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Minimum Unit Pricing (MUP) for alcohol evaluation

Sales-based consumption: a descriptive analysis of one year post-MUP off-trade alcohol sales data

Lucie Giles, Mark Robinson, Clare Beeston

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Contact

For further information about this work please contact:

Lucie Giles, Public Health Intelligence Adviser, NHS Health Scotland.

lucie.giles@nhs.net

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The Evaluation Advisory Group remit and membership are available online here:

www.healthscotland.scot/health-topics/alcohol/evaluation-of-minimum-unit-pricing-mup/overview-of-evaluation-of-mup/governance-of-evaluation-of-mup/mesas-governance-board-overview/evaluation-advisory-groups-eag

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Contents

Introduction

Purpose of this report

This report provides an analysis of off-trade alcohol sales data for the 12-month period since the implementation of minimum unit pricing (MUP) in Scotland. We provide a descriptive analysis of the:

- volume of pure alcohol sold per adult in Scotland both before and after MUP was implemented
- percentage change in per-adult alcohol sales over time
- change in average price per unit of alcohol sold.

We have provided comparisons over time and with England & Wales, where the legislation was not implemented. This is the first in a suite of studies looking at the impact of MUP on sales-based consumption. Further reports will provide statistical analyses of the impact of MUP on sales-based consumption at both one and three years post-MUP. These are expected to report in late-2020 and mid-2022, respectively.

Minimum unit pricing for alcohol in Scotland

The Alcohol (Minimum Pricing) (Scotland) Act 2012[1] was passed by the Scottish Parliament in June 2012. This provided the legislation required for the introduction of MUP, an important component of the Scottish Government's alcohol strategy, Changing Scotland's Relationship with Alcohol: A Framework for Action.[2] This strategy was developed in recognition of the well-documented harm alcohol was causing to individuals, families, communities and society in Scotland.[3] It contained a comprehensive package of policy and legislative actions which, collectively, aimed to reduce population levels of alcohol consumption and, in turn, associated levels of health and social harms.

The minimum pricing legislation provides for Scottish Ministers to set a strength-based floor price below which alcohol cannot be sold in licensed premises in Scotland. The legislation was subject to a legal challenge which ended when the UK Supreme Court ruled in November 2017 that MUP in Scotland was legal.[4] Secondary legislation setting the level of MUP at 50 pence per unit (ppu) of alcohol was passed in April 2018 and MUP was implemented in Scotland on 1 May 2018.[5]

The relationship between price, consumption and harm

There is strong and consistent international evidence that:

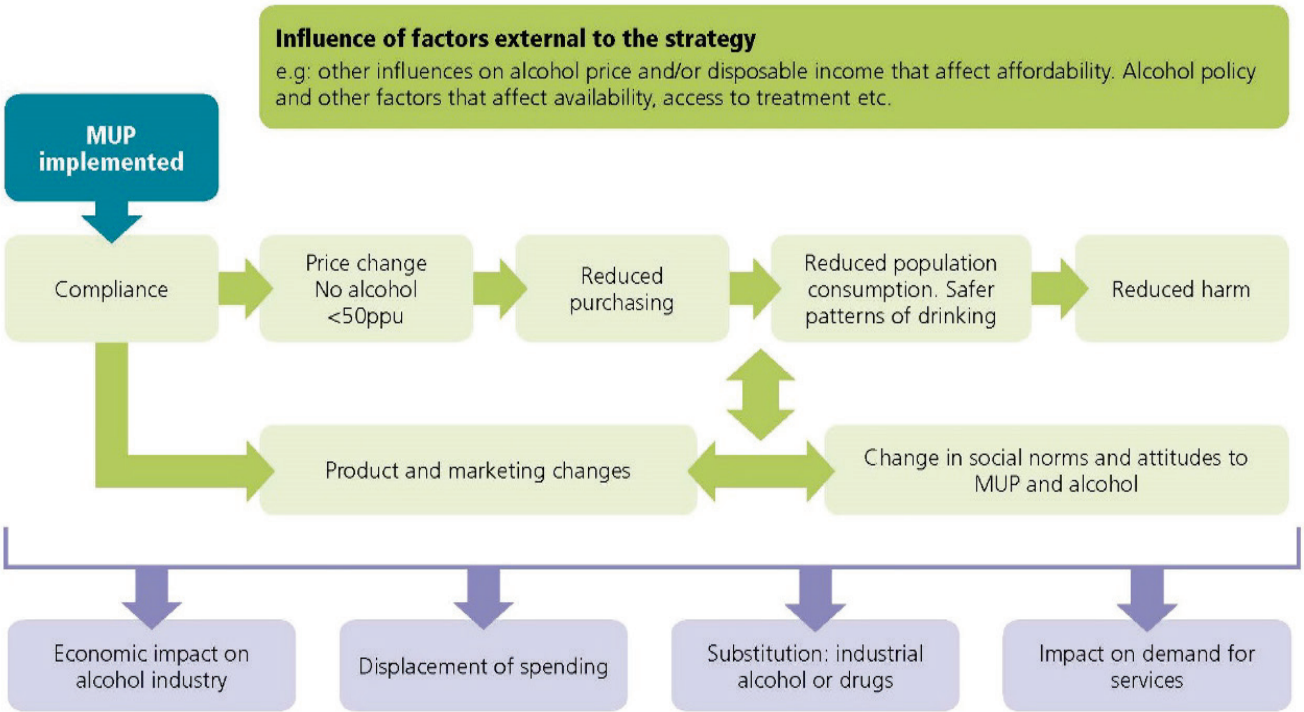
- alcohol price has a significant effect on consumption[6, 7]
- alcohol consumption is associated with increased risk of all-cause mortality[8]
- increasing alcohol tax is associated with a decrease in alcohol-related harm.[9] Conversely, when alcohol taxes and prices have been lowered, alcohol consumption and alcohol-related harm have increased.[7]

A theory of change for MUP has been developed (Figure 1). The theory of change shows the main expected chain of outcomes, where the implementation of MUP increases the price of low-cost, high-strength alcohol, leading to a reduction in alcohol consumption and, in turn, reducing alcohol-related health and social harms. The theory of change also shows other hypothesised outcomes such as changes in the alcohol market, or in other substance use. A portfolio of component studies managed by NHS Health Scotland has been established to gather evidence on this chain of outcomes and includes studies to assess compliance and implementation, changes in the alcohol market, alcohol consumption and alcohol-related harm. Other separately funded studies, resourced by research grant funding or other sources, will complement this portfolio.

This report provides an interim assessment of the impact of MUP on sales-based consumption at a population level using descriptive analysis. The sales-based consumption study will provide a full statistical assessment of the impact of MUP on population level alcohol consumption at both 1 and 3 years post-MUP. These are expected to report in late-2020 and mid-2022, respectively.

For a full summary of the legislation, the research that supports it and the evaluation of the impact of MUP, please see our document 'Protocol for the evaluation of Minimum Unit Pricing for alcohol'.

Figure 1: Theory of change for minimum unit pricing for alcohol



Using alcohol sales data to monitor alcohol consumption at a population level

Alcohol sales data are widely accepted as providing the most accurate estimate of population-level alcohol consumption in a country and are recommended by the World Health Organization (WHO).[10] The Monitoring and Evaluating Scotland's Alcohol Strategy (MESAS) programme, including the MUP evaluation, uses alcohol sales data for both the off-trade and the on-trade, obtained from market research specialists Nielsen and CGA, respectively, to show trends in per-adult alcohol consumption in Scotland and England & Wales. The validity and reliability of these data for this purpose has been assessed in previous MESAS reports. It was concluded that alcohol retail sales offer a robust source of data for monitoring population consumption in Scotland, although estimates are still likely to underestimate true levels of alcohol consumption (based on the net effect of a range of identified sources of over- and underestimation).[11, 12] As part of the ongoing MESAS programme, we are currently updating this work to assess any changes to the validity and reliability of using alcohol sales data for estimating population-level alcohol consumption.

Methods

Weekly off-trade alcohol sales data for Scotland and England & Wales were obtained from market research specialists, Nielsen, for the period May 2011 to May 2019. Nielsen estimates alcohol sales in Great Britain using electronic sales records from large retailers (retailers with 10 or more retail shops operating under common ownership) and a weighted stratified random sample of smaller ‘impulse’ retailers (retailers in which the consumer mainly uses the store for impulse or top-up purchases i.e. not the main grocery shop). A detailed description of the methods used by Nielsen to produce alcohol retail sales estimates is provided in an earlier MESAS report.[11] Alcohol sales estimates may differ slightly to those previously published as they continue to be improved retrospectively after first being supplied. Consequently, the most recent data provided by Nielsen is considered the best available because it provides the most robust view of alcohol retail sales.

The volume of alcohol sold (litres) was provided across eight alcoholic drink categories: spirits, wine, beer, cider, ready to drink beverages (RTDs), perry, fortified wine and ‘other’. The volume of each drink category sold was converted into pure alcohol volume using a category-specific percentage alcohol by volume (ABV). The ABV used was based on the typical strength of drinks sold in that category (except for wine where the same standard ABV was applied across all products due to the complexity of the wine market) and was provided by the data suppliers.

From September 2011 onwards retail sales data provided by Nielsen do not include data for the discount stores Aldi and Lidl. As such, all off-trade sales data provided since September 2011 (including estimates for the full 2011 calendar year) have been defined as ‘Off-trade excluding discount retailers’. In order to account for the proportion of alcohol sold within the discount retail sector, adjustment factors have been applied to off-trade sales estimates. Adjustment factors are based on the market share of Aldi and Lidl drawn from Kantar Worldpanel consumer panel data. Kantar Worldpanel data are collected by a panel of households (participants aged ≥18 years) who record their grocery purchases, including alcohol, using a barcode reader. Data are only collected on purchases brought into the home and include details such as quantity, price and the store of purchase. Kantar analysts use these data to estimate the alcohol market share of discounters in Scotland and England & Wales, by drink category. Market share estimates based on both sales volumes and values are provided on an annual basis. Volume market share estimates are then applied to the drink category pure volumes (described above) resulting in adjusted pure volumes.

Per-adult alcohol sales were calculated by dividing pure alcohol volumes (litres of pure alcohol) by the total population aged ≥16 years. Mid-year population estimates and projections for Scotland were obtained from National Records of Scotland and for England & Wales from the Office for National Statistics. Weekly population estimates were interpolated from the mid-year estimates.

Average sales price was calculated by dividing retail sales value (£), also from Nielsen, by pure alcohol volume. Both retail sales value and pure alcohol volume were adjusted, using the appropriate market share estimate, to account for the proportion of alcohol sold in the discount retail sector, as described above. Average prices are expressed as price per unit of alcohol.

Findings

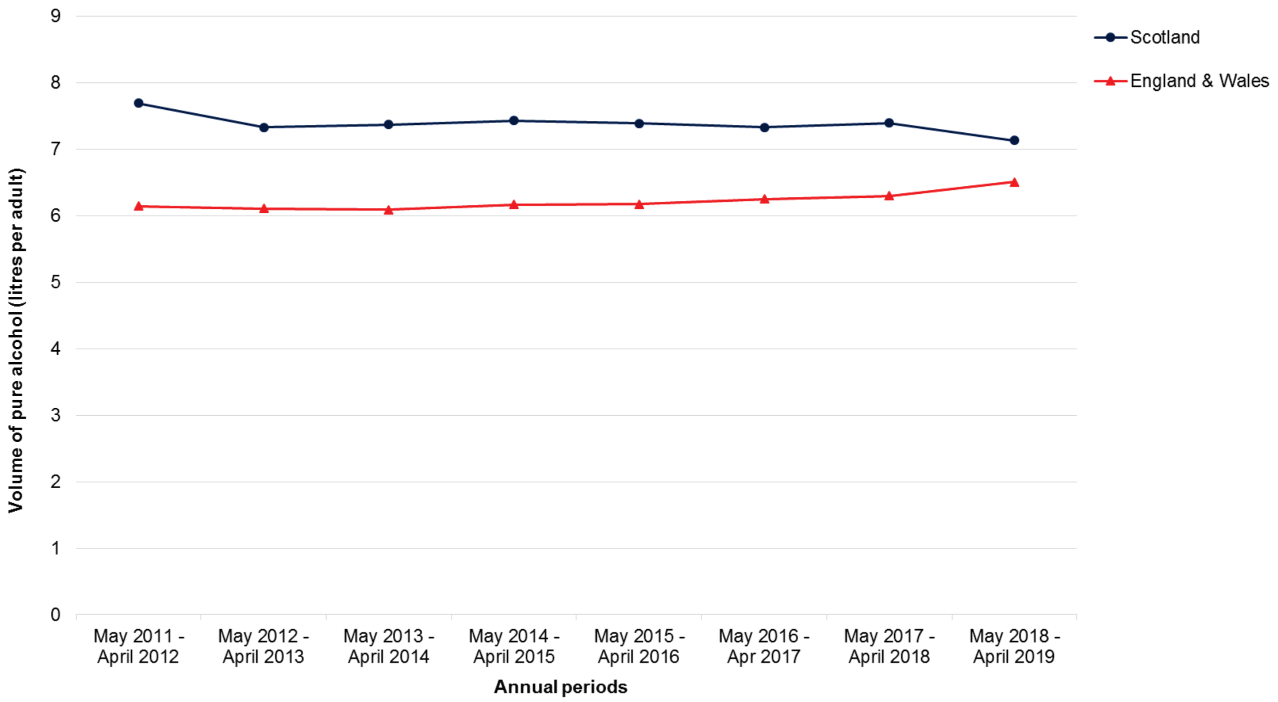
Annual trends in off-trade alcohol sales

Between May 2011 and April 2019 the volume of pure alcohol sold per adult in the off-trade in Scotland fell from 7.7 litres in the period May 2011–April 2012, to 7.1 litres in the period May 2018–April 2019 (Figure 2); this is a decrease in per-adult alcohol sales of 7.3% overall. This decline was not linear with a period of relative stability observed between May 2012–April 2013 and May 2017–April 2018. In the 12-month period following MUP implementation per-adult alcohol sales in Scotland fell from 7.4 to 7.1 litres per adult, a decline of 3.6% (0.3 litres per adult) compared with the previous year.

By contrast, over the same time period (May 2011–April 2019) per-adult alcohol sales in England & Wales rose from 6.1 litres per adult in May 2011–April 2012 to 6.5 litres per adult in May 2018–April 2019, a rise of 5.9% overall (Figure 2). The sharpest increase, from 6.3 to 6.5 litres per adult and representing a 3.2% (0.2 litres per adult) annual increase, was in the 12-month period following MUP implementation in Scotland.

While per-adult alcohol sales remained higher in Scotland than in England & Wales, the difference between the two countries in the post-MUP year was at the lowest level (0.6 litres per adult; 9.6%) since the beginning of this time series (May 2011–April 2012). Half of the reduction in this difference in the volume of pure alcohol sold per adult was due to the simultaneous decrease in Scotland and increase in England & Wales in the 12 months since MUP was introduced in Scotland (Figure 2).

Figure 2: Annual (May to April) off-trade alcohol sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

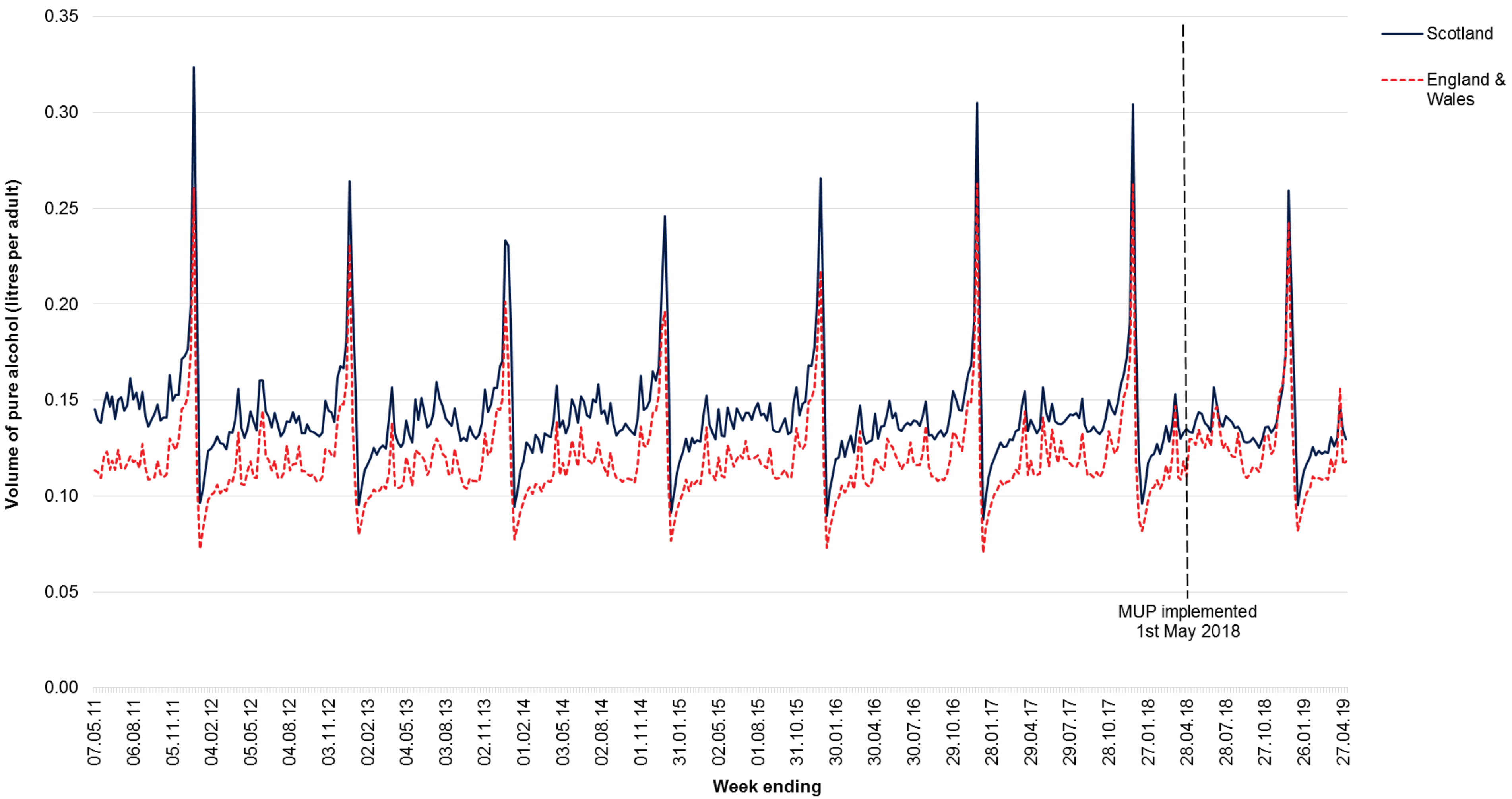


Weekly trends in off-trade alcohol sales

When weekly trends in per-adult alcohol sales are presented, the seasonal variation becomes apparent, with notable peaks over the Christmas and New Year period (Figure 3). As demonstrated with the annual data, per-adult alcohol sales were consistently higher in Scotland than in England & Wales prior to the implementation of MUP.

In the year following MUP implementation, the difference in per-adult alcohol sales between the two countries was narrower in most weeks than compared with before implementation (Figure 3). This was particularly noticeable in the peak in per-adult alcohol sales at Christmas and New Year. The difference seen in the volume of alcohol sold per adult in the off-trade between Scotland and England & Wales over Christmas and New Year 2018 was the smallest seen of any of the festive periods in the time series. Over Easter 2019, per-adult alcohol sales in England & Wales exceeded those in Scotland; this was one of only two points that this occurred across the whole time series, with both instances occurring after MUP implementation.

Figure 3: Weekly off-trade alcohol sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

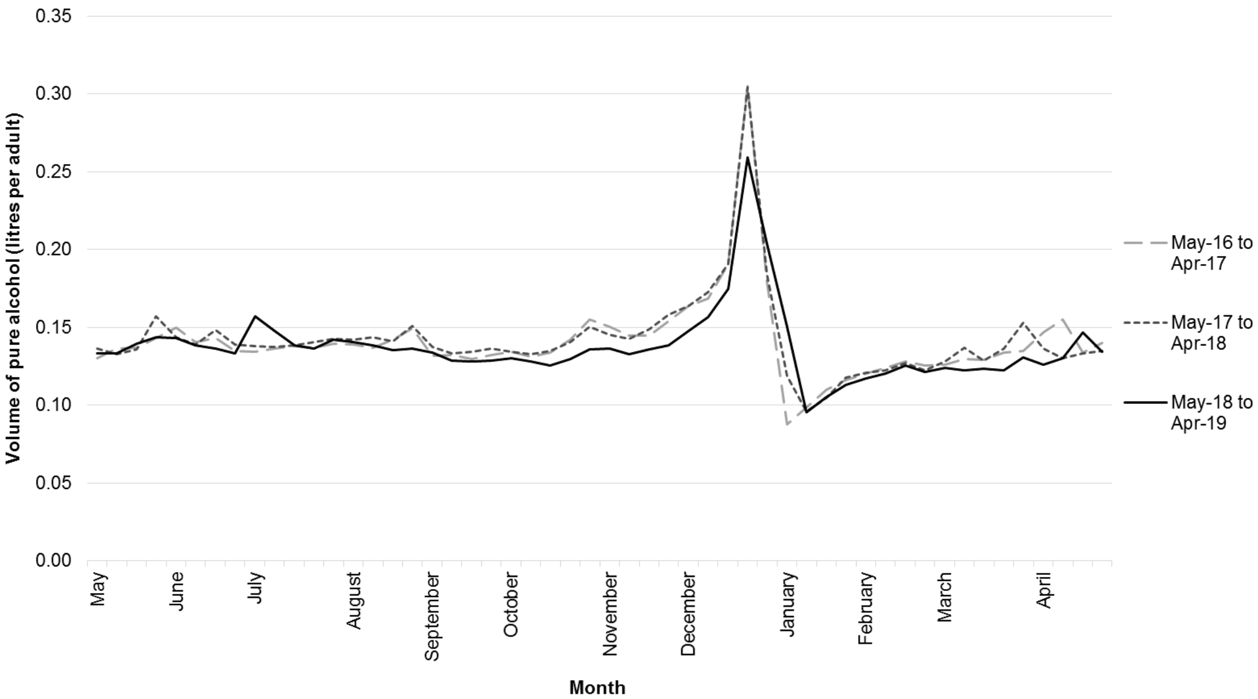


Year-on-year trends in weekly off-trade alcohol sales in Scotland

Superimposing the data year-on-year for the three years from May 2016 to April 2019 allows a more direct comparison to be made of the change in per-adult off-trade sales in Scotland over time (Figure 4). The volume of pure alcohol sold per adult in the off-trade in Scotland followed a very similar pattern in the year from May 2016–April 2017 and from May 2017–April 2018 (Figure 4). Very similar amounts of alcohol were sold throughout the year, with the peaks seen in the week prior to Christmas and at Easter being almost identical in the two periods.

In the post-MUP year (May 2018–April 2019) the volume of pure alcohol sold per adult was different; in the weeks from October to the peak at Christmas, per-adult alcohol sales were consistently lower than in either of the previous two years. Similarly, from March to Easter, per-adult alcohol sales were lower in the post-MUP year than in either of the previous two years; the peak in sales at Easter was also lower than in either of the previous two years. One area worthy of note is the peak seen in the first two weeks of July in 2018, which was notably higher than the previous two years and was also in seen in England & Wales (Figure 3); this corresponds to both the latter two weeks of the men's World Cup and the heatwave experienced throughout the UK at this time.

Figure 4: Weekly off-trade alcohol sales (litres of pure alcohol per adult), Scotland, May 2016–April 2019 year-on-year

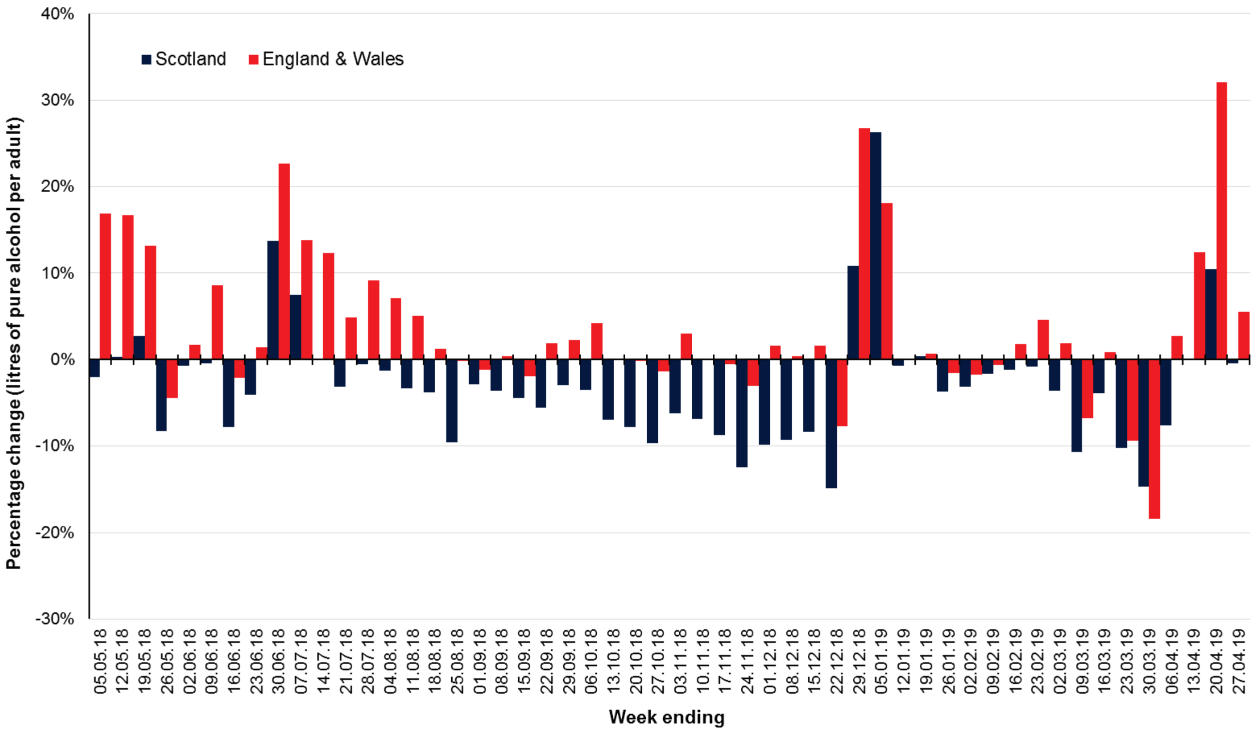


Percentage change in weekly off-trade alcohol sales pre- and post-MUP implementation

Figure 5 shows the percentage change in the volume of pure alcohol sold per adult when comparing individual weeks in the post-MUP year (May 2018–April 2019) with the corresponding week in the pre-MUP year (May 2017–April 2018). Bars below the x-axis indicate per-adult sales are lower than in the previous year while bars above the x-axis indicate sales are higher than in the previous year.

Following the implementation of MUP, per-adult off-trade alcohol sales in Scotland were lower in 43 of 52 weeks (compared with the same week in the previous year) (Figure 5). This was not the case in England & Wales where sales were lower in 16 of 52 weeks in the same time period.

Figure 5: Percentage change in weekly off-trade alcohol sales (litres of pure alcohol per adult) May 2018–April 2019 compared with the corresponding week in the previous year, Scotland and England & Wales

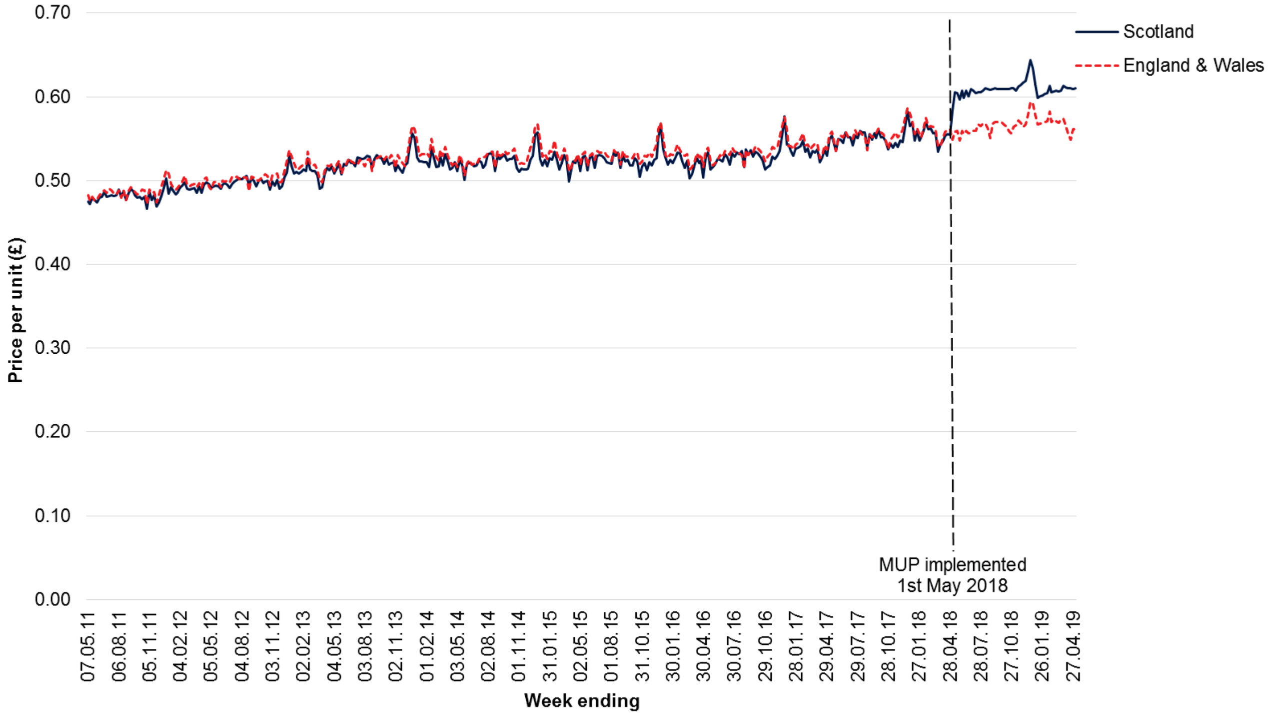


Weekly trends in average sales price of off-trade alcohol

Between May 2011 and April 2018, the average sales price of off-trade alcohol increased steadily over time in both Scotland and England & Wales, rising from approximately 48 pence per unit (ppu) in May 2011 to approximately 55ppu in April 2018 (Figure 6).

Following the implementation of MUP in May 2018 there was a step change in the average sales price of alcohol in Scotland; the same change was not seen in England & Wales. In the weeks immediately following the implementation of MUP the average price per unit of alcohol in Scotland rose to approximately 60ppu while it remained in the 55–56ppu range in England & Wales. By the end of April 2019, the average price per unit of off-trade alcohol in Scotland was 61ppu compared with 56ppu in England & Wales.

Figure 6: Weekly average sales price of off-trade alcohol, Scotland and England & Wales, May 2011 to April 2019



Descriptive analysis of alcohol sales and price by drink category

This section presents the same analyses as already presented for all alcohol but for each of five separate drink categories. The drink categories are beer, spirits, wine, cider and fortified wine, accounting for more than 98% of total alcohol sales. Table 1 presents the proportion each drink category contributed to total alcohol sales in the year following MUP implementation and the percentage change in volumes sold per adult pre- and post-MUP; figures from this table are cited throughout this section.

Table 1: Total market share and annual percentage change (pre- and post-MUP) in annual per adult alcohol sales in the off-trade, Scotland and England & Wales

	Total market share (post-MUP)	Percentage change from previous annual period	
		pre-MUP year	post-MUP year
Scotland			
Beer	23.3	-0.3	-1.1
Spirits	32.3	1.4	-3.8
Wine	33.1	0.3	-3.0
Cider	6.2	2.3	-18.6
Fortified wine	3.5	6.0	16.4
All alcohol*	**100**	**0.9**	**-3.6**
England & Wales			
Beer	27.6	-0.9	7.0
Spirits	26.2	4.2	5.6
Wine	35.0	0.0	-1.3
Cider	8.0	0.5	8.2
Fortified wine	1.4	-3.3	-11.2
All alcohol*	**100**	**0.8**	**3.2**

*All alcohol includes a small proportion of alcohol (<2%) not included in the five categories shown here.

Beer

Beer accounted for 23.3% of per-adult off-trade alcohol sales in Scotland and 27.6% in England & Wales in the most recent annual period (Table 1). The volume of pure alcohol sold per adult per year (May–April) in the off-trade as beer remained relatively stable throughout the time series, at between 1.6 and 1.8 litres per adult in both Scotland and England & Wales (Figure 7). Over the time series per-adult sales of beer switched from being higher in Scotland than in England & Wales (in May 2011–April 2012) to being lower in Scotland and higher in England & Wales (in May 2018–April 2019). Compared with the pre-MUP year, per-adult sales of beer fell by 1.1% in Scotland in the year following MUP implementation (Table 1), while sales rose by 7% in England & Wales.

Prior to MUP implementation weekly per-adult sales of beer were broadly similar between the two areas (Figure 8). In the year since MUP implementation, weekly sales in Scotland were generally seen to be lower than in England & Wales; peaks in sales in the last two weeks of July, the Christmas period and Easter 2019 were higher in England & Wales which contrasts the trend seen prior to the implementation of MUP (Figure 8). Per-adult beer sales in Scotland were notably lower over the Christmas period following MUP implementation than in either of the two years preceding it (Figure 9). The peak seen in all alcohol sales in the first two weeks of July 2018 (Figure 4) was in part driven by an increase in beer sales in this period (Figure 9).

Per-adult sales of beer were lower in more weeks following MUP implementation (compared with the same week the year before) in Scotland (32 of 52) than in England & Wales (11 of 52) (Figure 10).

The trend in the average sales price of beer (Figure 11) followed a similar pattern to that seen in total alcohol (Figure 6). The price per unit followed a similar level and trend in Scotland and England & Wales up until MUP implementation; at this point the average sales price rose substantially in Scotland from approximately 51ppu to 57ppu. In England & Wales the average price per unit of beer from May 2018 onwards mostly remained in the 51–53ppu range but with more weekly fluctuation than in Scotland.

Figure 7: Annual (May to April) off-trade beer sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

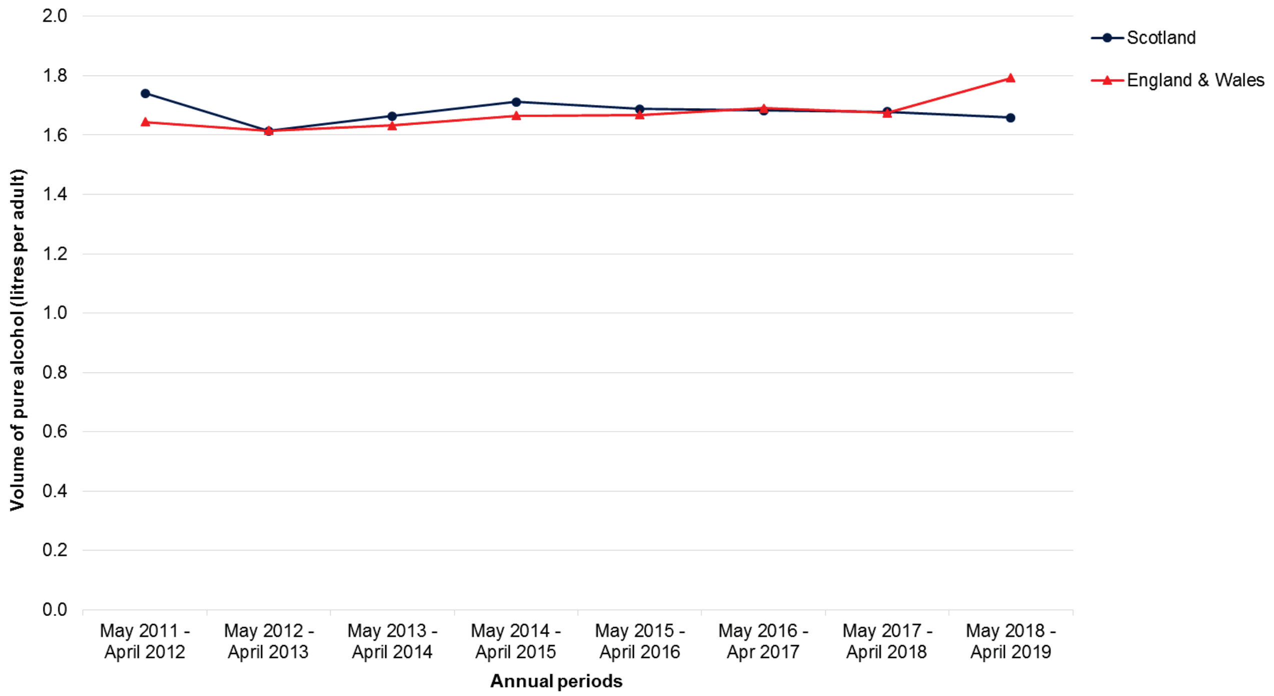


Figure 8: Weekly off-trade beer sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

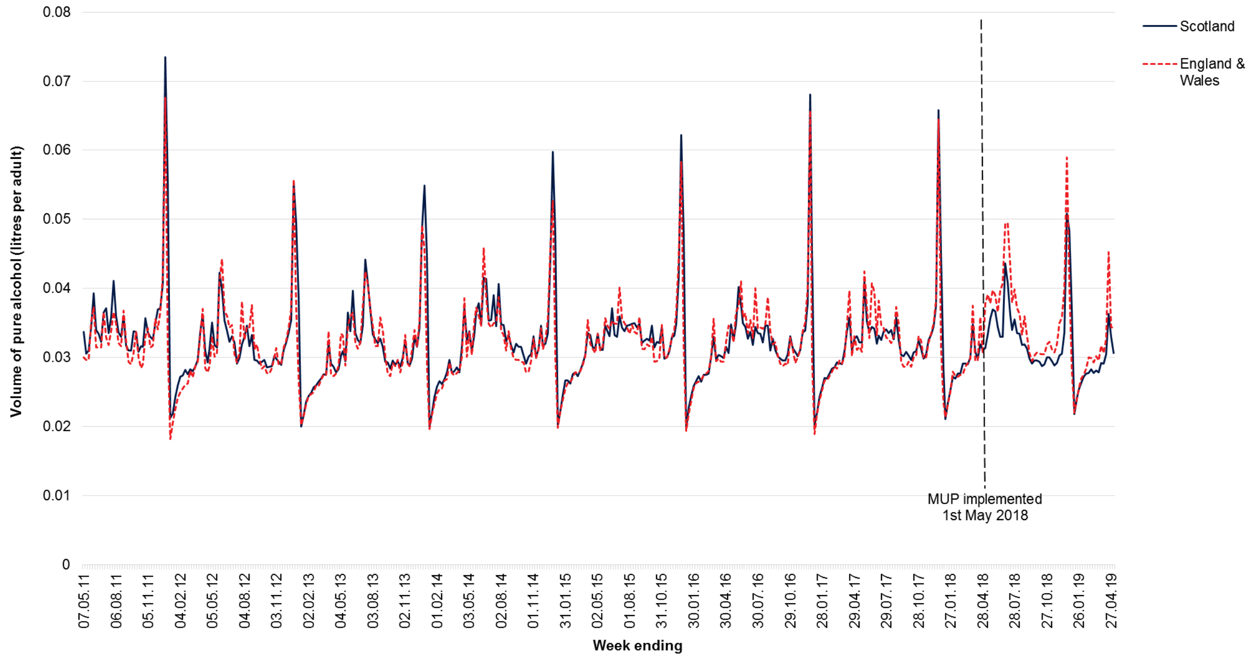


Figure 9: Weekly off-trade beer sales (litres of pure alcohol per adult), Scotland, May 2016–April 2019 year-on-year

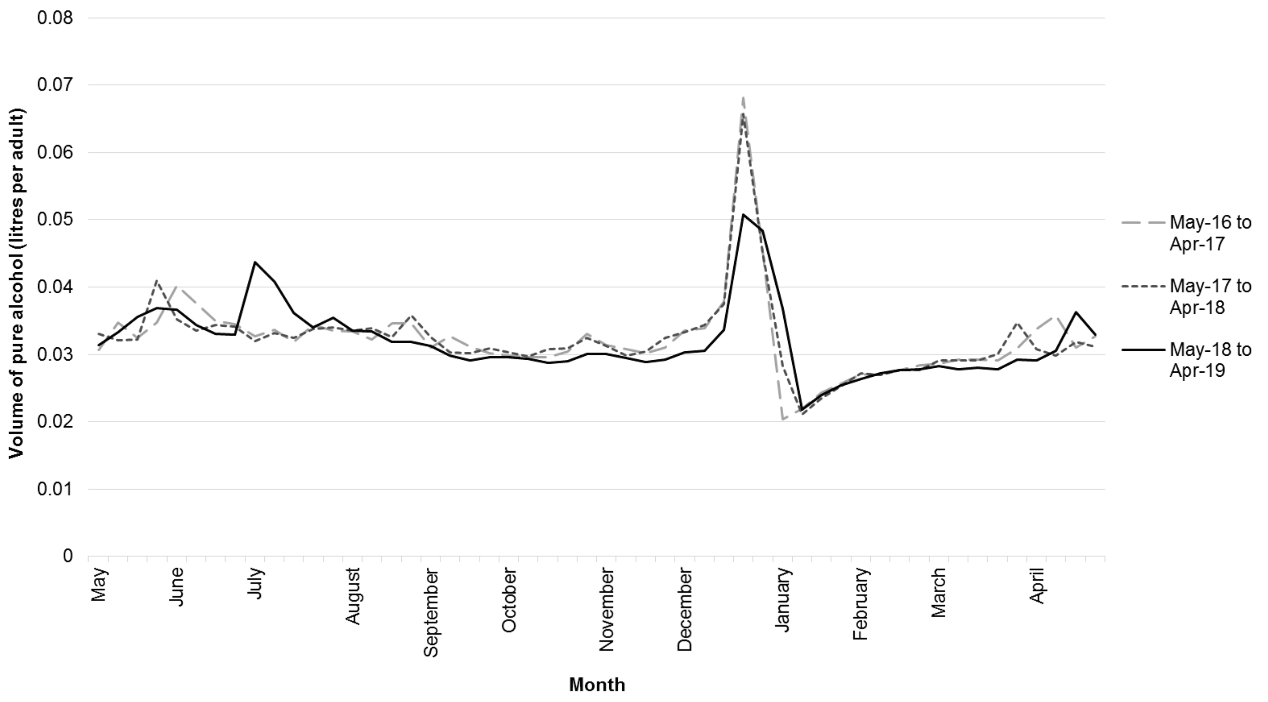


Figure 10: Percentage change in weekly off-trade beer sales (litres of pure alcohol per adult) May 2018–April 2019 compared with the corresponding week in the previous year, Scotland and England & Wales

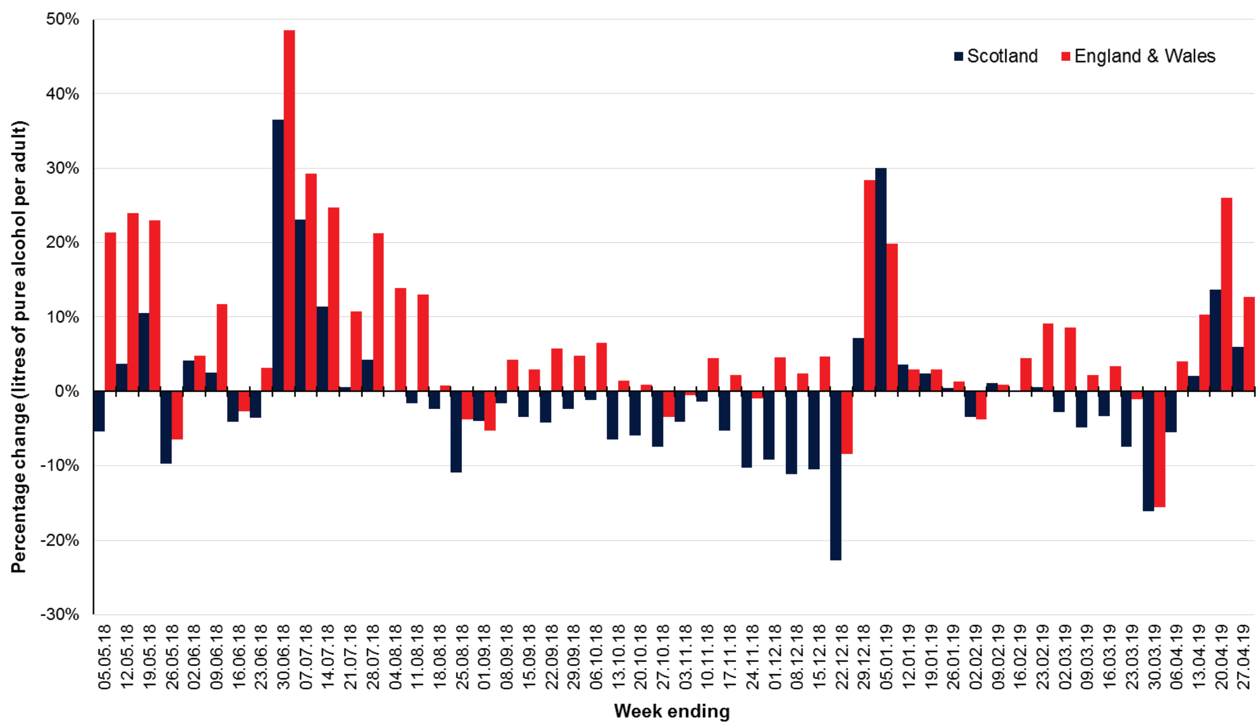
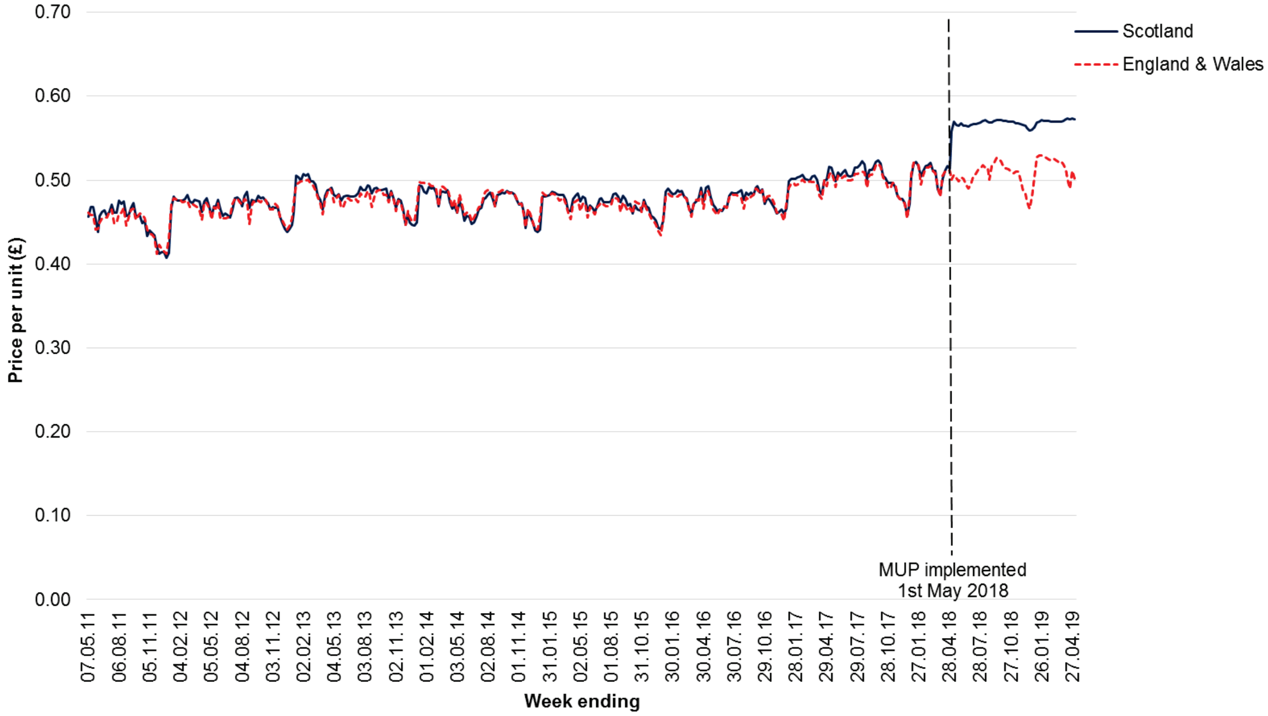


Figure 11: Weekly average sales price of off-trade beer, Scotland and England & Wales, May 2011 to April 2019



Spirits

Spirits accounted for 32.3% of per-adult off-trade alcohol sales in Scotland and 26.2% in England & Wales in the most recent annual period (Table 1). The volume of pure alcohol sold per adult per year in the off-trade as spirits fell from 2.5 litres in May 2011–April 2012 to 2.3 litres in May 2018–April 2019 (Figure 12), a fall of 8.4%. This decrease was not consistent over time, falling prior to May 2013–April 2014, remaining relatively stable through to May 2017–April 2018 before falling again in the post-MUP year. The volume of off-trade spirits sold in England & Wales rose from 1.4 to 1.7 litres per adult, rising year on year from May 2013–April 2014; overall this is a rise of 17.5% (Figure 12). Sales of spirits have consistently been higher in Scotland than in England & Wales; the difference has narrowed, falling from 73% higher to 35% higher over the time series. Compared with the pre-MUP year, per-adult sales of spirits fell by 3.8% in Scotland in the year following MUP implementation (Table 1), while sales rose by 5.6% in England & Wales.

Per-adult sales of spirits were lower in more weeks following MUP implementation (compared with the same week the year before) in Scotland (39 of 52) than in England & Wales (6 of 52) (Figure 15).

The average sales price of off-trade spirits (Figure 16), as with other drink categories, followed a similar level and trend in both Scotland and England & Wales until the implementation of MUP. In the weeks following MUP implementation the average sales price of off-trade spirits in Scotland rose from approximately 52ppu to 58ppu and, on average, remained at around that level for the remainder of the time series. In England & Wales the average price per unit of spirits from May 2018 onwards mostly remained in the 53–55ppu range but with more weekly fluctuation than in Scotland.

Figure 12: Annual (May to April) off-trade spirits sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

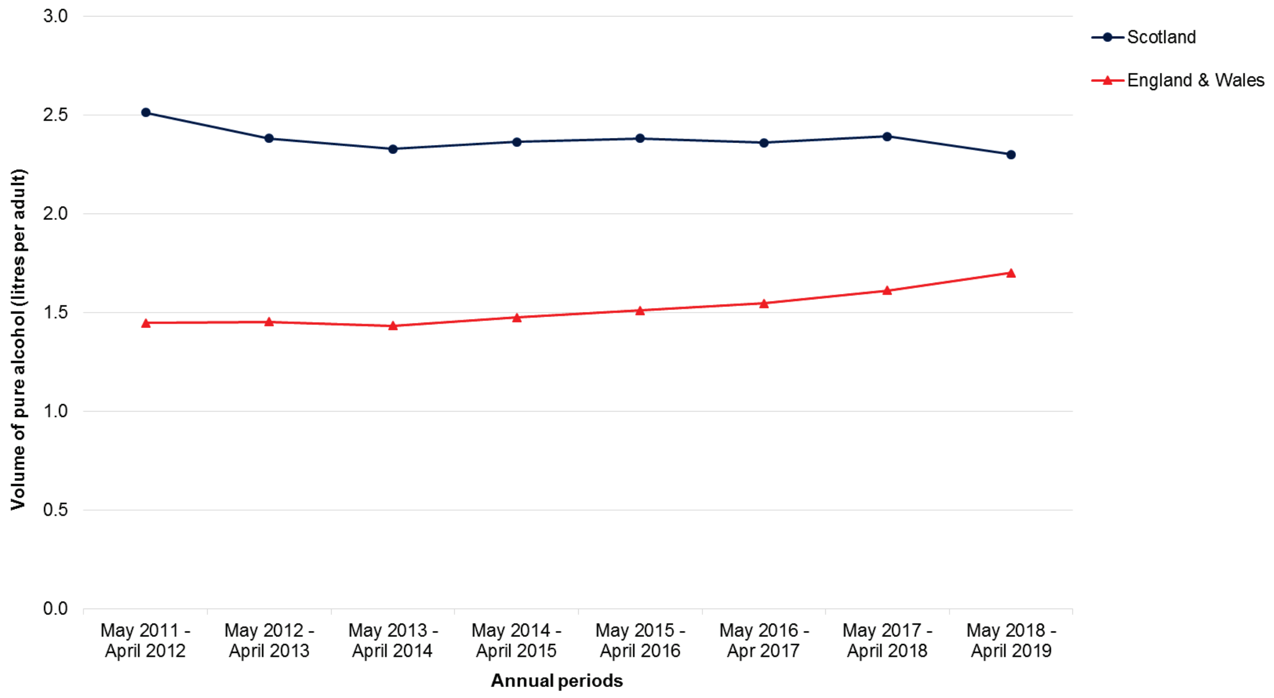


Figure 13: Weekly off-trade spirits sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

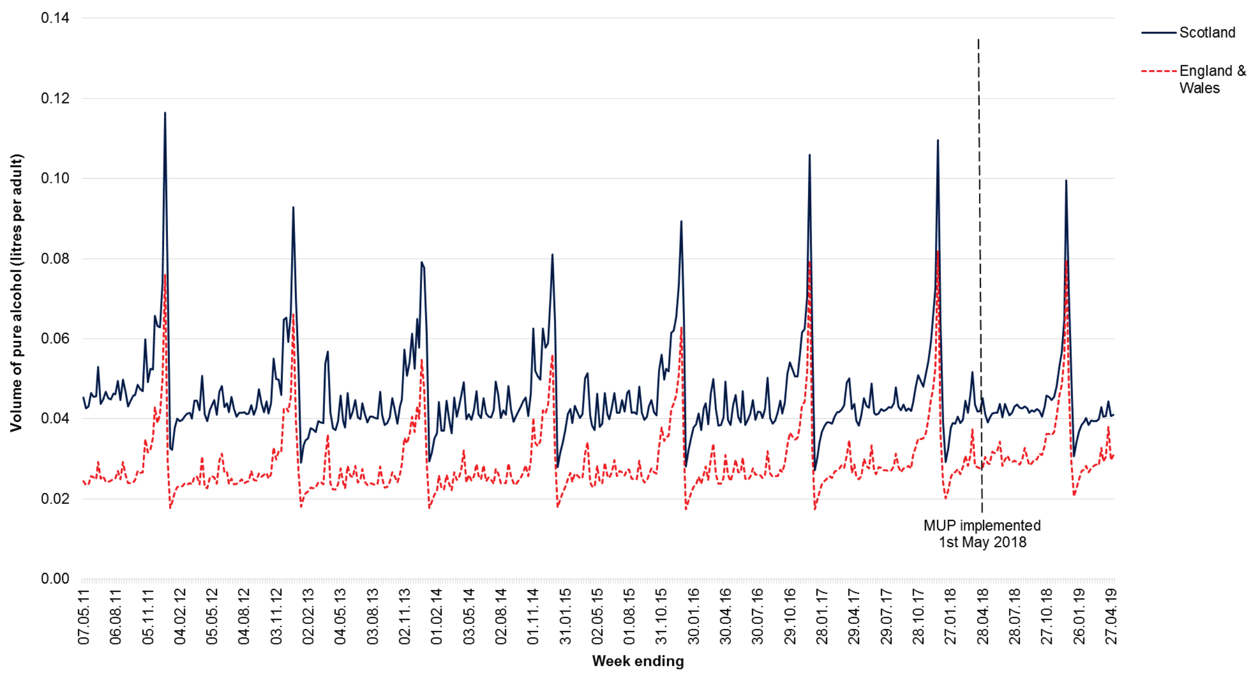


Figure 14: Weekly off-trade spirits sales (litres of pure alcohol per adult), Scotland, May 2016–April 2019 year-on-year

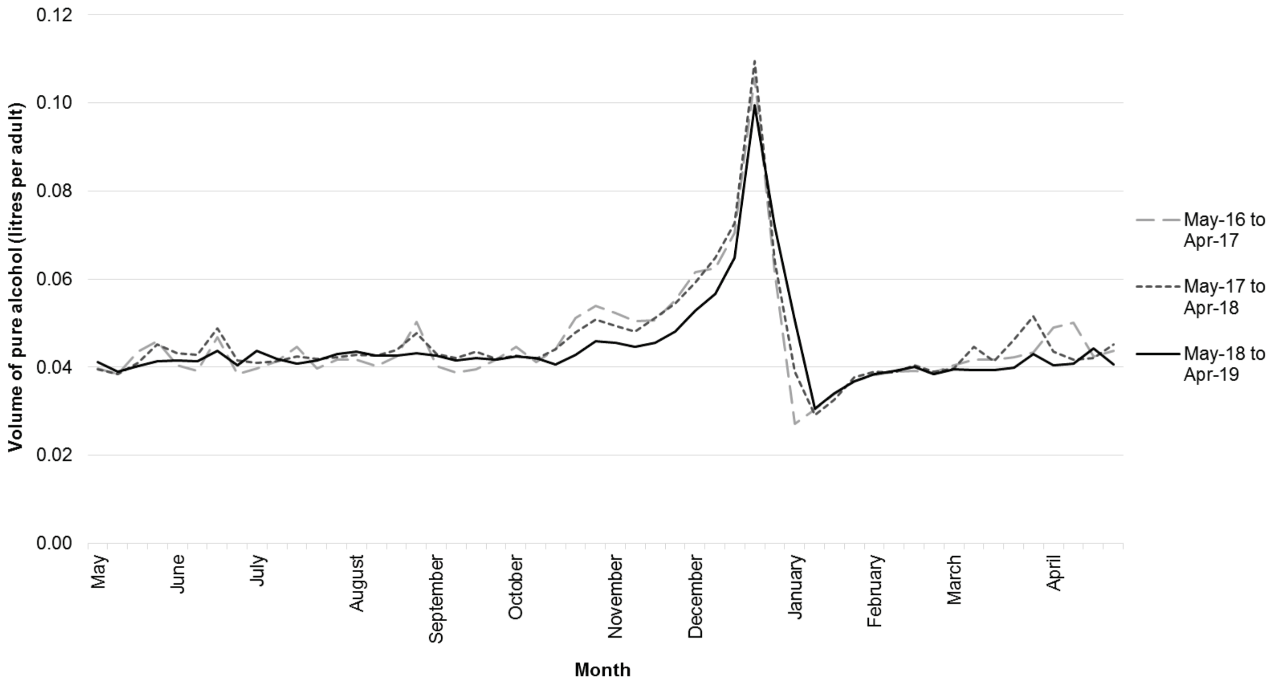


Figure 15: Percentage change in weekly off-trade spirits sales (litres of pure alcohol per adult) May 2018–April 2019 compared with the corresponding week in the previous year, Scotland and England & Wales

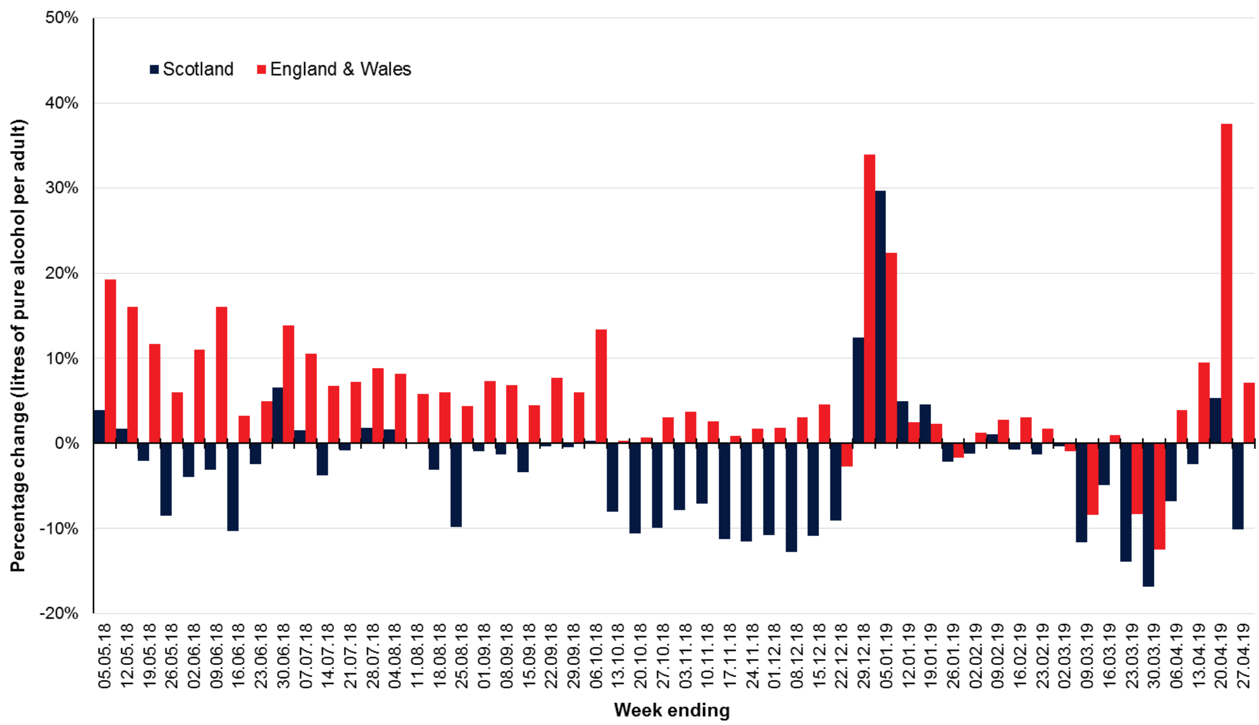
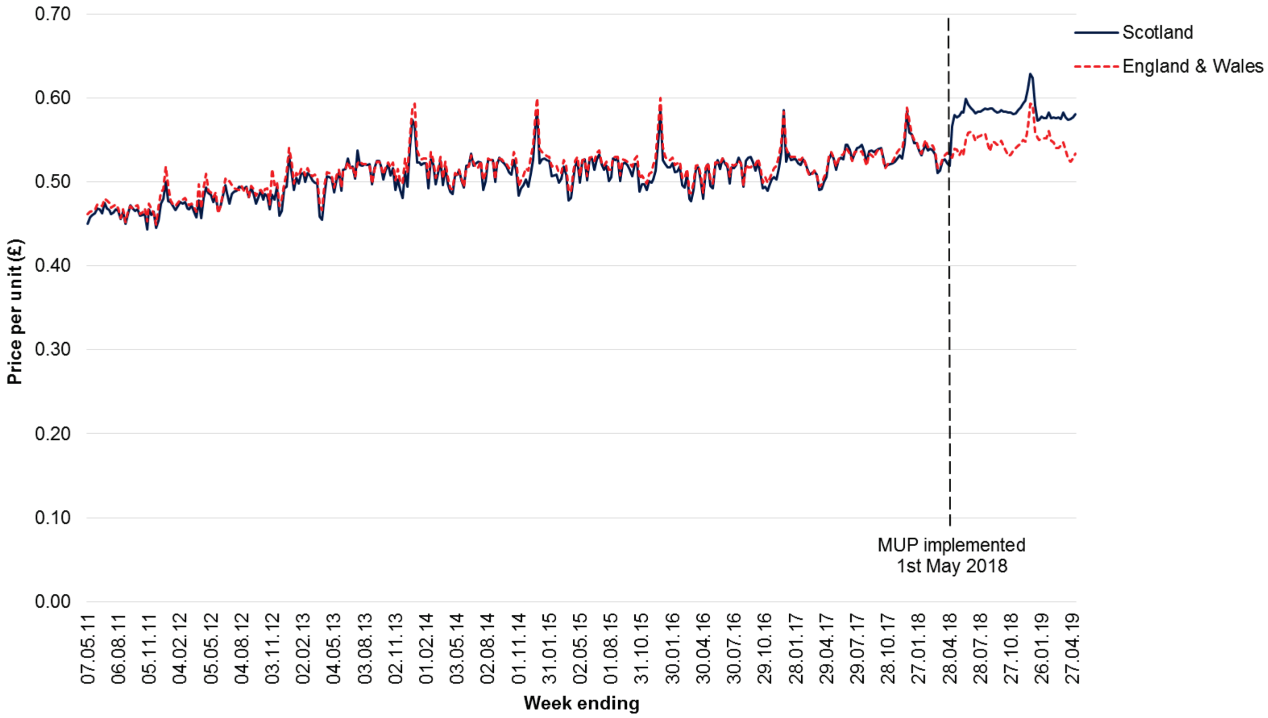


Figure 16: Weekly average sales price of off-trade spirits, Scotland and England & Wales, May 2011 to April 2019



Wine

Wine accounted for 33.1% of per-adult off-trade alcohol sales in Scotland and 35.0% in England & Wales in the most recent annual period (Table 1). The volume of pure alcohol sold per adult per year in the off-trade as wine fell over time in Scotland, from 2.6 litres in May 2011–April 2012 to 2.4 litres per adult in May 2018–April 2019 (Figure 17), while it remained relatively stable in England & Wales over the same time period, at around 2.3 litres per adult. Compared with the pre-MUP year, per-adult sales of wine fell by 3.0% in Scotland and by 1.3% in England & Wales in the year following MUP implementation (Table 1).

Per-adult sales of wine were lower in a similar number of weeks in both Scotland and England & Wales, following the implementation of MUP compared with the previous year (Figure 20).

The average sales price of off-trade wine (Figure 21) did not show the same step change in Scotland as seen in other drink categories and for alcohol overall. In the weeks leading up to MUP implementation, the average price per unit of wine in Scotland was approximately 62ppu, exceeding the minimum price of 50ppu. Over the time series the average sales price rose steadily from around 51–52ppu to 65–66ppu in both Scotland and England & Wales.

Figure 17: Annual (May to April) off-trade wine sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

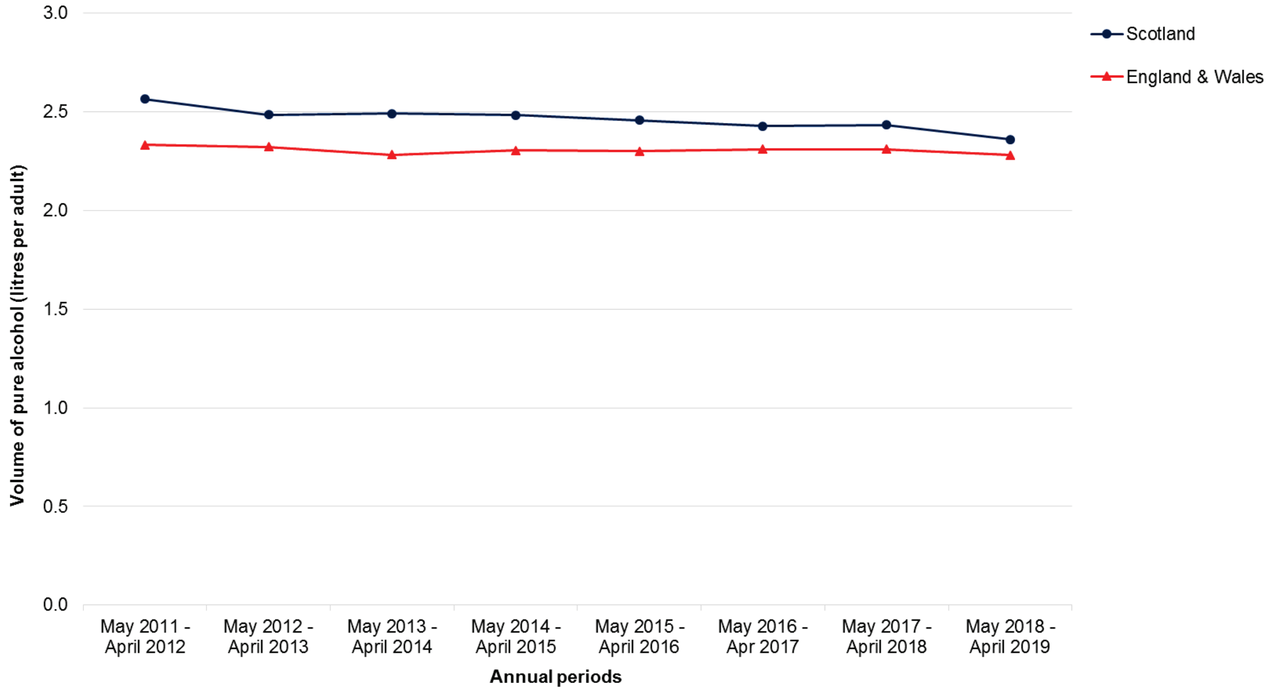


Figure 18: Weekly off-trade wine sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

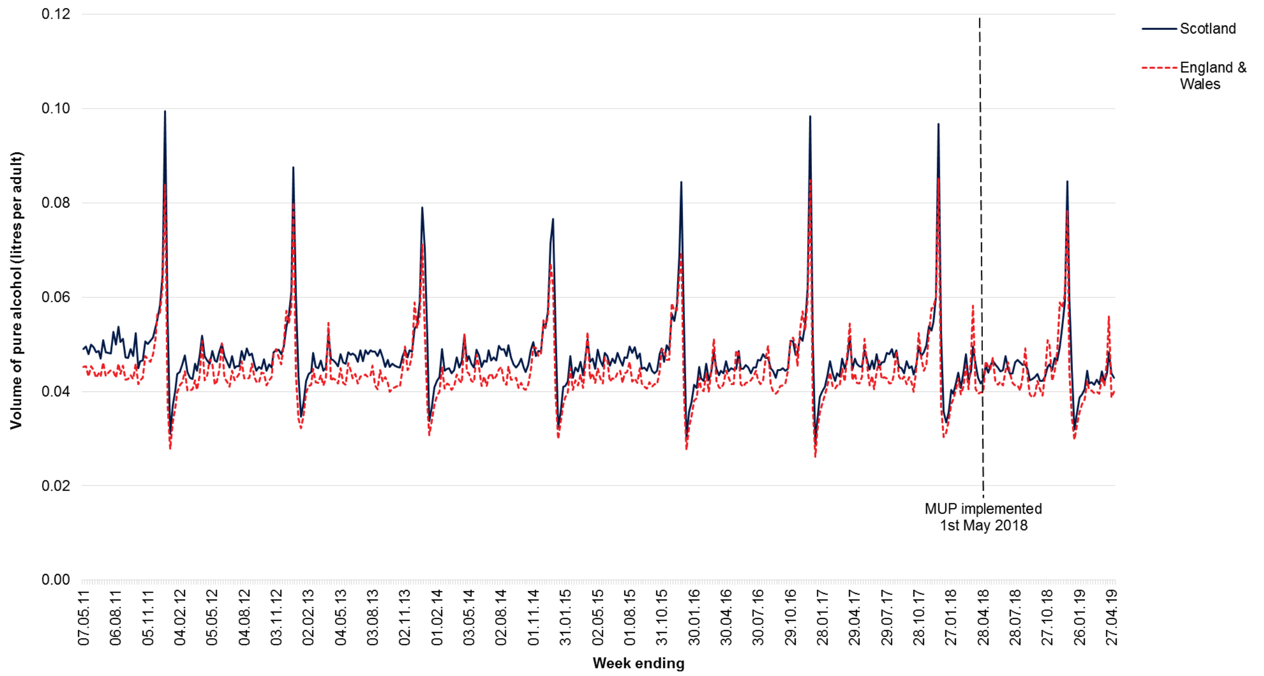


Figure 19: Weekly off-trade wine sales (litres of pure alcohol per adult), Scotland, May 2016–April 2019 year-on-year

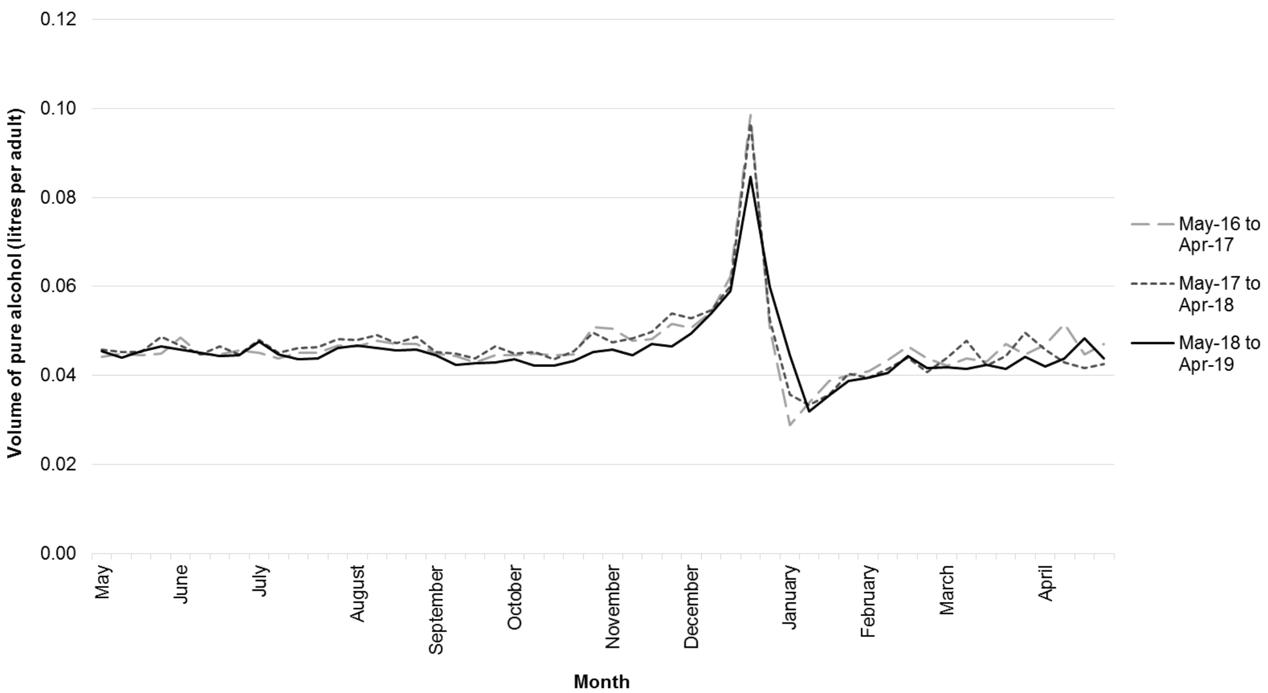


Figure 20: Percentage change in weekly off-trade wine sales (litres of pure alcohol per adult) May 2018–April 2019 compared with the corresponding week in the previous year, Scotland and England & Wales

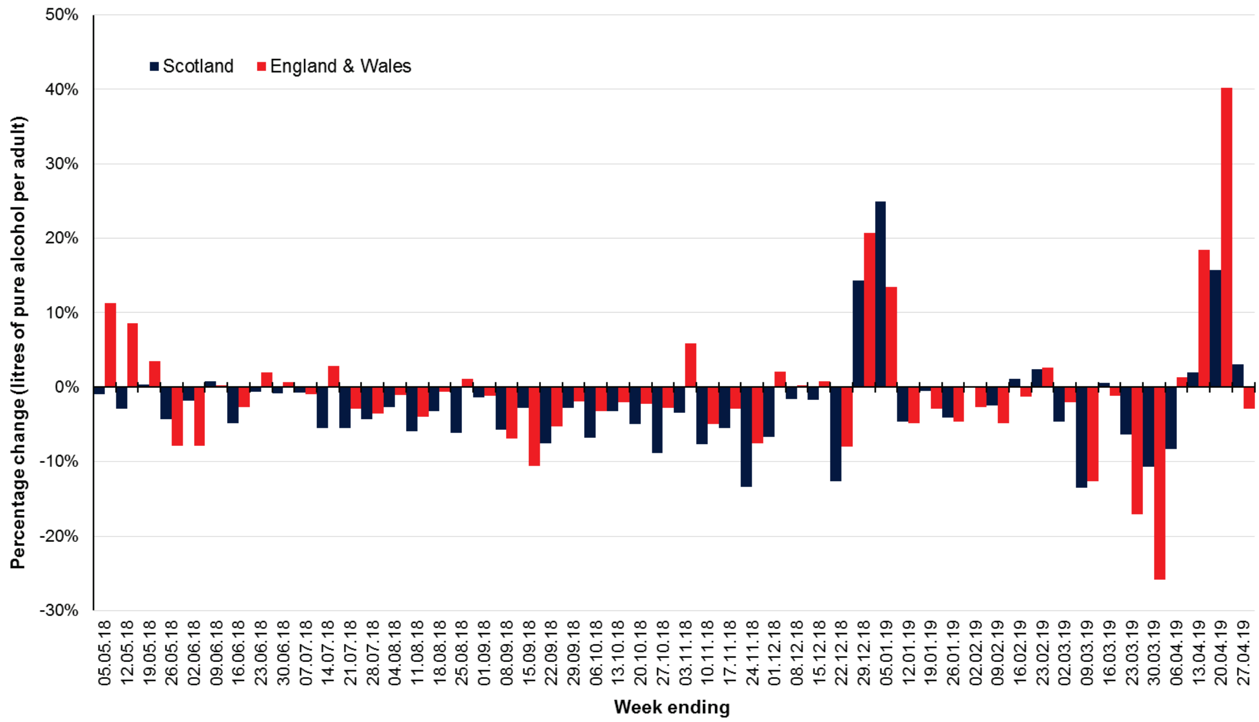
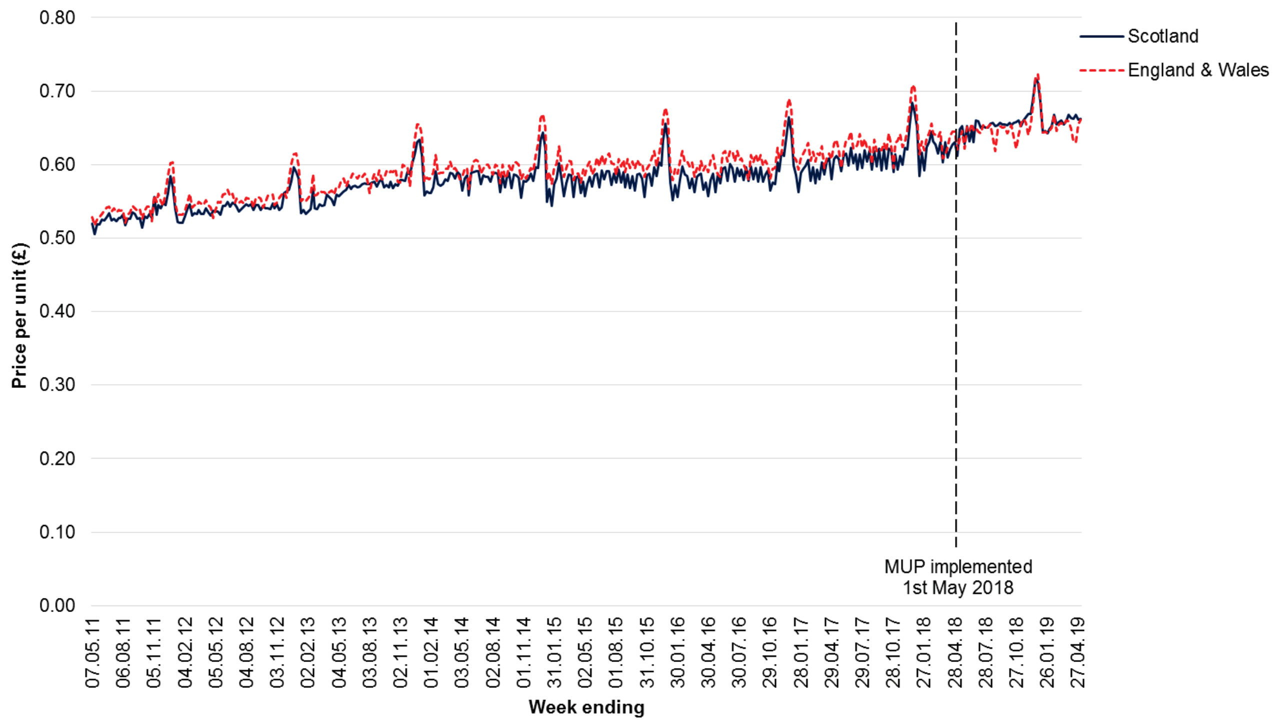


Figure 21: Weekly average sales price of off-trade wine, Scotland and England & Wales, May 2011 to April 2019



Cider

Cider accounted for 6.2% of per-adult off-trade alcohol sales in Scotland and 8.0% in England & Wales in the most recent annual period (Table 1). Prior to the implementation of MUP, the volume of pure alcohol sold per adult per year in the off-trade as cider followed a similar trend in both Scotland and England & Wales, but with per-adult sales consistently higher in Scotland (Figure 22). After MUP was implemented, per-adult sales of cider in the off-trade fell in Scotland and rose in England & Wales such that per-adult sales in England & Wales exceeded those in Scotland in the final annual period (Figure 22). This switch following the implementation of MUP was mirrored in the weekly trend (Figure 23); in the majority of weeks prior to the implementation of MUP per-adult cider sales were higher in Scotland than in England & Wales while they were lower following MUP implementation. Compared with the pre-MUP year, per-adult sales of cider fell by 18.6% in Scotland in the year following MUP implementation (Table 1) while sales rose 8.2% in England & Wales.

Per-adult sales of cider in Scotland were markedly lower throughout the post-MUP year than in either of the previous two years (Figure 24). The peak seen in all alcohol sales in the first two weeks of July (Figure 4) was in part driven by an increase in cider sales in this period (Figure 24).

Per-adult sales of off-trade cider were lower in nearly all weeks following MUP implementation (compared with the same week the year before) in Scotland (48 of 52), which is in contrast to England & Wales (10 of 52) (Figure 25).

Following the implementation of MUP the average sales price of off-trade cider (Figure 26) rose markedly from approximately 43ppu to 56ppu; this rise in average sales price was not seen in England & Wales. On average the price per unit throughout the post-MUP year was 55ppu in Scotland and 42ppu in England & Wales.

Figure 22: Annual (May to April) off-trade cider sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

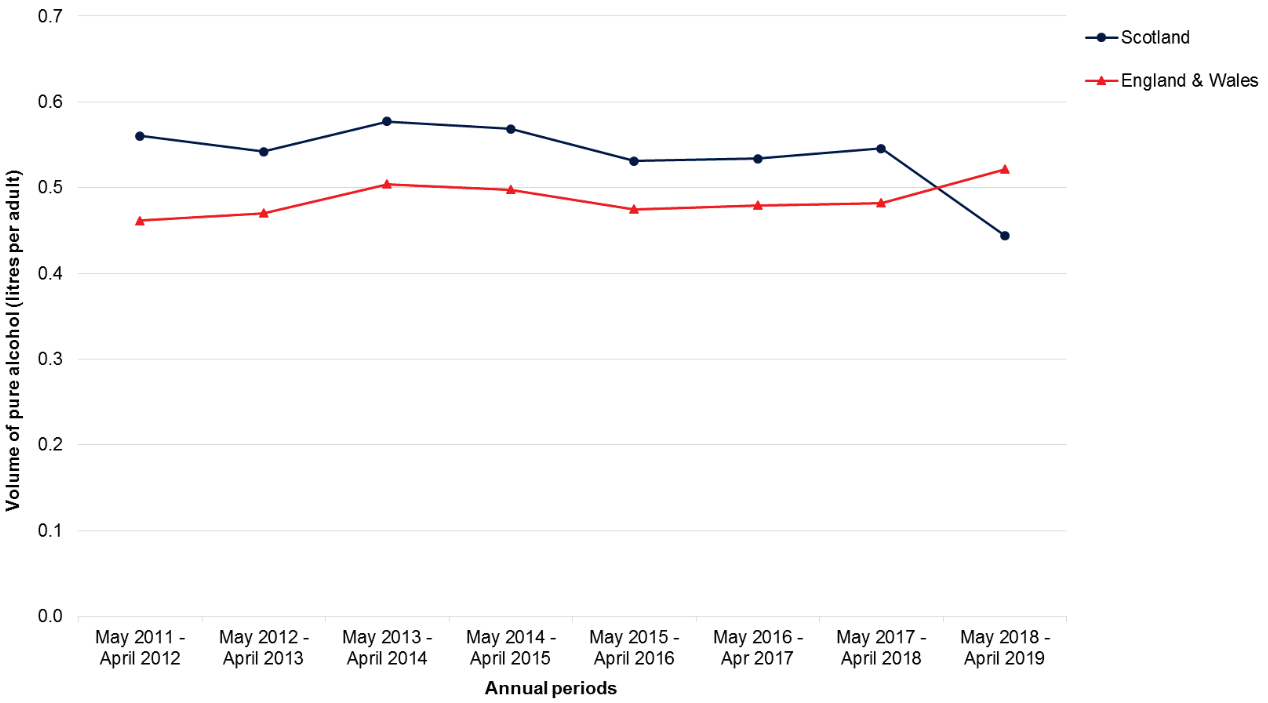


Figure 23: Weekly off-trade cider sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

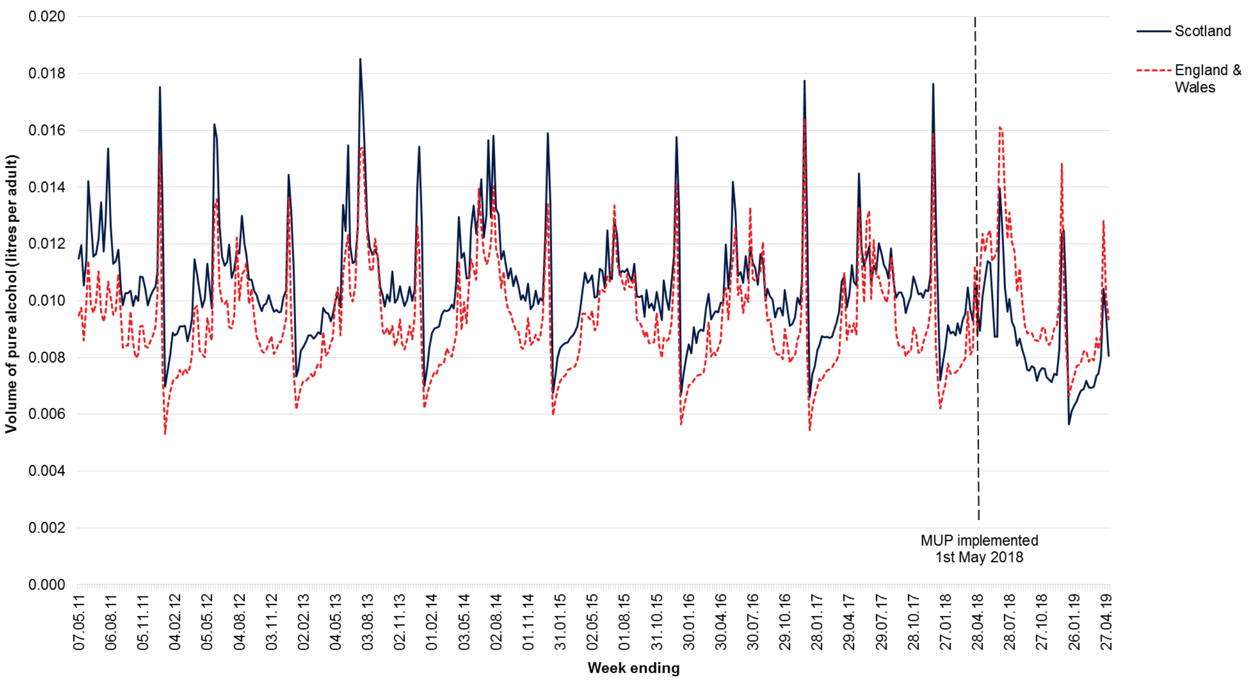


Figure 24: Weekly off-trade cider sales (litres of pure alcohol per adult), Scotland, May 2016–April 2019 year-on-year

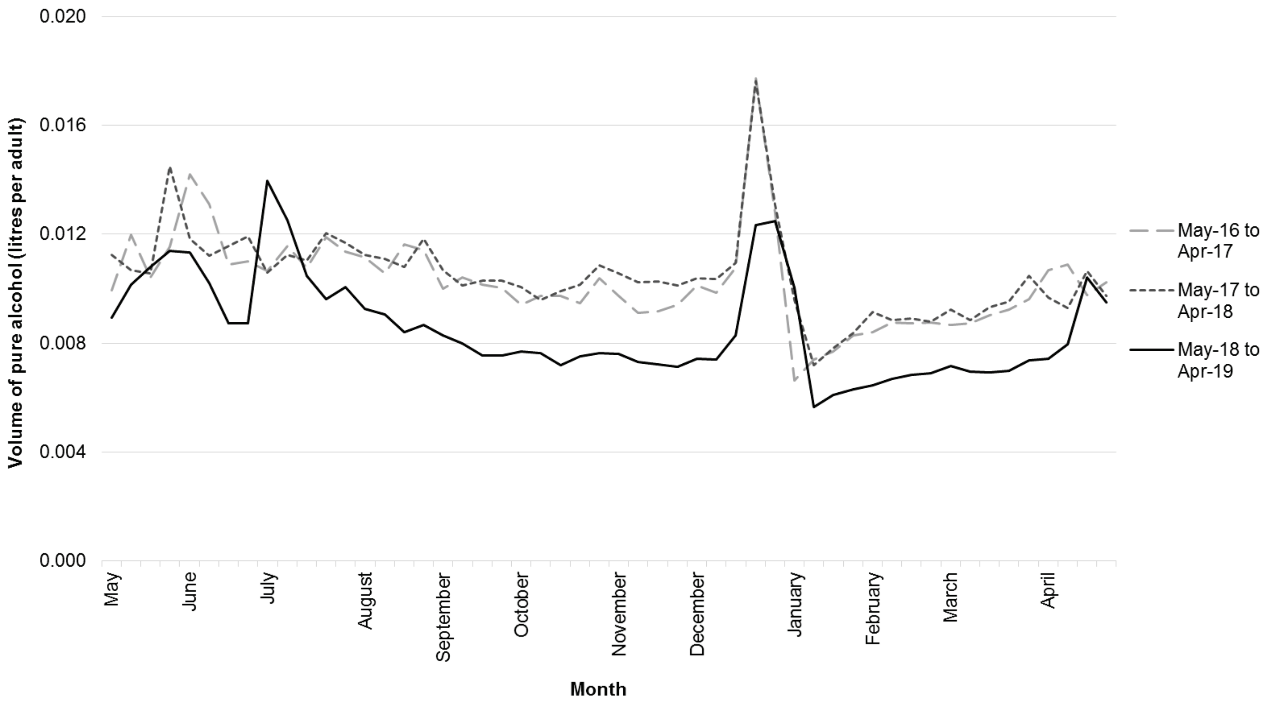


Figure 25: Percentage change in weekly off-trade cider sales (litres of pure alcohol per adult) May 2018–April 2019 compared with the corresponding week in the previous year, Scotland and England & Wales

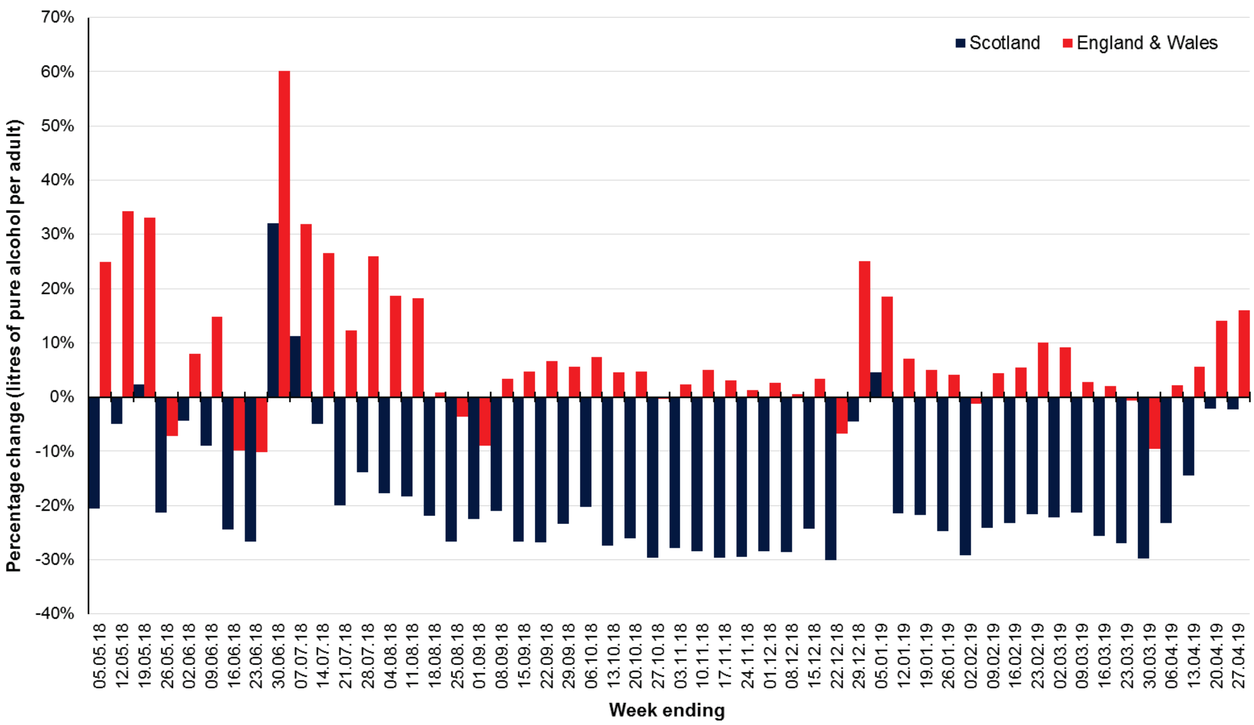
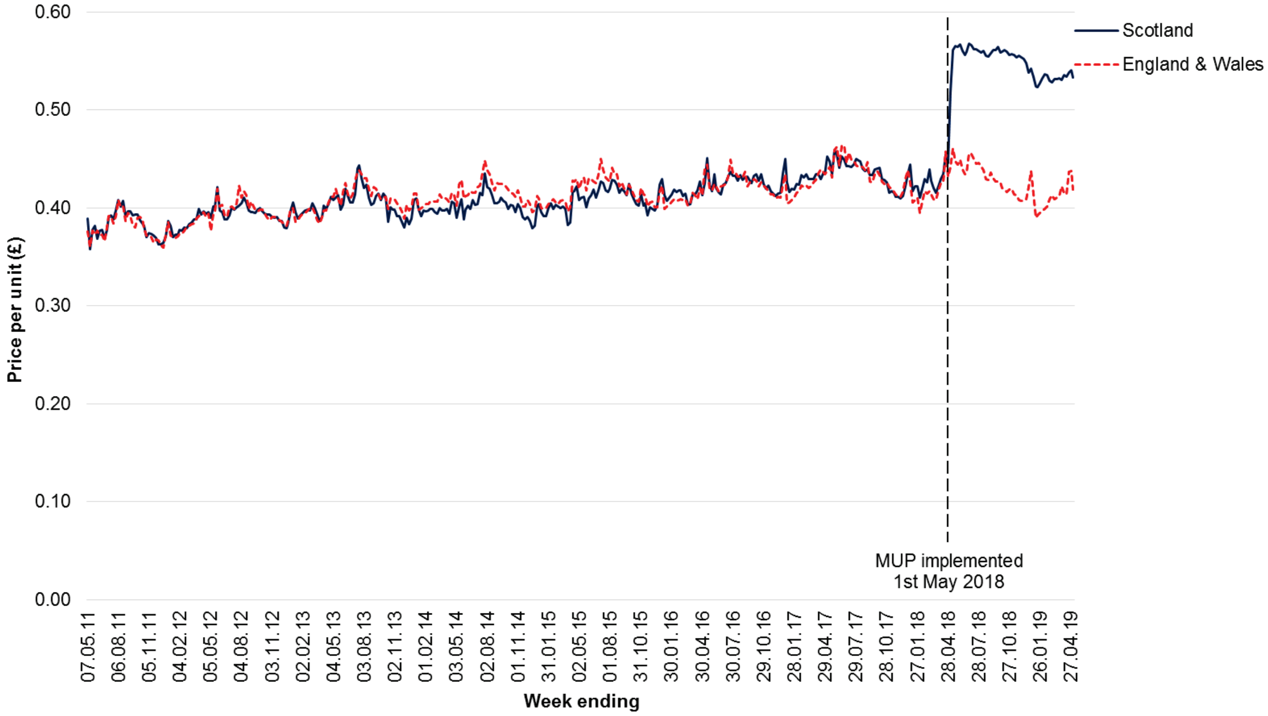


Figure 26: Weekly average sales price of off-trade cider, Scotland and England & Wales, May 2011 to April 2019



Fortified wine

Fortified wine accounted for 3.5% of per-adult off-trade alcohol sales in Scotland and 1.4% in England & Wales in the most recent annual period (Table 1). The volume of pure alcohol sold per adult per year in the off-trade as fortified wine rose in Scotland over the time series while it fell in England & Wales (Figure 27). The weekly data (Figure 28) show that per-adult sales of fortified wine in Scotland have increased steadily, particularly since the beginning of 2015, and that this increase was more pronounced following the introduction of MUP in Scotland. Compared with the pre-MUP year, per-adult sales of fortified wine rose by 16.4% in Scotland in the year following MUP implementation (Table 1) while sales fell 11.2% in England & Wales.

In Scotland the volume of pure alcohol sold per adult in the off-trade as fortified wine was higher in almost every week in the year after MUP implementation (51 of 52). By contrast in England & Wales, per-adult sales of fortified wine were lower in most weeks (49 of 52) in the period from May 2018–April 2019 (when compared with the previous year); the notable exceptions are the Christmas period and Easter weekend (Figure 30).

The average price per unit of off-trade fortified wine in Scotland (Figure 31) rose steadily throughout the time series, from approximately 47ppu in May 2011 to approximately 60ppu in April 2019. The implementation of MUP in May 2018 has had no obvious effect on the average price per unit of fortified wine. A similar pattern was observed in England & Wales although average sales prices were generally lower. The average price per unit of fortified wine in England & Wales rose from approximately 41ppu in May 2011 to approximately 52ppu in April 2019.

Figure 27: Annual (May to April) off-trade fortified wine sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

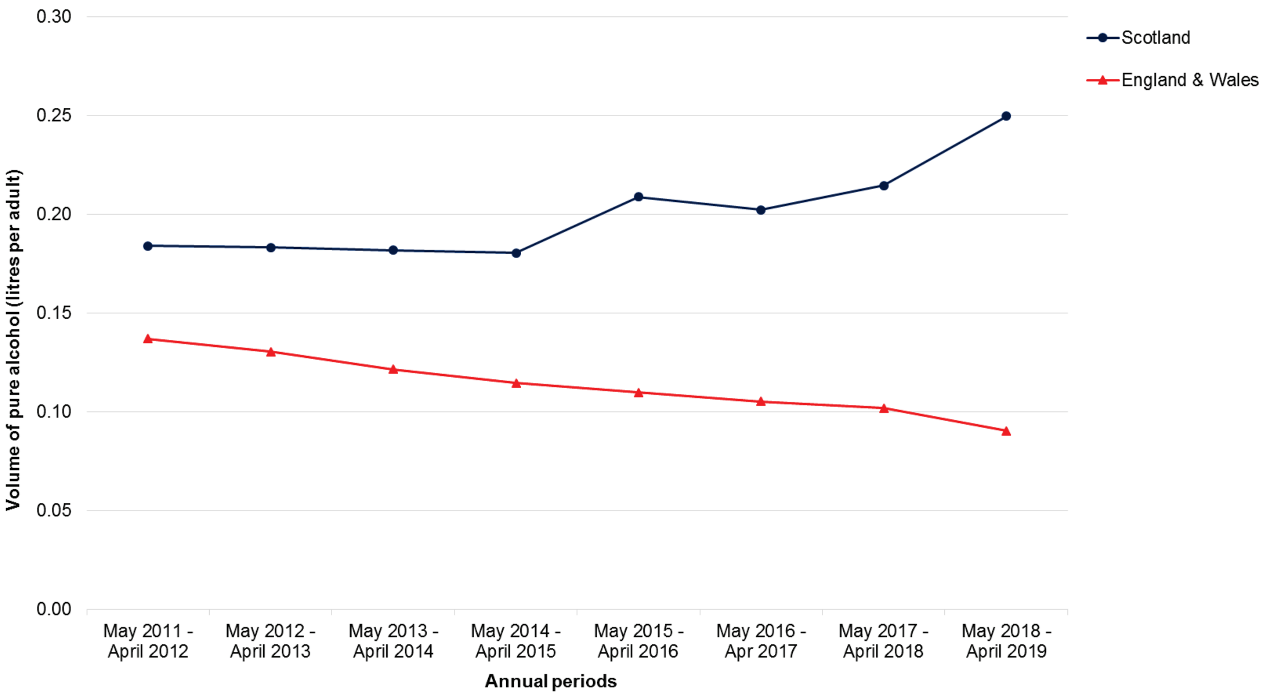


Figure 28: Weekly off-trade fortified wine sales (litres of pure alcohol per adult), Scotland and England & Wales, May 2011 to April 2019

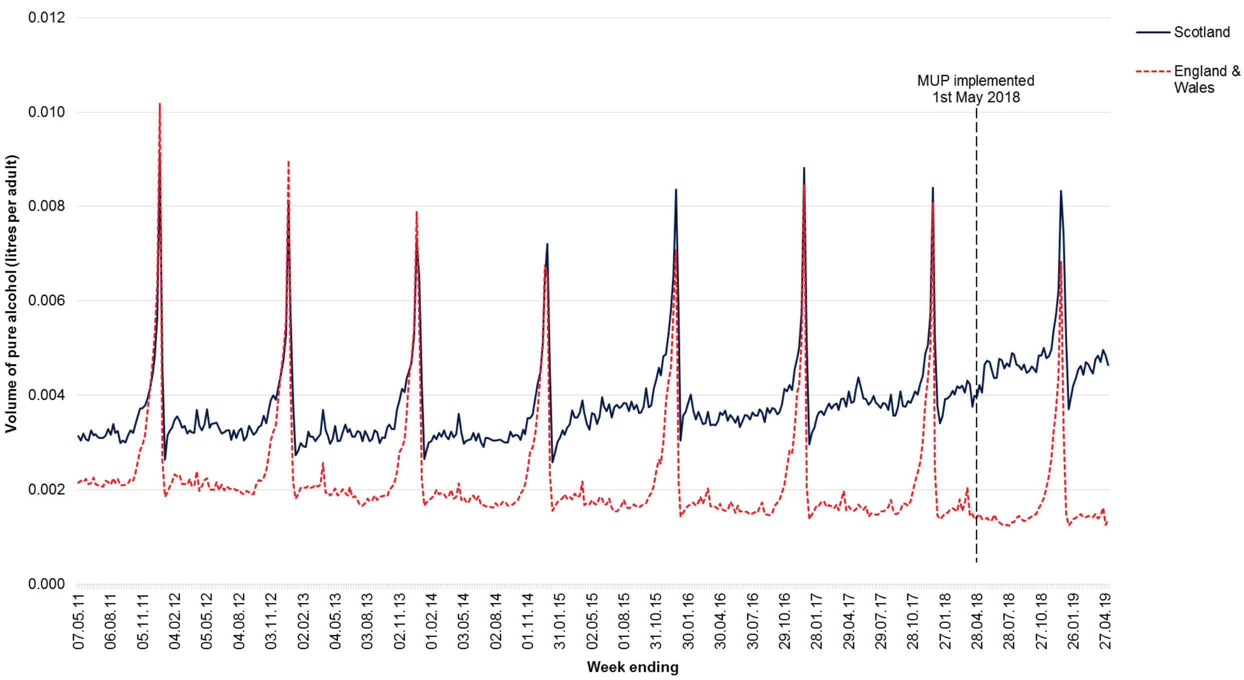


Figure 29: Weekly off-trade fortified wine sales (litres of pure alcohol per adult), Scotland, May 2016–April 2019 year-on-year

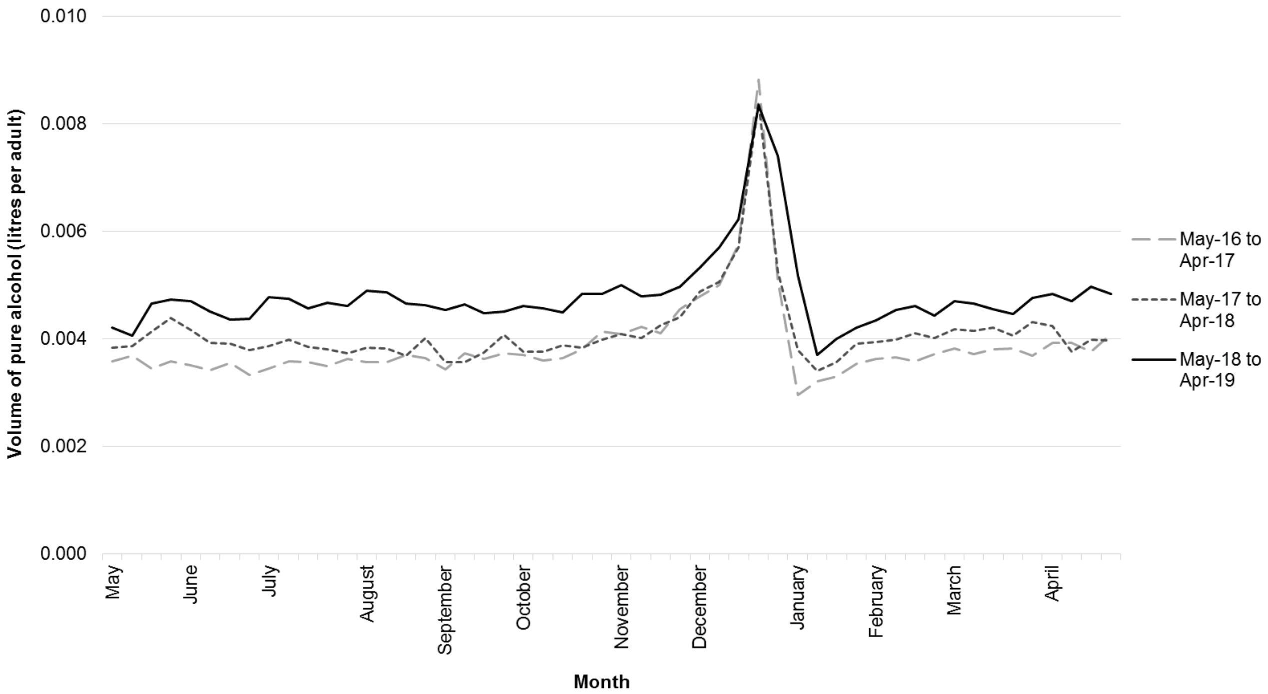


Figure 30: Percentage change in weekly off-trade fortified wine sales (litres of pure alcohol per adult) May 2018–April 2019 compared with the corresponding week in the previous year, Scotland and England & Wales

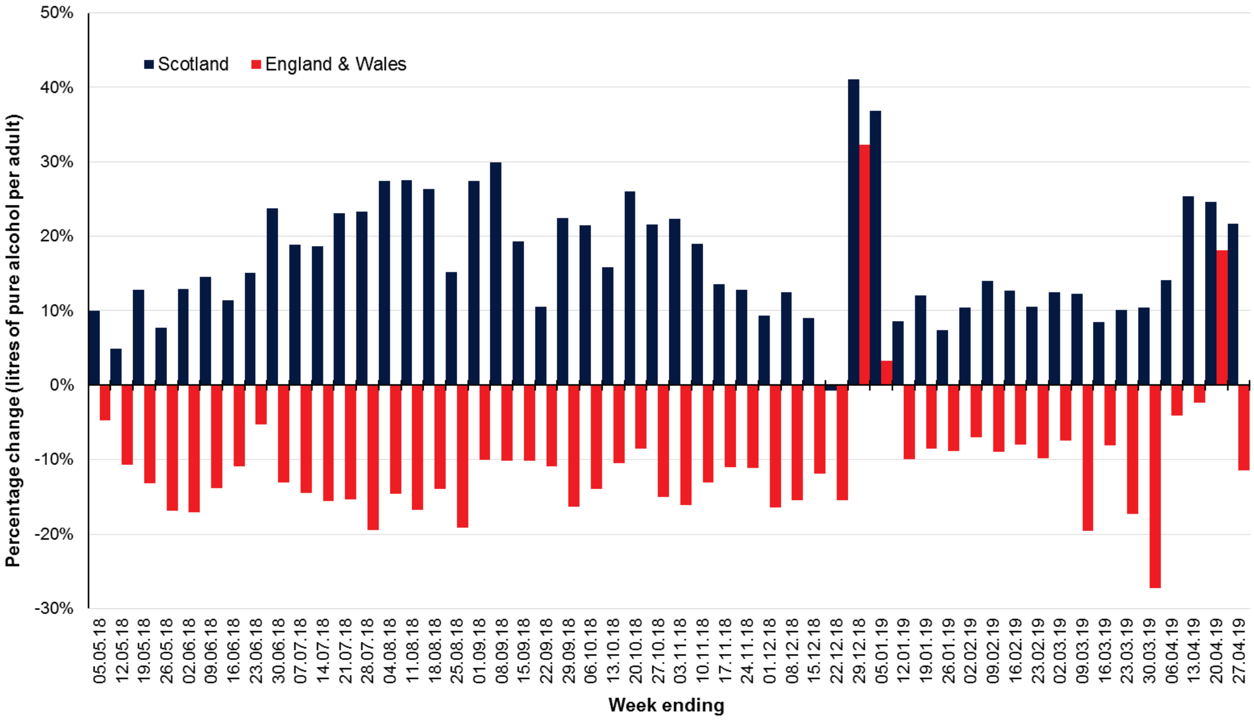
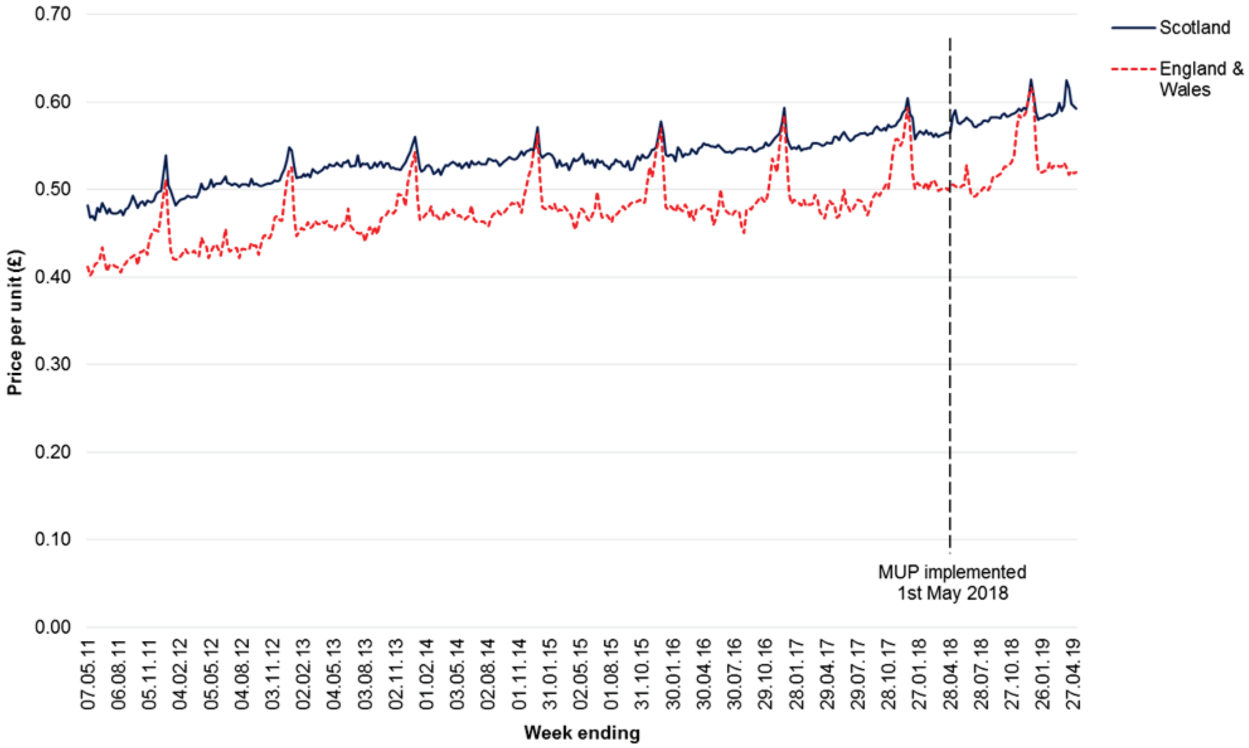


Figure 31: Weekly average sales price of off-trade fortified wine, Scotland and England & Wales, May 2011 to April 2019



Discussion

This report presents a descriptive analysis of trends in off-trade alcohol sales over an eight-year period, including the 12 months following the implementation of MUP in Scotland. We have provided comparisons over time (before and after MUP was introduced) and with England & Wales.

Principal findings

Overall, the volume of pure alcohol sold per adult through the off-trade in Scotland fell by 7.3% from 7.7 litres (in May 2011–April 2012) to 7.1 litres (in May 2018–April 2019) (Figure 2). In the 12-month period following MUP implementation, per-adult alcohol sales in Scotland fell from 7.4 to 7.1 litres, a decline of 3.6% compared with the previous year (Table 1).

By contrast over the same time period (May 2011–April 2019) per-adult alcohol sales rose by 5.9% in England & Wales, from 6.1 litres to 6.5 litres (Figure 2). The sharpest increase, from 6.3 to 6.5 litres per adult and representing a 3.2% annual increase, was in the 12-month period after MUP was introduced in Scotland (Table 1). The combination of a fall in per-adult alcohol sales in Scotland and a rise in England & Wales mean that, in the year following MUP implementation, the difference in per-adult off-trade alcohol sales was at the lowest level seen (9.6%) in this time series.

In the year following the implementation of MUP in Scotland, per-adult sales of cider fell by the greatest percentage (-18.6%), followed by spirits (-3.8%) and then wine (-3.0%), compared with the previous year (Table 1). Per-adult sales of beer in Scotland remained relatively stable (-1.1%) and sales of fortified wine rose (16.4%). In England & Wales per-adult sales of cider (8.2%), beer (7.0%) and spirits (5.6%) rose, while sales of fortified wine fell (-11.2%), compared with the previous year. Per-adult sales of wine remained relatively stable (-1.3%) (Table 1).

The period in July 2018, in which the UK experienced a heatwave and the latter half of the men's World Cup took place, had an impact on the volume of pure alcohol sold per adult in Scotland and England & Wales in the three months immediately following the implementation of MUP; this was driven largely by sales of beer and cider. Overall, the difference in sales between Scotland and England & Wales at the peak periods of

Christmas and Easter were lower in the year following MUP implementation than in any year prior.

There was a clear step change in the average sales price of alcohol following the implementation of MUP in Scotland. The average price per unit of alcohol rose substantially in Scotland while it did not in England & Wales. The rise was driven by an increase in the average sales price of beer, spirits and particularly cider.

Strengths and limitations

The use of alcohol sales data is recognised as the most robust means of monitoring alcohol consumption at a population level.[10] We have demonstrated in earlier MESAS studies that alcohol sales data offer a robust proxy for monitoring per-adult alcohol consumption in Scotland but are likely to still be an underestimation of total per-adult alcohol consumption.[11, 12] We are currently updating this work so as to provide an up-to-date assessment of the validity and reliability of using alcohol sales data to monitor population-level consumption.

Using weekly alcohol sales data offers the opportunity to analyse and present detailed trends, allowing granular changes in the year following MUP implementation to be identified. By analysing data for England & Wales we have been able to provide a comparator area where MUP has not been introduced.

We have limited this report to a descriptive analysis of the 12 months following MUP implementation. A full statistical analysis will be carried out to assess the impact of MUP on alcohol sales in the one- and three-year period post-MUP, taking account of underlying trends and seasonality.

The non-cooperation of discount retailers with market research companies and the subsequent omission of their data is a limitation of this analysis. However, by applying a mechanism to adjust the sales data, using the market share estimate of these retailers, we have improved the accuracy of the per-adult alcohol consumption estimates presented here.

Interpretation and implications

Early indications

This analysis presents an important early indication of the impact of MUP on population-level alcohol consumption for all alcohol and by drink category. The analysis is limited to a descriptive analysis of the trends, both annual and weekly, in per-adult off-trade alcohol sales in the seven years leading up to the implementation of MUP and the one year following. We have also presented an analysis of the average sales price of off-trade alcohol across the same time period.

We show a step change in the average sales price of alcohol in the off-trade in Scotland following the implementation of MUP; the magnitude of the change is variable by drink category and greatest in cider. Following the theory of change on which the evaluation is based, it would be expected that a fall in the sale of off-trade alcohol would follow this increase in price. In the year following MUP implementation we have seen an annual fall of 3.6% in total per-adult off-trade alcohol sales in Scotland. In England & Wales, where MUP has not been implemented, we have seen per-adult sales of off-trade alcohol increase by 3.2% in the same time period.

The change in per-adult alcohol sales following the implementation of MUP differs by drink category. Per-adult sales of cider saw the greatest fall in Scotland; this was likely to be associated with cider having the greatest relative increase in average sales price of all the drink categories following MUP implementation. Fortified wine was the only drink category in which per-adult sales in Scotland increased following the implementation of MUP. This is likely to be due to the combined effect of the lack of a step change in the average sales price of fortified wine and the price of some fortified wines relative to other high-strength alcoholic drinks available in Scotland.

Cross-border activity

While we have demonstrated that per-adult alcohol sales have fallen in Scotland since May 2011, we show that they have risen over the same time period in England & Wales. Half of the reduction in the difference between the two areas has occurred in the year since MUP was implemented in Scotland.

It has been suggested that Scottish residents may be crossing the border to purchase alcohol in northern England at a cheaper price than they would be able to in Scotland, either for their own consumption or to sell on illegally, and that this activity may account for these changes. Supplementary analysis of per-adult alcohol sales in the north-east and north-west regions of England (Appendix A; Figure A1), using the same method as in the main analysis, for the period May 2013 to April 2019 shows trends in these regions to be in line with the rest of England & Wales (Appendix A; Figure A2). Per-adult off-trade alcohol sales have consistently been higher in both the north-east and north-west regions of England compared with the rest of England & Wales. The annual percentage change in per-adult off-trade sales was higher in all three regions in the most recent annual period (the post-MUP period) than almost all earlier periods (with the exception of the north-west in 2014/15), but higher in the two northern regions than the rest of England & Wales (Appendix A; Table A1). However, the relative percentage difference between the north-east or north-west and the rest of England & Wales in the post-MUP period is within the range of percentage differences seen prior to MUP implementation, suggesting that cross-border sales activity is unlikely to explain the difference in per-adult alcohol sales in Scotland and England & Wales in the year following MUP implementation (Appendix A; Table A2).

Two other studies have presented qualitative evidence to suggest that cross-border activity is not a substantial issue:

- The Compliance Study found that very few of the Licensing Standards Officers, Trading Standards Officers and Police Scotland officers who were interviewed about their experiences of ensuring MUP had been complied with had ‘direct experience or knowledge of such activity’.[13] It was acknowledged that some people living in the area may opt to shop over the border or have online shopping delivered from an English store for their own consumption. There was no awareness among participants of alcohol being bought in large quantities for illegal sale in Scotland.
- The Economic Impact Baseline and Short Term Impacts Study[14] concluded that there is some evidence of Scottish consumers purchasing alcohol from stores on the English side of the border. Retailers noted that much of this activity predated MUP, because of where people work and shop or because of the pre-existing regulatory differences between Scotland and England. It was thought that any cross-border purchase was for individuals’ own consumption rather than engaging in bulk buying for others.

We will continue to examine a variety of data sources within the evaluation to ensure that we are taking account of cross-border sales activity.

The wider evaluation

Caution should be exercised in drawing any conclusions about the impact of MUP at this point in time or on the basis of a single analysis. The full evaluation will consider a wide range of outcome areas over a longer time period. Other work within the MESAS programme and the MUP evaluation portfolio will offer further insights into the impact of MUP on alcohol sales and price:

- The sales-based consumption study will use alcohol sales data to provide quantitative and statistical evidence of any change in population-level consumption following the implementation of MUP. This study will report on population-level alcohol consumption at both one and three years post-MUP and will employ interrupted time series analysis to determine the impact of MUP. These are expected to report in late-2020 and mid-2022, respectively.
- The annual MESAS Monitoring Report will continue to present a wide range of alcohol indicators, including sales and price. The 2019 MESAS Monitoring Report[15] showed that the average sales price of alcohol rose in Scotland, the proportion of alcohol sold at below 50ppu fell and the volume of alcohol sold per adult in Scotland fell in 2018. The next MESAS Monitoring Report is expected to be published in June 2020.
- The small retailers study will provide quantitative evidence on the extent of change to the price, characteristics and marketing of products available in the small and independent retailer sector. This study will report in early 2020.
- The alcohol price distribution study will provide quantitative evidence of the volume and proportion of alcohol sold at different price bands through the off-trade in Scotland pre- and post-MUP, and compared with England & Wales. This study will report in late 2020.
- The price and product range study will provide quantitative evidence on the extent of change to the characteristics of products available in the retail and wholesale sectors. This study will report in late 2021.

The final MUP evaluation report will bring together findings from the full portfolio, including the impact on the alcohol market and health and social harms. This is due to be published in late 2023.

Conclusion

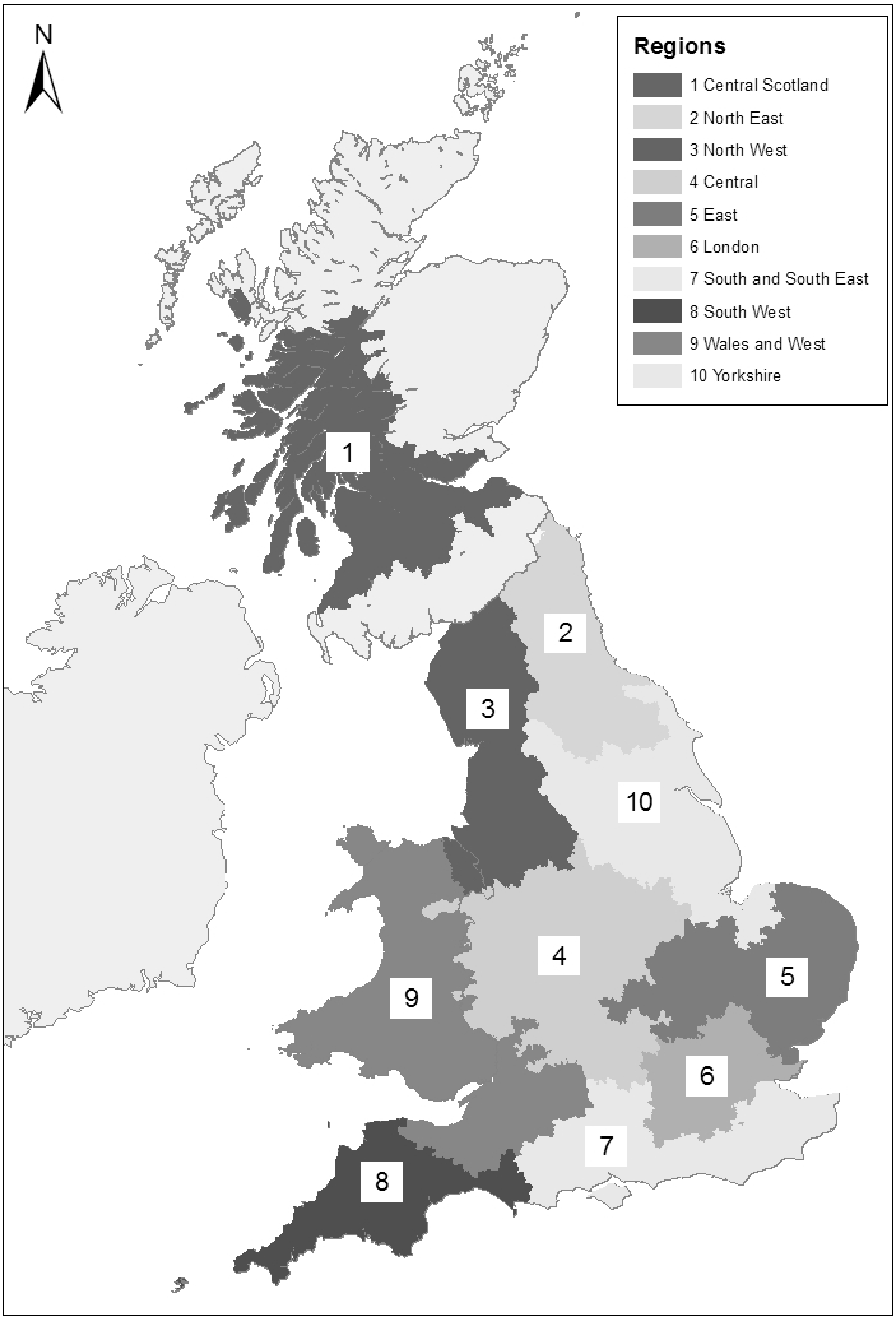
Analysis of alcohol sales data has shown that, in the 12 months following the implementation of MUP, off-trade alcohol consumption at a population level fell in Scotland while it rose in England & Wales. The combined effect of these changes resulted in the smallest difference in per-adult off-trade alcohol sales between Scotland and England & Wales in the time series available. A step change, in the form of an increase, in the average sales price of off-trade alcohol was apparent in Scotland following the implementation of MUP. The changes in both per-adult sales and average sales price post-MUP have differed by drink category.

This builds on findings from the MESAS Monitoring Report 2019[15] that showed both a rise in the price of alcohol and a fall in population-level consumption in 2018. It also complements the findings that compliance with MUP has been high in both large and small retailers[13] and that cross-border purchasing has not been substantial.[13, 14]

This descriptive analysis of alcohol sales and price in the off-trade is one of several studies that examine the impact of MUP on the price of alcohol and population-level alcohol consumption. Further studies looking at a range of outcomes and some over the longer term will report in due course.

Appendix A: Supplementary analysis

Figure A1: Map showing northern English regions included in this study (as defined by Nielsen)*



* This work is based on data provided through EDINA UKBORDERS with the support of the ESRC and JISC and uses boundary material which is copyright of the Crown.

Figure A2: Annual (May to April) off-trade alcohol sales (litres of pure alcohol per adult), north-east England, north-west England and the rest of England & Wales, May 2011 to May 2019

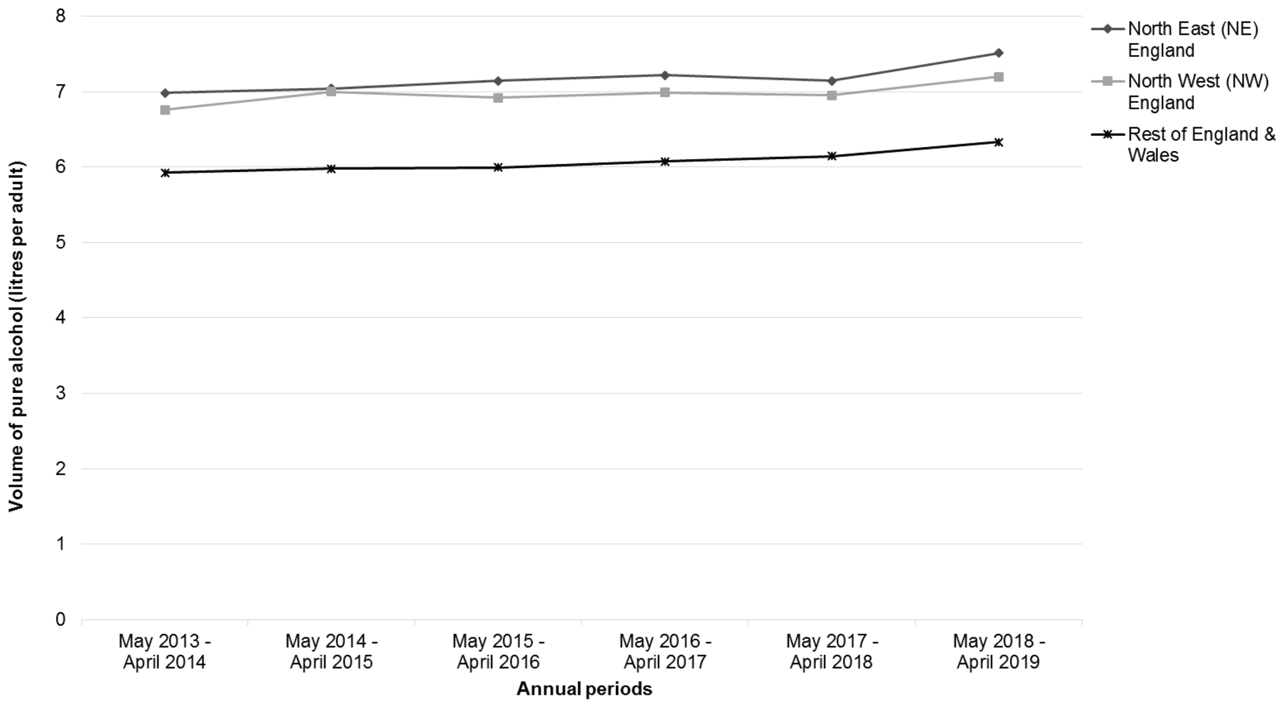


Table A1: Annual (May to April) percentage change in off-trade alcohol sales (litres of pure alcohol per adult), north-east England, north-west England and the rest of England & Wales, May 2011 to May 2019

	May 2014 – April 2015	May 2015 – April 2016	May 2016 – April 2017	May 2017 – April 2018	May 2018 – April 2019
North-west England	3.6%	-1.1%	0.9%	-0.5%	3.5%
North-east England	0.9%	1.5%	1.0%	-1.0%	5.1%
Rest of England & Wales	0.9%	0.2%	1.4%	1.2%	3.1%

Table A2: Annual (May to April) relative percentage difference in off-trade alcohol sales (litres of pure alcohol per adult), north-east England and north-west England compared with the rest of England & Wales (respectively), May 2011 to April 2019

	May 2013 – April 2014	May 2014 – April 2015	May 2015 – April 2016	May 2016 – April 2017	May 2017 – April 2018	May 2018 – April 2019
North-west England compared with Rest of England & Wales	14.1%	17.1%	15.5%	15.0%	13.1%	13.6%
North-east England compared with Rest of England & Wales	17.8%	17.8%	19.2%	18.9%	16.3%	18.6%

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