

**An analysis of the trade shocks of Brexit and
COVID-19 on the Irish craft beer micro-
breweries**

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Abstract

In 2018 Bord Bia reported that since the craft beer trend began in the late noughties, the growth output of Irish micro-breweries had slowed down. This paper will investigate whether the trade shocks of Brexit and COVID 19 further exasperated an industry that had already slowed down. The researcher will analyse responses from a select group of brewers who participated in in-depth interviews about their personal experiences of the last two years. Review the key business strategy changes to overcome the effects of Brexit and COVID-19.

Craft breweries maintained high staffing levels through the lockdown. They quickly changed their packaging from kegs to cans and their customer base from on-trade to off-trade. Their creativity and flexibility allowed them to alter their business to survive in the quickly changing environment. Some breweries capitalised on the trade shocks and increased their market share by utilising technology.

The study will the potential implications for further research in the craft beer industry and other SMEa are considered to shed additional light on the discussions throughout this paper.

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1 Introduction

In 2018 Bord Bia reported that since the craft beer trend began in the late noughties, the growth output of Irish micro-breweries had slowed down (Bord Bia, 2018) It was estimated that there were five new breweries in 2017, but this was offset by seven closing in the six months before the report was published.

Bord Bia suggested there were growth areas that the breweries were not utilising. It stated a need for independent breweries to increase their export market. But they thought few had the intention or ability to increase their exports.

At the time of the Bord Bia report in 2018, the most significant risk to Irish business was a hard Brexit which could substantially decrease our exports to the United Kingdom. Since then, the world has been dealing with the public health crisis caused by COVID-19. This has had a dramatic effect on social and economic activity. Due to lockdown and infections, supply chain issues have closed sections of industries (Daly & Lawless, 2020).

The paper "Examination of the sectoral overlap of COVID-19 and Brexit shocks" states that there has not been an overlap of sectors exposed to the shocks of both events (Daly & Lawless, 2020) Taking this idea, this paper will investigate if Irish micro-breweries have started or increased their exports and what effects Brexit and COVID-19 have had on the Irish craft beer industry over the last three years.

This high-risk, possibly overcrowded and young industry in Ireland will be analysed to see what strategies were put in place to overcome any shock that Brexit and COVID-19 would have caused. This is an industry that has disproportionately suffered from the lockdown measures that were put in place from the government lockdown strategies. While the Irish economy grew by 3.4% in 2020 (Central Statistics Office, 2021), the sale of draught beer dropped by 57% between January and September 2020 (IBEC, 2020).

This paper seeks to learn how micro-breweries overcame a uniquely disruptive time and how they adapted to the "new normal". It is recognised that the macro environment is a quickly changing environment with many obstacles, and it is difficult for business models to maintain growth without being flexible and innovative to change. These challenges are even more critical to SMEs due to the lack of resources ((Bughin & Woetzel, 2019) (Hossain, et al.,

2022). These challenges exist in the craft brewery industry as well (Lewis, 2001) and are only further amplified and hastened by Brexit and COVID-19.

This research will try to identify how Irish micro-breweries mitigated the unprecedented exogenous shocks of the last couple of years and what strategies they are implementing to succeed in the ever-changing business environment of the future.

2 Literature Review

2.1 What is a Craft Beer?

Beer accounts for 78% of alcohol sales globally (Nave, et al., 2022) It accounts for 40% of the alcohol market share in Ireland (Drinks Ireland, 2022) Throughout 2021 sales of beer dropped by 46% in Ireland. Exports fell by 3%, highlighting the low demand for Irish beer abroad in the hospitality sector.

Within the beer section, there lies industrial, imported and craft beer. Craft beer is the smallest sector. However, over the last decade, there has been an overall decrease in beer sales globally, but craft beer sales have increased (Yiu, 2021) (Wojtyra, 2020) (Skoglund, 2019) The craft beer movement started in the 1960s in the USA, where new brewing styles and the rise of beer festivals brought an increased awareness of craft beer to the consumer.

In the USA, craft beer is defined as a brewery that no more than 25% is owned or controlled by an alcoholic beverage industry member and cannot produce more than 6 million barrels a year. (Nave, et al., 2022) This changes from region to region. In Japan, craft beer didn't really exist legally till 1994. Before that, small breweries were producing what was considered local beer; however, the government changed the minimum production volume from 2,000 kl to 6000 hl allowing small breweries to become commercial businesses (Yiu, 2021) In Italy, the craft breweries are limited to 200,000 Hl, less than 3% of the USA volume. Italian craft beer must also be unpasteurised and must be non-micro-filtered

Craft beer offers different flavours, aromas, and styles, in larger, Ipas, Belgian style white beers, oatmeal stout and porters. They also use various brewing techniques, from wood barrels to spices and fruit (Garavaglia & Swinnen, 2018).

Craft beer deploys traditional and innovative techniques to create unique tasting beers that separate it from mass-produced beer. With these changes, it has become more challenging to define. What started as small, isolated cottage industries has transformed into larger breweries (Garavaglia & Swinnen, 2018) that now offer food and tours.

As the popularity of craft beers grows, some of the more successful breweries have been acquired or merged into larger commercial breweries. The larger mass breweries have also launched their definition of "craft beer" to gain a market segment. Despite these beers being

a reasonable offering, consumers of Craft beers did not show much interest (Pokrivčák, et al., 2019). Because customers still saw them as an industrially produced beer of poorer quality. As a result, the macro breweries started creating subsidiaries making it hard to identify the authentic craft breweries. Further confusing the definition of what craft beer is.

For this paper, a craft brewery will be defined as an independently owned brewery that does not produce more than 50,000 hectolitres a year (Revenue.ie, 2021).

2.2 Craft beer drinkers:

Consumers of craft beer value taste over price, and there is a belief that it is of a higher quality than mass-produced beer (Aquilani, et al., 2015) They would rather pay a bit extra for a unique experience than save money and drink mainstream industrial beer. Craft beer drinkers are mainly young people between the ages of 20-35 and of a higher income bracket (Nave, et al., 2022) As more people reach the drinking age, the craft beer segment will be expected to grow. Despite the trend that youth drinking is declining (Törrönen, et al., 2019) Their taste is veering towards healthier options and quality over quantity.

Within this consumer group, research has shown a direct correlation between the increase in their income and their demand for craft beer. And along with this demand is an increase in variety. Consumers are selecting beers from many breweries with the increasing availability of different brand(Nave, et al., 2022) Although to the less experienced craft drinker, when there is too much choice, they can be overwhelmed and pick the first option sticking to the beer style they know rather than having brand loyalty.

2.3 Neo localism

There has been a rise in local consumerism; this can be seen in the rise of the farmer's market. Craft breweries have used this trend in purchasing local to build a loyal customer base for decades. Neo-localism was first identified by Shortridge (1996), a term he started using about the rise of micro-breweries in the 1980s in the United States. They use local names and imagery to further root themselves in the community (Ikäheimo, 2021) and tell their story through the area's folklore. This increased localness has a positive effect on the business.

Schnell (2013) believes Neo localism is more than just the support of the local community. It is believed to be a social reaction to people's desire to move away from macro beer that is seen as manufactured, globally homogenised and corporate. Local craft beer has the image of being something familiar and authentic. Local beer is seen as a force against globalisation (Schnell, 2013) Therefore, craft breweries are inclined to remain local and can have difficulty growing outside their geographical area.

2.4 Craft beer Ireland

The rise of Irish craft beer is a recent phenomenon. There seem to be two reasons for its resurgence in the last 15 years. First, some breweries believe it was born out of the previous significant trade shock, the recession of 2008. The recession brought unemployment and uncertainty, especially to a younger generation. (Drakopoulou Dodd, et al., 2018). People started producing beer at home as a hobby, which developed into a business over time.

The second reason was the beer industry had become significantly homogenised in Ireland. A few major global leaders with similar offerings and styles of beers (Woolverton & JL, 2008) Smaller breweries had been bought and merged into substantial conglomerates with few to non-independent breweries left in Ireland. Despite the opposite being true in Great Britain, where independent breweries were thriving, with over three new breweries opening weekly at a 188% growth rate in 2014 (Drakopoulou Dodd , et al., 2018)

A handful of the home breweries decided to capitalise on their hobby and started to pioneer craft beer in Ireland. By 2013 there were only 20 small breweries which tripled to 60 breweries by 2015. Bord Bia documented the following year over 90 micro-breweries in the Republic of Ireland (Bord Bia, 2016). The total turnover from 2011 to 2015 had increased eleven-fold. From 2016 to 2017, the market grew from €39.4 million to €44.3 million. However, by the end of 2017, there were signs of slowing in growth and some brewery closures (Bord Bia, 2018).

This slowing down could be attributed to oversaturation in the market. The paper "*Competitiveness in a Saturated Market. A Case Study of the Scottish Craft Beer Industry*" (Zhang & Carol, 2015) notes that "*the ability to produce beer and services of the right quality, at the right price, at the right time*" can be integral to the competitive advantage.

Many of the breweries had exploited a neo-localism, which could have been limiting their growth. In the Scottish study, it had noted: that "Brew Dog had the most success in growing an international business as it had *"offered an anti-establishment message, targeting the poor quality of mass-produced beer"* (Zhang & Carol, 2015).

It can be argued that the power of craft beer is its artisanal approach. Traditional capitalism is high consumption with high growth trying to achieve monopoly power. However, with its folk ethos, craft entrepreneurship aims for social collaboration in the forms of knowledge and capital to create larger communities. The breweries also collaborate to develop new beers. This co-lab brewing seemed to be born out of something organic and reinforcement of growing alias (Dodd, et al., 2019) (Cunningham & Fraser, 2021) (Cunningham & Barclay, 2020).

These small businesses found it challenging to raise capital. Large institutional lenders considered them high-risk (Drakopoulou Dodd , et al., 2018) As a result, few have managed to acquire foreign investment short term. Others have raised capital from the government from sponsored initiatives like Enterprise Ireland (Enterprise Ireland, 2020).

Only 42% of micro-breweries in Ireland export. The quantities are small, with four micro-breweries accounting for over 75% of the exports in 2017 (Bord Bia, 2018) Ireland is the eighth largest European beer distributor, so the channels are available to micro-breweries. In 2016, two-thirds of the breweries had intended to increase exports. The UK ranking as the country Irish breweries were most likely going to export to followed by Italy and Germany.

Ireland has the highest on-trade sales of beer at 64.8% in Europe in 2017 (Foley, 2017) This suggests a symbiotic relationship between beer sales and hospitality in Ireland. However, it is worth noting there has been a general trend of lowered beer consumption. For example, Ireland and the United Kingdom decreased by over 22% per capita from 2007 to 2017 (Drakopoulou Dodd , et al., 2018).

2.5 Taprooms

In September 2018, the government changed the intoxicating liquor act (ISB, 2018) It created a new licence for Breweries and Distilleries, allowing visitors to buy and consume alcohol on the premises. Before this, they needed a publican's license.

A publican's license costs approximately €60,000 and can be difficult to obtain as there is usually a long waiting list. The "producers retail licence" is limited to the sale of goods manufactured on the premises and only allowed to trade between the hours of 10 am to 7 pm and costs €500. It can only sell alcohol to consume onsite to people who have completed the tour and can sell beers for takeaway for everyone else.

2.6 Craft beer and creativity

Many brewers welcome the chance to be creative (Reid & Gatrell, 2017) They experiment with recipes continuously, trying different combinations of hops to add flavour and aroma and adding a variety of new ingredients such as pineapple and tea. Others have used their creativity to create dynamic and striking labelling.

Some have changed their image from traditional to quirky designs to make them stand out. This experiment with labels helps build and add to brand identity. Craft breweries have rewritten the art of labelling. Some labels can be considered works of art; the eye-catching designs can be more important than where they are found on a shelf space (Naylor, 2017) Such is the creativity of these labels that there are dedicated graphic design websites filled with pictures of the cans and bottles (Mesker, 2019).

For many brewers' creativity is as important to them as "running a profitable operation". While all businesses in the long term need to make a profit to be viable for some, non-financial returns are equally rewarding (Reid & Gatrell, 2017) This satisficing behaviour is prominent in the craft brewery industry.

Such firms engage in what is termed satisficing behaviour; in other words, they are not driven by maximising profits. Instead, they enjoy working on collaborations with other breweries developing new beers, and fostering the community bond in the craft beer realm. In contrast

to a purely economic framework, satisficing behaviour appeals to and obtains personal satisfaction for individuals and the community that are driven by other factors than financial.

2.7 Brexit

On June 23rd, 2016, the people of the United Kingdom voted on whether to leave or stay in the European Union. 72.2% of the country turned out to the polls, with a majority vote of 51.9% to 48.1% to leave the European Union. In March 2017, Theresa May invoked Article 50 of the Treaty of the European Union, beginning negotiations of the country's departure from the EU (Bulmer & Quaglia, 2018) After a long period of turbulent negotiations, the United Kingdom left the European Union and entered a transition period in January 2020. This ended at the end of December 2020 (Walker, 2021), and the United Kingdom finally left the European single market and customs Union.

It was predicted that Brexit would impact Ireland more than the other EU countries. Ireland is the only country to share a border with the United Kingdom and a large amount of bilateral trade (Lawless & Morgenroth, 2019) It was believed that there would be a negative effect on the exports from Ireland to the United Kingdom. A key feature of being a European Union member is trade with goods with minimal barriers (Brexit Institute, 2018) It was thought that with the United Kingdom leaving the European Union, trade from Ireland to the United Kingdom would be less free with possible trade barriers.

In late December 2020, just before the United Kingdom left the European Union The European Union and United Kingdom Trade and Cooperation Agreement was formed. This agreement ensured no tariffs or quotas between the European Union and the United Kingdom when the goods could satisfy the rule of origin (European Movement Ireland, 2021) Meaning products need to be able to be sufficiently worked on or processed within the United Kingdom or the 27 member states of the European Union. This agreement provisionally commenced in January but came into full force in May 2021.

Since then, research has shown an asymmetric effect on trade between Ireland and the United Kingdom. Imports from the United Kingdom to Ireland have fallen far more than exports to Great Britain (Flynn, et al., 2021) Trade between Ireland and Northern Ireland has

significantly increased. However, it was at a low base level and did not offset the difference in exports to Great Britain (Flynn, et al., 2021)

Even though Brexit has not shown a sizable reduction in exports to Great Britain, there has been a considerable decrease in the export of food and beverages. This sector was seen as a highly exposed sector to Brexit. On average, over 40% of this sector was exported to the United Kingdom pre-Brexit (Copenhagen Economics, 2018) (Purdue & Huang, 2015) The impact of this trade shock is expected to be felt more by small indigenous companies.

From 2016 to 2018, there was a decrease from 30% of all beverage sales exported to the United Kingdom to 24% (Bord Bia, 2019) Although sales of Irish alcohol in 2019 had an 8% value growth despite a drop in sales to the United Kingdom (Bord Bia, 2020).

In 2022, the United Kingdom will put further custom checks. These checks may have additional effects on exports from Ireland, and the true long-term effects may not have been seen yet. It is also possible that exports to Northern Ireland increased over the last couple of years due to supply issues caused by COVID-19 (Flynn, et al., 2021).

2.8 Craft breweries and Brexit

There is little literature exploring the effect of Brexit on the craft beer industry domestically and internationally. However, the 2018 report on brewing and distilling in Scotland (SPICe, 2018) highlights the possible effects of Brexit on their future business. It notes that any agricultural policy change could affect their inputs' price. They also consider doubt in trade deals and supply.

Breweries in the UK have seen a rise in the price of hops. Germany is the second largest grower of hops (38% of world production), and with increased regulation, the export of hops to the UK has caused an increase in time and export fees. As a result, the price of international beers will rise in price in the UK. For example, a pint of Brooklyn, a renowned American craft beer, will be an average of £5, where English craft beer will be £4 in the UK (Nurin, 2016).

Rotsaert, a Belgium beer exporter, ceased temporarily exporting beer to the UK after Brexit came into place. They said the shipping companies they used were not prepared for the new

regulations, and there was a considerable rise in the price of their goods. In addition, the UK have now introduced a VAT of 20% and a new export tax of 17.5% on purchase exceeding 150 euros (France-presse, 2021) These added costs have made the UK market less competitive for international exporters.

2.9 Going international

One of the foundations of craft breweries is being local and serving the local community. As more craft breweries open both in Ireland and internationally, as Bord Bia (2018) has suggested, it is in their best interest to start exploring new markets as their home market becomes saturated. It is an industry that produces small volumes and has high production costs. If craft beer was to increase its volumes and reduce costs, they would risk becoming a mainstream beer. This would be completely contradictory to the allure of craft beer (Jasovska, 2021).

Craft brewers can find themselves in a predicament "*hold fast to their artisanal values and resist growth or embrace it*" (Solomon & Mathias, 2020) Therefore, its growth can be problematic. In addition, the definition of craft beer has become more blurred over time, as referenced previously, but the volume of beer produced seemed to be the definitive explanation of craft beer.

The Irish craft beer market is small and may face difficulty when trying to expand. Aspelund et al. (2007) stated that the success of an industry going global depends on the industry structure and the domestic market size. The Irish craft market is a niche market that is also hampered by its geographical location. This means they will need more resources to build an international market, sales and distribution capabilities (Bell, et al., 2004).

However, New Zealand has developed an international craft beer market, with over 40% of the breweries being internationalised (Jasovska, 2021) There are high rewards for successful craft breweries that do choose to export. Brew dog from Scotland has managed to grow its brand by using its counterculture messaging targeted at the mass production of beer (Zhang & Carol, 2015) And Sierra Nevada has become a global brand while maintaining its craft beer credentials (Cunningham, & Barclay, 2020).

2.10 COVID-19

In late 2019, a severe air born respiratory virus called COVID-19 was first detected in Wuhan, China. Within months the virus had spread to over 180 countries (World Health Organisation, 2020) The World Health Organisation declared it a public health emergency and a pandemic. The virus was twice as contagious as the flu and could lead to prolonged respiratory issues and death (Qun Li, 2020) It has since infected more than 349 million people and killed over 5.5 million worldwide (Johns Hopkins University, 2022).

Due to COVID-19, many countries in 2020 introduced social distancing and lockdowns. This had a profound negative effect on global exports. In April 2020, the International Monetary Fund forecasted a global contraction of -3 in economic activity due to the spread of COVID-19 (International Monetary Fund, 2020) In addition, travel restrictions and closed borders impacted the movement of goods, with global air transport being reduced by 24.6%. Maritime and land transport stayed mostly in operation but did suffer considerable delays (World Trade Organisation, 2020) These high levels of uncertainty can increase the price of transport and international trade.

These disruptions have caused a shortage in magnesium, an alloy needed for manufacturing cans (Bounds & Khan, 2021) In addition, the congestion at ports has caused a delay in importing and manufacturing cans (Wells, 2021) Magnesium is also used in the manufacturing of cars and has quadrupled in price in the last two years. In addition, the pandemic has revealed that Europe has an overreliance on raw materials outside European Union (Peel & Sanderson, 2020) These issues could have a long-term effect on supply.

Many SMEs found that uncertainty of closures and social distancing affected their business negatively (Central Bank of Ireland, 2021) These actions reduced mobility to and in the workplace, decreasing production and supply of goods. (Kazunobu & Hiroshi, 2020)As a result, between March and October 2020, there was over a 70% turndown in turnover for SMEs (Kren, et al., 2021) The adverse effects have been felt greater in labour-intensive industries where people cannot work from home (Dingel & Neiman, 2020).

The continued closure and restrictions on the hospitality business would have had a negative effect on the sales of craft beers. As suggested, there is a symbiotic relationship between beer sales and hospitality (Foley, 2017) Since the pandemic started, there has been a fall of over 17% in the general beer category (Hospitality Ireland, 2021)

The businesses that remained open or opened at intervals had a lowered total factor productivity in business (Bloom, et al., 2021) This was caused by implementing COVID-19 protective measures like screens, protective equipment, and lower capacity operation. The pandemic also brought a contraction in the labour supply. Companies had to reduce staff hours or implement layoffs (Central Bank of Ireland, 2021) : staff and close contacts had to isolate for up to ten days putting tremendous strain on the workforce and productivity.

The Irish government has implemented measures to deal with the economic turbulence COVID-19 has brought. The Temporary Wage Subsidy Scheme assists employers in receiving direct assistance for their payroll. In addition, short-term payment breaks on mortgages were introduced, along with tax breaks and a prohibition on rent increases and evictions (Kennelly, et al., 2020) Grants and lending resources were also offered (Kren, et al., 2021).

2.11 Craft breweries and COVID-19 Globally

Breweries worldwide saw an immediate drop in business as a state of emergency, and lockdowns were declared worldwide. In Japan, "Nomikai" (online drinking party) became very popular with people pre-ordering beer online. These sales saw an increase in beer sales on web platforms. With each lockdown in Japan, there was an increase in the purchase of craft beer (Yiu, 2021).

There was an increase in online sales in Scotland, with breweries needing to engage with social media if they were to survive the pandemic (Clarke, et al., 2021) In the Philippines, it was the same; utilising digital media and platforms was a must to sell their products throughout the pandemic (Ong, et al., 2022)

All of the above papers referred to the ability of all subjects to react rapidly to the changing environment and the capability to transform existing resources into new possibilities.

3 Research question

3.1 Rationale

There has been very little literature on Irish micro-breweries since 2018. The researcher wanted to discover and analyse the effects of COVID-19 and Brexit on Irish micro-breweries and their ability to increase their business through exports. The aim was to determine if Bord Bia was correct in 2018 with its analysis that they would need to start exporting for the survival of Irish craft breweries.

The study intends to provide a snapshot of the historical events and possibly provide government bodies within the area with a better understanding of what assistance may be needed for the industry to grow.

3.2 Research Question

What effects have COVID-19 and Brexit had on Irish micro-breweries' ability to grow their business since 2018?

What are the factors that have affected brewers the most during the pandemic?

What are the prolonged effects of both shocks, if any, on the future of Irish Craft breweries?

3.3 Sub aims and areas of study

The research hopes to provide an update on micro-breweries in the republic of Ireland. To establish any positive and negative effects that either of the trade shocks had on the industry. The research will try to explore the struggles and rewards the industry endured from 2018 to July 2022. These questions will also look at the long-term vitality of the industry and explore

As well as analysing

-If any of the individual breweries increased their market share by exporting?

-If they did not, do they have any plans in the future to expand into international markets?

-What, if any, could government bodies do to add to the industry?

3.4 Objectives of the study

Using qualitative research, the study will aim to discover the experience of individuals and business experiences and identify if COVID-19 and Brexit did have any long-term effect on them.

To gain an insight on strategies micro-breweries implemented throughout this turbulent period.

Explore why some micro-breweries were more successful than others.

4 Methodology

4.1 Introduction

This chapter will focus on the research methodology and methods, including the theory of research, research strategy, study design, and data collection and analysis methods. This research will use Saunders (Saunders, et al., 2009) research onion as a tool to conduct the study.

4.2 Research

Research is the systematic collection and interpretation of data with a clear purpose. Therefore we can define research as "*something that people undertake in order to find out things in a systematic way thereby increasing their knowledge*" (Saunders, et al., 2009) The first step is to decide what they want to achieve from the research. This is followed by determining how best to collect the information to achieve the objective.

Constructs are the building blocks of research, (i) axiology/values, (ii) epistemology/knowledge, (iii) methodology/action, or (iv) ontology/reality (Smith & Shaw, 2018). As the researcher seeks knowledge, this paper will adopt the epistemological construct.

4.3 Research Philosophy

An interpretive paradigm will be used in this research. This paradigm focuses primarily on how humans make sense of the world around them (Saunders, et al., 2016) Working within this paradigm's primary concern would be understanding the fundamental meanings of organisational life. Instead of emphasising rationality, the focus may be on discovering multiple subjectivities.

In positivism philosophy, the researcher observes social reality and makes law-like generalisations. A "positive" researcher can use existing theories to develop their hypotheses. These theories can be tested and confirmed or disproved, partly or entirely adding to

furthering the advancement of future research. This type of research is very structured and uses a large sample.

For this paper, the researcher is going to use the Interpretivism philosophy. It emphasises how humans create meaning in the world, which is different from physical phenomena. The interpretive oppose positivist attempts to discover universal, definite 'laws' that apply to all people of different cultural backgrounds, under different circumstances and at different times, thus creating and experiencing different social realities. They believe that reducing such complexity to law-like generalisations would lead to a loss of rich insights into humanity (Saunders, et al., 2009) Interpretive research will use smaller samples and be more in-depth with their study.

4.4 Research Method

The main difference between the qualitative and quantitative approaches is the quantitative approach will use standardised questionnaires that will almost record their answers numerically. Whereas qualitative is reflective and uses an open-ended question that will ponder the theoretical, philosophical paradigm (Choy, 2014)

For this research, information will be gathered from people within the Irish craft beer industry, compiling their direct experiences and professional prospective on the research question. A qualitative ethnographic approach will be used as it can give a depth and fullness that may not be obtained from a quantitative approach. Furthermore, this approach will allow the interviewees to unknowingly establish a pattern in their responses (Braun & Clarke, 2006) This is advantageous as there is not much research into the Irish Craft beer community, allowing for the natural development of the themes.

The qualitative approach will allow the research to have a historical and social context for the Irish craft beer movement over the past few years. The study will attempt to record the interviewees' experiences completely and holistically to give researchers a comprehensive knowledge of their experiences in the correct context. This research is epistemological as it is based on understanding several different sources of knowledge on a specific subject or reality (Bryman, 2008).

4.5 Research Bias

Research Bias is anything that alters or compromises the research. It can happen throughout the research, from poor design to bad data collection or conclusion. It can come from the researcher choosing which information to disseminate that may support their hypothesis while ignoring evidence that may contradict it.

Quantitative research uses significant levels of discussion. This discussion will always have a point of view (Hammersley & Gomm, 1997), but it is for the researcher to maintain the participants' point of view and not to be guided by their preconceived notions and prejudices. Therefore, the researchers must be cognitive of their research and how they transcribe the information. They must interpret the data through the frameworks leading to correct and factual findings.

4.6 Data Sampling

The targeted group for this research was current Irish craft beer industry employees. A purposive sampling strategy technique was used to select the candidates as in the samples were chosen deliberately (Punch, 1998) By using this strategy, there is better matching with the subjects and the aim and objectives of the research. Consequently, the study is more concise, improving the results and dependability of the results (Campbell, et al., 2020).

The group does vary in job titles and experience however, all were involved within the industry between 2020 till the present day and have only conveyed first-hand experiences. There are 75 Irish craft breweries currently operating in the Republic of Ireland. Nine interviews were conducted for this research. This sample size gives the study a probability of obtaining a statistically significant result (Cohen, 1988).

Over fifteen possible subjects were approached. Due to lack of availability or lack of interest in the study, seven subjects declined. The remaining eight participated and completed the interview process. They were all conducted over team meetings in 30 to 45-minute slots.

While the focus of the sample was on experience within the Irish sector, three participants could also represent experiences in English and American craft breweries, which provided helpful comparative information and context.

Though a percentage of sample participants did not participate in the interviews, it is doubtful there would be a non-response bias. The selection for all participants was similar so that they may have had similar opinions. However, when there are generalisations based on the group instead of doing a complete survey of the entire group, there will be an inevitable possibility of inaccurate reasoning.

Mistakes will inevitably be made when generalising about a population based on a sample rather than conducting a complete census. The sampling error can occur even in the best of circumstances since a random sample's averages do not match the population's corresponding standards(Berg, 2005).

The sample group readily complied as the researcher had worked within the hospitality industry for the last decade and had developed professional contacts with those within the craft beer community.

4.7 Semi-structured interviews

A semi-structured interview is one where the researcher has a verbal interchange with the interviewee to obtain information by asking questions. Although the researcher will have a list of predetermined questions, the researcher should allow for conversation that the interviewee feels is essential to the subject. As it is the research's objective to discover its participants' experiences, this type of interview will be effective in achieving that aim.

The questions were open ended, and the researcher used prompts to garnish the most relevant data. The researcher had previous knowledge of the subject, so a rapport was immediately established with the interviewees.

All interviews were recorded on a voice recording app on the researchers personnel phone. When the recordings were complete, they were downloaded to a private folder on a removable hard drive. All interviews began by asking the interviewee how they started working in the Irish Craft Beer industry. Then they were asked about their opinions on the

effects of Brexit first then COVID-19 on the industry. Finally, all participants were asked what they see for Craft beer in the future and any other thoughts they might have on the industry. The tone was informal, and interviewees were able to take the lead. All interviews were then transcribed.

4.8 Time Horizon

The researcher can choose either a longitudinal or cross-sectional route (Saunders, et al., 2009) As this was being conducted over a short period, cross-sectional research was used. The interviewees were contacted and interviewed over six weeks in 2022.

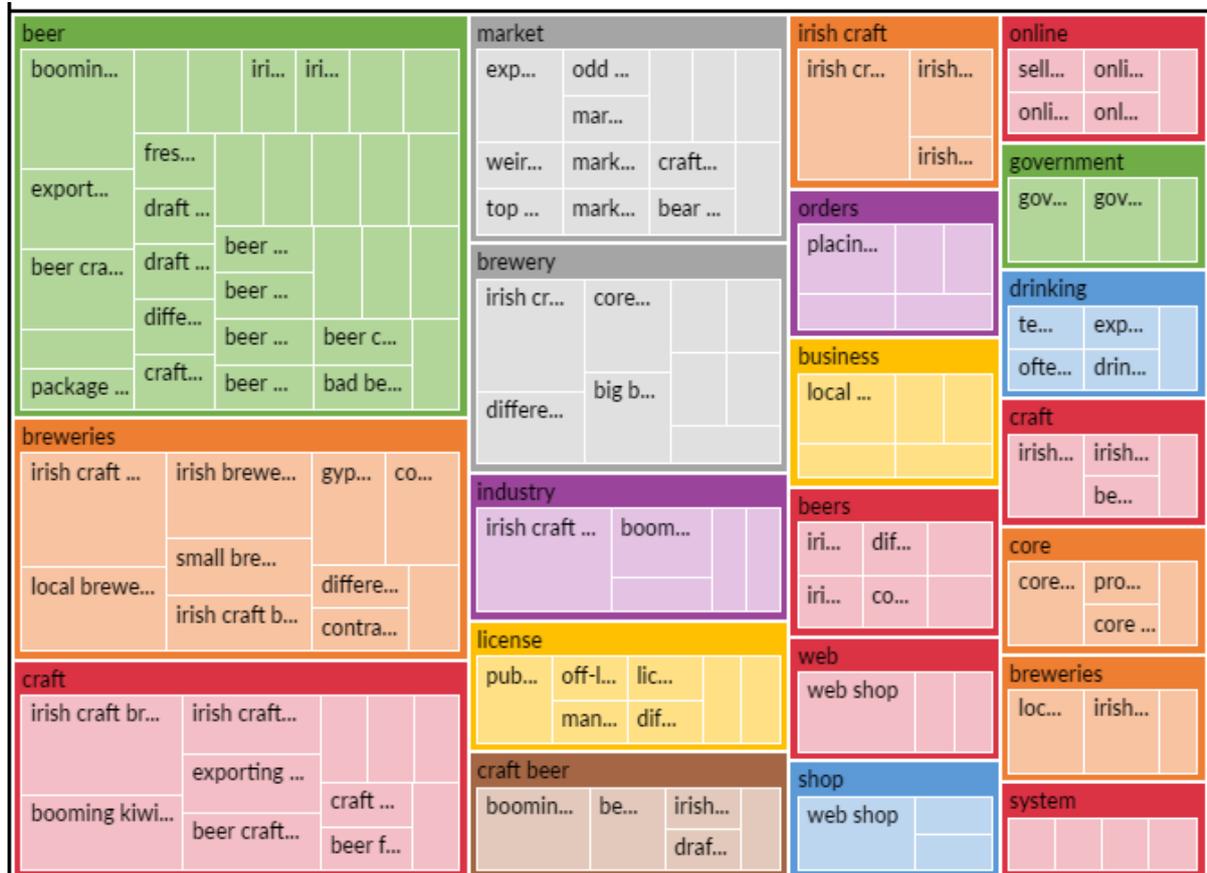
4.9 Data analysis and coding (more)

All interviews were transcribed verbatim before any analysis or coding. Through the collection of the data and the transcribing, the researcher can start submerging themselves in the data to comprehend the full breadth of the content. Only with reading and rereading can the researcher identify the possible patterns and coding (Braun & Clarke, 2006).

	A	B	C
1 : full capacity	0	0	2
2 : limited editions	0	0	2
3 : business	2	0	3
4 : brew	0	0	3
5 : subscription boxes	0	0	1
6 : beer	6	10	7
7 : term	0	0	3
8 : brewery	0	4	8
9 : license	0	0	2
10 : web	0	0	4
11 : online	2	0	2
12 : orders	0	0	4

Open coding was used to capture relevant or interesting information to the research question. For example, the software NVIVO produced a word frequency table from there, the words were narrowed down to words that had meaning to the research. From there, a hierarchy

chart was created with the themes presenting themselves in the darkest colours and each lower level has a lighter shade.



This allowed the themes to develop organically rather than predetermined. Through this coding, several themes became predominant relating to Brexit and COVID-19. Some of the themes had been identified in the literature; some had not.

These themes will be discussed in the following chapter. They will be built around comparisons and differences that emerged from the interviewees' narratives. Sections of the narrative will be selected to highlight the thematic patterns found in the research.

4.10 Ethics

In conducting this research, all ethical implications were considered and lodged with NCI under the Ethical Guidelines and Procedures for Research involving Human Participants. Under these guidelines, the researcher ensured all participants were given a briefing sheet on

the research, contact information for the researcher and supervisor, and their consent in writing before the interview.

All participants were informed all interviews would be recorded. They were assured that all information that was gathered would be stored and protected in line with GDPR policy. All interviewees were informed of their right to withdraw at any stage. All interviewees were over the age of consent and sound mind.

4.11 Conclusion

In this chapter, detailed insight into the methodology that was used for this research was explained. It showed the logic for using an exploratory strategy and the appropriateness of semi structures of interviews to meet research goals.

The chapter analysed how the information was being collected and catalogued. It also highlighted the ethical issues that need to be mitigated for this research. The finding from this methodological process will be shown in the next chapter.

5 Findings & Analysis

Brewers were contacted and asked about their experience of keeping the beer running in breweries during COVID-19 and Brexit

5.1 COVID-19

The first closures in March 2020 were devastating to many businesses within the hospitality sector. For craft breweries they lost all their on-trade sales suddenly moreover it immediately imposed an empirical threat to their business.

5.1.1 Immediate consequences

Many craft breweries had a limited avenue of businesses in the first lockdown was implemented. For many the most significant revenue was on trade sales which disappeared overnight. For many they had kegged up a large quantity of the beer as it was March and Saint Patrick's week, one of the busiest weeks for Irish pubs. Craft beer is known to have a short shelf life.

"in our case, we dumped a lot of beer we couldn't sell. especially kegs and craft beer; they're very sensitive so there is a point that you can't sell anymore you just need to dump it. And it's not our intention to sell bad beer" (Participant 1)

Not only did they have their remaining stock, but most of the orders sent to on-trade accounts in kegs were returned.

"We would have taken back a couple of 1000 kegs. That all had to be dumped" (participant 5)

There was also all the money that was owed to them from publicans all over Ireland. In the first two months of lockdown, many were unsure when and if they would get paid.

When it came to staff, all the breweries had different approaches. The owners took a pay cut in some breweries and kept all their team. This aligns with literature on breweries and

satisficing behaviour (Reid & Gatrell, 2017). Others had no staff and just paid themselves a reduced amount that was left after all the bills were paid. Some, let the majority of staff go during the first lockdown, only keeping a few on

"to keep the place ticking over" (participant 5).

However, once the Employment Wage Subsidy Scheme was introduced, all staff returned to work. Due to these government measures breweries managed to retain the vast majority of their staff. This was one of the key elements of this policy, staff were not seen as an added burden to the employer.

For all the breweries the roles of the staff changed. All employees were flexible within their job roles doing whatever work was necessary. The office staff helped on canning lines and brewers became drivers for the deliveries. This staff flexibility aided the survival of the breweries. It galvanised a team together deepening the sense of community within the brewery.

5.1.2 Changing packaging

Major changes occurred at all the craft breweries. To survive the loss of the offside trade of their business breweries had to develop ways of increasing their on-trade sales. By expanding their canning operations, they found new avenues of revenue. This strategy enabled many of the breweries to survive and some even thrived during the lockdown. Many breweries turned to canning the majority, if not all their stock. As a result, the demand for cans grew exponentially. For many breweries they extended their ranges into off-license and supermarkets all over the country. For some breweries it was the first time their beer was available in all the Irish counties.

Some breweries did not have the luxury of having their own canning line and had to rely on mobile vans.

"A lot of companies changed their model from kegs to smaller packaging. Some companies used a company like Bev Craft Vans.....a van that drives around the country going to different breweries with their canning machine in the back and canned their beers and then move on to the next one" (participant 4)

However, the vans popularity well so high that at points during lockdown there was a six-week waiting list for some breweries. This wait curtailed the number of orders they could fill and reduced the possible profit margins.

One of the breweries that was interviewed had traditionally outsourced their packaging. Using separate companies for bottling and canning. They invested in a canning machine at the early stage of the pandemic. It was significant investment at a time when revenues were low, but the purchase was vital to the company and Enterprise Ireland gave financial assistance towards the procurement. Even breweries that already had a canning line installed a second as the demand for cans grew.

"We bought a bigger canning machine which meant do we have better capacity to kind of keep up with demand. it was mental especially the first summer of covid you know it was absolutely mental good mental" (Participant 5)

5.1.3 Changing platforms

A lot of the breweries started direct sales to customers. They began delivering to their customers' homes in their area further deepening the local connection with them. This was a new method of selling for the breweries. It was not something they would continue indefinitely but a short-term solution and a good marketing tool.

Breweries also moved online using their creativity to develop digital sales from online shops and websites. For some their online sales saw over a 50% rise in their can sales or more. They also saw sales of merch increase two-fold or more. Many breweries started to realise the effectiveness of e-commerce for their businesses immediate and long-term future. These online platforms can be used to encourage sales both locally and garnish international interest.

"Whilst we had to close our taproom and lose all our sales into the on trade, we had a significant growth in off-trade and online via our own web shop." (Participant 2)

Successful breweries also engaged with their customer using social media. They used their own content as well as using postings from customers keeping it connected on an emotional level to their consumer. This use of social media will bring positive effects engaging with

new customers and grow business

Furthermore, there was a growth in subscription boxes and vouchers from the individual breweries. A trend seen throughout the drink and food industry. The vouchers like the deliveries were more of a marketing tactic to develop further customer loyalty rather than a new avenue of revenue.

the subscription boxes we're introduced to new customers in Ireland and internationally. A couple of the breweries collaborated with Beer 52 an English subscription box service. as a result large orders were placed with the company's of at least 40,000 cans a shipment. the breweries with a more significant number of rotational cans benefited more from this partnership. for every new beer they produced a new order was placed. it was very rare they did a repeat order on any of the beers. this is in keeping with the literature that craft beer drinkers can't see want to try new beers.

There were similar examples of European countries ordering beers for subscription boxes. however as much as they were thankful for the business, the large orders could drain them of their supply for their Irish customers. some found it difficult to predict how much beer they needed each month.

"they might buy 50 grams worth of stock once or twice a year which is quite substantial but it's not ideal I would rather they bought 10 grams a month 12 times a year if that makes sense" (participant 8).

by adapting these new ways of selling the craft breweries displayed their ability to be dynamic in a crisis. for some there able to turn the trade shark into a positive.

"All in all if you ask me if covid was a good thing or a bad thing It was a good thing in a sense" (Participant 5)

Breweries that have invested in social media fared better throughout the pandemic. They could convert their online presence into on trade and delivery sales. The broader their base before the pandemic, the great their success. The more established the brand was the greater their success.

Companies that had established a good core range and a loyal following before the lockdowns benefitted greatly from offering monthly rotational choices this kept the customer

engaged throughout COVID-19 as shoppers were constantly looking for unique and different offerings during the lockdown.

5.1.4 Different Products

To keep social media engagement breweries had to improve their labelling changing colours and fonts. Creating a label that works well online and pops on shelves in stores.

"We had to decide more colours, getting the cans together making sure there was no overlap. But it was good because we had better visuals in terms of like even on social media and stuff people taking pictures of the cans often drinking at home and stuff and then it was much more visual" (participant 3)

The brewers would produce new, increasingly more experimental beers throughout lockdown. New monthly limited-edition beers ranging from fruity gose and sours during the summer months to imperial double stouts and porters in the winter.

"in the first two years we did 130 new beers yeah it's just what we are" (participant 6),

It became a pilgrimage for craft drinkers to try all the unique beer; for them, they would probably never experience so many diverse varieties in Irish craft beer again.

5.1.5 Time to expand

All of breweries took this time to expand business and develop their premises and production. Many have invested in new infrastructure for their breweries acquiring new tanks and additional canning lines. In addition, 11 contributors had to adjust their business plans, so they were no longer just reliant on keg sales to pubs. One participant had moved premises the year before Covid-19, they took this time to develop their own taproom, install 700,000 solar panels and to begin a limited harvest of their own hops.

Several of the interviewees have started work on their own taprooms. These taprooms help the brewery to engage with tourist and locals. This focus on the locality is beneficial to the brewery for networks into the community and increasing a brand loyalty and awareness.

"We took the opportunity during covid to get it ready.... it's open now full time and it's doing really well" (participant 8)

Breweries made necessary changes to pivot to their new environment, but they all realised there was two critical factors to their business, the human element – keeping employees and staying optimistic and staying healthy and mindful and engaging with customers on an emotional level. The other is the ability to change business strategies immediately despite many unknowns.

5.2 Brexit

Covid 19 has affected Irish craft breweries in a multitude of ways. This section will now examine the shock of Brexit on the sector. It had been discussed that Brexit would have a negative effect on the Irish economy. Therefore, it was hypothesised Brexit would have a harsher effect on Irish industry already weakened or challenged by Covid 19. According to the Economic and Social Research Institute, Brexit will have an impact on Irish growth of business and cause a decrease in the job market. As well as an increase in cost of doing trade between the two islands (Barrett, et al., 2015) However as discussed previously (Daly & Lawless, 2020) research has suggested that there is limited overlap to sectors exposed to both shocks.

5.2.1 Export to the United Kingdom

Several of our interviewees reported that their distribution to English markets decreased after Brexit. If the Irish craft brewery did export to the UK, it affected the image they exported it was either greatly reduced or stopped all together. Breweries have offered anecdotal evidence that some of the suppliers of Irish beers to the UK ceased doing business.

"We lost our UK importer, they went out of business so that was a that was a big loss .. it was a number of things that impacted for them, Brexit and just loads of things happen at the same time for them" (participant 3)

For many craft breweries sending beer to Great Britain became too expensive and time consuming.

"UK is tricky very tricky. the amount of paperwork that is involved huge amounts of paperwork and time and the cost of shipping you really have to have the correct systems in place to do it.....and we are equipped to do it but a lot of people don't want to buy Irish now because it is hassle for them as well in the UK ." (participant 2)

Many Brewers stated that several other companies stopped doing business with the Irish breweries as there is too much red tape. This aligns with the literature on the possible effects of Brexit increasing the cost of doing business with the UK.

All the breweries did do the online training provided by government agencies such as Bord Bia before Brexit. Even though they all found the training beneficial the majority have decided for the time being to concentrate on exporting to the rest of Europe and newer untapped markets.

5.2.2 Import from Great Britain

Not all interviewees exported to Great Britain pre-Brexit or over the following years. However, all have been impacted by Brexit, all saw an increase in price for materials they require for their business.

"...more to do with equipment or materials coming from England to Ireland since there more difficulties or delays or extra costs that weren't there before but I think a lot of the companies try to source all that equipment from Europe now and just bypassing the English market" (participant 4)

Most of the breweries reduced or discontinued purchasing and importing goods from the UK and now source the majority of their material from the EU. By doing this they could source resources for cheaper and receive them in a shorter time frame. Many had told stories of delays of deliveries up to two months coming from the UK to Ireland.

These findings are in keeping with the paper *"Exporters and shocks: The impact of the Brexitvote shock on bilateral exports to the UK"* (Fernandes & Winters, 2021) this paper finds there is a reluctance for European countries to enter into bilateral exports with the UK

and reducing the likelihood of continuing serving the market. The continuing uncertainty has deterred many from re-entering the market.

5.2.3 Opportunities from Brexit

One had a very different experience from the others. their exports to

"the UK have doubled since Brexit" (participant 6)

They believe that the majority of people thought it would be a big hassle to do business with the UK leaving a gap in the market to give them some opportunities to increase their exports. they have taken what's many considered a trash and turned it into an opportunity. they have taken their rivals market share and are now serving additional new customers.

For others they saw opportunities in Europe. Many have talked about the difficulty and extra cost in getting products out of Great Britain into Ireland and Europe. this disruption has meant many European craft beer suppliers have severed their ties with English craft breweries. This has left a gap in the European market.

"but I do see a lot of opportunities there. and a lot of the European buyers are buying less from the UK so they're buying more from other countries. "(participant 2)

Exports to EU have risen. EU countries also are finding the red tape etc difficult and now have left to the UK and are sourcing more Irish craft beer.

5.3 Policy

The emergency supports put in place by the Irish government throughout the pandemic has had a considerable positive effect on the craft breweries in Ireland. These financial supports have kept a cash flow in the breweries when all hospitality business ceased.

However not all breweries received the wages subsidy. For some there are growth in sales made them ineligible, their turnover did not drop below the 30% required. even though their turnover had not dropped sufficiently their profit hat as there is a smaller markup on cans then kegs.

All welcomed the 50% relief from alcohol products tax for brewery separate use less than 50000 hl. although all were quick to point out it was a European initiative not the Irish government.

In general most felt the direct Irish government policies forgot about these small business with the extended lockdowns restricting their trade. although all find the local enterprise center of great assistance throughout with many qualifying for schemes to invest in their companies for expansion.

5.4 Future

Before the pandemic there had already been a change in consumers behavior for example there has been a rise in demand for more local and organic style offerings. there has also been a rise in healthy options and an increased interest in non-alcoholic beer.

"there is definitely a change in drinking patterns like to say there's more of a focus on the non-alcoholic or low alcoholic stuff: there seem to be a change post covid" (participant 7)

Brewing non-alcoholic beer takes longer and is more expensive to produce. non-alcoholic beer is make the same as beer and then has the alcohol removed. the equipment for this activity is costly.

"I have spoken to breweries in Europe that make these beers; the investment is like 60,000 to 100,000 euros like I don't see it really happening here in Ireland unless someone makes a really big investment into it" (participant 2)

Many breweries are still trying to regain the momentum they had in bars pre-COVID. Not all pubs on hotels have restocked their craft beer on taps. instead they have opted for beers from the larger breweries as there is a higher profit margin. it has been pointed out that during the pandemic all hospitality was asking people to stay local but have now turned to international suppliers to increase their profitability.

"like I get that it's more expensive but it just kind of irritates me that during COVID is all about local business and community now cavities are over they just turn their back on that community" (participant 3)

As with all Irish SMEs the craft breweries are facing considerable price hikes in the price of wheats hops and energy.

"all the inputs costs have gone up substantially. we haven't taken a price increase on cans yet, but the pressure is coming on. we're just gonna have to take the increase and take the hit on that, so that's the most worrying part of it now" (participant 8)

For the larger craft breweries the increase in their inputs and the inflation of 9% in June 2022 have many of them concerned about what the future has for them and their industry. it is interesting to remember that many of these breweries were born out of the recession of 2008. the breweries with more significant overheads are the ones that an economic downturn might hit more. smaller breweries versus 2 laps in a shed and close up shop and return a few years later when the economy improves, that's it they are motivated by money or the love of craft beer.

6 Discussions

Reviewing the initial research question and the findings it can now be analysed "What effects have COVID-19 and Brexit had on Irish micro-breweries' ability to grow their business since 2018?". The primary aim of this research was to answer this question and evaluate if the effect was positive or negative.

6.1 The effects of COVID-19 and Brexit on Irish Micro-breweries

In March 2020, the breweries were already grappling with changing business strategies for their export market. The departure of the UK from the EU has led to more barriers to trade. Many are now exporting to France and Italy rather than the UK. Then the pandemic hit, changing customers' needs overnight. People had to stay at home, unable to attend pubs and restaurants. Companies had to change their business model and value proposition.

COVID-19 has had both positive and negative effects on Irish craft breweries. During the pandemic, craft breweries had difficulty in their operational activities. Overnight the majority of their off trade was going. However, all breweries interviewed were able to seize the opportunities by developing and extending the ways they did business and changing from kegs to cans to on-trade to off-trade, from selling to reps then selling directly to the customer online.

All had imports and exports affected either from Brexit and or COVID-19. Most Irish craft breweries stopped trading with the UK increasing their sales online throughout the pandemic, directly selling to their customer or suppling subscription boxes throughout Europe. The increased use of online services and change of packaging created a positive pandemic for all Breweries interviewed for this paper. The breweries brought an experiential element to their products over the lockdown with their limited ranges and direct delivery to the customer. For craft beer drinkers, this is an essential element to why they drink craft beers.

Daly and Lawless (2020) said Brexit and COVID 19 would put a larger group of sectors at risk but it would be unlike that both shocks would affect them. Irish craft breweries have felt a price increase from Brexit but increased their exports from the exact cause. They saw loss

of keg sales but increase in cans. It would seem both shocks could have been detrimental to some companies, but all breweries interviewed were able to turn their bad fortune to good.

6.2 Lessons learned

Breweries initially went through a survival stage. First, some reducing staff to reduce costs immediately. Next, they began low levels of home delivery to the local community. Their creativity and knack for bootstrapping (Skoglund, 2019) allowed them to cut costs and create new innovative ways to increase their obliterated revenue. Throughout this stage, the business had no idea how long the lockdown would be. Initial, it was to be only for a few weeks. In this uncertainty, they needed to create a strategy to survive with few resources.

The government's EWS package gave financial assistance to most breweries. As a result, within six weeks of the first closure, all staff had returned, even if it was not cost-effective. As breweries are not driven by maximising profits (Reid & Gatrell, 2017), they choose their staff over their profits. However, all breweries have maintained their staff. Therefore they avoided the staffing shortages that hit many companies after the pandemic. In addition, the breweries could add value to their firms over the pandemic through organisational innovation with their team.

Through the availability of technology, in the forms of apps and machinery, breweries could change from survival mode to a new growth phase. This technology changed all aspects of the business. It led to an overall change in the type of product and change in customers. The breweries in Ireland have increased their contact with off-trade customers. With the taprooms' introduction and ongoing online sales, they have built a closer customer relationship. Therefore, they have forged more emotional connections with their customers and deepened the stories and memories surrounding their brewery, furthering their ties with neo-localism.

Breweries now need to decide what the customer wants post-pandemic. They need to anticipate new consumer behaviours and trends. They will also need to assess the viability of their COVID offerings and the continued use of their web shops and subscription boxes. Customers' expectations may have evolved from pre-COVID, and they may expect a dual service from their local craft breweries

Banks global are indicating there may be a recession in 2022. The European bank has raised its interest rates for the first time in over ten years. For breweries, they will need to continue with creative and adaptable strategies to grow themselves out of the possible recession. Continuing to grow their online sales and strengthening their relationships with their on-trade breweries can improve their revenue. However, the tricky part will be to maintain their local brand identity and export to a larger market while being able to absorb increasing inflation without putting themselves out of business and still be able to provide a high-quality product.

7 Conclusion

This study focused on COVID-19 and Brexit's effects on Irish Craft breweries. The results were produced by looking at how they responded and deployed their resources throughout the last 24 months. The breweries reacted with creativity and flexibility, changing their business dynamics to provide for the new environment against the backdrop of every increasing difficult circumstance. Increasing their product range and customer base

This paper has discussed how they modified their products during and after COVID-19, created and enhanced their online and off-trade sales, and increased their exports to new international markets. They have displayed resilience in these unprecedented disruptive times.

This study contributes to the literature on Irish SMEs detailing the craft breweries' response to the trade shocks of Brexit and COVID-19. It also contributes to the previous research on craft beer breweries in Irish and international contexts. It would be helpful to conduct such studies in other European countries, for example, France, to analyse, if any, the impacts of Brexit and COVID-19 on their craft breweries to measure the impact of their policies and strategies. These studies may find diverse differences due to geographical locations. Therefore, research into different cultural contexts could be beneficial to compare the different approaches the craft brewing sector has taken throughout the last two years. These studies could inform all SMEs on best practices during times of crisis.

Additionally, Ireland had longer lockdowns than many parts of the globe. It could be of interest to research the nature of lockdowns and how other craft breweries were affected. Further investigation should be into government policies' role in keeping and maintaining businesses open throughout the pandemic. As the Employment Wage Subsidy Scheme only finished in May 2022, it is hard to reflect what difference the scheme made on Irish craft breweries. It would be worthwhile investigating if the scheme bolstered some businesses that may have come to their conclusion sooner.

Continued research into this area could further focus on the shortcomings of this current study. Due to the limited number of interviews, further information could remain undiscovered from this research. Due to the diversity within the sector, further research would be beneficial. A data-driven comprehensive research paper on the craft industry should be considered to compare the results and build a clearer picture of the trade shocks on

the Irish Craft beer industry of COVID-19 and Brexit and the future for Irish Craft breweries in Ireland globally.

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Appendices

Appendix 1 – Questionnaire

The reason for this research is to analysis the development of the microbrewing industry in Ireland post Brexit and COVID-19.

Setting the scene

1. Tell me a bit about how you got into the craft beer industry?
2. Do you have your own premises or are you a gypsy brewery (contract brewery)?
3. How many hectolitres do you make a year?
4. Has this been an increase or decrease over the last four years?
5. What is your forecast for the coming year?
6. How many different products do you supply?
7. How do you distribute your goods?
8. How many staff do you employ?

Exports and Brexit

9. Have you increased or decreased exports in the last 4 years?
10. What are your top export markets?
11. Do you think Brexit has had any major effect on the Irish craft brewery industry?
12. If you export to Britain has your sale improved?
13. If you export to the EU have your sales improved?
14. What government measures do you think could be made to assist your business?
15. Are government agencies' providing an enough assistance to craft breweries? Y or N please expand.

COVID-19

16. What issues has COVID-19 caused from your company?
17. Has your brewery been able to retain all staff since 2018?
18. Has your business pivoted to new revenue streams as a result of COVID-19?
19. Have you availed of the changes in the intoxicating liquor bill to convert your brewery to a restaurant/ tourist attraction pre/post 2018?

20. What government measures do you think could be made to assist your business?
21. Are government agencies' providing an enough assistance to craft breweries? Y or N please expand.

Closing questions

22. What do you think the future holds for Irish craft breweries?
23. Do you foresee any major shocks for the immediate future?
24. Is there anything else you would like to add?

Appendix 2 – Consent Form

Consent to take part in research

"An analysis of the trade shocks of Brexit and COVID-19 on the Irish craft beer micro-breweries"

- I..... voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I understand that I can withdraw permission to use data from my interview
- I have had the reason and outline of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I understand that participation involves honestly answering a series of questions relating to my experience in micro-brewery throughout the last five years.
- I understand that I will not benefit directly from participating in this research.
- I agree to my interview being recorded
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research my identity will remain anonymous.
- I understand that a transcript of my interview in which all identifying information has been removed will be retained for 2 years.
- I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time.
- I understand that I am free to contact any of the people involved in the research to seek further

Signature of participant

Date

I believe the participant is giving informed consent to participate in this study

Signature of researcher

Date

Appendix 3– Participation in Interview request E-Mail

Dear -----

I am also an MSc student in international business. I am currently doing a research thesis on Irish craft beer microbreweriesmy research thesis.

My thesis is based on a Bord Bia report in 2018 that suggested there was saturation in the market and if they were to survive, they would need to expand into the export market. In my research, I will interview several craft breweries and try to analyse how their business performed within the trade shocks of COVID and Brexit.

I am wondering if there is anyone I could talk to/email about Irish craft beer exports and plans or if you have any up-to-date literature on the subject.

All interviews will be recorded, and all participants will be asked to sign ethical form that confirms your understanding

In advance, I would like to say thank you very much for any assistance you can provide.

Kind regards

Jen Keating