

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/373212921>

A study on the perceived organisational business continuity of foodservice executives

Article in *International Journal of Business Continuity and Risk Management* · January 2023

DOI: 10.1504/IJBCRM.2023.132919

CITATIONS

0

READS

81

2 authors, including:



Selim Yazici

Istanbul University

42 PUBLICATIONS 70 CITATIONS

SEE PROFILE

A study on the perceived organisational business continuity of foodservice executives

Murat Doğan*

Department of Gastronomy and Culinary Arts,
Istanbul Gelişim University,
TR-34310, Istanbul, Turkey

and

Department of Management and Strategy,
Istanbul University,
TR-34116, Istanbul, Turkey

Email: mdogan@gelisim.edu.tr

*Corresponding author

Selim Yazıcı

Department of Business Administration,
Istanbul University,
TR-34452, Istanbul, Turkey
Email: selim@istanbul.edu.tr

Abstract: Business continuity is a strategic approach that aims to identify, analyse, and mitigate the effects of potential unusual hazards on businesses. By adopting this approach, foodservice companies can ensure that their basic business processes continue uninterrupted, regardless of the cause of the business interruption, crisis, or disaster. To understand foodservice managers' perceived organisational business continuity and the challenges they face, a two-stage qualitative research study was conducted. Firstly, a group interview was conducted, and the analysis of the data resulted in categorising the managers' perceived organisational business continuity into four main themes and their business continuity challenges into eight themes. It was found that the foodservice managers' coordination of the food safety management system played a crucial role in understanding and creating business continuity in foodservice. Overall, it was determined that a new strategic approach that focuses on employees and all stakeholders rather than just technology-oriented applications would be necessary.

Keywords: foodservice; business continuity; business interruptions; food safety management system.

Reference to this paper should be made as follows: Doğan, M. and Yazıcı, S. (2023) 'A study on the perceived organisational business continuity of foodservice executives', *Int. J. Business Continuity and Risk Management*, Vol. 13, No. 3, pp.302–322.

Biographical notes: Murat Doğan is an Associate Professor at Istanbul Gelişim University, Fine Arts Faculty, Gastronomy, and Culinary Arts Department. He received his associate degree in cookery, Bachelor's in Food Engineering and Business Administration, Master's in Biology and Nutrition and Dietetics, and Doctorate in Food Engineering, Management, and Strategy.

He has worked as a Manager in the food industry for 13 years, has been working in the academic field for eleven years, and is still the Vice Dean of his faculty. He conducts academic and sector-oriented studies in the fields of food, nutrition, gastronomy, and business administration.

Selim Yazıcı is a Professor of Management and Organization at the Department of Business Administration at Istanbul University, Faculty of Political Sciences. He received his BSc in Mechanical Engineering from Yildiz Technical University and MSc and PhD in Business Administration from Istanbul University. He is lecturing on entrepreneurship, digital insurance, financial technologies, project management, business continuity management, business management, organisational behaviour, and international business both at the undergraduate and graduate levels. He is the Co-founder of FinTech Istanbul, a platform for supporting financial technology (FinTech) startups and building a strong ecosystem in Turkey.

1 Introduction

BC is an approach that identifies potential risks that may cause business interruptions in businesses, analyses and explains their effects, protects the interests of partners and stakeholders, and protects brand value and reputation. As in all sectors, BC in foodservice emerges as a new concept that enables the transition from a reactive crisis management approach to a proactive approach. In addition, foodservice applies the FSMS, which is a proactive system approach (Tucker, 2015a; Dzwolak, 2019).

The concept of business continuity was introduced to the business world more than 30 years ago in response to various business interruptions caused by operational, organisational, and environmental factors. The globalised nature of today's business world requires strategic responses to threats and risks of increasing diversity and magnitude. Businesses that want to be successful against their competitors must defend themselves with increasing resilience to continue profitably in the event of any serious business interruption. With a strategic approach to business continuity, businesses can continue their basic business processes regardless of the cause of the interruption, crisis, or disaster (Tucker, 2015a).

The strategic point of view shows that BC can be used as a proactive process in foodservice in all sectors. However, the foodservice industry has special problems and challenges different from those in other industries that increase the complexity of providing BC. These include the difficulty of finding alternative sources for key raw materials with food safety, the emergence of public health problems caused by products that cannot be food safe due to adulteration in the supply chain, their reflection on the public, and the risk of brand reputation (Peck, 2006; Gupta, 2012). All of those factors affect the continuity of the foodservice business.

Today, access to information is very easy and fast, and the events caused by the human factor are the primary threats to BC. Risks such as food adulteration and fraud, food sabotage, the complexity of the food supply chain, and global terrorism are new problems and threats that can have a serious impact on the foodservice industry. As in all sectors, BC in foodservice has emerged as a new concept that enables the transition from a reactive crisis management approach to a proactive and preventive approach. However, scarcity of resources (financial and human resources) and lack of experts slow down BC

practices, and businesses may be reluctant to require costly BC (Schätter et al., 2015; Trivedi et al., 2020).

Foodservice has been implementing the Food Safety Management System (FSMS), which is a proactive system approach, for many years. The intensely competitive environment in foodservice, technological innovations, the public's awareness of healthy food consumption, and legal obligations have further increased the importance of FSMS. Foodservice is in a vulnerable position compared to other industries, and all its efforts are frequently focused on protecting the core assets. The reason for this is that all the activities of the enterprises are focused on the production facilities (kitchen), and many of them do not make any distinction between daily activities and BC. In addition, businesses tend to rely on flexible manufacturing capabilities for emergencies (Swainson, 2018).

Foodservice is rapidly changing in line with the food industry, and the main drivers of change are the complexity of supply chains, the increasing use of new technology and applications, and ever-changing consumer habits. In foodservice, personalised nutrition programs, the demand for additive-free and environmentally friendly foods, energy efficiency, and the security of current and potential suppliers are the new trend areas. The future of BC in foodservice is inherently dependent on the evolution of these trends and the innovations that will surpass them in the coming years. To implement BC in foodservice, in addition to a significant number of resources, employees must also be trained to follow all processes correctly. Businesses that can implement BC will be better positioned to reduce potential risks to their products and services, as well as protect their customers, profitability, and brands (Velasco-Vizcaino et al., 2020; Niemimaa et al., 2019).

2 The theoretical and conceptual framework

The concept of business continuity was introduced to the business world more than 30 years ago in response to various business interruptions caused by operational, organisational, and environmental factors. DR activities implemented by businesses in the 1950s and 1960s formed the roots of BC. The purpose of DR is to intervene in extraordinary events with the preparation of emergency plans in general, not to try to prevent them. Later, businesses, especially banks, added the storage of backup copies of their critical data in alternative locations to their DR plans. However, the purpose of DR was not to protect all the activities of any given enterprise, but to protect technical systems. In the beginning, non-business data storage was only performed periodically. However, in the late 1970s, file backup and off-site storage procedures became more frequent and regular. For this, third-party regional storage facilities have been established. Over the decades, DR has evolved into business continuity planning and then business continuity management. This transformation occurred when the technological point of view was transformed into the system point of view. For this reason, businesses that apply a proactive approach to BC instead of DR, which is a reactive crisis management approach, will be able to gain an advantage in their sectors (Phillips and Landahl, 2020; Miller, 2011).

Today, with globalisation and technological developments, a dizzying transformation is experienced in business life and ways of doing business, and existing paradigms are changing. As a result of these developments, especially the spread of the internet over a wide area and its integration into every stage of business life, businesses can connect

directly or virtually. This situation requires minimising business interruptions, which is one of the main objectives of BC. Today's epidemics, natural disasters, terrorist attacks, and attacks on information systems show that BC is of critical importance. BC is expected to provide businesses with advantages in terms of protecting their vital assets, managing risks, reducing these risks, producing solutions in emergencies in a short time, and providing trust among customers, business partners, and stakeholders (Aven and Zio, 2021).

BC gives businesses the ability to manage events that could seriously adversely affect their ability to provide products and services to their customers and to continue to offer products and services at predefined levels. Major workplace accidents, negative media campaigns, market fluctuations, long-term power outages, failures in data processing and communication infrastructure, transportation issues, supply chain disruptions, critical employee losses, and so on these adverse events will lead to a rapid loss of customer satisfaction and loyalty. For these reasons, it is unlikely that most of the businesses that have closed will be reopened (Sahebjamnia et al., 2015). With the strategic approach of business continuity management, businesses can continue their basic business processes regardless of the cause of the interruption, crisis, or disaster. An effective BC approach enables businesses to have an advantage over their competitors in today's dynamic, global, and customer-oriented business world. BC offers a broader approach than traditional disaster recovery (DR) with a narrow technological focus, as it takes a holistic approach to the management of risks and threats, including all mission-critical elements of business operations (Tucker, 2015b).

2.1 FSMS in the foodservice

Food safety is all the work done to ensure that food can be served safely by eliminating chemical, physical, and biological hazards in all processes, from production to consumption. Consumption of food that is not suitable for food safety causes the spread of food-borne diseases, threatening public health and negatively affecting countries economically, socially, and politically (da Cunha, 2021).

Nutrition is a basic need, and eating safe foods is the most natural human right of every consumer. It is important for public health that the people who make up society meet their nutritional needs from the right sources. Foodservice businesses are organisations that provide catering services while considering public health (Ashe and Sonnino, 2013). Intense competition in the foodservice industry, new developments in food science and technology, public awareness of healthy eating, and legal regulations have increased the importance of FSMS. Foodservices are the last link of the supply chain that serves healthy foods to the end consumer by processing many agricultural, animal, and similar raw materials. It is of great importance for them to continuously provide healthy and safe food without any problems (Payne-Palacio, 2016; Girardon et al., 2019).

2.2 Business continuity in foodservice

Mad cow disease (bovine spongiform encephalopathy, or BSE), dioxin, foot and mouth disease (FMD), and Avian Influenza, which have been experienced in the food sector in the past, as well as earthquakes, tsunamis, terrorist attacks, and epidemic diseases (COVID-19, etc.) affecting all sectors, can cause high costs and large business

interruptions. As a result of all these events, the necessity of developing a system has emerged to protect the interests of business shareholders, stakeholders, the government, and customers. BC, which is a holistic system to eliminate these risks and uncertainties, has been an important argument for the solution. Like in other sectors, interruptions in the activities of foodservice establishments may cause damage to the added value they provide to society. Therefore, they must maintain the continuity of their functions in order not to incur high costs (Tucker, 2015b).

Due to its structure, the foodservice industry faces implementation challenges related to BC. These are the difficulties of finding alternative sources for key raw materials for food safety, the occurrence of public health problems caused by products that cannot be food safe due to adulteration in the supply chain, their reflection on the public, and the risk of brand reputation. Foodservice businesses, like other industries, must ensure that BC thrives for a long time. From a strategic management perspective, we suggest that foodservice businesses focus on FSMS to ensure BC. In addition, we think that determining the perceived business continuity of foodservice managers and business continuity challenges can provide practical advantages to these businesses (Peck, 2006).

According to the literature research, BC in the food production sector has been poorly studied, and few articles have been published (Carino et al., 2021; Chow, 2020; Peck, 2006; Schätter et al., 2015; Stanciu et al., 2012). This study aims to be one of the first to determine the perceived organisational business continuity of foodservice managers.

It is anticipated that the FSMS practiced by foodservice today will make a positive contribution to ensuring BC. In addition, it is estimated that FSMS requirements will lead to the establishment of BC in these businesses, and the importance of foodservice managers' perceptions in the realisation of all arguments is undeniable. We aimed to determine the perceived organisational business continuity of foodservice managers, the effect of FSMS on perception, and BC challenges with this research.

3 Methodology

The purpose of this study is to determine the perceived organisational business continuity of food service managers, identify challenges in business continuity practices, and offer solutions for the food service industry. The scope of the study was limited to the issue of BC, and other risks not related to it were excluded. Since our study is limited in duration, the findings obtained are limited to the duration of the study (December 2020 to March 2021). For this reason, there will inevitably be differences between the findings of our study and those of subsequent studies.

In the study, the research topic was examined in depth with qualitative analysis, and a focus group interview was designed to determine the perceived organisational business continuity, business continuity challenges, and the effect of the FSMS applied on business continuity. We attempted to identify the main and sub-themes of perceptions and challenges using content analysis and affinity diagrams on data from focus group interviews. The nominal prioritisation technique was used to prioritise the challenge themes.

3.1 Focus group interview

One of the purposive sampling methods, *maximum variation sampling* was used in the selection of focus group interview participants. It is stated that it will be advantageous to bring together participants from various fields of expertise to maximise the discovery of different ideas and suggestions through maximum variation sampling (Patton, 2014).

In this research, a focus group interview was chosen to identify three different issues:

- 1 determining the perceived organisational BC of foodservice managers
- 2 determining the effect of FSMS on foodservice managers perceived organisational BC
- 3 identifying and prioritising BC requirements and challenges to implementation.

Interview participants were composed of foodservice managers and university academics. Participants were classified according to their full-time employment status, and they are divided into three categories:

- 1 employees with extensive experience in the food industry
- 2 employees with extensive experience in academic knowledge
- 3 employees with experience in both the industry and academic fields.

Participants representing the sector were selected from managers specialising in food safety and quality management systems. Participants from academia were chosen from among faculty members with foodservice experience and expertise in food safety and quality management systems. In total, eight sector representatives and five academics were selected by looking at their online profiles and conducting telephone interviews. A total of six participants, consisting of three sector representatives and three academicians, agreed to participate in the interview. Their participant profiles are given in Table 1. A semi-structured question list was prepared and used for the focus group interview (Williamson and Johanson, 2017).

Table 1 Participants' profiles

<i>Participant code*</i>	<i>Age range (in years)</i>	<i>Education qualification</i>	<i>FSMS experience (range in years)</i>
AS-1	41–45	PhD Degree	16–20
AS-2	36–40	PhD Degree	11–15
AS-3	41–45	PhD Degree	11–15
FS-1	31–35	BSc Degree	6–10
FS-2	26–30	BSc Degree	0–5
FS-3	36–40	MS Degree	11–15

Note: *AS: academic staff, FS: foodservice.

3.2 Design of interview questions

Due to the nature of the research, a semi-structured interview method was used, and the participants were helped to clarify their views around a theme. The open-ended questions given in the semi-structured interviews provided a better understanding of the subject and

made obtaining the data easier. The interview questions were determined by considering the ISO 22301 standard, (Kirchner et al., 2013) study and the *perceived organisational business continuity* scale they created for this study.

At the interview, the participants were asked about:

- 1 their working life experiences and various demographic issues
- 2 the conceptual framework of business continuity was briefly explained and their current business continuity knowledge was questioned
- 3 questions about the perceived organisational business continuity
- 4 what their business continuity challenges were based on, depending on their FSMS experiences.

3.3 Content analysis, affinity diagram, and nominal prioritisation

The content analysis method was used to determine the perceived organisational business continuity of managers, the effect of the FSMS on this perception, and BCC from the data obtained as a result of the interview. As FSMS is a proactive and strategic management system, it uses various systematic tools such as:

- 1 management and planning tools
- 2 process analysis tools
- 3 decision-making tools
- 4 data collection tools
- 5 various systematic tools such as root cause analysis (Bicheno and Catherwood, 2005; Motarjemi and Mortimore, 2014).

In this study, management and decision-making tools were used to analyse the data obtained from the semi-structured interviews. In previous studies, Dzwolak (2019) used the affinity diagram to categorise business models, and Kumar et al. (2006) used the nominal prioritisation technique to rank their projects. An affinity diagram and a nominal prioritisation method were used to identify and prioritise the BCC of the foodservice industry due to the nature of the data and the purpose of the study. The reliability of these methods has been confirmed in several studies (Dzwolak, 2019; Kumar et al., 2006; Holtzblatt and Beyer, 2017). The identified difficulties were grouped into broad themes using the affinity diagram, and then six participants were asked to rank the difficulty themes identified by the nominal prioritisation technique.

Content analysis, used in the study, is a systematic examination of a text and a research technique based on making repeatable and valid inferences. The reproducibility of a study is the ability to perform the same analysis at different times and conditions. Obtaining valid results means that another researcher obtains the same results under the same conditions. For the reliability of the results, the study must be reproducible, and for its validity, it must be obtained objectively. For this purpose, the content of the interview was given to four different researchers, and similar inferences were obtained from them (Gaur and Kumar, 2018).

4 Result and discussion

As a result of the analysis of the focus group interviews, the dimensions of perceived organisational business continuity of the foodservice managers were gathered under four main headings and 12 sub-titles (Figure 1). It has been revealed that many factors shape the framework of the perceived organisational business continuity of the managers, and it has been observed that there are formal, semantic, and technical dimensions. Some questions and general evaluations from the focus group interview are given in Table 2.

Figure 1 Dimensions of perceived organisational business continuity (see online version for colours)

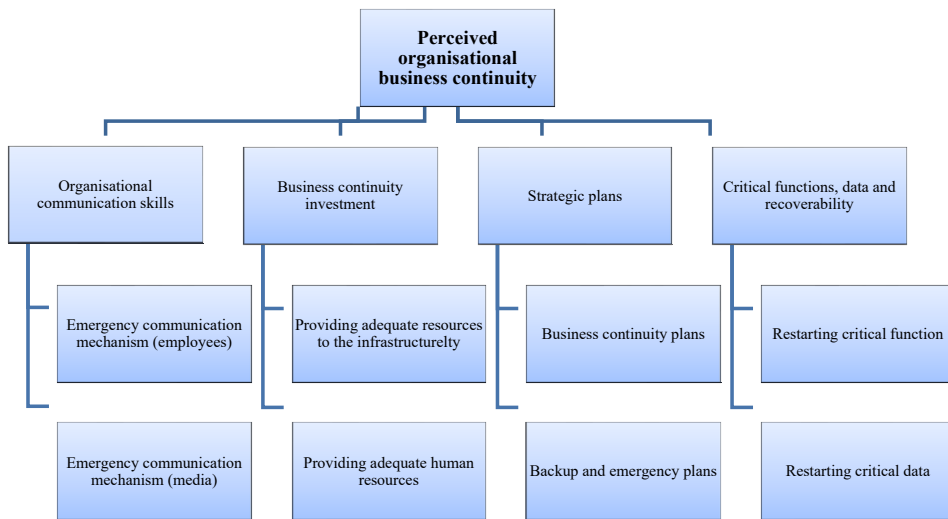


Table 2 Some questions and general evaluation results from the focus group interview

<i>Interview questions</i>		<i>General evaluation</i>
1	What types of disasters or severe outages have the potential to significantly impact your company or other foodservice companies?	Disaster or disruption affecting any industry has the potential to affect foodservice businesses as well. Natural disasters such as fire, flood, devastating earthquakes, physical/biological attacks, and cyber-attacks have the potential to adversely affect BC.
2	Has your company taken measures to minimise the effects of a potential disaster or serious disruption on your operations, employees, and assets? If so, what are they?	The foodservice businesses have taken various measures to minimise business interruptions. The duties, authorities, responsibilities, and powers of attorney of the employees were determined and planned in what the responsible person should do in case of a possible disaster. Implementation is carried out within the framework of disaster plans defined in management systems.

Table 2 Some questions and general evaluation results from the focus group interview (continued)

	<i>Interview questions</i>	<i>General evaluation</i>
3	Has your company developed a formal disaster recovery and/or business continuity plan? If not, do the policies and procedures of the food safety management system include elements of such plans?	The foodservice companies do not have a formal disaster recovery and/or business continuity plan. However, emergency action procedures and plans have been established and implemented against the foreseeable or expected disasters within the scope of management systems and FSMS.
4	To what extent is your company prepared to operate in the event of a disaster or severe outage?	Precautions against all disasters or interruptions that can be foreseen in emergency procedures have been determined, and actions to be taken in case of their occurrence have been planned. Therefore, the working situation affects whether the disaster is expected or not and its size.

4.1 Dimensions of perceived organisational business continuity

The content analysis of the themes obtained by the focus group interviews was detailed and evaluated under the following four headings:

4.1.1 Organisational communication skills

Organisational communication ensures that organisational behaviour is consistent. Open and effective communication channels in foodservice foster strong communication between employees and their managers, as well as other employees, and can thus be one of the most important factors ensuring BC. Strong organisational communication creates a synergetic effect and can find solutions to BC challenges in a shorter time with fewer employees. In particular, foodservice requires more effective use of internal communication due to the complexity of business processes (Daniela, 2013).

All participants mentioned that they think organisational communication skills are very important in ensuring the BC of foodservice. In this sense, various in-house software, such as e-mail, mass messaging, and the intranet, can help with internal communication and ensure BC. When a new decision is made, an instruction is revised, a change is made in the workflow, an emergency occurs, etc. It is important to make announcements to employees with effective communication on issues, to manage time well, and to ensure the participation of employees in the BC organisation. Adkins et al. (2009) conducted a study to determine the relationship between BC and communication, and, supporting our study, they found that businesses cannot be prepared for future disasters when they do not know how to conduct BC and lack effective and strategic communication.

From the focus group interview, it was also revealed that organisational communication skills may vary depending on their resources due to the structural problems of the foodservice. For this reason, unwritten and unrecorded communication models may be insufficient to ensure BC. If there is no written procedure or similar recorded documents during the change of executive chefs or managers, BC can often be damaged. This situation supports the idea that verbal organisational communication is not sufficient to ensure BC.

4.1.2 Business continuity investment

For a business to recover quickly and effectively in the event of a disaster or serious problem, it must allocate sufficient financial and human resources to BC. Calculating the true total cost of a business interruption is not an easy task, but determining the investment needed to prevent or recover from a disaster is much easier. It is therefore critical to identify appropriate investments to avoid or minimise business disruptions (Sahebjamnia et al., 2015).

Participants mentioned their needs by emphasising management systems in general, and they emphasised that this necessitates investments in infrastructure and human resources. From the focus group interview, the following information was briefly determined about the investment in BC. The foodservice is working closely with its management systems. The priority of management systems is to ensure BC with proactive and preventive activities. Financial and human resources are required for the implementation of these systems, and therefore, foodservice is aware of this responsibility and should allocate sufficient financial and human resources. However, some foodservice establishments do not want to allocate financial and human resources because they do not have sufficient awareness.

One of the participants representing the industry (kitchen manager) stated that they have created and implemented similar plans for BC and also stated that he has been tasked with this issue. She first received the relevant training and then planned in detail all the actions to be taken in case of business interruptions that may occur as a result of extraordinary events. According to the plan, it has been determined how many days of food can be produced with the raw materials that should be in the warehouses in cases where the suppliers cannot bring raw materials due to a disruption. This plan includes activities related to what can be done in the face of many similar business interruptions. In addition, if foodservice is implementing FSMS, they already must prepare both a disaster emergency action plan and a food safety emergency action plan.

4.1.3 Strategic plans

According to Phillips and Landahl (2021), successful businesses are organisations that envision and develop adaptive mechanisms to deal with business disruptions. The focus group interview data were examined, and these businesses are organisations that identify the risks in their environment and modify their strategic plans accordingly to improve their ability to cope with unexpected disasters and crises. Today, as the business environment becomes more complex and riskier, businesses need to develop a corporate strategic flexibility capability and reflect this in their strategic plans to counter the effects of disasters and crises.

In the foodservice industry, emergency procedures are implemented, including plans outlining how to communicate with employees in the event of a disaster. These procedures include training and raising awareness among employees; forms of communication, primarily informing department heads and their employees; etc. BC's strategic plans include succession plans for key positions, and a focus group interview analysis showed that foodservice has identified proxy positions for key positions. It was investigated why the backup plans were made even though there was no legal regulation, and it was concluded that the management system applications, especially the FSMS, contributed. In support of this, one of the participants (academics) said, "A company that

implements FSMS already has a proxy list. Key personnel and proxy personnel information must be written down in this list”.

4.1.4 Critical functions, data, and recoverability

Identifying and knowing critical functions and data to ensure BC in foodservice is an important source of information for preventing or minimising business interruptions. For this reason, strategic plans must include critical functions and data to return to normal operations as soon as possible after the interruptions (Fani and Subriadi, 2019).

When the production and service processes of the industry are examined, it can be seen that there are too many critical functions. If the purchasing department cannot supply the raw materials required for production on time, the desired quality of production and service cannot be provided. Even if the purchased product is very safe, it may not be possible to use it in production if it is not stored correctly. If the production and service personnel were too few, not even the products could be produced. If the hygiene and quality department does not have an employee to supervise and approve that the food produced is suitable for food safety and sensory evaluation, it cannot be put into service. Even if there is a disconnection with the customer in the customer service department, BC cannot be ensured (Torabi et al., 2014).

Participants in the focus group interview emphasised that the skilled personnel function is the most important critical function. The main reason why one of the most critical functions in foodservice is the personnel function suggests that this sector includes labour-intensive and special processes. First of all, the executive chef, assistant cooks, kitchen team, waiters, and logistics team are critical to the uninterrupted execution of the business. In addition, production and service activities related to food safety are also considered critical functions.

Financial data is among the most critical data of the food service industry, and data such as suppliers, customers, and personnel, which may affect production, are also critical data for BC. The protection of this critical data ensures the continuation of financial assets, the correct response to customer requests as soon as possible, and the fulfilment of legal requirements (Phillips and Landahl, 2021).

Critical data is present at all stages of the workflow, and therefore, all stages from the acceptance of goods to the service of the final product are very important for BC. Although they seem to be the most effective cooks in terms of the end product, processes such as sales and marketing, public relations, transportation, and service also play an active role in ensuring the BC. Recipes for cooks, raw material acceptance specifications for the purchasing department, storage instructions for the warehouse department, etc. form the critical data of the foodservice industry. Even if little information is missing, the workflow cannot be completed, so business interruption occurs and BC is adversely affected (Bajgoric, 2014).

In foodservice, in addition to identifying critical functions and data, recoverability, which means minimising damage and resuming operations, is also of great importance. By making risk assessments, business interruptions and their results are determined, and thus recovery plans are prepared. As a result, if the magnitude of the disaster is at the predicted level, the business interruption will be negligible as the measures have been taken earlier. The recovery period for critical functions may vary depending on the type of disaster, the measures to be taken, and the financial structure of the enterprise. However, it may not be possible to give an exact time (such as an RTO, or recovery time

objective) for this situation (Sahebjamnia et al., 2015). A participant (sector manager) expressed this situation for his company as follows: “But if such an event (earthquake, etc.) occurs in the company where I have experience, it will take a long time to start a business from scratch. And if we consider that all legal procedures have been completed without any problems, it will take months.” Another participant (a sector manager) said, “With quick organization planning, it can be fulfilled in at least one week.” Participants predicted a wide range of duration of recoverability of functions, from at least one week to several months. This finding suggested that the variability of the internal dynamics of the enterprises had an effect.

In the focus group interview, the participants evaluated the duration of time to recover critical data when foodservice becomes inoperable in a disaster. It turned out that critical data was backed up as required by management systems, responsible personnel and methods were identified, and therefore, data could be recovered as soon as the disaster (emergency) was over. Recovery of written data may not be complete as it requires a more demanding process, but it can be recovered in a day or even less when data is backed up digitally. But this is also about the scale of the disaster, and digital data requires the internet. Digital data can be accessed as soon as internet access is available. This can happen in an hour, or it can happen in a week. For this reason, even if critical data is stored on digital media, it must be transferred as a hard copy and backed up. Small-scale businesses are often not very successful with IT, so if they lose their data in the event of a disaster, it will be very difficult to recover it. Our study also revealed similar results regarding the necessity of combining the business continuity approach with the recovery function of the new business models proposed by Niemimaa et al. (2019).

4.2 Challenge items and themes

Eight main challenge themes and 33 items were determined by using the affinity diagram for the challenge items obtained from the interviews, as shown in Figure 2.

4.2.1 Prioritising challenge themes

One of the expected outcomes of this research was to determine the BC challenge themes and the importance of the challenge themes among each other. Focus group interview participants were asked to compare the challenge levels of the eight challenge themes and to give a specific score (lowest 1 to highest 5). They were evaluated using the weighted nominal prioritisation technique. The most challenging items were asked to be awarded more points than the less challenging ones. However, participants were given the flexibility to assign equal points to some of the challenges if they wanted to (Figure 3).

4.2.2 Structural problems in the foodservice

When the identified challenge themes were evaluated according to their priorities, it was observed that the structural problems in the foodservice industry were the most important BC challenges. Structural problems in the foodservice industry are generally unsuitable with production and logistics infrastructure, low profitability, fluctuations in raw material prices and unpredictable increases, insufficient production capacity, high employee turnover, wrong supplier selection, and inadequacies in information technologies.

Figure 2 Eight challenge themes identified for BC with an affinity diagram

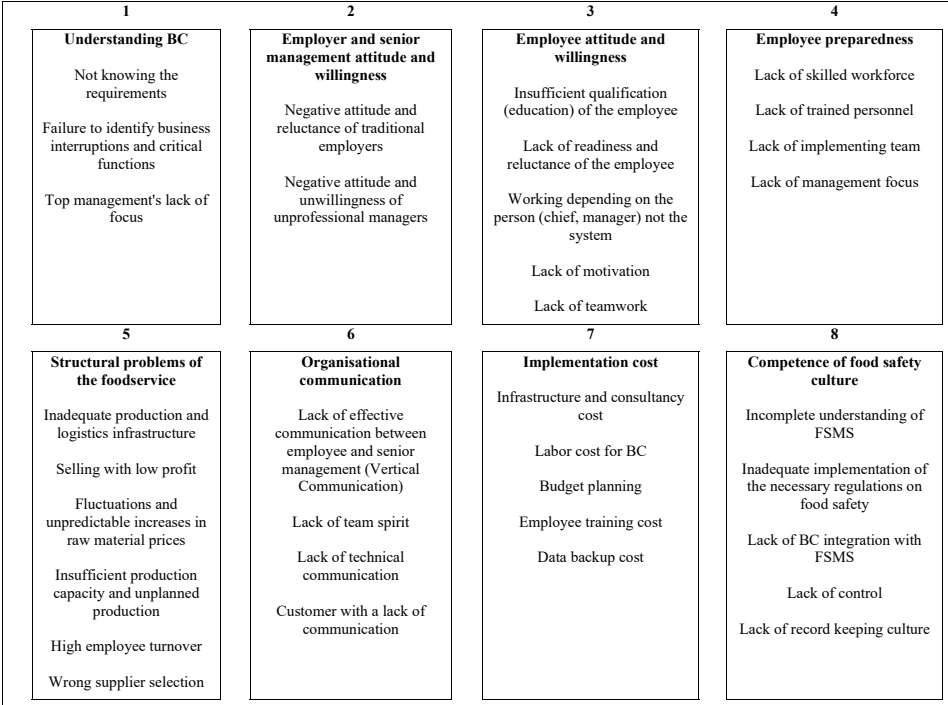
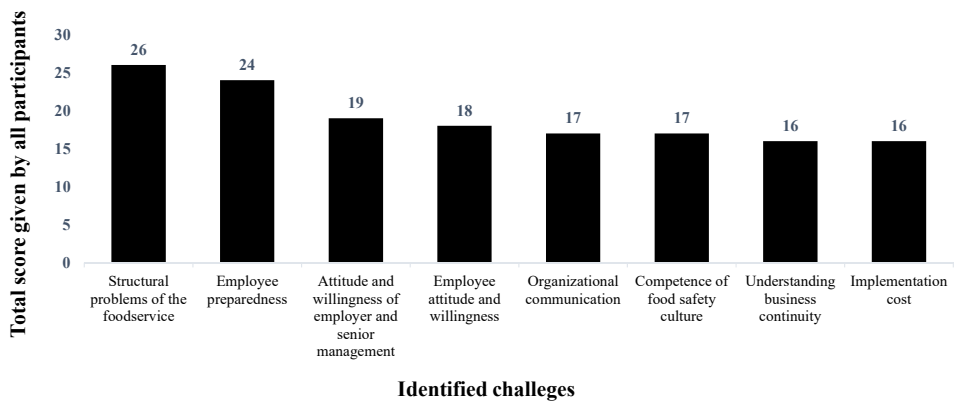


Figure 3 Results of weighted nominal prioritisation



Note: The numbers above each bar represent the sum of the scores all participants gave to this challenge.

Due to the complexity of the processes involved in the foodservice industry, BC vulnerabilities inevitably occur in kitchens that have inappropriate infrastructure. The use of the appropriate methods, equipment, and standards in all processes is important in eliminating business interruption problems (Knežević and Mitrović, 2017).

In recent years, fluctuations in food prices and unpredictable increases have caused many problems. The main reasons for the fluctuations in prices are climate change and

drought, wars between major food producers, and economic fluctuations in the markets of developing countries that are also food producers (Bradbear and Friel, 2013).

One of the structural problems of the foodservice industry is the high turnover of employees. The reason for this is that the sector's personnel work under an intense and tiring schedule. High employee turnover causes the inadequacy of trained employees, and this problem creates a disadvantage in terms of BC (Joung et al., 2018).

The ability of the sector to perform production and service in the best way without business interruption is possible by determining the right time to supply food raw materials. In addition to the procurement's determination of the supply, it is very important for the suppliers to regularly comply with these periods. If suppliers do not comply with deadlines, potential business interruption hazards are inevitable (Doğan, 2018).

4.2.3 Employee preparedness

Responses from both industry representatives and academics showed that employee preparedness is the second-priority challenge for the foodservice industry. Employee preparedness means that employees are ready to adapt to new requirements in terms of knowledge and hands-on experience. From the focus group interview, it was concluded that the factors most affecting the preparedness of employees, which is among the BC challenges of the enterprises, are the qualified and trained workforce, the implementing team, and the management focus. Strengthening the will of the implementing team to work is possible by supporting the BC activities of the senior management. The quality of the team that is formed is also very important in achieving success in minimising business interruptions and returning to normal activities as soon as possible. The quality of the team is determined by the talents, knowledge, skills, experience, educational attainment, and training status of the employees. However, from an organisational point of view, employee preparedness is not complete unless teams with highly qualified employees are well-managed. Kato and Charoenrat (2018) conducted a similar study targeting 136 SMEs in Thailand and found low levels of employee-sourced preparedness in BC, including the lack of development of a written business continuity plan.

4.2.4 Employer and senior management attitudes and willingness

According to the focus group interview, one of the priority BC challenges is the attitude and willingness of the employer and senior management. Supporting and maintaining the BC activities of the enterprises by the top management is one of the critical success factors. Meeting the BC requirements is the responsibility of the top management, and it also appoints the employees who will take part in the execution of the activities. They assist in the formulation of BC strategies, policies, objectives, and plans. For this reason, the positive attitude and willingness of the employer and senior management will provide a great advantage in BC. Young and Jordan (2008) provided evidence that top management support was the most important critical success factor for project success.

4.2.5 Employee attitude and willingness

Employee willingness is defined as the resistance of employees to changing conditions (Borstorff et al., 1997; Driskell et al., 2018). The focus group interview showed that the

factors most affecting employee attitude and willingness, which is one of the BC challenges for enterprises, are employee quality (training), teamwork, and motivation.

4.2.6 Organisational communication

In the focus group interview, both industry representatives and academics revealed that they do not consider organisational communication among the primary challenges in BC. This finding made us think that foodservice companies generally focus their activities on FSMS because of the regulations, and this is the result of the system giving priority to organisational communication. Yiannas (2008) suggested that practices in FMSM should establish a behaviour-based food safety culture. Thus, it states that this system will prioritise corporate communication and capabilities, and the results of our study support the conclusion that food service is sufficient in terms of organisational capabilities.

4.2.7 Competence in food safety culture

Culture is the way we do things, and food safety culture is how the business does its food safety activities (da Cunha, 2021). The interview showed that the identified challenge themes were evaluated according to their priorities and that the specified challenge theme was not among the priority challenges for BC. There are two reasons why the challenge priority may be lower. The first could be that foodservice implements the FSMS and thus the business' food safety culture is adequate. The second reason is that there is no positive relationship between food safety culture and BC. But the second reason has a low probability because the FSMS approach, which contributes to the formation of a food safety culture, includes proactive activities such as good production practices, prerequisite programs, and food defense plans that also support BC.

4.2.8 Understanding business continuity

According to the responses from the focus group interview and the prioritisation, understanding BC was determined to be a low challenge. This result showed that food service managers were familiar with the BC concept as they adopted the FSMS approach, and Peck's (2006) study supports this.

4.2.9 Implementation cost

The focus group interview concluded that the implementation cost was not a primary challenge for BC. The reason for this result may be that although BC activities are not included in the budgets of the foodservice, they have emergency activities, food defense, good production practices, and prerequisite programs. Considering this situation, it can be concluded that the participants did not give priority to the cost of implementation as the degree of challenge.

Table 3 Matrix showing the relationship between perceived organisational business continuity and business continuity challenges* (see online version for colours)

	Business continuity challenges							
	1	2	3	4	5	6	7	8
Perceived organisational business continuity	Structural problems in the foodservice	Employee preparedness	Employer and senior management attitudes and willingness	Employee attitude and willingness	Organisational communication	Competence in food safety culture	Understanding business continuity	Implementation cost
1	Organisational communication skills							
2	Business continuity investment							
3	Strategic plans							
4	Critical functions, data, and recoverability							

Note: *The blue color shows the relationship between perception and challenges.

The study revealed the main themes of food service managers' perceived organisational business continuity:

- 1 organisational communication skills
- 2 business continuity investment
- 3 strategic plans
- 4 critical functions, data, and recoverability.

In addition, the most important business continuity challenges were identified as:

- 1 structural problems in the foodservice industry
- 2 employee preparedness
- 3 employer and senior management attitudes and willingness, respectively.

Evaluating the identified challenge themes according to their priorities, it was seen that the structural problems in the foodservice industry were the most important challenges among the business continuity challenges. The relationship between the perceived organisational business continuity of food service managers and perceived business continuity challenges is given in detail in Table 3.

When the perception dimensions and the challenge themes are compared, it is seen that there is an overlap between the *organisational communication skills* dimension of the perception and the challenge themes of *employee preparedness* and *employer and senior management attitudes and willingness*. As Rapaport and Kirschenbaum (2008) emphasise, we claim that BC is a social process. Because the dimensions of perception and the challenge themes that we uncovered in our study reveal that BC is a social process rather than a financial one, our findings show that the best way to manage BC activities and social business processes is with a human-oriented approach, which allows the foodservice industry to be successful in BC. For this reason, businesses need a strategic human-oriented approach to provide all employees with the ability to adapt to all emergencies that may cause business interruptions. In addition, it is seen that the *business continuity investment* dimension of the perception overlaps with the *structural problems in the foodservice industry* challenge.

5 Conclusions

In this study, we aimed to determine the perceived organisational business continuity of foodservice managers, the effect of the food safety management system on this perception, and their perception of a business continuity challenge. In conclusion, the research showed that the perceived organisational business continuity of the foodservice managers can be grouped into four dimensions, organisational communication skills of the enterprises, providing financial and human resources for business continuity, strategic plans, critical functions, data, and recoverability. The structural problems in the foodservice industry, employee preparedness, attitude, and the willingness of employers and senior management were found to be the business continuity challenges of foodservice, respectively. We think that all dimensions perceived by foodservice managers will make significant contributions to the field literature and the industry. One

of the four dimensions of perception is organisational communication skills, and it is a fact that food service businesses with advanced skills will contribute to business continuity by managing all business processes, especially critical business processes, in the best way. The second dimension of perception is providing financial and human resources for business continuity, and one of the most critical resources for foodservice businesses is employees. Critical processes can be managed in the best way by directing and managing the employee correctly. For business continuity, the importance of adequate separation of financial and human resources is also very important. The third dimension of perception is strategic planning, which contributes to ensuring business continuity. These plans can have important consequences for the performance and future of the actions that businesses will take in the face of events that may cause business interruptions. One of the main goals for these businesses is to develop plans with a strategic and proactive management approach, as well as to be prepared for any event. The fourth dimension of perception, critical functions, data, and recoverability, depends on the existence of alternative facilities and systems for the enterprises, as well as the existence of solution partners who can undertake critical functions when the place and time come. According to foodservice managers, the structural problems of businesses, the preparedness and attitude of employees, and the willingness of employers and senior management are the most important business continuity challenges. The structural problems of foodservice businesses are generally inadequate and inappropriate infrastructure, low profitability, uncertainties in raw material prices, high employee turnover, mistakes in supplier selection, and inadequacies in information technologies. Employee preparedness is another important business continuity challenge, and the most important factors affecting this are the lack of trained employees and an expert practitioner team. Another important challenge is the attitude and willingness of the employer and senior management toward business continuity and the lack of regulations to carry out business continuity studies according to the legislation suggests that it is the biggest obstacle to the willingness of the employer and senior management. As we move into the 21st century, the extent and type of business interruptions in foodservice businesses are likely to increase and change as technology advances and spreads. The dimensions of perceived organisational business continuity that we uncovered with our study point to a human-oriented solution such as organisational communication skills, human resources, and strategic plans. For this reason, the findings of our study showed that instead of applications focusing on technology alone, as in the past and today, a new strategic approach that will centre on the employee and all stakeholders is required. The FSMS, coordinated by foodservice managers, as well as the business continuity methodological approach that emerges from the study are thought to contribute to the understanding, creation, and maintenance of business continuity in foodservice. Thus, strategic plans, exercises, and training developed with proactive business process management enable the definition of critical processes that may cause business interruptions and the implementation of strategic decisions. This distinction is crucial, as it is not possible to secure all business processes to the same extent. We hope that the results of the study will contribute to the allocation of the scarce resources of the foodservice industry to permanent solutions rather than temporary ones, and thus provide the answers to preventing business interruptions.

6 Future research

We consider this study to be an important first step in the study and application of BC in foodservice, and we hope that it will serve as a good steppingstone for further advanced research in the future. In addition, one of the most important study items in gastronomy is human perceptions and attitudes, and therefore, further research needs to be increased by including all the stakeholders in this field.

References

- Adkins, G.L., Thornton, T.J. and Blake, K. (2009) 'A content analysis investigating relationships between communication and business continuity planning', *The Journal of Business Communication*, Vol. 46, No. 3, pp.362–403.
- Ashe, L.M. and Sonnino, R. (2013) 'At the crossroads: new paradigms of food security, public health nutrition and school food', *Public Health Nutrition*, Vol. 16, No. 6, pp.1020–1027.
- Aven, T. and Zio, E. (2021) 'Globalization and global risk: How risk analysis needs to be enhanced to be effective in confronting current threats', *Reliability Engineering & System Safety*, Vol. 205, No. 1, p.107270.
- Bajgoric, N. (2014) 'Business continuity management: a systemic framework for implementation', *Kybernetes*, Vol. 43, No. 2, pp.156–177.
- Bicheno, J. and Catherwood, P. (2005) *Six Sigma and the Quality Toolbox*, revised ed., Picsie Books, Buckinghamshire, UK.
- Borstorff, P.C., Harris, S.G., Feild, H.S. and Giles, W.F. (1997) 'Who'll go? A review of factors associated with employee willingness to work overseas', *People and Strategy*, Vol. 20, No. 3, p.29.
- Bradbear, C. and Friel, S. (2013) 'Integrating climate change, food prices and population health', *Food Policy*, Vol. 43, No. 12, pp.56–66.
- Carino, S., Collins, J., Malekpour, S. and Porter, J. (2021) 'Environmentally sustainable hospital foodservices: drawing on staff perspectives to guide change', *Sustainable Production and Consumption*, Vol. 25, No. 1, pp.152–161.
- Chow, L.S. (2020) 'Foodservice waging war against COVID-19 crisis and the opportunity', *Journal of Tourism, Hospitality and Environment Management (JTHEM)*, Vol. 5, No. 19, pp.41–49.
- da Cunha, D.T. (2021) 'Improving food safety practices in the foodservice industry', *Current Opinion in Food Science*, Vol. 42, No. 12, pp.127–133.
- Daniela, P. (2013) 'The interdependence between management, communication, organizational behavior and performance', *Annals of the University of Oradea, Economic Science Series*, Vol. 22, No. 1, pp.1554–1562.
- Doğan, M. (2018) 'Catering services management. Toplu beslenme sistemleri ve catering hizmetleri yönetimi', *Nobel Akademik Yayınları*, pp.20–32, Istanbul Turkey.
- Driskell, J.E., Salas, E. and Driskell, T. (2018) 'Foundations of teamwork and collaboration', *American Psychologist*, Vol. 73, No. 4, p.334.
- Dzwolok, W. (2019) 'Assessment of HACCP plans in standardized food safety management systems – the case of small-sized Polish food businesses', *Food Control*, Vol. 106, p.106716.
- Fani, S.V. and Subriadi, A. P. (2019) 'Business continuity plan: examining of multi-usable framework', *Procedia Computer Science*, Vol. 161, No. 12, pp.275–282.
- Gaur, A. and Kumar, M. (2018) 'A systematic approach to conducting review studies: An assessment of content analysis in 25 years of IB research', *Journal of World Business*, Vol. 53, No. 2, pp.280–289.

- Girardon, P., Gabard, F. and Peyer, H. (2019) 'Food safety management system – HACCP – risk assessment', in *Gases in Agro-Food Processes*, pp.105–107, Academic Press, London, UK.
- Gupta, V.K. (2012) 'Flexible strategic framework for managing forces of continuity and change in supply chain management of fast food (quick service restaurant) industry', *International Journal of Business Continuity and Risk Management*, Vol. 3, No. 2, pp.148–166.
- Holtzblatt, K. and Beyer, H. (2017) 'The affinity diagram', *Contextual Design*, DOI: <https://doi.org/10.1016/b978-0-12-800894-2.00006-5>.
- Joung, H.W., Choi, E.K.C. and Taylor, J.J. (2018) 'Investigating differences in job-related attitudes between full-time and part-time employees in the foodservice industry', *International Journal of Contemporary Hospitality Management*, Vol. 30, No. 2, pp.817–835.
- Kato, M. and Charoenrat, T. (2018) 'Business continuity management of small and medium sized enterprises: evidence from Thailand', *International Journal of Disaster Risk Reduction*, Vol. 27, No. 3, pp.577–587.
- Kirchner, T.A., Mottner, S. and Ford, J.B. (2013) 'Business continuity/disaster recovery readiness of nonprofit arts organizations?', *12th AIMAC International Conference*, Bogota, pp.394–403.
- Knežević, S. and Mitrović, A. (2017) 'Analysis of the opinions in the audit reports of companies in the hospitality sector: accommodation and catering service', *Tourism International Scientific Conference Vrnjačka Banja-TISC*, Vol. 2, No. 2, pp.324–340.
- Kumar, M., Antony, J., Singh, R.K., Tiwari, M.K. and Perry, D. (2006) 'Implementing the Lean Sigma framework in an Indian SME: a case study', *Production Planning and Control*, Vol. 17, No. 4, pp.407–423.
- Miller, H.E. (2011) 'Integrating sustainability into business continuity planning', *International Journal of Business Continuity and Risk Management*, Vol. 2, No. 3, pp.219–232.
- Motarjemi, Y. and Mortimore, S. (2014) 'Assessment of food safety management systems', in *Food Safety Management*, pp.987–1004, Academic Press, London, UK.
- Niemimaa, M., Järveläinen, J., Heikkilä, M. and Heikkilä, J. (2019) 'Business continuity of business models: Evaluating the resilience of business models for contingencies', *International Journal of Information Management*, Vol. 49, No. 12, pp.208–216.
- Patton, M.Q. (2014) *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*, Sage Publications, London, UK.
- Payne-Palacio, J. (2016) *Foodservice Management: Principles and Practices*, Vol. 75, Pearson Education, Harlow, UK.
- Peck, H. (2006) *Resilience in the Food Chain: A Study of Business Continuity Management in the Food and Drink Industry*, Final Report to the Dep. for Environment, Food and Rural Affairs, Dep. of Defence Management & Security Analysis, Cranfield University, Shrivenham, pp.1–193.
- Phillips, B.D. and Landahl, M. (2020) *Business Continuity Planning: Increasing Workplace Resilience to Disasters*, Butterworth-Heinemann, Oxford, UK.
- Phillips, B.D., Landahl M. (2021) 'Chapter 4 – parts of a business continuity plan', in Phillips, B.D. and Landahl, M. (Eds.): *Business Continuity Planning*, pp.65–84, Butterworth-Heinemann, Oxford, UK.
- Rapaport, C. and Kirschenbaum, A. (2008) 'Business continuity as an adaptive social process', *International Journal of Emergency Management*, Vol. 5, Nos. 3–4, pp.338–347.
- Sahebjamnia, N., Torabi, S.A. and Mansouri, S.A. (2015) 'Integrated business continuity and disaster recovery planning: towards organizational resilience', *European Journal of Operational Research*, Vol. 242, No. 1, pp.261–273.
- Schätter, F., Hansen, O., Hermannsdörfer, M., Wiens, M. and Schultmann, F. (2015) 'Conception of a simulation model for business continuity management against food supply chain disruptions', *Procedia Engineering*, Vol. 107, No. 9, pp.146–153.

- Stanciu, S., Stanciuc, N., Dumitrascu, L., Nistor, C. and Sirbu, R. (2012) 'Modern approach to business continuity management in food', *Risk in Contemporary Economy*, pp.71–74, Dunarea de Jos University of Galati, Galati, Romania.
- Swainson, M. (2018) *Swainson's Handbook of Technical and Quality Management for the Food Manufacturing Sector*, Woodhead Publishing, Duxford, UK.
- Torabi, S.A., Soufi, H.R. and Sahebjamnia, N. (2014) 'A new framework for business impact analysis in business continuity management (with a case study)', *Safety Science*, Vol. 68, No. 10, pp.309–323.
- Trivedi, S., Negi, S. and Anand, N. (2020) 'Impact of COVID-19 on agriculture supply chain in India and the proposed solutions', *International Journal of Sustainable Agricultural Management and Informatics*, Vol. 6, No. 4, pp.359–380.
- Tucker, E. (2015a) 'Chapter 1 – business continuity – a definition and a brief history', Tucker, G. (Ed.): *Business Continuity from Preparedness To Recovery: A Standards-Based Approach*, pp.1–17, Butterworth-Heinemann., Oxford, UK.
- Tucker, G. (2015b) *Business Continuity from Preparedness To Recovery: A Standards-Based Approach*, Butterworth-Heinemann, Oxford, UK.
- Velasco-Vizcaino, F., Pohlmann, A. and Cepeda, M. (2020) "'We have our style!' Optimizing food experiences in personalized catering boutique concepts', *Case Studies on Food Experiences in Marketing, Retail, and Events*, pp.147–159, Woodhead Publishing, Duxford, UK.
- Williamson, K. and Johanson, G. (Eds.) (2017) *Research Methods: Information, Systems, and Contexts*, Chandos Publishing, Cambridge, MA, US.
- Yiannas, F. (2008) *Food Safety Culture: Creating A Behavior-Based Food Safety Management System*, Springer Science & Business Media, Bentonville, AR, USA.
- Young, R. and Jordan, E. (2008) 'Top management support: mantra or necessity?', *International Journal of Project Management*, Vol. 26, No. 7, pp.713–725.

Abbreviations

BC	Business continuity
BCC	Business continuity challenges
BSE	Bovine spongiform encephalopathy
DR	Disaster recovery
FMD	Foot-and-mouth disease
FSMS	Food safety management system