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Brewing and distilling in Scotland - economic facts and figures

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Scotland's brewing and distilling sectors play a vital role in the Scottish economy, permeating many facets of Scottish society. This paper presents economic facts and figures about Scotland's brewing and distilling sectors, with the objective of aiding policy scrutiny and developments in these sectors. Topics covered include: business base profile, turnover, employment, GVA, trade, and links with other industries.



11 October 2018
SB 18-64

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Executive Summary

Scotland's brewing and distilling sectors play a vital role in the Scottish economy. Many distillers and brewers are based in rural communities. This is not only important for direct jobs but also indirectly through generation of tourism, linkages to agriculture, and wider supply chain impacts. Many firms in both sectors are at the forefront of product innovation to cater for ever changing consumer trends. Food and drink is an integral component of how "brand Scotland" is promoted globally. Exported brewery and distillery products help to sell Scotland to the world.

Globally, alcoholic drinks volume sales have been declining and are expected to stagnate further over coming years. Continued growth in spirits, benefited by the cocktail culture, is counterbalanced by decline in ready-to-drink premixes and stagnation in beer, cider/perry and wine. The healthy lifestyle trend has also impacted on alcohol sales manifesting itself in several ways, including increased use of natural botanicals as gin ingredients, growth in natural wines, increased use of fruit flavours in cider, and an increase in low/no-alcohol beers, wines and spirits.

Distilling the Scottish spirit

The UK's distilling sector is going through an unprecedented boom. The majority of growth in distilling enterprises has been in England, driven by gin production, which has surpassed Scotland in terms of UK share of distilleries since 2010. Though in terms of revenue share and employment size-band, Scotland is still dominant. It shouldn't be surprising that Scotland is leading the way as it is the whisky capital of the world with hundreds of years of distillery expertise. Here are some key points about Scotland's distilling business base.

- Given that some of the large Scottish distilling enterprises produce numerous brands of spirits at different sites, the distinction between enterprises and local units becomes important. In 2018, Scotland had 245 distilling related business local units. This figure represents growth of 69% in the business base since 2010. Much of this growth has been over the last two years. The two years to 2018 alone saw an additional 55 local units recorded.
- Twenty-two of Scotland's 32 local authorities have a distilling business presence - up from 15 local authorities in 2010. The Moray area has the highest intensity of distilling related firms, with almost a quarter of Scottish distilling activity based there.
- Average turnover across all Scottish distilleries was approximately £5.3 million in 2018, compared to average turnover of £673,000 for all businesses in the Scottish economy.
- Nine in ten distilling jobs in Britain are based in Scotland. Employment levels in the industry have been relatively stable, varying between 7,000 to 8,000 over the last eight years.

The spirits industry contributes approximately 3% to total Scottish GDP. In the 18 years of available data, the contribution of the sector to GDP has averaged 2.8% and peaked at 3.3% of total GDP in 2013. GVA at basic prices for Scotland's 'spirits and wines' industry was £3.9 billion in 2015. This was down from a record high of £4 billion in 2013. The two most recent years of available data (2014-15) show an emerging downward trend.

Spirit duty is a tax on producing and selling spirits, with rates set by the UK Government. The current rate per litre of pure alcohol is £28.74. In real terms the level of excise duty on spirits has fallen by 50% since 1978/9. Commentators argue that there is a strong case for reform of alcohol duties as the current system is not well targeted at heavy drinkers and has indefensible anomalies.

Gin

There are over 110 Scottish gins, and over 60 distilleries currently producing gin within Scotland. Three of the world's bestselling gins: Hendrick's, Gordon's and Tanqueray, are all made in Scotland. The way gin has interjected in the homeland of whisky should not be surprising. Increasingly Scotland whisky distillers are looking to gin because it's quicker and easier to make, and gives them a faster return when waiting for whisky to mature. It is estimated that some 70-80% of UK produced gin comes from Scotland. Gin's popularity has seen an onslaught of new 'Scottish' brands hit the market. This has resulted in concerns from industry experts about what is truly a Scottish gin.

Whisky

Scotland is home to 128 malt and grain distilleries, making it the greatest concentration of whisky producers in the world. While many countries in the world produce whisky, only Scotland can make 'Scotch'. The majority of scotch whisky is consumed as blended scotch whisky. In 2017, the value of scotch whisky exports reached a record £4.37 billion. To put this into perspective, total expenditure by international visitors to Scotland in 2017 was £2.3 billion. Scotland's national drink accounts for 20% of all UK food and drink exports.

Scotland's brewing

Globally, beer consumption has been falling for decades. However, this has not dampened the significant brewery start-up rate, responding to consumers choosing to drink more expensive, specialised beers. Scotland's craft breweries have flourished over recent years with a plethora of new breweries entering the market.

Back in 1840, Scotland boasted 280 breweries. However, by 1910 this had been reduced to 92 and a continuous decline eventually reduced that number to just 11 by 1970. Now with 115 breweries the industry has increased massively from the 1970s. Year-on-year over the period 2010 to 2018, the number of breweries has increased. This rapid period of expansion has resulted in the beer manufacturing business base increasing by 229% over the eight year period.

- Sixteen of Scotland's local authority areas had a brewing industry presence in 2018. This is a significant increase from just four local authorities in 2010. Both urban and rural areas have benefited from the explosive growth of the sector. Edinburgh and Highland local authority areas have the highest intensity of brewing activity in Scotland.

- Whilst Scotland's brewing sector has increased by 229% since 2010, the majority of this growth has been in micro-breweries. Micro-breweries represent 83% of Scotland's brewing business base.
- Average turnover across all Scottish breweries was approximately £271,310 in 2018, compared to average turnover of £673,000 for all businesses in the Scottish economy. Ten percent of Scottish breweries have sales levels over £1 million. And 52% have turnover levels under £100,000.
- Employment in Scotland's brewing sector has averaged 1,000 over the last 9 years, and was at 1,000 in the most recently available data for 2017. This represented 7% of total British employment in the sector.

GVA at basic prices for Scotland's 'manufacture of beers and malts' industry was £334 million in 2015. The period 1998 to 2011 witnessed a trend of decline in the economic value the sector. The last four years of available data (2012-15) have seen a significant reversal of this downward trend. Since 2011 the economic value of the sector has increased by 146%. Despite this significant growth, the brewing industry contributes a relatively small proportion of total GDP, at approximately 0.3% of total Scottish GDP.

The brewing sector is an important driver of wider economic activity due to intrinsic links with other sectors. Based on Scottish Government's Input Output modelling, the 'beer and malt' sector is in the top quartile for knock-on economic impacts. It has the 17th highest output multiplier (capturing direct, indirect, and induced effects) of 98 industry groups. This is substantially above the 'spirits' sector which ranks 85th. Both sectors have relatively high employment multiplier effects, with the spirits sector ranked 8th and brewing ranked 10th, across all sectors of the economy.

Important links to other sectors

The supply chains for distilling and brewing encompass much more than the direct on-site production but also upstream provision of farming inputs and downstream inputs such as bottling, package design, marketing, transport logistics, etc. In addition to these core inputs, firms in other sectors – such as construction, energy and financial services – also support the supply chain.

- Barley in many ways is Scotland's foremost crop and as a key ingredient in whisky and brewing, it underpins a world-wide, multi-billion pound industry. In 2017, 291,000 hectares of barley (67% of all cereals grown) and 109,000 hectares of wheat (25% of cereals) were grown in Scotland. There were also 33,000 hectares of oats (8% of total cereals). According to the NFUS 28% of the UK's barley area is in Scotland.
- The growth in Scotland's distilling and brewing business base is bringing spin-off benefits to the tourism sector with record numbers exploring Scotland's whisky trails and brewery tours. This increased demand for food and drink related experiences has seen an increase in events such as whisky and craft beer festivals, whisky month, gin maps of Scotland, etc. Furthermore an increasing number of bars, pubs and restaurants are offering tasting flights showcasing Scottish gin, whisky and craft beers; and offering tasting menus matching specific beverages to food.

Policy considerations highlighted in the report include: data challenges, defining Scottish gin and Scottish craft beer, alcohol duties, understanding the supply chain, Brexit, ownership structures, and increased understanding of tourism impacts of gin and beer.

Introduction

Scotland's brewing and distilling sectors play a vital role in the Scottish economy. The added value of these sectors to Scotland goes beyond the often quoted headline economic figures and permeates through many facets of Scottish society.

- Many distillers and brewers are based in rural communities. This is not only important for direct jobs but also indirectly through generation of tourism, linkages to agriculture, and wider supply chain impacts.
- Many firms in both sectors are at the forefront of product innovation to cater for ever changing consumer trends. And often learnings from innovations can be transferred to other sectors of the economy.
- Food and drink is an integral component of how brand Scotland is promoted globally. Exported brewery and distillery products help to sell Scotland to the world.
- Scotland's [food and drink sector is aiming to double the value of the sector](#) to £30 billion by 2030. Brewing and distilling will play a key role in this.
- Scotland is the only place in the world that offers a university degree in brewing and distilling. Heriot-Watt University (HWU) has a global reputation for its International Centre for Brewing and Distilling.

This paper presents economic facts and figures about Scotland's brewing and distilling sectors, with the objective of aiding policy scrutiny and developments in these sectors, from a business support perspective.

Given that this paper has an economic facts and figures purpose, it has not focused on the wider social and health policy issues linked to alcohol. Thus, it should be caveated that any consideration of the economic facts in this paper, should be balanced with consideration of the negative impacts associated with alcohol misuse. The effects of this misuse are wide, and generate substantial costs not only for the health service, but also for criminal justice, communities, employers, the wider Scottish economy, and Scottish society as a whole. More information on social and health policy issues related to alcohol in Scotland can be found at the following sources as an introduction:

- [NHS Health Scotland monitoring and evaluating of Scotland's Alcohol Strategy \(MESAS\)](#)
- [Alcohol Focus Scotland](#)
- [Minimum Unit Pricing](#)
- [Treatment and support services](#)

It is worth noting that the Scottish Government can legislate and formulate policy on alcohol in aspects of health, licensing, treatment and criminal justice. The UK government has control over taxation and broadcast advertising.

The remainder of this chapter sets the scene in terms of [alcohol market trends](#), the business base boom across both the [distilling](#) and [brewing](#) sectors, and then the [structure for the rest of the report](#).

Alcohol market trends

The most recent trends in the UK alcoholic drinks sector as [highlighted by Euromonitor](#) ¹.

- Alcoholic drinks volume sales declined slightly in the UK in 2017 and are expected to stagnate over coming years. Continued growth in spirits, benefited by the cocktail **culture**, was counterbalanced in 2017 by decline in ready-to-drink/high-strength premixes and stagnation in beer, cider/perry and wine.
- The healthy lifestyle trend started to impact the alcoholic drinks industry in 2017, manifesting itself in several ways, including increased use of natural botanicals as gin ingredients, growth in natural wines, increased use of fruit flavours in cider and ready-to-drink mixes, and an increase in low/no-alcohol beers, wines and spirits.
- Discounters and online retailers continue to increase their share of distribution. The value for money and simplicity offered by discounters such as Aldi and Lidl continue to persuade an increasing number of consumers to shop with them, with increasing store numbers allowing for further expansion.
- Volume sales of alcoholic drinks are expected to remain stagnant over the forecast period, largely as a consequence of the healthy lifestyle trend leading to a reduction in alcohol consumption. The only category which bucks the trend is spirits, which is predicted to grow modestly in volume terms, driven by bitters, whisky, gin and dark rum.

Focusing on beer, whilst the number of breweries, and therefore choice of product offered, is growing, general beer consumption levels are falling. For the UK, the Cask Marque has identified four key factors which have led to a change in beer consumption across the UK ². These were:

- premiumisation
- health
- bored with big brands
- real world nostalgia.

Outlets for consumption are also changing, the most prominent being fluctuations in pub numbers with a general downward trend. According to [SBPA](#) there are approximately 4,900 pubs in Scotland. In 2017 there were around 11,500 licensed premises in Scotland (this will include hotels, restaurants, etc.), and 5,110 off-licence premises ³.

In response to changing consumer tastes and with the use of digital and social media tools, 'craft and artisanal' start-ups and SMEs have boomed and garnered significant market share over recent years. Let's take a look at the extent of this boom.

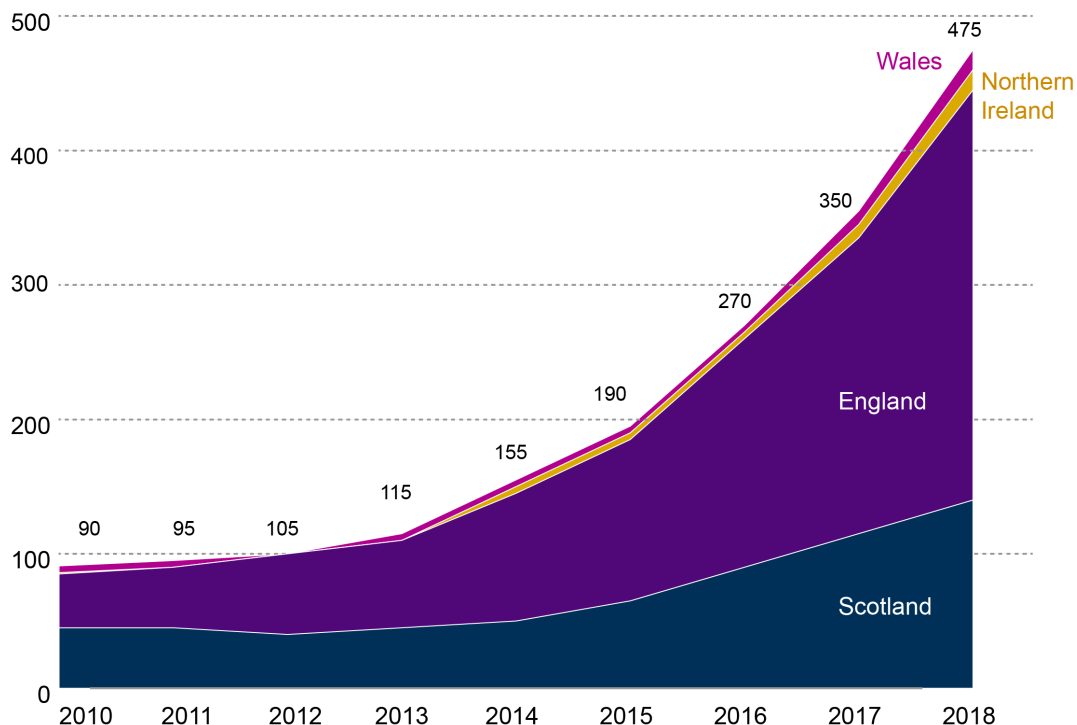
Spirits: a growing industry

Increased demand for craft batch spirits and premiumisation of products has resulted in something of a distillery boom globally. In 2018, there were 475 enterprises in the UK

involved in what is classified as 'distilling, rectifying and blending of spirits'. This represented growth of 428% since 2010, when there were 90 distilling enterprises in the UK. The majority of growth in distilling enterprises has been in England, which has surpassed Scotland in terms of UK share of distilleries since 2010. Though in terms of revenue share and employment size-band Scotland is still dominant, as illustrated in the spirits chapter.

- Over the eight year period to 2018, the number of distilleries in Scotland increased by 211% (45 to 140 enterprises). This represented 30% of the total UK share (down from 50% in 2010).
- The number of distilleries in England grew from 40 in 2010 to 305 in 2018 (663% increase). This represents 64% of total UK distilling enterprises, up from 44% in 2010.

Figure 1: Enterprise count distilling, rectifying and blending of spirits, 2010-2018



Source: Office for National Statistics (ONS) - NOMIS, 2018⁴

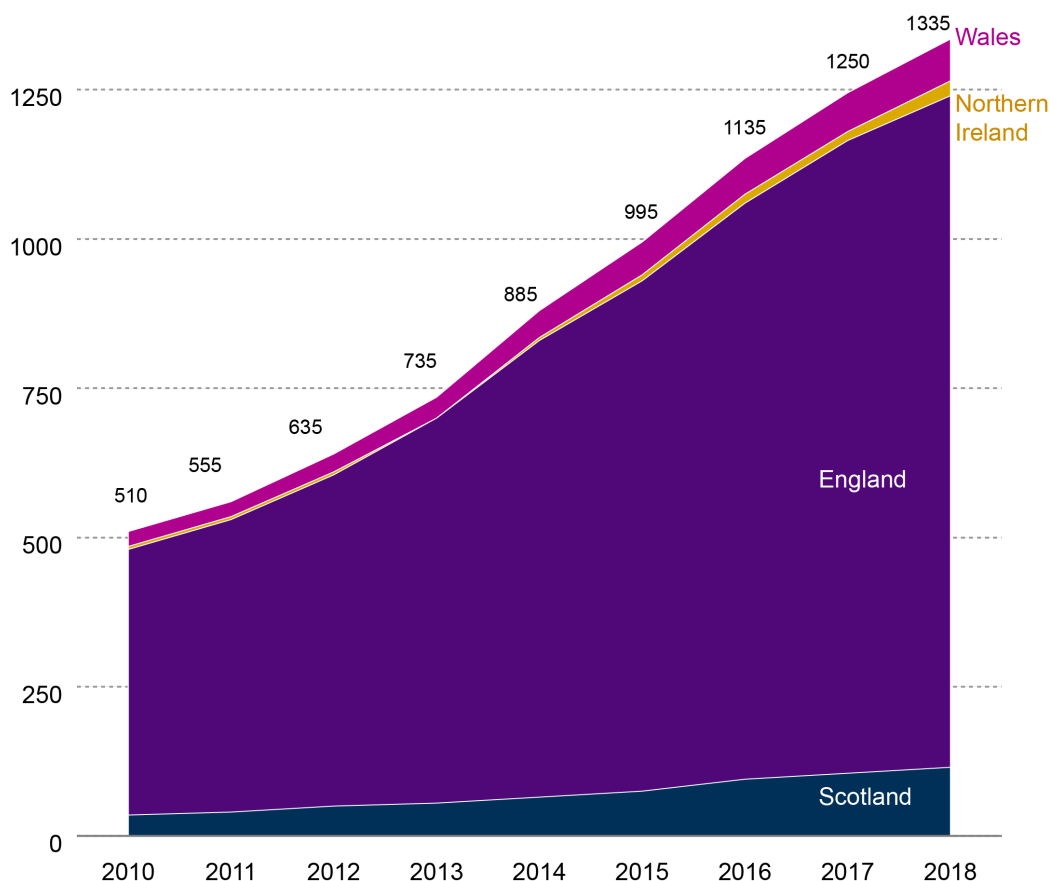
The issue with the official business count numbers published by the ONS (and other official published statistics by industry) is that they do not distinguish between which spirit the distillery is actually producing. This creates challenges for analysis and understanding trends by spirit.

Industry experts⁵ believe that a gin and craft cocktail boom has been a key driver in the surge of new distillery openings in the UK, over the last five years. However, given the already highlighted challenges in understanding the type of distillery be it gin, vodka, or whisky - it is not possible to tell exactly the count of distillery by product type in Scotland. This issue will be highlighted throughout this report, and where possible information from industry and trade organisations has been used to supplement official statistics. The economic characteristics of Scotland's distilling and spirits sector are explored in detail in the '[Scotland's spirits](#)' chapter.

A brewing industry

Globally beer consumption has been falling for decades. However, this has not dampened the significant brewery start-up rate worldwide, responding to consumers choosing to drink more expensive, specialised beers. In 2018, 1,335 enterprises in the UK were manufacturing beer. This represented growth of 162% since 2010 in the UK's brewing business base. The majority of this growth was in England, where there were an additional 680 brewing enterprises in the 8 years to 2018. Over the same period, Scotland saw an additional 80 brewing enterprises, representing growth of 229%.

Figure 2: Enterprise count manufacture of beer, 2010-2018



Source: Office for National Statistics (ONS) - NOMIS, 2018⁴

Scotland's 115 brewing enterprises in 2018 were 9% of the UK total. In percentage terms, Scotland has seen a higher than proportionate rise than the rest of the UK in the number of breweries emerging, growing by 229% from 2010 to 2018 (relative to 157% for the rest of the UK). [Scotland's brewing chapter](#) explores in much more detail the economic characteristics of the brewing sector in Scotland.

Report structure

The remainder of this report is structured as follows.

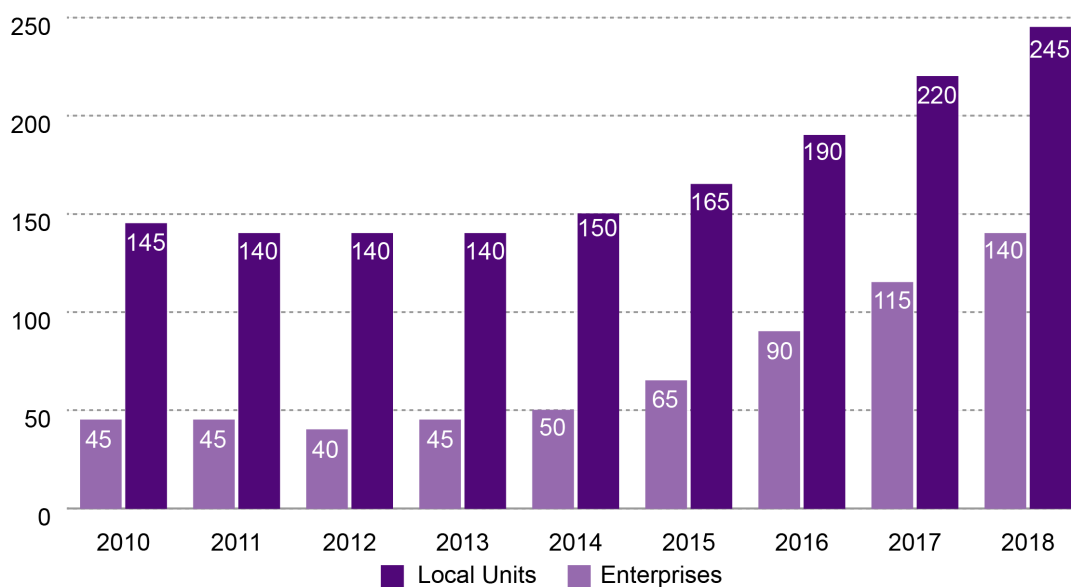
- [Scotland's spirits](#) examines the characteristics of the distilling business base. It looks at trends in employment and GVA from distilling. Special focus is given to gin and whisky. Short profiles of a selection of Scottish distilleries are also provided.
- [Scotland's brewing](#) looks at trends in brewery firm numbers, employment, GVA, production, and trade. Industry concerns around craft beer definitions and beer duty are highlighted. And a flavour of the business base is provided with some mini brewery profiles.
- [Links with other industries](#) are explored, with a focus on agriculture, tourism, and malting.
- And finally a [summary of policy considerations](#).

Scotland's spirits

The UK's distilling sector is going through an unprecedented boom and it shouldn't be surprising that Scotland is leading the way. Scotland is the whisky capital of the world and has hundreds of years of distillery expertise. And it is not only whisky that's growing, gin production is also prospering.

Business base

Figure 3: Distilling, rectifying and blending of spirits, number of enterprises and local units, 2010-2018, Scotland



Source: Office for National Statistics (ONS) - NOMIS, 2018⁴

There were 140 Scottish enterprises involved in 'distilling, rectifying (purifying) and blending of spirits' in 2018. Given that some of the large Scottish distilling enterprises produce numerous brands of spirits at different sites, the distinction between enterprises and local units becomes important.

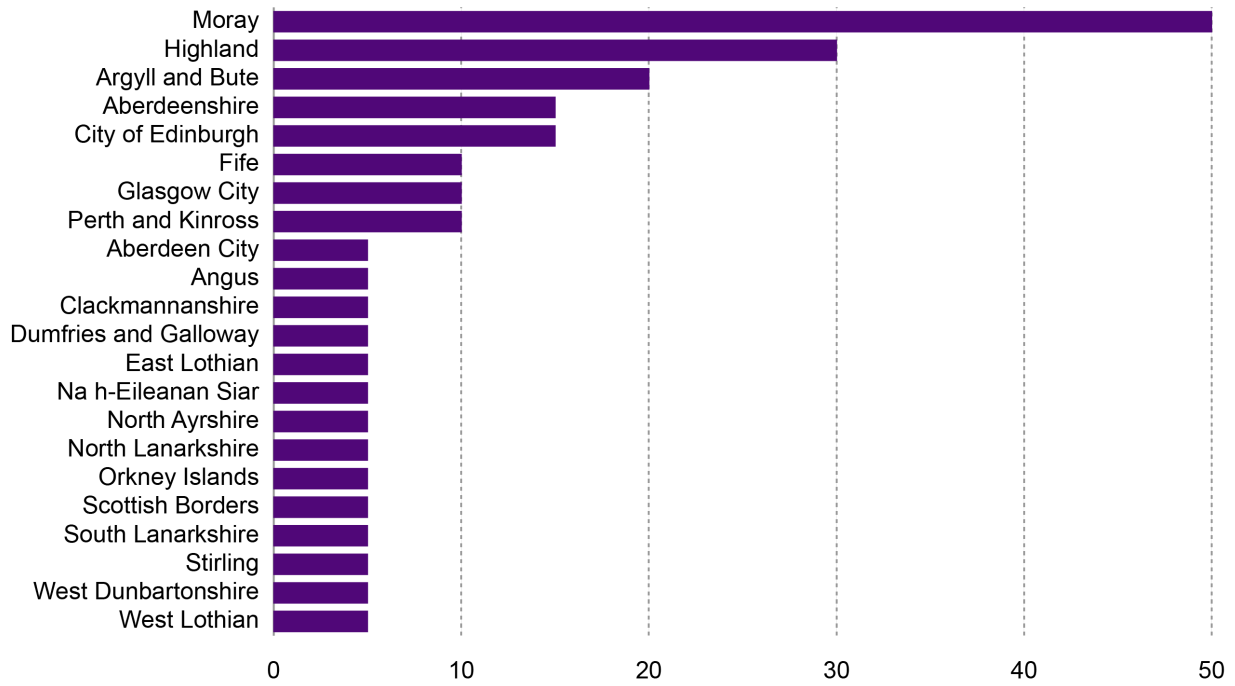
- An **enterprise** can be thought of as the overall business, made up of all the individual sites or workplaces. It is defined as the smallest combination of legal units (generally based on VAT and/or PAYE records).
- A **local unit** is an individual site (for example a factory or shop) associated with an enterprise.

Thus, to fully understand trends in the Scottish distilling business base it is important to look at local unit numbers. In 2018, Scotland had 245 distilling related business units. This figure represents growth of 69% in the business base since 2010. Much of this growth has been over the last two years. The two years to 2018 saw an additional 55 local units recorded.

Twenty-two of Scotland's 32 local authorities have a distilling business presence - up from 15 in 2010 - showing the growing geographic spread of the sector. The relevant local

authorities are illustrated in Figure 4. The Moray area has the highest intensity of distilling related firms with almost a quarter of Scottish distilling activity based there. Other hotspots for distilling were Highland (13% of total), Argyll and Bute (9%) Edinburgh (7%), and Aberdeenshire (7%).

Figure 4: Distilling, rectifying and blending of spirits - count of local units, 2018, local authorities with activity

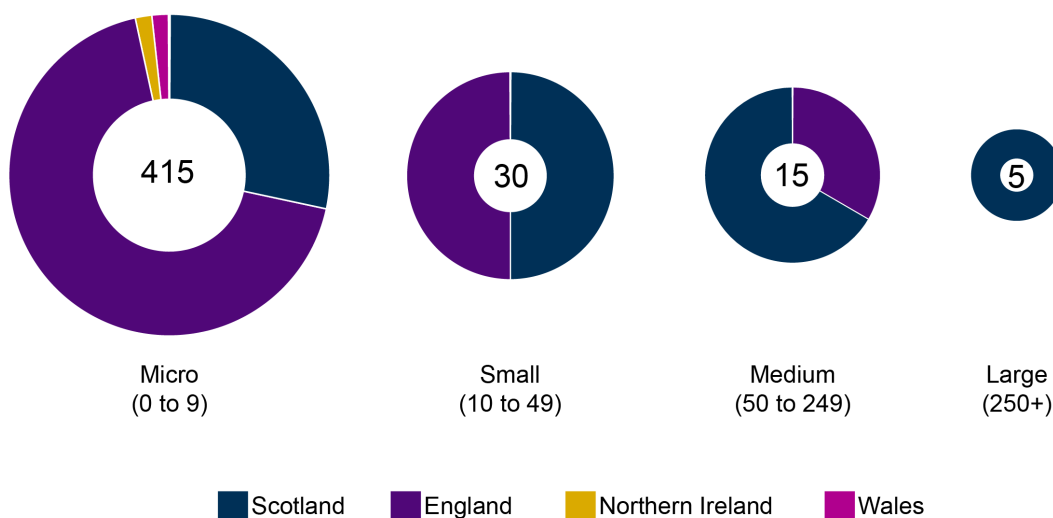


Source: Office for National Statistics (ONS) - NOMIS, 2018⁴ Please note all figures are rounded to avoid disclosure. Values may be rounded down to zero and so all zeros are not necessarily true zeros. Thus, some local authorities not included here may have a minor distilling presence but these areas do not show in official data.

Turnover and size

Overall across the UK, 89% of distilling enterprises were micro in size (see [Figure 5](#)), employing 0-9 employees. Just 4% of the UK's distilling business base can be classified as medium or large, with the majority of these based in Scotland. Whilst [Figure 1](#) showed that England had significant growth in distilleries, [Figure 5](#) shows that the majority of these are micro in nature. In terms of scale, Scotland dominates the distilling industry, with all of the UK's large distilleries.

Figure 5: Distilling, rectifying and blending of spirits, count of enterprises by employee sizeband, 2018, UK nations

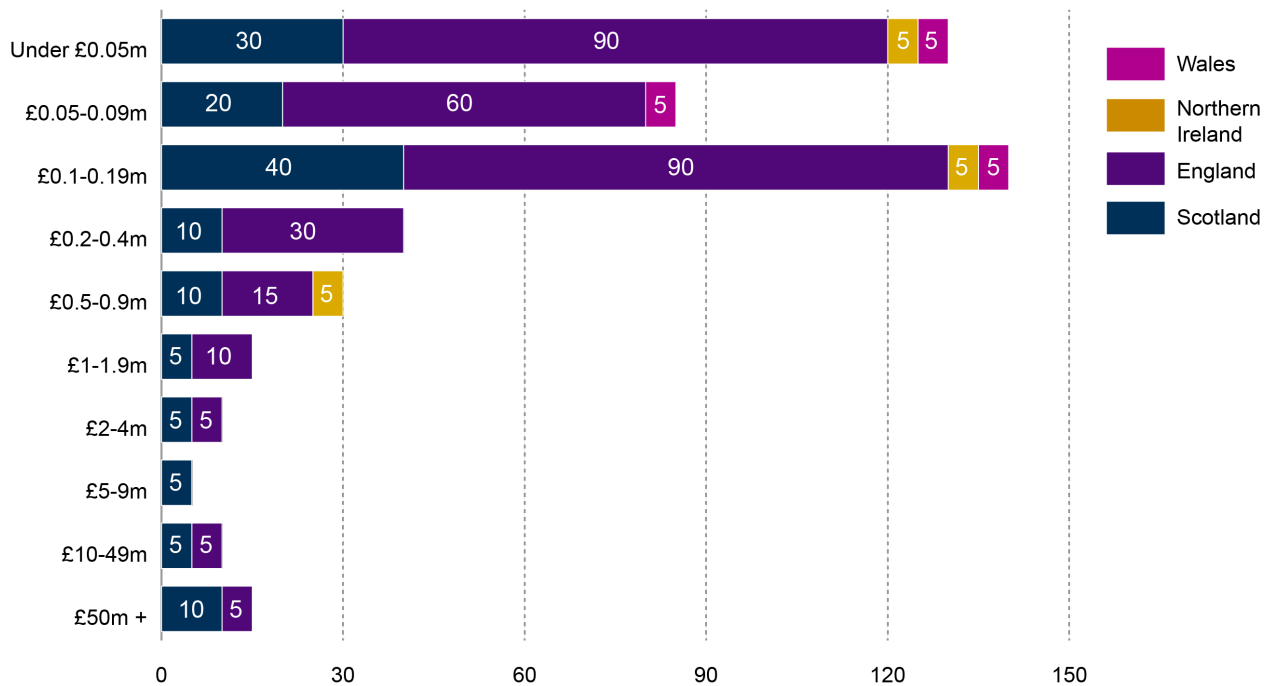


Source: Office for National Statistics (ONS) - NOMIS, 2018⁴ Please note all figures are rounded to avoid disclosure. Values may be rounded down to zero and so all zeros are not necessarily true zeros. Totals across tables may differ by minor amounts due to the disclosure methods used.

About one in four of the UK's distilleries (27%) have turnover levels under £50,000 and 74% of all distilling enterprises have turnover levels under £200,000 (see [Figure 6](#)). This reflects the fact that 89% of the UK's distilling business base is micro in nature. Average turnover across all Scottish distilleries was approximately £5.3 million in 2018, compared to average turnover of £673,000 for all businesses in the Scottish economy. The average turnover figures have been calculated using available turnover bands, as illustrated in [Figure 6](#). The upper band of £50+ million has no upper limit and calculations were conducted using the £50 million level. Thus, the estimates are likely to be an underestimate and should be interpreted as an indicator of relative scale rather than exact indicators.

Distilleries in Scotland dominate the high turnover bands in [Figure 6](#). Seven percent of Scottish distilleries have sales levels over £50 million and a further 5% have levels between £10-49 million.

Figure 6: Distilling, rectifying and blending of spirits, count of enterprises by turnover, 2018, UK nations

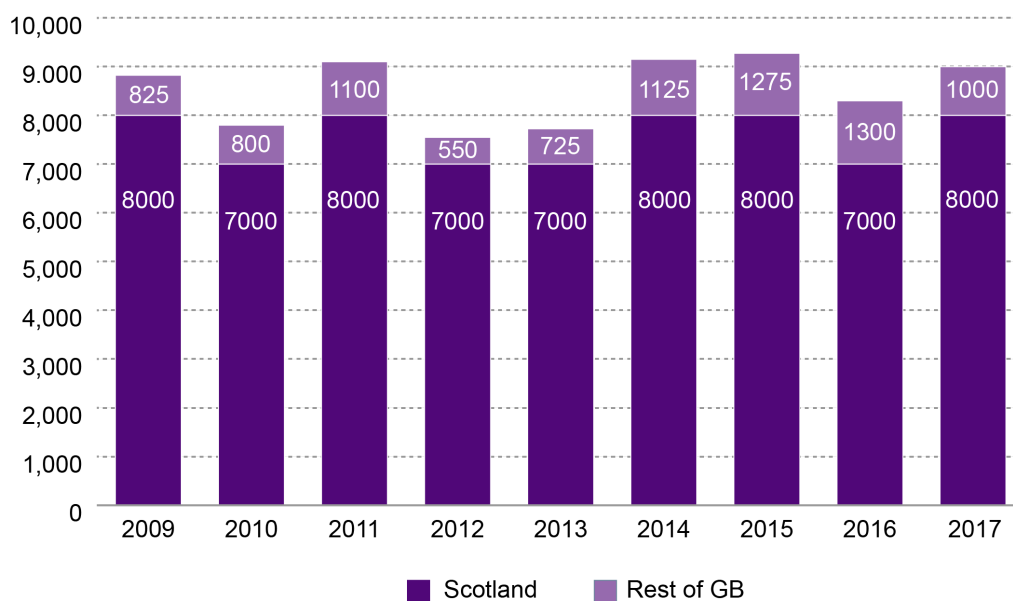


Source: Office for National Statistics (ONS) - NOMIS, 2018⁴ Please note all figures are rounded to avoid disclosure. Values may be rounded down to zero and so all zeros are not necessarily true zeros. Totals across tables may differ by minor amounts due to the disclosure methods used.

Employment

Nine in ten distilling jobs in Britain are based in Scotland. Employment levels in the industry have been relatively stable, varying between 7,000 to 8,000 over the last 9 years. The annual variations are likely caused by the timing of production runs and fluctuating levels of outsourcing. Despite the significant growth in distillery enterprise numbers, this hasn't correlated with employment levels. This is likely because almost all of the firm level growth has been either nano or micro size distilleries - with staff levels between 0 and 9.

Figure 7: Distilling, rectifying and blending of spirits, employment, 2009-17, Scotland & Rest of Great Britain

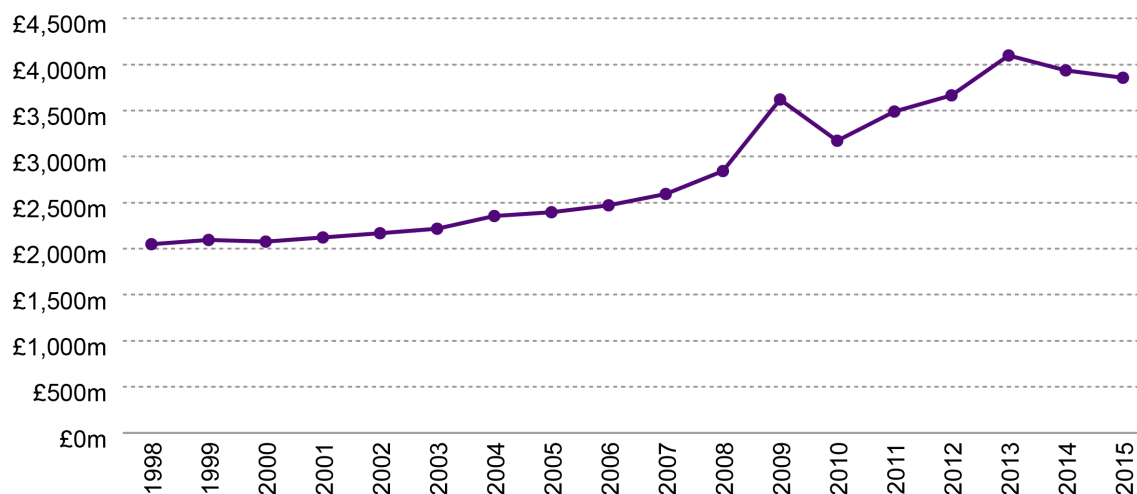


Source: Office for National Statistics (ONS) - NOMIS, 2018⁶ ONS Business Register and Employment Survey (BRES) employment data does not include Northern Ireland

Income

Gross Value Added (GVA) at basic prices for Scotland's 'spirits and wines' industry was £3.9 billion in 2015. These figures correlate with [Scotch Whisky Association data](#) which shows that the Scotch Whisky sector directly contributes over £3.2 billion GVA to the Scottish economy. The period 1998-2009 witnessed a period of significant and constant growth. In 2010 the fortunes of the spirits sector dipped, but the following 3 year period again recorded record growth, breaking the £4 billion mark in 2013. The two most recent years of available data (2014-15) show an emerging downward trend. It remains to be seen, if this trend will continue or be reversed.

Figure 8: Gross Value Added (GVA) at basic prices by industry, manufacture of spirits and wines, 1998-2015



Source: Scottish Government, 2018⁷

It is possible to estimate each Scottish industry's contribution to GDP from the [Input Output tables](#) by dividing GVA at basic prices for each industry by the overall total GVA figure. The spirits industry contributes approximately 3% to total Scottish GDP. In the 18 years of available data, the contribution of the sector to GDP has averaged 2.8% and peaked at 3.3% of total GDP in 2013.

Trade

HMRC data show the export and import of gin and the export of Scottish whisky products. Whilst the bulk of whisky can be attributed as Scottish produce, the origin of gin across UK regions is less clear. Hence, whilst there is certainty around the trade value of Scottish whisky, the same figure for Scottish gin is not available (even though the bulk of this spirit is understood to be produced in Scotland). Where trade values are available, these are discussed in more detail in the 'in focus' sections that follow.

The export of spirits from the UK is the tenth largest contributor to the total value of exports out of over 1,300 other product categories recorded by HMRC. Spirits contributed 1.6% of total UK exports in 2017 at £5.63 billion.

Gin in focus

It is difficult to find Scottish specific data on the production of spirits, aside from scotch whisky, as highlighted previously. Thus, the figures below are sourced from a range of unofficial sources to provide an indication of the scale of gin production in Scotland. This section also highlights some gin specific issues and provides examples of gin products produced in Scotland.

There are over 110 Scottish gins ⁸, and over 60 distilleries ⁹ currently producing gin within Scotland. Distilleries differ in size but the growth has been in small scale, artisanal gin production. Three of the world's bestselling gins: Hendrick's, Gordon's and Tanqueray, are all made in Scotland. The ascent of gin has been rapid, in 2010 UK gin sales were about half those of scotch. Today, both are worth about £1.2 billion, though by 2020 gin is predicted to be worth more than £1.5 billion, while scotch sales will stay flat ¹⁰. UK exports of gin accounted for £532 million worth, or 9%, of total spirits exports in 2017 ¹¹. This represented growth of 13% (+£59m) on the previous year.

The way gin has interjected in the homeland of whisky should not be surprising. Increasingly Scotland whisky distillers are looking to gin because it's quicker and easier to make, and gives them a faster return when waiting for whisky to mature. It is estimated that some 70 ¹² -80 ¹⁰ % of UK produced gin comes from Scotland.

Gin's popularity has seen an onslaught of new 'Scottish' brands hit the market. This has resulted in concerns from industry experts about what is truly a Scottish gin ¹³.

Defining what is a Scottish gin

Gin production, according to its UK industry code is made up of actual distilling, rectifying and blending. It is difficult to disaggregate these activities and there is some evidence of cross production within distilling plants. Some firms also have their gin produced entirely by other producers on contract. These activities can be classified as below ¹⁰:

- Primary alcohol production.
- Prepare botanicals rectify and blend with purchased Grain Neutral Spirit.
- Outsource entire production process.

Hence, it would seem that just some are spirit producers, whereas others may be involved only in rectifying and blending of produced spirit. Added to the already highlighted challenges around data on gin producers in Scotland, it is difficult to establish what parts of the production processes are actually happening in Scotland - the proportion producing base product and those rectifying or blending the spirit.

Media reports ¹⁴ in 2017, highlighted concerns that not all Scottish gin is made in Scotland. It was revealed that some Scottish gins were made by contract distillers in England. And, unlike for scotch, which has name protection, there is no similar legal protections for other spirits produced in Scotland. The Scottish Distillers Association wants Scottish produced spirits to have the same protection as scotch whisky ¹⁵. The Association is encouraging those making spirits in Scotland to sign up to their accreditation scheme to ensure authenticity and quality of Scottish products.

Gin-tastic variety

This section provides an overview of some Scottish gin products, illustrating the variety in terms of geography, scale, and uniqueness of brand.

Isle of Harris Gin

The Isle of Harris Distillery is a working distillery in Tarbert on the Isle of Harris, creating the award-winning Isle of Harris Gin and the forthcoming 'The Hearach' single malt whisky. The distillery opened in 2015. Products from the Isle of Harris Distillery reflect the the maritime influences of the island.

All distillation, bottling and order fulfilment takes place at Tarbert on Harris. And casks of its single malt, The Hearach, are maturing in its warehouse by the shores of Loch an Siar near Ardhasaig. Although very much a working distillery, it is also open to visitors. Initial visitor targets had been in the region of 40,000 per annum but in the first year they reached 60,000, and in 2017 visitor numbers were just over 80,000. To put this in perspective, the total number of annual visitors to the Outer Hebrides is approximately 218,000.

Isle of Harris Distillers raised £11 million to build and fund the distillery from a number of public and private investors. The company successfully applied to the Scottish Government through its [Food Processing, Marketing and Co-operation scheme](#) and in January 2013 was awarded a £1.9 million grant towards the distillery, as well as securing an investment of £1.5 million from the Scottish Investment Bank. To date, Isle of Harris Distillers has received grant approvals from Highlands and Islands Enterprise (HIE) totalling over £1.25 million assisting with the construction of the distillery, and off-site warehouse, business development costs and attendance at trade fairs. Gordon Macdonald, HIE Account Manager for Isle of Harris Distillers, has worked on the project since 2011 and feels that the distillery has transformed the economy of Harris, creating a world-class product and an internationally significant destination in the heart of Tarbert.

Summary of information from [Isle of Harris Distillers](#) and [Isle of Harris Distillers Case Study - Highlands and Islands Enterprise](#)

Arbikie Gin

Arbikie Highland Estate Distillery is a family-owned working farm situated on the east coast of Angus. It produces an award winning range of spirits including gin, whisky and vodka. Three varieties of potato are grown on the family farm to create Arbikie gin and vodka.

The Arbikie Highland Estate distillery is a genuinely single site operation – the ingredients are planted, sown, grown and harvested within an arms-length of the distillery. The mountain-filtered water is taken from an underground lagoon on the farm. Bottling is also done on site.

Many of Scotland's distilleries are at the forefront of innovation. Arbikie exemplifies this as their distiller and Abertay University PhD student Kirsty Black won first prize in the Institute of Food Science and Technology Young Scientist of the Year Scotland Award. The winning project looked at the potential for legumes, via intercropping, to replace the use of inorganic fertiliser on cereal crops. And utilise the starch from the resulting pea or bean crop to produce alcohol and the protein to feed in to the aquaculture industry.

Summary of information from [Arbikie Highland Estate Distillery](#) and [Business Insider](#)

GlenWyvis GoodWill Gin

GlenWyvis Distillery was established in 2015 as a Community Benefit Society with the specific purpose of owning and operating a community-owned distillery and associated visitor centre to benefit the community of Dingwall. The distillery aims to benefit the local community by developing Dingwall into the leading Craft Distillery Town of Scotland, and a quality destination on the North Coast 500 tourist route.

In 2016, the first share offer in GlenWyvis Distillery Limited raised a total of £2.6 million from some 2,200 investors towards anticipated costs of £3.8 million. Following the detailed planning, design and costing phase, the construction of the new distillery commenced in January 2017 and the first run of new spirits followed soon after. The first batch of gin distilled at the 100% community-owned distiller was available for sale in summer 2018.

The distillery aims to have the strong green credentials; they currently deliver their gin by electric car. And situated high on a hill above Dingwall, GlenWyvis Distillery will be entirely powered by renewable energy.

Summary of information from [GlenWyvis Distillery](#) and [Crowdfunder](#)

Whisky in focus

Scotland is home to 128 malt and grain distilleries¹⁶, making it the greatest concentration of whisky producers in the world. While many countries in the world produce whisky, only Scotland can make 'Scotch'. The spirit can't be called scotch until it has aged in Scotland

for at least three years. However most single malt whiskies sleep for much longer, before going to market.

- The majority of scotch whisky is consumed as blended scotch whisky. This means as many as 60 of the different single malt and single grain whiskies are blended together, ensuring that the individual scotch whiskies harmonise with one another and the quality and flavour of each individual blend remains consistent down the years.
- Single malt scotch whisky is classified in one of five main categories - Highland, Lowland, Speyside, Islay and Campbeltown - according to the geographical location of the distillery in which it is made. In many ways, the geography and climate of each region influences the character of the whisky produced there.

Research by the [Scotch Whisky Association](#) (SWA) found that the scotch whisky sector directly contributes over £3.2 billion GVA to the Scottish economy. When indirect and induced multiplier effects are taken into consideration, the industry's impact is £4.7 billion GVA in Scotland. The SWA estimate that overall employment in Scotland associated with scotch whisky, including multiplier effects was 36,850 (10,540 direct, 19,430 indirect, 6,880 induced). The SWA research states the hospitality sector was a predominant factor in indirect employment ¹⁷. These industry estimates of employment are relatively on the high side compared to the official ONS estimates, already reported in this chapter. And the applied multiplier effects are much greater than those estimated by the Scottish Government for the sector in [input-output modelling](#).

Whisky duty

Spirit duty is a tax on producing and selling spirits with rates set by the UK Government. The current rate per litre of pure alcohol is £28.74 ¹⁸. This [equates to £7.54](#) for 70cl at 37.5% abv ¹⁹ for spirits.

A [Institute of Alcohol Studies fact-sheet](#) summarises the theory of alcohol taxation ²⁰. It highlights that:

- the World Health Organization classes increasing alcohol taxes as one of the most cost-effective measures for achieving its target of a 10% reduction in harmful alcohol consumption
- alcohol tax has also been endorsed by the Organisation for Economic Co-operation and Development (OECD), among a suite of measures to reduce the negative health effects of drinking
- a Public Health England review of the efficacy of different alcohol policies concluded that increasing taxes was a cost-effective way to reduce alcohol consumption and harms.

According to the [Scotch Whisky Association](#) tax on scotch whisky currently stands at 74%. The 74% tax (VAT and excise duty) is based on an average selling price of £14.15 for a 70cl bottle (as at June 2018) of scotch whisky in the off-trade in the UK. Of that, excise duty forms £8.05 and VAT forms £2.36. Thus, total tax on a bottle is £10.41 ²¹. However, it should be noted that the [Institute of Alcohol Studies](#) shows that in real terms the level of excise duty on spirits has fallen by 50% since 1978/9 ²².

The [Scotch Whisky Association](#) believe that scotch and other spirits are taxed at a higher level per unit of alcohol than other categories. For example, they state scotch is taxed 327% more per unit than cider, and 19% more than wine. The Association are calling for no more increases to the spirit duty rate and to 'stop the scotch super tax'. The Institute of Alcohol Studies acknowledges that there are significant differences in the level of tax between different types of drink, with wine and spirits attracting higher rates of duty on average than beer, and cider taxed at the lowest rate of any drink.

The [Institute for Fiscal Studies](#) has branded the UK's current system of alcohol excise duties "a mess". They state ²³ :

“ ...there is a strong case for reform of alcohol duties. The current system is not well targeted at heavy drinkers and has indefensible anomalies, such as very low rates on cider compared with beer. Regardless of whether minimum pricing is introduced, the UK Government should consider redesigning alcohol taxes. ”

Whisky exports

In 2017, the value of scotch whisky exports reached a record £4.37 billion ¹¹ . To put this into perspective, total expenditure by international visitors to Scotland in 2017 was £2.3 billion ²⁴ . By volume, the equivalent of 1.23 billion bottles were exported to 180 markets worldwide in 2017, an increase of 20 million bottles or 1.7% compared with 2016. Scotland's national drink accounts for 20% of all UK food and drink exports.

- Blended scotch whisky continues to be the largest traded category of scotch whisky by far - accounting for over two-thirds of all Scotch exports in both value and volume terms. Over 842 million bottles of blended Scotch were exported in 2017 with the top five destinations being France, USA, Mexico, Spain and South Africa – accounting for 314 million (37%) of all blended scotch whisky exports.
- Single malt continued to improve year on year where volumes exported accounted for 10% and values accounted for over a quarter of total exports. It was 2016 when the value of single malt exports exceeded £1 billion for the first time and the value in 2017 grew by a further 14% to £1.2 billion. While there may have been some exchange rate assistance, the additional 8% in volume taking the total number of bottles of single malt to over 122 million, there is an indication that the premiumisation of the category continued in 2017.

The bulk market remains an important factor in the supply of scotch globally. Supplies for bottling scotch whisky overseas nearer to, or in-market, provide economic and environmental efficiencies for some supply chains and there is also the consideration of scotch used as a primary ingredient for other spirit drinks. Growth in bulk exports (in either volume or value) has been marginal in recent years. The [SWA believes that this supports the hypothesis](#) that industry is approaching the expansion of supplies more strategically. Volumes of bulk exports would reduce further with tariff liberalisation in key markets.

The European Union maintained its position as the main region for scotch whisky exports and accounted for 32% of the total value of exports in 2017. North America accounted for £1.1 billion worth of scotch whisky exports and for 25% of all scotch whisky exports by

value. Volumes and values to Asia grew with the hub of Singapore, which accounted for a third of export values and 19% of the volume, driving a considerable amount of growth ¹¹.

Geographical Indication

A current concern for the whisky sector is continued recognition of Geographical Origin status, in light of Brexit negotiations. The Scottish whisky industry has protected Geographical Indication (GI) in the EU which is administered at the UK level (EU Regulation 110/2008). The [Scotch Whisky Association](#) want to see scotch whisky's GI protection in the EU continues after the UK leaves the EU. They believe the UK must introduce a domestic legislative framework for GIs, together with a register that incorporates all GIs currently protected in the EU. Further discussion on the implications for Scottish GIs can be found in the [SPICe Briefing: Geographical Indications and Brexit](#).

Whisky galore

Scotland has such a variety of distillers - in terms of size, geography, age, ethos, history, branding, etc. - that this paper would struggle to reflect the diverse assortment. Thus, we have highlighted just two, illustrating the long established Macallan distillery in contrast to the relatively new Eden Mill distillery.

The Macallan

Founded in 1824, Macallan was one of the first distillers in Scotland to be legally licensed. Based in Moray, Macallan produces a variety of products from entry-level Scotch to some of the most coveted bottles for serious collectors.

The new Macallan distillery opened in summer 2018. The innovative new site has been designed with the visitor experience central to its development. The project took three years and six months to complete and cost £140 million. With 36 copper pot stills – 15 more than the previous site – the new distillery will enable production of the Macallan single malt to increase by up to one-third if required.

Macallan is part of the Edrington Company. Edrington makes some of the most famous Scotch whiskies, including The Famous Grouse, Highland Park, Cutty Sark and The Glenrothes. Edrington is headquartered in Scotland but international in its composition. It has over 70% of its 3,000 staff based overseas promoting opportunities for international development of its brands. The company owns its route to market in 13 countries and operates the remainder through joint ventures and third party arrangements.

The new distillery represents a significant investment in Macallan by brand owner Edrington, which is putting a total of £500 million towards building the distillery and additional warehousing, and sourcing quality wood over the next 12 years.

Summary of information from [Macallan](#), [Edrington](#), and [Scotch Whisky](#).

Eden Mill

Eden Mill is Scotland's first single site distillery and brewery based in St Andrews. Set up in 2012, Eden Mill were the first to make spirits in the region for 150 years. Eden Mill initially launched their new make spirit, which was followed by 1-year old expressions. They then launched 2-year old expressions, as a prelude to the launch of their maiden single malt whisky in 2018. The first bottling of the single malt was sold at auction and broke the world record for a first release, at £7,100. Also the first three batches of their Art of the Blend blended whisky sold out.

In early 2018, Eden Mill unveiled plans to create a new distillery and brewery just metres from its current headquarters in Fife. The £4 million expansion project will allow them to increase production of gin, beer and whisky, create innovative products, and retain space for further expansion.

Eden Mill is listed as the number one tourist destination in Fife on TripAdvisor and at peak times is fully booked weeks in advance. The new facility will enable Eden Mill to double the number of tourists taking distillery tours from 25,000 to 50,000 a year.

Eden Mill products are sold in more than 20 countries. In terms of markets, it has seen Europe performing very well, continued growth in the US, and UK duty free proving successful.

Summary of information from [Eden Mill](#) and [The Scotsman](#)

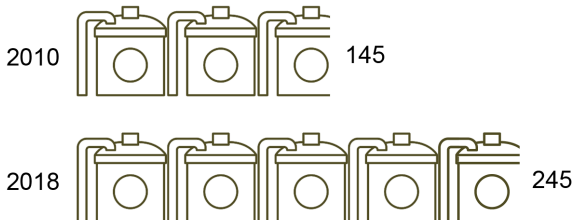
Summary infographic distilling



The Scottish distilling industry

The number of distilling local units in Scotland has increased by 69%

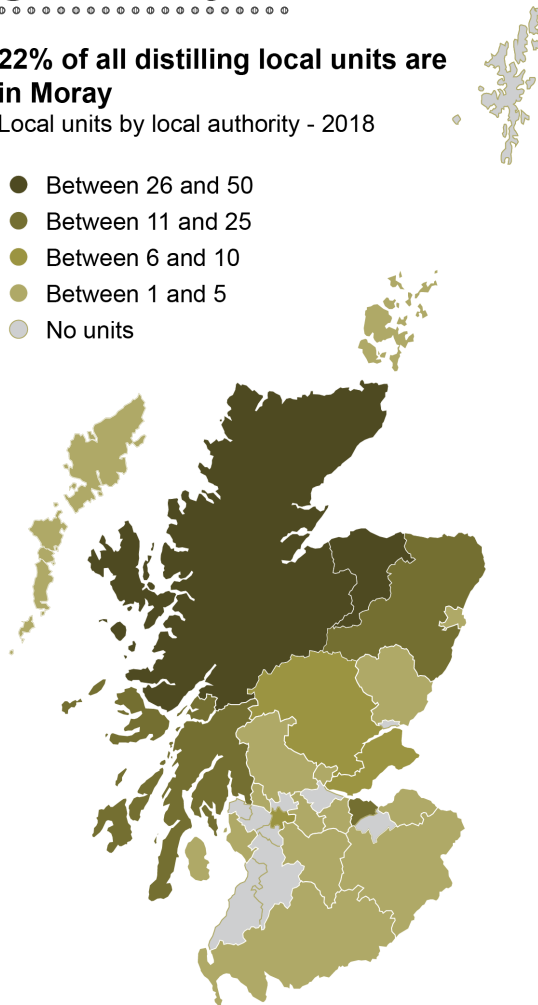
Between 2010 and 2018



22% of all distilling local units are in Moray

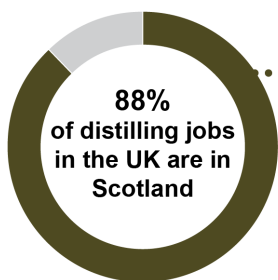
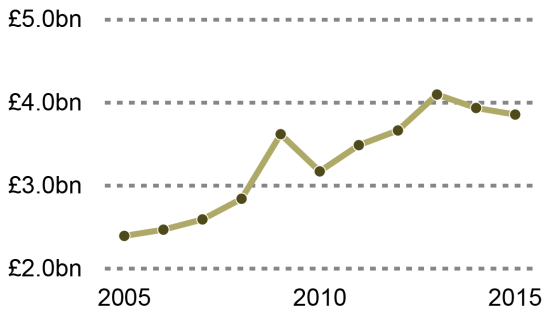
Local units by local authority - 2018

- Between 26 and 50
- Between 11 and 25
- Between 6 and 10
- Between 1 and 5
- No units

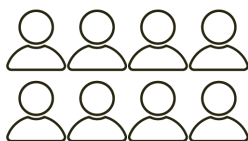


The GVA of the distilling sector has fallen for the past two year to £3.9bn

It peaked at £4.1bn in 2013



This works out as 8,000 jobs



A local unit is an individual site (for example a factory or shop) associated with an enterprise.

Please note all figures are rounded to avoid disclosure. Values may be rounded down to zero and so all zeros are not necessarily true zeros. Thus, some local authorities not included here may have a minor distilling presence but these areas do not show in official data.

Source: SPICe data visualisation

Source: ONS

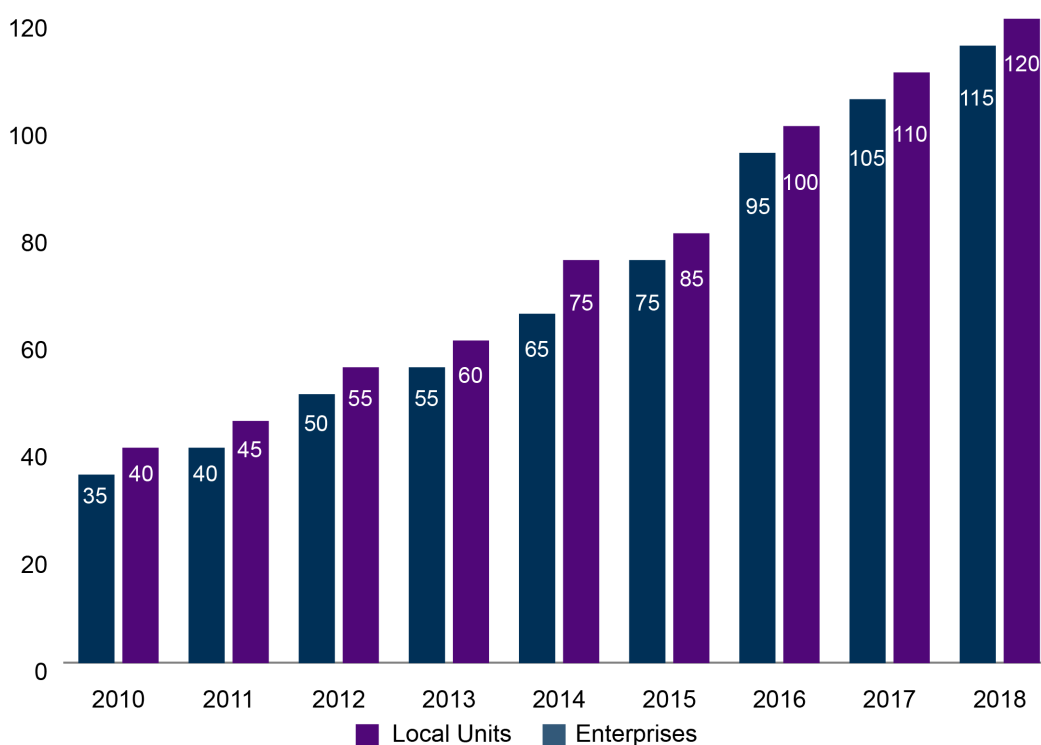
Scotland's brewing

Whilst whisky is recognised as the national drink of Scotland, there is a long and rich history across the country when it comes to brewing beer, with a tradition dating back over 5,000 years ²⁵. Much like the rest of the world inspired by the craft ale revolution in America, Scotland's craft breweries have flourished over recent years with a plethora of new breweries entering the market.

Business base

Figure 2 showed that there were 115 brewing enterprises in Scotland in 2018. Though as highlighted in the previous spirits chapter, it is important to look at trends in both enterprises and local units. Unlike spirits where there are notable differences in enterprise and local unit numbers, the scale of difference isn't significant with breweries. Thus, for the most part this analysis will focus on enterprise counts.

Figure 9: Manufacture of beer, count of enterprises and local units, 2010-2018, Scotland

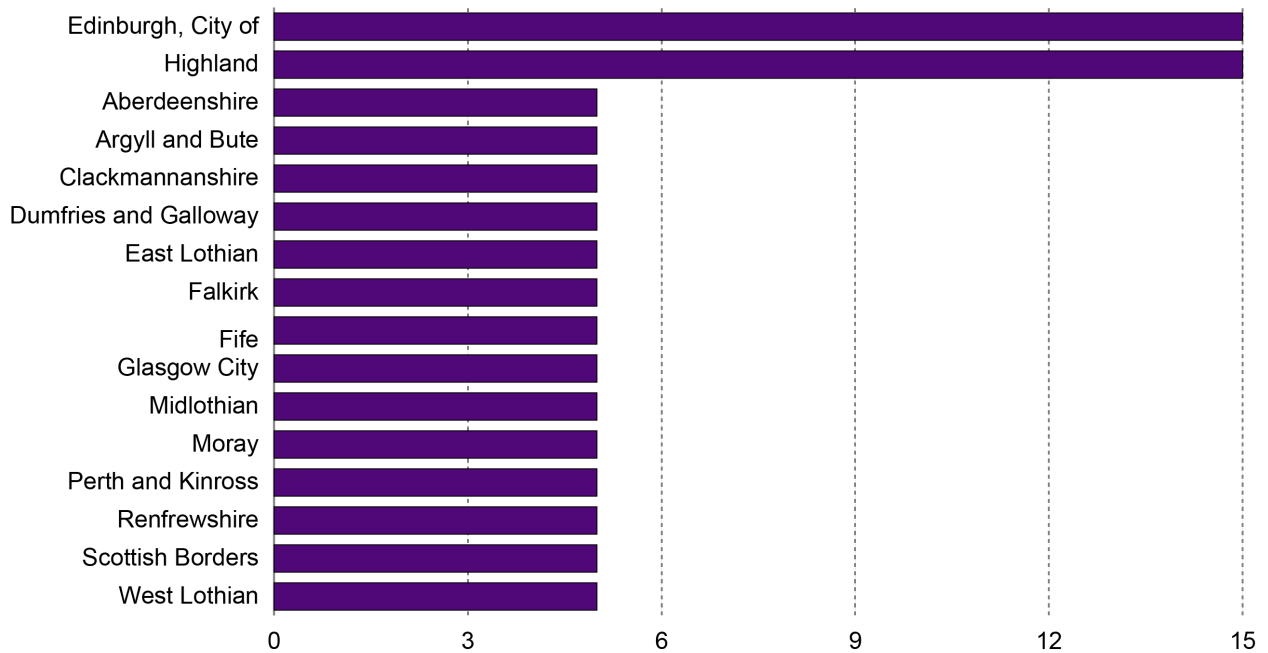


Source: Office for National Statistics (ONS) - NOMIS, 2018⁴

Back in 1840, Scotland boasted 280 breweries. However, by 1910 this had been reduced to 92 and a continuous decline eventually reduced that number to just 11 by 1970 ²⁶. Now with 115 breweries the industry has increased massively from 1970s. Year-on-year over the period 2010 to 2018, the number of breweries has increased. This rapid period of expansion has resulted in the beer manufacturing business base increasing by 229% over the 8 year period.

Sixteen of Scotland's local authority areas had a brewing industry presence in 2018. This is a significant increase from just four local authorities in 2010. Both urban and rural areas have benefited from the explosive growth of the sector. Edinburgh and Highland local authority areas have the highest intensity of brewing activity in Scotland. In particular, Edinburgh has seen a rapid expansion of its brewing business base over recent years with numbers trebling.

Figure 10: Manufacture of beer - count of enterprises, 2018, local authorities with activity

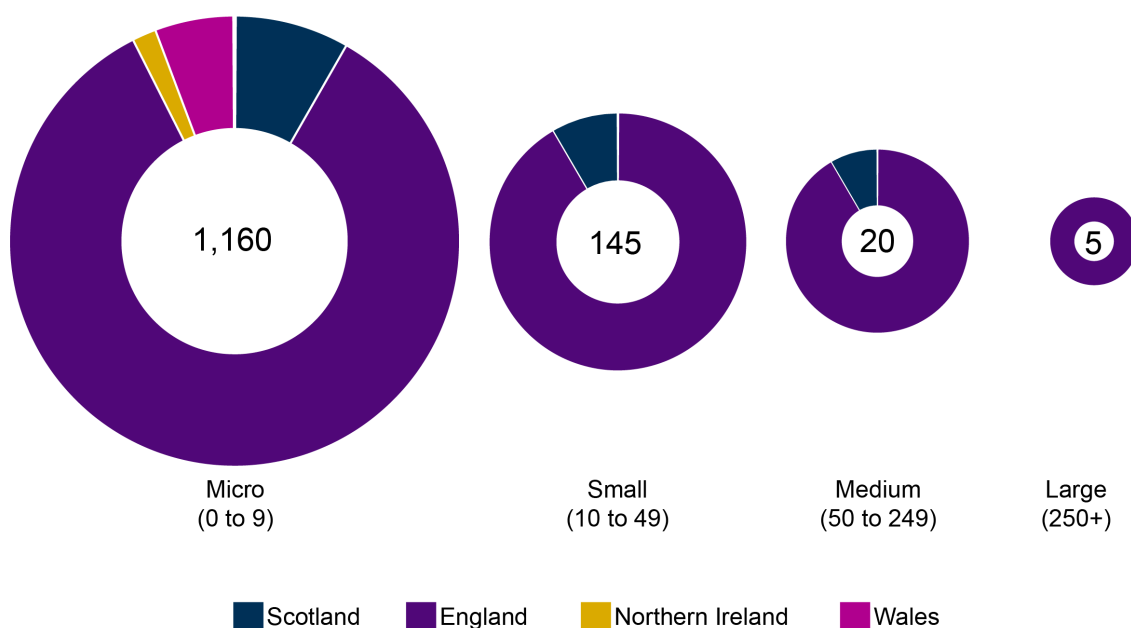


Source: Office for National Statistics (ONS) - NOMIS, 2018⁴ Please note all figures are rounded to avoid disclosure. Values may be rounded down to zero and so all zeros are not necessarily true zeros. Thus, some local authorities not included here may have a minor distilling presence but these areas do not show in official data.

Turnover and size

Overall, 87% of the UK's breweries were micro in size (see Figure 11), employing 0-9 employees. Just 2% of the UK's brewing business base can be classified as medium or large. Whilst Scotland's brewing sector has increased by 229% since 2010, the majority of this growth has been in micro-breweries. Micro-breweries represent 83% of Scotland's brewing business base. This mirrors trends across Europe, where much of the growth in brewing has been driven by small scale breweries established to develop niche products sold locally. Moreover, the UK has the highest number of micro-breweries within Europe ²⁷

Figure 11: Manufacture of beer, count of enterprises by employee sizeband, 2018, UK nations

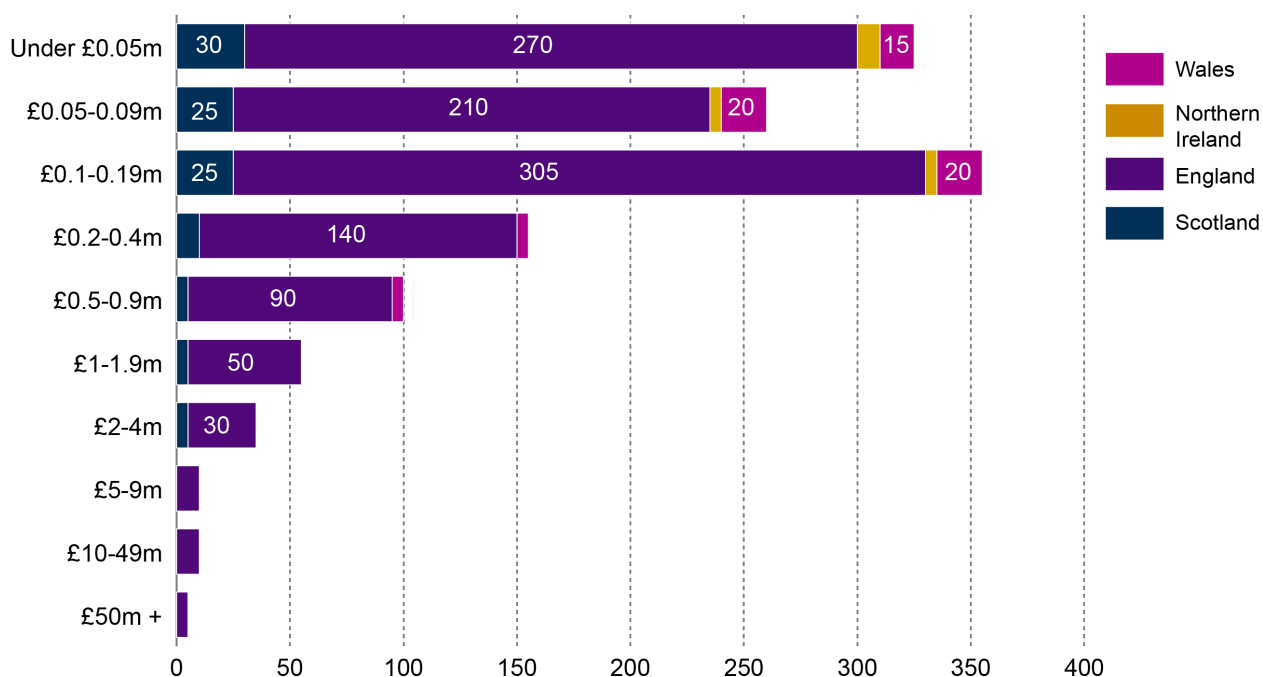


Source: Office for National Statistics (ONS) - NOMIS, 2018⁴ Please note all figures are rounded to avoid disclosure. Values may be rounded down to zero and so all zeros are not necessarily true zeros. Totals across tables may differ by minor amounts due to the disclosure methods used.

A quarter of the UK's breweries have turnover levels under £50,000 (see Figure 12). And approximately one in ten breweries have turnover levels over £1 million across the UK. Average turnover across all Scottish breweries was approximately £271,310 in 2018, compared to average turnover of £673,000 for all businesses in the Scottish economy. The average turnover figures have been calculated using available turnover bands, as illustrated in Figure 12. The upper band of £50+ million has no upper limit and calculations were conducted using the £50 million level. Thus, the estimates are likely to be an underestimate and should be interpreted as an indicator of relative scale rather than exact indicators.

Ten percent of Scottish breweries have sales levels over £1 million. And 52% have turnover levels under £100,000. Scotland's relatively low turnover levels across the brewing sector reflect the incredibly small-scale nano and micro firms, manufacturing less than 50,000 litres a year. By comparison industry giant Anheuser-Busch InBev, who owns Budweiser and several other beers, produced [61.3 billion litres of beer in 2017](#).

Figure 12: Manufacture of beer, count of enterprises by turnover, 2017, UK nations



Source: Office for National Statistics (ONS) - NOMIS, 2018⁴ Please note all figures are rounded to avoid disclosure. Values may be rounded down to zero and so all zeros are not necessarily true zeros. Totals across tables may differ by minor amounts due to the disclosure methods used.

Analysis of Scotland's brewing business base is limited by difficulties in getting exact data on ownership structures and business types. A recent report¹⁰ for the Scottish Government highlighted the complications of integration across the sector, i.e. vertical and horizontal, and the role of ownership in what are, effectively private limited companies and partnerships and therefore do not need to declare information on ownership. As an example the report highlights:

The C&C Group which owns the Magners brand also own Wellpark Brewery in Scotland where Tennents is produced (the leading lager brand in Scotland). In 2014 C&C Group opened a craft brewery project on site called the Drygate Brewery (previous name for Wellpark) in partnership with Williams Bro's Brewing Co. on the back of acquisitions by other major producers in the global craft beer market. Heineken also have a presence in the market via the Caledonian Brewery company which produce a range of Scottish craft ale products.

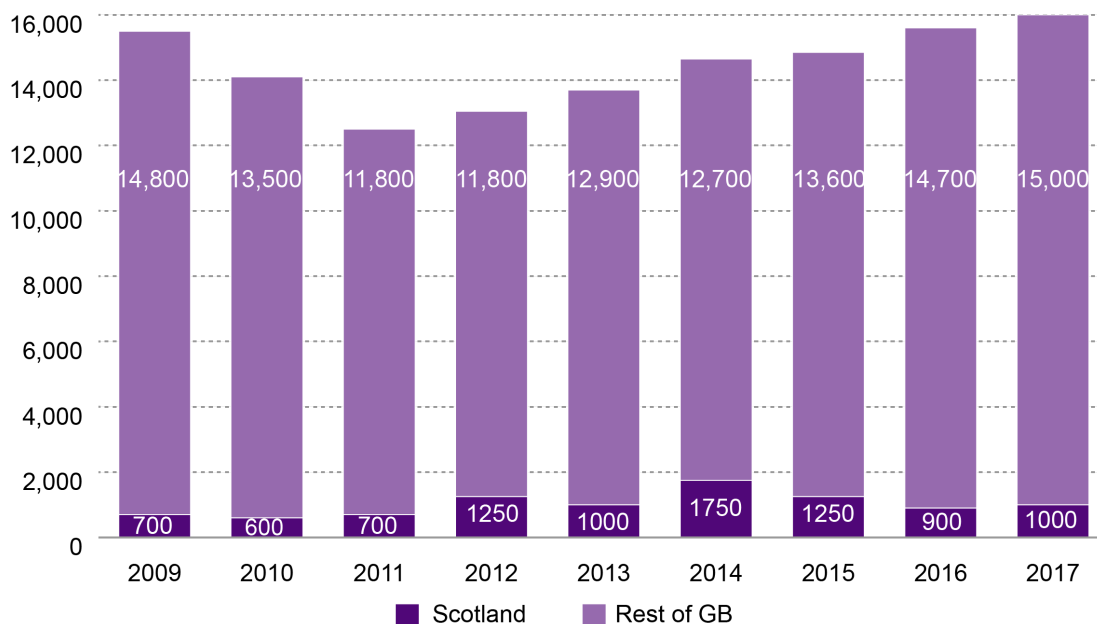
Extract from SRUC Report for Scottish Government¹⁰

Employment

Employment in Scotland's brewing sector has averaged 1,000 over the last 9 years, and was at 1,000 in the most recently available data for 2017. This represented 7% of total British employment in the sector. Given the micro nature of Scotland's breweries, the scale of employment opportunities are more limited. Figure 13 shows that Scottish brewing

employment peaked in 2014, with the emergence of a downward trend post-2014. It remains to be seen whether this downward trend will continue or change direction.

Figure 13: Manufacturer of beer, employment, 2009-17, Scotland & Rest of Great Britain

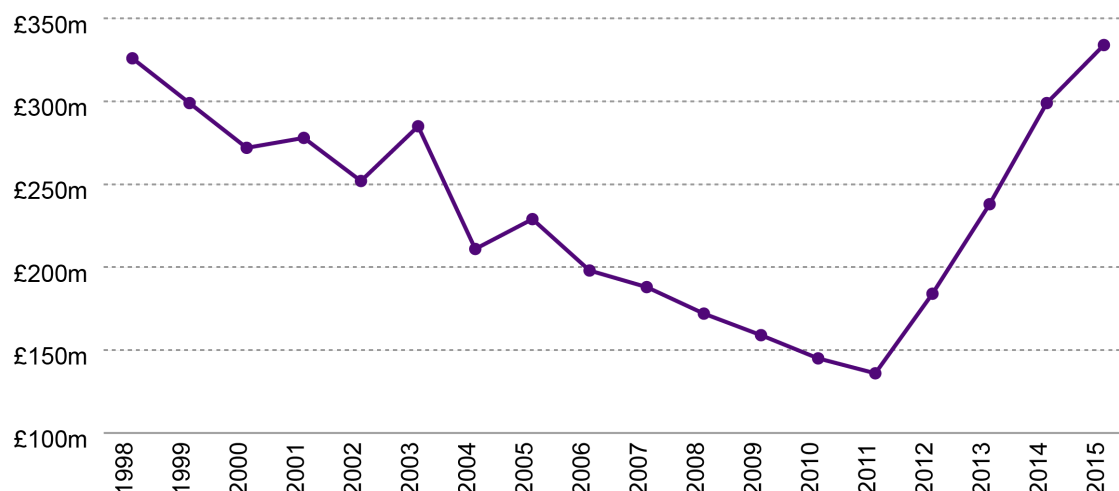


Source: Office for National Statistics (ONS) - NOMIS, 2018⁶ ONS Business Register and Employment Survey (BRES) employment data does not include Northern Ireland

Income

Gross Value Added (GVA) at basic prices for Scotland's 'manufacture of beers and malts' industry was £334 million in 2015. The period 1998 to 2011 witnessed a trend of decline in the economic value of Scotland's brewing sector. The last four years of available data (2012-15) have seen a significant reversal of this downward trend. Since 2011 the economic value of the sector has increased by 146%. The current GVA level of £334 million surpassed the previously recorded peak, in available data, of £326 million in 1998.

Figure 14: Gross Value Added (GVA) at basic prices by industry, manufacture of beers and malts, 1998-2015



Source: Scottish Government, 2018⁷

It is possible to estimate each Scottish industry's contribution to GDP from the [Input Output tables](#) by dividing GVA at basic prices for each industry by the overall total GVA figure. The brewing industry contributes approximately 0.3% to total Scottish GDP.

The brewing sector is an important driver of the wider economic activity due to intrinsic links with other sectors. Based on Scottish Government's Input Output modelling ⁷, the 'beer and malt' sector is in the top quartile for knock-on economic impacts. It has the 17th highest output multiplier (capturing direct, indirect, and induced effects) of 98 industry groups. This is substantially above the 'spirits' sector which ranks 85th. Related both sectors have relatively high employment multiplier effects with the spirits sector ranked 8th and brewing ranked 10th, across all sectors of the economy.

A 2017 [report by Oxford Economics for the Scottish Beer and Pub Association](#) ²⁸ (SBPA) found that Scotland's breweries accounted for 1,820 direct jobs with wages of £52 million and direct GVA of £215 million. Furthermore, including multiplier effects the report found that 8,950 jobs, £200 million of wages and £540 million of GVA were sustained in the Scottish economy from the direct, indirect and induced effects of beer breweries.

Though a note of caution is needed as the estimates count all part-time workers and the full time equivalents will be lower. Also the direct estimates for jobs and GVA in the SBPA report differ to the ONS and Scottish Government figures [referenced earlier in this chapter](#). This is due to a number of reasons, including: the report although published in 2017 is based on 2014 data when brewing employment figures peaked and a different methodology unspecified for modelling GVA.

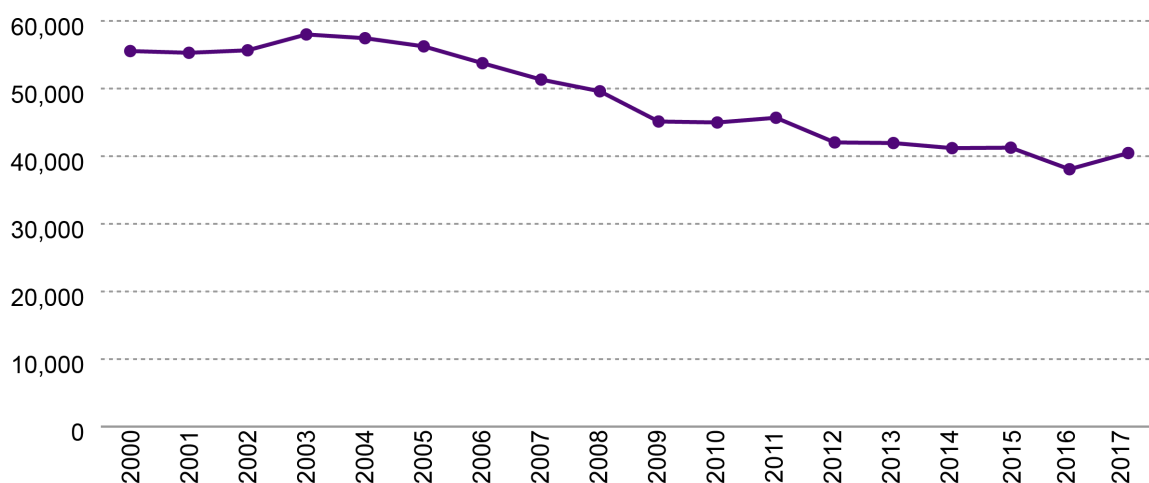
Production and trade

Few figures exist which disaggregate beer production and trade levels at a Scottish economy level. Thus, this section focuses on UK level trends.

In 2017, the UK produced 40,480 thousand hectolitres of beer, up 6% on the 17 year low the previous year. Figure 15 shows that since 2000, there has been a general decline in the UK's beer production levels. In fact, a recent SRUC Report ¹⁰ stated that beer production has fallen by 41% since 1980. Despite this decline, the UK has the second highest levels of beer production in Europe, Germany tops the list with 94,957 thousand hectolitres of production ²⁷.

Similarly data from the Brewers of Europe ²⁷ shows that UK beer consumption at 43,731 thousand hectolitres was the second highest in Europe after Germany by absolute volume. However, when adjusted for a per capita basis the UK was ranked 18th out of 31 countries where data was available for Europe.

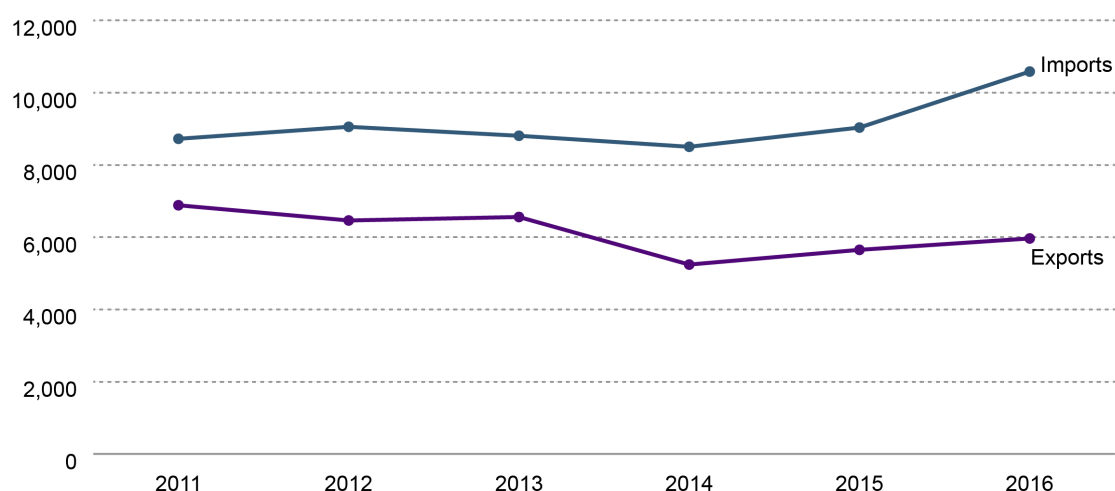
Figure 15: UK beer production, thousands hectolitres, 2000-2017



Source: HM Revenue and Customs, 2018²⁹

Figure 16 shows that UK beer imports have been increasing, in the 5 years to 2016 by 21%. Whilst over the same period, the performance of beer exports has been mixed with a downward trend between 2011-14 and a slight pick-up from 2015 onwards ²⁷.

- The majority of UK beer imports (89%) come from the EU. The UK imports more beer than any other European country. France was the second highest at 7,640 thousand hectolitres of beer imported in 2016.
- 63% of UK beer exports were to the EU having fallen from 70% in 2011. UK beer export levels are the fifth highest across Europe. Although significantly smaller than those of Germany, Netherlands, and Belgium, which export 2-3 times the volumes of the UK.

Figure 16: UK beer trade, thousands hectolitres, 2011-2016

Source: The Brewers of Europe, 2017²⁷

The top markets for UK beer exports were: Ireland (22% of total), USA (19%), France (14%), and China (8%)³⁰. However, BBPA note that exports to Ireland are distorted by bulk beer imported in to the UK, packaged and then re-exported and exports to France are distorted by cross-channel shopping, and possibly smuggling and duty fraud. Within the EU, there was growth in exports to Belgium, Spain, Poland, Czech Republic, Cyprus and Malta. Outside of the EU, exports to China, Russian and Singapore grew the most over the last year.

It is also thought that the weakness of the pound that occurred, as a result of Brexit, will benefit the craft beer industry more than their more mainstream competitors, as these products are made locally and unlikely to be affected by any increase in import charges. International breweries, however, may have to increase their prices to compensate for the extra costs that they may face¹⁰.

Beer in focus

This section explores wider issues of importance to Scotland's beer industry and provides some examples of the variety of breweries operating in Scotland.

Craft beer: a definition

There is no official definition of 'Craft Beer', which can encompass everything from a one-man production unit to substantial businesses such as Harviestoun, Innes and Gunn and BrewDog. The [Society of Independent Brewers \(SIBA\)](#) introduced an "Assured Independent British Craft Brewer" seal as a way for truly independent craft breweries to differentiate the beers they brew from mass-produced products. There have been calls for greater clarity over who is brewing beer, following an increase in the popularity of craft beer and a number of buyouts of independent craft breweries by global brewers³¹.

Beer duty

Beer duty is a tax on producing and selling beer with rates set by the UK Government. The current rate per hectolitre per cent of alcohol for beer is £19.08¹⁸. This equates to £0.43 for a pint at 4% abv¹⁹. An additional duty is charged on 'high strength' beers, those over 7.5% abv, while a reduced rate applies to 'low strength beers', those under 1.2% abv. Already in this report, we have set-out some of the theory behind alcohol taxation (see the [section on whisky duty](#)).

According to [British Beer and Pub Association \(BBPA\)](#), the UK has one of the highest rates of duty in the world and states the current rate is 12 times higher than that in Germany. And the [Institute of Alcohol Studies](#) highlights that "UK's current system of alcohol excise duties is a mess with a litre of 7.5% ABV beer is liable for 138p of tax, but a litre of 7.5% ABV cider (that contains exactly the same amount of ethanol) is liable for only 39p of tax²²".

In the brewing sector [microbreweries are eligible for reduced rates of duty](#). This progressive rate of reduced beer duty was introduced in 2002 and since its introduction the number of breweries in the UK has trebled. To obtain relief the brewery must satisfy limits on its total annual production:

- no more than 60,000 hectolitres of beer may have been produced in your brewery in the previous calendar year
- less than half of the beer produced in the brewery in the last calendar year may have been produced under licence
- you must reasonably estimate that in the current calendar year your brewery will produce no more than 60,000 hectolitres of beer.

This limit on duty has been highlighted as a potential barrier to expansion¹⁰. [BBPA](#) believe that [major distortions have arisen that need to be addressed due to the current structure of the scheme](#) and the upward trend in beer excise duty. BBPA believe that reform of the system is required to provide a structure that provides a greater growth incentive, and a more level playing field for brewers. Some issues highlighted related to the current system include:

- smaller brewers are overcompensated for economies of scale in the industry
- small to mid-sized brewers receiving little, or no, duty relief find it difficult to compete and or scale-up
- market entry has increased significantly, including both efficient and inefficient entrants.

A recent House of Commons Library publication³² stated:

“ The operation of small breweries relief is raised occasionally in the House, with some evidence that the cost of the relief has risen since its introduction. HMRC's most recent statistics put the annual cost at around £70m. ”

Flavour of Scotland's brewers

Here we present just a sample of the variety of brewers in Scotland.

BrewDog

Perhaps the most high profile of Scotland's new brewers is Aberdeenshire firm BrewDog. Since it was founded in 2007, BrewDog has grown from two employees to 800. It has opened almost 50 bars globally (including 30 in the UK) with a global footprint including: Helsinki, Tokyo, Rome, São Paulo.

Since 2011, average annual turnover growth has been 63%. In 2017 alone, BrewDog grew turnover by 55% to £112 million. Trading profit was £9 million in 2017, up from £6 million the previous year. BrewDog exported to more than 50 countries in 2017. The firm opened its first brewery outside Scotland in the USA's Ohio in 2017. Furthermore BrewDog's growth continues with construction underway of a brewery in Australia and they are currently looking to find a site to build a brewery in China.

BrewDog was listed in the Sunday Times Fast Track 100 for a sixth-consecutive year in 2017. No other company has ever achieved this. BrewDog is the 13th biggest beer brand in the UK and its flagship beer 'Punk IPA' is the number 1 on trade craft beer in the UK. Currently, five of the top ten best-selling craft beers in the UK off trade are BrewDog products.

Summary of information from [BrewDog Annual Report & Accounts 2017](#) and [BrewDog](#)

Six°north

Located six degrees of latitude north of Belgium, Aberdeenshire brewer Six°north produces Belgian-style beers from its Stonehaven brewery established in 2013. Since then Six°north has grown exponentially and they now employ over 80 staff across five sites. This includes four bars in Aberdeen, Stonehaven, Edinburgh & Glasgow.

Summary of information from [Six°north](#)

Stewart Brewing

Edinburgh based Stewart Brewing was founded in 2004. A payroll, which originally consisted of just founders Jo and Steve Stewart has grown to support over 25 employees.

Since moving to a custom built brewery in 2013, Stewart Brewing have grown from their seven original 5,000 litre fermentation vessels. Two 15,000 litre fermentation vessels were installed in 2014 and further expansion in 2016 consisted of one 17,000 litre fermentation vessel, six 5,000 litre conditioning tanks and ten 1,100 litre conditioning tanks. In 2017, a further six 10,000 litre fermentation vessels were added. In addition to their original line up of cask ales, which still remain at the core of the business, they have also produced a range of bottled beers, cask and keg brews.

Stewart Brewing's custom-built premises are open to the public, where on-site facilities include: experimental brew-it-yourself Craft Beer Kitchen, 18 tap growler fill station, and a beer flight poured straight from the tank. This set-up allows people to create their own concoctions under the watchful eye of one of the brewers.

They currently ship to Canada, Hong Kong, China, Singapore, Dubai and Russia and are aiming to expand into USA, Nordics, Spain, Italy, France, Benelux and Germany.

Summary of information from [Stewart Brewing](#) and [Scotland.org](#)

Fyne Ales

Fyne Ales was founded in 2001 in disused buildings on a family farm near Loch Fyne in Argyll. Fyne Ales products are recognised internationally, with multiple award-winning products amongst the thirty different beers brewed each year.

Fyne Ales production starts with the collection of rain from a burn on the hill behind the brewery to use as water supply. They use Argyll's most abundant resource (over 10 feet of rain falls each year) and convert it into beer. Fyne Ales has three main offers : the core cask beers; its keg offering; and the new Origins Brewing project.

In 2014 works completed on Fyne Ales new brewery, a converted sheep shed with a forty brewers barrel-per-brew capacity (compared to ten barrels in the original brewery). Fyne Ales had a successful 2017 with production exceeded 10,000 hectolitres for the first time in a single year. Highlights for 2018 included building on the launch of its mixed fermentation Origins Brewing project and an increased focus on keg output.

The brewery is open to the public, where visitors can take a tour with a brewer to see how the beers are made, and then learn about the beers through a tutored tasting. Food is also served made with beef from the brewery's herd of highland cattle. Fyne Ales also host the annual FyneFest on Loch Fyne.

Summary of information from [Fyne Ales](#) and [Brewers Journal](#)

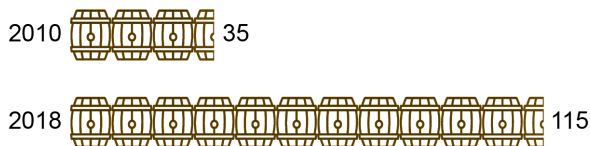
Summary infographic brewing



The Scottish brewing industry

The number of brewing enterprises in Scotland has increased by 229%

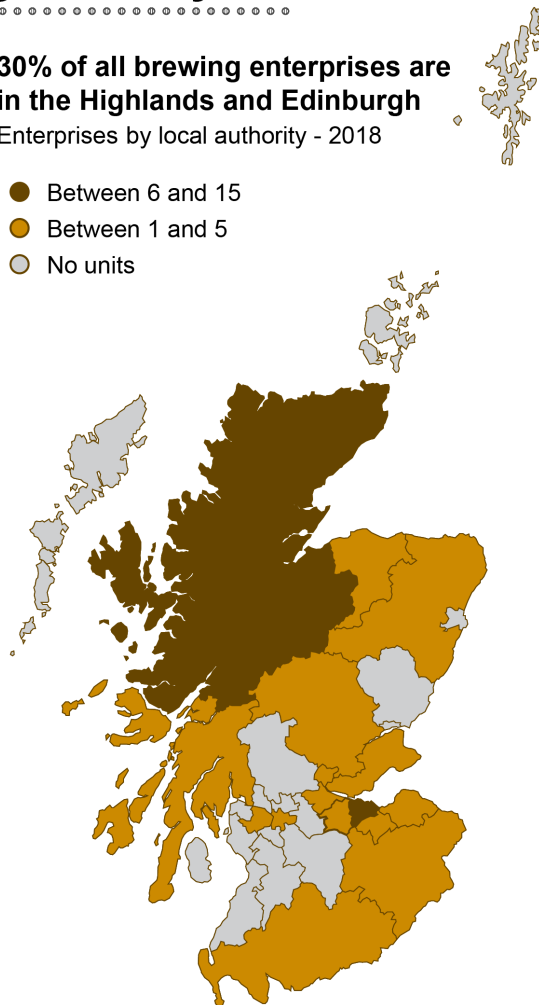
Between 2010 and 2018



30% of all brewing enterprises are in the Highlands and Edinburgh

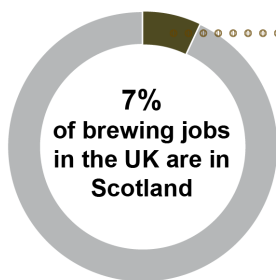
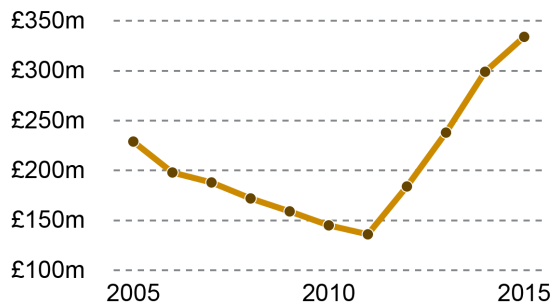
Enterprises by local authority - 2018

- Between 6 and 15
- Between 1 and 5
- No units

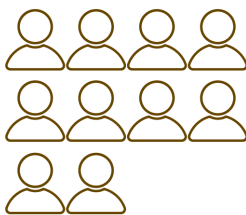


The GVA of the brewing sector has increased by 146% to £334m

Between 2011 and 2015



This works out as 1,000 jobs



An enterprise can be thought of as the overall business, made up of all the individual sites or workplaces. It is defined as the smallest combination of legal units (generally based on VAT and/or PAYE records).

Please note all figures are rounded to avoid disclosure. Values may be rounded down to zero and so all zeros are not necessarily true zeros. Thus, some local authorities not included here may have a minor brewing presence but these areas do not show in official data.

Source: ONS

Source: SPICe data visualisation

Links with other industries

This section looks at the links Scotland's distilling and brewing sectors have with other industries. The supply chains for distilling and brewing encompass much more than the direct on-site production but also upstream provision of farming inputs and downstream inputs such as bottling, package design, marketing, transport logistics, etc. In addition to these core inputs, firms in other sectors – such as construction, energy and financial services – also support the supply chain.

In particular, this chapter has focussed on the cross-linkages with agriculture, malting, and tourism. Other industries such as bottling have substantial knock-on effects relating to brewing and distilling but there is little data available to illustrate the scale of this effect.

It is important that supply chain linkages are highlighted and acknowledged in the design of government policy and industry strategies related to Scotland's distilling and brewing sectors.

Agriculture

Scottish agriculture has been intrinsically linked to brewing and spirit production in terms of reliance on inputs. Barley in many ways is Scotland's foremost crop and as a key ingredient in whisky and brewing, it underpins a world-wide, multi-billion pound industry.

In 2017, 291,000 hectares of barley (67% of all cereals grown) and 109,000 hectares of wheat (25% of cereals) were grown in Scotland³³. There were also 33,000 hectares of oats (8% of total cereals). According to the NFUS³⁴ 28% of the UK's barley area is in Scotland. Approximately 35% Scotland's barley goes into malting and 55% goes for animal feed. Milling wheat grown in Scotland are mainly used for biscuit making. And some wheat is also used in distilling and for animal feed.

Cereal farms are concentrated in the east of the country, where the most suitable land for tillage tends to be found. On average these farms have more than half their land in cereals. Many of these farms have put increased emphasis on the matching of inputs to crop requirements and 85% of the crop is marketed through [Scottish Quality Cereals](#), Scotland's quality assurance scheme.

An important consideration for Scotland's brewers and distillers will be the likely effects of any new agricultural policy as a result of Brexit that might disrupt supply or increase the costs of inputs.

Malting

Already highlighted above, a large proportion of Scotland's barley goes into malting. Malting involves barley or other grains been steeped, germinated, and dried, and then used for brewing, distilling, and vinegar-making.

The vast majority of malt produced in Scotland is for the whisky distilling sector, with the Maltsters Association of Great Britain (MAGB) estimating that 96.2% of their planned barley purchases in Scotland from the 2017 harvest were of spring barley, and the

remaining 3.8% were for winter brewing varieties and specifications. In terms of varieties purchased at the 2016 harvest, over 85% in Scotland were of known approved distilling (rather than brewing) varieties, compared to just 30% distilling varieties in England. Distilling overtook brewing as the dominant source of demand for UK produced barley malt in 2011 ¹⁰.

The [total annual requirement for malting barley in Scotland](#) ³⁵ is around 900,000 tonnes, of which around 800,000 tonnes is required for scotch whisky distilling. The total UK market for malting barley is around 1.8 million tonnes. Making Scotland a significant part of that total, despite having only around 10% of the arable area of the UK. On an EU-28 basis, the annual requirement is in the order of 9 million tonnes, whereas globally, the total usage is approximately 23 million tonnes. EU-28 is therefore a major player in the world trade of malt and malting barley, and Scotland is a big player within this ecosystem.

Tourism

The growth in Scotland's distilling and brewing business base is bringing spin-off benefits to the tourism sector with record numbers exploring Scotland's whisky trails and brewery tours. This increased demand for food and drink related experiences has seen an increase in events such as whisky and craft beer festivals, whisky month, gin maps of Scotland, etc. Furthermore an increasing number of bars, pubs and restaurants are offering tasting flights showcasing Scottish gin, whisky and craft beers; and offering tasting menus matching specific beverages to food.

Scotland is home to the greatest concentration of distilleries in the world, according to the Scotch Whisky Association (SWA) ³⁶ whisky tourism saw record numbers of visitors in 2017, with 1.9 million visits to whisky distilleries from tourists.

- The increase in visits to 1.9 million is an 11.4% rise year on year, representing 45% growth in popularity since 2010.
- The SWA survey also details that on average over £32 was spent during each trip to a visitor centre, up almost 4% year on year and by £11 per visit in 2010.
- The 2017 annual survey compiled by the SWA found that spending at visitor centres was up by 15.6% to £60.9 million. Visitor centres reported that the highest number of visitors came from Germany and the USA, followed by those from India, China and Japan.

In a separate survey and analysis, the [2016 Scotch Whisky Industry Review](#) estimated that in 2015 there were a total of 56 distilleries with visitor facilities. The average number of visitors was 22,551 though this ranged between 85,000 and 700 visitors per year.

As well as whisky distilleries, many gin distilleries are opening their doors. These tours are often in unique spaces and many existing places are also opening pop-up gin bars on their premises. At the time of writing, there wasn't any studies examining the economic impact of gin tourism. A number of sources have launched gin visitor maps, such as [VisitScotland](#), the [Scottish Gin Society](#), and the [Wine and Spirit Trade Association](#).

Similarly, there are no publicly available studies examining the economic effects of beer tourism. In 2016, [VisitScotland published research](#) estimating that the Scottish craft beer

industry has the potential to capitalize on the food and drink tourism market worth £881 million a year to Scotland's visitor economy ³⁷. However, this was a very generalistic market potential study rather than an economic impact study. In 2017 VisitScotland, in association the Brewers Association of Scotland, revealed an [interactive craft beer map](#), offering detail of brewery tours and details on beers sold.

Policy considerations

This short section summaries policy considerations that were highlighted throughout this paper and also captures some recent recommendations from the Scottish Government commissioned report ¹⁰ on the craft beer and artisan alcohol sectors.

- **Data challenges:** whilst the whisky sector is relatively data rich, other spirits are poorly served in terms of official data and this prevents a full understanding of current business base and contributions to the Scottish economy. It is not possible to disaggregate data by spirit type or in some cases at a Scottish level, and this creates challenges for analysis and understanding of trends.
- **Defining Scottish gin and Scottish craft beer:** with gin it is difficult to establish what parts of the production processes are actually happening in Scotland. The Scottish Distillers Association wants Scottish produced spirits to have the same protection as scotch whisky. Similarly there is no official definition of 'Craft Beer'. There have been calls for greater clarity over who is brewing beer, following an increase in the popularity of craft beer and a number of buyouts of independent craft breweries by global brewers.
- **Alcohol duties:** there are significant differences in the level of tax between different types of drink, with wine and spirits attracting higher rates of duty on average than beer, and cider taxed at the lowest rate of any drink. Commentators argue that there is a strong case for reform of alcohol duties. The current system is not well targeted at heavy drinkers and has anomalies. Related this paper has highlighted questions around the small brewery relief scheme.
- **Understanding the supply chain:** this paper has focussed on the cross-linkages with agriculture, malting, and tourism. However, other industries such as bottling have substantial knock-on effects but there is little data available to illustrate the scale of this effect. There is a need to greater understand the supply chains linked to brewing and distilling to sustain economic growth.
- **Brexit challenges:** whilst still so uncertain it is difficult to assess Brexit's effects on brewing and distilling. Thou consequent challenges could include: loss of workforce and skills, fluctuations in supply and cost of input, uncertainty in trade deals, and continued recognition of Geographical Origin status.
- **Ownership structures:** research into the ownership structures of brewing and distilling firms would be an useful exercise to understand the reliance on multinationals within the Scottish brewing and distilling business base.
- **Increased understanding of tourism impacts of gin and beer:** whilst the tourism impact of whisky are well highlighted, the tourism impacts of gin and beer in Scotland have not been studied in any depth.

As caveated in the [introduction](#) of this report, any consideration of the economic facts and related policy considerations should be balanced with consideration of the health and social policy aspects associated with alcohol.

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