Hospitality SME Innovation. Responses to Multi-faceted Crises

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Abstract

Purpose: This research investigates the multi-faceted effects of Covid-19, Brexit and climate change on SMEs in the hospitality sector. Specifically, we evaluate the main opportunities, challenges and implications that hospitality businesses face in times of crises, ~~investigating how these businesses adapt strategically~~and innovate as a response.

Design/methodology/approach: The research adopts a mixed methods approach firstly analysing quantitative data from the Business Insights and Conditions Survey (BICS). Secondly qualitative where data is gathered from interviews with a range of hospitality SMEs. The data are analysed independently and then triangulated to gain a deep understanding of the issues faced by hospitality SMEs and their responses.

Findings: This research contributes to knowledge on the impact of economic challenges on the hospitality sector. This research underlines that hospitality businesses face multiple challenges. The findings show that sector has responded with innovations to meet requirements and regulations, some which were forced upon the industry due to changing regulations and some unforced innovations based on the strategic intentions and entrepreneurialism of the business owners.

Originality: The paper embeds the pandemic with Brexit and climate change challenges, identifying two distinct types of innovation as SME responses in the hospitality sector. Survival in the hospitality industry is reliant upon adaptations, some brought about by the pandemic and others by Brexit and climate change.

Keywords: Hospitality, Covid-19, Brexit, Climate Change, Strategy, Innovation~~, UK~~

1. Introduction

Arguably, the economy even when lives are in peril owing to the Covid-19 pandemic, remains central and of paramount importance (Michie, 2020). Governments faced Covid-19, responded with lockdowns, introduced measures to promote public safety, including regulations specific to trading in the hospitality sector. For the sector, the effect of Covid-19 has been exacerbated by Brexit, the United Kingdom's departure from the European Union, and climate change. The interaction of Covid, Brexit and climate change has seen effects on supply chains, consumer demand and staffing across the hospitality sector.

Time scale demands, digital use and lifestyle/regulatory responses to Covid-19 are influencing people's demand for food products (Yela Aránega *et al.*, 2022). Furthermore, the ability to produce food, through both trade issues and food security concerns have been highlighted as more difficult and unclear by Brexit (Lang, 2019). Food security brought about by climate change is an issue with whole food systems under threat (Wheeler and von Braun, 2013), Brexit has also impacted upon this (Lang, 2019) and Covid also having an impression (Aday and Aday, 2020). Somehow, with pressure on supply chains (Aday and Aday, 2020), staff (Ramos *et al.*, 2020) and regulations to be complied with, the hospitality industry must adapt – and work with a more demanding consumer. Despite the range of issues, the current literature provides neither a map of the issues in an integrative manner, nor solutions which are being practised in spite of them.

Covid-19 has left a lasting impact on the hospitality sector in the UK, as highlighted by a House of Commons report on the sector by Hutton (2022). Before the pandemic, in 2019 the sector was worth £59.3bn, around 3% of UK economic output, with 2.53 million jobs, representing 7.1% of UK employment. The hospitality sector saw one of the biggest economic declines of all sectors during the pandemic, particularly as hospitality businesses were initially closed during lockdowns and later reopened with operating constraints, due to limits on dining numbers and social distance. The consequences of this were that hospitality economic output over 2020 was 42% lower than 2019, and 2021 output was 21% lower than 2019. Although 2.13 million hospitality jobs were furloughed, the number of workers in the sector was 90,000 less by the end of 2021 compared to March 2020 and by February 2022 there were 166,000 job vacancies in the sector (Hutton, 2022). With high levels of foreign-born workers in the hospitality sector, Brexit is also an issue that adds to the challenges in the sector in the post-Covid period.

Thus, research is required to develop an understanding of the current state of the food hospitality sector, regarding the broader environment and responses from businesses. ~~The aim of this research is to both understand challenges and the innovative responses.~~ ~~t~~The aim of the research is twofold. First to understand the challenges and issues facing the industry. Second, to see how innovation is being undertaken in the industry. Hereafter, the paper discusses literature relating to the hospitality sector, viewed through a resource bricolage lens. The subsequent section presents the methods and data approach of this research, before the findings are discussed leading to conclusions of this research. In doing so, the paper contains a review of current practices which are being used to work through a time of formidable challenges, and sets out where academics and policy makers can make further contributions.

2. Literature Review

This literature review identifies and discusses the key issues facing the hospitality sector. The body of literature relating to Covid-19 issues in the food and beverage sector is relatively sparse and mostly occurs in the trans-crisis phase. However, research exists across a range of settings, including the USA (cf. Liu-Lastres and Wen, 2022; Sönmez *et al.*, 2020), UK (cf. Ntounis *et al.*, 2022; Tajvidi and Tajvidi, 2021), China (cf. Hu *et al.*, 2021), Spain (cf. Crespí-Cladera *et al.*, 2021; Palau-Saumell *et al.*, 2021), and several other countries. Systematic literature reviews have been conducted by Gursoy & Chi (2020), and Park et al. (2022). Literature relating to this sector has identified a range of ongoing issues relating to the Covid-19 pandemic, notably the impact of Covid on the sector (cf. Park *et al.*, 2022), business resilience in the face of Covid-19 (cf. Hemmington and Neill, 2022; Pillai *et al.*, 2021), technology adoption (cf. Bivona and Cruz, 2021; Chou *et al.*, 2021; Marinković and Lazarević, 2021), innovation (cf. Breier *et al.*, 2021; Hemmington and Neill, 2022), and labour issues (cf. Chen *et al.*, 2022; Sönmez *et al.*, 2020).

A significant issue discussed in the literature is access to labour in the hospitality sector. Chen et al. (2022) highlight job insecurity in the sector and point to the dilemma of staff in working in an environment where they are at risk of becoming infected with Covid-19, as well as facing the risk of losing their jobs. These factors led to increased job stress and staff turnover (cf. Chen and Eyoun, 2021). Further labour issues were observed in the USA, where hospitality staff experienced occupational disparities, a lack of protection, and the absence of vital social security (Sönmez *et al.*, 2020). Literature points to the impact of Covid-19 on the hospitality sector as a whole, which included food and beverage businesses. The Covid-19 pandemic has shown that the hospitality sector is highly vulnerable to economic shocks of this nature (Hu *et al.*, 2021).

Strategies to combat the spread of Covid-19, including social distancing, lockdowns, and mobility restrictions led to unprecedented challenges for businesses across the hospitality sector (Gursoy and Chi, 2020), and a decrease in demand (Bartik *et al.*, 2020), as consumers showed hesitations towards visiting hospitality businesses (Liu-Lastres and Wen, 2022). Furthermore, hospitality businesses experienced increasing expectations on implementing high health and safety measures in order to operate (Gössling *et al.*, 2020). The effects of the pandemic have led many hospitality businesses to move away from sustainable operations and place more of a focus on maintaining their business operations (Elkhwesky *et al.*, 2022). The lockdowns and related strict regulations have challenged existing business models for SMEs and pursuing established normal business models is not always possible, thus rapid response is required to respond to the crisis (Clauss et al., 2021). The flat structures and uncomplemented ownership structures make change possible for SMEs (Juergensen et al., 2020). Allied with external support, particularly from government innovation is a way for SME's to survive.

Given the challenges of the Covid-19 pandemic, literature investigated business resilience in the hospitality sector. Ntounis et al. (2022) discussed in the context of UK hospitality businesses, pointing to resilience within the sector due to businesses being accustomed to seasonality and uncertainty of demand, however, less resilience was also felt due to the slow nature of the recovery of the sector from Covid-19. Within crisis management literature, small businesses are considered more susceptible to economic shocks (Lu *et al.*, 2020) and government support is an important factor that influences decision making in operational responses to the crisis (Chou *et al.*, 2021). The experiences of the pandemic were more difficult for smaller hospitality businesses, especially in rural areas, as their business activities stopped and they were unable to engage with customers (Palau-Saumell *et al.*, 2021). Due to the extent of the challenges experienced by hospitality businesses, their survival was dependent on their financial strength (Crespí-Cladera *et al.*, 2021). In many countries, the sector was supported by government funding, through grants, loans, or tax reductions, (Hemmington and Neill, 2022).

While the Covid-19 pandemic brought unprecedented challenges for the hospitality sector, it also brought a variety of opportunities (Gursoy and Chi, 2020), developing more innovative practice (Hemmington and Neill, 2022). Indeed, crises can act as a trigger event for business model innovation (Breier *et al.*, 2021). Disruptive responses are required to business environment changes such as Covid-19 (Bertello et al., 2022). Opportunities were observed by Hemmington and Neill (2022) among hospitality businesses in New Zealand, who were able to make use of social media and revised business models, such as offering takeaway services, or placing more emphasis on locally sourced produce. Further examples of diversified business operations include distilling businesses producing ethanol needed for medical purposes during the pandemic, or breweries supporting restaurants to ensure mutual benefit for the businesses (Bivona and Cruz, 2021). This aligns with arguments that SMEs should be flexible, adaptable and efficient, and able to react to market changes (Santoro et al., 2018). The pandemic led some hospitality businesses to evaluate how they operate in a more sustainable way, in placing more emphasis on social responsibility (Elkhwesky *et al.*, 2022). Changes to the business model depend on the mobilisation of resources within the business (Bivona and Cruz, 2021; Hemmington and Neill, 2022). Resource-based view theory points to the possibility of deriving competitive advantage through leveraging valuable, rare, inimitable and non-substitutable resources (Barney, 1991). The mobilisation of resources could be seen through the lens of resource bricolage, derived from the work of Levi-Strauss (1966, p. 17) on resource-scarce innovation processes, referring to the action of making do with 'whatever is at hand'. Research on business resilience during the Covid-19 pandemic has been explored through resource bricolage, as businesses relied on relational capabilities, building financial capabilities, and making use of support to develop resilience (Kuckertz *et al.*, 2020).

New opportunities in hospitality have been observed through technology. The pandemic led to changes in food consumption habits, such increased purchases online (Marinković and Lazarević, 2021). Technology was a vital tool in supporting hospitality businesses operations during the pandemic, bringing opportunities for new business models, such as the development of cyber communities (Tajvidi and Tajvidi, 2021). Technology is acknowledged as a source of competitive advantage for hospitality businesses (Pillai *et al.*, 2021). This includes the increased use of mobile apps for food delivery (Ramos, 2022; Wen *et al.*, 2022). Technology enabled businesses to overcome restrictions of social distancing to connect to their customers (Breier *et al.*, 2021). Furthermore, changing consumer habits saw increased support for local food producers (Palau-Saumell *et al.*, 2021) enabled by disruptions within international supply chains, while local supply chains were less impacted by the pandemic (Cappelli and Cini, 2020). Moreover, a lack of information technology is a major barrier to open innovation (Bertello et al., 2022).

Although the Covid-19 pandemic had a significant impact on the hospitality sector worldwide, it is important to note that the UK hospitality sector has also been impacted by Brexit. In the UK, separate labour issues exist to those that occurred from the Covid-19 pandemic, with Brexit identified as a notable factor. Filimonau and Mika (2019) pointed to the important role played by Eastern European workers in the UK hospitality sector, and acknowledged the return of workers following Brexit. Issues existed in the sector before the Covid-19 pandemic, regarding a shortage of labour across the food and drink supply chain, especially in light of Brexit and the dependence of the sector of large numbers of EU workers, difficulties in procurement, and the need for innovation (National Assembly for Wales, 2019). Thus, the research question we aim to investigate is: what are the opportunities, challenges and implications for the hospitality sector in times of crisis?

3. Methods and data approach

To investigate we use data drawn from two sources, quantitative data from the Business Insights and Conditions Survey (BICS) and qualitative data from interviews. The research complexity is pronounced, and multifaceted, where mixed methods allows a flexible technique to investigate a range of issues (Harrison and Reilly, 2011). Mixed methods research synthesises quantitative and qualitative research ideas, a mixing of approaches where the combination can increase the ability to gain insights and triangulation. The collective use of qualitative and quantitative provides better understanding of a research problem than simply using one or the other (Creswell, 2014). An explanatory sequential design, where first quantitative and then qualitative methods are used, allows qualitative insights to enhance the quantitative findings in more depth (Creswell, 2014). This approach allows generalisations using quantitative analysis, and then further deeper follow-up analysis with a second qualitative analysis (Harrison & Reilly, 2011).

For the quantitative analysis, secondary data was used The Business Insights and Conditions Survey (BICS) is a major UK survey of business, to examine '*…responses on how their turnover, workforce, prices, trade and business resilience have been affected by current conditions, including the coronavirus (COVID-19) pandemic and the end of the EU transition period'* (Scottish Government, 2022). The survey is conducted fortnightly and was first conducted in March 2020. It has n=1095 respondents in Wave 54, which was collected on 4 April to 17 April 2022, which forms the primary source of evidence for this paper. BICS data is analysed across waves 1 to 54.

The qualitative research involves the use of semi-structured interviews. We selected participants based upon having experienced and working through the pandemic across a range of hospitality businesses. The number of interviewees was n=6, they ranged in experience from 5 years to 30 years of SME operation. The range of business was from hoteliers to fast food providers. Data was analysed through thematic analysis, a process of identifying, analysing and reporting patterns, which aims to identify common threads across different interviews (Vaismoradi *et al.*, 2013).

3.1.: Quantitative analysis

As reported in May 2022, 5.3% of the hospitality sector, compared with 1.3% for all sectors had experienced an over 50% decrease in turnover (Wave 53). In December 2021 these figures were 1.3% for the hospitality sector, and 11.9% for all sectors. In November 2020, 61.1% for hospitality and 16.9% for all sectors. Indeed, throughout the pandemic the sector was one of the hardest hit, despite the ability to trade in some capacity. Consistently more hospitality sector SMEs are reporting a turnover reduction when compared with the rest of the SME sector. Throughout the pandemic the hospitality sector has reported the highest levels of significantly reduced turnover.

Reasons for the downturn are seemingly interrelated and beyond Covid. In terms of the UK departure from the EU the hospitality industry was affected in terms of both labour and operations. In August 2021, 38.8% of business reported severe disruptions to the number of workers they had from within the EU, higher than any other sector (Wave 6). Despite this, the sector has had one of the lowest external vacancies rates across all sectors, right through the year 2020. Therefore, in spite of being able to trade, finding staff has proved more difficult for the sector than the all-sector average.

In addition, climate change is a factor. Climate change and food production are intricately linked. Climate change is impacting upon business operations in the hospitality sector. In 2021, of the hospitality sector surveyed, 25.4% indicated that implementing actions to reduce emissions was too costly for the business, which compares with 18.7% for all SMEs in the survey (Wave 41). Further, 11.6% of these hospitality SMEs indicated they were unsure of how to measure emission outputs, compared to 8.5% in all sectors. In terms of having a lack of expertise around options to undertake positive change, 7.6%, the second highest sector and above the all-sector 6.8% indicated this was an issue. Therefore, we see financial issues, and expertise problems for dealing with climate change.

This makes operations of the SME's complicated by the hospitality sector's nature. The sector was partially able to trade during lockdowns, and through several changes in the relevant Covid-19 regulations. Most interestingly, in the UK SMEs were able to furlough staff. For the most the options of homeworking and hybrid arrangements are unsuitable. That said, 21.9% of SME's indicated that staff had undertaken training while on furlough, the third highest of any sector (Wave 34), and despite a small drop in numbers, a later survey also indicated that 18.2% had conducted training, which is still the third highest for any sector. After the furlough period, 53.6% of SMEs in the sector had trained staff, compared with 36.2% for all sectors (Wave 40). The highest level of training was also true in two previous surveys, with the hospitality sector having the highest number of SMEs engaged with training after furlough (Waves 36 and 34). So, the sector has to be at work, and is undertaking the most training upon return. This may be attributable to staff turnover, with the hospitality sector consistently reporting higher staff turnover than the average of all sectors. Which is combined with 39.3% of hospitality sector and an all-sector score of 35.2% worker shortage.

The hospitality sector has been affected by Brexit, Climate change and Covid-19. We argue that the interaction of these three must be understood to better address innovation decisions made at the later stages of the pandemic. In terms of moving forward, the hospitality sector has had high levels of capital expenditure when compared with other sectors. In March 2022 10.6% of the hospitality sector had indicated that capital expenditure was above average for this time of year. Moreover, 72.4% indicated that this was owing to the pandemic. In terms of costs, the supply chain has been affected with 55.7% of the hospitality sector indicating they are paying higher prices compared to an all sector 53.4% (Wave 22). There is both a need for capital investment owing to Covid-19 and a supply chain price issue. This during a period while demand for the hospitality sector products is indicated to have increased by 14.4%, all businesses have seen 17.8% of SMEs increased demand. In terms of performance, this is perhaps best captured by confidence, 52.5% of hospitality were highly confident compared with 75.1% across all sectors, thus there are far fewer confident businesses in the hospitality sector.

Despite the low levels of confidence and the effects on the business, innovation remains a priority for many SMEs. Data was collected from 9 August to 22 August 2021. Specifically, SMEs were asked '*How has your business's innovation changed since the start of the* *coronavirus (COVID-19) pandemic?*' For the hospitality sector SME's 16.7% indicated they had innovated more as a result of the pandemic, compared with 14.9% for all sectors. Further, 15.6% of the hospitality sector had no change and 2.6% reported less innovation. While no change was well below the all-sector average (28.1%), the lesser innovation was slightly above (2.1%). In many ways the three-way (Brexit, climate change and Covid-19) pressures, as well as performance related issues, may have driven innovation, or this may simply be a response to customer demands, or legislation. However, there are above average levels of engagement with innovation in the sector.

The types of innovations made are interesting. Only 11.5% of the SMEs in the hospitality sector had adopted digital technology, against an overall 28.4% across all sectors. The use of third parties and already high rates of adoption may explain this. 26.2% had introduced new products and services compared with 19.4% for all sectors. Incremental changes to products and services were 17.1% for the hospitality sector, and 22% for all sectors. 19.6% of hospitality SMEs had innovated with regards to management practices, compared to an all sector 28.4%.

The outcomes expected from these innovations is also interesting. 27.2% of hospitality SMEs feel productivity will improve as a result of the innovations made (22.5% for all sectors). The SMEs were asked if they will increase innovation compared to pre-pandemic levels in the coming 12 months. The hospitality sector responded with 12.3% indicating they will increase, 25.7% will not change and the remainder unsure. This was below the all-sector 13.9% for increasing innovation and also below the 33.6% for remaining the same. It is here where we can perhaps see the uncertainty and lack of confidence emerging in the innovation intentions.

In summary, the quantitative analysis yielded a number of insights, which are specific to the industry, beyond Covid with climate change and Brexit forming part of the larger picture. The quantitative picture indicates that while Covid-19 has had an immense impact on the day-to-day operations of SMEs, the analysis was to identify the most pronounced trends in the secondary data available. Only 52.5% of hospitality SME's have high confidence that they will survive, well below 73.4% across all sectors (April 2022). With staffing issues, climate change challenges innovation efforts are hampered.

3.2. Qualitative analysis

To further investigate the issues raised in the quantitative phase a qualitative interview guide was developed, with questions aimed at generating insights to complement and further unpack the quantitative findings. Firstly, the complex environment, and then the effects on business followed by the new nature of innovation and business practice changes findings are discussed below.

There was a consensus that the economic climate of Covid was complex, with one respondent's short response: '*So there were multiple factors taking place.*' (R1). '*We did show some recovery from Covid, but there were lingering issues from Covid, and then obviously lingering issues from the Brexit factor*' (R2). Beyond the malaise of Covid and Brexit, there was also concern for the environment, with issues such as waste reduction noted by respondents and even discussion about increased concern over plastic usage. One respondent stated: '*And obviously no detrimental effects on the environment. So yeah, I would say, I am* *environmentally conscious in that respect. I try and do what I can. The only thing I can do anything about is the amount of fuel I use, and the energy of the ovens, and things like that*' (R1) which typifies the complex situation faced by SMEs in the hospitality industry. Given the complex business environment changes to business models and innovation have proved essential, yet difficult.

Theme 1: Covid

Covid-19 brought both challenges and opportunities for SMEs in the hospitality sector. First, Covid lowered customer numbers with a priming effect, '*First of all Covid came and it became more prominent on the news, and the first effect I suppose we saw was less people coming into the restaurant itself*' (R2). Across business as interest and fear of Covid grew, numbers of customers were reduced. Moreover, there was fear and in some cases public opinion towards businesses being open was a challenge: '*it became apparent really that the situation with Covid was getting significantly worse, and we were conscious also of public opinion in terms of businesses remaining open and operating, and people's concerns about the spread of Covid, not that we were targeted, but we could see some businesses were potentially being targeted on social media about being irresponsible to be open'* (R2). Thus, before lockdowns and government action, businesses were challenged by the environment.

Public opinion also parlayed with the introduction to lockdowns. However, food outlets had varied operating restrictions, limiting them to take-away only at times. The regulations were also paralleled by social pressure: '*as our restrictions increased and the severity of Covid increased, we were very much aware of the public opinion and a lack of demand. So, we were more or less forced to shut down then with government regulations in Wales'*. (R2). There was a feeling that the takeaway outlets were part of the covid spreading 'infrastructure' with one respondent stating '*... what if our staff was spreading Covid even though it was minimal contact in terms of takeaways*.'. Here the respondent was speaking to public inquiry and worries about the SME being part of a super spreading event.

Theme 2: Brexit

The lingering effects of Brexit were often mentioned in the interviews. When asked, one respondent physically recoiled and stated: '*I don't like looking into it too much because it just it gives me a headache, whatever is going on*.' (R3). Across each of the interviews there was an acknowledgement that Brexit had made operations harder, in terms of price, staff, and also supply. Covid and Brexit interacted to make operations difficult: '*…that was partly Covid, to a large degree, and I suppose the effects of Brexit'* (R2). Furthermore, another added: '*If we're not in the EU and it becomes more expensive for people in this country to travel.*' (R4) adding that Brexit had lowered demand and changed the opportunities for business.

Theme 3: Climate change

Even with the pressure of Brexit and Covid, the environment was a consideration for the SME operators interviewed. Climate change poses unique challenges for the hospitality sector. The move towards takeaway from traditional dine in as well as changes based on regulations around staff contact forced the use of plastics and other products that businesses would not normally use. Interestingly the interviewees when asked about this focused on recycling: '*I recycle anything that's plastic or anything that can be recycled'. (R1)* One respondent also indicated that even the recycling was more difficult: '*Recyclable and recycled packaging before…got more expensive than the non-recycle ones'* (R3). Also cutting down waste was a theme which emerged: '*we also looked at unnecessary wasteful activities within the restaurant and how we could improve.'* (R2), with reductions of waste being a way to save on costs: '*the whole waste thing is all to do with saving money'* (R3). In general, the following summarises the attitudes across the interviewees: '*in terms of sustainability, we were always conscious of that, especially as directors being farmers' sons, we knew the agenda, we'd try to promote reducing our waste, really limiting, or even getting rid of all the use of plastic.'*. However, the changes in the business environment make this a challenge.

Theme 4: Operations impact staff

Covid and Brexit had a profound impact on staff hire and retention, but also in making the business resilient early in the pandemic. In the early period of uncertainty, one respondent stated: *'we kept staffing low'* (R5) and across each of the interviews the combined effects of Brexit and Covid impacted upon recruitment and retention. Oner respondent indicated: '*The biggest barrier really is that staffing is the big headache potentially*' (R6) when referring to the effects of Covid and Brexit. Another indicated staff had moved away from the industry and the skill shortage had led to interesting competitive behaviour: '*everybody else were fighting over a very small local pool of staff, and what became apparent was that there was a skills shortage, but also some businesses were willing to pay a ridiculous amount of money for some of the staff*' (R2). Moreover, '*but surprisingly, even though they were shutting, those employees weren't remaining in hospitality, they were looking elsewhere*' (R2). Another interviewee also added that the government backed furlough programme had been used, but on the owner '*so I was furloughed'* (R5), meaning that time away from the business and innovation was taken. As such the staffing impacts have played a significant role with respect to operations in the hospitality sector.

Theme 5: Operations impact supply chains

Supply chains were inevitably hit by the pandemic, and this was magnified with Brexit. In some ways the effects on supply chains were varied: *'So Brexit did have an effect, not so much for us in terms of supply chain, because maybe that's where we did have a bit more resilience, because we were using local suppliers, local meat, where I know that there's other restaurants specializing in Spanish or Italian products had big issues, not just in the increased costs, but also in the availability and bureaucracy of it all'* (R1). A local business focused on beer had no real issues, after some initial minor issues: '*But quickly smoothed out'* (R5). A food focused retailer stated: '*Where everyone was out 'cause it was so cheap, obviously, like they were ordering steaks and things so like getting certain cuts of meat were quite challenging. But yeah, that was only for a short period.*' (R6), which highlights a government policy had an impact on consumer behaviour, and thus knock-on effects on the suppliers. In other areas there were issues, pies and soft drinks for a takeaway store were in short supply and the vendor had to change suppliers: '*because we're running out of them and there weren't many places that could get them cause obviously the supply lines couldn't get them fast enough to where they were* *needed and obviously being in a small town in West Wales, they'd obviously got to big hubs first.*' (R3). And smaller items which are not part of mainstream supply chains could also be an issue: '*They decided to implement a queue system, so I needed one box of vegetarian sausages from the last aisle, but they were doing a one-way system through the whole point. Would it take me? An hour and a half to get them, so I had to quickly stop going*' (R4). So dependent on the product and location, issues could be minor or more pronounced, but all interviewees noted issues with suppliers.

Theme 6: Demand (consumers)

This is perhaps best summarised by the following quote: '*There's nobody in town, as you remember, you know, there's just nobody in town.'.* (R4). The demand from customers switched as traditional markets dried up. The type of customer went form tourists and local students to '*I was taking phone orders … you know, a couple of those like … the sparkies, the electricians and things, and they were doing the field hospital down the leisure centre.*' (R4). Not only has demand change but the way consumers have responded has been interesting: '*Uh, it's in, you know, I make trade off of the jukebox as well, which is still a cash machine, you know, and it's not taking the same amount of money. Because some people don't carry it. However, over the bar, I would suggest bar sales are helped by a cashless society'* (R5*).* Interesting here we see people using the juke box less as they don't have and cash, but the use of card at the bar has been a boost for sales.

Theme 7: Innovation forced

Innovations were thrust upon SMEs within the hospitality sector. The government drove innovation through both funding and policy directives specific to the hospitality sector. An example was a basic change to the layout of the hotel which allowed more space and seating room. Another change driven by regulation was a move from in-house dining to take away food: '*We shifted focus to the takeaway business and continued that for a while, which worked well*' (R1). However, the move to business models which would comply where not always viable: *'we did look at doing the delivery side of it for a while, but when we looked into the amount, you'd have to charge people extra to cover the delivery costs'* (R3). Also, hygiene featured in the interviews, with changes to practices driven by regulation and interestingly care for staff and customers. Interviewees expressed concern about virus transmission, and concern for staff. One example was the instillation of screes 'I've got screens in between every table' (R4) and the interviewee indicated that these would be permanent as customers liked the safe feeling – the '*privacy and their own little space'*. So, the forced innovation has been well received by the customer base, and the innovation has been adopted going forward, not just a temporary, but a permanent measure.

Theme 8: Innovation opportunity

Changes to the SMEs were not all drastic, and not always forced by the pandemic. For example, one SME implemented a new digital ordering system: '*We've got new till systems which make things a lot easier now for taking orders.*'. This new technology led to new processes and operating efficiencies. And even future plans for a better developed website, so that the SME could move away from partners who undertook delivery at a significant charge.

The pandemic was a chance to reset, to rethink the business operations and direction. One interviewee noted *'But it was actually a good period for me because staff costs are my biggest costs'* (R4), and then began to reflect on how busy the period was, but also giving a chance for reflecting on the overall operations and preparing for the future: '*you know, we had a kitchen done upstairs. We just refurbished the shop.*' (R4). Another indicated 'I've '*I felt it's kind of reset a few uhm … approaches to towards my business and I've I felt that we've been certainly as busy if not a bit busier'* (R5). There was also a chance to reflect on sustainability and climate change: '*my new fish and chip range about a sustainable range, so it has triple filtration systems, things like that*' (R4). Thus, despite the challenges faced, Innovation has been happening in SMEs in the hospitality sector.

4. Discussion

The research contributes to knowledge on the impact of Covid-19 on the hospitality sector. This aligns with recent research on this topic, particularly in the context of the UK (Ntounis *et al.*, 2022; Tajvidi and Tajvidi, 2021), however, this research builds on existing knowledge to underline the combined influence of Covid-19, Brexit and climate change as significant issues impacting the industry. Findings from this research support the notion that the hospitality sector is highly vulnerable to economic shocks (Hu *et al.*, 2021). Findings also reflect trends across the sector in the UK outlined in the Hutton report (2022).

Concerns by hospitality businesses towards the spread of Covid-19 to customers and staff, as outlined in the interviews, reflects findings by Chen et al. (2022), which impacted the turnover of staff (Chen and Eyoun, 2021). In addition to staffing issues, a significant impact of the Covid pandemic was the disruption to supply chains (Cappelli and Cini, 2020). These challenges led to the questioning of the resilience of hospitality businesses to mitigate these effects. However, hospitality businesses are seen to display resilience capabilities due to the seasonal nature of the sector (Ntounis et al., 2022).

Despite the challenges in the sector, findings point to opportunities for hospitality businesses (Gursoy and Chi, 2020), notably innovation (Hemmington and Neill, 2022), which was partly forced upon businesses due to restrictions, but also proactively sought by businesses in seeking to diversify their operations (Breier *et al.*, 2021). Interview respondents identified technology as a vital tool in supporting businesses during the Covid-19 pandemic, enabling businesses to engage in marketing through social media (Hemmington and Neill, 2022), or engaging with technology to simplify operational systems within the business (Pillai *et al.*, 2021). Further opportunities observed in the interviews was seen through increased cooperation between local businesses, with the aim of developing business resilience and sharing resources. This is underlined by Respondent 1 who sought to work with local businesses as a means of diversifying customers during Covid, but also sought to overcome supply chain issues through working with local suppliers. Businesses displayed elements of resource bricolage (Levi-Strauss, 1966) in working in this way, as they were able to make use of specific local resources to support their businesses during the pandemic, bringing mutual benefit to local businesses (Kuckertz *et al.*, 2020).

Unique findings from this research underline the challenges faced by the hospitality sector due to the economic conditions brought about by Brexit, such as access to staff, as many hospitality businesses had previously depended on EU staff (Filimonau & Mika, 2019; Hutton, 2022); as well as supply chain issues in procuring products (National Assembly for Wales, 2019). As outlined above, these issues were also consequences of the Covid-19 pandemic, but in the context of the UK, Brexit exacerbated the impacts of these on the hospitality sector. Furthermore, this research points to the impacts of climate change that hospitality businesses have been dealing with, including reducing food waste, and more specifically reducing the use of plastic. As Covid forced many businesses to adapt their activities towards takeaways, the use of packaging became a new challenge for hospitality businesses, especially in aiming to ensure sustainability (Elkhwesky *et al.*, 2022).

5. Conclusion

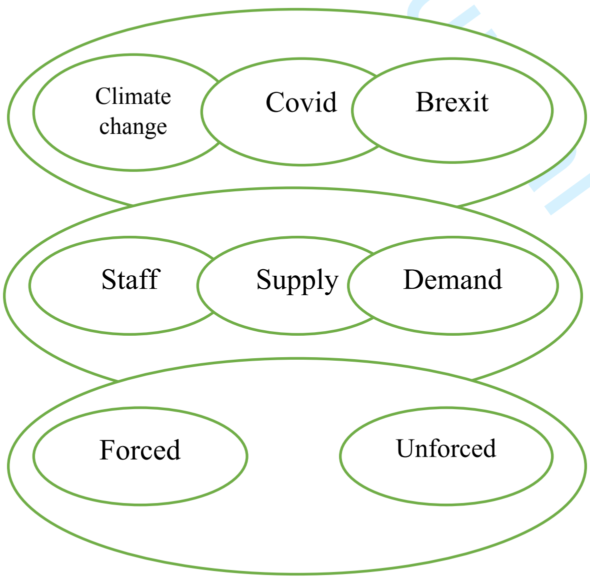
The research analysed innovation ~~during a pandemic in the~~and the issues facing the hospitality industry. Covid was ~~part~~ one of three issues facing SMEs in the hospitality sector, ~~including~~ the others being climate change and Brexit. ~~, with Covid influencing staffing, supply chains and consumer demand.~~ It is these which SMEs have responded to with both forced and unforced innovations. Based on our findings we present Diagram 1, which underlines the themes derived from the research. The diagram points to overlapping issues of climate change, Covid and Brexit that have impacted the hospitality industry. These have led to issues for hospitality businesses in accessing and retaining staff, supply chain interruptions and impacts on consumer demand, either through being forced to close due to lockdown regulations, and ~~due~~ owing to consumers avoiding hospitality settings due to concerns over catching and spreading Covid-19. Findings identified innovation as a notable consequence of the triple pressures of Covid-19, Brexit and climate change, whether this was forced upon hospitality businesses through regulation, such as social distancing and hygiene measures, or unforced innovation in which businesses actively sought to innovate to overcome the challenges in the sector, such as introducing training or integrating new technology into the business.

Diagram 1: Conceptualisation of Findings

Issues

Effects/Challenges

Responses



This research contributes to knowledge on the impact of ~~economic~~ challenges on the hospitality sector. While the research focusses on the UK, findings point to issues that have previously been seen in other research contexts, such as staffing issues in the USA (Sönmez *et al.*, 2020). This research underlines that hospitality businesses face multiple challenges. In the case of the UK, this is evident in a combination of Covid-19, Brexit and climate change. As outlined in Diagram 1, the effect of this is seen through staffing, supply chain and consumer demand challenges, however, these can be managed through forced or unforced innovation. This focus on forced and unforced innovation aligns with arguments by Santoro et al. (2018) that SMEs should be flexible, adaptable and efficient to react to market changes. This is especially pertinent as this research has outlined the complex challenges at present in hospitality through the effects of the Covid-19 pandemic, Brexit and climate change.

The focus on multiple challenges to the sector is limited within research on hospitality business and merits further research, particularly in the context of the UK on the impact of Brexit on the sector, but also globally, on the impact of climate change on hospitality businesses, and how the sector can develop sustainable practice in the use of materials for packaging and reducing food waste. Limitations are acknowledged in this research in understanding the longer-term impacts of Covid, Brexit and climate change on the sector, as the research was conducted in the immediate post-Covid period, however, future research on this topic would be necessary in exploring the longer-term impacts, as well as exploring longitudinal research on the subject, in order to evaluate the ongoing effects of hospitality sector issues.

There are implications and suggestions that arise from this research. The results indicate that no crisis can be considered in isolation. Covid, Brexit, and in particular climate change will remain ~~present~~ and SMEs must consider them when confronting the next crisis. The ability to innovate, either forced or voluntary is important to the business survival. SMEs who move from their standard business model, who innovate must have a fuller understanding of the labour implications. With Brexit and Covid induced shortages of labour any changes and innovation need to be cognisant of this. Climate change will and is already influencing movement of people through drought for example, so this will influence staffing. While these implications would enable hospitality SMEs to better prepare for future economic shocks, this research also draws attention to sector-specific matters that policymakers should consider in supporting the development of the sector.

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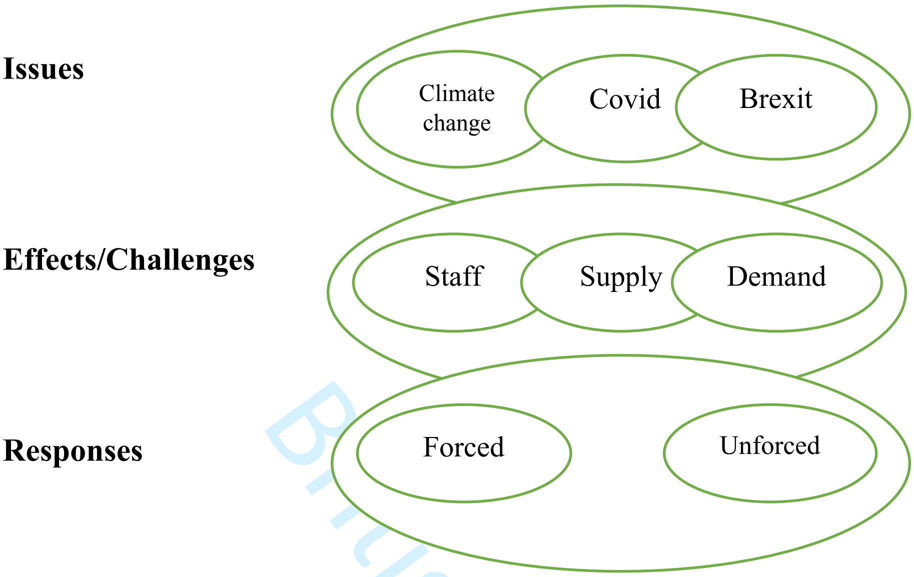
Diagram 1: Conceptualisation of Findings



Reviewer(s)' comments to Author:

Reviewer: 1

Recommendation: Minor Revision

Comments:
Thank you for your efforts in revising the manuscript. The paper has substantially improved, but is till lacking in terms of its clear focus. The Introduction section is weak:

"The aim of this research is to both understand challenges and the innovative response"

Is this it? More clearly defined aims and objectives are needed, and these need to be addressed in the discussion and conclusions of the paper.
Thank you for this comment. We discussed the comment in great depth and made numerous changes to reflect the main issue raised here, a lack of clarity in the introduction and the conclusion.

We have subsequently re-written substantive parts of the paper to remedy this. We now feel the paper is better in the area of aims and objectives, as well as linking back to these in the conclusion.

Additional Questions:
1. Originality: Does the paper contain new and significant information adequate to justify publication?: yes

Thank you

2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?: yes

Thank you

3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?: yes
Thank you

4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?: yes

Thank you

5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact

upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?: yes

Thank you

6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: yes

Thank you

Reviewer: 3

Recommendation: Accept

Comments:

The paper is improved compared to the first version.

Thank you

Additional Questions:

1. Originality: Does the paper contain new and significant information adequate to justify publication?: Yes.

Thank you

2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?: The paper demonstrate an adequate understanding of the relevant literature.

Thank you

3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?: Yes.

Thank you

4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?: Yes.

Thank you

5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?: Yes.

Thank you

6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: Yes.

Thank you