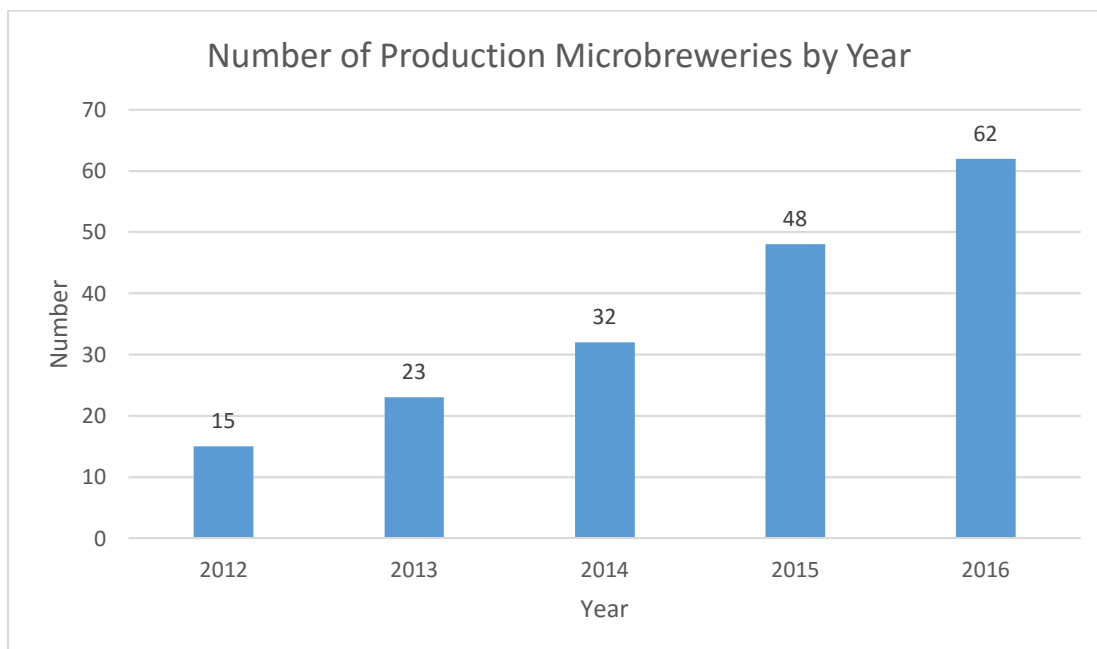


Craft Beer and Microbreweries in Ireland, 2016

A Report for the Independent Craft Brewers of Ireland and Bord Bia

Final Report, August 2016



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The author would like to thank Seamus O'Hara of the Carlow Brewing Company for his support and guidance. The support of Bord Bia is also acknowledged. Special thanks are due to the 44 Irish microbreweries that responded to a survey, which formed the basis for much of this Report.

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Main Findings

It is estimated that there are some 90 microbreweries operating in the Republic of Ireland, of which 62 are production microbreweries and at least 28 are contracting companies. There has been a 29% increase in the number of production microbreweries from 48 in 2015 to 62 in 2016. The number of microbreweries has more than quadrupled since 2012.

The output of craft beer by production microbreweries amounted to some 134,000 hectolitres (hl) in 2015. This represents a 56% increase on the 2014 figure of 86,000hl. In absolute terms, output rose by 48,000hl. On the basis of current trends for the year to date, the microbreweries are anticipating that output will rise by 63,000hl or 47% to 197,000 hl for the year 2016 as a whole.

The total turnover of craft beer production companies in 2015 is estimated at €40m and at a projected €59m for 2016. In the five years since 2011, turnover has increased eleven fold.

The microbrewery production of 134,000hl in 2015 represents 1.8% of the total beer production in Ireland. With the current trends in craft beer production, the Irish craft beer production market share is likely to hit 2.5% in 2016.

Turning to the consumer market for beer in Ireland, of the 134,000hl produced by microbreweries in 2015 some 110,000 hl were sold in the domestic Irish market, indicating an Irish microbrewery share of 2.5%. The projected Irish craft beer share of total beer consumption is predicted to rise to 3.4% for 2016.

Based on the 2016 estimates for Irish craft beer production and consumption, the share of craft beer in overall Irish beer production and consumption has risen approximately six fold since 2012.

Taking account of international experience, there is substantial potential for further development of the Irish craft beer industry in terms of both numbers and output. An increase in the number of production breweries to more than one hundred and a five-fold increase in output is possible over the longer term.

Microbreweries currently have substantial unused capacity and more is planned. This could facilitate major output growth in the short term, if the growth in demand is sustained. To date, output growth has been driven largely by domestic demand. While two-thirds of microbreweries export, the volumes are typically small. Three producers account for 78% of all exports by volume. There is a need for other microbreweries to expand their export performance.

There are a number of regulatory changes that would support the further development of the craft beer sector. These include allowing the sale of own beer from brewery premises during the hours of production and an increase in the current ceiling for tax relief.

Production microbreweries in Ireland currently (in mid-2016) employ an estimated 479 people, including full-time, part-time and seasonal employment. This means that the production microbrewing sector has directly created 167 extra jobs in the past year. Microbrewing in Ireland is seven times more labour intensive than macro-brewing. There

are production microbreweries in operation in 23 of the 26 counties. Employment in the microbrewing industry is thus very widely dispersed throughout the country.

At current (2016) production levels, microbreweries, including both production and contracting companies, are employing 439 persons on a full time equivalent (FTE) basis. Of the total employment, 399 FTEs are employed in production microbreweries and 40 FTEs in contracting companies. The microbrewing industry sources over half of its brewing ingredients by value in Ireland. Thus, there are significant downstream benefits for the agricultural and other sectors in the economy. The indirect employment downstream is estimated at 392 persons. This means that every person employed in production micro-brewing is almost matched by another in the wider economy that supplies the industry.

1.1 Introduction

This report was prepared on behalf of the Independent Craft Brewers of Ireland (ICBI), with the support of An Bord Bia. It is the third such study commissioned by the ICBI, following publication of an initial study in 2014 and an update study in 2015.¹ The findings of the first study contributed to the government decision in Budget 2015 to raise the production ceiling below which microbreweries can avail of excise duty relief, from 20,000 to 30,000 hectolitres. In the 2016 Budget, excise tax relief was made available upfront instead of on a rebate basis. This was an issue highlighted in the 2015 report.

The purpose of the current Study was to:

- Provide an update on the development of the micro-brewing industry In Ireland
- Review the potential of the industry and the contribution that it is making and could make to the economy; and
- Analyse the regulatory barriers that continue to hinder the achievement of that potential.

This year's report was extended in scope to provide greater detail on the capacity of the industry and its export performance.

The report relates to the microbrewing industry in the Republic of Ireland. Based on an internet search and industry sources, a list of microbreweries was developed and these microbreweries were subject to a Survey. Data referenced in this report are drawn from the Survey unless otherwise indicated.

Appendix 1 discusses the organisation of the Survey, the response rates achieved and the methodology by which estimates of craft beer production from the microbrewery sector were derived from Survey data.

The Report is organised as follows: Section 2 summarises the recent development of the microbrewing industry in Ireland in terms of output, revenues and market share. The future prospects for craft brewing are assessed in Section 3. The operational characteristics of the industry are described in Section 4. Section 5 assesses the impact of the microbrewing industry on the economy as a whole. Section 6 presents conclusions.

¹ The Development and Economic Impact of Microbreweries in Ireland. Bernard Feeney for the ICBI, August 2014.

Craft Beer and Microbreweries in Ireland, 2015. Bernard Feeney for the ICBI, August 2015.

2. Development of the Microbrewery Sector

2.1 Number of Microbreweries

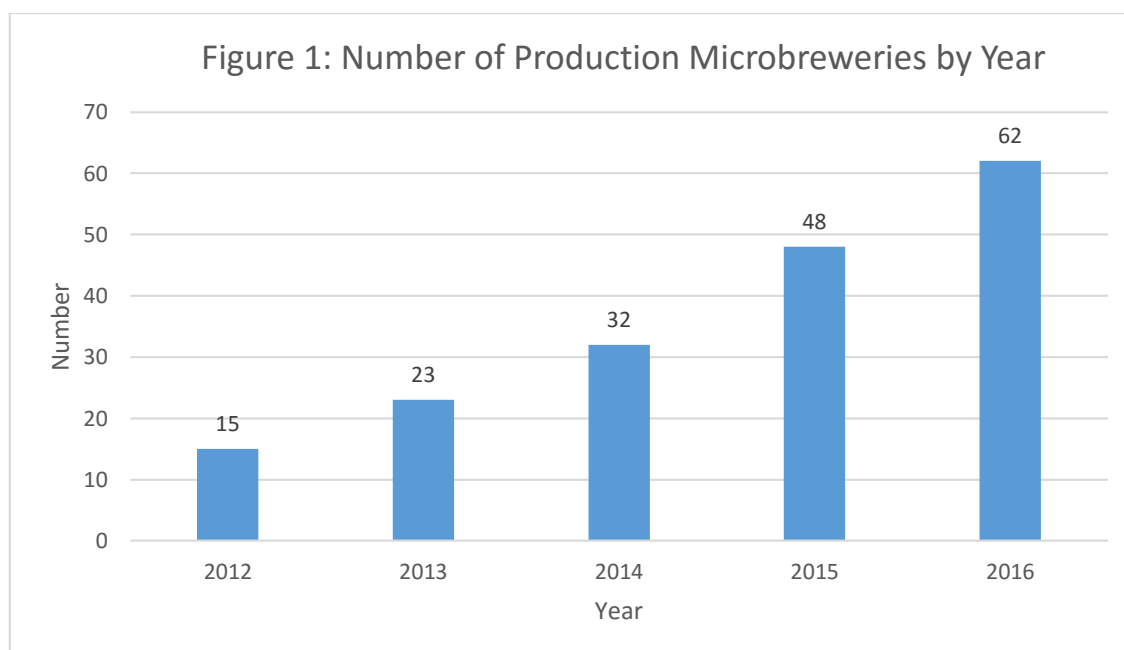
In broad terms, microbrewing comprises two different types of brewing enterprise:

- Microbreweries which produce beer on their own premises for sale on or off the premises;
- Contracting beer companies who market and sell beer products produced on their behalf by other breweries.

Throughout the report, these two categories are encompassed in the term ‘microbrewery’. Those that produce beer in their own right are referred to as “production microbreweries”. These include pubs that have a brewery on their premises. Those that contract out production are referred to as “contracting companies”. Some microbreweries that are in the process of establishing their own brewing plant go through an initial contracting phase before commencing production in their own right.

At the time of writing in July 2016, it is estimated that there are some 90 microbreweries operating in the Republic of Ireland, of which 62 are production microbreweries and at least 28 are contracting companies.²

There has been a 29% increase in the number of production microbreweries from 48 in 2015 to 62 in 2016. The number of microbreweries has more than quadrupled since 2012 (see Figure 1)

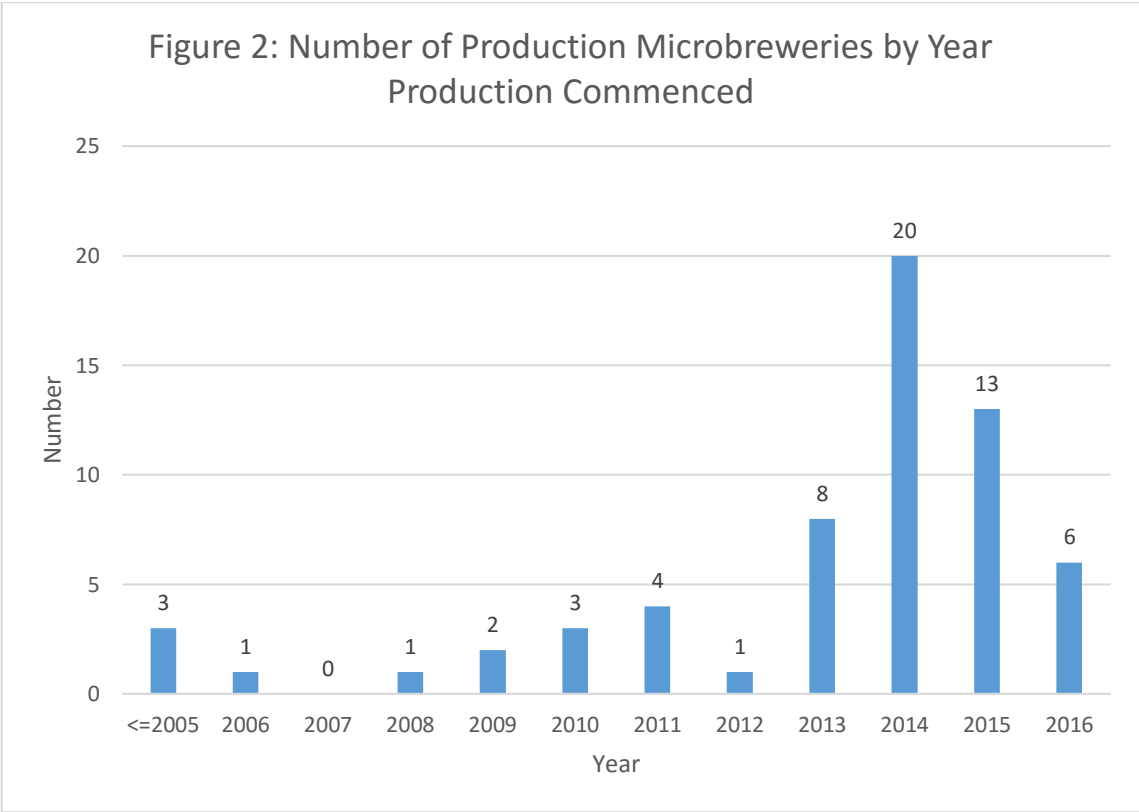


Source: Compiled by the author from survey and An Bord Bia data. Figures refer to the number of breweries in production at approximately mid-year.

² While every effort has been made to identify all existing microbreweries, it is possible that a small number may have been missed, particularly among contracting companies.

Figure 2 sets out the year in which the current 62 production microbreweries first commenced production. It is estimated that 13 new production microbreweries commenced production in 2015, compared with a total of 20 in 2014. This highlights the phenomenal growth in new enterprises in the last two years: 33 of the 62 production microbreweries commenced production in 2014-2015.

During the first half of 2016, six further production microbreweries commenced operations. There are apparently another ten or so breweries that are being planned, some of which may come on stream by end 2016. For the year 2016 as a whole, the rate of entry may be close to the 2015 figure of 13 production microbreweries. However, it looks as if 2014 will prove to be the peak year for new entrants.



Source: Compiled by the author based on survey data; refers to 62 production microbreweries in operation in mid-2016.

2.2 Output

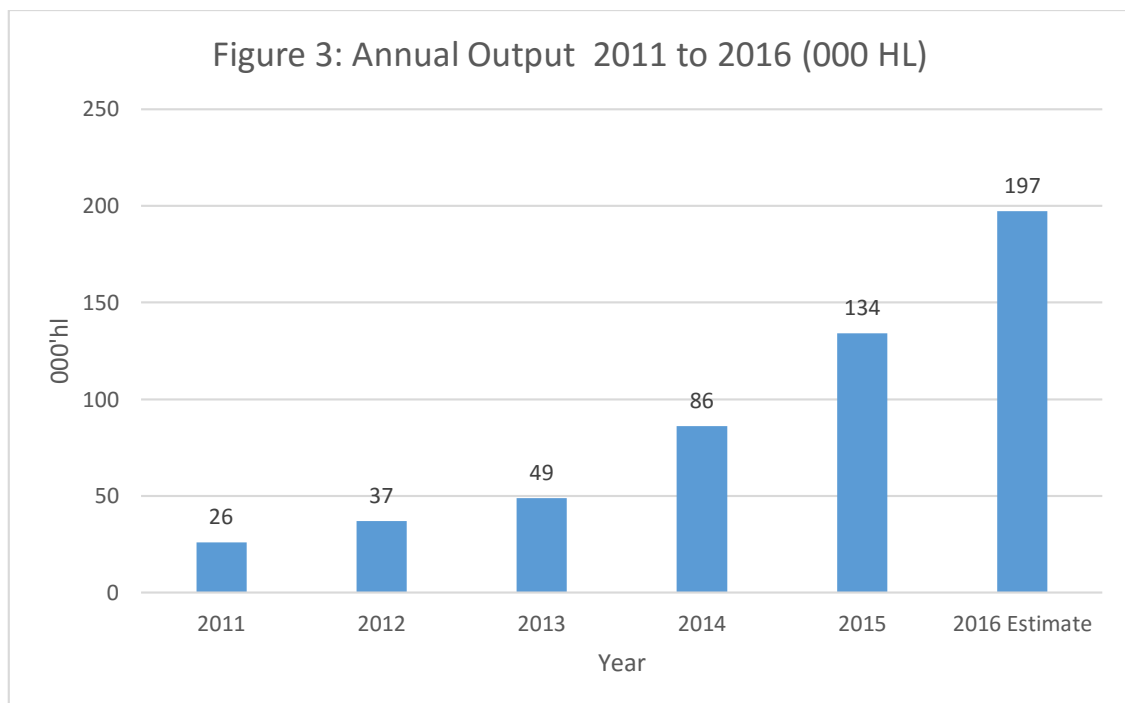
The output of craft beer by production microbreweries amounted to some 134,000 hectolitres (hl) in 2015. This represents a 56% increase on the 2014 figure of 86,000hl. In absolute terms, output rose by 48,000hl. Output from the 13 microbreweries that commenced production in 2015 accounted for one-quarter of the increase of 48,000hl. Thus, pre-2015 breweries expanded production significantly.

Figure 3 and Table 1 depict the trend in output over the last four years. Between 2011 and 2015, the output of production microbreweries rose almost six fold.

Table 1: Trends in Annual Output of Microbreweries. 2011-2017

Year	Output (000)HL	% Change	Change (000 HL)
2011	26		
2012	37	42.3	11
2013	49	32.4	12
2014	86	75.5	37
2015	134	55.8	48
2016 Estimate	197	47.1	63

Source: Compiled by the author from survey and Bord Bia and other data

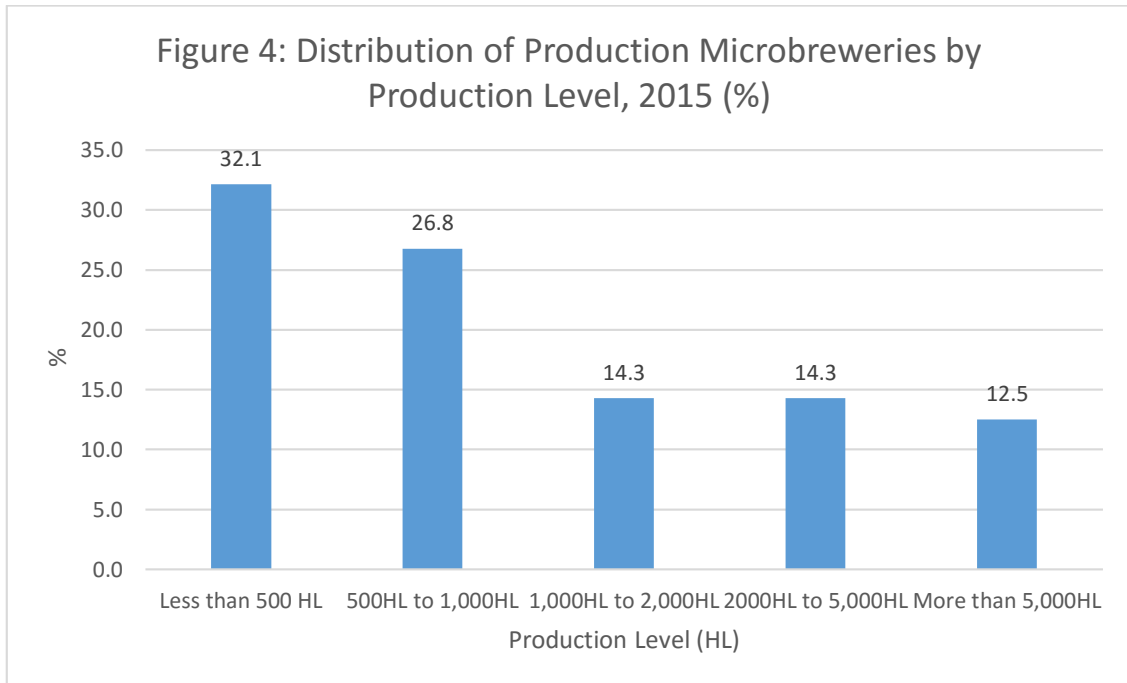


Source: Compiled by the author using survey and Bord Bia and other data

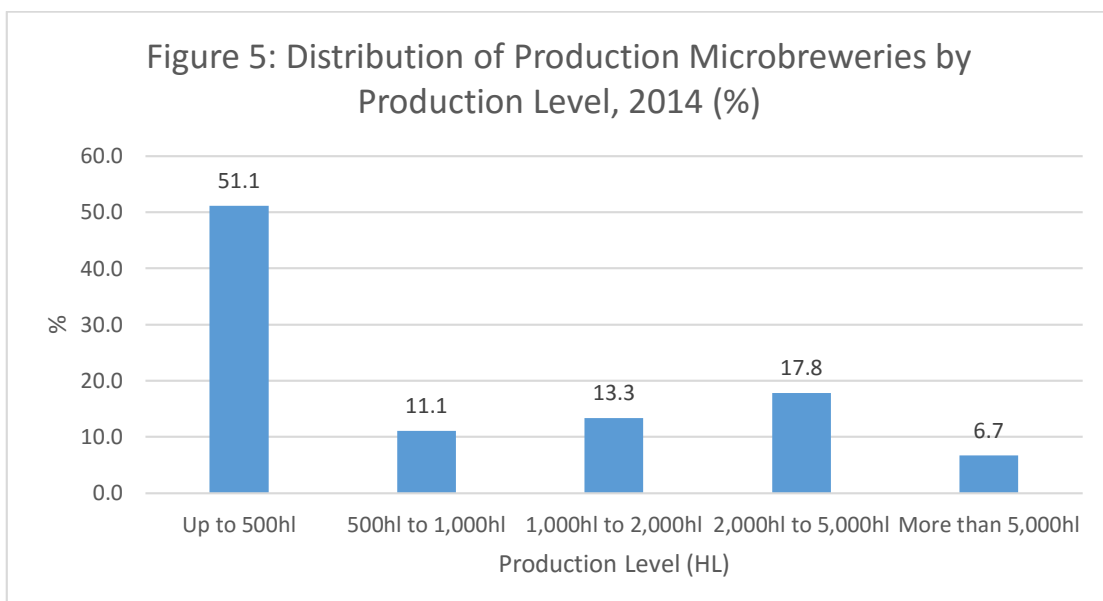
On the basis of current trends for the year 2016 to date, the breweries are anticipating that output will rise by 63,000hl or 47% to 197,000hl for the year as a whole. Looking at the trends over the last few years, it is clear that the percentage growth rate in production is in decline from a high of 75%. This is not surprising as such growth rates are difficult to sustain at higher production levels.

2.3 Size Structure

Of the 56 breweries in production during 2015, over 32% produced 500hl of beer or less in that year. The equivalent figure for 2014 was 51%. The reduction in the proportion of very small microbreweries is due to the fact that the very large influx of new entrants in 2014 had come fully into production by 2015 (see Figures 4 and 5). In general, however, the size of microbreweries is on the increase. In 2015, 12.5% of breweries had production levels greater than 5,000hl as compared to 6.7% in 2014.



Note: Compiled by the author from Survey data and other sources; based on 56 production microbreweries



Note: Compiled by the author from Survey data and other sources; based on 44 production microbreweries.

2.4 Irish Microbrewery Market Share

The IBA reports that total beer production in Ireland amounted to 7,755,000 hl in 2015.³ The microbrewery production of 134,000hl in 2015 represents 1.7% of the production market.⁴ With the current and anticipated trends in craft beer production, the Irish craft beer market share is likely to hit 2.5% in 2016.

Turning to the consumer market for beer in Ireland, the IBA estimates this at 4,414,000 hl for 2014. Of the 134,000hl produced by microbreweries in 2015 some 110,000 hl were sold in the domestic Irish market, indicating an Irish microbrewery share of 2.5%. The projected Irish craft beer share of total beer consumption is predicted to rise to 3.4% for 2016.

Based on the 2016 estimates for Irish craft beer production and consumption, the share of craft beer in overall Irish beer production and consumption has risen approximately six fold since 2012.

Table 2: Trend in Irish Craft Beer Market Shares

Market Share (%)	2012	2013	2014	2015	2016
Production (%)	0.4	0.6	1.2	1.7	2.5
Consumption (%)	0.6	0.9	1.4	2.5	3.4

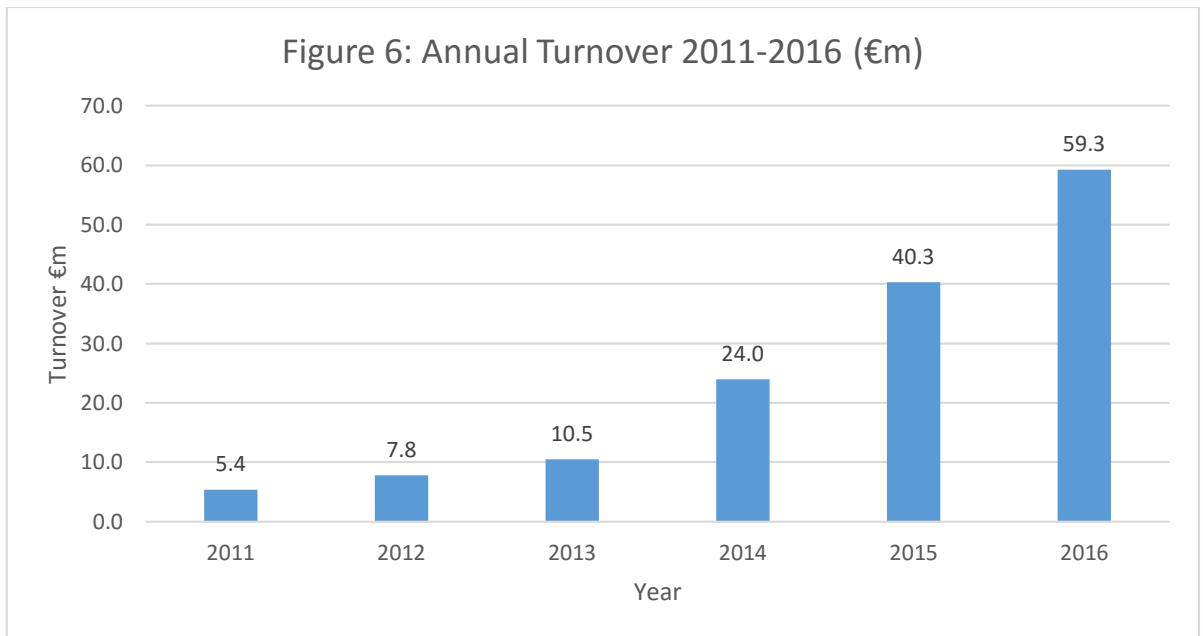
Note: Compiled by the author from Survey and IBA data. Note 2016 figures are based on year to date

2.5 Turnover

The total turnover of craft beer producers in 2015 is estimated at €40m and at a projected €59m for 2016. In the five years since 2011, turnover has increased eleven fold (see Figure 6).

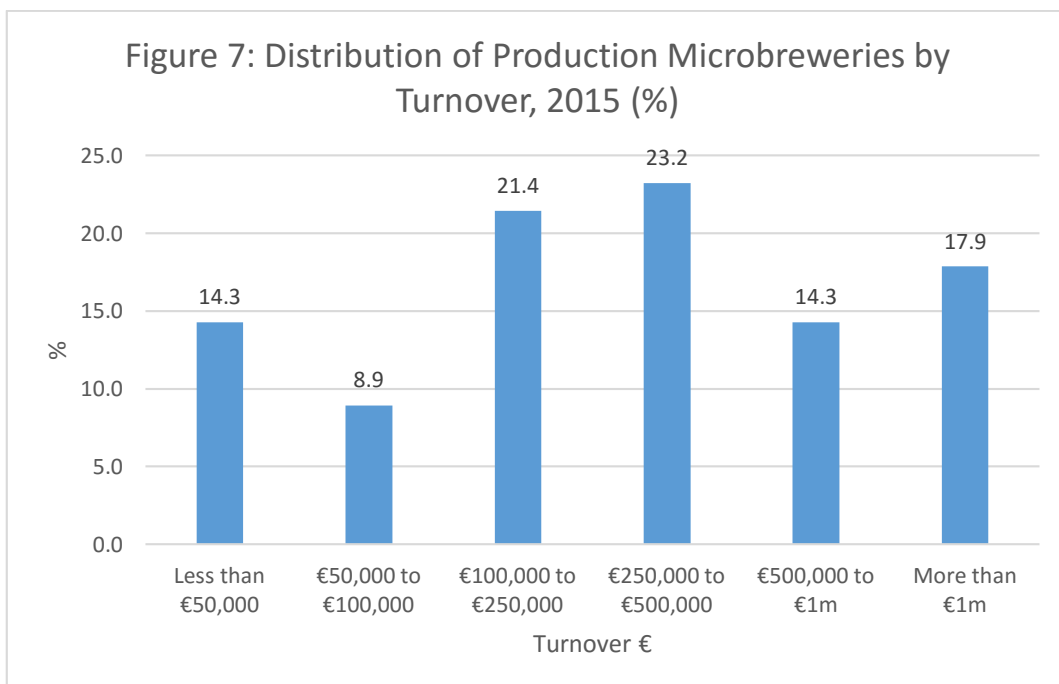
³ IBA, Beer Market Report, 2015, 2016.

⁴ Total beer production has been in decline. This estimate assumes that beer production in 2015 will remain broadly static.

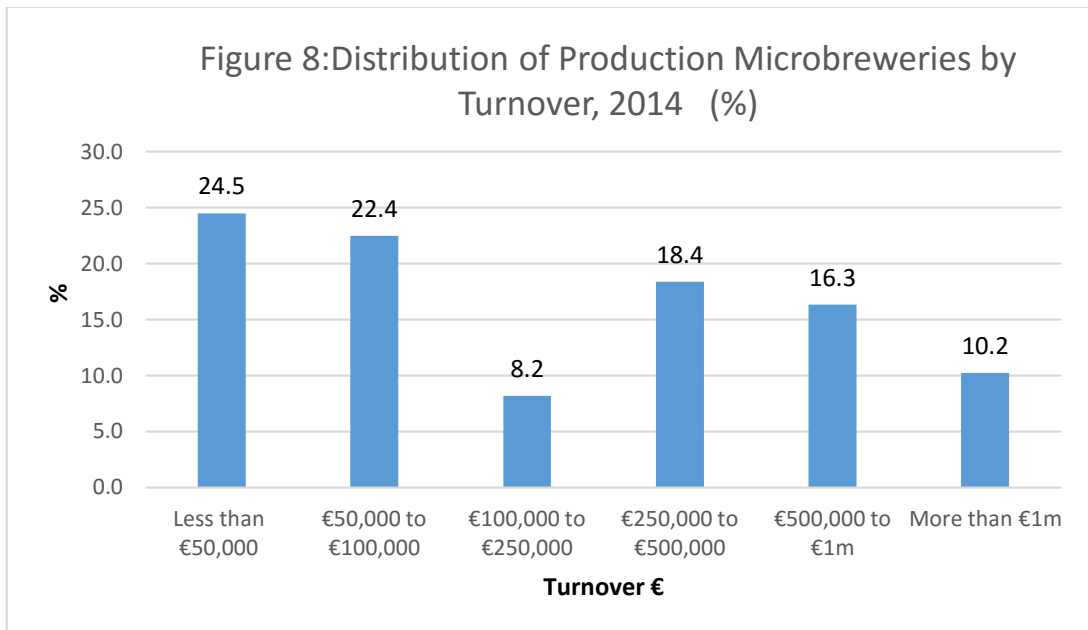


Source: Bord Bia statistics and estimates by the author

Some 14% of microbreweries had a turnover of less than €50,000 in 2015. This compares to a quarter of breweries in 2014. The turnover of breweries is rising rapidly: almost one-third now have revenues in excess of €500,000, compared with just over on-quarter in 2014. See Figures 7 and 8.



Note: Estimated by the author based on Survey data; refers to 62 microbreweries.



Note: Estimated by the author based on Survey data; refers to 49 microbreweries.

3. Future Growth in Microbrewing

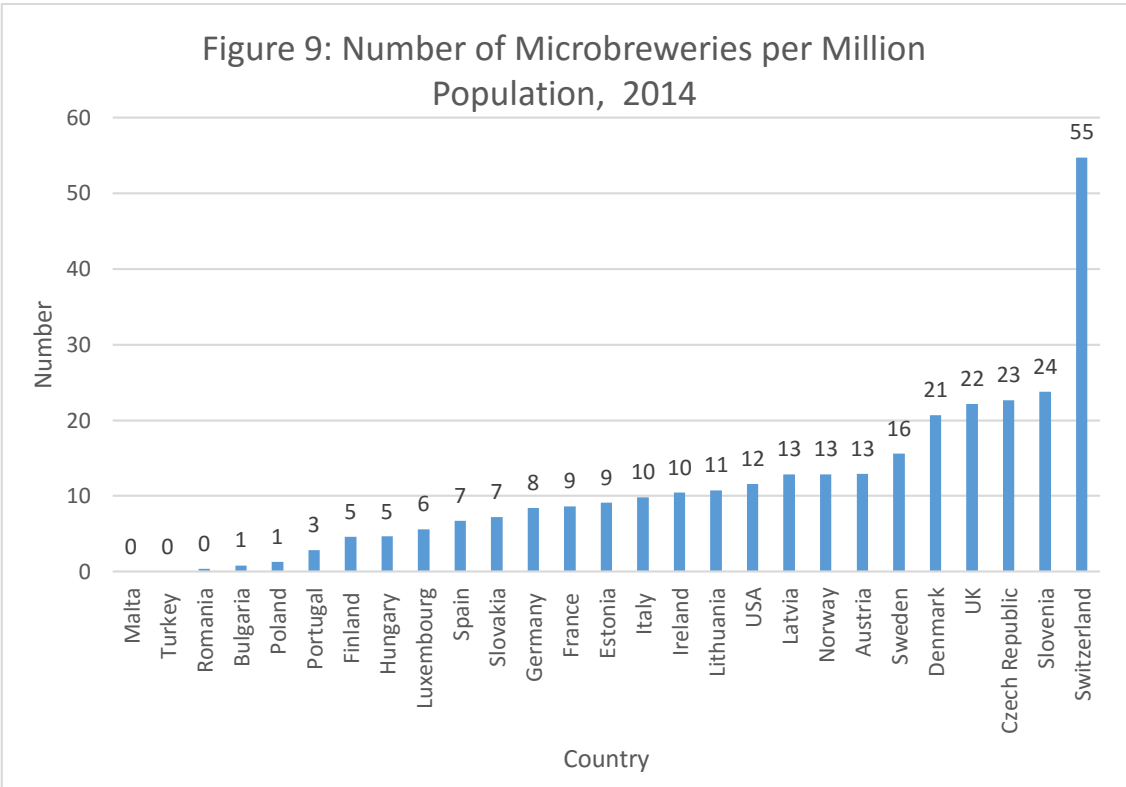
The rapid increase in both the number and output of microbreweries since 2011 suggests that further strong growth may be expected. For this to occur, microbreweries have to have sufficient capacity to ensure supply and consumer demand has to remain strong. This section of the Report first looks at the current development of the Irish microbrewing industry in an international context, before considering the structure of existing demand and the production capacity of the industry.

3.1 The Development of Irish Microbrewing in an International Context

Looking at the number of microbreweries per million population for various countries for the year 2014, it is clear that Ireland has improved in terms of development of microbreweries. In 2013, it was ranked 17th in terms of microbreweries per million population. In 2014, it has moved up to 12th.

However, at just over ten microbreweries per million inhabitants, Ireland still lags behind other countries with a strong beer drinking culture. For example, Ireland had half the rate of the UK, Denmark Czech Republic and Slovenia. Switzerland has an exceptionally well-developed craft industry at 55 breweries per million population, or over five times the rate in Ireland.

If Ireland were to ultimately match countries such UK, Denmark Czech Republic and Slovenia with over 20 microbreweries per million, then a total of at least 100 microbreweries could be envisaged for the Republic of Ireland as a whole.



Sources: compiled by the author from data provided by Beer Europe, the Brewers Association USA, United Nations statistics as well as survey data. Due to rounding, zeros mean less than one.

Another perspective is provided by comparative levels of production of craft beer at home and abroad. Such data are more difficult to obtain, however, the USA experience is well documented. In 2015, American craft beer production accounted for 12.2% by volume of all beer production.⁵ This compares with the equivalent figure of just under 2% for Ireland in the same year. It is clear that, on this measure, Irish craft beer production has still substantial potential for growth.

3.2 Microbrewery Capacity

The Survey asked respondents to report their current annual capacity. Based on the data provided, it is estimated that the current capacity of the microbrewing production companies is in the range of 400,000 to 450,000 hl. The reason why a range is estimated is that some companies appear to have estimated their capacity based on the size of their production space rather than installed brewing equipment.

Substantial investment in capacity has occurred in the last two years in particular. This is because some breweries, that have been in operation for a number of years, are now enlarging their initial facilities. In addition, some start-ups are entering the market with large initial capacity.

As the anticipated output is 197,000 hl for 2016, the capacity estimate suggests a capacity utilisation of between 44% and 49%. This is a low utilisation rate. Unused capacity is in the range of 200,000 to 250,000 hl.

The indications are that capacity will continue to grow apace. Almost 44% of responding microbreweries stated that they are currently investing in even more capacity. Thus, it is clear that capacity will not act as a restraint on supply. Rather, at the current rate of demand growth of some 60,000 hl per annum and the continued investment in capacity, the prospect is that capacity will continue to substantially exceed output for several years to come.

3.3 Structure of Market Demand

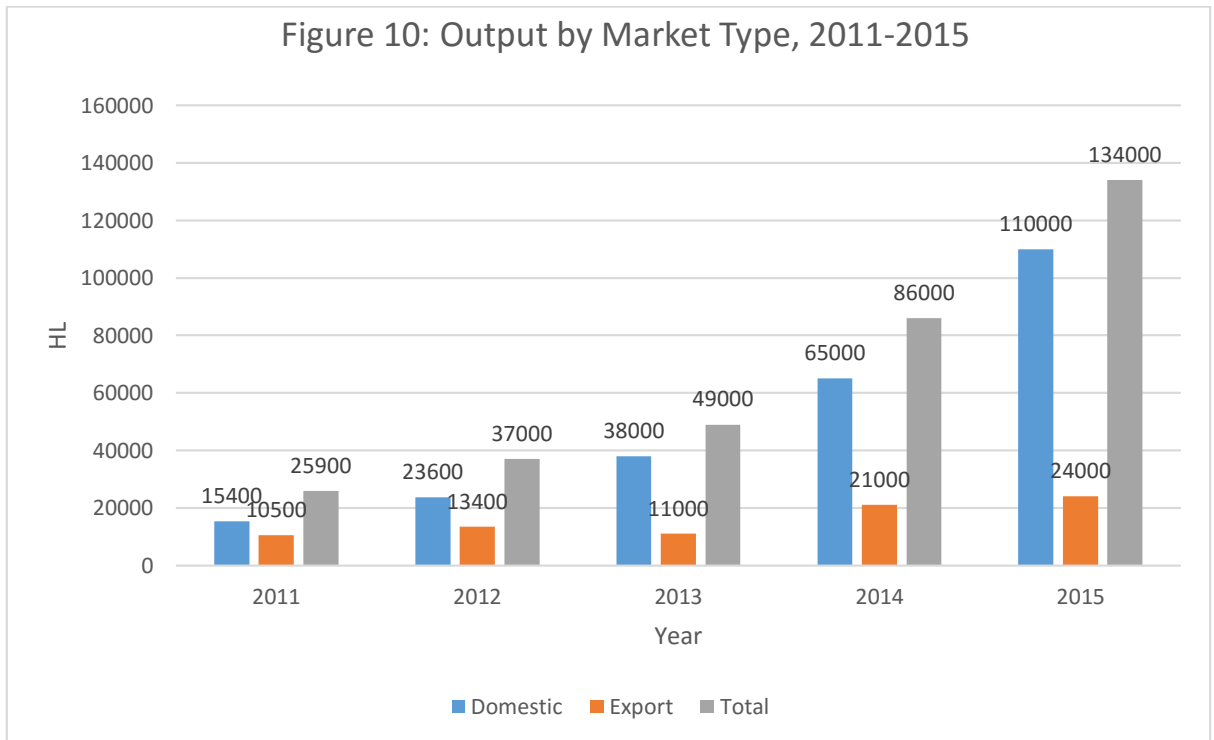
Of the 134,000 hl of beer produced in 2015, 110,000 hl was consumed in the domestic market, with 24,000 hl going for export. Thus, exports accounted for 18% of total production. Looking back over a longer period, it appears that the domestic demand has been the driving force. While domestic demand has increased more than fourfold since 2011, exports have just about doubled. See Figure 10.

About two-thirds of microbreweries export some of their production. However, the quantities are often very small. Three producers account for 78% of all exports by volume. There will have to be a greater focus on exports, if the microbrewing sector is to continue its phenomenal rate of growth.

The likely scenario is that the rate of new entrants to the Irish craft beer market will moderate and 2014 will be seen to be an exceptional year in that regard. However, production will continue to advance, as the sector becomes more export focussed.

⁵ Brewers Association, USA

Microbreweries have major ambitions in this regard: two-thirds of microbreweries are intending to expand their exports significantly within the next few years and are targeting a 40% export share on average.



Survey respondents were asked to rank their top three export markets in order by export volume. Twelve export markets were mentioned, with the UK receiving the most mentions followed by Italy, France and the USA in that order. Other countries mentioned were Australia, Canada, Netherlands, Belgium, Denmark, South Korea, Germany, and Russia.

It is possible to develop a ranking by volume exported. On this basis, France, followed by the USA and Italy were the principal export markets by volume in 2015.

However, this is only an approximate picture of export markets, as export volumes are concentrated in a small number of producers. These producers would have significant export volumes outside their top three export markets. These would not have been recorded in the Survey.⁶

3.4 Barriers to Development

Output from the micro brewing industry is currently more than doubling every two years, so it has the potential to become a major element in the Irish drinks industry, with huge benefits to the economy, through increased exports. It has a developing role in tourism and can help to encourage more moderate drinking, with consequent health benefits.

⁶ Information on only the top three export markets was sought to keep the questionnaire to a reasonable length and to ensure that it could be readily completed. For the same reasons, export volumes were not sought.

Against this background, microbreweries were asked to indicate the major regulatory barriers that inhibit their development. The concerns of microbrewery owners are focussed, at this stage, on four issues:

- The most common issue raised by the industry is that relating to restrictions on sale of own beer to brewery visitors and, to a lesser extent, at farmers' markets. This is seen as a valuable marketing tool that has significant dividends for Irish tourism.
- The ceiling of 30,000 hl which applies to the excise tax relief is once again a matter of concern. As indicated above, microbreweries are increasing in size and some brewers have already installed capacity in excess of the ceiling while others are approaching it. Some respondents note that a maximum 200,000 hl ceiling is permitted under EU legislation and that many EU Member States have adopted this approach. There is concern that, if the ceiling is raised it should be by a significant amount that allows room for growth. Above the ceiling and below the maximum ceiling of 200,000hl, a graduated approach is favoured, so that a gradual withdrawal of the relief is ensured.
- The existence of what are seen as anticompetitive practices is a major concern to microbrewers. These practices include the offer of incentives to publicans, both monetary and in material terms, to stock particular brands, sometimes on an exclusive basis. As small enterprises, microbreweries cannot compete with such incentives, even if they so wished.
- Finally, microbreweries are concerned with the taxation levels on beer both in terms of excise duty and VAT and are seeking reductions in the same. Some are seeking an increase in the relief for microbreweries above the 50% which currently obtains, although this is not possible under current EU regulations.

3.5 Conclusions

Based on international experience, there is substantial potential for further development of the Irish craft beer industry in terms of both numbers and output. An increase in the number of breweries to more than one hundred and a five-fold increase in output is possible over the longer term.

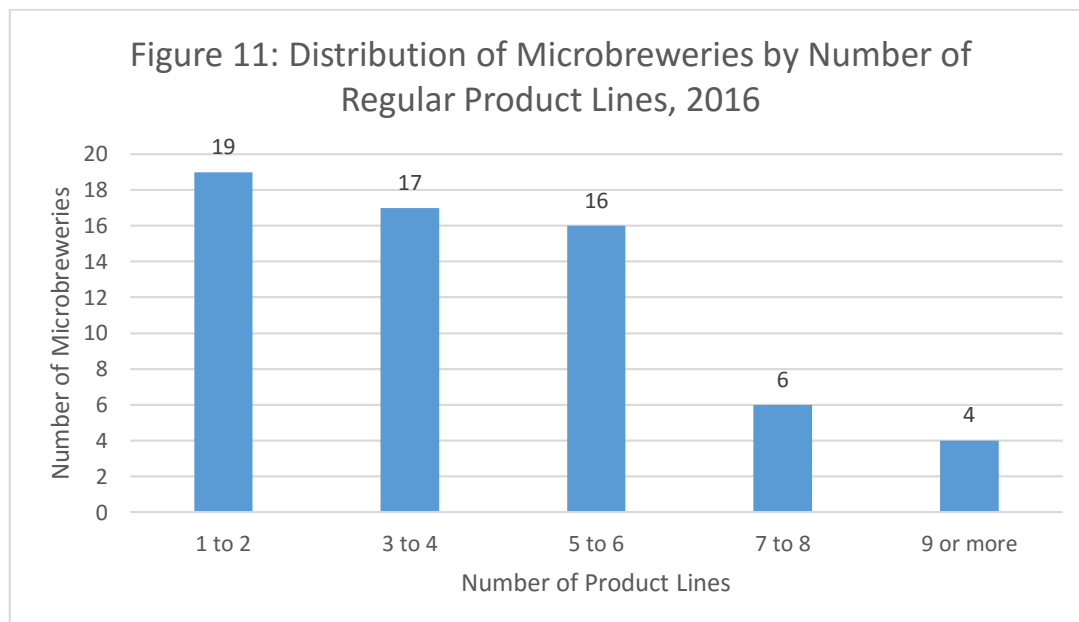
There is currently substantial unused capacity and more is planned. This could facilitate major output growth in the short term, if the growth in demand is sustained. To date, domestic demand has largely driven output growth. While two-thirds of microbreweries export, the volumes are typically small. Three producers account for 78% of all exports by volume. There is a need for other microbreweries to expand their export performance. They have major ambitions in this regard: two-thirds of microbreweries are intending to expand their exports significantly within the next few years and are targeting a 40% export share of total output, on average.

There is a number of regulatory changes such as relating to the sale of beer from brewery premises and the increase in the current ceiling for tax relief that would help breweries achieve their targets.

4. Operational Characteristics of Microbreweries

4.1 Product Lines

The typical microbrewery now has 4 to 5 regular product lines as against 3 to 4 in 2015. There is evidence over the last three surveys of considerable diversification in regular product lines. There are now 26 production microbreweries with five or more regular product lines. The equivalent figures for 2015 and 2014 were 18 and 7 respectively. On average, microbreweries have 6 seasonal or occasional product lines.



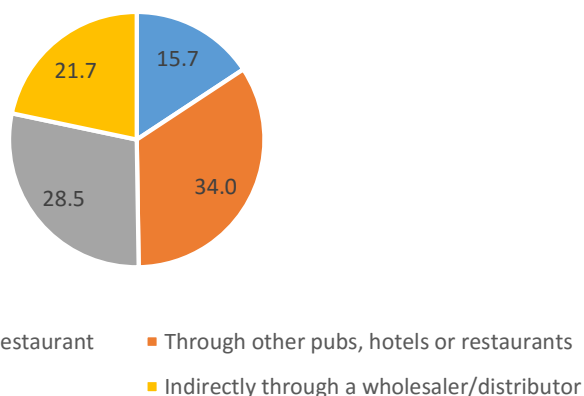
Note: compiled by the author based on Survey and On-Line data for 62 microbreweries

4.2 Distribution

Microbreweries have a number of distribution channels open to them. They can distribute their product themselves or use a wholesaler/distributor. Figure 12 depicts the proportion of domestic sales through various channels. It shows that almost 50% of sales are directly through pubs, hotels and restaurants. Of this, 16 percentage points (or one-sixth of total sales) is through brewery-owned pubs, hotels or restaurants. Some 29% of sales are through other retail outlets (mainly off licences) while 22% are indirectly through a wholesaler/distributor. Compared to 2014, the proportion of sales through a wholesaler/distributor has declined significantly (albeit within a larger market), while that for other retail outlets has increased.

Of course, microbreweries typically use at least three out of the four channels to some degree. For example, half of the 38 microbreweries surveyed used the three distribution channels other than through own outlets.

Figure 12: Proportion of Output by Distribution Channel, 2015(%)



Source: estimated by the author using data from 37 production microbreweries

4.3 Packaging

Microbreweries have a number of ways of packaging their product: bottles, cans, kegs or casks. Table 3 sets out the number and proportion of microbreweries using each packaging option. Keg is the most frequently used packaging option (94.6% of microbreweries), with bottle a close second (86.5%). Nine microbreweries in the Survey now use cans compared to only three microbreweries in 2014.

Table 3: Number and Proportion of Microbreweries using Various Packaging Options, 2015.

Packaging Option	Number of Microbreweries	Proportion (%)
Bottle	32	86.5
Can	9	24.3
Cask	14	37.8
Keg	35	94.6

Source: based on a survey of 37 microbreweries

4.4 Employment

Production microbreweries in Ireland currently (in mid-2016) employ an estimated 479 people. This means that the production microbrewing sector has created 167 extra jobs in the past year.⁷

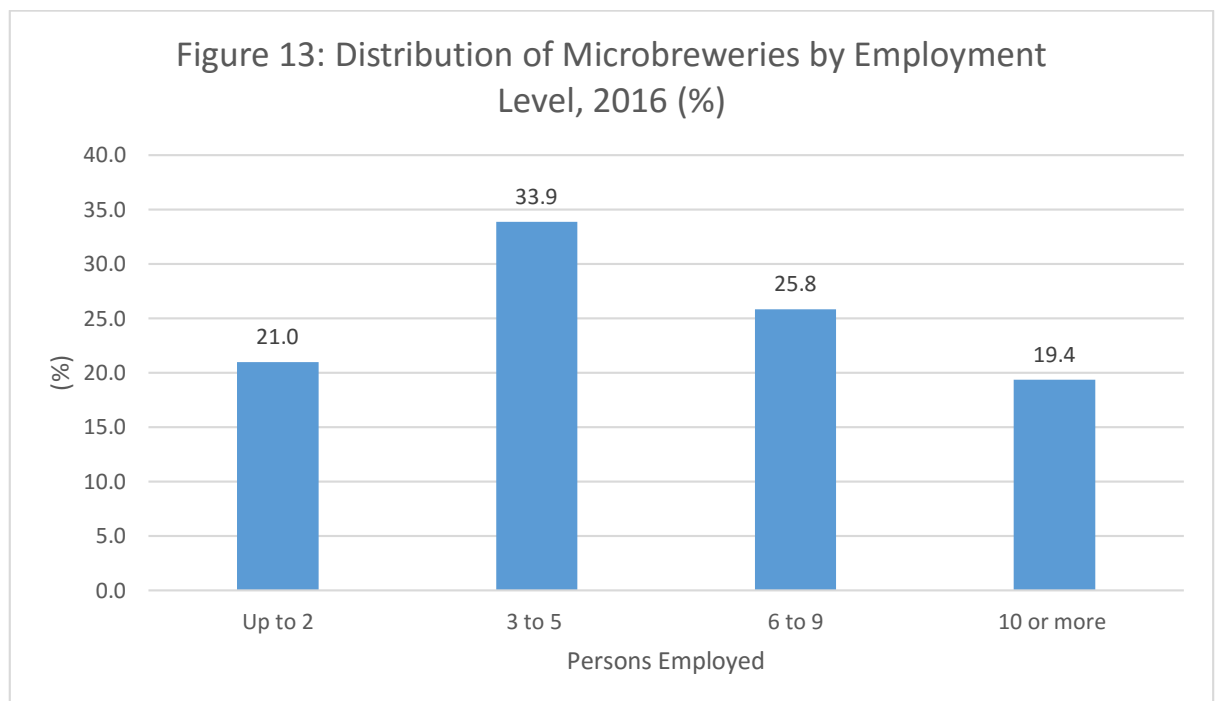
⁷ Excludes bar staff in own pubs.

Of the total of 479 persons employed, 351 represent full time jobs. There are also 75 employed part-time and some 53 on a seasonal basis. Of the 426 persons employed on a regular basis, 104, or almost one quarter, are female.

Some 84% of microbreweries have a staff member with a formal brewing qualification. It is estimated that there are some 90 persons in the sector as a whole with formal brewing qualifications, amounting to 25% of all persons employed full-time.

Generally speaking, individual microbreweries employ few people, typically between 3 and 5 persons (see Figure 13). However, brewery size in employment terms is on the increase. In 2015, 27% of breweries employed two people or less, the equivalent figure for 2016 has dropped to 21%. Almost one-fifth of breweries now employ 10 or more people

Microbrewing is a much more labour intensive activity than conventional large scale brewing. With regard to the brewing industry as a whole, the Irish Brewing Association (IBA) estimate that there were 2,119 full time employees in the industry in 2014 producing 7.3m hl, or 290 full time employees per m hl.⁸ At the current rate of employment, the equivalent figure for the micro-brewing industry would be 2,100⁹. This makes micro-brewing in Ireland seven times more labour intensive than macro-brewing.



Note: Estimated for 62 microbreweries by the author based on Survey data

An associated feature of the micro brewing industry is that it is subject to substantial economies of scale. As plant size increases, operational personnel do not increase in line.

⁸ IBA. The Irish beer industry and its importance to the Irish economy IBA (undated)

⁹ Estimated by the author based on Survey results for 2015 levels of employment and output.

This is illustrated in Table 4 that relates employment in full time equivalents per 1000 hl of production to the level of output from the microbrewery. Very small breweries have high unit labour costs, which diminish somewhat as production levels increase.¹⁰

Microbreweries in the start-up phase are relatively labour intensive. While this has benefits for the economy as a whole, it means that they are subject to higher costs compared to macrobreweries. Even the largest microbreweries are four times more employment intensive than their macro counterparts. This reduces the capacity of the microbreweries to compete. Microbreweries currently benefit from an excise tax rebate of 50%. This is a significant benefit to them in maintaining competitiveness in the face of their cost structure.

Table 4: Employment Intensity of Production

Brewery Annual Output(HL)	Employment(FTEs)per 1000 hl
<500	9.6
>500<=1,000	4.1
>1,000<=2,000	2.7
>2,000<=5,000	1.7
>5,000	1.3

Source: based on the 2016 and 2015 Surveys

¹⁰ The Society of Independent Brewers in the UK has identified a similar trend: see SIBA. Local Beer Report, 2013

5. Economic Impact

5.1 Direct Employment

Microbreweries provide employment in the brewing process, in marketing and distribution of the product, as well as in general administration. Because many breweries are small or in the start-up phase, they often employ personnel on a part-time basis. Equally, because demand is subject to variation and seasonal products are produced, staff are also employed on an occasional basis.

It is estimated that at current (2016) production levels, microbreweries that are in operation are employing 439 persons on a full time equivalent (FTE) basis.¹¹ Of the total employment, 399 FTEs are employed in production microbreweries and 40 FTEs in contracting companies.

4.2 Indirect and Induced Employment

The micro-brewing industry sources over half of its brewing ingredients by value domestically. For example, almost 95% of microbreweries source supplies of malted barley from within the Republic of Ireland, typically amounting to 80% to 90% of all their malted barley inputs.¹² Distribution is another source of local spin-off activity. As was indicated above, 22% of the output of the sector is currently channelled through wholesalers/distributors.

Thus, there are significant downstream benefits for the agricultural and other sectors in Ireland.

By identifying the sectors from which the micro-brewing industry purchases and the use of the CSO's Input-Output tables, it is possible to estimate the wages and salaries to which these purchases give rise.¹³ An indirect employment effect can then be calculated.

This indirect employment was estimated at 392 persons. This means that every person employed in production micro-brewing is matched by another in the wider economy that supplies the industry.

The craft brewing labour force earns incomes that are spent on goods and services produced in Ireland. The production of these goods and services also gives rise to employment. This induced employment is estimated to amount to 149 persons for 2016. On this basis, the craft brewing industry supports almost 1,000 jobs in Ireland (see Table 5).

¹¹ FTEs are estimated assuming that part-time is one half of full-time and occasional is one sixth.

¹² Based on the Survey

¹³ The CSO Input-Output Tables for 2010 were used

Table 5: Employment Supported by the Microbrewing Industry in Ireland, 2016 (FTEs)

Category of Employment	Number of Persons Employed
Direct	439
Indirect	392
Induced	149
Total	980

Source: estimated by the author

4.3 Regional Impact

Of the 62 production microbreweries in operation in mid-2016, 9 are in County Cork, compared to 6 in Dublin. There are a further 10 in the counties of Wicklow, Kildare and Meath that make up the wider Dublin Region.

There are microbreweries in operation in 23 of the 26 counties. Employment in the microbrewing industry is thus very widely dispersed throughout the country. It is also worth noting that microbreweries are sited in rural as well as urban areas, which enhances the local employment effect.

Table 6 depicts the current regional distribution as of mid-2016.

Table 6: Number of Production Microbreweries by County, 2016

County	Number of Microbreweries	County	Number of Microbreweries
Carlow	1	Louth	1
Cavan	2	Longford	1
Clare	2	Mayo	3
Cork	9	Meath	3
Donegal	4	Monaghan	1
Dublin	6	Offaly	1
Galway	5	Roscommon	1
Kerry	4	Sligo	1
Kildare	3	Tipperary	1
Kilkenny	0	Waterford	2
Laois	0	Westmeath	0
Leitrim	1	Wexford	4
Limerick	2	Wicklow	4

Source: compiled by the author; refers to breweries in production in mid-2016

4.4 Tax Revenue Benefits

While microbreweries benefit from a tax rebate, they still pay over substantial excise duties to the Revenue Commissioners. Based on estimates of domestic sales for 2015 and 2016, it is estimated that microbreweries will pay the Revenue Commissioners some €5.8m in excise duties in respect of 2015 production, rising to €8.6m in 2016.¹⁴

In addition to the above, the wages that microbreweries pay out give rise to income tax and PRSI payments to the Exchequer. These arise from direct, indirect and induced employment. The anticipated income tax and PRSI which will be paid by the industry and its employees in respect of production in 2016 are set out in Table 7. The micro brewing industry is expected to generate over €3.7m in income tax, USC and PRSI receipts for the Exchequer. This rises to €10.8m when indirect and induced tax and PRSI revenues are taken into account.¹⁵

The tax and PRSI revenues arising from the microbrewery industry at 2016 production levels at €10.8m exceeds the expected excise tax rebate in respect of 2015 production.

Table 7: Summary of Anticipated Income Taxes and PRSI, 2016

Category of Payment	Income Tax (€m)	PRSI (€m)	USC (€m)	Total (€m)
Direct	1.7	1.5	0.5	3.7
Indirect	2.4	2.0	0.7	5.1
Induced	0.9	0.8	0.3	1.9
Total	5.0	4.2	1.5	10.8

Source: estimated by the author

¹⁴ Based on a 4.7% ABV content.

¹⁵ This assumes that, at the current high rate of unemployment, additional employment in micro-brewing will reduce unemployment numbers by the same amount. The net expenditure gain to the Exchequer in terms of reduced social welfare payments has not been included in the above figures.

6. Conclusions

Development of the Microbrewery Sector

- It is estimated that there are some 90 microbreweries operating in the Republic of Ireland, of which 62 are production microbreweries and at least 28 are contracting companies.
- There has been a 29% increase in the number of production microbreweries from 48 in 2015 to 62 in 2016. The number of microbreweries has more than quadrupled since 2012.
- It is estimated that 13 new production microbreweries commenced production in 2015, compared with a total of 20 in 2014. This highlights the phenomenal growth in new enterprises in the last two years: 33 of the 62 production microbreweries commenced production in 2014-2015.
- The output of craft beer by production microbreweries amounted to some 134,000 hectolitres (hl) in 2015. This represents a 56% increase on the 2014 figure of 86,000hl. In absolute terms, output rose by 48,000hl. Output from the 13 microbreweries that commenced production in 2015 accounted for one-quarter of the increase of 48,000hl. Thus, pre-2015 breweries expanded production significantly.
- On the basis of current trends for the year 2016 to date, the breweries are anticipating that output will rise by 63,000hl or 47% to 197,000hl for the year as a whole. Looking at the trends over the last few years, it is clear that the percentage growth rate in production is in decline from a high of 75% in 2013. This is not surprising as such growth rates are difficult to sustain at higher production levels.
- The total turnover of craft beer producers in 2015 is estimated at €40m and at a projected €59m for 2016. In the five years since 2011, turnover has increased eleven fold.
- The size of microbreweries is on the increase. In 2015, 12.5% of breweries had production levels greater than 5,000hl as compared to 6.7% in 2014.
- The microbrewery production of 134,000hl in 2015 represents 1.8% of the market. With the current and anticipated trends in craft beer production, the Irish craft beer market share is likely to hit 2.5% in 2016.

- Turning to the consumer market for beer in Ireland, of the 134,000hl produced by microbreweries in 2015 some 110,000 hl were sold in the domestic Irish market, indicating an Irish microbrewery share of 2.5%. The projected Irish craft beer share of total beer consumption is predicted to rise to 3.4% for 2016.
- Based on the 2016 estimates for Irish craft beer production and consumption, the share of craft beer in overall Irish beer production and consumption has risen approximately six fold since 2012.

Future Growth in Microbrewing

- Based on international experience, there is substantial potential for further development of the Irish craft beer industry in terms of both numbers and output. An increase in the number of breweries to more than one hundred and a five-fold increase in output is possible over the longer term.
- Microbreweries have currently substantial unused capacity and more is planned. This could facilitate major output growth in the short term, if the growth in demand is sustained. To date, domestic demand has largely driven output growth. While two-thirds of microbreweries export, the volumes are typically small. Three producers account for 78% of all exports by volume. There is a need for other microbreweries to expand their export performance.
- They have major ambitions in this regard: two-thirds of microbreweries are intending to expand their exports significantly within the next few years and are targeting a 40% export share of total output, on average. There is a number of regulatory changes such as relating to the sale of beer from brewery premises and the increase in the current ceiling for tax relief that would help breweries achieve their targets.

Operational Characteristics of Microbreweries

- The typical microbrewery now has 4 to 5 regular product lines as against 3 to 4 in 2015. There is evidence over the last three surveys of considerable diversification in regular product lines. There are now 26 production microbreweries with five or more regular product lines.
- Microbreweries have a number of distribution channels open to them. Almost 50% of sales are directly through pubs, hotels and restaurants. Of this, 16 percentage points (or one-sixth of total sales) is through brewery-owned pubs, hotels or restaurants. Some 29% of sales are through other retail outlets (mainly off licences) while 22% are indirectly through a wholesaler/distributor. Compared to 2014, the proportion of sales through a wholesaler/ distributor has declined significantly (albeit within a larger market), while that for other retail outlets has increased.
- However, some distribution channels are more intensively used than others. Some 45% of the output of microbreweries is sold through both brewery-owned

and other pubs, hotels and restaurants, while 41% is through a wholesaler distributor.

- Microbreweries have a number of ways of packaging their product: bottles, cans, kegs or casks. Keg is the most frequently used packaging option (94.6% of microbreweries), with bottle a close second (86.5%). Nine microbreweries in the Survey now use cans compared to only three microbreweries in 2014.
- Production microbreweries in Ireland currently (in mid-2016) employ an estimated 479 people. This means that the production microbrewing sector has directly created 167 extra jobs in the past year.
- Of the total of 479 persons employed in production microbreweries, 351 represent full time jobs. There are also 75 employed part-time and some 53 on a seasonal basis. Of the 444 persons employed on a regular basis, 108, or almost one quarter, are female.
- Some 84% of microbreweries have a staff member with a formal brewing qualification. It is estimated that there are some 90 persons in the sector as a whole with formal brewing qualifications, amounting to 25% of all persons employed full-time.
- Generally speaking, individual microbreweries employ few people, typically between 3 and 5 persons. However, brewery size in employment terms is on the increase. In 2015, 27% of breweries employed two people or less, the equivalent figure for 2016 has dropped to 21%. Almost one-fifth of breweries now employ 10 or more people
- Microbrewing is a much more labour intensive activity than conventional large scale brewing. Micro-brewing in Ireland is seven times more labour intensive than macro-brewing.

Economic Impact of Microbreweries

- At current (2016) production levels, microbreweries that are in operation are employing 439 persons on a full time equivalent (FTE) basis. Of the total employment, 399 persons are employed in production microbreweries and 40 in contracting companies.
- The microbrewing industry sources over half of its brewing ingredients by value domestically. For example, almost 95% of microbreweries source supplies of malted barley from within the Republic of Ireland, typically amounting to 80% to 90% of all their malted barley inputs. Distribution is another source of local spin-off activity. Thus, there are significant downstream benefits for the agricultural and other sectors in Ireland.

- This indirect employment was estimated at 392 persons. This means that every person employed in production micro-brewing is almost matched by another in the wider economy that supplies the industry.
- The craft brewing labour force earns incomes that are spent on goods and services produced in Ireland. The production of these goods and services also gives rise to employment. This induced employment is estimated to amount to 149 persons for 2016. On this basis, the craft brewing industry supports almost 1,000 jobs in Ireland.
- Of the 62 production microbreweries in operation in mid-2016, 9 are in County Cork, compared to 6 in Dublin. There are a further 10 in the counties of Wicklow, Kildare and Meath that make up the wider Dublin Region.
- There are microbreweries in operation in 23 of the 26 counties. Employment in the micro-brewing industry is thus very widely dispersed throughout the country.
- While microbreweries benefit from a tax rebate, they still pay over substantial excise duties to the Revenue Commissioners. Based on estimates of domestic sales for 2015 and 2016, it is estimated that microbreweries will pay the Revenue Commissioners some €5.8m in excise duties in respect of 2015 production, rising to €8.6m in 2016.
- In addition to the above, the wages that microbreweries pay out give rise to income tax and PRSI payments to the Exchequer. These arise from direct, indirect and induced employment. The micro brewing industry is expected to generate over €3.7m in income tax, USC and PRSI receipts for the Exchequer. This rises to €10.8m when indirect and induced tax and PRSI revenues are taken into account.
- The tax and PRSI revenues arising from the microbrewery industry at 2016 production levels at €10.8m exceeds the expected excise tax rebate in respect of 2016 production.

Appendix 1: Organisation of the Survey

Introduction

This Appendix summarises the approach adopted to the Survey of microbrewing companies.

Identifying the Population

The first task was to identify the population of microbrewing companies to be surveyed. Although the emphasis was on the establishing the volume of craft beer produced in Ireland by production microbreweries, it was also considered useful to survey contracting companies where possible. Based on an internet search and industry sources, a list of microbrewing companies was developed. This list identified 62 production microbreweries and 28 contracting companies that were in operation in May 2015 – a total of 90 companies in all.

Survey Methodology

The Survey was undertaken electronically using Survey Monkey. A questionnaire was developed and dispatched to respondents via Survey Monkey. Respondents could then fill in the survey electronically by ticking boxes in respect of closed questions or writing in answers.

Sample Size

72 companies were included in the sample, including all production microbreweries.

Questionnaire

A questionnaire was developed for use in Survey Monkey. The emphasis was on the use of closed questions, so that the response could be in the form of ticking boxes. It was designed so that it could be completed in approximately five minutes if respondents had the information to hand.

Survey Response

Of the total of 72 companies surveyed, 48 made a return – a response rate of 64%. Of the 62 production microbreweries, 38 made a return. A response rate of 63%

Of the 14 production microbreweries that did not make a usable return, 6 had commenced production during 2015/16. They may have felt that they had little to report.

Production Estimation Methodology

One of the purposes of this Report was to track the output from Irish microbreweries. As 2015 is the last full calendar year, the estimation of output in that year was a key focus of the Report. This estimate was made in the following manner.

Of the 62 production companies, 6 were not relevant as they had commence production in 2016. 38 provided a direct estimate of 2015 production from the Survey. A further 8 breweries had responded to the 2014 or 2015 Surveys and an estimate was available from this source. This meant that there was a direct production estimate available for 46 of the 56 relevant breweries. For the remainder, where production capacity was available from

their website, this was used to determine their full annual output. Their 2015 output was then estimated by factoring for the number of months of operation in 2015. The output for the remaining breweries was obtained by comparing them to similar breweries for which data was available: for example, the production estimate for two brewpub/hotels was made by reference to Survey data for similar operations, factoring, where appropriate, for the number of operational months in 2015.

