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▶ The raising of minimum alcohol prices in Saskatchewan, Canada: impacts on consumption and implications for public health.

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The Canadian province of Saskatchewan offered a confirmatory real-world test of whether plans in Britain to impose high minimum price for a unit of alcohol really will reduce consumption, first step in the chain expected to lead to improved public health and productivity and reduced crime.

Summary In steps from 2003 to April 2010, the Canadian province of Saskatchewan moved significantly toward the public health ideal of a fixed minimum price for a unit of alcohol, offering a real-world test of similar policies whose potential impacts have been modelled for England and Scotland, and which their respective governments plan to implement to improve public health and productivity and reduce crime.

Though not actually setting a fixed per unit price, the province set per litre prices for beverages in different strength bands which in the end came close to setting a per unit price. After substantial increases and extensions to other beverage types in April 2010, the province ended with minimum prices which, depending on beverage type and strength, averaged between 1.16 and 1.84 Canadian dollars per standard drink containing 17.05 ml of alcohol, among the highest of all Canadian provinces. By levying proportionately greater increases in minimum prices on stronger beverages, the final step taken in April 2010 also substantially reduced incentives for selecting these drinks. Despite this, most low alcohol content products still had slightly higher minimum prices per standard drink than their high alcohol content counterparts.

The rates were implemented by the Saskatchewan Liquor and Gaming Authority, a public agency with a monopoly on alcohol distribution and a partial monopoly on the sale of alcohol in off-licence stores. Prices applied directly to off-licence sales and to the prices the authority charged bar and restaurant owners, meaning they also indirectly affected on-licence retail prices, but probably less so than off-licence prices.

The impact of these changes on alcohol consumption in the province were assessed by relating a given proportional increase in minimum prices to total sales of alcohol by the Saskatchewan Liquor and Gaming Authority per adult or older teenager in the population over the two years before the April 2010 changes and the following two years. Similar calculations were made for sales of different beverages and sales through off- versus on-licence outlets. The calculations for beverage types took in to account trends in the average overall price of alcohol and in the per capita consumption of all other beverages, effectively throwing in to relief the impact of changes in the minimum price of alcohol for each beverage type against the context of overall trends in price and consumption. Adjustments were also made for trends in household income, cost of living, socio-demographic variables, time of year, and underlying trends over time.

Main findings

It was expected that introducing minimum per unit prices would reduce overall alcohol consumption, particularly of high versus low alcohol content varieties of each beverage type, and have a greater effect on off-licence than on-licence sales. Generally these predictions were supported.

After the extensions and price rises on 1 April 2010, total annual per capita consumption fell by 3.5% at the same time as the value of the alcohol sold increased by 4.3% per capita; the public was drinking less, but spending more.

The contention that minimum price changes were an important influence was supported by calculations that (after other influences had been taken in to account) a 10% increase in minimum price across all beverages was significantly associated with an 8.4% reduction in total consumption. Within each main beverage type the corresponding figures were reductions of 10.6% for beer, 5.9% for spirits and 4.6% for wine. Consumption of beverage types to which minimum prices were first extended in April 2010 fell significantly by up to 21% in the case of premixed cocktails.

Impacts of minimum price changes were generally significantly greater on sales through purely off-licence versus primarily on-licence outlets such as bars and clubs. They were also greater on the higher strength varieties of beer, wine, and cocktails across all outlet types. Impacts on higher strength beer (over 6.5% alcohol) were particularly marked – a 22% reduction in total consumption for a 10% increase in minimum price. In contrast, low strength varieties of spirits and 'coolers' were more affected than the higher strengths.

The authors' conclusions

The substantial increase in minimum prices and their adjustment to reflect alcohol content implemented in Saskatchewan in April 2010 significantly reduced consumption while increasing government revenue. The impact was greater for beverages most affected by minimum price increases and for alcohol purchased from liquor stores, and

was accompanied by a shift in consumer preferences toward less strong beer, wine and cocktails. The probable result will be substantial benefits in terms of public health and safety and the reduction of social disorder. Minimum pricing should be carefully considered as part of any comprehensive strategy to reduce alcohol-related harm.

Results were consistent with the principle that increasing the price of alcohol reduces consumption. For example, impacts were absent or weak when very few or no products in a particular beverage category were affected by new minimum prices. Because the minimum prices set by the distributor precisely determined the minimum prices from the government monopoly liquor stores, but only indirectly influenced prices in bars, restaurants, and clubs, the larger effects seen for sales from purely off-licence than mostly on-licence premises were as predicted. The most substantial change in consumption was for strong varieties of (especially) beer, wine, and cocktails, which also increased most in minimum price. This finding is important for public health goals, because these higher strength products have been associated with high-risk patterns of drinking.

Price increases had a greater estimated impact in Saskatchewan than in British Columbia, another Canadian province. This was possibly because in the former prices increased across virtually all beverage types, while in British Columbia only the minimum price of spirits was increased with any regularity.

Limitations of the study include the relatively short time period over which trends were analysed, a crude measure of average price, and the lack of a comparison or 'control' jurisdiction against which to benchmark trends in Saskatchewan. However, with no minimum liquor store prices, the neighbouring province of Alberta also experienced no change in annual per capita alcohol consumption from before to after the major price changes in Saskatchewan. Also the study incorporated 'internal controls' by comparing outcomes for beverages not affected by minimum price increases with those that were, and by contrasting sales from off-licence versus on-licence premises. No estimate could be made for the influence of cross-border sales, although this is not likely to be large because most Saskatchewans live in urban areas at least 100 km from US or provincial borders.

FINDINGS The featured study plus a similar companion study of British Columbia form a substantial part of the evidence that in the real world something close to minimum per unit pricing at levels being contemplated in the UK has reduced consumption in the way predicted by mathematical models for the UK.

One difference from Britain is that in both provinces a provincial authority supplies alcohol through its own outlets and to private outlets, offering a relatively direct, loophole-free way of controlling price to the consumer by increasing price to retailers, and a direct mechanism via which high prices bolster government revenue. In Britain the proposal is that a minimum unit price would be set by government to which retailers would have to adhere. The simplicity of the proposal should make it difficult for retailers to find loopholes. Taxation adjustments may divert some of the higher margins on drinks to government income. Without this there is the potential noted in a detailed opinion from the European Commission that minimum per unit pricing could counter-productively increase the incentive for the alcohol industry to market the affected products due to higher profit margins. That margins and industry revenue will increase was acknowledged by impact assessments for Scotland and England.

Neither study was able to determine whether, as expected, the heaviest drinkers cut back most when the cheaper drinks they favour were hardest hit by the price rises, an important way in which health benefits would be generated. The Saskatchewan study did however show that consumption reductions were greatest in respect of the strongest products in most beverage categories, which also were the cheapest per unit of alcohol.

Findings has described the state of play in the UK in this hot topic entry. Broadly Scotland has already passed the required legislation but faces legal challenges over implementation, while for England and Wales in November 2012 the government announced a consultation on a minimum price, having accepted the general principle after some reluctance.

Even if it is accepted that consumption will fall if a minimum per unit price substantially raises the floor price of alcohol, there remains the much more complicated and value-laden issue of assessing whether on balance this is a good thing. In the featured study and most others, public health and productivity gains and crime reduction are the main elements of the benefits expected from such policies. The 'benefits' drinkers themselves feel they get are rarely valued in to the calculations. The greatest losers in this sense are expected (by UK government impact assessments, 1 2) to be the poorest regular drinkers, though they too stand to gain in health terms if they respond as expected by cutting their drinking.

Other critics have argued that the adverse consequences experienced by drinkers themselves should normally be considered offset by the benefits they gain; consequences are among the 'costs' they are prepared to 'pay' for the benefits. To do otherwise is the same, they suggested, as treating skiing as utterly socially wasteful because only the accident costs suffered by skiers are considered while taking no account of the fact that that skiers generally derive at least some enjoyment from their risky activity. Neglect of benefits other than limited health gains is sometimes justified on the basis that risky drinkers must be ill-informed or irrational consumers, an unwarranted assumption say these critics.

Calculations for Britain in particular have been dominated by productivity gains due to less drink-related unemployment, unrealistically assuming no countervailing benefits. Yet in the absence of full employment, vacancies left by drinkers will usually be filled by someone else, ending perhaps via a chain of job changes in someone currently unemployed gaining a job.

In the recent past at least one UK government analysis has also argued that drinking produces social and business benefits for society as a whole due to "alcohol's capacity to act as a catalyst in social interactions and leisure experiences ... promoting social cohesion," but then as now there is no study on which estimates of these benefits could be based, so they are omitted from calculations.

Such consideration may have a very large impact on the presumed cost-savings from minimum price policies expressed in monetary terms and too on the balance of pros and cons, though not on the more concrete estimates of lives saved and prolonged, illnesses and injuries averted, crimes not committed, and resultant quality of life improvements due to less drinking. These in themselves may be considered good enough reasons to curtail the availability of alcohol, even if some drinkers are thereby deprived of the benefits they feel they get from drinking, or pay more to sustain these and lose out in the form of less money for other purposes. For more extended discussion see this Effectiveness Bank hot topic entry.

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