**Data**

The data on weekly spending on tobacco products comes from the Smoking Toolkit Study (STS) collected between April 2014 and February 2020. The spending figures are adjusted for inflation using the consumer price index (CPI) for tobacco products to December 2018 prices. Figure 1 presents the distribution of expenditures in the data, providing a self-reported median spend of £19.51 and mean spend of £23.81 per smoker per week for England as a whole.

**[Income data]**

**[Smoking prevalence/number of smokers]**

**Methods**

The estimated total annual expenditure based on the mean self-reported weekly expenditure on tobacco, and an estimated 6.131 million smokers in England, is £7.59 billion per year. This figure is below the total collected by the government in tobacco duty alone, receipts of which totalled £8.84 billion in the calendar year 2018 and £8.75 billion of which came from cigarettes and hand-rolling tobacco (HRT). To estimate the duty receipts specifically from spending by English smokers, we adjust the total duty receipts for the UK by the percentage of UK smokers who are English (calculated from the Annual Population Survey and estimated at approximately 82.25%). When making the England-only adjustment, total tobacco duty receipts from England are still estimated at £7.64 billion. This suggests the mean weekly expenditure figure of £23.81 is an under-estimate of the true mean due to under-reporting in the data. In order to produce mean weekly spending estimates from the toolkit data which are consistent with the amount implied by HMRC duty receipts, we therefore estimate an upshift factor to apply to the spending data.

To calculate the required upshift factor we estimate the total annual expenditure implied by the total duties received by HMRC and take the ratio of this figure to the estimate based on the raw toolkit data. We do this separately for factory-made cigarettes and hand-rolling tobacco (HRT). The approach for each product is to take the price (per pack of 20 cigarettes or per 100g of HRT) and calculate the total duty paid on the respective quantity – based on duty rates as at December 2018. The percentage of the market price which is paid as duty is calculated from these figures and applied to the duty receipts data to estimate total expenditure on (legally supplied) tobacco. Price data for cigarettes is obtained from the ONS and the December 2018 price of £10.63 for a pack of 20 cigarettes is used in the calculation. For HRT, price is taken as an average of online supermarket prices in December 2020 and deflated to December 2018 prices using the All-Tobacco component of the consumer prices index (CPI).

As some consumption of tobacco products is from illicit sources, we also estimate expenditure on illicit tobacco. HMRC estimate the “tax gap” which arises from the market for illicit tobacco. Using estimates from the 2016/17 tax year of the market shares of illicit and legal tobacco sources of total consumption by product, expenditures on illicit sources of consumption are calculated as the legal expenditure multiplied by the illicit market share as a proportion of the legal market share. For factory-made cigarettes this ratio is 0.15/0.81 = 0.185 and the equivalent for hand-rolled tobacco is 0.28/0.67 = 0.418. Note the remaining market share in each case relates to cross-border sourced tobacco and is excluded from the calculations of total spending.As the market shares are shares in consumption not expenditure, and prices per cigarette are lower for illicit sources, this figure is multiplied by the average illicit price as a proportion of the average legal price. The average cost of illicit sources of tobacco are approximately half of the average legal price for both factory-made cigarettes and hand-rolling tobacco (ASH Scotland, 2021).

Based on the above calculations, we multiply the survey responses by a factor of around 1.93 to account for underreporting of spend. The detailed breakdown of the upshift factor calculation is given in Table 1.

**Table 2 about here - calculation of mean/median weekly spending by subgroups.**

The impact on the most deprived becomes even more stark when spend on smoking is expressed as a percentage of income. Applying estimated spend to smoking populations calculated using ONS mid-year population estimates and smoking prevalence from the Annual Population Survey, an estimate can be made for different areas in England of the average weekly spend per smoker, the total spending on smoking in the locality and the percentage of a smoker’s net disposable income (after tax and housing costs) spent on tobacco products. Table 3 shows that the estimated weekly spend by region varies from **£29.38** in the Southwest to **£37.78** in the Northeast, which is **5.67%** and **7.48%** of the average income in these areas respectively. London has the lowest percentage of income spent on tobacco at **4.60%.**

**Table 3 about here - table showing weekly spending, income, and percent of income by GOR**

As we look at smaller geographical areas such as local authorities (LAs) there is larger variation in both average weekly spend and the percentage of income spent on tobacco products.

**Figure 1 about here - scatterplot of percentage of income vs income**

Table 4. Expenditure on smoking in the local authorities with the highest tobacco expenditure as a proportion of income

Table 4 summarises tobacco expenditure in the LAs with the highest expenditure on tobacco as a proportion of income. We estimate that the LAs where smokers spend the highest proportion of their income on smoking are **Halton, Bolton, Oldham, Redcar & Cleveland, Salford, Wolverhampton, Middlesbrough, Stockport, Kingston upon Hull and Tameside. The LAs where the average smoker spends the lowest percentage of their household income on tobacco products are Kensington & Chelsea, Wandsworth, Westminster, Kingston upon Thames and Hammersmith & Fulham.**

In Halton the average smoker is estimated to spend almost 10% of their income on tobacco products, almost four times as much as in Kensington & Chelsea. This not only represents a heavy burden on the household budget, but because almost all the money spent flows directly out of the local economy, it places an additional burden on the community. By applying the average cost in each local authority by their estimated smoking population (8), we estimate that £47,198,000 is spent on tobacco products in Halton each year and that the dividend to the local economy of making smoking obsolete would be £43,894,000 each year. In Bolton, Salford, Stockport and Kingston upon Hull the smokefree dividend would be more than £75 million per year.

**Discussion**

Over the past half century smoking has become increasingly concentrated in our most deprived communities and consequently, so too has the burden on health and wealth. Spending on tobacco is not a transaction entered into freely. Most smokers say that they want to quit and every year more than one in three make a serious attempt to quit. However, tobacco dependence makes this choice harder to implement and data show that nicotine dependence increases with age and deprivation. High rates of parental smoking not only make disadvantaged children sick, it keeps them poor, it blights their communities with premature mortality and sustained disability. It is beyond the scope of this report to estimate the enduring impact on local economies although what economists refer to as a multiplier effect seems likely.

What is evident is that making smoking obsolete would act as a highly targeted tax cut reaching precisely our most deprived families and communities making a material difference to household finances and local economies, releasing funds to families to spend on what matters to them most.

# **References**

ASH Scotland. (2021). *Calculating the cost of smoking.* Retrieved from https://www.ashscotland.org.uk/media/850413/28-calculating-the-cost-of-smoking-june-2021.pdf

**Table 1) Calculation of the upshift factor.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| HMRC Stats | | | | | | |
| Cigarettes | | | Hand-Rolled | | | Totals (£m) |
| (1) Total duty receipts (£m) |  | 6,372 | (1) Total duty receipts (£m) |  | 1,188 |  |
| (2) Pack Price (£ per 20 cigs) |  | 10.63 | (2) Price per 100g (Dec 2020) |  | 51.60 |  |
| (3) Ad-Valorem tax rate |  | 0.165 | (3) Price deflator |  | 0.93 |  |
| (4) Ad-Valorem tax (£ per pack) | (2) \* (3) | 1.75 | (4) Price per 100g (Dec 2018) | (2) \* (3) | 47.90 |  |
| (5) Specific duty (£ per 1000 cigs) |  | 228.29 | (5) Specific duty (£ per kg) |  | 234.65 |  |
| (6) Specific duty (£ per pack) | (5) / 20 | 4.57 | (6) Specific duty (£ per 100g) | (5) / 10 | 23.46 |  |
| (7) Total excise (£ per pack) | (4) + (6) | 6.32 |  |  |  |  |
| (8) Total excise % of price | (7) / (2) | 59.45% | (8) Total excise % of price | (6) / (4) | 48.98% |  |
| (9) Total legal cigarette spend (£m) | (1) / (8) | 10719 | (9) Total legal HRT spend (£m) | (1) / (8) | 2425 |  |
| (10) Total illicit cigarette spend (£m) |  | 994 | (10) Total illicit HRT spend (£m) |  | 507 |  |
|  |  |  |  |  |  | 14,645 |
| Survey data estimate | | | | | | |
| Total grossed-up expenditure |  |  |  |  |  | 7,591 |
| Dataset : | Toolkit |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Upshift Factor: | 1.929 |  |  |  |  |  |

**Figure 1) Distribution of Weekly Spending on Tobacco**

Diagram

Description automatically generated with medium confidence

**Extra Figures/Tables**

**Distribution of Spending by Region**

Chart

Description automatically generated