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**SHOULD CROSS-BORDER SHOPPING AFFECT TAX
POLICY?**

By David Buck, Christine Godfrey and Gerald Richardson

YARTIC OCCASIONAL PAPER 6

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ABSTRACT

Since the creation of the Single European Market it has been claimed that cross border shopping will have major detrimental effects on UK industry, employment and government revenue. The brewers in particular have argued that, to remove the incentive for CBS, UK excise duties on alcohol should be lowered to European levels. To support this the trade has put forward three main arguments: that there are large financial incentives for CBS; that CBS will have a large detrimental effect on the UK economy; and that large tax cuts in the UK will be beneficial. The purpose of this paper is to provide an objective discussion and assessment of these arguments.

To examine the incentive argument realistic estimates of costs and savings from a cross border shopping trip were calculated. The estimated savings of between £16 and £60 from the purchase of 800 cigarettes in France would not be sufficient to justify the travel and time costs of a special trip. Calculating savings for alcohol is complex but a shopper bringing back a maximum of 110 litres of Holsten Pils from France could save £176 on the purchase of the same quantity in the UK. However, travel costs can be substantial. For example, return travel costs from London to Calais for one car and driver are in the range £100 to £300. The available evidence also suggests that organised smugglers can make more profits by smuggling duty-free goods into the Southern European countries than from smuggling duty-paid goods between the UK and elsewhere.

If cross border shopping were substantial a number of different groups could be affected. However, as argued in the paper the effects need not be detrimental to all parts of the tobacco and beverage industries. In any case, the available evidence suggests that expenditure on alcohol and tobacco in the UK has not been affected by cross border shopping.

The trade argues that large tax cuts would eliminate the incentives for cross border shopping. However, the economic effects of a large tax cut are unclear. Cuts in duty may not be passed on to consumers, price responsiveness could fall and tax revenue and sales suffer as a result. If tax cuts did lead to increases in consumption, there would be concurrent rises in health and social problems.

In conclusion, the evidence reviewed in this paper suggests there is little support for any of the trade's main arguments. Incentives to engage in CBS are small, available data does not indicate a large increase in cross-channel journeys or sharp falls in UK sales, the economic effects of substantial tax cuts are uncertain and may have detrimental health and social consequences. These considerations suggest that there is no justification for a major change in tax policy.

1. INTRODUCTION

Recently, there has been much discussion in the media about cross-border trade between the UK and Europe in alcohol and tobacco products. The Single European Market (SEM) Act came into force in January 1993, one of its provisions was the removal of strict limits on the personal importation of alcohol and tobacco from other EU states. The large difference in excise taxes between the UK and its continental neighbours and the concurrent dismantling of systematic customs checks has created incentives for significant cross-border purchases from France and the low countries.

Incentives exist both for legitimate personal purchases, illegitimate personal purchases and smuggling for subsequent resale in the UK. The major brewers in particular have expressed concern about the impact of legal cross-border shopping (CBS) and smuggling on their UK sales (Whitbread PLC 1994). The Brewers argue that CBS represents a serious threat to manufacturing jobs and retailers in the South-East and suggest this may affect government tax revenue. They are actively campaigning for a reduction in tax levels to remove the incentives for cross-border shopping (BLRA 1994a).

However, such a change in policy would have major consequences for alcohol and tobacco consumption, health and possibly crime levels in the UK. The Government has a commitment to increasing cigarette taxation in real terms on health grounds and the wider context of the Health of the Nation white paper would make cutting excise taxes for either tobacco or alcohol a controversial step.

The purpose of this paper is to provide an objective discussion and assessment, where possible, of the incentives and size of cross-border shopping and smuggling and the implications of CBS for future fiscal policy. The arguments and possible costs and benefits to industry, government, society and the individual of CBS and proposed tax policy options to curb it are explored.

2. THE SINGLE EUROPEAN MARKET AND THE REMOVAL OF BORDER CONTROLS

Cross-border shopping has become an issue because of the removal of border controls as part of the move towards the Single European Market (SEM) and wider integration within the EU. Until recently, the imposition of legal and technical barriers to trade, via the system of customs checks at UK ports and airports, meant smugglers faced considerable risks in attempting to import tobacco and alcohol illegally in the UK.

One of the main objectives of the SEM, officially created in January 1993, was to remove border controls. Border controls impose considerable administrative costs to firms. Additionally customs controls create disincentives to trading and physical delays, raising transport costs. Table 1 shows that these costs are far from insignificant.

Table 1: Estimated costs of border controls in the EU

	ESTIMATES (ECU)	PER CENT OF CROSS-BORDER TRADE
Administration and delays	8bn	2
Disincentives to exporting and importing	4.5 - 15bn	1.125 - 3.75
Maintaining controls	0.1 - 1bn	0.025 - 0.25
Total	12.6 - 24bn	3.15 - 6

Source: collated from Vickerman (1992)

Total costs due to border controls have been estimated to be in the order of 12 to 24bn ECU for the EU as a whole, or 3 to 6% of the value of total cross-border trade, equivalent to between £1.6bn and £3.3bn for the UK in 1991, the majority of this arising from removing

the disincentives to firms from engaging in intra-EU trade (Vickerman 1992).¹ A further cost-benefit study carried out by the Single Market Unit of HM Customs and Excise estimated that the potential benefits to UK business could amount to almost £550mn over 4 years (HM Customs and Excise 1992). This figure is less than those reported in Vickerman (1992) primarily because it makes no allowance for the increase in trade as a result, this is the most significant component in table 1. The costs of delays are also probably underestimated.² At the very least there will be savings to British business of £135mn per year from the removal of customs barriers, the more realistic figure lies between £1.6bn and £3.3bn. These gains should not be forgotten when assessing the problems of cross-border shopping.

¹ Calculated from intra-EU trade statistics (Eurostat 1993).

² The Customs and Excise report only takes into account the savings that arise in driver's pay as a result of fewer delays.

3. WHAT ARE THE INCENTIVES FOR CBS?

By January 1993 all border controls for routine movement of intra-EU goods had been eliminated in the UK. The only remaining barriers to personal importation of alcohol and tobacco are that no-one can bring goods into the country on behalf of a third party, for subsequent resale, or beyond the 'indicative limits' set by the government without proof that the additional amounts are for personal consumption.

The underlying incentive for CBS is financial, people can save money legitimately by buying abroad. In practice this is reinforced by the fact that there are no limits on the number of times a person can bring back duty-paid products to the UK and that the indicative limits are guidelines only, this casts doubt on their effectiveness at stemming the volume of CBS. Mintz and Tulkens (1986) have provided a theoretical account of cross-border shopping but it is clear that the strength of the incentive to engage in CBS depends on the perceived costs and benefits of doing so to the individual.

Figure 1: Incentives for individuals to engage in CBS in alcohol and tobacco products

BENEFITS	COSTS
<ul style="list-style-type: none">* Monetary savings on personal consumption as a result of price differences* Greater choice of goods?* Possible profits from illegal resale of goods* Leisure activity	<ul style="list-style-type: none">* Travel costs* Risk of capture and possible prosecution if over indicative limits* Opportunity cost of time

As well as legitimate CBS, the removal of border controls also affects the incentives for illegal importation. The relaxation has reduced the perceived costs of both organised smuggling as an income-generating activity and occasional trips where individuals import for

opportunistic resale.

The removal of border controls and barriers to importation have effectively increased the gap between the perceived benefits and costs, inducing both greater cross-border purchases by those already doing so and an increasing number of people deciding to engage in CBS who previously would not have done so. Thus for a larger number of people the benefits are outweighing the costs in Figure 1.

4. WHAT ARE THE COSTS AND BENEFITS OF CBS?

The actions of individuals has implications for the rest of the economy. These can also be categorised into costs and benefits. Figure 2 outlines the main advantages and disadvantages of CBS for four parties: individual shoppers; industry; government and society. The benefits and costs to shoppers are similar to those in figure 2 except for the addition of possible health and social problems due to increased consumption.

CBS obviously has implications for alcohol and tobacco industries. However its effects are ambiguous and there are no routine data available to sustain these claims:

1. If consumers *substitute* overseas purchased cigarettes and alcohol for UK-purchased goods, domestic sales, profits and employment will fall. However, there could be different effects in production and retailing sectors. Retailing is likely to be affected most, especially in the South-East. The BLRA are particularly concerned for small off-licenses. Even within the retailing market the alcohol market is very segmented and whether the public house, or supermarket trade have felt a large impact is difficult to determine. Indeed over Christmas 1993 many UK supermarkets reported "good trade" in alcohol. The same is true of the big UK brewers.
2. In contrast to the retailers, alcohol and tobacco manufacturing industries will only be affected by CBS if goods purchased overseas are *not* of UK origin. If UK consumers are simply importing UK brands as pure substitutes there will be no effect on production sales or employment.³
3. In addition, because prices are lower consumers may buy more than they would have done in the UK. If they are buying more goods produced by the UK alcohol and tobacco industries then these industries may even see an increase in their sales and profits due to CBS.

³ Unless this entails changes to manufacturing processes.

Figure 2: Incentives and costs and benefits of cross-border shopping

INCENTIVES TO SHOP ACROSS BORDERS

INDIVIDUALS CONTEMPLATING CBS
<ul style="list-style-type: none"> * Perceived financial savings from purchase of alcohol and tobacco * Perceived possible profits from resale

ACTUAL COSTS AND BENEFITS AS A RESULT OF CBS

SHOPPERS	
BENEFITS	COSTS
<ul style="list-style-type: none"> * Realised financial savings * Greater choice of goods? * Increased welfare and consumer surplus * Realised profits from subsequent resale * Leisure activity 	<ul style="list-style-type: none"> * Travel costs * Opportunity costs of time * Capture and possible prosecution if over indicative limits or caught during resale * Detrimental effects on health if increase consumption



INDUSTRY	
BENEFITS	COSTS
<ul style="list-style-type: none"> * Increase in employment in travel industry as a result of increased passenger traffic 	<ul style="list-style-type: none"> * Lost alcohol and tobacco sales * Employment losses in UK production and retailing industries particularly in South-East



GOVERNMENT	
BENEFITS	COSTS
<ul style="list-style-type: none"> * Removal from unemployment register of new travel industry and related staff 	<ul style="list-style-type: none"> * Loss of excise and VAT revenues * Unemployment benefits linked to alcohol and tobacco industry * Increased enforcement costs * Possible effects on balance of payments * Possible increased healthcare costs



SOCIETY	
BENEFITS	COSTS
<ul style="list-style-type: none"> * Increased welfare and consumer surplus 	<ul style="list-style-type: none"> * Increases in alcohol attributable crime and alcohol and tobacco-related diseases

4. The UK travel industry will also, unambiguously, benefit from CBS, in terms of increased employment and profits.

The government could incur substantial costs from CBS. The major reason for the price differential is higher tax rates in the UK. The government will lose this tax revenue on each unit of alcohol and tobacco purchased abroad, if CBS is a substitute for domestic shopping. The relative strength of the substitution effect is a crucial issue for industry and government. The government will also have to pay for any net unemployment in alcohol and tobacco retailing and production although this will be offset by any net increase in travel-related employment. The balance of payments may also be adversely affected and enforcement and policing costs increase. In the short term the Health of the Nation targets could be jeopardised and in the longer term possible medical and social problems may lead to greater health-care and other costs.

Finally, society at large will also incur costs and benefits. This is *not* simply the aggregation of costs and benefits to industry, shoppers and government. Some of these costs, such as unemployment benefits, are transfer payments and do not represent a "true" cost to society. These welfare payments do not involve scarce resources in themselves but do affect the distribution of income among the population, i.e. from taxpayers to those receiving the benefits. On the other hand the additional welfare gains to shoppers and possible recipients of cheap smuggled goods could be counted as benefits. The social costs of increases in alcohol-attributable crime and health consequences of increased consumption of alcohol and tobacco are likely to be the greatest burden on society at large if CBS results in an increase in consumption.

5. HOW BIG ARE THE INCENTIVES FOR CBS?

This section attempts to estimate the strength of the financial incentives and disincentives to engage in CBS.

5.1 Financial incentives

5.1.1 Tobacco

Table 2 shows that the prices of the most popular brands of cigarettes varies significantly across EU countries from a low of £0.89 per pack in Spain to a high of £2.82 in Denmark. Cigarettes are heavily taxed throughout the EU, from a low of 68% of the final price in Spain to a high of 85% in Denmark. It also shows that there is very little difference in the total tax take between the UK and its two close continental neighbours France and Belgium. However, there is a large difference in price, the price in the UK being 60% and 20% higher than in France and Belgium respectively. This reflects the different tax structures between countries.

Cigarettes are liable to three separate forms of taxation: VAT, levied on final selling price as all other goods; an additional ad valorem tax; and a specific fixed excise tax levied per cigarette. It is the mix between the specific and ad valorem taxes which gives rise to differences in price. In the high price countries (Germany, Denmark, Ireland and the UK) the specific tax accounts for a high percentage of the total tax take.

Where more reliance is placed on the ad valorem tax there is a much greater price dispersion between brands since down-market brands will be taxed less than more expensive international brands. This is not true where the fixed excise tax is levied, all brands are taxed at the same amount. The result is that average prices tend to be lower in countries where a large amount of tax is raised ad valorem. For example, shoppers bringing home the indicative limit of 800 cigarettes could expect to make a saving of over £60 by buying the most popular brands in Spain compared to that in the UK. However, this also implies that smoking habits are likely to be different, cheaper generic brands dominate the markets in the Southern European states whilst international brands have larger market shares in the north. It is therefore doubtful

whether UK shoppers would purchase local, low quality cigarettes even at such prices.

Table 2: Average prices of most popular cigarette brands (pack of 20), estimated savings from legal cross-border purchasing and tax rates in EU countries 1994

COUNTRY	PRICE ¹	FINANCIAL SAVING (800 CIGARETTES) ²	TOTAL TAX	SPECIFIC TO TOTAL TAX
Belgium	£1.98	£16.36	74%	10.4%
Denmark	£2.82	-£17.32	85%	51.3%
France	£1.51	£60.02	78%	5.6%
Germany	£1.96	£17.13	72%	47.2%
Greece	£1.14	£50.00	72%	4.5%
Ireland	£2.46	-£2.81	75%	54.5%
Italy	£1.54	£33.99	73%	2.9%
Luxembourg	£1.60	£31.74	69%	5.0%
Netherlands	£1.88	£20.31	72%	50.0%
Portugal	£1.03	£54.22	81%	13.8%
Spain	£0.89	£60.02	68%	9.3%
UK	£2.39	-	77%	54.3%

Note: 1. Average price of most popular 4 to 6 brands to nearest penny.

Source: Prices derived from BASP (1994a), savings estimate by authors, tax rates from BASP (1994b).

Table 3 shows that price differentials between international brands, in this case Marlboro, are far less marked between countries. Legal savings of £55 are possible by importing from Greece. In practice France and the low countries are the most obvious source of cigarettes because of the lower travel costs. Personal importation of the most popular brand would result in savings of between £16 and £60, and of Marlboro £24 to £30.

Table 3: Prices of 20 Marlboro cigarettes in the European Union 1994

COUNTRY	PRICE	ESTIMATED SAVING ON 800 CIGARETTES
Belgium	£1.95	£23.78
Denmark	£2.85	-£12.35
France	£1.81	£29.03
Germany	£1.93	£24.40
Greece	£1.31	£49.10
Ireland	£2.49	£1.85
Italy	£1.69	£33.97
Luxembourg	£1.55	£39.53
Netherlands	£1.74	£31.81
Portugal	£1.16	£55.28
Spain	£1.31	£49.10
UK	£2.54	-

Source: Price data, BASP (1994a), savings estimate by authors.

Internationally recognised brands such as Marlboro or Winston are also preferred by smugglers since they are easier to sell. There are no figures on the extent of the organised smuggling of cigarettes in the UK. With the removal of border controls however it has almost certainly increased. However, BASP also argue that the differences in prices between international brands are not sufficient to allow smugglers to pay intermediaries, transportation costs and to offer the consumer a low enough price to buy on the black market and as of December 1993 there had been no seizures of lorries transporting illegal foreign duty-paid cigarettes in the UK.

The market for smugglers is in duty-free cigarettes, this is a serious problem in Spain and Italy. These are mostly US-produced cigarettes imported into northern European ports, no duty is paid if the goods are subsequently re-exported outside the EU. In practice exit papers

are often forged and the cigarettes are unloaded from the lorries and sold directly on the Southern European black market. Alternatively cigarettes are exported to Cyprus and smuggled from there back into the EU on the Adriatic coast or Gibraltar.

Profits from this duty-free smuggling are far higher than for any smuggling of duty-paid cigarettes between EU countries with low and high taxation. Paradoxically, it is easier and more profitable to sell smuggled cigarettes in the low-priced Mediterranean countries than in the high-priced northern European nations. This is because selling cigarettes on the streets of Spain and Italy is a part of normal life whereas the distribution of cigarettes is more controlled in the UK. Tobacco smuggling has intensified in France, not for resale in France itself, but because France is a transit country for smuggled tobacco coming from Eastern and Western Europe and headed for the markets of Spain, Italy and Portugal. Smuggling is becoming more of a problem in Germany, particularly in the east of the country as smugglers bring in cigarettes from East European states.

In conclusion, shoppers could be expected to save between £16 and £60 by bringing home the indicative limit of 800 cigarettes from a CBS-trip. This alone would not justify travel and other opportunity costs. However, in combination with alcohol purchases there may be sufficient rewards (alcohol is discussed in the next section). Organised cigarette smuggling may be profitable but it is easier and more profitable for smugglers to concentrate their efforts on Southern European markets.

5.1.2 Alcohol

The financial incentives to purchase alcohol cross-border are far more complicated to quantify than those associated with tobacco. This is because the market is highly segmented. The alcohol market contains several distinct sub-markets which can be classified in several different ways. There are at least 5 common classifications of products, beer (including lager), table wine, spirits, sparkling wine and fortified wine. Alcohol is also sold in two major different forms, on and off-licence. The incentives to engage in cross-border shopping may therefore be very different for different groups of the population. For example, the incentive for those who consume alcohol in public houses may be less than those who drink

solely at home, since the social aspects of drinking are more highly valued.

Nonetheless table 4 shows that excise rates on alcohol in the UK are higher than almost all other countries in the EU, with the exception of Ireland for all alcohol products and Denmark for spirits.

Table 4: Excise and VAT rates in the EU

COUNTRY	BEER per pint (5% abv)	WINE per 75cl (11.5% abv)	SPIRITS per 70cl (40%abv)	VAT (%)
Belgium	£0.08	£0.22	£3.49	20.5
Denmark	£0.19	£0.51	£7.56	25.0
France	£0.04	£0.02	£3.00	18.6
Germany	£0.04	£0	£2.88	15.0
Greece	£0.05	£0	£1.09	18.0
Ireland	£0.44	£1.58	£6.00	21.0
Italy	£0.08	£0	£1.15	19.0 ¹
Luxembourg	£0.05	£0	£0.49	15.0 ¹
Netherlands	£0.10	£0.29	£3.20	17.5
Portugal	£0.06	£0	£1.47	16.0 ²
Spain	£0.04	£0	£1.16	15.0
UK	£0.30	£1.01	£5.55	17.5

Notes: 1. VAT rates for wine lower

2. VAT rates for wine lower and higher for spirits

Source: derived from BLRA (1994b)

Price comparisons are more difficult to make because of the split on and off-licence markets, myriad types of packaging, discounting and differences in markets in the UK and elsewhere. Nonetheless some are possible, table 5 shows price comparisons for leading beer and lager brands in France and the UK. The mean price differential is 67% for those 10 brands in the table. However, there is a wide dispersion of prices depending on product, packaging and

volume. At one extreme Guinness appears no cheaper than in the UK whilst Stella Artois is less than half the price in France. This may be partly explained by their respective marketing positions in either country. Stella Artois is marketed as a premium brand in the UK but not in France, similarly Guinness may be pitched at the premium end of the market in France but less so in the UK. Another explanation may be transportation costs. The products are different in two other respects: packaging and volume. In France 68% of beer is bought in bottles and 4% in cans as opposed to less than 10% and 22% respectively (Whitbread PLC 1994). Table 5 also demonstrates that for some beers buying in bulk yields definite price advantages (Heineken and Holsten Pils). This means that the comparisons in table 5 should be treated cautiously. Whitbread PLC (1994) have produced three price comparisons for lagers marketed in similar ways in both countries. Table 6 shows that price differentials appear to be higher for premium brands than market leaders or low-cost brands. The evidence, also suggests that the most lucrative brands to import are premium lagers such as Stella Artois and Kronenberg 1664. A shopper bringing back the maximum of 110 litres could save £176 by buying Holsten Pils in bulk in France as opposed to in 4-packs in the UK and almost as much by buying Stella Artois.

There is also a much higher incentive to smuggle alcohol on a small-scale than there is to smuggle tobacco. Large-scale organised smuggling of cigarettes is extremely lucrative but as section 5.1.1 argues this trade is focused on southern European countries. Since fewer than 30% of UK residents now smoke there is also less incentive for illegal imports for personal use than for alcohol. In contrast, only 6% of men and 12% of women reported being abstinent from alcohol in 1992 (OPCS 1994), illegal importation of alcohol for personal use is therefore likely to be more problematical. In addition a van-load of cigarettes is likely to raise far more questions by excise verification officers (EVOs) than a van-load of alcohol. Despite the fact that the excuse 'it's for a party' is not strictly legitimate there is enough casual evidence to suggest that this often works. The general all-pervading nature of alcohol consumption in our society makes small-scale smuggling much more likely to occur, and easier to justify to EVOs, than analogous cigarette smuggling. In contrast large-scale smuggling may be less rewarding and easier to tackle, alcohol is a relatively high physical volume, low value good. The risks of capture may not be low enough to justify the large-scale transportation of such low value goods. However, more evidence is needed.

Table 5: Comparative beer prices: French (December 1993) and UK (April 1994) Superstores¹

PRODUCT	SIZE FRANCE	SIZE UK	PRICE FRANCE	PRICE UK	PRICE DIFFERENTIAL ²	SAVING ON 110 LITRES
Beck's		6X27.5CL bottles	-	£4.99	-	-
Bishop's Finger	12X50cl cans		£6.52	-	-	-
Budweiser	6X33cl cans	4X33cl cans	£3.02	£3.59	78%	£131
Carling	24X25cl bottles	4X50cl cans	£5.93	£2.99	51%	£66
Grolsch		4X44cl cans	-	£3.99	-	-
Guinness	4X33cl bottles	4X44cl cans	£2.37	£3.15 ³	0%	£0
Guinness Draught		4X44cl cans	-	£4.45	-	-
Heineken	6X25cl bottles 6X33cl bottles	4X44cl cans	£2.00 £2.37	£2.69 ⁴	14% 28%	£21 £36
Heineken Export		4X44cl cans	-	£3.99	-	-
Holsten Pils	6X25cl bottles 24X50cl cans	4X44cl cans	£2.37 £12.09	£4.59	65% 159%	£113 £176
Kronenbourg	6X25cl bottles	10X25cl bottles	£2.25	£4.49	20%	£33
Stella Artois	24X25cl bottles 24X50cl cans	10X25cl bottles 4X44cl cans	£5.33 £13.04	£4.99 £4.29	125% 125%	£122 £159
1664	12X25cl bottles		£3.62	-	-	-

Notes: 1. Mammoth Superstore Calais, Sainsbury's. 2. Based on price per cl. 3. Reduced - usual price £2.99. 4. Reduced - usual price £3.69.

Source: French data Bathe (1994), UK data authors.

Table 6: Price comparison of similarly marketed brands

	MARKETING POSITION				
	Premium	Leaders		Low price	
	1664	Kronenbourg	Carling	Sphinx	Hectors
Size					
France	12X25cl	26X25cl		24X25cl	
UK	8X500ml		12X500ml		4X440ml
Price/litre					
France	£1.05	£0.82		£0.49	
UK	£1.75		£1.17		£0.62
Price differential	67%	43%		26%	
Saving on 110 litres	£77	£38.50		£14.30	

Source: derived from Whitbread PLC (1994)

5.2 Disincentives

It is obvious that there are financial incentives to engage in CBS however as figure 1 points out there are also disincentives, financial and otherwise. The costs associated with engaging in CBS are an important factor in the decision to undertake CBS and the subsequent volume of goods purchased. It is not possible to be certain about the full costs facing each individual and there is no 'typical' cross-border shopper. Potential cross-border shoppers come from all parts of the country and will incur different travelling costs getting to the coast. Once there, there are many ways of crossing the channel by ferry, depending on company, time, number of passengers and absence or presence of a motor vehicle.⁴

⁴ More detailed figures presenting cost estimates depending on home town, destination port, public or private transport to the coast, number of trippers, ferry company and crossing and time of year are available from the authors upon request.

Despite there being no 'typical' cross-border shopper there are two main reasons why cross-border shopping would take place:

1. As additional purchases during trips to Europe for *other* purposes; and
2. As distinct trips to Europe as the *main* or only purpose.

This distinction is important since the costs associated with a special trip are more than the costs associated with those trips which have another primary purpose. For example, a common scenario is where families travel to the continent as part of a summer holiday and 'fill-up' with alcohol or cigarettes on the way home. In this case no extra travel costs and few extra opportunity costs are incurred in doing so since ferry and other travelling costs would have to be paid anyway. In contrast where the sole purpose of a trip is to purchase cheap alcohol or tobacco, shoppers will incur fares related solely to their shopping. The total return costs of travelling to France for these purposes are not negligible and are estimated for the Dover-Calais route depending on ferry company, presence of a vehicle and number of occupants, in table 6. Mid-band ferry prices are reported; they tend to be lower in the winter and higher in the summer. Three categories of travel have been defined, car plus driver, car plus more passengers (allowing more alcohol and tobacco to be imported legally) and foot passenger. Two durations are also considered, the standard return and the cheaper short break. The former will tend to be purchased by those shoppers whose shopping coincides with a holiday, the latter is more likely to be taken by those with the sole intention of bringing back cheap alcohol and tobacco.

5.3 Some estimates of costs and gains from cross-border shopping

Cross-border shopping is far more likely amongst holidaymakers and other travellers who are travelling to the continent already for reasons other than shopping. Additional costs are low. This group may therefore be less sensitive to smaller price differences between brands in the UK and France than those who travel solely to shop. Purchases may be more varied and

lower in general, because they do not have to cover travel costs. This is testable.

It is very difficult to determine the costs and savings from cross-border shopping which is an end in *itself*. These people will incur large travel costs. As a result many shoppers may be travelling 'experimentally' in order to discover the true benefits or costs themselves. This implies that sales of cross-border products may drop in future years. Dedicated cross-border shoppers will be much more specific about the goods they wish to purchase.

For an individual, total savings from *legal* cross-border shopping are likely to be around £60 for cigarettes and up to £180 on beer, additional savings on wine and spirits can also be made. However, savings on alcohol are far more difficult to assess, a total of £240 or more. Whether this is outweighed by travel costs depends on the means of transport and home town amongst other variables. Table 7 below shows estimates of the likely costs and savings, *per journey*, associated with a return trip by car from London to Calais under various fare structures.

Table 8 shows that there are net financial savings to be made under almost all fare structures. In fact, *theoretically* over £1,000 per journey could be made with a car with 5 passengers taking the maximum indicative limits, or £200 per occupant. However, in reality foot passengers and car occupants will not be able to physically carry such large amounts of goods. Savings fall to around £380 per car, or £190 per occupant on a daytrip and around £50 for a heavily-laden footpassenger.

There are obviously therefore financial incentives for legal personal importation. However, these net savings may be reduced further if goods are not purchased for subsequent resale. For example, only 30% of the population are cigarette smokers and thus cigarettes will be less attractive purchases to most shoppers, except as gifts, and not all shoppers will have a preference for the beer with the highest price differential.

Table 7: Estimated return travel costs: Dover-Calais

COMPANY AND FARE STRUCTURE	TOTAL ESTIMATED TRAVEL COSTS FROM FOLLOWING POINT OF DEPARTURE										
	B'ham	Bristol	Cardiff	Edinburgh	Glasgow	London	M'chester	Newcastle	Nott'ham	Sheffield	
STENA-SEALINK											
STANDARD											
Car + 1	£218	£231	£242	£293	£302	£290	£234	£239	£211	£224	
Car + 5	£246	£259	£270	£321	£330	£318	£262	£267	£239	£252	
Foot	£84	£89	£94	£123	£123	£65.70	£97	£120	£92	£97	
3 DAYS											
Car + 1	£158	£171	£182	£233	£242	£130	£174	£179	£151	£164	
Car + 5	£174	£187	£198	£249	£258	£146	£190	£195	£167	£180	
Foot	£50	£65	£70	£99	£99	£41.70	£73	£96	£68	£73	
DAYTRIP											
Car + 5	£130	£143	£154	£205	£214	£102	£146	£151	£123	£136	
Foot	£44	£49	£54	£83	£83	£25.70	£57	£80	£52	£57	
P&O EUROPEAN											
STANDARD											
Car + 1	£262	£275	£286	£337	£346	£234	£278	£283	£255	£268	
Car + 8	£303	£316	£327	£378	£387	£275	£319	£324	£296	£309	
Foot	£84	£89	£94	£123	£123	£65.70	£97	£120	£92	£97	
5 DAYS											
Car + 1	£176	£189	£200	£251	£260	£148	£192	£197	£169	£182	
Car + 4	£200	£213	£224	£275	£284	£172	£216	£221	£193	£206	
Foot	£59	£64	£69	£98	£98	£40.70	£72	£95	£67	£72	
HOVER SPEED											
STANDARD											
Car + 1	£282	£295	£306	£357	£366	£254	£298	£303	£275	£288	
Car + 5	£323	£336	£347	£398	£407	£295	£339	£344	£316	£329	
Foot	£84	£89	£94	£123	£123	£65.70	£97	£120	£92	£97	
5 DAYS											
Car + 1	£193	£206	£217	£268	£277	£165	£209	£214	£186	£199	
Car + 5	£208	£221	£232	£283	£292	£180	£224	£229	£201	£214	
Foot	£59	£64	£69	£98	£98	£40.70	£72	£95	£67	£72	

Table 8: Estimated costs, savings and net financial gain from legal cross-border shopping per journey

FARE STRUCTURE	ESTIMATED RETURN TRAVEL COSTS	EST. MAX. SAVINGS	EST. LIKELY SAVINGS	EST. MAX. NET SAVINGS ¹	EST. LIKELY NET SAVINGS
STANDARD					
Car + 1	£290	£240 ¹	£240 ¹	-£50	-£50
Car + 5	£318	£1,200 ²	£480 ³	+£882	+£162
Foot	£65.70	£240 ¹	£78 ⁴	+£174.30	+£12.30
3 DAYS					
Car + 1	£130	£240 ¹	£240 ¹	+£110	+£110
Car + 5	£146	£1,200 ²	£480 ³	+£1,054	+£334
Foot	£41.70	£240 ¹	£78 ⁴	+£198.30	£36.30
DAYTRIP					
Car + 5	£102	£1,200 ²	£480 ³	+£1,098	+£378
Foot	£25.70	£240 ¹	£78 ⁴	+£214.30	+£52.30

- Notes: 1. Assuming single person and indicative limit of 800 cigarettes and 110 litres of beer.
2. Assuming indicative limits for 5 individuals.
3. Assuming more realistic 2 individuals (220 litres beer) and 1,600 cigarettes.
4. Assuming more realistic single person, 800 cigarettes and 10 litres of beer.

However, if the intention is *illegal* resale the net profits may be less than the price differentials between the UK and France suggest. Smugglers will not be able to re-sell imported alcohol or cigarettes at the full UK price. Potential final consumers and retailers will require financial discounts in order to induce them to trade illegally, and with risk to themselves. Although, we know of no reliable estimates of re-sale prices it may be that likely savings could be reduced by half from a car-load of alcohol and tobacco implying a net profit

per trip per person of under £50.

5.4 Summary

Under these realistic scenarios it is not evident that the incentives for small-scale consumption and illegal resale are particularly great given travel costs, physical restrictions and low resale prices. Add to this the opportunity cost of time, the consequences of capture, then the initially strong financial incentive to engage in CBS as a *discrete* operation becomes marginal. In addition not all cross-border shoppers will act in the manner described above. For some, CBS is a leisure activity in itself (eg. the proliferation of so-called 'booze buses'). The *maximisation* of financial savings are not the driving force behind this trade. Shoppers will not have the information, or the desire, to make such calculations. Individual tastes and preferences will almost certainly take priority over the 'best bargain'. How successful such booze cruises will be in the long-run is debatable but the carrying capacity of the coaches is very limited.

6 HOW MUCH OF A PROBLEM IS CROSS-BORDER SHOPPING?

Section 5 has summarised the incentives and disincentives to engage in CBS. For the individual contemplating to cross the channel *solely* to shop it can be seen that the financial incentives are largely cancelled out by other costs. However, there are certainly incentives to illegally smuggle more than the indicative limits and to bring back alcohol and tobacco when trips are being made for other reasons. The really important question is how big is this problem? In short, we do not yet know although there have been several attempts at estimating its size and effects. This literature is reviewed below and some indirect evidence of the significance of CBS is presented.

6.1 Evidence from other countries

CBS has been a substantial problem in other countries such as the Republic of Ireland and Canada. Fitzgerald et al (1988) carry out an economic analysis of the rationale and extent of CBS between the Republic of Ireland and Northern Ireland. Econometric and survey techniques were used to derive the best estimate of IR£84mn - IR£250mn being spent on consumer goods in Northern Ireland by citizens of the Republic in 1987.⁵ Of this approximately IR£10mn - IR£30mn was spent on alcohol and tobacco, between 1.2% - 3.6% of total Irish household expenditure on these items, much of this illegally imported.⁶

In Canada organised smuggling of Canadian-produced cigarettes from the United States is such a major political and financial problem that excise taxes on cigarettes were cut. The Canadian trade is distinctly different from that in the Republic. The extensive land border and large gap in prices makes smuggling both financially rewarding and relatively risk-free. The problem was mainly confined to the Quebec area where cigarettes are bought in the United States, passed through two Mohawk Indian reserves which bestride the border, and sold in Quebec for \$20 per carton, the official price being \$45. The stigma of handling stolen goods

⁵ This lower bound is derived from the survey. It should be treated sceptically because of the well-known under-reporting of alcohol consumption in survey work.

⁶ Calculated from table 4.2 and final CBS estimates contained in Fitzgerald et al (1988).

by smokers is largely removed because of the sheer size of the trade and the Quebec government was thought to be losing \$600mn per year. In this case the obvious solution, a crackdown in the Reserves was not politically feasible due to the problems in them in 1990.

6.2 Evidence from the industry

6.2.1 Whitbread PLC

Whitbread PLC (1994) use a number of approaches to estimate the number of people crossing to the continent and bringing back alcohol and tobacco. The most important is an on-going survey of cross-channel shoppers. A forecasting model is also used to predict beer sales for 1993, the residual between actual and predicted (about 800mn barrels) is *assumed* to be due to *substitution* of UK consumption for personally imported beer from France.

6.2.2 The BLRA

The BLRA (1994a) submitted evidence to the Treasury of the importance to the UK economy of the alcohol industry in general, and the brewing industry in particular, in support of a 50% duty reduction on beer. They present figures which suggest that personal duty-paid imports now account for 2.2% of the total UK beer market. However, personal duty paid imports already accounted for approximately 1.5% of the UK market in the year *before* the abolition of border controls, the additional effect in 1993 has only been approximately 0.7%.⁷ This confirms our argument above that the incentive for small-scale importation is not particularly great and the increase in imports that have taken place may well be temporary.

However, the BLRA also argues that the illegal 'van trade' is a major problem. Vans are loaded up with many times the indicative limits and brought back to the UK for illegal resale in most instances. It is undeniably the case that the van trade has increased as a result of the abolition of border controls and the BLRA estimates that the van trade accounts for a third

⁷ This is only an approximate calculation derived from a figure representing duty paid imports from 1990 to 1993 in BLRA (1994a).

of total duty-paid imports on beer, or 1.1% of the UK market.

6.2.3 A critique of the industry case: substitution or additional expenditure?

The BLRA supports the view of Whitbread PLC (1994) that cross-border shopping causes major damage to the industry and the exchequer. A fundamental point in this argument is that cross-border shopping is a *perfect substitute* for expenditure on beer in the UK. This is a contentious point. Customs and Excise refute this assumption and argue that *only half* the trade is actually money that would have been spent in the UK, the other half is additional expenditure. The losses to the economy, which are relatively low anyway, may therefore be only half of what the brewers calculate.

Three points about the evidence from the industry and in support of customs and excise can be made:

1. The evidence from surveys of cross-border shoppers and the illegal van trade is a valuable source of information. However, 'independent' research on the size and scale of the problem is also important and should be encouraged.
2. The forecasting method used by Whitbread PLC to estimate the 'missing expenditure' on domestic consumption in 1993 is controversial. They argue that the difference between the actual and predicted sales from the model is the loss due to cross-border shopping. However, *any* forecasting model will not predict completely accurately sales in any one year. It is perfectly plausible and *likely* that the difference between actual and predicted sales is a random prediction error, unrelated to cross-border shopping. This weakens the argument that cross-border shopping is fully substituting for UK sales.
3. There are several reasons why some cross-border shopping may be *additional* expenditure and therefore less detrimental to the brewers and the economy. First, not all products sold in France and other European countries will be of foreign origin. The UK alcohol and tobacco companies, if they are competitive and aware of market

opportunities, will be making full use of the opportunities to market their own products, familiar to UK customers, on the other side of the channel, these are *additional* sales for the UK alcohol and tobacco industries. Second, this trend will be reinforced by UK retailers such as Sainsbury's and Tesco's opening superstores on the other side of the channel, which will stock UK products. The evidence of Custom's and Excise that half cross-border sales are additional, weakens the case further.

6.3 Evidence from domestic consumer expenditure on alcohol and tobacco

A further important indicator of whether there has been any significant leakage in sales to cross-border shopping is consumer expenditure on alcohol and tobacco. The CSO has recently published consumer expenditure estimates for *domestic* purchases in 1993, the first year of open borders (CSO 1994).

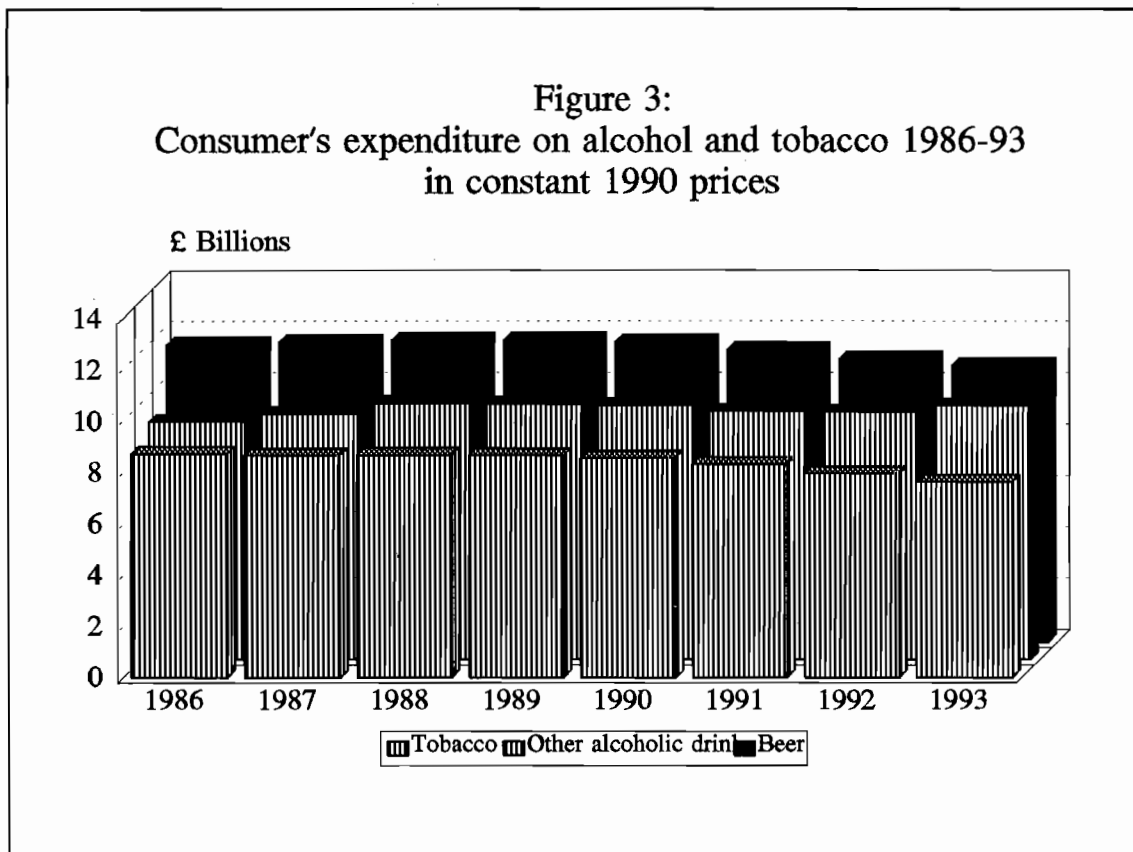
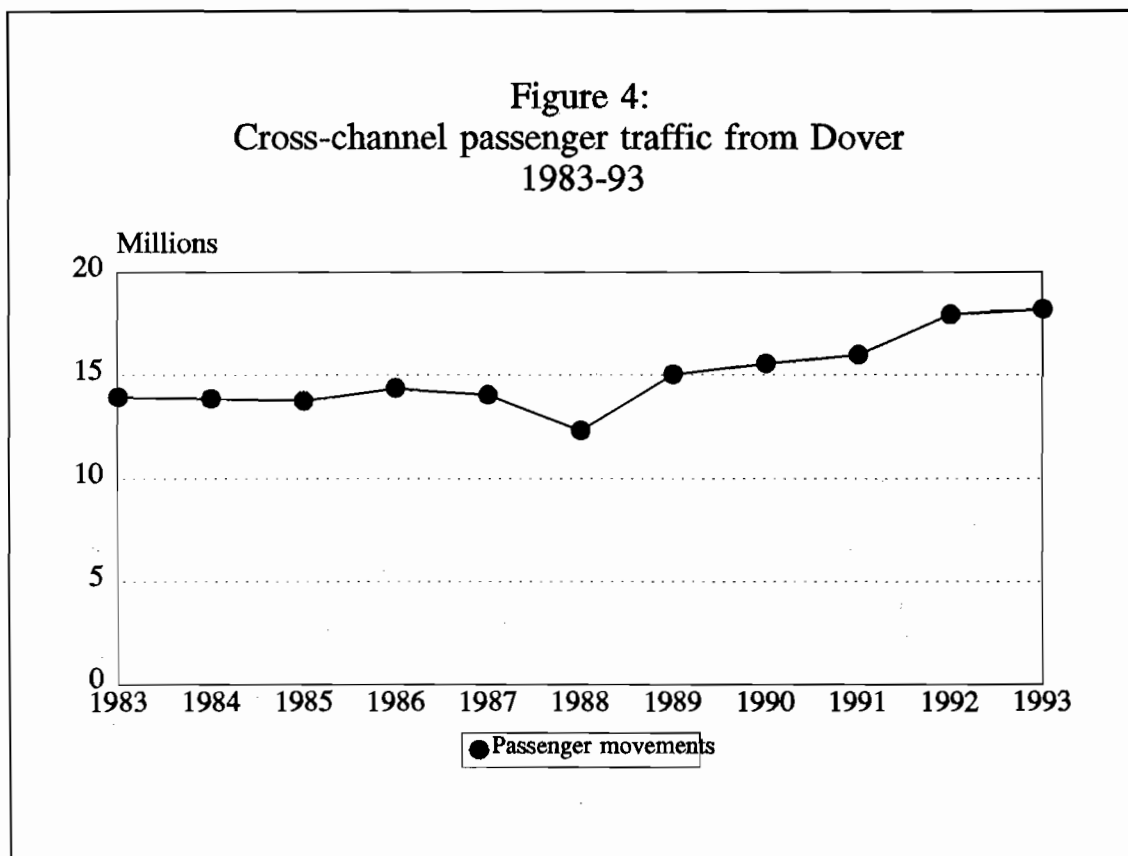


Figure 3 shows the trend in real consumer's expenditure on alcohol and tobacco. If cross-border shopping were having a major impact, as the industry claims, then a detectable and significant fall in domestic alcohol and tobacco expenditure would be expected during 1993. As figure 3 shows this has plainly not been the case. Tobacco expenditure maintained its long downwards decline which has been evident in the figures for many years. Beer expenditure is also still in a shallow decline which started in 1991, there is no evidence that this has accelerated during 1993. Domestic expenditure on other alcohol actually increased during 1993 leaving the real figure for total consumer's expenditure on alcohol unchanged from 1992.

6.4 Cross-channel ferry journeys



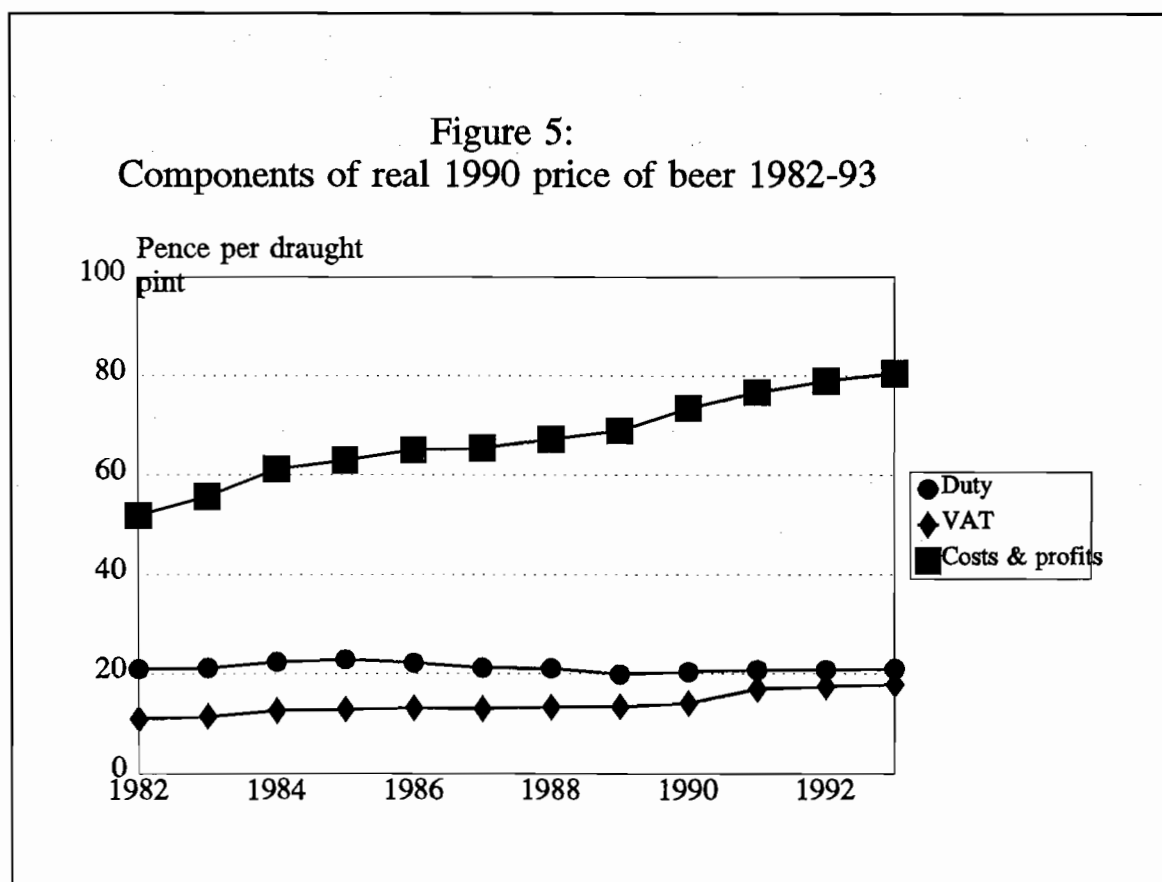
Another check on the importance of cross-border shopping can be gained by inspecting cross-channel passenger movements. If cross-border shopping had induced a large number of

people to make trips solely for shopping purposes this should show as a step change in 1993. As figure 4 shows this is not immediately obvious. There were 18.5mn¹ journeys from Dover in 1993 compared to 17.9mn in 1992, an increase of less than 4%. It is doubtful whether this can be attributed solely to CBS since ferry traffic at Dover is already following an increasing trend. Indeed a bigger rise of 12% occurred in 1992 due to improved and more frequent ferry services.

6.5 Summary

It is doubtful from this evidence whether cross-border shopping is having an appreciable effect on domestic expenditure on either alcohol or tobacco. There appears to be little justification for the fears of the brewing industry.

7. CROSS-BORDER SHOPPING: THE BREWER'S SOLUTION



The analysis of the last section raises the question about whether the brewers' stated concerns about cross-border shopping may be a means to an end. The brewing industry has been very open in its arguments for a cut in duty to stem the claimed loss in sales due to cross-border shopping and tax rises since 1979 (BLRA 1994a). However, there is little evidence thus far that cross-border shopping is affecting UK sales. The evidence on tax is also not that persuasive. Figure 5 shows the components of the real price of a pint of beer from 1982 to 1993. It shows that real taxes have stayed virtually constant and the main cause of price increases has been the costs and profits of the brewers themselves. This trend is not consistent with the claim that taxation has been the major reason for falling beer sales. A similar story holds for the price of whisky, although wine and cider prices have remained relatively constant in real terms. Only for tobacco have tax increases outstripped the costs and profits of industry over the last 10 years, this is a reflection of the government's stated

commitment to increase the real level of taxation on tobacco.

7.1 The Brewers' proposals

In a number of widely publicised reports the Brewers have argued for excise duty cuts in order to safeguard jobs, sales and profits in the UK industry. Whitbread PLC (1994) argue that the only effective answer to the 'problem' is to bring UK duty rates down to the average level in mainland Europe. This is also the position of the Brewer's and Licensed Retailer's Association (BLRAa). The BLRA argues for a *50% reduction* in duty in order to safeguard sales, jobs and stimulate the brewing industry further. As has been argued there is little rationale for this on the grounds of cross-border shopping. The prime driver of price increases of beer in the UK have been the brewers' own costs and profits. Finally, it is not clear that such a large duty change would result in the stimulus to consumption that the Brewers are claiming. With such large changes in price the behaviour of consumers is difficult to predict.

7.2 Detrimental health and social consequences: jeopardising the Health of the Nation targets?

The Health of the Nation policy (Department of Health 1992) is the framework for government health policy. Targets have been set for a range of major diseases and behaviours in order to improve the health of the population by the turn of the century. The smoking and alcohol targets are an integral part of this policy. The Brewers' proposals for a major reduction in alcohol duties threaten the success of this government's health policy as would any reduction in tobacco duties.

7.2.1 Smoking and health

The relationship between smoking and health is now well established. Smoking is related to excess risks for a range of cancers, coronary heart disease and chronic obstructive lung disease and causes over 100,000 premature deaths per year. There is a dose-response relationship between smoking and disease risk but the greatest health gains come from quitting. There are

morbidity effects of smoking but these are less well quantified. Smoking also affects others especially the unborn and children living with smokers. The effects of passive smoking on adults has received a lot of publicity and the estimates of excess deaths range from 300 to 1000 per year.

It is noticeable that the tobacco industry has been far less vocal in its condemnation of cross-border shopping. The industry may be aware that it has 'lost' the health debate with the government's commitment to maintaining tax levels and that cross-border shopping is not a sufficiently large problem to challenge this commitment. Reinforcing this strategy may be the opportunities for the industry of new markets in Eastern Europe which may compensate for the continued decline in home consumption.

7.2.2 Alcohol and health

For alcohol the relationship between different levels and patterns of drinking and health problems is more complex. Chronic drinking is associated with liver problems and some cancers as well as psychological disorders. The number of premature deaths associated with named alcohol disorders is, however, relatively small at about 2000 per year. Alcohol is, however, associated with a much larger range of diseases but is generally one of a number of risk factors. Estimates of the total number of alcohol related deaths per year, using different epidemiological surveys, varies from 9,500 to 33,000 based on 1991 England and Wales mortality figures (Godfrey and Hardman 1994). These figures translate into between 220,000 and over 500,000 life years lost. Hospital admission surveys suggest that up to 1 in 5 may be alcohol related (Barrison et al, 1982; Lockhart et al 1986) although other studies have suggested lower levels (Taylor et al 1986). Direct treatment for alcohol misuse takes place in a variety of both statutory and voluntary agencies. Alcohol problems also affect primary care and Accident and Emergency departments.

The health problems from alcohol are more likely to occur among heavier drinkers but problems can occur across a wide range of drinkers. Episodic drinking and accidents or alcohol-related violence is a particular problem especially for young people. There is also, however, accumulating evidence that moderate drinking may reduce risks from coronary heart

disease for middle aged men and post menopausal women (Marmot and Brunner, 1991; Anderson et al 1993).

Protective effects of low levels of alcohol may be assumed to mitigate against the use of tax as a health policy. It becomes important to know how tax affects the consumption of different groups of the population. Research is limited but does suggest heavy drinkers are price sensitive (Cook, 1981). In the UK research using pooled data from the General Household Survey indicated that price elasticities may also vary across age groups with men under 35 being more price sensitive than older age groups (Sutton and Godfrey 1994).

In summary, alcohol misuse is associated with a number of social and legal problems as well as affecting health. In value terms these problems may outweigh health problems.

8. CONCLUSION

Since the creation of the Single European Market it has been claimed that cross border shopping will have major detrimental effects on UK industry, employment and government revenue. The brewers in particular have argued that, to remove the incentive for CBS, UK excise duties on alcohol should be lowered to European levels. To support this the trade has put forward three main arguments: that there are large financial incentives for CBS; that CBS will have a large detrimental effect on the UK economy; and that large tax cuts in the UK will be beneficial. These arguments have been examined in the paper and the conclusions are now discussed in turn.

The incentives for CBS are financial. Lower tax rates in Europe and a relaxation of border controls have made legal importation seemingly attractive. However, travel costs for small-scale shopping are substantial and for most individuals net savings of buying in Europe will be small. The effects on the illicit trade are harder to predict. The available evidence suggests that organised smugglers can make more profits by smuggling duty-free goods into the Southern European countries than from smuggling duty-paid goods between the UK and elsewhere.

The second argument concerns effects of substantial CBS on the UK economy. The potential effects on the UK beverage industry are not clear. The effect on alcohol retailers depends critically on whether CBS purchases, legal or illegal, are substituting for, or additional to, current on and off-license sales. If they are solely additional there will be no effect on sales. The potential effects on UK alcohol and tobacco producers depends on the origin of the goods purchased. If UK consumers are only importing UK brands as substitutes there will be no effect on production, sales or employment. However, if shoppers take advantage of lower prices to increase the quantities of UK goods purchased then producers will gain trade. The available evidence suggests that expenditure in the UK has not been affected by cross border shopping.

One part of the trade, the Brewers', have argued that a 50% tax cut on beer is needed. They argue this will eliminate the incentives for cross border shopping. It has been argued,

however, in this paper that there is little evidence of lost sales. Even if tax changes were forthcoming, the economic effects of a large tax cut are unclear. Cuts in duty may not be passed on to consumers, price responsiveness may fall and tax revenue and sales suffer as a result. If tax cuts did lead to increases in consumption, there would be concurrent rises in health and social problems.

In conclusion, the evidence reviewed in this paper suggests there is little support for any of the trade's main arguments. Incentives to engage in CBS are small, available data does not indicate a large increase in cross-channel journeys or sharp falls in UK sales, the economic effects of substantial tax cuts are uncertain and may have detrimental health and social consequences. These considerations suggest that there is no justification for a major change in tax policy.

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