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AGGRESSIVELY REGRESSIVE

The 'sin taxes' that make the poor poorer

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About the author

Christopher Snowdon is an author, journalist and researcher who focuses on lifestyle freedoms, prohibition and dodgy statistics. He is the Director of Lifestyle Economics at the Institute of Economic Affairs and regularly appears on TV and radio discussing social and economic issues. He wrote *Velvet Glove*, *Iron Fist: A History of Anti-Smoking* (2009) and *The Spirit Level Delusion* (2010). His most recent book is *The Art of Suppression: Pleasure, Panic and Prohibition since 1800* (2011) which looks at the prohibition of alcohol, drugs and tobacco. Born in North Yorkshire, he now lives with his wife and daughter in Sussex.

Summary

The poorest twenty per cent of households in Britain spend an average of £1,286 per year on ‘sin taxes’, including betting taxes, vehicle excise duty, air passenger duty, ‘green taxes’ and duty on tobacco, alcohol and motor fuels. In addition, they also spend £1,165 on VAT.

The £1,286 spent on sin taxes represents 11.4 per cent of the disposable income of Britain’s poorest fifth of households. For every eight pounds spent by the poorest fifth of households, one pound is taken from them in sin taxes.

Despite significantly lower rates of alcohol consumption and car ownership, the poorest income group spends twice as much on sin taxes and VAT than the wealthiest income group as a proportion of their income. Tax is the single biggest source of expenditure for those who live in poverty and indirect taxes are a major cause of Britain’s cost of living crisis.

The average smoker from the poorest fifth of households spends between 18 and 22 per cent of their disposable income on cigarettes. The tax on these cigarettes consumes 15 to 17 per cent of their income.

Motoring taxes absorb eight per cent of the income of a typical driver from the bottom fifth of households.

Alcohol taxes consume 2 to 4 per cent of the income of moderate drinkers in the bottom fifth of households.

People in the bottom fifth of the income stream who drink moderately, smoke and drive a car spend 37 per cent of their disposable household income on sin taxes and VAT. The comparable figure for people in the top fifth of the income stream is 15 per cent.

Halving ‘sin taxes’ on fuel, tobacco and alcohol, scrapping green energy subsidies and returning the rate of VAT to 15 per cent would reduce tax evasion, reduce black market activity, improve labour market flexibility and stimulate the economy. Above all, it would put money back in the pockets of those who are in greatest need of it.

Regressive taxation

It is well established that indirect taxes are nearly always regressive, which is to say that they take a greater proportion of income from the poor than from the rich. In Britain, the income tax system is progressive, taking 25 per cent of the income from the richest fifth of households, but only ten per cent of the income from the poorest fifth. The top one per cent of earners pay a quarter of all income tax (HMRC, 2012b: Table 2.4). By contrast, most of the poorest fifth's income comes in the form of various welfare payments from the state. However, the progressive nature of the income tax system is undermined by the large and growing regressive impact of sales taxes and 'sin taxes'.

The extent to which a tax is regressive depends upon the size of the tax and the customer demographic. Taxes on luxuries which are primarily bought by the rich can be progressive. Such taxes were not uncommon in the eighteenth and nineteenth century, but have since fallen out of favour. Several academics have proposed a 'progressive consumption tax' in which consumption, rather than income, is taxed at a rising marginal rate. For example, the first £20,000 of spending would be taxed at 20 per cent, but spending above £200,000 would be taxed at 60 percent. Proponents of such a tax see it primarily as a means of controlling 'conspicuous consumption' and encouraging saving, rather than raising extra tax revenue, and no government has yet adopted it (Frank, 1999; Skidelsky and Skidelsky, 2012).

Unsurprisingly, the wealthy tend to spend more money than the poor, but the poor tend to spend *all* their money, and since most spending goes on items that are subject to VAT and/or sin taxes, a larger proportion of income is taken in indirect taxation from the poor than from the rich. In Britain, some essential items are exempt from VAT (eg. children's clothes and most food products) while others are subject to a reduced rate of five per cent (eg. domestic heating fuel and sanitary products). The poor spend a greater share of their income on such essentials, but this is not enough to fully mitigate the regressive nature of indirect taxation as a whole. On the contrary, the tax system exacerbates the problem by levying additional 'sin taxes' on products such as tobacco, alcohol and motor fuel which take a much greater share of income from the poor than from the rich.

Other taxes on betting, air travel and car ownership (vehicle excise duty) are also regressive (although only marginally in the case of airline passenger duty). Furthermore, in addition to motor fuel taxes, there are compulsory 'green levies'—*de facto* taxes—on domestic fuel which are used to subsidise wind farms and other renewable energy industries. *Which?* magazine estimates that these 'green taxes' add £185 to the average household's annual £1,247 energy bill.

The aim of this paper is to examine how sin taxes affect the poor and why so little concern is expressed about their disproportionate treatment by those who claim to speak for them.

Aggressively regressive

The burden of indirect taxation on the poor has risen over several decades. VAT, introduced in 1973 and levied at a rate of 8 per cent for most of the 1970s, rose to 15 per cent in 1979 and then to 17.5 per cent in 1991. After being briefly lowered to 15 per cent in 2008-09 in an attempt to stimulate consumer spending, it has since been raised to 20 per cent.

Alcohol and tobacco have been taxed for centuries. James I's 4,000 per cent tax rise on tobacco in 1604 and the Gin Act of 1736 are just two examples of 'sin taxes' that were explicitly designed to curtail consumption. More recently, motor fuel has been added to the list of price inelastic goods that can be taxed in the name of the 'public interest'.[1] The 'sin' of motoring lies in the pollution and congestion it can cause.

In recent years, tobacco, alcohol and motor fuel have all been the subject of duty escalators which have been abandoned as a result of popular protest or tax evasion. The tobacco duty escalator was halted between 2000 and 2009 as a result of widespread cross-border shopping and illicit sales. The fuel duty escalator was also abandoned in 2000 following major protests co-ordinated by haulage companies. Since 2009 there have been several above-inflation rises in fuel and tobacco duty, as well as the creation of an alcohol duty escalator, although a campaign spear-headed by *The Sun* newspaper succeeded in having beer taken off the escalator in late 2012.

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1 See Graham and Glaister (2002) and Gallet (2007) for price elasticity estimates for motor fuel and alcohol respectively.

In Britain today, taxes on tobacco, petrol, diesel and alcohol are amongst the highest in Europe. Tobacco prices are higher than any EU country except Ireland and alcohol prices are 43 per cent higher than the EU average (ONS, 2013b). Although the UK has some of the cheapest pre-tax motor fuel prices in Europe, tax rates of around 60 per cent ensure that diesel and petrol prices are consistently higher than most other countries at the pump (Office of Fair Trading, 2013: 5-6).

The rising burden of indirect taxation

As Figure 1 shows, those in the poorest fifth of households (the lowest income quintile) spent 30 per cent of their disposable income on indirect taxes in 2011/12 while the richest fifth spent only 15 per cent on the same (ONS, 2013a: Table 14).

Figure 1: Proportion of disposable income spent on indirect taxes

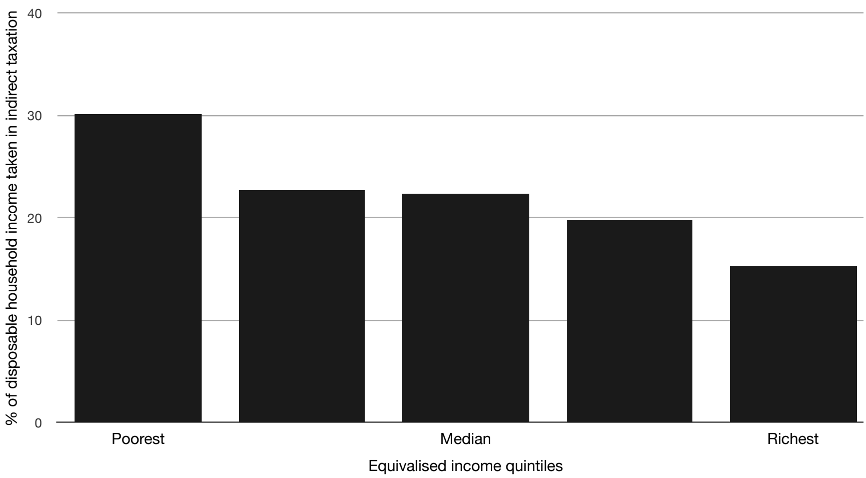
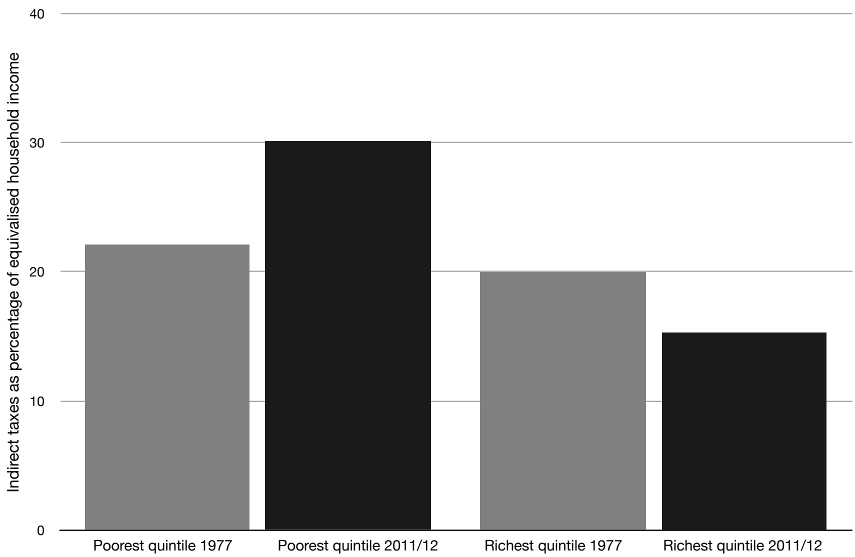


Figure 2 shows how this gap has widened since 1977. The poorest quintile (shown on the left of Figure 2) has seen its share of income spent on indirect taxes rise from 22.1 per cent in 1977 to 30.1 per cent in 2012. By contrast, the richest quintile has seen its share of income spent on indirect taxes fall from 20 per cent to 15.3 per cent. This can be partly explained by incomes at the top rising more quickly than those at the bottom, but it is primarily due to indirect tax rates rising and new indirect taxes being introduced.

Figure 2: Impact of indirect taxes on poorest and richest quintiles, 1977-2012



Britain's bottom quintile spends an average of £1,286 per annum on 'sin taxes', including betting taxes, vehicle excise duty, air passenger duty, 'green taxes' and duty on tobacco, alcohol and motor fuels (including the VAT that is levied on the duty). This does not include the amount spent on VAT on these and other products (£1,165), nor does it include the amount spent on the products and services themselves (ONS, 2013a: Table 14).

This is a very significant sum of money to those who have an annual disposable household income of just £11,288.[2] It amounts to 11.4 per cent of their income. To put it another way, for every eight pounds the poorest people in Britain spend, one pound is taken from them in sin taxes. Even the church at the height of its powers only expected a tithe of one pound in ten from its penitent sinners.

2 Throughout this paper, I use ONS figures of equivalised household income for 2011/12 which range from £11,288 for the bottom quintile and £57,023 for the top quintile. The ONS describes equivalisation as 'the process of accounting for the fact that households with many members are likely to need a higher income to achieve the same standard of living as households with fewer members. Equivalisation takes into account the number of people living in a household and their ages, acknowledging that whilst a household with two people in it will need more money to sustain the same living standards as one with a single person, the two person household is unlikely to need double the income.' (ONS, 2013a: 19)

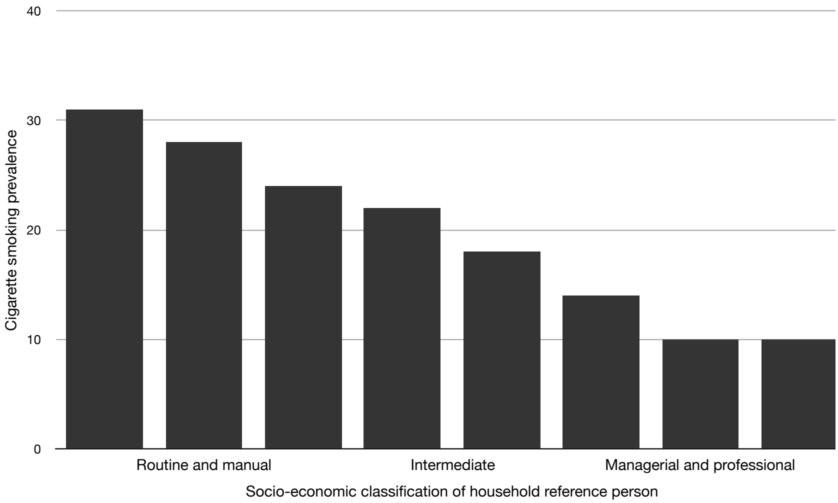
Tobacco taxes

The most sharply regressive tax in Britain is tobacco duty. The tax rate on cigarettes is unusually high by international and historical standards. A typical pack of 20 cigarettes costs £7.98, of which £6.17 is duty and VAT (VAT is charged on both the product and the duty). This amounts to 77.3 per cent of the retail price (Tobacco Manufacturers Association, 2013).

Tobacco taxes are doubly regressive because smoking is significantly more common amongst people on low incomes. Figure 3 shows the differences in smoking prevalence between different occupational groups.[3] Those who work in routine occupations are three times as likely to smoke than those in upper management. (ONS, 2013c: Table 1.5). Smoking prevalence is even higher, at 35 per cent, for the unemployed (ibid.: Table 1.22) and is around 90 per cent for the homeless (ASH, n.d: 2).

3 The chart above shows, from left to right, 'Routine', 'Semi-routine', 'Lower supervisory and technical', 'Small employers and own account', 'Intermediate', 'Lower managerial and professional', 'Higher professional', 'Large employers and higher managerial'.

Figure 3: Adult smoking prevalence amongst occupational groups



It has long been recognised that smoking is 'strongly and negatively correlated with family income' (Hersch, 2000: 9). Put simply, the less money someone has, the more likely they are to buy the most heavily taxed product in Britain. Possible reasons for this counterintuitive correlation include the fact that financially stressed smokers are less likely to quit (Martire et al., 2011) and well-educated people are less likely to start (Hersch, 2000).

In addition to being less likely to smoke, people in managerial and professional occupations smoke fewer cigarettes than those in less well-paid jobs (11 per day compared with 14 for those in intermediate and routine occupations) (ONS, 2013c: Table 1.10). They are also more inclined to give up - 68 per cent of smokers in the top occupations say they would like to 'give up smoking altogether' compared with 59 per cent of those in routine and manual jobs. 53 per cent of smokers in the managerial and professional class say they find it 'difficult to stop for a day' compared to 62 per cent of those in routine and manual work (ibid.: Table 1.20).

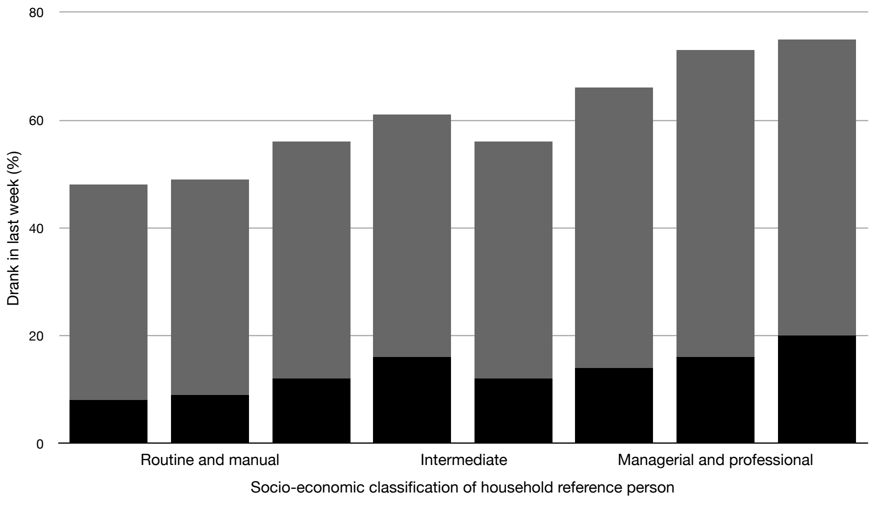
In short, poorer smokers are less inclined to quit and find it more difficult to quit if they try. Unsurprisingly, far fewer of them *do* quit.

This large and growing social divide in smoking rates has not always existed. In 1960, there was little difference in smoking prevalence between high and low earners (Berridge, 2007: 206). Office for National Statistics data show that in 1977 the bottom quintile spent less on tobacco duty than any other income group while the richest quintile spent twice as much. By 2012, however, the bottom quintile spent more than any other group on tobacco duty and the richest quintile spent 25 per cent less. For a variety of reasons, education, tax rises and prevention strategies have had a greater influence on higher earners than on low earners. This amounts to a perfect storm for the poor. As a group, they are more likely to smoke and, as individuals, they consume a larger number of cigarettes. Tobacco taxes have risen to eye-watering heights at a time when the poor are much more likely to smoke than the rich.

Alcohol taxes

In contrast to smoking, alcohol consumption tends to increase in line with income. Figure 4 shows the proportion of each occupational group who drank in the last week, with the black segment representing those who drank on five or more days (ONS, 2013d: Table 2.6). While three-quarters of those in the top group drank in the last week, less than half of the bottom group did so. Those in the top group were also more than twice as likely to drink on five or more days of the week (20 per cent against 8 per cent).

Figure 4: Drank in the last week, by occupational group

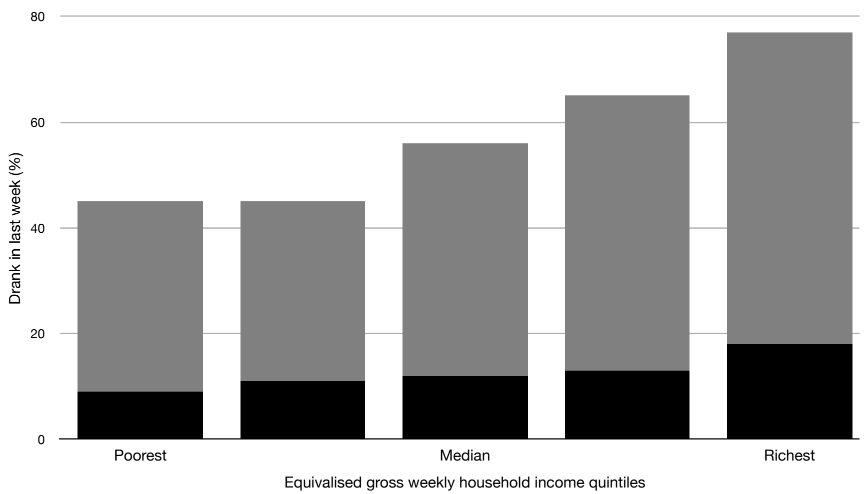


It should be noted that a slim majority of the poorest groups did not drink at all in the last week. Moreover, 49 per cent of unemployed people report not drinking at all in the last week while only 33 per cent of those in work report not drinking in the previous week (ONS, 2013d: Table 2.12).

The same social gradient holds true for heavy drinking. 24 per cent of men who work in the top jobs drink more than eight units of alcohol on their heaviest drinking day, compared to 16 per cent of those working in 'routine' occupations. The gap is even more pronounced amongst women - females working in the top jobs are twice as likely to have exceeded six units in a day than those in routine occupations (16 per cent against 8 per cent) (ONS 2013d: 9).

A similar trend can be seen if we look at income quintiles in Figure 5 (ibid.: Table 2.10). The bottom two groups - which is to say the bottom 40 per cent of earners - are significantly less likely to drink than those on higher incomes.

Figure 5: Drank in the last week, by income quintile



This clear social gradient partially mitigates the regressive nature of alcohol taxes. However, despite the rich consuming more alcohol than the poor, alcohol taxes remain regressive. Alcohol duty (and the VAT levied on the duty) accounts for two per cent of the disposable income of Britain's bottom quintile, but only 0.6 per cent of the income of the top quintile (ONS, 2013a: Table 14). There is little argument in the academic literature about the regressivity of taxes on alcohol. Even if measured over the life-cycle, the poorest spend considerably more than the rich on alcohol taxes as a proportion of their income (Lyon and Schwab, 1995).

Motoring taxes

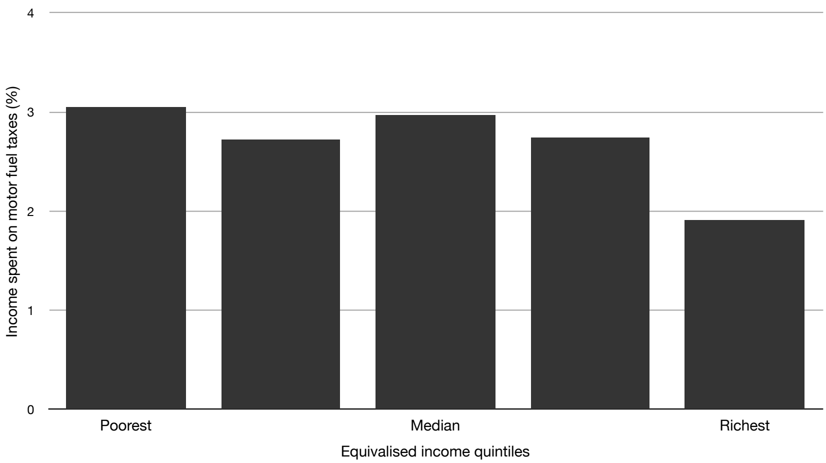
Despite the strange metropolitan belief that motoring is a luxury of the wealthy, car ownership is widespread amongst low income groups outside of central London. Nearly half (46 per cent) of individuals in the bottom income quintile own a car, rising to 68 per cent for pensioners and couples with children (Office of Fair Trading, 2010: 73). This is lower than the rate in countries such as France and the USA, and it is significantly lower than the rate amongst the rest of the UK population (81 per cent), but it not low enough to justify being neglected by anti-poverty campaigners.

The benefits to the poor of having access to a car were spelt out by the Office of Fair Trading in a 2010 report:

> 'Without access to adequate means of transportation, the poor are at risk of facing social exclusion, as they are unable to access food shopping, financial, leisure, health and education facilities that are not within walking distance. In addition, for car owners the marginal cost of a journey can be less than half the cost of public transport. This is particularly significant for family travel.
>
> We were told that for people on low incomes and without a car, the fear of being stranded on public transport limited their travel opportunities. Examples of this are public transport not serving hospitals after 6.30pm and the limited validity of cheap train fares with the risk of having to pay full fare if the specific train is missed.' (Office of Fair Trading, 2010: 73)

Figure 6 shows the proportion of disposable income spent on motor fuel by each income quintile. The richest quintile has the highest rate of car ownership and consumes the most motor fuel. As with alcohol, the higher rates of fuel consumption amongst middle and high earners partially mitigate the regressive effects of the duty. But not entirely. Despite the richest households buying more than three times as much motor fuel as the poorest households, fuel duty remains quite regressive, with the poorest households spending an average of 3.1 per cent of their income on motor fuel taxes (including VAT on the duty) while the richest households spend only 1.9 per cent.

Figure 6: Proportion of income spent on motor fuel taxes

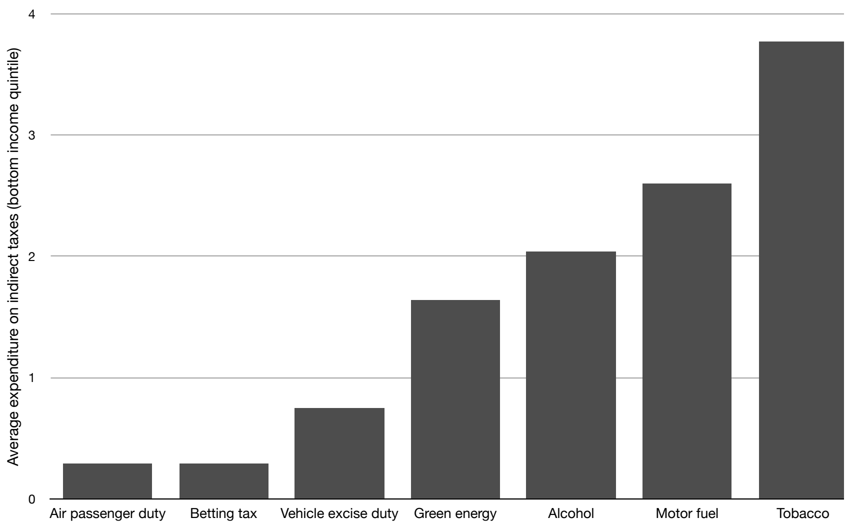


The cost of vehicle excise duty accounts for a further 0.75 per cent of the bottom quintile's income but only 0.4 per cent of the top quintile's income. In the aggregate, therefore, taxes on motoring are moderately regressive. However, as we shall see in the next section, the regressivity of sin taxes cannot be fully appreciated by looking only at group averages.

Impact on individuals

Collectively, Britain's bottom income quintile spends 11.4 per cent of its disposable income on sin taxes (including the VAT on the sin taxes, but not the VAT on the products themselves). These costs are broken down in Figure 7.

Figure 7: Proportion of income spent on 'sin taxes' by the bottom quintile



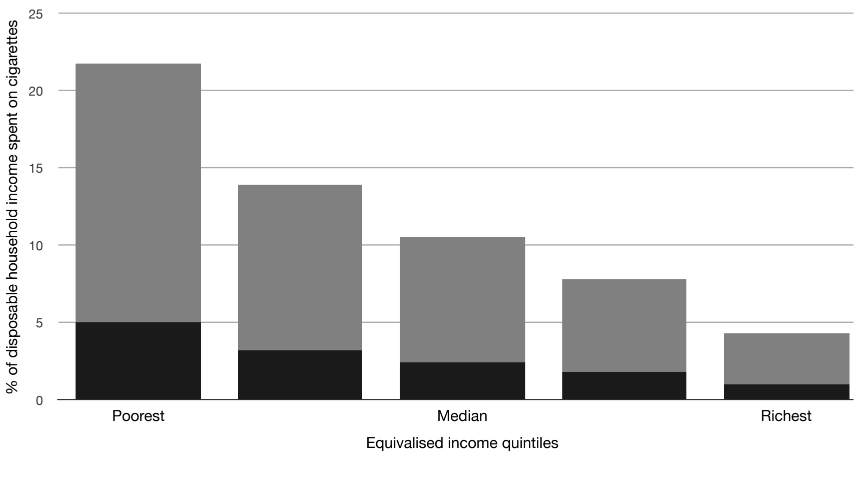
Of course, not everybody smokes, drinks or drives a car so these costs are not evenly spread. For the individual, the costs may be significantly higher, lower or non-existent depending on their consumption habits.

Smokers

Office for National Statistics data show that low income smokers report smoking 14 cigarettes per day, but studies have shown that smokers typically underreport the number of cigarettes consumed by around a third (Warner, 1978; Farrelly, 2012). Assuming an underreporting rate of 33 per cent, these smokers consume an average of 19 cigarettes per day. The cost of such a habit, based on the 2011 price of a popular brand of UK cigarettes (*Benson and Hedges*; £7.09 per pack) amounts to £2,458 per annum, of which £1,891 (76.9 per cent) is tax.

At this price, smokers in the bottom income quintile spend 21.8 per cent of their income on cigarettes. The taxes alone absorb 16.8 per cent of their income. By contrast, the same level of cigarette consumption costs middle income smokers 10.6 per cent of their household income (8.1 per cent in taxes) and costs the wealthiest smokers 3.4 per cent of their income (2.6 per cent in taxes).[4] Figure 8 shows the impact of a 19-a-day cigarette habit on each quintile of the income distribution. The grey segment shows the tax while the black segment shows the cost of the product.

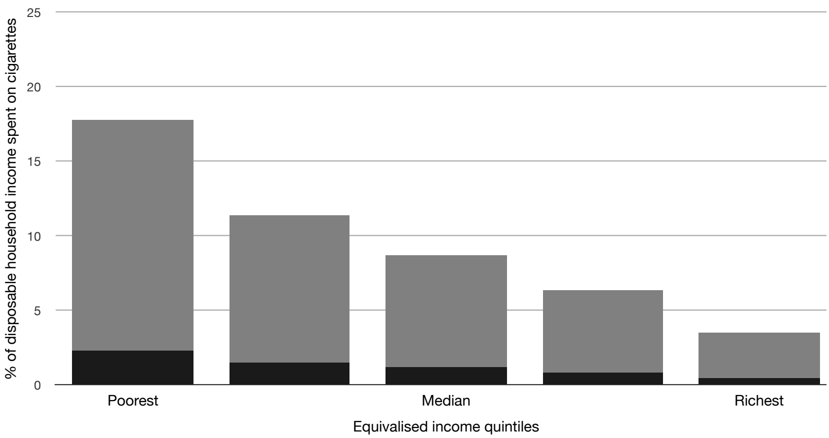
Figure 8: Proportion of income spent by average smoker on premium brand cigarettes



4 Subsequent tax rises have pushed up the cost of smoking since 2011. A 19 cigarette per day habit in 2013 costs £2,767 per annum, of which £2,139 (77.3 per cent) is tax.

There are a number of ways for poor smokers to mitigate the cost of high cigarette taxes, including switching to budget brands. If the low income smoker purchases a typical cheap brand (*Windsor*; £5.73 per pack in 2011), the proportion of annual income spent on the product falls to £2,007. This remains a very high proportion of annual income - 17.8 per cent, compared to less than four per cent for smokers in the richest quintile. With budget brands, the cost of tobacco duty remains the same, but VAT is lower. These taxes nevertheless make up an even higher proportion of the retail price than with the premium brands - 87 per cent in the case of *Windsor* in 2011. The impact of a 19-a-day budget brand cigarette habit on different income quintiles is shown in Figure 9.

Figure 9: Proportion of income spent by average smoker on budget brand cigarettes



Buying rolling tobacco is also an option for smokers on low incomes. It is an increasingly popular option. The proportion of smokers who roll their own cigarettes has risen from 15 per cent in 1978 to 33 per cent in 2011, with the rise being sharpest amongst women. As late as 1990, only two per cent of female smokers rolled their own cigarettes, but by 2011 the figure had risen to 26 per cent (ONS, 2013c: Table 1.11). Evidence shows that poorer smokers in the UK are nearly twice as likely to roll their own cigarettes than the wealthiest group of smokers (Licht et al., 2011: 242).

The tax rate on roll-your-own tobacco is slightly lower than on manufactured cigarettes, but is still punitive at around 67 per cent. A smoker in the bottom income quintile who consumes three 25 gramme pouches of rolling tobacco per week will spend £1,176 per annum. This amounts to 10.4 per cent of their household income, including seven per cent spent on the tax (based on *Golden Virginia*; £7.54 in 2011).

The last resort for the poor smoker is cross-border shopping and the black market. In New York, where cigarette taxes have increased dramatically in recent years, nearly half of all cigarettes are bought out of state (Farrelly, 2012: 3). In the UK, HMRC estimates that nine per cent of cigarettes were sourced from the black market in 2010/11 (National Audit Office, 2013: 4). Rolling tobacco is much more likely to have avoided UK tax as a result of being smuggled into the country or brought over from EU countries for personal consumption. HMRC estimates that no tax was paid on 38 per cent of roll-your-own tobacco in 2010/11 (National Audit Office, 2013: 4). These figures are based on self-reporting by smokers and are therefore likely to be underestimates. Whatever the true figure, it is clear that poor smokers can cushion themselves from tax rises to some extent, but relying on criminal activity and tax avoidance to mitigate regressive taxation cannot be a sound basis for public policy.

Drinkers

According to ONS figures, 83 per cent of adults drank alcohol in 2010 (ONS, 2013d: Table 2.5b). Those in low paid work drink an average of 10.5 units per week (ibid.: Table 2.6). This average hides a multitude of underlying differences, from the person who has one glass of sherry at Christmas to the person who drinks heavily every day. Since the average includes teetotallers and occasional drinkers, the average for regular drinkers will be significantly higher. There are also differences between men and women (15.9 units against 7.6 units per week) that are greater than any of the differences between different income groups.

Notwithstanding the wide variation in drinking patterns, the ONS data tell us that drinkers in the bottom quintile spend an average of £278 per annum on alcohol duty (including the VAT on the duty).

This figure is based on self-reported survey data and in Britain, as in other countries, there is a large gap between recorded alcohol sales and self-reported alcohol consumption. If self-reporting was accurate, about a third of all the alcohol purchased in Britain must be poured down the drain. Since this is rather implausible, researchers believe that drinkers underreport their consumption by 40 to 60 per cent (Boniface, 2013). If this holds true for people on low incomes, their real expenditure on alcohol taxes is in the region of £415.

Therefore, if the self-reported data is accurate, drinkers in the bottom quintile spend an average of 2.5 per cent of their income on alcohol taxes. If the self-reported data underestimates their consumption by 50 per cent, the figure is closer to 3.7 per cent. Both of these figures reflect a level of alcohol consumption that is moderate and falls well below the government's guidelines. Those who drink more heavily naturally pay more tax.

Motorists

In 2011/12, duty on petrol and diesel was 58p per litre and prices at the pump averaged £1.33 and £1.41 respectively. The bottom quintile spent an average of £244.50 on motor fuel duty, excluding VAT, which amounts to 8.1 litres per week. The total annual cost of this petrol and diesel, including fuel duty, VAT and the product itself, amounts to £578 per household.[5]

This cost is not spread evenly throughout the quintile, however, but is paid only by those who own a vehicle. 54 per cent of the poorest quintile do not own a vehicle and therefore pay no fuel duty. It is the remaining 46 per cent who pay, on average, £1,257 each - 11.1 per cent of their disposable income. On average, these drivers buy 18 litres of petrol or diesel per week.

5 This estimate assumes that each decile consumes an equal share of petrol and diesel (50/50) at an average cost of £1.37 per litre, with 59.5 per cent of each litre cost paid in tax. Prices are based on averages in December 2011 (AA, 2011).

In total, 61 per cent of the cost of a £1.33 litre of petrol, and 58 per cent of a £1.41 litre of diesel, is made up of duty and VAT (AA, 2011). Of the £1,257 that low income drivers spend on fuel per annum, £748 goes straight to the government in duty and VAT. These taxes amount to 6.6 per cent of their disposable household income. Vehicle excise duty relieves them of a further 1.6 per cent of their income (an average of £185 per annum). Motoring taxes therefore cost them 8.2 per cent of their annual household income.[6]

Figure 10: Proportion of income spent by average motorist on motor fuel taxes

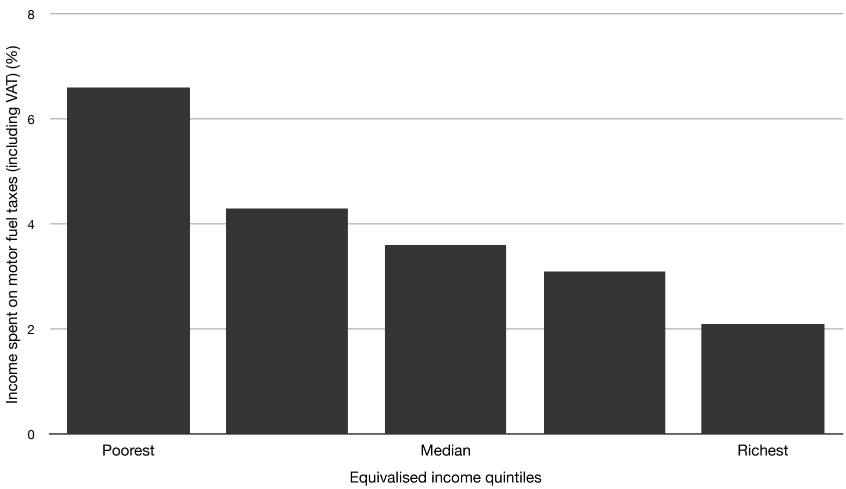
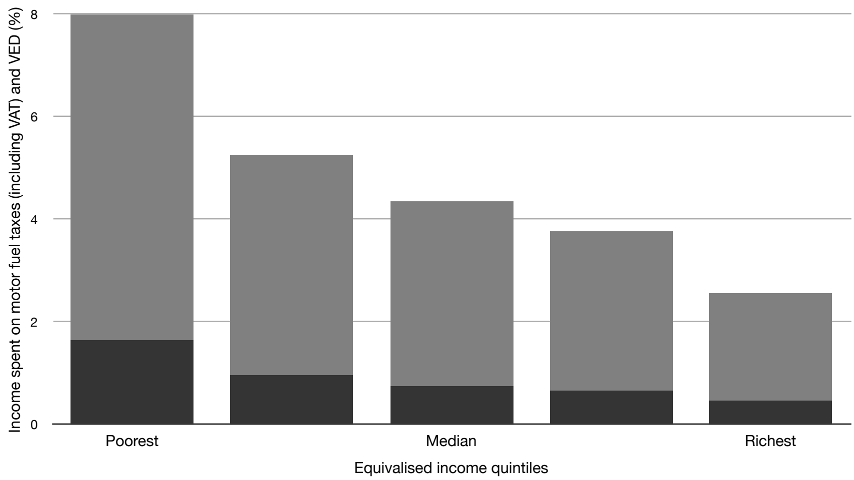


Figure 10 shows the share of household income spent by motorists in each quintile on motor fuel duty (plus VAT on the duty). It contrasts sharply with Figure 6 which showed that fuel duty has only a

6 Estimates of fuel consumption are based on ONS data showing hydrocarbon oils duty. Car ownership figures come from the Office of Fair Trading (2010: 71). The ONS also publishes figures for car ownership ('Family Spending 2011', Table A47), but these are lower than the OFT's and imply that fuel consumption is implausibly high amongst the lowest income groups. For example, the ONS's estimate that only 37 per cent of the bottom quintile own a vehicle suggests that these low income motorists spend an unfeasibly large amount on fuel - more than £1,500 per annum. This is more than the next two quintiles and is about the same as the second-richest quintile. The OFT's figures therefore appear more realistic. If, however, the ONS's figures are correct, fuel taxes are still more regressive than shown above, taking 8.2 per cent of disposable income from drivers in the bottom quintile.

moderately regressive impact on the bottom quintile as a whole. When we look only at low income motorists themselves, we see that the proportion of income taken in fuel taxes is much higher and the regressive gradient is much steeper. The impact is still more dramatic when the cost of vehicle excise duty (VED) is taken into account (see Figure 11 - black segment shows VED).

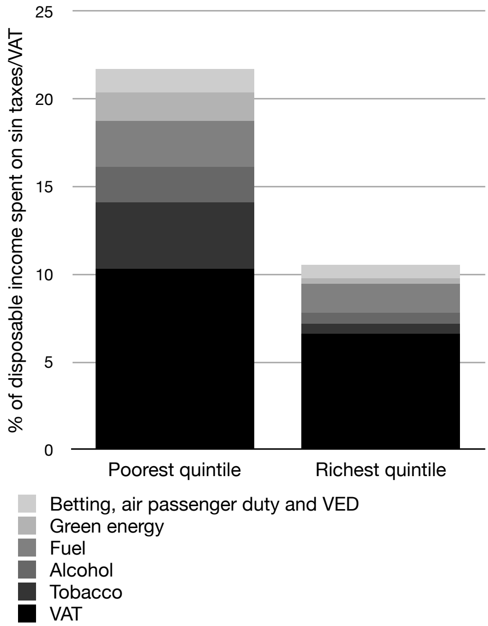
Figure 11: Proportion of income spent by average motorist on motor fuel taxes and vehicle excise duty



The reckoning

Figure 12 shows the proportion of disposable income spent by households in the bottom and top quintiles on the following indirect taxes: VAT, tobacco duty, alcohol duty, motor fuel duty, green taxes on domestic fuel, and a combination of betting duty, air passenger duty and vehicle excise duty. The figures for tobacco, alcohol and motor fuel taxes include the VAT on the duty, but not on the product (to avoid double-counting, VAT on the duty has been deducted from the total VAT shown in black).

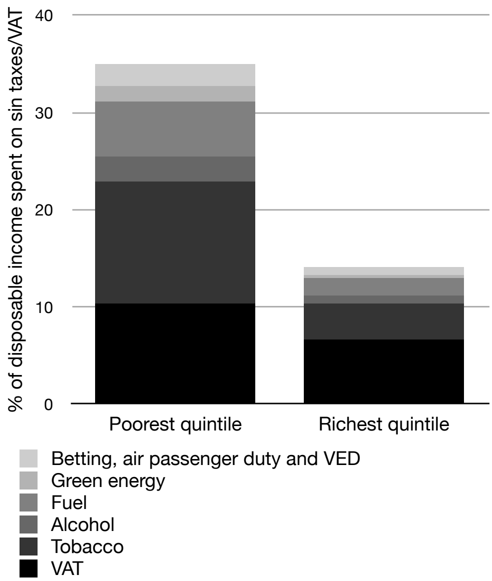
Figure 12: Proportion of income spent on 'sin taxes' and VAT



The results are striking. The poorest quintile spends twice as much of their income on these taxes (21.7 per cent) than the wealthiest quintile (10.6 per cent). This includes 11.4 per cent spent on sin taxes related to health and the environment, and 10.3 per cent spent on VAT.

The gap is larger still if we look only at the households that actually consume the products in question. Figure 13 shows that a person in the bottom quintile who drinks moderately, smokes and drives a car will spend 36.9 per cent of their disposable household income on sin taxes and VAT.

Figure 13: Proportion of income spent by typical drinker, smoker and motorist on 'sin taxes' and VAT



In line with the evidence previously discussed, we have based the figures in this chart on the assumption that 46 per cent of people on low incomes own a car, compared to 91 per cent in the highest income bracket. We have assumed that 83 per cent of individuals in both groups are drinkers. And we have estimated that 30 per cent of low income individuals and 15 per cent of high income individuals are smokers.[7]

For the purpose of this estimate, we assume that each drinker, smoker and motorist consumes the mean average amount of alcohol, tobacco and motor fuel that is typical of consumers in their income quintile. In practice, the amount spent by each individual will naturally depend on the amount he drinks, smokes and drives, but by excluding those who do not partake in each activity at all we get a clearer picture of the effect on people rather than on aggregate groups.

In sum, although wealthier individuals tend to spend more on alcohol, fuel and tobacco[8] than those in the bottom quintile, they spend 14.8 per cent of their disposable income on ‘sin taxes’ and VAT. This is a considerable percentage to lose in indirect taxes, but those in the bottom quintile lose more than twice as much. People in the bottom fifth of the income stream lose more than a third of their entire household incomes on sin taxes and VAT if they smoke, drink and drive, with tobacco taxes taking the largest share.

Figure 13 does not purport to represent the typical consumer from the bottom quintile. Clearly, not all poor people drink, smoke and drive. Indeed, it is difficult to imagine many people on low incomes being able to afford to be smokers, drinkers *and* motorists, but very large numbers engage in at least one of these activities and this graph illustrates the extent to which those who do are penalised by Britain’s sin tax regime.

7 Smoking prevalence figures are the author’s estimates based on occupational smoking rates. The ONS does not have data on smoking by income quintile.

8 Although wealthier smokers tend to smoke fewer cigarettes, the amount spent on tobacco duty by smokers in the top quintile suggests that they spend more on tobacco. Possible explanations include buying more expensive brands and purchasing fewer cigarettes on the duty-free and illicit market.

It should be remembered that the data provided by the Office for National Statistics are based on self-reported estimates from surveys. As mentioned above, it is well known that people significantly underreport their tobacco and alcohol consumption and so the figures shown in these two graphs, large though they are, are also likely to be underestimates (Niemietz, 2012: 141). To produce a conservative estimate, we have taken the figures as given by the Office for National Statistics and have not adjusted them to reflect suspected under-reporting of alcohol and tobacco consumption.

Even taking the self-reported figures at face value, taxes on tobacco, motoring and alcohol absorb 12.6 per cent, 8.2 per cent and 2.5 per cent from the disposable household income of smokers, drivers and moderate drinkers respectively in the bottom income quintile. The equivalent figures for people in the top income quintile are 3.8 per cent, 1.8 per cent and 0.8 per cent.

These are not the only taxes that the poor must pay. In addition to sin taxes, green energy surcharges and VAT, households in the bottom quintile pay an average of £448 per annum in income tax (after tax credits) and an average of £686 in council tax (after council tax benefits and rebates). Moreover, there are lesser indirect taxes, including stamp duty, customs duties, insurance premium tax and television licenses. All told, the poorest households pay 37 per cent of their *gross income* in direct and indirect taxes. To put it another way, the single biggest expenditure for people in poverty is tax. This leads us to the conclusion that the most effective way for the state to lift people out of poverty is to stop taking their money.

Where is the outrage?

The iniquitous impact of sin taxes on low income groups is met with a surprising degree of indifference by those who usually speak up for the poor. Some would like to go further by introducing patently regressive policies such as minimum pricing, fat taxes and soda taxes. As Niemietz says, 'When it comes to raising low earners' living standards, cutting sin taxes substantially should be seen as a low-hanging fruit.' (Niemietz, 2012: 144) Perhaps so, but neither anti-poverty campaigners nor health campaigners are inclined to make the case for less punitive indirect taxation.

It is very well established that 'excise taxes on alcohol, cigarettes, and gasoline are regressive' (Lyon and Schwab, 1995). Health and environmental campaigners can scarcely be unaware of this fact. The anti-smoking pressure group Action on Smoking and Health acknowledged in 2011 that:

> 'Based on 2009 prices, poorer smokers proportionately spend five times as much of their weekly household budget on smoking than do richer smokers.' (ASH, 2011)

And yet, as Colman and Remler (2004: 2) note, 'little is heard today about cigarette tax regressivity, not even from those who normally consider themselves advocates of the poor. In the rare instances when cigarette tax regressivity is mentioned, it is usually to challenge the notion that they are regressive.' This challenge is usually made by attempting to reposition sin taxes as progressive on the basis that they supposedly have the most effect on the poor, thereby saving them the most money and benefiting their health.

The belief that poor smokers are more price responsive than wealthier smokers is economically plausible and some studies have supported it (Townsend et al., 1994; Chaloupka and Warner, 2000; Hersch, 2000) - although others have not (Wasserman, 1991; Borren and Sutton, 1992; Franks et al., 2007). The poor's supposedly greater price sensitivity is often proclaimed as fact by health groups, including the World Health Organisation:

> 'Low- and middle-income population groups are more responsive to tax and price increases; therefore consumption and prevalence are reduced in these groups by greater magnitudes than in higher-income groups, resulting in a reduction in health inequalities and tobacco-related poverty.' (WHO, 2012: 3)

This is a classic exposition of the 'sin taxes are good for the poor' argument. The only problem is that decades of real world evidence contradict it. The poor are less inclined to quit than the rich and are less likely to be successful if they do decide to quit, even when tobacco taxes reach dizzy heights (Barbeau et al., 2004: 273; Farrelly, 2012: 5). This socio-economic divide has grown wider over time and increases over the lifetime of each generation (Barbara et al., 2004). The high smoking rates, low quit rates and low incomes of the poor inevitably mean that they are most likely to suffer from 'tobacco-related poverty'.

If the poor were truly the most sensitive to the price of tobacco - and if tax rises were the most effective way of bringing down the smoking rate - we would expect large tax hikes to inspire the poor to give up *en masse* while the rich continue to smoke. In fact, the exact opposite has occurred in every country where high tobacco taxes have been implemented as a health measure. The reality is that 'while tobacco taxes encourage people to quit smoking, those people are most likely to be from the middle- and upper-income brackets... [therefore] an already regressive tax actually grows more regressive over time, as more middle- and upper-income people quit, while lower-income people continue to smoke. Meanwhile, government grows as dependent on the sin tax's revenue as taxpayers are dependent on the sin.' (Balko, 2004)

In New York, for example, there was no decline in smoking prevalence amongst low income groups between 2004 and 2011 despite a trebling of cigarette taxes. Amongst the rest of the state's population, however, the smoking rate fell by 29 per cent (RTI International, 2011: ES-1). Farrelly (2012: 5) notes that 'even in the state with the highest cigarette tax, the lowest income group continues to smoke at a much higher rate than the higher income groups ... low-income smokers have not been more price responsive than smokers with higher incomes'.

In the USA as a whole, there was virtually no difference between smoking rates in the top and bottom quintiles in 1976 (Evans et al., 1999: 33), but by 2003 - after years of incremental tax rises - those in the bottom quintile were more than twice as likely to be smokers (Sanmartin and Ng, 2003: 28). Today, smoking rates are nearly three times higher in the bottom income group (34 per cent) than in the top income group (12 per cent) (Farrelly, 2012: 3). As mentioned above, similar socio-economic transformations have been seen in Britain and other high tax countries.

As cigarette prices rise ever higher and the gap in smoking rates between rich and poor grows ever wider, it becomes increasingly difficult to maintain that cigarette taxes are particularly effective in getting the poor to quit, let alone that they are not highly regressive. Researchers have gradually come to accept that low income consumers of tobacco are less price responsive than they were in the past. Consequently, as Franks et al. note, there was a 'dramatic decline in the effect of cigarette pack prices on smoking participation' in the USA after the mid-1990s (Franks et al., 2007: 1876). This should not be surprising. Smokers today are, after all, different people to smokers a generation ago. They smoke despite years of anti-smoking campaigns, public smoking bans and 'denormalisation'. Almost by definition, they are more resistant to public health policies, including tax rises, than were previous generations. Price elasticities based on data from the 1970s and 1980s no longer reflect the buying habits of this 'hardcore' of smokers.

Even the studies which have found poor smokers to be more price responsive have not been able to show that the overall effect of high tobacco taxation is progressive. Colman and Remler (2004: 32), for example, conclude:

> 'Policy makers must acknowledge that cigarette taxes are truly regressive using any traditional notion of regressivity. It is increasingly and overwhelmingly the poor who smoke and so it is the poor that are hit harder as we rely more and more on cigarette taxes. The somewhat greater likelihood of the poor to quit does not come close to overturning this basic result.'

For most of the twentieth century, the regressive nature of sin taxes was seen as a minor problem because the sums involved were relatively trivial (Remler, 2004: 225). However, as this paper has shown, that is no longer the case. Even a conservative estimate shows that the average low income smoker, motorist and drinker spends 12.6 per cent, 8.2 per cent and 2.5 per cent of their income on sin taxes related to tobacco, motor fuel and alcohol respectively. If we adjust for underreporting, the average British smoker in the bottom income quintile spends around twenty per cent of his entire disposable income on cigarettes - a finding that is consistent with studies from New York where spending on cigarettes absorbs 20 to 25 per cent of poor smokers' income (Farrelly, 2012; RTI International, 2011). Taxes on motor fuel and alcohol have also dug ever deeper into the pockets of the poor as they rise above the rate of inflation. The question therefore remains: where is the outrage about these most regressive of taxes?

A historical parallel could be drawn with the nineteenth century American reformer Frances Willard. Willard was a Christian socialist and a fighter for workers' rights, but above all she was a temperance campaigner. Amongst the social problems that the prohibitionists blamed on alcohol was the plight of those who earned enough to afford adequate living standards but who plunged themselves into 'secondary poverty' by spending too much on drink. The labour movement saw higher wages as the solution to this problem, but the temperance movement feared that higher wages would only lead men to spend more money in the saloon. Torn between socialism and temperance, Willard sided with the latter, telling a gathering of trade unionists in 1886 that the 'central question of labour reform is not so much *how to get higher wages*, as *how to turn present wages to better account*' (emphasis in the original) (Willard, 1889: 413). By this she meant that workers would have to abstain from drink. If they chose not to, they would have to settle for poverty.

She would prefer the poor to be wealthy and sober, but if they refused to be sober, they would not be allowed wealth.

Today, the ‘public health’ and environmentalist movements are more influential than the temperance movement was in the 1880s and their agenda trumps traditional concerns about poverty and inequality. If sin taxes represent the point at which ‘paternalistic and egalitarian inclinations collide’ (Niemietz, 2012: 142), the paternalists have routed the egalitarians.

Arguments in favour of sin taxes

Aside from paternalistic and revenue-raising motives, apologists for regressive sin taxes rely on two key arguments. Firstly, that these taxes are essentially voluntary because the products involved are not necessities. In the case of car ownership in rural areas, that is debatable, and there are questions about the morality of exploiting those who are addicted to tobacco and alcohol. Nevertheless, if we accept that alcohol, tobacco and petrol are non-essentials, we must also recognise that most products are non-essential. Why target some non-essentials with heavy taxation but not others? The answer, surely, is that it is not the non-essential nature of these products that draws fire, rather it is the desire of politicians and lobby groups to deter the consumption of certain sinful products—and this brings us back to paternalism.

VAT is a tax on non-essentials. Duty on alcohol, tobacco and fuel is an additional tax on products that are perceived by some to be undesirable. Taxing tickets to football matches to the point at which prices treble would be a tax on a non-essential. Insofar as such a tax hike would make the poor poorer, it could be said that they brought it on themselves by continuing to buy the tickets. But the mere fact that such spending is discretionary would not stop the tax being regressive, nor would it make it fair. Questions would surely be asked about why a product that is disproportionately purchased by the working class was being targetted for heavy taxation while opera tickets were left untouched.

When tax makes up most of the retail price of a product - as is the case with petrol, tobacco and some alcohol - it is disingenuous to blame the consumer for his own secondary poverty. We know that these products have a high inelasticity of demand and we know that they are regressive under any realistic customer demographic. Dismissing the damaging impact of such taxes by saying that the damage would not exist if poor people stopped buying the products evades the issue of who is responsible for making the products expensive in the first place. As we saw in Figure 9, a typical consumer of budget cigarettes in the bottom quintile spends £2,007 per annum on his habit - 18 per cent of his household income. If there was no tax on the product, he would spend just £253 per annum - which is barely more than two per cent of his income. The gap between these two figures is so vast that the blame for any secondary poverty brought about by the ‘cost of smoking’ lies overwhelmingly with the government that sets the tax rate.

It is trivially true that people on low incomes could avoid paying sin taxes if they ceased buying the ‘sinful’ products. It is equally obvious that, despite some of the most punitive taxes in the world, very large numbers of people on low incomes nonetheless do so and will continuing doing so for the foreseeable future. Tax policy should be designed to deal with the world as it is, not as some would like it to be.

The second argument made in favour of sin taxes is that drinking, smoking and motoring create negative externalities that warrant Pigovian taxation. Since the poor and rich alike create pollution when driving and (supposedly) ramp up health costs with their bad habits, there is no case for excluding the poor from sin taxes.

The economic arguments in favour of Pigovian taxation are strong. However, a close inspection of the figures reveals that alcohol, tobacco and motor fuel taxes in Britain far exceed the costs of these products’ externalities. Taxes on motoring not only exceed the costs of maintaining the road network by £30 billion (Wellings, 2012: 13), but also exceed the environmental costs associated with driving. Estimates of the social cost of carbon vary enormously, but even the high-end figure from the 2006 Stern Review only amounts to 12p per litre of petrol or diesel (ibid.: 20).

There is no doubt that revenues from tobacco duty far exceed the healthcare costs associated with smoking. The £2.7 billion that smoking is said to cost the NHS is paid for four times over by tobacco taxes. Indeed, many studies have found that smoking leads to net savings in public spending as a result of lower pension payments, nursing home provision, old age healthcare and so on (Leu and Schaub, 1983; Lippiatt, 1990; Barendregt et al., 1997; van Baal et al., 2008). From a strictly Pigovian perspective, there is a stronger case for subsidising cigarettes than for taxing them.

Alcohol duty also exceeds the negative externalities associated with drinking, both in terms of healthcare and policing. Claims that drinking costs the UK £21 billion per annum are based on an estimate that is dominated by intangible ‘emotional costs’, lost productivity and other ‘costs’ which are neither external nor financial and therefore do not require a Pigovian response (Cabinet Office, 2003). If intangible, private and non-financial costs are excluded from the estimate, the true cost to the government of alcohol use comes to around £6 billion. Alcohol tax revenues currently amount to £12 billion.

Sin taxes should be cut by half

For many years, anti-poverty policies in the UK have been based on an inefficient, bureaucratic and complex system of benefits and tax credits. This system has led to a ruinously expensive welfare state that has increasingly been paid for by stealth taxes and sin taxes. As we have seen, these indirect taxes needlessly inflate living costs for low-paid workers while clawing back large sums of money from those who live on benefits. For many of those in the bottom half of the income distribution, this amounts to taking with one hand and giving with the other.

Cutting duty on alcohol, tobacco, petrol and diesel by half, scrapping green energy subsidies and reducing VAT to the EU minimum of 15 per cent would be an important step forward in reducing the cost of living and would have the greatest impact on the poor. At this lower rate, 'sin taxes' would still comfortably exceed the costs of externalities and infrastructure that are associated with these products.

We reject the paternalistic notion that taxes should be used as tools for social engineering in order to meet targets set by a technocratic elite. In a free society, adult consumers should not be punished for making choices in the marketplace that others consider unwise. For those who make the choice to drink, smoke or drive, sin taxes can feel more like 'lifestyle fines'—penalties for choosing an unfashionable way of life. These taxes should not exceed the cost of their net externalities.

This only leaves the question of raising tax revenue. In 2011/12 the British government received £9.9 billion from tobacco duty, £10.1 billion from alcohol duty and £26.9 billion in motor fuel duty (HMRC, 2012a: 5). Halving these sin taxes would lose the government £28.14 billion (including the VAT on the duty). Lowering VAT to 15 per cent would reduce tax revenues by no more than £23 billion.[9] In total, the reforms we propose would lead to a shortfall in the region of £50 billion, which is another way of saying they would leave an extra £50 billion in the pockets of the British people.

In practice, the revenue shortfall would be considerably less than £50 billion. Reducing indirect taxes would reduce tax avoidance and black market activity. HMRC estimates that it missed out on £2.3 billion of alcohol, tobacco and motor fuel taxes in 2010/11 in addition to £9.6 billion of VAT (HMRC, 2012: 4). £1.5 billion was lost through tobacco smuggling alone. Under a low tax regime, Britain would almost certainly bring the trend of British residents shopping on the continent for alcohol and tobacco to a halt and might instead attract European shoppers to the UK. Reducing fuel duty would have broad, incalculable economic benefits through lowering the price of other goods and removing barriers to work. At their current, exorbitant rates, taxes on petrol and diesel 'hamper just about every economic activity by raising the costs of trade.' (Wellings, 2012: 5)

Despite these and other benefits, it is likely that cutting regressive taxes would still leave a gap in the public finances, at least in the short term. Fortunately, there is a vast amount of unnecessary, inefficient and harmful public spending in Britain that can be slashed to balance the books. In *Sharper Axes, Lower Taxes*, the IEA laid out an extensive blueprint that will, if followed, reduce government spending by £242 billion per annum (IEA, 2011). This is more than enough to leave space for tax cuts that will put money back into the pockets of people on low incomes.

This proposal is not as radical as it might first appear. Virtually no other country in the EU has such high taxes on alcohol, tobacco and fuel. Halving tobacco duty would bring it close to the EU average and lowering VAT to 15 per cent would bring it to a level that was

9 Not all VAT is currently levied at 20 per cent, so this is a rough, high-end estimate based on the total 2011/12 figure of £99.6 billion.

the norm between 1979 and 1991. Halving motor fuel duty would make petrol cheaper than it is in most EU countries, but it would remain more expensive than it is in the USA and would be about the same price as it was in Britain ten years ago (in real terms).

Nearly all EU countries have much lower alcohol taxes than Britain. Most of them, including Spain, Italy and Germany do not charge any duty on wine at all (European Commission, 2013: 15) and the vast majority have beer duty that is less than half of the current British rate (Ireland, Sweden and Finland are the only exceptions). Indeed, most EU countries levy beer duty at less than twenty per cent of the current British rate (Foley, 2011).

In summary, the kind of tax rates we propose are not unusual by international and historical standards. On the contrary, it is the current system of punitive and regressive indirect taxation that is the aberration.

Conclusion

Sin taxes become more regressive as their rates rise and consumption of the products in question are increasingly confined to lower income groups. As discussed above, tobacco duty is the most regressive tax in Britain today not only because it is levied at an extremely high rate but because the poor are three times more likely to smoke than the rich. By contrast, alcohol and motor fuels are disproportionately consumed by wealthier individuals, although this is no consolation to the large number of poor individuals who consume these goods.

Irrespective of whether the paternalistic objectives behind these taxes are commensurate with a free society, the use of regressive taxation to achieve them is clearly not commensurate with a war on poverty. Despite significantly lower rates of alcohol consumption and car ownership, the poorest income group spends twice as much of their household income on sin taxes and VAT as the wealthiest income group. Tax is the single biggest source of expenditure for those who live in poverty and indirect taxes are a major cause of Britain's cost of living crisis. We therefore propose cutting taxes on fuel, alcohol and tobacco by half, scrapping green energy subsidies and reducing VAT to 15 per cent. This would put money back in the pockets of those who are in greatest need of it.

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