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The Dangers of Alcohol Deregulation:

The United Kingdom Experience

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Executive Summary

In the United States, the marketing, promotion and sale of alcohol are systematically regulated. As part of a growing globalization trend across the alcohol industry, some have questioned if alcohol should be deregulated in the United States. To answer this question one need only look at the recent experiences of the United Kingdom on whether liberalized alcohol laws are optimal. This paper suggests that the answer is no. Alcohol should be regulated, and deregulation of alcohol has many dangerous and unintended consequences for society at large.

The British public has something America does not want: an alcohol epidemic. This epidemic is characterized by very high rates of youth intoxication; large increases in alcohol induced diseases including liver cirrhosis; and frequent public disorder and violence around pubs and nightclubs. An examination of how this epidemic came about is a good lesson for the United States in an effort to ensure it does not reach our shores.

Like many countries, the United Kingdom (England, Wales, Scotland and Northern Ireland) has a cyclical history with alcohol problems. Periods of heavy drinking, crime and disorder have usually been provoked by some kind of public action. Countermeasures were then needed to reduce problems. Recent history saw a comprehensive set of regulations established during World War I and retained for several decades to good result, until the latest round of deregulation began in the 1960s.

Today's epidemic in the U.K. follows the path of gradual deregulation to a point where society treats alcohol the same as any other product. All forms of alcohol—beer, wine and spirits—are sold almost everywhere and can be purchased 24 hours a day. Alcohol was allowed for sale in grocery stores in the 1960s; pubs' and clubs' hours were extended; and enforcement of existing laws was weak. As alcohol became more available it became cheaper. From 1980 to 2007, alcohol became at least 70% more affordable. This was particularly true in grocery stores where four large supermarket chains gained 75% of the market and became locked in a price war driving alcohol prices ever lower. Alcohol is sold below cost by many of these mega-retailers. People shifted to drinking primarily at home due to the cheaper prices. Meanwhile, local urban communities were looking for ways to revitalize their core centers and hit upon entertainment as the key. Numerous nightlife centers sprung up—some with mega-bars able to host 1,000 patrons. These became scenes of drunken debauchery with people spilling out at closing time vomiting, urinating and passing out. An ill-advised solution was to allow 24 hour sales so drunks would exit throughout the night, not all at once. This did not seem to stop the problems. It did increase the burden on law enforcement which had to staff up for the very late hours.

Women and youth are prominent in the epidemic. Rates of female intoxication, violence, disease and death have sky-rocketed. Pictures of young, intoxicated women frequent the news. Youth intoxication rates are well over twice that of the U.S., and 8-year-old British children are hospitalized from drinking too much.

The U.K. has tried education and voluntary business responsibility programs. They had little effect. With few tools left, they passed the Licensing Act of 2003. It provided new measures for enforcement of underage sales and public order offences as well as the 24-hour sales provision. While it included a new tax at 2% above inflation, it did not contain provisions for minimum prices, bans on volume discounts or other measures that might have curbed the price war. To curb public disorder offenses, a new violation allowed police to arrest and charge those engaged in rowdy behavior, but there were no bans on drink specials or minimum prices that might have curbed excess drinking in

pubs and clubs. The new tax did negatively affect pubs. It exacerbated the decline in patronage associated with a smoking ban and heavy price competition from grocery supermarkets.

The primary lesson to be learned comes from public health authorities who advise the use of multiple policies that have prior scientific evidence of effectiveness implemented in a systematic way. Such policies need to address many items, not just one factor in alcohol. Price, availability, industry practices, the drinking context, drunk driving, youth consumption and enforcement are all important. The World Health Organization and a study by the U.K.'s own Sheffield University provide excellent advice on what kinds of policies can be effective.

Controlling price is of the utmost importance as it drives consumption. Higher prices have been shown to curb consumption in all classes of drinkers—moderate, heavy and hazardous drinkers. Taxes, minimum prices, bans on discount promotions and bans on price discrimination by suppliers and wholesalers all serve to increase prices. Special efforts may be needed for pubs, bars and clubs because they tend to be frequented by hazardous drinkers. The tendency is to use tax measures alone to control prices. As the science indicates, multiple measures are needed to achieve balance in the marketplace. Ironically, the United Kingdom exemplifies the problem of using taxes alone to control prices. Even before the 2008 tax increase, the U.K. had some of the highest taxes on alcohol among European countries.

Despite the efforts of government to control the epidemic, the U.K. is battling strong market forces that seek to use the grocery business's standard model of mass merchandising for alcohol. This model calls for high volume sales at low prices with heavy promotion. This will increase consumption of alcohol. Therefore, marketplace regulation must be aimed at preventing large quantities of cheap alcohol, readily available and heavily promoted.

The U.S. has serious problems with alcohol—particularly with underage drinking, but it has not reached the point of an epidemic. This could happen as the U.S. faces similar market forces that push prices lower and make alcohol ubiquitous. There are frequent calls for deregulation that would allow mass merchandising techniques for alcohol. As in the U.K., alcohol is much more available than in the past—it's even at many community events including some school and church functions. Americans have seen a gradual decline in alcohol prices. American children are drinking at younger and younger ages, and young women are drinking at increased rates.

Currently, the U.S. has a strong alcohol regulatory system. Most states have the regulatory elements recommended by public health authorities. Each state has a system that carefully controls alcohol through three market segments. This system prevents price wars, eliminates tainted alcohol and collects taxes. Drunk driving has declined, although too many people still die on American highways from alcohol-induced crashes. Enforcement has curbed illegal sales to underage buyers.

It is critical that Americans take the lesson from the United Kingdom with great seriousness. Unbridled and unrestrained free market forces, once unleashed, are very hard to control. Americans must be very clear about the fact that alcohol is a different product that cannot be sold just like any other commodity. It must be clear that the purpose is to prevent practices which induce increases in consumption, heavy drinking and hazardous behavior. The research and rationale for these important marketplace curbs is not sufficient. Often policymakers are at a loss to explain why Americans regulate in the way that we do. This is dangerous as we could lose a good regulatory system merely due to lack of understanding.

The Dangers of Alcohol Deregulation: The United Kingdom Experience

"Quite simply, England is drinking far too much. England has an alcohol problem." - Sir Liam Donaldson, Chief Medical Advisor, U.K. [1]

The British have an epidemic on their hands, and it threatens to be exported to the United States. That epidemic is alcohol abuse. In the US, some may have a perception that Europeans are "better" at dealing with alcohol: "They have fewer regulations, the drinking age is lower and they have fewer problems." Why don't we just follow their example? Well, it turns out this presumption is not true. According to the World Health Organization (WHO), Europe is the heaviest drinking region in the world. Moreover, they reap the consequences with problems of underage drinking, violence, alcohol induced deaths and alcohol diseases. Problems do vary by country with heavier drinking concentrated in the northern regions. This paper explores the experience with alcohol in the United Kingdom because it shares many similarities with the U.S., including similar industry participants. [2] An examination of the current epidemic and how it came about can be helpful to our prevention efforts, so we don't have the same experience.

Highlights of the Current Epidemic in the United Kingdom

The U.K. has High Consumption, Disease and Death Rates from Alcohol: Today, the United Kingdom has one of the highest consumption rates in the world and faces a serious problem with youth drinking, urban violence and alcohol related disease. For example, the death rate from cirrhosis of the liver increased dramatically since 1955 in England and Wales, particularly for men. This is of great concern because the most common cause of liver cirrhosis is chronic and heavy alcohol use.

Death Rates from Liver Cirrhosis for Males and Females

Figure 1: Males

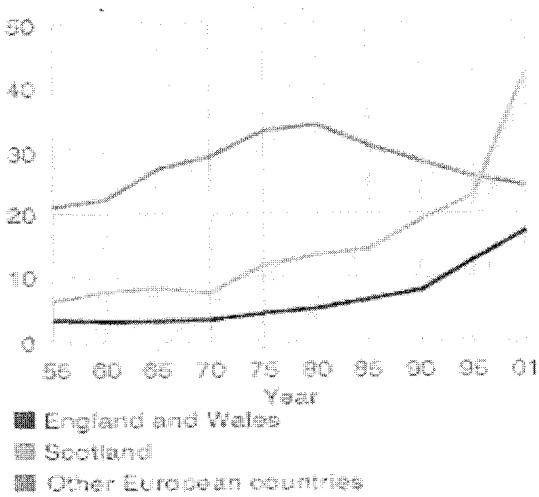
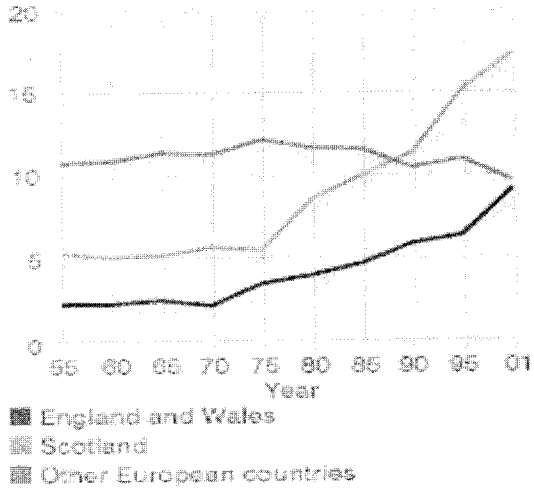


Figure 2: Females

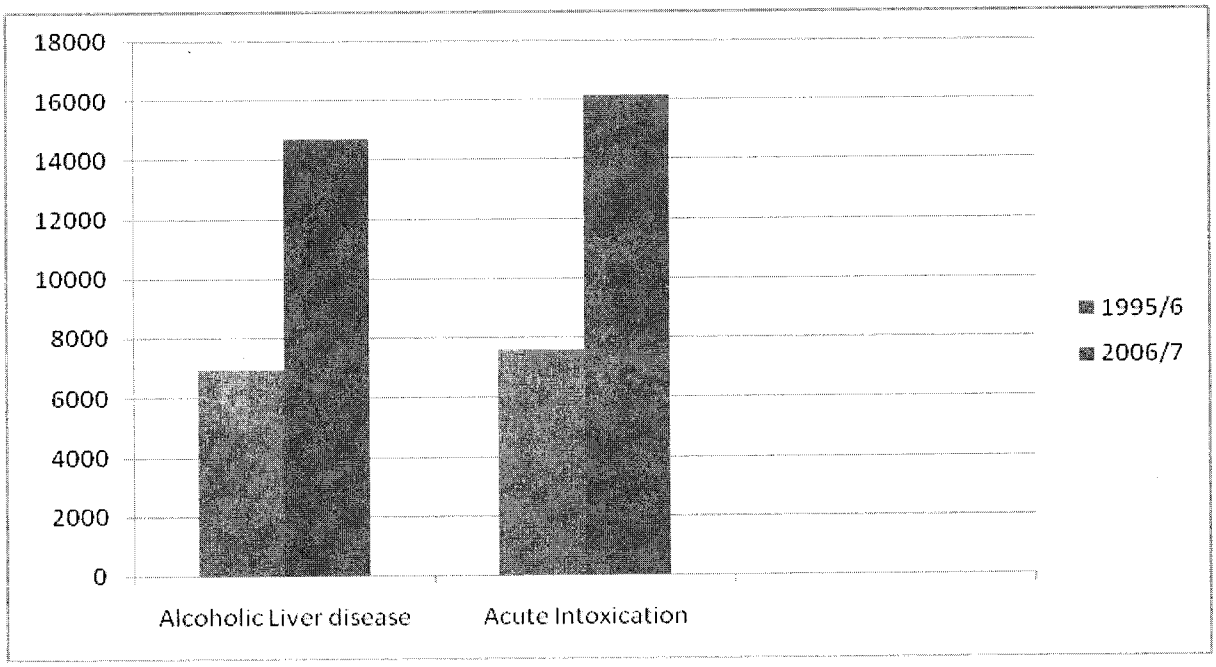


Source: World Health Organization data

According to the U.K.'s chief medical officer, cirrhosis increased for all age groups but most dramatically for the 35-44 age group which saw "an 8-fold increase in men and approaching a 7-fold increase in women." [3, p. 15] In contrast, the cirrhosis rate peaked and decreased for other European countries. As Figures 1 and 2 indicate, the rate for women is still considerably below that of men, but both are on a steady increase. In the U.S., the 2001 death rate for males was 12.3 and for females 6.4 per 100,000 population, considerably below that of Scotland and well below that of England.

Hospital admissions for alcoholic liver disease and for acute intoxication also show large increases. From 1995/6 to 2006/7, the increases for both were about double.

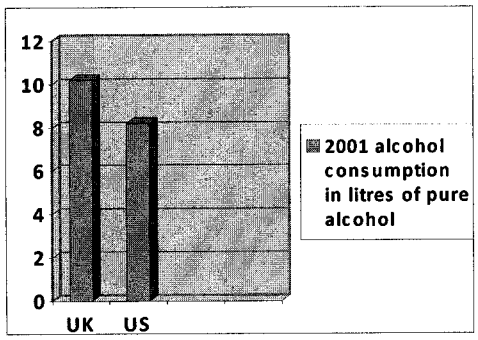
Figure 3: Hospital Admissions for Alcoholic Liver Disease and Acute Intoxication

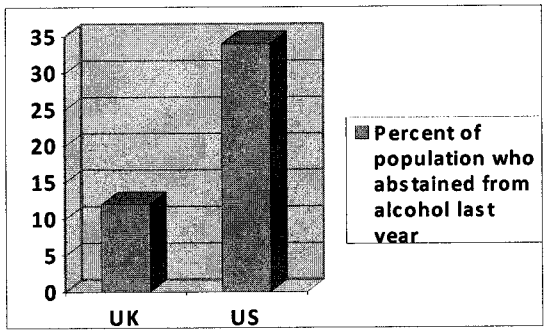


Source: Hospital Episode Statistics, The Information Centre, 2008

For the population as a whole, the U.K. has a high consumption rate. Generally high consumption rates are associated with high levels of alcohol problems. In a comparison of per capita consumption rates with 43 selected countries, the United Kingdom had the 8th highest rate. By comparison, the U.S. ranked 27th. A large majority of the population in the U.K. drinks at some point during the year. The World Health Organization (WHO) reported that only 12% of people in the United Kingdom were "last year abstainers." [4] In the U.S., according to the WHO, 34% were abstainers. Data from other surveys in the U.S. indicate the percentage of U.S. non-drinkers may be even higher.

Figures 4 and 5: Per capita alcohol consumption comparison for adults 15 years and older



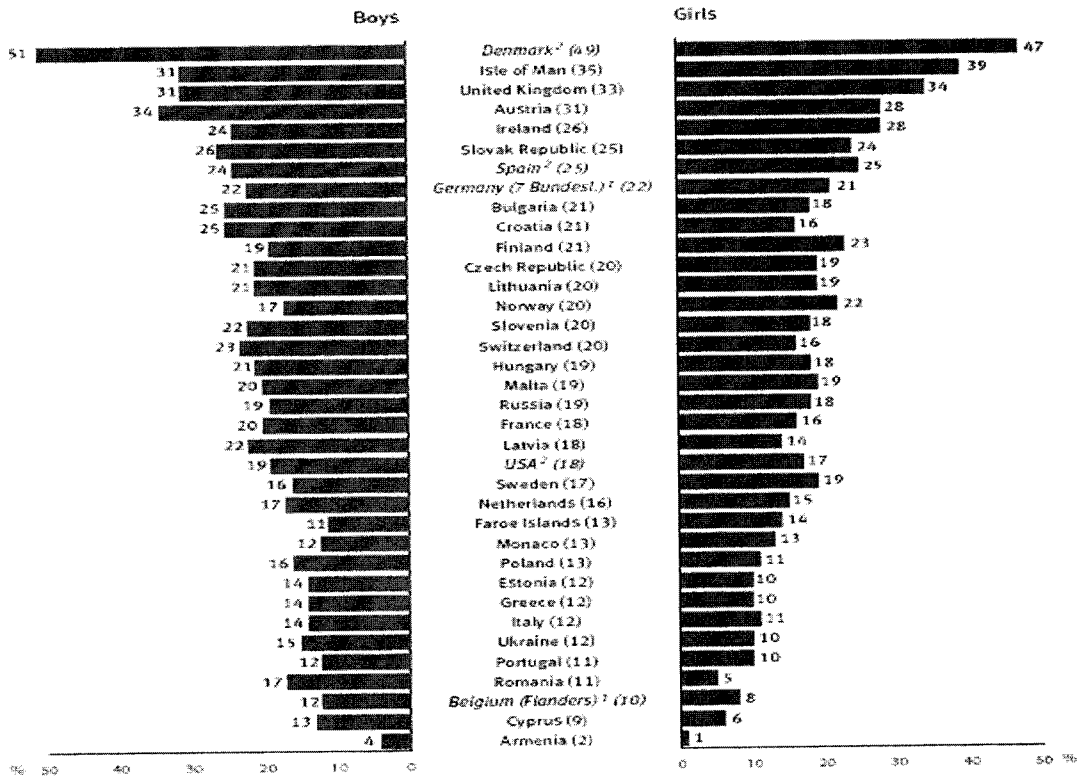


Source: WHO Global Status Report 2004

While most U.K. citizens drink moderately, a substantial portion drink more than health authorities recommend on a daily basis. In the U.K., such limits have been defined as no more than four units of alcohol for a male and three for a female. A unit is 10 milliliters of pure alcohol, about a half pint of normal strength beer, lager or cider. According to the Office for National Statistics, 41% of men and 34% of women surveyed in 2007 reported drinking above the recommended limits at least one day in the week before the survey. [5] It is difficult to compare exactly the U.S. and U.K. drinking patterns since surveys ask questions in different ways and define things differently. Nevertheless, it seems clear that the U.S. just drinks a lot less. The Centers for Disease Control does an annual telephone survey on health issues. It found that in 2008 45.5% of adults did not drink in the past 30 days, 15.6% engaged in binge drinking and 5% in heavy drinking. [6]

Youth and Childhood Drinking is over Twice the U.S. Rate: Of great concern is the exceptionally high youth drinking rate in the United Kingdom. As illustrated in Figure 2, the United Kingdom had the third highest rate among the selected counties. The U.S. ranked 22nd. [7] This is especially serious because those who start drinking before age 15 are twice as likely to become addicted and regular alcohol use can damage the developing adolescent brain. [8]

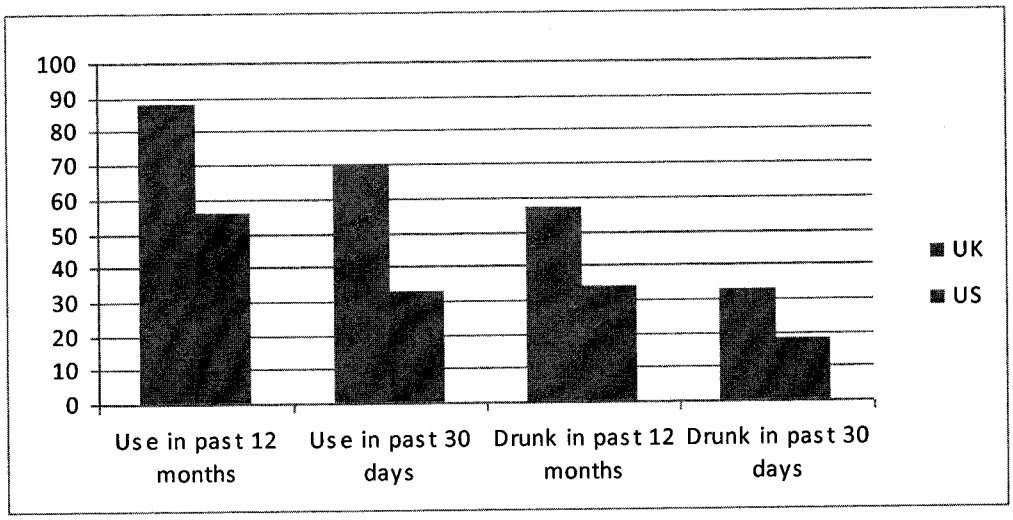
Figure 6: Percentage of 15 and 16-year-olds who have been intoxicated in the past 30 days



Source: "The 2007 European School Survey Project on Alcohol and Other Drugs (ESPA) Report, Substance Abuse Among Students in 35 Countries" (1 means "Limited geographic coverage"; 2 means "Limited comparability")

It is especially disturbing to see instances of very young children hospitalized. In 2008, a Times Online article noted, "A child under ten is admitted to hospital to be treated for alcohol-related problems once every three days in England, according to Government figures revealed today." Between 2002 and 2007, 648 youth under the age of 10 and 24,000 youth under age 16 were hospitalized due to excessive alcohol use. In the 16-17 age bracket, emergency room visits for alcohol increased 95% from 2002-2007. [9] As indicated in the Figure 7, the U.K.'s rates for 15 and 16-year-olds drinking and intoxication are almost twice the U.S. rates.

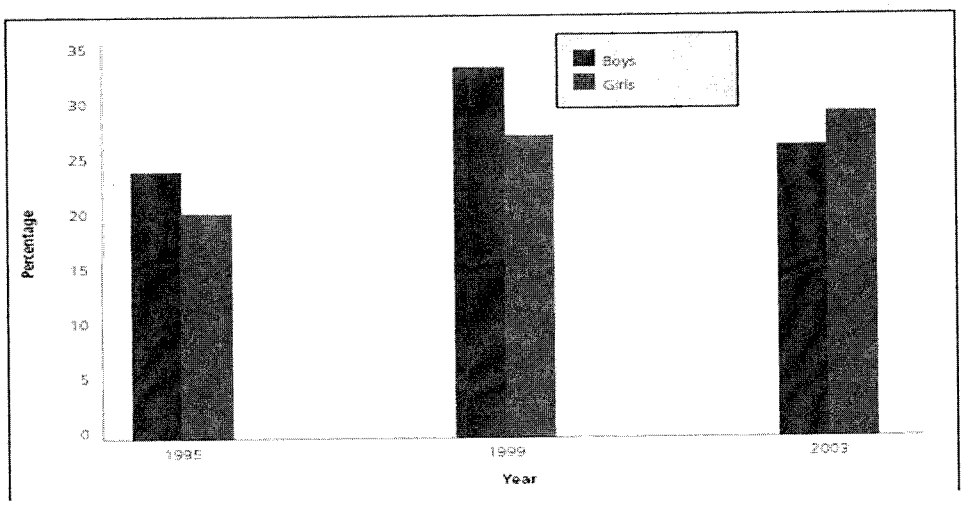
Figure 7: Drinking and Intoxication Patterns of 15 and16-Year-Olds: U.K.v.U.S.



Source: 2007 European School Survey Project on Alcohol and Other Drugs

Women in the U.K. Engage in Dangerous Drinking Practices: Along with heavy underage drinking, there is a disturbing pattern of increased drinking among women of all ages. While boys have always drunk at higher rates than girls, that pattern changed in 2003. As Figure 8 indicates, in 2003, a higher percentage of females aged 15 and 16 drank five or more drinks in a session on at least three occasions in the past month than young males. [10]

Figure 8: Percentage of U.K. boys and girls, 15 and 16, who consumed five or more drinks on at least three occasions in the previous month (1995-2003)



Source: Plant, MA & Plant, ML (2006) Binge Britain: Alcohol and the national response. Oxford: Oxford University Press

A recent article in the *Daily Telegraph* highlights the severity of the problem: "The number of young women treated for alcohol poisoning has increased by 90% in the past five years, according to the Department of Health statistics. During the past five years 4,439 girls age 14-17 were seen by doctors for alcohol poisoning compared with 1,776 boys." [11] This trend portends major future health problems as alcohol is harsher on a female body. According to the U.S. Center for Substance Abuse Prevention, "Women who drink heavily face greater health risks than men who drink heavily. They are more prone to liver disease, heart damage and brain damage. Studies show that women with alcoholism are up to twice as likely as men to die from alcohol-related causes such as suicide, accidents, and illnesses." [12]

Bars are Open 24 hours a Day and Violence, Crime and Public Disorder Are Constantly in the News: As stated in a Mail Online news article, "Public order offences have soared by 136% in the past four years as police struggle to contain a surge of alcohol-fuelled crime and disorder in town centres across the country." [13] In the same article, police officials noted that the longer hours for bars means police have to deploy larger numbers throughout the night which stresses police resources. The Licensing Act of 2003 allowed bars and stores to sell alcohol 24 hours a day. The measure was instituted to reduce the crowds of drunken celebrants flooding the streets at closing time. Some thought it would reduce problems. That doesn't seem to have happened. Things got so bad that for the 2009 New Year's celebration in London that 13 "booze buses" (actually field hospitals) were set up especially to deal with injuries suffered by revelers. It was estimated that an emergency call was received every seven seconds. [14]

While the connection between heavy drinking and crime is well established in research, Great Britain does not have good data to demonstrate how the current epidemic is impacting crime rates. Data on the number of offenders for "drunkenness" indicates a decline since 1981, but according to a British Medical Association report, "These figures should be taken with caution as they most likely reflect changes in policy and police practice rather than changes in the actual incidence of drunkenness. " [15, p. 39] The difficulty with crime data is that it usually relies on arrest reports and patterns of police enforcement. The problem which seems most serious is the pattern of public order offenses around bars including vomiting, public urination, excessive noise and general rowdiness. The Licensing Act created a new violation called "Penalty Notice for Disorder."

Alcohol Epidemics are Not New to the United Kingdom

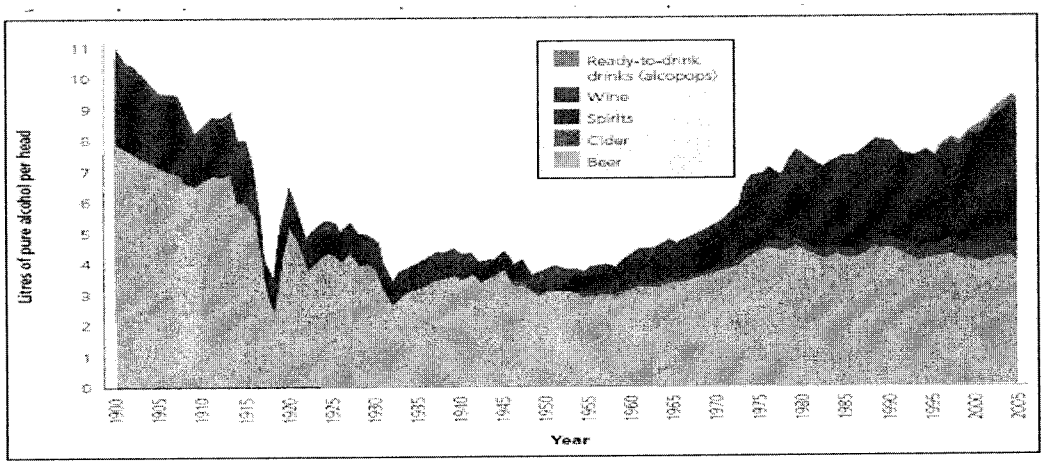
"Due to the fine tuning of taxation and success of the anti-spirits campaign after decades of experience with high consumption, the gin epidemic faded." - D. Musto, describing an alcohol epidemic in the 1700s [16]

This is not the first alcohol epidemic in the United Kingdom. The British have a long history with alcohol that includes periods of high consumption usually provoked by

reduced taxation or liberalized regulation. With the periods of high consumption came problems of mass intoxication, drunken violence and disease. Once these problems set it, the government inevitably tried to reverse the trends. Such efforts met with mixed success.

In the 1700s, a "Gin Craze" was fueled by a decrease in the tax on gin. On two occasions, a large tax increase was used to reduce problems with little success. A more moderate series of measures eventually brought the consumption level down. During the World War I, a comprehensive set of regulations went into effect that limited bar hours, heavy drinking practices and raised taxes. Because these measures appeared to be effective in curbing alcohol problems, many were retained after the war. Those measures and the Great Depression pushed a consumption decline to the point where it was half that of the beginning of the 20th century.

Figure 9: Per capita alcohol consumption in the U.K. (liters of pure alcohol)



Source: Statistical handbook 2007 (British Beer and Pub Association, 2007)

What Propels the Current Epidemic?

"Since the Second World War, there has been considerable deregulation and liberalization of alcohol control policies in the U.K. This has been accompanied by an increase in consumption levels and alcohol-related problems..." - British Medical Association Board of Science [15]

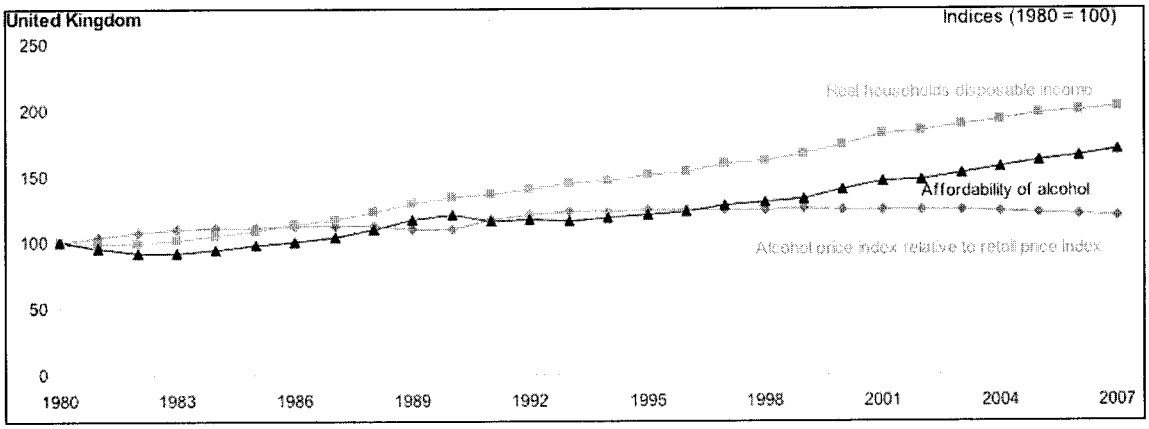
The current epidemic seems to have its origins when the U.K. started to systematically deregulate alcohol laws and when drinking patterns in the U.K. were changing. Beer consumption remained flat while wine and spirits increased significantly. In addition, alcopops were introduced. After WWII, the restrictions on availability were lessened over time, and the price generally declined. Alcohol was allowed to be sold in grocery stores beginning in the 1960s; bar and pub closing hours were extended as were

Sunday sales. After 2003, 24-hour sales were allowed in bars and stores. Today's minimum drinking age laws are very weak. In fact, "The minimum age at which alcohol consumption is permitted in the U.K. is not 18 years as widely suppose, but 5 years." [10, p. 142]. It is illegal to purchase alcohol or consume it in a bar if one is not 18. Enforcement of illegal purchases was generally not done until passage of the Licensing Act of 2003 which eliminated a 20 year moratorium on "alcohol stings."

The deregulation worked in concert with market forces to produce the current epidemic. Some of the major factors are:

Price: There is widespread belief that the price of alcohol is a major factor in the epidemic. Between 1980 and 2007, the affordability of alcohol has increased almost 70%. [17]

Figure 10: Affordability of Alcohol



Source: Focus on Consumer Price Indices, Office for National Statistics and Economic Trends

Several factors have contributed to the lower prices for alcohol. Only one of those is the tax on alcohol. [15, p. 49] The U.K. has relatively high taxes compared to other European Union countries. [15, Appendix 3] In a comparison with 25 countries in the EU, the U.K.'s tax on four forms of alcohol was the second or third highest. Price control tools such as minimum prices, price posting, non-discrimination price laws and bans on selling below cost do not exist. In addition, there is no strict regulation of industry from production through sale at the retail level. The lack of these tools has allowed retailers to gain market share through reduced prices with the result of increased consumption.

Figure 11: Excise Duty Rates in the European Union

Country	Spirits £ per 70cl bottle 40% ABV	Still wine £ per 75 cl bottle 11.5% ABV	Sparkling wine £ per 75 cl bottle	Beer £ per pint 5% ABV or 12° Plato	VAT rate %
Austria	1.9	0.00	0.00	0.10	20
Belgium	3.4	0.25	0.84	0.08	21
Cyprus	1.2	0.00	0.00	0.02	15
Czech Rep.	1.8	0.00	0.43	0.04	22
Denmark	3.9	0.43		0.13	25
Estonia	1.9	0.35	0.35	0.07	18
Finland	5.5	1.10	1.10	0.38	22
France	2.8	0.02	0.04	0.05	19.6
Germany	2.5	0.00	0.27	0.04	16
Greece	2.1	0.00	0.00	0.06	18
Hungary	1.6	0.00	0.24	0.09	25
Ireland	7.6	1.42	2.84	0.39	21
Italy	1.6	0.00	0.00	0.12	20
Latvia	1.8	0.22	0.22	0.03	18
Lithuania	1.8	0.23	0.23	0.04	18
Luxembourg	2.0	0.00	0.00	0.04	15
Malta	4.5	0.00	0.00	0.04	18
Netherlands	2.9	0.31	1.05	0.10	19
Poland	2.3	0.18	0.18	0.09	22
Portugal	1.8	0.00	0.00	0.06	21
Slovakia	1.5	0.00	0.33	0.07	19
Slovenia	1.4	0.00	0.00	0.14	20
Spain	1.6	0.00	0.00	0.04	16
Sweden	10.4	1.23	1.23	0.31	25
UK	5.5	1.25	1.65	0.38	17.5

Source: European Commission's Excise Duty Tables (Alcohol Beverages)

Domination of the Big Box Grocery Chains: The United Kingdom has a unique concentration of alcohol sellers that help drive the alcohol marketplace. This marketplace concentration has attracted not only the ire of the public health community and government leaders but also that of alcohol suppliers who are captive to these powerful interests. There is widespread belief that the selling and promotion practices of the large supermarket chains have been a major contributor to the alcohol epidemic. Cheap alcohol—wine, beer and spirits—is very available, and the best deals are in the large chain-operated grocery stores. The United Kingdom monopoly regulator, the Competition Commission, has been investigating the supermarket business for some time. It is concerned about market concentration and sales practices. The U.K. grocery market is dominated by four large chains which control approximately 75% of the market (Tesco, Asda, Sainsbury and Morrison's). One of the findings of the Competition Commission is that these chains frequently use alcohol as a "loss leader." [18, p.49] Another reason for low prices is that many supermarkets do their own wholesaling: "Grocery retailers are vertically integrated upstream to varying degrees. Most supermarket chains purchase grocery products for resale directly from food and drink manufacturers and processors..." [18, p. 18] As a result, the retailers extract significant concessions from the suppliers on pricing. This is a prohibited practice in many U.S. states.

The business model used by the big box chains makes it possible to offer large quantities of cheap alcohol. According to the Food Marketing Institute, "Low markup to stimulate high volume is the fundamental principle of mass merchandising, which the supermarket industry introduced to the marketplace in the 1930s." [19] Because the large chains have enormous purchasing power, they buy product in volume and count on high volume sales to generate profits.

With low markups and high volume comes extensive promotion. In order to profit from this formula, people have to be enticed to buy. According to the U.K.'s Institute of Alcohol Studies, "The Competition Commission have found that five leading grocery retailers sold 38.6 million pounds ($57.4 million) worth of alcohol at below-cost during the 2006 World Cup. Supermarkets know full well that drinks promotions linked to such events entice consumers to buy more alcohol and to drink more alcohol. To claim otherwise is disingenuous." [20, p.2]

These are not just big chains. They are enormous global enterprises. Tesco, which enjoyed a 32% market share in August 2008, is the world's fourth largest retailer by sales and the second largest by profit (Wal-Mart is first). It operates all over the globe with 273,000 employees. It has just opened stores in the United States in California, Nevada and Arizona. Asda is owned by Wal-Mart, the world's largest public corporation by revenue. These companies have exceptional economic power to control public purchasing habits on a massive global scale. Currently, the top four U.K. chains, locked in fierce competition, have driven the price of alcohol lower and lower purely for economic interests and not for public health gains.

Several laws and practices used in the U.K. are prohibited in the U.S. These laws include the use of quantity discounts, the use of credit, the direct sale from suppliers and central warehousing.

Decline of the Pub: The majority of drinking used to take place in pubs that sold draft beer. Pubs were typically owned or leased by large brewing companies. The pubs were "tied houses" because they were owned or controlled by a brewery. Generally, only the brewer's product was available at one of their pubs. In 1989, 75% of the beer market in the U.K. was controlled by six large brewing companies. Today things are very different.

In 1989, the Competition Commission issued the Supply of Beer Law. [21] Based on a determination that the beer industry had become monopolistic, the Commission required any brewing company with more than 2,000 pubs to divest those beyond the limit and allow at least one "guest beer" (from another brewery) to be sold in the remaining pubs. The assets of the large brewing companies were sold and some of the breweries were closed. The companies that now own the remaining assets are large, global enterprises such as Diageo, Anheuser-Busch InBev, Heineken and Carlsberg. The pubs were sold to retailers. While this seemed to eliminate the "vertical integration" by suppliers, the brewery sector is now dominated by fewer but larger globally-oriented players and the 1989 Act was repealed. Similarly, ownership of the remaining pubs is now concentrated in publically-owned and -traded retailers. This has created a tension between

independent retailers and corporate taverns. This is a much different system than the American "three-tier" system of state-based alcohol regulation which has suppliers selling to individually licensed wholesalers who can only sell to licensed retailers.

These market forces induced consumers to change their drinking habits, and pubs have suffered. As noted previously, the advent of cheap alcohol available in supermarkets fostered more drinking at home in the U.K. As the consumption data shows, people are also drinking more wine, spirits and alcopops. "Pre-drinking" became popular. This is a practice where people drink at home before going out. This reduced the amount of money spent on drinks in pubs and nightclubs. In July 2007, smoking was banned in enclosed places in England and Wales. Scotland did the same in 2006. This appears to have further reduced patronage.

Another blow to pubs came from the Licensing Act of 2003 which included a new duty to be levied over four years at 2% above inflation. The first year of levy was 2008. The British Beer and Pub Association contend the tax has caused a reduction in sales and an increase in pub closures. A report called "A Wake-up for Westminster" claims that total beer sales are down eight million pints a day since the peak in 1979 and that pub closures are occurring at a rate of five per day. Pubs have also incurred increased costs to be open longer to service people—some of whom have already been drinking at home. [22]

Night life and the Increase in Binge Drinking among Young Women: Problems with bars and rowdy behavior are not new. It has been an issue from time to time throughout history. Recent changes in urban areas, however, seem to have fostered nightlife problems. Historically, the pub was a neighborhood institution primarily populated by males. While those places still exist, entertainment districts have sprung up in urban centers as a way to lure people back to the cities and revitalize the urban core. As bars and pubs were clustered in a given area, night life in town centers became notorious for rowdy, drunken behavior. Some of the new "superpubs" are very large with capacities for up to 1,000 people. There is research to indicate that alcohol problems increase with bar density and, obviously, large premises present particular management problems. [10, p. 53] To document problems with bars, a reporter for The Observer spent three hours in a bar in Reading, a city 40 miles from London. She and a friend bought 12 rounds of drinks. Every 20 minutes they returned to the same location. "The barwoman recognized our faces and thought the drinks were for the two of us. But she never stopped serving-enough alcohol to kill each of us." As she observed, "It seemed as though everyone was drunk, but no one was turned away from the bar." [23] Another account from a bar employee confirms this pattern: "I have been a manager for 30 years in these superpubs and in town centres. How we make our money is to make people binge drink: the more people drink, the more I get as a bonus." [15, p.92]

Young women are very prominent in this nightlife scene. There was a time when women were not admitted to some pubs, so it may feel liberating to freely partake in the pub culture. A pattern of excessive drinking has emerged, known as the "Ladette" culture.

According to an article in Mail Online, "ladette" is "defined as a young woman who behaves in a boisterously assertive or crude manner and engages in heavy drinking sessions." [24] Such behavior has been publicized and encouraged by celebrities and DJs. Social networking sites such as Facebook feature young women boasting of inebriation. Even more disturbing is the pattern of violence by women. In the same article, the author cites a report by the Youth Justice Board which claims that violent offenses carried out by girls age 10-17 increased over 300% in seven years. While offenses by boys are still much higher, the percentage of incidents for boys is decreasing. [24]

Counterfeit and Tainted Alcohol: There has been publicity about tainted alcohol in Russia and countries in Asia, but there have also been incidents in the United Kingdom. In 2007, thousands of liters of fake vodka were seized at an illegal bottling plant in Wales. Initial testing indicated the product contained enough methanol to be a serious health risk. Methanol is a form of alcohol that is unfit for human consumption; too much can cause toxic hepatitis. The result can be severe health problems including death. This was a blow to the U.K. Treasury as they had just instituted a "duty stamp" program designed to prevent the sale of such products. According to the U.K. Treasury, criminal gangs in the U.K. are turning to counterfeit alcohol as it becomes harder to smuggle genuine bottles of spirits. The industry is concerned that counterfeiters will develop fake duty stamps to go with their fake products. The U.K. Revenue and Customs entity had been making steady progress to reduce the level of spirit fraud. They report that in 2000-01, it was as high as 28% of the market leading to losses of 1.2 billion pounds in revenue. By 2004-5, they estimate the market share was down to 8%, with estimated losses of 300 million pounds in revenue. [25] Moreover, there has been much concern about English citizens taking a ferry to Calais to load up with lower taxed alcohol in France and taking it back to the United Kingdom for untaxed and unregulated resale.

Government Response—What Works?

"Research on local prevention efforts suggests that local strategies have the greatest potential to be effective when prior scientific evidence is utilized and multiple policies are implemented in a systematic way. Complementary system strategies that seek to restructure the total drinking environment are more likely to be effective than single strategies." - World Health Organization [26, p.12]

Public policy can be effective in curbing alcohol problems. As England has seen, not all public policies work. The most recent example is the measure permitting alcohol to be sold 24 hours a day. That is why the World Health Organization advises that policies have some scientific evidence of efficacy and that multiple policies be adopted in a systematic formula. The effectiveness of particular types of policies is discussed in a World Health Organization publication, "What are the most effective and cost-effective interventions in alcohol control?". A very brief overview of these policies is discussed below. It is important to note that every one of these issues is complicated, and the effectiveness of any regulation in isolation is limited.

Price: The WHO concludes that "There is substantial evidence showing that an increase in alcohol prices reduces consumption and the level of alcohol-related problems." [26, p. 4] The authors go on to note that the impact of price increases differs among countries depending on the prevailing culture and public support. Alcohol prices can be affected by taxes, restrictions on price-related alcohol promotions, minimum price levels and setting limits on price discrimination at the wholesale level. Studies of price indicate that price increases impact all drinkers: "These kinds of studies strongly indicate that heavy and dependent drinkers are at least as responsive to alcohol price increases as are more moderate consumers, and furthermore, that price increases via excise duties on alcohol beverages have a particular effect in reducing youthful drinking." [26, p. 7]

Availability: As the WHO report notes, "stricter controls on the availability of alcohol, especially via a minimum legal purchasing age, government monopoly of retail sales, restrictions on sales times and regulation of the number of distribution outlets are effective interventions." [26, p. 4]

Drunk Driving Measures: Many measures to reduce drunk driving get high effectiveness ratings including: "sobriety check points, random breath testing, lowered blood alcohol concentration limits, suspension of driver's licenses, graduate licensing for novice drivers and brief interventions for hazardous drinkers." [26, p.4]

Other Measures: Other measures again demonstrate that all alcohol regulation needs to be systematic. Server liability and enforcement of on-premise regulations combined with community mobilization have some impact but can be expensive. Educational approaches, while popular, do not have much evidence of effectiveness. [26, p.4] Advertising is an area where there is uncertainty regarding the best method of curtailing ads that expose youth. According to the British Medical Association, "Research evidence suggests that repeated exposure to high-level alcohol promotion influences young people's perceptions, encourages alcohol consumption and increases the likelihood of heavy drinking." [15, p.54] The U.K. regulates advertising via compliance with advertising codes, including codes developed and enforced by an industry association of nine members representing 60% of the alcohol market. There is considerable skepticism about the efficacy of such code enforcement—particularly as it regards self-regulation. Future research is needed to guide regulatory policy on this issue.

Research on Specific Price Regulations: The U.K.'s University of Sheffield has done some unique and important research to assist in policy development. As the researchers state, "This is the first study to integrate modeling approaches intended to answer specific policy questions around pricing and promotion of alcohol and the related effects on harms in terms of health, crime and employment in England." [27, p. 11] They used several large data bases to construct a model that estimates likely changes in behavior and harms with different policies. Here are some results:

- General Price Increase: General price increases on all forms of alcohol exhibit large reductions in average consumption across the population including all classes of drinkers (they classified drinkers as moderate, hazardous and harmful based on the number of alcohol units consumed per week). Policies targeting price changes only on lower-end products had lower consumption increases although they disproportionately impacted harmful drinkers including youth.

- Minimum pricing options: The researchers found that as the level of the minimum price is increased, effectiveness increases substantially. Thus, the largest minimum price produced the highest drop in consumption. Differential prices for on-premise (pubs and nightclubs) and off-premise (grocery and convenience stores) lead to larger reductions in consumption. The authors believe this occurs because younger and hazardous drinkers frequent the pubs and nightclubs. If stores also have a minimum price, switching to home drinking is inhibited.

- Restrictions on discount promotions: A ban on various kinds of discounts (such as buy three for the price of two) produces reductions in consumption. Bans on discounts only for low-priced products are not effective in reducing consumption.

- Impact on harm from price increases: Their model found that policies which result in price increases reduce alcohol-attributed hospital admissions and deaths, incidence of crime and reduced unemployment (defined as loss of job due to alcohol and absenteeism due to alcohol).

U.K. Government Actions to Combat the Epidemic: Many Problems and Few Tools

"The real reason why drinking has gone through the roof is the Government's irresponsible deregulation of alcohol, which has turned it into an everyday commodity." - Melanie Phillips, Daily Mail reporter [28]

A review of the U.K. alcohol epidemic reveals several distinct problems: generally high consumption; very high consumption in young adults and children; high consumption among women; and public disorder in bars in town centers. There is general agreement that the problem of drunk driving has improved. Drunk driving rates have declined in England and Wales since 1990 and since 1970 in Scotland. [10, p. 73]

At the present time, the government has few tools to address these problems. There has been a great deal of talk, speeches and proposals, and there does seem to be general agreement that alcohol prices are too low. However, the alcohol industry in the U.K.

generally opposes government intervention, and there is no check on the retailer-supplier power struggle. According to the authors of Binge Britain, "The formulation of recent alcohol policies within the U.K. has been predicated by a governmental wish to cooperate and agree with the beverage alcohol industry. The latter wields enormous economic and political power and appears to have dominated much of the policy making process." [10, p.83]

The 2003 Licensing Act did create some new tools: new regulations and penalties for underage sales, new laws for public order offenses and a significant tax increase. The tax increase was levied in 2008 and will be levied for four years at 2% above inflation. While the increase will likely begin to impact overall consumption, it may accelerate the pattern of drinking at home and "pre-drinking" before going out. Because grocery chains use low priced alcohol to lure shoppers to their particular stores, they may absorb all or some of the tax increase. Some of the chains are pushing the suppliers to absorb 100% of the tax increase which will allow the stores to continue their low prices. This places them at an even greater advantage vis-à-vis the pubs. Multiple methods to control prices and promotion practices are usually needed to curb the kinds of problems in existence today in the U.K.

To combat underage sales, a new offense of "persistent sales" was created. Tesco was charged with such an offense and fined for selling alcohol to a 16 year-old three times in two months. [29] As law enforcement continues to use the new tools in the 2003 Act, they may be able to curb problems. This highlights another difference between the U.K. and the U.S. as enforcement of underage drinking laws has been a priority in the United States for the last decade.

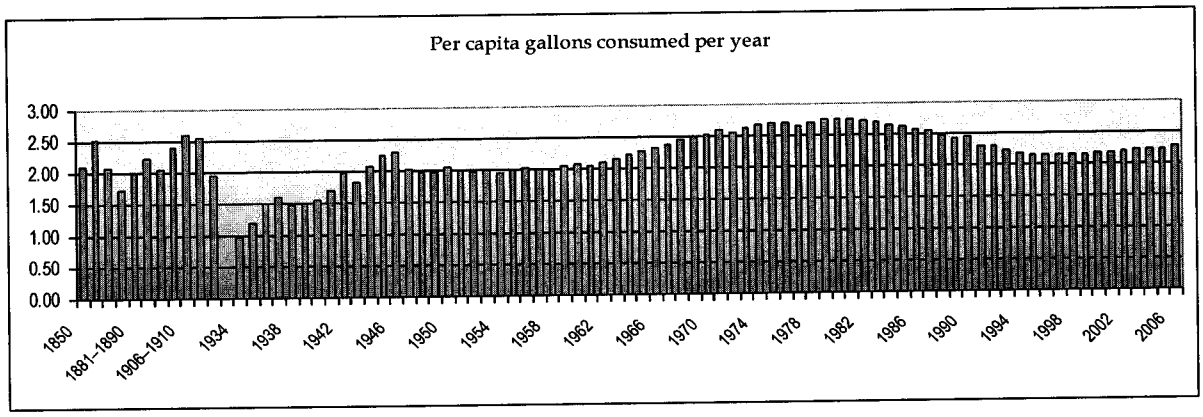
One of the most ill-advised measures is the 24-hour sales provision. This greatly increases availability and stretches law enforcement resources. According to the WHO, "Most studies have demonstrated increased drinking or rate of harmful effects with increased sales times, and decreased drinking when they are shortened." [26, p.8-9]

It seems that the U.K. has relied too heavily on a few isolated measures or ineffective measures such as education and 24-hour sales. A systematic approach with multiple measures that addresses price, industry licensing and regulation, availability, the drinking context and age limits would likely be more effective.

Could this Epidemic Infect the U.S.? Areas of Concern

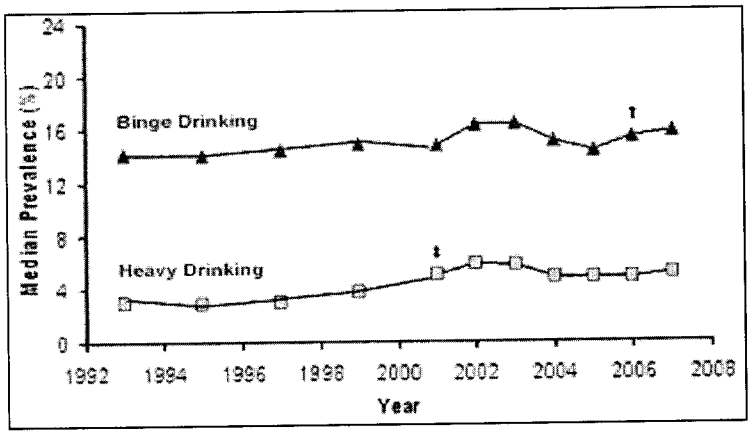
"Every country has its Achilles' heel. When a gunman goes berserk in the United States, we are quick to point out to our American friends the blindingly obvious: that if you have so many guns in circulation, such tragedies are inevitable. With alcohol, the roles are reversed. America, historically, has had more restrictions on drinking: Americans are now entitled to chide us for our complacency in allowing a happy-go-lucky culture to spiral slowly but steadily out of control." - Max Davidson, Telegraph reporter [30]

Figure 12: Apparent consumption in the U.S. 1850-2006



Source: Centers for Disease Control

Figure 13: Prevalence of binge drinking and heavy drinking among adults in the United States, 1993-2007



Source: Centers for Disease Control

In the 1990s, binge and heavy drinking also began an upward trend. Both rose during the 1993-2007 period. These patterns portend future costs for society in terms of alcohol induced disease and death.

The U.S. does have a problem with underage drinking, but the U.K.'s is much worse. As noted earlier, the drinking and intoxication rates of 15 and 16-year-olds in the U.K. are about twice as high as the U.S. In addition, data from 2002-2007 has shown some small decreases in youth drinking in several age groups. [31] Despite these decreases, there are concerns about youth drinking at very young ages. According to a report by the U.S. Department of Health, approximately 10% of 9 and 10-year-olds have started drinking, and nearly one-third of youth begin drinking before age 13. [p. 6, 32] Since we

know youth who start drinking before age 15 are four times more likely to become addicted, we risk losing the potential of a large number of our youth.

There is also a pattern of increased consumption by women, particularly young women. According to a fact sheet from the National Center on Addiction and Substance Abuse at Columbia University, "...in the 1960s, only 7% of girls reported having their first drink between the ages of 10 and 14; today, nearly one-quarter of all girls report beginning to drink alcohol before age 13." [33] For older women, problems are increasing. In a study comparing U.S. Census Bureau data from 1991-1992 and 2001-2002, Dr. Richard A. Grucza and colleagues at the Washington University School of Medicine found, "The prevalence of alcohol use and alcoholism stayed about the same in men. But except in the very youngest age group, women reported significantly more alcohol use than they did a decade ago." [34] Alcohol-induced deaths are increasing for both men and women although not at rates as high as in the U.K.

While drinking problems may not be as severe as in the United Kingdom, trends are similar. There are further similarities in the areas of deregulation, the power of the retail sector, and the increased affordability of alcohol:

Deregulation: The U.S. has experienced a gradual relaxation of alcohol laws over the past several decades. Alcohol is much more available than in the past. After Prohibition, alcohol was very limited in terms of where, when and how it could be purchased. That changed gradually over time to the point where most states allow sales in a wide variety of retail establishments. Several states that originally sold spirits and wine in state stores changed their systems to allow greater availability for these products. Some states gave up exclusive sales of wine to the retail sector. Others converted state stores to modern retailing businesses by hiring private contractors. Industry-led deregulatory interests facilitated by recent court decisions have opened-up ways around state controls of alcohol sales. Alcohol is frequently available at community events and even some church and school functions. Many states have increased the hours of sale for alcohol by extending bar closing hours, expanding hours of sale at retail stores and removing the prohibition on Sunday sales.

Retail Sector Power: The alcohol markets in the .S. and the U.K. have some similarities. In both countries, beer is the most commonly consumed beverage. But, the U.S. has not had the large chains of tied house breweries or retail bars and pubs. U.S. regulations provide major barriers to a "vertical integration" scheme which would allow ownership of retail, wholesale and manufacturing by one entity. Federal policy requires a balance to effectively regulate interstate and foreign commerce and enforce the 21st Amendment which allows for individual state alcohol regulation. As a result of this legal structure, the United States' retail market is different. Retailers have to make sure their alcohol selling practices fit both federal and state law as opposed to the U.K. situation where the retailers are able to dominate the alcohol market. Some states own the spirits business and don't allow sale of such products in grocery stores. Other states restrict what types of stores can sell what types of products. Enforcement of trade practice laws

prohibit practices such as slotting fees, credit and other measures that would break down the independence of one sector versus another. Such independence is critical to preventing "vertical integration" and further market dominance by one sector.

The market share of the grocery business is not as consolidated as the U.K. The top four in the U.K. have 75% of the market while the top four in the U.S. only have 54% based on 2007 sales data (See Figure 14).

Figure 14: Grocery chain market share in the U.S.

Wal-Mart / Sam's Club	$138.2 million	26.4%
Kroger	$ 65.6 million	12.6%
Safeway	$ 42.3 million	8.1%
Costco	$ 35.3 million	6.8%
Others	$241.2 million	46.1%

Source: Food Marketing Institute: "Top U.S. Supermarket and Grocery Chains" (by 2007 grocery sales)

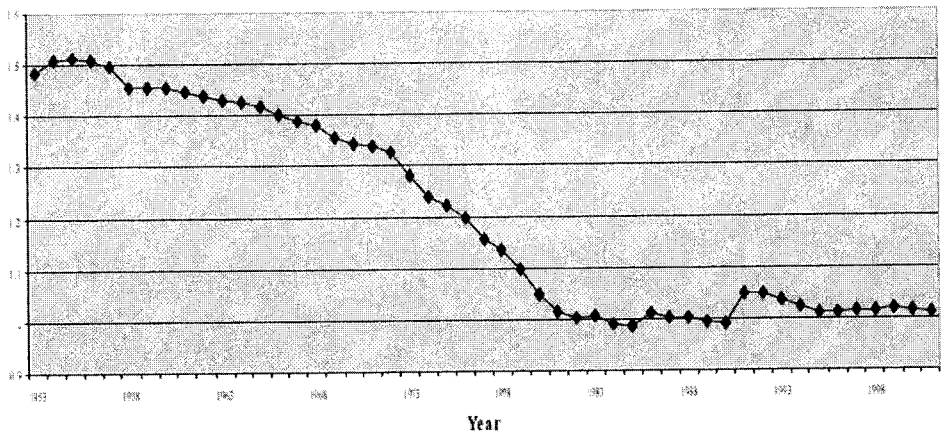
The retail grocery market has a strong incentive to sell products in high volume. According to the Food Marketing Institute, "The intense competition among food retailers for the consumer dollar is best demonstrated by profit margins that continue to be less than 2 cents on each dollar of sales. " [19] They go on to explain how supermarkets survive with so little margin for error, "To earn a dollar, supermarkets would rather sell a $1 item 100 times, making a penny on each sale, than 10 times with a dime markup. Low markup to stimulate high volume is the fundamental principle of mass merchandising, which the supermarket industry introduced to the marketplace in the 1930s." [19]

With such a merchandising approach, it is easy to see why Costco—which relies on very low markups—works steadily on deregulation. Using buying power to acquire very large quantities of alcohol at deep discounts, like they do with potato chips or tires, is simply not permitted in many states. In addition, it is not possible to manage the supply of large quantities without being able to act as a wholesaler to store and distribute the large quantities. Costco has used its home state of Washington to challenge barriers to their business model. Over time they have won several. Minimum prices for retail alcohol sales were eliminated, and a bill recently passed in the state legislature eliminating a minimum 10% markup at the wholesale level. Costco challenged several major regulations in 2004. They alleged that nine different regulations "restrict many of [Costco's] efficient and competitive practices as to wine and beer suppliers..." They prevailed on most measures at the trial level but lost all but a few at the appellate level. [35] They then turned to the political arena. Continued pressure over time has been a fairly effective strategy. The wins they gain work to benefit other large chains and tend to push the model of cheap alcohol sales in high volume.

Advertising, promotion and marketing of alcohol continues to be an important subject of debate over alcohol policy and regulation. Research in this area is relatively new. According to the Center on Alcohol Marketing and Youth, youth exposure to alcohol advertising on television increased 38% from 2001 to 2007. [36] Research in the U.S. indicates that those youth with greater exposure to alcohol marketing are more likely to start drinking than their peers. [36] Both the U.S. and the U.K. have various industry self-regulation mechanisms and government advertising codes to curtail ads that appear to target youth. The U.S., however, also has state regulations, some of which restrict advertising and preclude licensees from promotions that encourage high volume drinking.

Price declines: According to economist Frank Chaloupka, "Infrequent/modest increases in taxes and repeal of some control policies have contributed to sharp reductions in inflation adjusted alcoholic beverage prices over time." [37] Despite the lack of vertical integration in the U.S. alcohol business, prices have declined and affordability has increased. As noted earlier, increased affordability is related to increased consumption, particularly among youth.

Figure 15: Inflation Adjusted Alcoholic Beverage Prices, 1953-2001



Source: "Reducing Morbidity and Mortality through Alcohol Pricing and Taxation," Frank J. Chaloupka, Director, ImpacTeen, University of Illinois at Chicago.

Protective Factors: A System, Not a Silver Bullet

There is no silver bullet to curb alcohol problems. What works for the United States may not work for the United Kingdom and vice versa. But, the U.K. situation has highlighted the need for comprehensive regulation rather than deregulation and high taxes. As the World Health Organization recommends, strategies have the greatest potential to be effective "when prior scientific evidence is utilized and multiple policies are implemented in a systematic way." [26] As we have seen, a good system to combat alcohol problems has several measures to ensure prices are not too low and availability is controlled. The

system also must have age restrictions, anti-drunk driving measures and effective enforcement.

In the U.S., each state has its own regulatory system. But, most states have a system which includes the elements recommended by the WHO. As the U.K. experience demonstrates, a good balance in pricing is critical. That means measures to keep prices high enough to avoid increased consumption but low enough to avoid the incentive for bootlegging. Most states have taxes in addition to other measures such as a ban on volume discounts, a requirement for wholesalers to sell at the same price to all, minimum prices, post and hold laws, a ban on selling below cost, uniform pricing and prohibitions on price reduction specials. These multiple measures go a long ways toward preventing the extreme price reductions and promotional practices that have occurred in the United Kingdom. These regulations are more crucial than ever as the marketplace consolidates around a few large companies in the manufacture and retail sectors. Since the U.S. system places substantial requirements on wholesalers, vertical integration that would drive prices even lower is avoided.

The fact that alcohol is regulated at the state level means each state has a different set of rules. Industry may complain that this makes life difficult for companies operating on a national or global level, but that is true for every industry. Each state has a different set of tax and consumer protection laws impacting many commodities. It is a function of our system of state government. The alcohol regulations are unique in their Constitutional origin and the American historical experience which led to a decision to regulate alcohol primarily at the state level. The alcohol regulations protect communities from experiencing the adverse impact of the global market. Moreover, regulation at the state level allows quicker response to community problems. To tear down or seriously weaken the U.S. regulatory system, each state would have to make legislative changes. Over the past decades, there has been some weakening of alcohol regulation, particularly as it relates to marketplace rules. Alcohol is much more available due to increases in the number of licensees and an expansion of hours for selling alcohol. But, it is a more gradual process when it must be done state-by-state. Incremental changes do allow for a chance to see if change brings harm. In addition, there have been some areas where regulations have been strengthened, namely drunk driving and underage drinking. The major threat to our state systems is from lawsuits that could potentially impact all states if major cases result in declaring certain types of regulation unconstitutional. If the trial court's decision in the Costco case had held on appeal, it might have drastically changed our regulatory landscape. Lawsuits will continue to be a threat. This means regulators must be ever vigilant to ensure they can clearly explain the system, its purpose and how its regulations foster public health and safety.

It is also critical that laws be adequately enforced. As noted with the United Kingdom, enforcement of what underage laws that exist has been minimal. And, they are only beginning to conduct decoy operations to reduce underage sales. In the U.S., there was a time when underage drinking laws were poorly enforced, but that changed. A federal program—called Enforcing Underage Drinking Laws—provides an annual block grant to

each state for such enforcement. Research has shown that frequent compliance checks are necessary to keep illegal sales down. [38, p.171] Greater enforcement has also occurred for laws against furnishing alcohol to minors, for serving minors in bars and for minors in-possession of alcohol. In both countries, there have been good efforts to regulate and enforce drunken driving laws to good result.

Conclusions—A Strong System is Necessary to Prevent an Epidemic

1. The U.S. could experience a similar alcohol epidemic if it does not maintain a fair, balanced and strong alcohol regulatory system. This system needs to have multiple measures to control price, availability, promotional practices, underage drinking and drunk driving. Such a system must have effective enforcement.

2. Powerful market forces will continue to chafe at the regulatory system. As the retail and manufacturing segments become more consolidated and more globally-oriented they will push to deregulate in order to use mass merchandising techniques. Therefore, it is incumbent on policymakers, regulators and prevention advocates to articulate the reasons why such techniques can create social problems. Because mass merchandising relies on high volume to profit from low prices, the business model promotes high consumption by a large number of people. Regulatory advocates must make the case that alcohol is a different commodity that requires special care in selling, marketing and industry structure.

3. The U.S. regulatory system which carefully controls alcohol through three market segments keeps the market in balance, tracks alcohol products and provides an inexpensive method of tax collection. This system helps prevent price wars and problems with tainted and counterfeit alcohol products. It also serves as a check on the most aggressive alcohol sellers and producers.

4. Price is a very critical factor in alcohol control. It is so important that states should use multiple methods to keep it balanced—not so high as to facilitate bootlegging, but not so low as to increase consumption. Because the political will is not always there to check the erosion of taxes by inflation, such methods as minimum prices, prohibition against selling below cost, post and hold legislation and volume discounts bans are ever more important. The requirement for wholesalers to have the same price for all is crucial in preventing price wars. Increases in price can have positive effects on all classes of drinkers in terms of health, crime and employment.

5. Availability is important. Alcohol products—and particularly cheap alcohol products—are much less of a problem if they are rarely available. Recent deregulation efforts have made alcohol more available. It is now sold in restaurants, bars, drugstores, grocery stores, convenience stores, gas stations, hotels, airplanes, ships, buses and even on the internet. It is also present at school, church and

community events. Sports facilities count on alcohol as a mainstay for revenue. Not only are there increased opportunities for purchase, this increase has added to the burden of local law enforcement and alcohol regulatory agencies trying to regulate these varied sources.

6. Promotion and selling practices that encourage heavy consumption especially for youth and women need to be curbed including marketing of alcohol to underage drinkers. The trends of greater drinking among youth and women are serious. While the rates are much lower in the U.S. than in the U.K., the patterns are similar. The U.K. should provide a lesson in how bad things can get. This suggests attention to the serving practice in on-premise establishments. Many states have server training and server permit systems as well as prohibitions against high volume drink practices. Retaining and enforcing these regulations are very important in curbing intoxication and public offenses in and around bars.

7. Drunk driving still kills way too many Americans. But, progress has been made through the use of several important laws and stepped-up enforcement. This is an area where both the U.S. and the U.K. have focused enforcement and regulation to reduce the problem.

NOTES

[1] Sir Liam Donaldson, Chief Medical Advisor, U.K. Department of Health as quoted in "Teenage girls and alcohol poisoning," by Urmee Khan, Telegraph, March 22, 2009.

[2] The United Kingdom is a unitary state that includes England, Scotland, Northern Ireland, and Wales. The islands of Jersey, Guernsey and the Isle of Man are Crown Dependencies. The government is a parliamentary system headquartered in London, but Scotland, Northern Ireland and Wales have "devolved national administrations" which gives them jurisdiction over things like health and education. This is why alcohol regulation may be somewhat different in England, Scotland, Northern Ireland and Wales.

[3] "On the State of the Public Health," The Annual Report of the Chief Medical Officer of the Department of Health 2001, United Kingdom Department of Health.

[4] World Health Organization Global Status Report on Alcohol, 2004.

[5] "A third 'drink over daily limit'," BBC on-line, January 22, 2009.

[6] "Behavioral Risk Factor Surveillance System, Prevalence and Trends Data, Nationwide (States and DC)-2008 Alcohol Consumption," National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control, online document.

[7] The 2007 ESPAD Report. ESPAD is the European School Survey Project on Alcohol and Other Drugs. The project studies data on substance use among 15 and16-year-old European students and monitors trends between countries. The U.S. is included in many comparisons, but the data is from a U.S. survey, not the ESPAD survey.

[8] Harmful Consequences of Alcohol on the Brains of Children, Adolescents, and College Students, American Medical Association.

[9] "Hundreds of children under 10 hospitalised with alcohol problems," Times Online, November, 2008.

[10] Plant, M.A. and Plant, M. L., Binge Britain: Alcohol and the National Response, Oxford University Press.

[11] "Three times as many teenage girls have been admitted to hospital with alcohol poisoning as boys, official figures show," Daily Telegraph, March 22, 2009.

[12] "Effects of Alcohol on Women," U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention brochure.

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[17] "Trends in the affordability of alcohol in the U.K.," Institute of Alcohol Studies, 1980-2007, Web site document.

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[19] "Competition and Profit," Food Marketing Institute, Web site PDF.

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[22] "A Wake-up for Westminster, Economic trends in the beer and pub sector," British Beer and Pub Association, September 2008.

[23] "One bar, three hours-I was sold enough drink to fill me," by Anushka Asthana, The Observer, October 23, 2005.

[24] "Ladette binge-drinking violence soars by 300% in just seven years," by Simon Alters, Mail Online, March 1, 2009.

[25] "United Kingdom: Treasury haunted by spectre of fake spirits," by Vanessa Houlder, Financial Times, December 27, 2006.

[26] "What are the most effective and cost-effective interventions in alcohol control?" World Health Organization, February 2004.

[27] "Independent Review of the Effects of Alcohol Pricing and Promotion: Part B, Modelling the Potential Impact of Pricing and Promotion Policies for Alcohol in England: Results from the Sheffield Alcohol Policy Model", University of Sheffield, U.K.

[28] "The drunken reality of deregulation," by Melanie Phillips, Daily Mail, March 16, 2009.

[29] "Tesco to challenge shoppers 'who look under the age of 25' when they are buying alcohol," by Sean Poulter, Mail Online, March 26, 2009.

[30] "Time for a little sober reflection on alcohol," by Max Davidson, Telegraph, March 17, 2009.

[31] "Exposure to Substance Use Prevention Messages and Substance Use among Adolescents: 2002 to 2007," SAMHSA's 2007 National Survey on Drug Use and Health (NSDUH), Web site document.

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[35] Costco v. Hoen, US Court of Appeals, Ninth Circuit.

[36] "Youth Exposure to Alcohol Advertising on Television, 2001 to 2007," Center on Alcohol Marketing and Youth.

[37] "Reducing Morbidity and Mortality through Alcohol Pricing and Taxation," Frank J. Chaloupka, Director, ImpacTeen, University of Illinois at Chicago.

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About the Author

The author of this paper is a former alcohol regulator. From 1996 to 2003, she was the executive director of the Oregon Liquor Control Commission. She left that position to work for Oregon Partnership in the non-profit field of alcohol abuse prevention, specializing in the reduction of underage drinking. As a prevention advocate, she gained an increased appreciation for the value of alcohol regulation and its effectiveness as increasingly demonstrated by research. She currently operates her own company called Public Action Management, PLC, where she focuses on public education programs. Information about these programs can be found at www.pamaction.com or by e-mail at pam@pamaction.com.

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