A Perfect Storm, Brexit, COVID-19 and Increased Cases of Food Contamination. A Case Study of how British Food Manufactures Foster Safe Food cultures.

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Abstract:

The effects of the 2008 economic recession are continuing to add friction to the wheels of the UK economy. The situation is compounded by the effects of the uncharted waters of Brexit on a global scale and also further heightened by the International Monetary Fund's warning that the 'global economy is facing a deep recession with the ongoing impact of COVID-19'. The UK Food Standards Association indicates that the sector suffered an 89% drop in business in April 2020, resulting in 675,000 sector-specific job losses. It is also predicted that 23% of businesses may fail, equating to a further 10,000 job losses in 2021.

Unfolding events in real time have done little to support UK industry, and in particular, the food manufacturing sector, who are being constantly challenged with the threat of contamination. In this context, the statistics on food contamination are concerning, as globally up to 600 million people suffer food contamination each year, resulting in 420,000 deaths. In the UK, it is also estimated that annually 2.4 million people are affected by food contamination, costing the economy more than £1bn a year. Since 2015, there has been a continuous year-on-year increase in the number of such food incidents in the UK. Such failings clearly damage brand identity, reduce revenue and ultimately lead to the potential termination of operations.

This discussion paper charts the unfolding effects of the 2008 UK recession, which cost the UK economy approximately £7.4 trn, the events leading to the UK Brexit negotiations, at a cost of £32.9 bln, and the continuing devasting consequences of the global pandemic on the UK and the UK food manufacturing sector, as it strives to develop a progressive food safety culture. It further offers viable suggestions in their efforts to establish a positive food safety culture.

Keywords: UK Recession, Brexit, Pandemic, Food Safety Culture

Introduction:

Regardless of its causes, the 2008 recessional output loss was estimated at between $60trn and $200trn for the world economy and between £1.8trn and £7.4trn for the UK. The Bank of England also suggested that the hidden cost to the UK taxpayer, in having to support the main UK banks, was more than £50bn. Thirteen years later, its effects still tarnish the UK economy through low consumer spending, reduced interest rates which failed to generate increased lending and investment, and the effects of austerity measures which damped down UK consumers' appetite to spend. This was further compounded by low UK productivity growth due to low wage growth, flexible labour markets, limited technological innovation and investment.

The level of economic instability was also tested in the UK Brexit vote to leave the UK. The cost to the UK economy and its tax payers of the divorce process is estimated by the UK Office for Budget Responsibility to be in the region of £32.9 billion. The UK government, then, had to navigate its way through uncharted waters, having left the EU, further heightening the nervousness of UK PLC. As the UK set its post Brexit course, the world was blindsided with a sudden and devastating global pandemic. Governments around the world were forced to go into economic lockdown to control the transmission rates. This paper charts the unfolding scenario and its impact on UK food manufacturers in their attempt to continue fostering a positive health and safety culture.

The Brexit Challenge:

Having twice been prevented from membership, on January 1, 1973, the UK Prime Minister Edward Health brokered an invitation to join the European Community as their ninth member state, without seeking the support of UK voters. The first European referendum was, however, held in 1975 and resulted in a 67% vote to remain in the EU, but the murmurings of whether to remain, often fuelled by Eurosceptic, or leave have ebbed and flowed as part of the differing views of UK voters (Spiering, 2015). In 2013, David Cameron allegedly stated that if the Conservatives were to win the next election in 2015, the UK people would have their say on the UK's continued membership of the EU (Grice, 2013).

Preceding the Conservative election success, Cameron was forced by disgruntled eurosceptic cabinet ministers to commit this into the Conservative electoral manifesto and hold a referendum (Watson et al., 2018a). It is probably reasonable to say that both the 'Remain' and the 'Leave' referendum campaigns exhibited in hindsight what can best be described as untruths and created a national footprint of animosity. Cameron's strategists were confident that, although the result would be close, there would be a vote to remain, as the agenda had been instigated by Eurosceptics, rather than the UK citizens. On June 23, 2016, the electorate defied polling predictions and delivered a close 52% to 48% majority to leave. On June 24, David Cameron fell on his sword and resigned as British Prime Minister. He later stated that the vote to leave was born out of unhappiness driven by populism (Alexander, 2016). The Brexit process was clear in that there would be a four-year transitional period to negotiate a deal and the UK would formally leave the EU on January 31, 2020 (Edgington, 2020).

The vote to leave the EU through the signing of Article 50 of the Lisbon Treaty was greeted by insecurity (Watson et al., 2018a). The new Prime Minster, Teresa May, who actually voted to stay, struggled to impose her leadership and unite her cabinet in a clear and focused departure plan, which further agitated a lack of confidence in the exit strategy. At the same time, her

leadership also attracted criticism from the US President, Donald Trump (Macaskill, 2018). All of this was further exacerbated by political rumours of a impending UK /EU divorce bill, equating to £84 bln (Connolly, 2018), and arguments about just how the UK and the EU were going to divide assets, agree EU budgets and scope out the future rights of both UK and EU nationals (Peter, 2016).

Justin King, former Sainsburys CEO, stated that the consequences of Brexit would mean 'higher prices, less choice and poor quality' (Grut, 2017). The UK economy is still feeling the economic scars of the 2008 recession that were on a state of heightened alert. Hence, on June 24, 2016, the currency markets were quick to respond, and the British pound experienced its worst day, falling 10% while the UK FTSE 250 also fell 8%. The unprecedented fall in currency drove up the annual rate of inflation from 0.5% to 2.9% (Allen and Davies 2016). The consequences also supressed wage growth, consumer spending and positioned the UK as the weakest G7 economy (Cadman, 2016).

The nervousness surrounding the Brexit leave vote was not restricted to currency traders, but gained the attention of businesses as the economic future was uncertain (Watson et al., 2018b). The agri-food sector was concerned about the forecasted immigration controls, as they contributed £103 billion or 7.6% to the national Gross Value Added in 2013 and employ 3.8 million people, which consisted of 7% EU nationals (2.2 million +/- 0.1 million) and non-EU nationals 4% (1.2 million +/- 0.1 million) (O.F.N.S, 2016). Furthermore, the CEO of Dairy UK also raised concerns, that negotiation talks about the Brexit departure date needed to take place with haste (Bryans, 2018). In addition, the Food and Drink Federation's (FDF) Director General stressed, on behalf of their members, that time is of the essence in the need to provide clarity on the UK – EU trade relations and the need to reassure anxious businesses via a detailed and informed transition period (Maushagen and Macdonald, 2018).

When the country wanted strong leadership to navigate its way through the uncharted waters of Brexit, throughout her 34-month premiership, Teresa May was plagued with misfortune, from a disastrous party conference speech, being trapped inside her car whilst on a state visit to meet German Chancellor Angela Merkel, to Donald Trump questioning her capacity to negotiate a deal for the UK with the 27 EU members (Stewart, 2019). Her demise was attributable to her endeavours to unite a deeply divided leave and remain cabinet office behind her proposed Withdrawal Bill. This was rejected three times in parliament, as the Bill went too far for leavers and not far enough for remainers (Liz, 2019) and the subsequent resignations of two cabinet ministers led to Teresa May resigning on June 7, 2019 (Kuenssberg, 2019). She was replaced by Borris Johnson, who was handed the baton and took up a mantra of 'Get Brexit Done' (Adams, 2019).

Johnson inherited a negotiation forum with the EU which had repeatedly rebutted the former Prime Minister's proposals (Boffey, 2019). Fears were exhibited in the food sector and other sectors, and there was considerable nervousness that the UK might exit the EU with a 'no deal' and would then have to operate under World Trade Organization (WTO) terms, the basic trade rules for countries without trade deals (Sanford, 2019). The projected consequences would be far-reaching for food producers. The EU would introduce a tariff system, with certificates, licences and special labelling for some types of foods, plants and live animals required on UK exports, resulting in higher supply chain and ultimately consumer costs (King, 2020). Furthermore, without a trade agreement, UK food standards could prove problematic, as without the EU agreement to UK food quality standards, such goods would have to be checked at border crossings with the resultant delays affecting supply chains and the shelf life of food

products, such as fish, dairy and poultry (Seferidi, 2018). The UK would also have to conduct full inspections on incoming freight and the anticipated delays may result in EU food producers seeking alternative markets, and, in doing so, may cause food shortages in UK supermarkets (Syal, 2019). A 'no deal' would also affect the fishing industry, as the UK would lose the rights to EU waters and this would be exacerbated by the additional EU tariffs on UK seafood exports (O'Carroll, 2019). It might also lead to numerous uneconomic scenarios from a hard border between Northern Ireland and Ireland, as Northern Ireland would be required to remain in the EU, something that would further foster an uncertain future for food producers (Campbell, 2019).

The Brexit Aftermath:

A Trade Deal was finally agreed, having gone almost to the wire on December 31, 2020, some 1,500 days after the resignation of David Cameron. The Treaty became legally binding from January 2021, at an estimated administrative and legal cost of approximately £2bn (Owen and Lloyd, 2021). In terms of the food industry, the agreed deal will affect all sectors of the food industry, and the true impact of the Brexit agreement will not be fully appreciated for months, if not years (Grocer, 2021). The response from the food sector was one of insecurity as a 'no deal' would have been disastrous. Tesco chairman John Allan stated that a deal avoids punishing tariffs that could have pushed average food prices up by 5%. The British Retail Consortium's CEO Helen Dickinson said that the Brexit deal means UK firms and households can breathe 'a collective sigh of relief'. The reality is that the future is not fully transparent, and the food industry is moving cautiously ahead to comprehend just how the Brexit deal will impact the food sector.

Whilst on the surface, a 'zero-tariff, zero-quota' appears a good deal (Boffey and O'Carroll, 2020), this may prove problematic for manufactures and exporters of food. Under the rule of origin, UK businesses are required to demonstrate why they are entitled to a tariff free entry into the EU for each product, and, as part of the 'rules of origins', all contents must be produced in the UK (Reuben, 2021). Products with ingredients from other countries outside the UK/EU will be affected. As noted by Dominic Goudie, Head of International trade at the FDF, this will have a significant impact on supply chain operation.

In terms of food quality, negotiations failed to agree a process to diminish the duty of sanitary and phytosanitary (SPS) quality checks in relation to animal food, including plant origin, when crossing borders (Partridge, 2021). In consequence, UK exports of food products in areas such as dairy and meat will have to follow the full burden of requirements to demonstrate compliance in areas such as animal welfare and slaughter methods. Peter Hardwick, trade policy advisor at the British Meat Processors Association (BMPA), indicated that the additional administration compounded with the physical inspection would hinder approximately 30% of freight. Such a requirement has frustrated the UK food sector, as the EU had relaxed inspection processes with countries such as New Zealand, where only 1% of food products are required to follow SPS inspection checks. Emily Rees, senior fellow at the European Centre for International Political Economy, implied that such inspection audits may raise questions about trust between the UK and EU and are a direct consequence of both parties adopting separate costly bespoke procedures.

On a positive note, UK hauliers are still permitted to operate between the UK and EU without the anticipated need for permit approval (Gowans, 2020). However, when haulage drivers reach their initial country of destination, they are now restricted to two additional journeys

within that country, of which a maximum of one cabotage operation for UK hauliers, thus limiting the risk of having to travel back without a load (Gowans, 2020). Concerns were also raised by the CEO of the Cold Chain Federation, Shane Brennan, who indicated that such an agreement between the UK and EU may influence the transport capacity within the UK and would need to be regulated by the UK government. UK hauliers are also reporting that the administrative and physical checks are causing significant delays (Davies, 2021), and without the required documentation, hauliers are being turned away for departure ports for the EU, thus adding to delays.

UK food exporters are now required as a 'third country' to ensure that all wooden pallets are heat treated prior to the export of goods to the EU, as a quality assurance process to reduce the likelihood of contamination and the uncontrolled dissemination of pests (Payne, 2020). The new requirement will also generate additional costs in the supply chain, procurement and distribution of pallets throughout the UK's transportation hubs. For instance, pallets dropped off in one location such as Northern Ireland may result in stock piles if goods are not required for the hauliers' return trips.

The UK fishing industry will incrementally acquire an increased share of its own water to fish (Edgington, 2020) over the next 25 years, though most of the quota will be transferred in 2021. The UK and EU further agreed that there would be annual negotiations to agree how the catch is divided (Morris and Barnes 2021). It is anticipated that in 2026, the UK fishing industry will absorb an extra £145m of fishing quotas year on year. The transition has been far from easy, as there is growing evidence to suggest UK fish exporters are struggling to export to the EU because of delays in completing the required Health Certificates for each catch of different species from which each port (Helm and Savage, 2021). Such delays have resulted in lost sales, as the shelf life of the sea food in many cases has expired (Fraser, 2021). The situation is further compounded by disgruntled French fishing boats thwarting the now legitimate fishing rights of UK fishing boats (Harrison, 2021).

In respect of the 'Good Friday Agreement' which maintains peace in Northern Ireland, the EU conceded that there should be no hard border between Northern Ireland and Ireland. However, despite assurances from Boris Johnson that there would be frictionless trade between Ireland and Great Britain, the UK government stealthily conceded to a new regulatory border between Northern Ireland and Great Britain, (England, Scotland and Wales) referred to as the Northern Ireland Protocol (Campbell, 2021). As a consequence of Great Britain having left the EU, Northern Ireland is required to adopt EU 'regulatory' cross border checks in the form of customs documents and physical checks for food products such as dairy, meat and poultry. In essence, a board had been established in the Irish Sea (Edgington and Morris, 2021). UK food exporters to North Ireland have found the complexity in completing the necessary document challenging and this has resulted in export and import delays, a reduction in food exports and supermarket supply chain challenges (O'Carroll, 2020).

The Global Pandemic:
With the UK still feeling the effects of the 2008 economic recession, and this amplified by the need to navigate its way through the unchartered waters of the Breixt deal, the UK, amongst other countries, was thrown a curve ball in the form of a global pandemic. On March 11, 2020, the World Health Organisation formally classified the outbreak of COVID-19 as a pandemic, indicating that the virus had spread on a global scale (World Health Organization, 2020). Its grip on the world economy and society was rapid and it was unforgiving in its trail of human

and economic suffering. To date, the pandemic has taken globally approximately 3.5 million lives and seen 167 million cases (WHO, 2021). Governments around the world urgently locked down their economies for all but essential services such as food supply chains (Nicola et al., 2020; FAO and WHO, 2020). The UK Government, following scientific advice, issued a 'stay at home order', something echoed by over of 160 countries worldwide (Habe et al., 2021).

The Office for National Statistics indicated that the pandemic has affected the food and drink sector more than any other sector of the UK economy (OFS, 2020), as it faces drastically reduced consumption. A situation unfolded in which home consumption was on the increase, whilst out-of-home consumption, which generates the largest revenue margins, was supressed due to the lock downs (Pieters, 2021). The Food Service and Hospitality Market Research Report (FSHMRR, 2020), the Organisation of Economic Co-operation and Development and the Food Standards Agency indicated that the sector suffered an 89% drop in business, resulting in 675,000 sector-specific job losses, many of these in the 16 – 24 age bracket. In 2020, the UK 'Positivity-Rate' of transmission was 5% and the transmission rates posed an unparalleled economic challenge, including within the food and drink sector. The Office for National Statistics identified that this sector was the most badly affected (OFS, 2020a). The ONS also indicated in April 2020 that 23% of businesses had suspended operations and approximately 60% of businesses who remained in operations indicated a fall in revenues (OFS, 2020b). Whilst COVID-19 has caused a significant reduction nationally in food sector jobs, overall the sector has seen significant growth, especially in supermarket delivery services and across their business operations (Goodley and Ambrose, 2020).

Whilst the UK operated under national lockdowns, food manufacturers and their supply chains had to continue essential operations. Even though many food manufacturers operated under quality assurance systems, the number of companies having to suspend their operations due to COVID-19 outbreaks was of concern. Such outbreaks of COVID-19 transmission cases were often associated with meat processing plants. Such cases were attributable to the cramped working conditions in the plants and also that much of the workforce on factory operations were low-paid, non-English-speaking foreign workers, who often struggled to understand quality procedures (McSweeney, 2020). Figures suggest that a mere 47 notifications of COVID-19 transmissions and no deaths were reported to the UK's Health and Safety Executive (HSE) by food manufacturers, who employee over 430,000 people (Davies, 2020). It is estimated the number of reported incidences could more than 30 times higher (Halliday, 2020).

The Challenges in Adopting a Positive Food Safety Culture:

The consequences of failing to adhere to food safety standards cannot be overstated. The WHO estimate that there are over 600 million cases of food contamination resulting in 420,000 deaths per year (WHO, 2020). Such failures are not confined to impoverished countries, but are clearly evident in affluent economies too. For instance, in the USA, approximately 48 million people suffer food poisoning, resulting in 3,000 deaths per year (Ruiz-Capillas and Herrero, 2019). The figure for the European region is 23 million incidents with just under 5,000 deaths a year (WHOE, 2019). In terms of the UK, the estimated number of food contaminations was thought to be around 1 million. However, this figure was more recently revised by the UK Food Standards Agency to approximately 2.4 million incidents with 180 deaths per year (Whitworth, 2020), costing the UK economy annually over £1bln (Sustain, 2018). Furthermore, the UK has witnessed an increase in the number of 'zero-rated' food manufacturers who require prompt improvements to food hygiene standards (FSA, 2018). Reece (2017) reported that food and drink recalls had increased by 62% and allergen recalls by 78%. The number of foreign bodies

has also increased by 350% according to Ridler (2018).

The main frustration here is that the vast majority of food contamination cases are avoidable. As with efforts to reduce COVID-19 transmissions, food safety is very much reliant on employee compliance with safe systems of work. Failures are often attributable to employee food safety behaviour (De Boeck et al., 2017). Griffith et al. (2010) also linked 97% of food contaminations to the noncompliance of food handlers. In consequence, failure to comply will significantly weaken food manufacturers' quality assurance systems and potentially make them ultimately redundant (Yiannas, 2009). However, the finger of blame cannot be pointed solely at the behaviour of employees. Such failures are very much reliant on the commitment of management. Food manufacturers cannot sit back, having simply invested in well-respected quality assurance systems. Management need to recognise that their action or inaction can affect food safety performance. They are indeed the thermostatic regulators of their organisation's food safety culture (Bennis, 2009).

The challenge that managers in the food sector face is that there is no one unifying definition of food safety culture, despite the growing breadth and depth of literature on the food safety culture (Watson et al., 2018b). The clarity and commercial recognition of food safety culture is also hindered, as there is also no agreed and validated approach to measuring it against performance (Dodsworth et al., 2007). In terms of a cultural definition, the work of Schein (2004) referred to culture as a network of formal and information assumptions influencing a group, such as values, beliefs and attitudes in their response to organisational situations (Nayak and Waterson, 2016). Culture, in essence, is manifested by the minority (i.e., the management), which influences the majority (i.e., the workforce) in terms of food safety cultural compliance (Watson et al., 2018a). As noted previously, the action or inaction of management can certainly influence the work force culture. Sadly, in all too many cases, it takes a serious incident of non-compliance to capture the attention of senior management about the cost of a neglected food safety culture. It is what psychologists describe as 'change blindness' (Beanland et al., 2017).

The importance and potential benefits of embedding a food safety management system cannot be over-emphasised. If done correctly, it can provide a *'control'* framework to foster and sustain a positive food safety culture. However, a common error of many organisations is that they underestimate the level of resources required for this task, and overestimate the current support of existing staff (Watson et al., 2018a). It must be stressed that costly quality systems do not ensure compliance; to do so requires the intrinsic buy in of their staff. Employees should be included in the key steps of maintaining an effective quality control of operations such as their tangible and regular involvement in the strategic design and change processes. To do this effectively often requires an authentic leadership style of inclusivity. To do it otherwise, will only breed hearsay, rumours and a disconnect between management and employees. In essence, the organisation needs to ensure that employees become active participants of the control procedures within the organisation (Zin and Ismail, 2012).

The role of '*co-operation'* is equally critical in the orchestration and development of a progressive food safety culture. Research indicates that there is a clear link between responsible behaviour and quality compliance (De Boeck, 2017). Again, the role of leadership in developing co-operative bonds between management and employees is vital and, if done effectively, will breed responsibility and accountability (Taylor, 2011). As with employee involvement in control, their cooperation, and the systems to support this, such as 360° communication, interactive and timely staff meetings are clear evidence that the organisations infrastructure drives and values such initiatives. Many organisations start off with the best intentions. However, incrementally, due to perceived work pressures, a culture of co-operation

is starved of dialogue and this manifests in dysfunctional groups often shrouded in power struggles (Beauregard, 2010).

A key interdependent attribute in the formulation of a positive food safety culture is that of **'communication'**. Yiannas (2009) stated that: 'you can tell a lot about the food safety culture within an organisation by their communication or lack of communication on the topic'. If there is a perception within the workplace that employees feel rationed to formal communications, then the result will be that they will then often rely on informal grapevine communication driven by hearsay and will no doubt test employee loyalty and erode trust (Wright et al., 2012). It is equally important to note that the effectiveness of any communication system is very much dependent on quality rather than quantity (Hofmann and Morgeson, 1999). Furthermore, there is a clear correlation between 360° interactive functional communications and compliance (Vredenburgh, 2002). If management are committed to a positive food culture, the true litmus test is that it should result in recurring evidence of management attending and participating in such modes of communication.

The competence of a workforce is of equal importance in the pursuit of an effective food safety culture. Organisations often differentiate workforce training from management-targeted development plans (Yu, 2017). On closer inspection, it is often the case that whilst employees attend training sessions, management often defer from attending development sessions citing work commitments. If this is unregulated, it can become the norm. There is also a firm link between those organisations who implement and monitor the effectiveness of their training and development regimes and the evidence of positive compliance to functional food safety procedures (Da Cunha et al., 2014). An effective barometer to enhance the effectiveness of training and development procedures is through effective appraisal schemes (Cappelli, 2018), particularly one in which the appraisers are qualified and the appraisees are both informed and see value in the process (Ko, 2015).

Conclusion:

Given the steep Brexit learning curve, all businesses and the UK government are finding the adjustment to a new way of working with the EU challenging, to say the least. Furthermore, whilst there are encouraging signs that the various Covid 19 vaccines are beginning to reduce the rates of transmissions and fatalities, the UK still needs to tread carefully. The UK food manufacturing sector is facing increased pressure to ensure that their supply chains are both free from COVID-19 transmission and also that food contaminations are factored out of their business operations. To achieve this, it is critical that food manufacturers do not just realise the importance of a food safety culture, but also fully commit to embedding and monitoring their food safety culture with the necessary control, co-operation, communications and competence measures. Such cultural drivers require senior management involvement and adequate resourcing. The importance of food safety cultures in the fight against food contamination, poisoning and deaths is now recognised by international regulators, who are embedding revised legislative principles, notably the updated EC regulation. 2021/382 (EC, 2021) designed to refine and enhance Food Safety Management System's through compulsory food safety cultural audits. The evidence is overwhelming; a positive food safety culture does not just reduce non-compliance but is correlated with enhanced employee morale and business sustainability and growth. To do otherwise, is folly and the potential lost opportunity could be catastrophic to their business operations.

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