being drunk in greater quantities. This may have been the case for beer, but the data on spirits is indicative of a real change in preferences as expressed in alcohol intake. Since the analysis was restricted to past-week drinkers, it probably mainly reflected changes in the drinking patterns of regular rather than occasional drinkers.

FINDINGS As the authors suggest, switching to other beverages means that raising tax on one type of product **does not** reduce overall consumption of alcohol at all, or not as much as an across the board price rise or a high minimum unit price of the kind **being planned** for the UK. Presumably because switching is more likely to happen, the impact of a beverage-specific price rise is greatest on beverage types which occupy a relatively small place in the market, such as alcopops (1 2). Nevertheless there are reasons (**below**) to think that (despite not being statistically significant in the featured study) there was an overall drop in alcohol consumption among young people consequent on the alcopops tax, as would be expected if the reason for producing alcopops in the first place was to make alcohol more available and palatable to young people.

Switching to spirits from alcopops was seen by the authors as negative because of their association (as in a **Swiss study**) with more excessive, non-social drinking to cope with problems, though as the featured study authors caution, this may not be the case among children who would have drunk alcopops had the tax not increased.

It might be thought that one positive effect would have been to partially shut a gateway to drinking for young people, but in fact across the **full school samples** (ie, not just past-week drinkers) significantly more had drunk in the past week in 2007 than in 2003. Also, in the featured study the age when past-week drinkers had started drinking was virtually the same in 2007 as in 2003 in both full and matched samples.

Apart from the methodological limitations noted by the authors, it seems possible that in matching the 2007 and 2003 samples on variables like how many friends drank, past-month 'binge' drinking, and age of onset of drinking, they could also have cancelled out some of the effects of the tax rise. For example, if the tax rise led fewer young people to drink, this might also have led to lower past-week consumption among drinkers, an effect of the tax rise which might be eliminated by making sure as far as possible that the 2007 and 2003 samples were matched for number of drinking friends. The effect would have been to under-estimate the impact of the tax rise. Still, a near 5% drop in total consumption was found; not statistically significant, but, if real, across the entire population of young people perhaps significant in public health terms. The authors themselves cite evidence of a small overall drop in consumption nationally. Also it is unclear how the switch to beer/wine based alcopops promoted by the alcohol industry was taken in to account in the analysis. The **questions** about alcopop drinking made no distinction between spirit- and non-spirit-based drinks. If as seems likely the 2007 alcopop total included more of the latter, and that they contained less alcohol, the effect would again have been to underestimate the fall in alcohol consumption in the form of alcopops and also the total fall.

Australian studies

Beyond the European studies the featured report cites, figures from Australia (1 2) suggest that the 2008 increase of almost 70% in the tax on alcopops caused a substantial fall in alcopop sales, only partially counter-balanced by a smaller shift to cider, wine-based drinks and spirits, contributing to a small net reduction in overall sales across the population.

A [further Australian study](#) was based on data from the emergency departments of hospitals in a beach resort known as popular venue for 'binge' drinking by young people. Confined to older teenagers and young adults, it examined whether among this major target group, the tax rise had led to fewer alcohol-related injuries and other acute adverse effects of heavy drinking. No such effect was found; as the authors suggested, this may have been because the single-occasion, celebratory, and once a year 'binges' which probably accounted for much of the harm are not as price sensitive as regular drinking.

UK policy

As in Germany, concerned by youth 'binge' drinking, before the elections in 2010 the Conservative Party in Britain was planning significant tax increases on alcopops as well as strong beer and strong cider. In the event, once in power [duty was increased](#) only on strong beers and ciders. Concern over alcopops had plummeted along with their consumption, which in 2010 the [Treasury noted](#) had fallen by almost three quarters between 2001 and 2008, until they represented only 8% of alcohol consumed by 18–24-year-old hazardous male drinkers. The Treasury's conclusion was that this category of drinks were not now "disproportionately responsible for alcohol-related harms".

The expected £0.45 or £0.50 minimum price per unit of alcohol being planned by governments for England and Scotland [would hardly affect](#) the category of drinks including alcopops, which already sell for a relatively high per unit price. Among the 18–24-year-old hazardous drinkers over which there is most concern, alcopops consumption is expected to slightly increase in response to a minimum price, while overall consumption would steeply fall as the cheaper drinks became more expensive.

More relevant to alcopops is a ban on offering the products at a discount, in Scotland [expected](#) to have a [greater impact](#) (though still small) than any level of minimum price tested in the simulation model. In November 2012 the government for England [consulted](#) on a ban on off-licence promotions offering discounts contingent on buying several drinks at once. Scotland [implemented](#) such a ban in October 2011, with no obvious short term impacts on sales in comparison with England and Wales.

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