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**THE ROLE OF DYNAMIC CAPABILITIES IN BUILDING RESILIENT SMALL
AND MEDIUM ENTERPRISES (SMEs).**

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DECLARATION

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Whilst registered as a candidate for the above degree, I have not been registered for any other research award. The results and conclusions embodied in this thesis are the work of the named candidate and have not been submitted for any other academic award.

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I dedicate this thesis to the honour of God, my Provider and Strength giver.

ABSTRACT

There are a growing number of disruptions faced by small and medium enterprises (SMEs). These disruptions originate from within the firms and from their surroundings on a day-to-day or intermittent basis.

Previous studies have explored the concept of resilience to overcome these disruptions, either on an individual or organisational level. However, such studies have resulted in different definitions for the phenomenon, especially at the organisational level. Although organisational resilience has been defined differently in previous studies, earlier studies have overlooked the perception of organisational resilience from the standpoint of the owner-managers of small and medium enterprises operating in the food and drink industry. In addition, studies explicitly exploring the relationship between organisational resilience and dynamic capabilities (sensing, seizing and reconfiguration) are relatively scarce.

Therefore, this study focused on exploring the perceptions of organisational resilience from the standpoint of the owner-managers of small and medium enterprises (SMEs) operating in the food and drink industry. Also, dynamic capabilities play a role during the resilience process. This study adopted an interpretative phenomenological analysis approach, aimed at highlighting convergence and divergence in the owner-managers' narratives obtained from semi-structured interviews and further identify patterns. This qualitative study demonstrates the presence of three perceptions of organisational resilience, (i.e. the process-based, endurance-based or resource-based perceptions) and provides evidence that highlights the role of dynamic capabilities during the resilience process (which is enacted by the owner-managers by responding through two distinct response patterns consistent with their cognitive abilities) to achieve a survival, stable or growth resilience outcome.

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ABBREVIATIONS

1. BREXIT – Britain Exiting the European Union
2. COVID-19 – Coronavirus Diseases of 2019
3. EU – European Union
4. FDF – Food and Drink Federation
5. FSB - Federation of Small Businesses
6. IPA – Interpretative Phenomenological Analysis
7. O-M – Owner-Manager
8. O-Ms – Owner-Managers
9. SMEs – Small and Medium Enterprises
10. UK – United Kingdom

DISSEMINATION

1. I presented the findings of this study at a conference organised by the European Institute for Advanced Studies in Management themed Research in Entrepreneurship and Small Business on the 19th of November 2020.

CHAPTER ONE

INTRODUCTION

1.1 Background of and Rationale for this Study

In recent times, unexpected disruptions have increased significantly in terms of frequency and extent (Linnenluecke et al. 2019), such as the most recent Covid-19 pandemic and BREXIT. Disruptions like the Covid-19 pandemic and BREXIT have disrupted the day-to-day processes of firms in the United Kingdom (UK) and worldwide, leaving some firms able to cope better with these events and other disruptive events than others (Battisti et al., 2019). This implies that organisations, especially Small and Medium Enterprises (hereafter, SMEs), operate in increasingly challenging environments having to deal with challenges such as natural disasters (Battisti & Deakins, 2017), weather or climate-related events (Korber & McNaughton, 2017) and disasters that are human-made (Williams et al., 2017) such as economic recessions (Bullough & Renko, 2013). In addition, there are some other challenges experienced in firms, which are organisation-specific such as staff absenteeism, mistakes, and infrastructural loss to fire (Sterling, 2011).

More often than not, organisations are surprised by these disruptions, as they usually occur unexpectedly (Linnenluecke, 2017). Nevertheless, some organisations are more capable of responding effectively to these disruptions and are more suited to survive extreme, unforeseen, and abrupt events than other organisations in a similar condition (Ali & Gurd, 2017). For organisations to survive, stabilise and possibly thrive, resilience, a potential framework, is needed to rise above these disruptions (Bhamra & Burnard, 2011). Thus, resilience is crucial. Resilience is popularly termed as a 'bounce back' to normalcy following a disruption (Williams et al., 2017). However, there are several definitions for the term in extant literature. As a concept, exploring resilience is significant because without an in-depth understanding of the phenomenon and its practicability, firms, especially SMEs, which are known to struggle with limited resources, may have lower chances of survival. If they survive at all, then they may likely struggle. Therefore, understanding the resilience of organisations (or organisational resilience) is key to ensuring SMEs remain viable in the society.

There are several definitions for resilience in extant literature (Fisher, 2019). However, the available definitions of organisational resilience have originated from studies mostly conducted in large organisations (Sullivan-Taylor & Branicki, 2011; Linnenluecke, 2017) with earlier studies overlooking the perception of resilience at the organisational level from the standpoint of the owner-manager. In the SME literature, organisational resilience is still an emergent topic, and consequently, understanding what the construct means to owner-managers is relatively unknown in the literature. Therefore, this implies that the definition of organisational resilience needs to be explored holistically to achieve an in-depth understanding of the phenomenon. More importantly, a comprehensive study of organisational resilience is necessary specifically in SMEs (Linnenluecke, 2017). SMEs are heterogeneous small businesses that are likely to experience disruptions differently, and thus their owner-managers may have distinctively different understandings of the phenomenon. Therefore, studying the organisational resilience of SMEs and exploring how owner-managers perceive the construct helps bridge the gap in this under-researched area.

In addition to understanding SMEs' resilience, it is crucial to comprehend the role owner-managers play towards promoting the resilience of their firms. Scholars should not underestimate the role of owner-managers within SMEs because the very heartbeat of an SME is controlled and regulated by the owner-manager, who largely ensures the firm's survival or growth (Cartan-Quinn & Carson, 2003; Piperopoulos, 2010). Additionally, for the promotion of resilience in organisations, especially SMEs, several factors need to be satisfied by the owner-manager. Factors such as access to finance (Institute for family business, 2018), external support, adequate planning (Galler, 1997), and dynamic capabilities (Zehir & Narcikara, 2016). While factors such as access to finance, the presence of external, adequate planning and the acumen of the owner-manager have individual relevance to the advancement of organisational resilience, nonetheless, in the context of this study, the specific factor that aligns to the framework of this research is the aspect of dynamic capabilities. Emphasised by Battisti and Deakins (2017) dynamic capabilities are relevant during resilient responses by SMEs.

According to Teece, Winter, Helfat, and Peteraf (2009), dynamic capabilities are processes that utilise, change and build the firm's resource base in response to changes in the firm's internal and external environment. These changes include disruptions occurring within the firm or in its

environment. Therefore, dynamic capabilities are crucial for SMEs' resilience and their rebound in environments characterised by unexpected events because dynamic capabilities coupled with the flexibility of SMEs enables the firm to overcome resource limitations (Battisti & Deakins, 2017). Also, dynamic capabilities are profoundly known to have a relationship with several firm outcomes such as the performance of a firm (Teece et al., 1997; Eisenhardt & Martin, 2000), competitive advantage (Teece, 2007; Sirmon et al. 2010), market share, value creation and value sustenance (Vijaya, Ganesh, & Rahul, 2019).

However, earlier studies in the SME context have not explicitly investigated the role of sensing, seizing, and reconfiguration, which are dimensions of dynamic capabilities (Teece, 2007; Teece 2012; Teece 2014a) in building the resilience of SMEs. Rather, available published studies exploring the relationship between organisational resilience and dynamic capabilities in SMEs has focused on the relationship between authentic leadership and resilience (Zehir & Nacikara, 2016), the relationship between proactive posture, resource integration and resilience (Battisti & Deakins, 2017), and the relationship between learning and resilient outcomes – survival, stability and growth (Battisti, Beynon, Pickernell & Deakins, 2019). Understanding how resilience works in SMEs is still vague (Linnenluecke et al., 2019), especially regarding how dynamic capabilities (sensing, seizing and reconfiguration) play a role in achieving organisational resilience outcomes such as survival, stability, and growth.

Furthermore, the role owner-managers play in enacting sensing, seizing, and reconfiguration towards achieving survival, stability and growth resilience outcomes is understudied. Therefore, this study seeks to address the issue of the limited empirical research investigating the relationship between organisational resilience and dynamic capabilities (sensing, seizing and reconfiguration). As SMEs are significant to the national and global economy, their resilience should be explored in-depth. In the context of this study, the focus is on the resilience of the SMEs operating in the food and drink industry. In this study, it is worth noting that, as the owner-manager is the heartbeat of an SME (Cartan-Quinn & Carson, 2003; Piperopoulos, 2010) and promotes the resilience of SMEs by regulating several factors such as finances (Institute for family business, 2018) and dynamic

capabilities (Zehir & Narcikara, 2016). Therefore, in this study the unit of analysis is the owner-manager, which is co-terminus with the firm.

As aforementioned, SMEs are relevant to the local and global economy, especially SMEs operating in the food and drink industry (Food and Drink Federation, 2017). SMEs operating in the European Union's (hereafter EU's) food and drink industry employ many individuals and contribute to the economy, and comprises 99.1% SMEs that generate a turnover of £477 billion (FoodDrinkEurope, 2020). In addition, the UK's food and drink industry is the largest manufacturing sector that employs more than 117,000 individuals and contributes the sum of £28.2 billion annually to the UK economy (Food and Drink Federation, 2017). However, with the study of resilience predominantly conducted in large organisations and not SMEs (Sullivan-Taylor & Branicki, 2011) and studies exploring resilience in SMEs operating in the food and drink industry are particularly limited. The known published studies investigating the relationship between dynamic capabilities and resilience in SMEs (e.g. Zehir & Nacikara, 2016; Battisti & Deakins, 2017; & Battisti et al., 2019) have not been conducted in food and drink SMEs.

1.2 Situating the Study

This study differs from the approach of previous studies investigating the relationship between dynamic capabilities and resilience. Studies exploring the relationship between dynamic capabilities and resilience in SMEs operating in the food and drink industry are scarce because the SMEs are considered part of an industry categorised as being part of industries that require low technological processes and thus, have a dedication to research and development lower than 1% (Lager, 2011). The food and drink industry is not usually characterised as a high technological sector, in line with the arguments made by Teece et al. (1997) at the inception of the dynamic capabilities, which pointed towards highly dynamic environments as a requirement for dynamic capabilities to be effective. However, the manufacturing food and drink SMEs are known to face challenges in the UK (Thomas et al., 2015) resulting from a dynamic environment that requires dynamic capabilities to overcome. This makes the manufacturing SMEs operating in the UK's food and drink industry an ideal context for studying the relationship between organisational resilience and dynamic capabilities.

Therefore, this exploratory study is valuable to both scholars seeking to advance resilience and strategic management studies and business practitioners alike.

The research topic became particularly interesting to the researcher as the UK's dynamic business environment became apparent to the researcher, characterised by several disruptions such as BREXIT etc. The UK's dynamic environment stimulated the researcher's thoughts towards how firms, "especially SMEs", survive and possibly thrive after the changes experienced within the firm's environment. In addition, the systematic literature review conducted in this study highlighted a relatively small number of peer-reviewed articles discussing studies that have explored dynamic capabilities in the SME context within the UK (about 5%). Therefore, the study was conducted in the UK in order to comprehend how organisations, especially SMEs in the UK utilise dynamic capabilities to build and sustain organisational resilience.

At the on-set of the primary research stage of the study, the researcher aimed to focus on participants located on the Isle of Wight, as a single, specific, environmental context. The researcher also aimed to do this with the expectation that the participants would have an existing network that would create a snowball effect, which would help recruit more participants for this study. However, of the 39 firms contacted on the island only one firm on the Isle of Wight agreed to participate in the study. The, researcher then had to widen the focus to suitable participants located, first in the wider Solent LEP area, then Southern England, and finally Southern England and Wales, in order to obtain sufficient participants.

In summary, the discussion above has highlighted the significance of SMEs to the economy and why it is important to ensure that SMEs are resilient to disruptions. In addition, the discussion above has also highlighted the absence of adequate academic research undertaken in SMEs towards understanding organisational resilience from the standpoint of the owner-managers and it relates with sensing, seizing, and reconfiguration in SMEs operating in the food and drink industry. In the same vein, the owner-managers role in enacting the dynamic capabilities towards achieving growth, stability, or survival resilience outcomes is yet to be explored. Therefore, this study addresses these critical gaps and advances the existing knowledge in organisational resilience and strategic

management. The research questions and objectives necessary to fill the gaps in knowledge and theory are presented below.

1.3 Aim, Objectives, and Research Questions

This study aims to explore the roles of owner-managers and dynamic capabilities in fostering SMEs' resilience. To meet this aim, the objectives and operationalising research questions of this study are discussed below.

As noted, the resilience of organisations, especially SMEs operating in the food and drink industry, is significant because SMEs are relevant to several countries' economies. However, the study of resilience in SMEs is scarce (Linnenluecke, 2017) and dynamic capabilities are argued to be essential for achieving resilience in SMEs (Battisti & Deakins, 2017). In addition, SMEs are greatly dependent on their owner-managers (Cartan-Quinn & Carson, 2003; Piperopoulos, 2010). Therefore, this study focuses on the role of dynamic capabilities in building resilient SMEs. Based on the aforementioned scholars' arguments, the first research question of this study is to explore whether the owner-managers of SMEs operating in the UK food and drink industry have different perceptions of organisational resilience in the context of their firms. To buttress this research question, a supplementary question is asked to explore whether factors influence their perception of organisational resilience. These research questions aim to satisfy the objective of investigating how owner-managers of manufacturing SMEs operating in the UK food and drink context perceive organisational resilience.

Consequently, the overarching research question this study aims to answer is whether SMEs require dynamic capabilities, operationalised as sensing, seizing and reconfiguration to achieve survival, stability or growth resilience outcomes and whether the resultant processes influence the achievement of the different resilience outcomes. The second research question is extended to explore whether owner-managers promote resilience through certain activities and whether they influence the use of dynamic capabilities to achieve varying resilience outcomes. The research questions aim to satisfy the objective of exploring the role of dynamic capabilities in building and

sustaining resilience in SMEs and exploring the owner-manager's role in promoting resilience through dynamic capabilities.

1.4 Methodological Approach

For this research, interpretivism is considered an appropriate methodological lens because it allows for investigating context and process issues by integrating different theoretical approaches across multiple analyses (Blundel, 2007). An interpretative phenomenology analysis (IPA) approach is adopted to better understand how owner-managers of SMEs perceive resilience and how they enact dynamic capabilities to achieve organisational resilience through their lived experience captured using qualitative in-depth interview methods. In-depth interviews were conducted with thirteen owner-managers. As indicated by earlier scholars, this study builds on the notion that owner-managers may perceive disruptions differently (Argon-Correa & Sharma, 2003) and there is the need to understand how resilience unfolds in SMEs (Linnenluecke et al., 2019).

1.5 The Contributions

This study contributes to the limited research exploring the role of dynamic capabilities in building resilient SMEs. This study's contributions are of interest to scholars in the organisational resilience and strategic management fields because firms, especially SMEs, are constantly required to operate in increasingly turbulent environments comprised of unexpected changes (Bhamra & Burnard, 2011; Linnenluecke et al. 2019). The study's contributions have relevance to policy and practice in the small business community, specifically to organisations such as the Federation of Small Businesses (FSB) and the Food and Drink Federation (FDF). The contributions to theory, practice and policy development are detailed in chapter 8. In Summary, this study makes the following contributions to theory.

First, this study contributes to the organisational resilience theory by highlighting the three ways the owner-managers perceive organisational resilience in the context of their firms. It was identified that the owner-managers have a process, endurance, or resource-based perceptions of organisational resilience, and this was consistent with the owner-managers' previous experience. The identified

perceptions are in line with earlier conceptualisations of resilience on the organisational level in the business and management domain (Duchek, 2019), except for the resource-based perception which has been predominantly conceptualised in the psychology domain (Fisher, 2019), and on the individual level in the business and management domain (Wishardt, 2018).

Second, this study contributes to organisational resilience and dynamic capabilities theory. Taken as a whole, this study's approach advances the need to conduct interdisciplinary research. It was identified that sensing, seizing, and reconfiguration dynamic capabilities are present during responses to disruptions in line with earlier scholars' arguments (Battisti & Deakins, 2017), and the patterns for enacting the dynamic capabilities were equally identified in this study. Specifically, dynamic capabilities are understood to be enacted either through an opportunity-focused or disruption-focused response pattern. The owner-managers' cognition is also identified to be consistent with the response pattern they decided to employ to enact the dynamic capabilities. The background and rationale for this study and its research question, objectives, and contribution have been discussed. The structure of this thesis is summarised below.

1.6 Structure of the Thesis

This thesis consists of eight chapters, namely introduction, background literature review, systematic literature review, research methodology, research findings, cross case and pattern analysis, discussion, and conclusion. The arguments explored in each of the other chapters are outlined below.

Chapter Two - Background Literature Review, critically evaluates the literature relevant to resilience, particularly resilience in SMEs. The literature on dynamic capabilities, which is the theoretical framework used as a lens to explore SMEs' resilience, is also reviewed. The chapter argues that resilience is crucial for SMEs' survival and growth and that dynamic capability constitutes SMEs' resilient response. The chapter provides an overview of the general dynamic capabilities literature.

Chapter Three - Systematic Literature Review, critically evaluates the literature relevant to dynamic capabilities, particularly in SMEs. A systematic search for published peer-reviewed literature is conducted, and the steps are illustrated. The academic papers sourced are analysed and reviewed

to present the scholarly work done in SMEs concerning dynamic capabilities to highlight the literature gap regarding examining the relationship between dynamic capabilities and resilience in SMEs.

Chapter Four - Research Methodology, explains the phenomenology research methodology chosen for the primary research from an interpretative basis to examine the role of dynamic capabilities in building SMEs' resilience by generating rich data regarding participants' intentions, feelings, behaviours, actions, and meanings. An IPA approach is suggested as the most appropriate research approach to obtain as much in-depth information needed to explore the phenomena in a context. In the chapter, the data analysis processes and purposeful sampling strategy are also explained.

Chapter Five - Findings, presents the findings from this research. It suggests that dynamic capabilities are enacted, among other activities, during SMEs' response to disruptions. The results indicate that resilience perception by owner-managers vary and is a process, endurance, and resource-based. In this chapter, the influence of resources towards the achievement of organisational resilience is presented. Finally, the findings are illustrated graphically to depict a process-like flow of the resilience process.

Chapter Six - Cross-case analysis and pattern-searching analysis examine the findings to find convergence and divergence between the meanings derived from the narratives of the owner-managers. The cross-case analysis and pattern-searching analysis findings that the response to disruption can either occur with the owner-manager being focused on opportunities or the disruption. In firms where the owner-managers focused on opportunities, they had a greater chance of achieving the growth organisational resilience than firms where the owner-managers focused on the disruption, which tended to lead to the achievement of survival resilience. The diagram to illustrate these patterns of response are presented in this chapter.

Chapter Seven - Discussion of key findings, examines the conclusions made from this research and relates it to the existing literature in organisational resilience and dynamic capabilities. In this chapter, this study's findings are put into context, revealing the contributions to knowledge made by this present study.

Chapter Eight - Conclusions, brings together the arguments made throughout the thesis, discussing the contributions to knowledge made by this research regarding the role of dynamic capabilities in building resilient SMEs and contributions made to practice and implication for policy. Also, acknowledging the limitations of this present study, suggestions are made for future research into the relationship between dynamic capabilities and resilience in SMEs.

Given that each chapter's contents have been outlined, the next section commences with the Literature Review's full discussion.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction to the SME

In the preceding chapter, the introduction to this study was discussed briefly. This section serves the purpose of reviewing the literature on SMEs that defines what SMEs are, discussing their firm characteristics and their vital significance to the EU and UK economies (especially SMEs operating in the food and drink industry) and the influence of owner-manager/entrepreneurs in SMEs. This chapter is organised as follows: it provides an overview of the organisational characteristics of SMEs, the challenges of SMEs, the influence of SME entrepreneur/owner-manager, SMEs in the food and drink industry, and the summary of this chapter.

2.1.1 SME Organisational Characteristics

There is an absence of a universally accepted definition of SMEs (Bhamra et al., 2011). The definition of SMEs differs from one country to another. However, the definitions use different measurement parameters such as the number of employees, annual income, or annual balance sheet total as thresholds for defining an SME (Small Business Survey UK, 2017). Consequently, variations in thresholds lead to different SME definitions across and within countries as various organisations have different meanings of SMEs (Gamage, 2003). Therefore, various studies have defined SMEs differently depending on the generally accepted definition in the geographical location where the research has been conducted.

Conventionally, SMEs are comprised of 250 employees or less. Nonetheless, some countries like New Zealand set the threshold lower (i.e., 100 staff), while others, for example, the United States of America, places a higher limit (i.e., 500 staff) (OECD, 2005). In contrast, in the UK, SMEs are known for having 0 - 249 employees, with small businesses comprising of 0 - 49 employees and medium-sized businesses comprising of 50 - 249 employees (Department for Business, Energy & Industrial Strategy, 2017). In Table 2.1 below, a summary of the definitional characteristics of micro, small and medium-sized firms is presented.

Table 2.1. Definitions of Micro, Small, and Medium-sized SMEs (EC, 2016).

Company Category	Employees Threshold	Turnover or Balance Sheet Total
Micro	<10	≤ € 2m
Small	<50	≤ € 10m
Medium-sized	<250	≤ € 50m or ≤ € 43m

The definition of an SME, as stated in the discussion above, is not comprehensive. Consequently, variations exist between SMEs' various sizes (micro, small, and medium-sized), arising from the firm's attributes, processes, and structures (Attwell, 2003). Similarly, within each SME, the approach to and requirements for responding to disruptions will depend on several factors, factors other than the organisation's size, but also its owner-managers' vision for the establishment and ambition for it to survive, remain stable, or thrive, which varies as the firms mature (Hills et al., 2008; Durst, 2012).

In the UK, SMEs make up 99.9% of all companies, are responsible for 59.2% of private-sector employment and contribute 51% of the private-sector turnover (Department for Business, Energy & Industrial Strategy, 2019). Therefore, a country's employment, economic growth (Herbane, 2015), and financial stability are highly dependent upon SMEs' performance (Bhamra et al., 2011). These various contributions of SMEs make it imperative for research to be conducted on how to ensure their survival and growth. In this study, SMEs are defined as organisations with an employee number of 0 – 249, with a focus on firms having an employee number of 5 – 49 employees. The decision to focus on firms having a workforce of 5 – 49 employees comes as a result of the United Kingdom having a high population of firms (99.9% of the business population) with an employee number of 0 – 49 employees (Federation of small business, 2019). Therefore, exploring firms having an employee number of 5 – 49 in this study ensures that the present study will be theoretically and practically relevant to scholars and business practitioners.

The UK's SME landscape is very heterogeneous and constitutes many companies, as statistical data suggests (Federation of small business, 2019). They range from a long list of industries that span

from the corner-shops to technologically advanced companies (London Stock Exchange Group, 2013). Furthermore, the reasons behind SMEs' success differ and are not easily categorised under factors such as age, sector, or size (Department for Business Innovation & Skills Report, 2013). Although SMEs may reside in the same country, sector, or industry, still SMEs differ in many ways. For example, SMEs grow at different paces, and those that do not grow are predominantly referred to as "lifestyle" firms where growth is not the primary goal (Miller, Besser, & Malshe, 2007).

SMEs referred to as "lifestyle" firms usually utilise a set of different resources from growth conscious SMEs (Brush, Greene, Hart, & Haller, 2001) because they are primarily focused on the firm's survival to maintain the owner-manager's way of life as opposed to increasing the firm's market share and consequently its profitability (Ates, A., & Bititci, U., 2011). In the context of this study, the participating firms are SMEs with a growth consciousness. Also, SMEs' heterogeneity is influenced by the difference in two entrepreneurs' actions as no two entrepreneurs portray similar actions or effects (Hills et al., 2008). Therefore, there is a difference between medium-sized and small firms as the entrepreneurs identify, perceive, and interpret possibilities differently (Durst, 2012). The sample of this study consists of multiple organisations, as it aimed to provide more insight than would have been the case if the research sample consisted of only one firm.

Although SMEs vary from each other, however, the general life-span of SMEs is remarkably short due to a high propensity to fail, especially in the first five years (Gray 2005), and this failure rate has increased consistently over the years to an approximate 12% rate in the year 2017 (Startups, 2020). Therefore, the preservation and growth of these significant firms (SMEs) should be a priority (Hamburg, 2014). However, to preserve SMEs successfully, the differences between SMEs should be adequately explored to gain an in-depth understanding of their differences, to avoid generalisations that can prove to be hazardous, especially in the small firm sector (Carson et al., 1995; Cartan-Quinn & Carson, 2003; and Hills et al., 2008). Therefore, research conducted in the SME context should not aim for generalisations but rather a significant contribution to knowledge (which this study aims to achieve) that can prove useful to SMEs that require such knowledge.

Despite SMEs' having a likely short life span, SMEs are potentially more innovative and creative than their larger firm counterparts (O'Shea, 1998). SMEs' ability to be more innovative and creative may

be attributed to the Owner-manager's capacity to change quickly and affect the SMEs in more ways than one because SMEs are, for the most part, administered by the owner-manager (Vargas and Rangel, 2007; Singh et al. 2008). Nevertheless, owner-managers are known to make decisions in a non-linear and unstructured manner (Carson 1998; Beaver & Prince 2004) due to SMEs' more straightforward and flat structured nature. SMEs' specific and flat structured nature contributes to the flexibility afforded to their owner-managers compared to the owner-managers of larger companies (Borch & Arthur, 1995). SMEs' flat nature and flexibility can prove to be significant resources needed for the owner-manager to ensure the survival, stability and growth of SMEs even when faced with challenges or disruptions. Thus, potentially increasing the life span of an SME.

Therefore, the small size, flat structure, and informal nature of SMEs stimulate connectedness, participation, and experimentation to the firm's advantage (O'Dwyer et al., 2009). In addition to the connectedness found in SMEs, there tends to be an organisational atmosphere induced by loyalty and synchronisation between employees and the owner-manager. This commitment and synchronisation atmosphere offers its advantages and critical benefits (Day, 1994; Carson et al., 1995; and Cartan-Quinn & Carson, 2003). These include short lines of communication characterised by the close relationship between employees and the owner-manager. It facilitates information dispersal (Becherer et al., 2001), and this allows for a quick decision-making process that enhances the flow of information at a faster pace (Yusof & Aspinwall, 2000a). Mostly, the information found in SMEs is obtained due to the close relationship SMEs have with their customers (Olavarrieta & Friedmann, 2008; Raju et al., 2011). However, some studies have highlighted that SMEs use information dissemination systems that can affect information absorption by causing a delay (Levy & Powell, 1998). Therefore, an information dispersal system utilised in an SME is not always successful but depends on the firm's actors.

Nevertheless, the connectedness that is found in SMEs (O'Dwyer et al., 2009) is exhibited in the loyalty of the employees and a drive towards a similar goal (Day, 1994; Carson et al., 1995; and Cartan-Quinn & Carson, 2003) coupled with the rapid distribution of information from top to bottom of the firm that allows for spontaneous decisions to be made (Yusof & Aspinwall, 2000a; Becherer et al., 2001). The connectedness serves SMEs well to promote their survival, growth, and

performance when faced with challenging situations. Unfortunately, despite the connectedness in SMEs facilitated by the firm's structure, SMEs still experience challenges because of their characteristics and other factors.

2.1.2 Challenges Faced by SMEs

In the preceding paragraphs, the literature highlighting the advantages relished by SMEs resulting from their characteristics has been reviewed. However, the growth of SMEs is impacted by several challenges (Carson, 1990; O'Donnell et al., 2001; Verhees & Meulenber, 2004) including resource constraints such as inadequate finances, knowledge base, historical-based management style, and inflexible routines (Singh et al., 2008). There are many more constraints that have been theoretically identified by scholars, which come as a result of flaws linked to the small-size characteristics of SMEs and the low quality management system of SMEs. Flaws such as a weak demand forecast for the future, restricted prowess in technology, and strategic practices (Cartan-Quinn & Carson, 2003; Gray, 2005). Also, SMEs' proactive and experimental behaviour is found to be inhibited by the flat structure and sometimes family ownership status of SMEs (Borch & Madsen, 2007).

Furthermore, the absence of adequate resources in SMEs results in a continued focus on goals that can be achieved in the short-term and the firm's survival (Gray, 2005; Hills & Hultman, 2006) without adequate emphasis placed on long-term goals. Consequently, the employees, including the managers, rarely have prospective career development paths, which results in the employees often vacating their positions to progress their careers in larger organisations (Gray, 2005), thus leaving SMEs to cope with the lost human resources. As a result of lost resources, SMEs struggle with the lack of information (Hamburg, 2014) and strongly rely on obtained customer market information from secondary sources, which is not adequate for competitiveness (Verhees & Meulenber, 2004). Conversely, larger firms take business decisions in apt business conditions than the SMEs, which have to make do with the information at hand, however rudimentary it may be (Hills et al., 2008). Thus, making SMEs an ideal context for studying how firms survive, remain stable or grow.

However, although SMEs are known to have limited resources (Carson, 1990; O'Donnell et al., 2001; Verhees & Meulenber, 2004), they still have resources, especially those acquired through networking (Kara, Spillan, & Deshields, 2005) and from customers (Verhees & Meulenber, 2004) to

curb the lack of resources owing to the lack of information (Gray, 2005). Therefore, it is worthwhile to conduct a study on how the available resources are utilised to ensure SMEs' survival, growth, and performance. Given that, SMEs continuously face disruptions requiring an improvement in their performance (Burnard & Bhamra 2011; Larsson, Syberfeldt & Safsten, 2017), especially those operating in the food and drink industry (Thomas et al., 2015). The literature on SMEs operating in the food and drink industry is reviewed in the next sub-section highlighting their significance and the challenges faced by such firms.

2.1.3 SMEs in the Food and Drink Industry

In the European Union, the largest manufacturers that employ the most number of people and contribute majorly to the economy of Europe is the food and drink industry (FoodDrinkEurope, 2016). The food and drink manufacturing industry account for the employment of relatively 14% of individuals working in the EU. Also, it accounts for 285,000 SMEs in the EU, which is 99.1% of the firms in the food and drink industry (FoodDrinkEurope, 2020). Correspondingly, the food and drink industry in the UK is the largest manufacturing sector in terms of contributions made economically (Food and Drink Federation - FDF, 2017), highlighting industry's immense significance to the economy as a whole and the households having members employed by the industry. SMEs in the food and drink industry generated a turnover of £477 billion, and a majority of them have employee numbers ranging from 0 -19 (FoodDrinkEurope, 2020).

Most studies conducted in the context of SMEs operating in the food and drink industry have explored areas such as the strategic capabilities that initiate competitive advantage (Carraresi et al., 2016), the pre-development stage during the execution of projects in SMEs that lead to new product development (Abu et al., 2012), and the exploration of 'contextual marketing' in SMEs located in Wales, UK (Harris & Deacon, 2011). Also, studies have explored the assessment of the leading innovation activities at play in SMEs operating in the Australian wine industry (Aylward, Glynn, & Gibson, 2006), the utilisation of data envelopment analysis with missing data to measure the proportionate efficiency of the food and drink industry of selected countries in the EU (Gardijan, & Lukač, 2018), and the evaluation of the correlation between the price-making ability of a firm and the capabilities for marketing in food SMEs operating in the EU (Banterle et al., 2014). Therefore,

scholars have overlooked the study of organisational resilience in the context of SMEs operating in the food and drink industry.

After subsequent Boolean searches on the University of Portsmouth's EBSCO database using relevant keywords (*e.g. 'Organisational resilience' OR 'Organisational resiliency' OR 'Organisational resilient' AND SMEs OR 'small and medium sized enterprises' OR 'small firms' OR 'small firm' OR 'small business' OR 'small businesses' OR 'small firm' OR 'small firms' AND 'food and drink sector' OR 'food and drink industry'*) it was noted (at the time the search was conducted), that no known published studies were focused on exploring the organisational resilience of food and drink SMEs (especially in the UK). However, there was a study conducted by Sullivan-Taylor and Branicki (2011). In their study, the sample consisted of eleven managers forming a heterogeneous SME sample that was not focused solely on firms operating in the food and drink industry. Therefore, the Boolean search results highlight a need for studies exploring organisational resilience in the context of SMEs operating in the food and drink industry. This is in line with the argument that most empirical research exploring resilience are conducted in large organisations and not in SMEs (Sullivan-Taylor & Branicki, 2011). Therefore, this study contributes in this regard.

Earlier in this chapter, the literature on the constraints of SMEs was reviewed, highlighting several limitations. However, there are other SME limitations, such as economies of scale (Slater & Narver, 1994; Carson, 1995; and Hills et al., 2008) and employees having poor educational backgrounds (Storey, 1994), among other constraints. In addition to SMEs' constraints, as reviewed earlier, SMEs operating in the food and drink industry are faced with several unique challenges. For example, in the European food and drink industry, there has been an increased level of demand for improved food safety, properly labelled products with adequate information, and assurances regarding the sources of the raw materials used to manufacture the products as well as the manufacturing process itself (Carraresi et al., 2016). To overcome the contemporary challenges, the SMEs operating in the food and drink industry have undergone continuous changes.

The changes that impact the European food and drink industry also affect the SMEs that operate in the UK industry, especially as SMEs make up most of the food and drink manufacturing firms (Banterle et al., 2011b). Also, to survive by overcoming these changes, SMEs have been pushed to

develop competitive competencies, especially in markets where multinational food and drink firms have a larger proportion of the market (Carraresi et al., 2016). Therefore, the owner-managers of SMEs operating in the food and drink industry have gained experience by encountering several disruptions and challenges. Thus, making SMEs operating in the food and drink industry well suited for studies exploring resilience and how it is achieved.

Furthermore, in recent times, SMEs are increasingly operating in highly turbulent environments, with disruptive events becoming more frequent. Such disruptive events include natural disasters like earthquakes (Battisti & Deakins, 2017), weather and climate-related events resulting from global warming (Korber & McNaughton, 2017), disasters that are human-made (Williams et al., 2017) such as economic recessions (Bullough & Renko, 2013) and disruptions that are organisation specific such as staff absenteeism, mistakes and infrastructural loss to fire (Sterling, 2011). Challenges similar to those just mentioned are experienced periodically by organisations, including SMEs operating in the food and drink industry. For example, the UK's vote to leave the EU left the owner-managers of the UK food and drink firms in imminent distress and crisis, as they have maintained a long-term relationship with their EU partners (BBC, 2019). More recently, firms have faced and are currently facing challenges that have resulted from the Covid-19 pandemic, which had seen a significant drop in the consumption of products and distortion of the supply chains (Deloitte, 2020).

Nevertheless, irrespective of the disruptive events occurring in the environment, SMEs are more flexible and adaptable. This enables them to survive and potentially thrive in these turbulent environments (Lai et al. 2016) with a high dependence on their owner-managers. The owner-managers' role within SMEs is reviewed in the next section to highlight their significance to SMEs.

2.1.4 The Role of the SME Owner-Manager/Entrepreneur

Previous studies have particularly emphasised the influential role of entrepreneurs in influencing firms' survival, performance, and growth, especially SMEs. A significant determinant of SMEs' competitiveness and performance is the fundamental role of the owner-manager/entrepreneur. This results in the allocation of decision-making responsibilities to solely the owner-manager, thereby influencing its entire strategy (Piperopoulos, 2010). Therefore, it is arguable that the success of an SME depends on the owner-manager's role (Cartan-Quinn & Carson, 2003) because SMEs are more

often than not given life to by the individual that starts up the firm. SMEs tend to progress and operate based on the vision incubated in the individual's mind before its inception.

The owner-managers of SMEs control the business through what is considered as non-systematic guidelines and instructions - exerting control through informal, face-to-face processes and enterprises (Goffee & Scase, 1995). Hence, the reason SMEs are structured around the 'personalities' of the owner-managers. As such, an SME's growth potential depends on the energies, talents, plans, and preferences of the owner-manager (Piperopoulos, 2010). Understanding the logic behind SMEs' business and management aspects is related to understanding and accepting the characteristics of the owner-managers. Owner-managers of SMEs display different managerial methods depending on a blend of their individual and firm aims and objectives (Cartan-Quinn & Carson, 2003; Merrilees, Rundle-Thiele, & Lye, 2011). Nevertheless, the competitiveness and innovative performance of an SME are in direct relationship with the role, personality, and strategic decision of the owner-manager (Hausman, 2005). Based on research conducted in 305 Israeli small tourism firms, managerial skills as an entrepreneurial human capital are argued to have contributed the most to both long-term and short-term business growth and performance of small firms (Haber & Reichel, 2007).

For the survival and competitiveness of an SME, the owner-manager must establish the path of the company, be strategic, visionary, and goal-oriented (Man et al., 2002). The company vision is usually communicated and construed by the SME owner-managers (Slater and Narver, 1995). The overarching business philosophy is often in correspondence to the owner-managers personality, aims, objectives, beliefs, and capabilities (Becherer et al., 2001; and Hills et al., 2008; Storey & Greene, 2010). However, when there is a problem with the owner-manager's characteristics, it likely becomes a source of weakness in the firm, potentially leading to the SME failing (Piperopoulos, 2010). For example, some scholars have highlighted that the owner-manager dominates the entire aspect of the business, thereby limiting teamwork (Yusof, 2000). However, for the survival and growth of an SME, the owner-manager needs to invent a shared vision that drives the firm's purpose in areas of firm strategy and objectives formulation (Sadler-Smith et al., 2003). This prevents the management team (Hudson, 2003) from frequently dealing with day-to-day crises within the organisation.

Sadly, despite their passionate drive, which is needed to equip the organisation with an opportunity-seeking attitude, owner-managers of SMEs can find it challenging to share their passion and vision on a firm-level (Stringer, 2000; Wang & Chugh, 2014). Thus, possessing the essential knowledge of what to do and when to do it is significant for the owner-manager to effectively affect an SME. This is especially true when the owner-manager needs to communicate the firm's vision with the employees and stimulate an atmosphere where employees have the freedom to be creative and make a significant contribution (Salvato & Vassolo, 2018). However, to gain this knowledge, the owner-manager will need to search for avenues to derive such an essential understanding.

Owner-managers of SMEs are known to acquire relevant information about the market from several sources and by various means (Hulbert et al. 2015). Occasionally, owner-managers obtain relevant information through networking (Carson et al., 1995). An owner-manager's network can provide formal or informal, direct or indirect, and an external source of information for the business (Verhees & Meulenber, 2004; Hulbert et al., 2015). The information received informally resulting from the relationships established between the owner-manager and customers or suppliers supports the SME owner-managers to identify opportunities, capture the possibilities, and limit uncertainty by lowering the risk (Keh et al., 2007). Therefore, for owner-managers to successfully obtain the information, it is highly dependent on the customers and suppliers, with either the customers or suppliers notifying the owner-manager of their needs and what is available to satisfy customers' needs, respectively.

As aforementioned, the role of an owner-manager is crucial, correlates directly with the growth of an SME (Wiklund & Shepherd, 2003; Department for Business Innovation & Skills, 2013), and plays a significant role in the survival and growth of the firm (Carson & Cromie, 1990). Therefore, given that the survival, performance, and growth of SMEs are dependent on the owner-manager(s), including their perceptions (Piperopoulos, 2010), one of the objectives of this study is to explore the role owner-managers play in building the resilience of SMEs. The objective is based on the argument that exploring how owner-managers influence the processes within an SME and how they utilise available resources (Verhees & Meulenber, 2004; Kara, Spillan, & Deshields, 2005) to achieve resilience by adapting the resources to new challenges (Battisti & Deakins, 2017) deserved scholarly

attention. This explorative study aims to enhance our understanding of the role owner-managers play, especially regarding the likely impact of their perception of resilience to the resilience process.

In summary, the literature reviewed in this section covered the existing literature on the organisational characteristics of SMEs, the challenges of SMEs, SMEs in the food and drinks industry, and the role of the owner-manager. The review provided a deeper understanding of the research context. It has highlighted the importance of exploring resilience in SMEs (especially in the food and drink industry) as the SMEs are faced continuously with the challenge of improving their performance and adapting to changes flexibly. This challenge to improve continually constitutes a crucial source of global competitive advantage for SMEs (Burnard & Bhamra 2011; Larsson, Syberfeldt & Safsten, 2017). Also, the significance of the role(s) played by owner-managers in SMEs by utilising the resources available to the firm has been reviewed.

In the next section, the existing literature on organisational resilience in general and SMEs is reviewed to stimulate a deeper understanding of organisational resilience and discover the potential research gaps in the existing literature.

2.2 Introduction to Resilience

In the preceding sections, SME challenges have been discussed, illustrating the significance of resilience and studying the construct in the context of SMEs operating in the food and drink industry. This section serves the purpose of reviewing the literature on the concept of organisational resilience in general and organisational resilience in SMEs. The review aims to ensure an understanding of the concept, highlight earlier research conducted in the field, and highlight gaps within the literature for exploration in this study. This section is organised as follows: a provision of an overview of the resilience evolution, resilience definition, organisational resilience, organisational resilience conceptualisations, organisational resilience in SMEs, measurement of resilience, and the summary.

2.2.1 Overview of Resilience

Organisations are often taken by surprise by abrupt changes and unexpected events (Linnenluecke, 2017). Some organisations are more capable of responding to and, in many cases, more suited to survive extreme, unforeseen, and abrupt events than other organisations in the same conditions (Ali

& Gurd, 2017). However, to remain viable and sustain competitiveness within uncertain environments, organisations must strive to adapt continuously. Organisations will experience disruptions and uncertainties when operating in turbulent environments, and conditions such as a change in its's-self is a constant thing. Nevertheless, a potential framework to rise above these abrupt changes, unexpected events or disruptions, to enhance organisational development can be provided by the organisational resilience phenomenon (Bhamra & Burnard, 2011).

Resilience has been explored in several disciplines and has enticed numerous scholars' interest (Akgün, & Keskin, 2014), including scholars in the business and management discipline. However, resilience made a novel appearance in published literature following the seminal paper by Holling in 1973 titled 'Resilience and Stability in Ecological Systems' (Bhamra & Burnard, 2011). The study of resilience in ecology and other fields trace their roots to the seminal paper.

However, in the business context, resilience traces its novel appearance to the academic papers published following the study of organisations' responses to external threats published by Staw et al. (1981) and Meyer (1982). The two articles produced results, which advanced different arguments. Staw et al. (1981) argued that organisations had responses to inflexible threats and would eventually limit the organisation's survival. Conversely, Meyer (1982) argued that organisations could adapt as a response to external threats. Despite the varying arguments made by Staw et al. (1981) and Meyer (1982), resilience is generally accepted as a crucial characteristic for an organisation to possess to respond better to various disruptions.

In the practical sense, an organisation's ability to get finished goods into a market and offer necessary services to customers can potentially be affected by disruptions directly (Conz et al., 2017) as the markets change from time to time. However, business continuity plans are mostly part of an organisation's policies (Bhamra et al. 2011), ready for disruptions. However, until these plans are applied by intuition during an actual disruption, the plans will prove to be unsuitable (Bhamra & Burnard, 2011) because without actually testing these plans, there is no knowledge of its operational suitability or practicability.

In environments where organisations operate, there will inevitably be implications of discontinuities and disruptions because of turbulences. Therefore, the survival and continuous operation of an organisation are threatened by turbulence (Burnard & Bhamra, 2011), with turbulence popularly referred to as an 'unpredictable change' in an organisation's complex environment (Boyne & Meier, 2009). Furthermore, as it is widely acknowledged that organisations are subjected to an unpredicted future known for both intrinsic and extrinsic risks and uncertainty (Burnard & Bhamra, 2011). Consequently, studies exploring how firms remain resilient in the face of continuous disruptions are essential for several businesses' future and highlight the importance of this research.

An essential point worth noting is that resilience is not solely focused on solving challenges caused by disruptions but also covers the capability of a system to adapt its functionality to both calculated and unsuspecting situations. Thus, fostering the ability to function through different disruptive situations (Burnard et al. 2018). There are two commonly known types of organisational response, the rigid and flexible response. The rigid response is widely regarded as a 'negative adjustment' and the flexible response widely regarded as a 'resilient response' or 'positive response' to disruptions (Burnard & Bhamra, 2011). Therefore, for firms desiring to adapt successfully to both predicted and sudden situations, exhibiting a response considered as a flexible response is more rewarding than responding in a rigid manner that cancels out the positive outcome that could have otherwise been achieved. However, in response to disruptions, the magnitude of disruption can be minimised by identifying the disruption(s) or its threat(s) at a much earlier time before it fully manifests.

Furthermore, an organisation's strategy to manage crisis sometimes involves the minimisation of the magnitude of the disruption to be more capable of controlling the interruptions. This sort of organisational response suggests that owner-managers of organisations can predict both the form of interruptions and the magnitude of its impact. However, this may not prove to be true in an uncertain environment where disruptions occur unannounced (Burnard et al., 2018). Organisations are best prepared to analyse disruptions in an in-depth manner and take proper consideration of a broad range of alternative solutions or responses during periods of normal operations (Zhang et al. 2002) when the disruption is absent or not at a stage where it has fully manifested.

Therefore, during periods of normal operations, management representatives become skilled in understanding situations, gathering information, making judgments, and providing definite plans of action. Subsequently, during and after a disruption, the challenges of the situation reduce management officials' capacity to put into practice the rigorous process of assessing the disruption and potential solutions (Burnard et al., 2018). Thus, evidence indicates that organisations can assess disruptions and possible responses (Burnard & Bhamra, 2011) – before the disruption occurs, while the disruption is occurring and after the disruption has occurred. However, the ability to assess disruptions and possible responses depends on the nature of the disruption and the environment where the organisation operates, thereby influencing its resilience.

Furthermore, from the human resources management context, for an organisation to be resilient, it requires a labour force that rapidly and effectively adapts to change while still maintaining minimal stress levels (Gomes, 2015). Therefore, disruptions demand that managers make decisions that are context-specific quickly under stress and ambivalence (Burnard et al., 2018). Unfortunately, during a disruption, the information needed to make the decisions is likely inconsistent (Wilson et al. 2010). This implies that crisis management plans cannot thoroughly guide the decision-making process. Thus, this will require the decision-makers to rapidly comprehend the context within which the disruption has occurred and assess its apparent impact before providing suggestions for bouncing back (Burnard et al., 2018). In SMEs, the decision-makers are usually the owner-managers themselves (Piperopoulos, 2010). Therefore, implying that in SMEs, the owner-manager plays a key role in achieving the organisation's resilience.

By reviewing the earlier discussions on resilience as a whole, an argument can be made that resilience is a topic of core importance to scholars, professionals, and businesses. The idea of resilience grants the assurance of a plausible, attractive, and seemingly attainable strategy to prepare for and successfully face different types of disruptions (Arjen & Michel, 2013). Based on extant literature, a resilient organisation is assumed to have a superior high level of performance despite the rise of environmental challenges and declared to 'bounce back' shortly, with minimal effort.

Furthermore, organisational resilience is at a high level of an organisation's most wanted values during regular operation periods and even more required in periods of crisis or disruption (Aleksić et al. 2013). Additionally, for the sustainability of organisations in turbulent environments, resilience is seen as a critical organisational capability (Ates & Bititci, 2011) which is highly required in recent times due to the increasing disruptions faced by organisations. For example, recent disruptions like BREXIT and the Covid-19 pandemic. Therefore, studies like this present study explore SMEs' organisational resilience and are relevant and well suited for contemporary times.

However, this useful firm characteristic is multi-dimensional and studied in different research streams or disciplines (Akgün & Keskin, 2014), resulting in multiple definitions. In the next section, key definitions of organisational resilience are reviewed, and a definition of resilience is adopted for this study.

2.2.2 Organisational Resilience Definitions

Conventionally, the resilience construct is highlighted in situations that have seen individuals, communities, units (e.g., families or teams) or organisations positively adapt to a significant event characterised by difficulties, challenges or adversity (Fisher, 2019). Also, resilience is more often than not related to the thought of doing well irrespective of the threatening situations that appear to disrupt the performance of individuals or organisations (Wishart, 2018). The positive adaptation is usually classified as the ability to bounce back following a disruption (Williams et al., 2017), yet having the ability to be consciously aware of the environment for changes that can be detected, avoided, or adjusted to (Ortiz de Mandonjana & Bansal, 2015). Thus, implying the relevance of resilience to individuals, societies and organisations primarily in times of crisis, disruption, or potential adversity.

Despite the seemingly prevalent foundation of resilience (i.e., positively adapting or doing well in adaptation to difficulties), the present literature on resilience studies is complicated by varying definitions of the construct and the lack of research in the area that is theory-driven (Robertson et al., 2015; Britt et al., 2016; Vanhove et al., 2016). In addition, it appears that "with the growth of interest in resilience has come confusion regarding the conceptualisation of resilience..." (Britt et al., 2016, p. 379), despite claims by Annarelli and Nomino (2016, p. 10) arguing that scholars have

agreed on the organisational resilience definition, foundations, and attributes. However, understanding the definitional aspect of resilience is vital for promoting the study of the construct, especially in organisations, because a clear understanding of its definition and the theoretical conceptualisations will lead to empirical explorations that are productive (Fisher, 2019). Therefore, in this study, the definitions given by other scholars are reviewed. Accordingly, this study adopts an operational definition to identify resilience.

As aforementioned, resilience is a multi-dimensional construct with several definitions resulting from several studies in different streams conducted by several scholars (Robertson et al., 2015; Vanhove et al., 2016), leading to a lack of consensus in its definition (Britt et al. 2016). In the business and management domain, resilience is relatively at its infancy and broken into various streams such as the response to external threats by organisations, the adaptation of business models, the contributions of employees and the vulnerability of supply chains (Duchek, 2019). Thus, highlighting an opportunity to contribute to the resilience field in the business and management domain, especially concerning SMEs as they are faced with more situations of unforeseen circumstances that threaten their survival (Dahlberg et al., 2015). The fundamental definitions of resilience reviewed in this study are focused on resilience as a construct in organisations with contributions from several scholars to provide a holistic review of the literature.

The organisational resilience construct has been defined as a "firm's ability to effectively absorb, develop situation-specific responses to, and ultimately engage in transformative activities to capitalise on disruptive surprises that potentially threaten organisational survival" (Lengnick-Hall et al., 2011, p. 244). The definition by Lengnick-Hall et al. (2011) suggests that resilience results from a systematic process involving several actions that enable the firm to respond to organisational threats. On the other hand, the construct is defined as "a fundamental quality... to respond productively to significant change that disrupts the expected pattern of an event without engaging in an extended period of regressive behaviour" (Horne & Orr, 1998, p. 31). Horne & Orr's (1998) definition focuses on the outcome that suggests that a positive response to organisational threats has been achieved. The definition by Horne and Orr (1998) has received support from scholars such as Linnenluecke et al. (2012). They defined the construct as the "organisational capacity to absorb

the impact and recover from the actual occurrence of an extreme weather event” (Linnenluecke et al., 2012, p. 18), highlighting their focus on the outcome as a means of justifying the occurrence of resilience has occurred.

However, unlike the aforementioned definitions, the construct has been defined by Boin & Eeten (2013, p. 431) as a phenomenon that “prevents budding problems from escalating into full-blown crisis or breakdown”. Boin and Eeten’s (2013) definition has received support from scholars such as Ortiz-Mandojana & Bansal (2015). They defined the construct as “the incremental capacity of an organisation to anticipate and adjust to the environment.” (p. 6). Both definitions highlight the precursory aspect of organisational resilience as a means of taking actions necessary to prevent or prepare for disruptive events.

The definitions aforementioned do not represent all the definitions of organisational resilience available in the literature. Like the definitions mentioned above, the other definitions of resilience differ one from another. However, despite their differences in definition, there are still areas of agreement, as this can be found in other reviews of the resilience literature (Luthar et al., 2000; Masten, 2001; Britt et al., 2016). The first area of the agreement refers to the importance of problems, risks, disruptions, or unsuitable conditions in the resilience sense. Without them, there would be no need to be resilient. This implies that resilience does not occur in isolation but is understood adequately in situations or circumstances that have resulted or likely to result from unpleasant issues (Fisher, 2019). Vanhove et al. (2016) stressed that although adversity or disruption is relevant for resilience to be demonstrated; however, the origin and scale of the disruption can vary significantly. Therefore, disruptions are significant to the resilience process. In this study, the disruptions experienced or potential disruptions act as indicators of the resilience process investigated because there can be no resilience without a disruption at the very least.

Another area of the agreement refers to the manifestation of positive adaptation following a disruption (Fisher, 2019). The positive adjustment implies that successful resilience has been realised and is identified by “good outcomes despite serious threats...” (Masten, 2001, p. 228). Although the outcomes serve as an indicator of resilience, Fisher (2019) argues that it is noteworthy to recognise that resilience results are not resilience themselves but merely indicators of achieved resilience.

Drawing from the earlier definitions of organisational resilience, examples of resilience outcomes can include recovery from extreme weather conditions (Linnenluecke et al., 2012), emerging from difficult situations better (Vogus & Sutcliffe, 2007), successfully taking advantage of disruptive situations (Lengnick-Hall et al., 2011), and successful adjustment to the changing environment (Ortiz-de-Mandojana & Bansal, 2015). The resilience outcome depends on the disruption and the context in which it has occurred (McLarnon & Rothstein, 2013). Thus, highlighting the relationship between a disruption and the resilient outcome to indicate the achievement of resilience.

Despite the areas of agreement highlighted from the resilience definitions, there are also areas where the definitions are at odds with each other. Firstly, resilience has often been designated as different labels by scholars (Duchek, 2019). For example, resilience ability or capacity or potential and organisational resilience or resilient organisation. In earlier definitions, resilience has been labelled as "a fundamental quality" (Horne & Orr, 1998, p. 31), "organisational capacity" (Linnenluecke et al., 2012, p. 18), "firms' ability" (Lengnick-Hall et al. 2011, p. 244) and "incremental capacity" (Ortiz-de-Mandojana & Bansal, 2015, p. 6). Therefore, there is a difficulty associated with arriving at a consensus regarding the definition of organisational resilience. This highlights an opportunity to explore further the perception of resilience, especially from the owner-managers of SMEs operating in the food and drink industry.

After reviewing various definitions of resilience, Wishart (2018) attempted to define resilience in such a way that it encompassed all the resilience perspectives identified earlier into a single definition. Wishart (2018, p. 9) defined resilience as "a strategic objective intended to help an organisation survive and prosper ... rebounds from adversity strengthened and more resourceful". On the other hand, Fisher (2019, p. 592) a scholar in the psychology domain, defined it as "the process by which individuals can positively adapt to substantial difficulties, adversities, or hardship." Fisher's definition also refers to organisations and not just individuals. However, in this study, *resilience is defined as a process through which an organisation positively adjusts to maintain normal functioning (or even thrive) following a disruption or potential disruption due to the firm's initial reaction to disruptions and subsequent coping activities.* The definition highlights key aspects of resilience according to

Fisher (2019) – which are a time factor, adversity/disruption trigger, resilience mechanism and resilience outcome.

In this subsection, the different definitions of organisational resilience have been reviewed, and the definition adopted in this study presented. In the next section, the main conceptualisations of organisational resilience in the business and management domain are reviewed to deepen our understanding of the phenomenon.

2.2.3 Organisational Resilience Conceptualisations

The lack of an agreement in the resilience literature does not occur in the definition of resilience alone but also occurs in the construct's conceptualisation (Linnenluecke, 2017). It is only plausible that since the definition of organisational resilience differs from researcher to researcher, researchers will also conceptualise the term differently, owing to the multiple contexts in which the various studies were conducted (Duchek 2019). The conceptualisation of organisational resilience is commonly categorised as an outcome or process.

2.2.3.1 Organisational Resilience conceptualised as an Outcome

Following the outcome conceptualisation of resilience, scholars have understood resilience as focusing on the outcomes that suggest successful resilience has been achieved in response to a disruption or difficulty. This conceptualisation is best illustrated when resilience is described as a “bounce back” after experiencing a disruption (e.g. Horne & Orr 1988; Sutcliffe & Vogus, 2003). This conceptualisation does not only depict the understanding of resilience in terms of a comeback or rebound but also in terms of sustaining normalcy while facing “transient perturbations” (Bonanno, 2004, p. 21) or “short-lived” decline in functional normalcy (Crane & Searle, 2016, p. 468). Therefore, under this resilience conceptualisation stream, resilience is understood as being exhibited through a successful return to normalcy or by maintaining the functional normalcy by resisting or holding-on despite difficulty (Fisher, 2019).

This stream of resilience conceptualisation is focused on the indicators that highlight the difference between resilient organisations and non-resilient ones (Duchek 2019). A group of scholars following this stream of resilience conceptualisation have also frequently attributed the success of resilient

organisations to the availability of sufficient resources (e.g. Kendra & Wachtendorf 2003; Vaelikangas & Romme 2013) and beneficial relationships (e.g., Gittell et al., 2006). In comparison, another group of scholars have frequently attributed the success of achieving organisational resilience in resilient organisations to the total behavioural input of the individuals present in the organisation (e.g. Weick 1993; Horne & Orr 1998; and Vaelikangas & Romme 2013). Therefore, possession of resources within a firm and those obtained from relevant relationships and the input made by the owner-manager or employees behaviourally are contributors to the resilience of an organisation that exhibits resilient outcomes that portray the achievement of organisational resilience.

In general, scholars having this conceptualisation of resilience have more regard for the indicator, which highlights that the organisation, has successfully dealt with the difficulty or some form of disruption. This stream of conceptualising resilience has its significance in the organisational resilience literature.

However, several limitations come with having this conceptualisation of resilience. The outcomes are merely indicators that highlight successful resilience but does not give an in-depth understanding of the resilience construct. For example, it does not stress the resilience mechanism that has led to a resilient empirical outcome. Basically, "Considering resilience as simply bouncing back to a previous state of functioning defines resilience as an outcome, but the processes that influenced returning to a previous state of functioning and wellbeing following an adverse event are not articulated" (McLarnon & Rothstein, 2013, p. 63). Therefore, the outcome conceptualisation does not provide answers for those seeking to identify if resilience is "the result of designed processes or perhaps the outcome of improvisation and luck" (Boin & Van Eeten, 2013 p. 430). Thus, this study attempts to extend the knowledge that sheds light on the underlying mechanisms or patterns that leads to resilient outcomes that highlight successfully achieved resilience. At this point, there is a need to review the process conceptualisation of organisational resilience.

2.2.3.2 Organisational Resilience Conceptualised as a Process

By following the process conceptualisation stream of resilience, scholars have understood resilience as a process focusing on the actions taken in response to the difficulty and what the firms that are resilient possess (e.g., Sutcliffe & Vogus, 2003). As critically reviewed above, "good outcomes are

not enough to define resilience” (Sutcliffe & Vogus 2003, p. 108). However, studies exploring resilience as a process in-depth are limited (Duchek, 2019). In this conceptualisation stream, scholars understand the resilience process in varying ways and label the process stages differently. For example, Linnenluecke et al. (2012) portrayed the process perspective of resilience as having the anticipatory adaptation phase, exposure phase, recovery, and restoration phase, the post-impact firm total resilience calibration phase and adaptation in the future phase (where the recovery and restoration, and the post-impact firm total resilience calibration touch on resilience).

Contrastingly, Burnard and Bhamra (2011) argued that the resilience process is characterised by phases such as the detection (and activation) phase, a response demonstrating resilience phase and learning as an organisation phase – the stages that appear to be critical in their work are the identification of threat and response activation phases. However, “anticipation, coping and adaptation” as elements in the resilience process paint a complete picture of the process (Duchek 2019, p. 222). Anticipation is defined as the “prediction and prevention of potential dangers before damage is done” (Wildavsky 1991, p. 77), whilst coping is referred to as a diverse range of responses to the distress resulting from negative situations experienced (Carver & Cannon-Smith, 2010) and adaptation “refers to the specialisation of resources to fit the environment” (Billington et al., 2017, p. 427)

Although the resilience process is conceptualised differently and argued to be composed of different stages/phases labels attributed as elements of the process, the process conceptualisation of resilience offers insight into “the dynamic and evolutionary rather than static nature of organisational resilience” (Billington et al., 2017, p. 426). “Thus, resilience capacity is a developmental process rather than a fixed trait (outcome)” (Akgun & Keskin 2014, p. 6919) of an organisation. This comprises of firm processes and routines that enable the organisation to return to normalcy following a disruption and provides novel opportunities that cause the organisation to thrive beyond normality (Sutcliffe & Vogus, 2003).

Theoretically, resilience studied as a process over a long period can potentially produce varying resilience outcomes. These resilience outcomes can be classified as; survival, stability, or sustained performance or growth (Battisti et al., 2019). Firstly, the survival resilience outcome usually results

from the rigidities created by an entrenched organisational culture, which form as a result of previous resilience (Conz et al., 2017) and a reluctance to change (Cardoso & Ramos, 2016). Secondly, the stability resilience outcome stems from the engineering and ecological perspective where a system, after responding to disruption, is expected to return to its previous equilibrium. Finally, the sustained performance or growth resilience outcome in contrast to the stability performance outcome is viewed as an ongoing adaptive capacity, which exceeds the previous equilibrium and stems from the evolutionary perspective (Conz, Denicolai & Zucchella, 2017).

Therefore, studying resilience by conceptualising it as a process enables the researcher to investigate the different responses made towards a disruption (Sutcliffe & Vogus, 2003) and how they lead to different organisational resilience outcomes – survival, stability or growth (Battisti et al., 2019). In this study, resilience is conceptualised and explored as a dynamic process (Billington et al., 2017), which fosters the exploration of the construct using a dynamic construct such as dynamic capabilities as a well-suited lens to uncover its mechanism and how the mechanism results in the achievement of different organisational resilience. This study aims to extend earlier academic literature conceptualising resilience as a process and make a contribution, as studies exploring organisational resilience as a process are limited (Duchek, 2019).

Similar to the conceptualisation and definition of resilience, scholars have adopted different methods to measure resilience. In the next subsection, the methods employed to measure resilience is reviewed.

2.2.4 Resilience Measurement

In addition to the different definitions and conceptualisations of resilience reviewed, several scales have been adopted to measure resilience. The absence of an agreed definition for resilience has caused a lack of agreement on how resilience should be operationalised (Windle et al., 2011). Attempts to measure individuals' resilience have been made for no less than two decades ago, although this has been in the clinical and not the organisational context (Mallak & Yildiz, 2016). The Connor-Davidson resilience scale is the most common tool used for operationalising individual resilience measurement. The scale comprises of twenty-five factors and has been applied to several

contexts, and the results obtained are considered to be well-founded statistically. Recently, new versions of the Connor-Davidson resilience scale have also been developed (with the more modern versions being usually shorter) (Campbell-Sills & Stein, 2007), and they have proven to be statistically well-founded (e.g., Lauridsen et al., 2017).

With the existence of several tools used to measure individuals' resilience, there have been several attempts to measure the resilience of organisations. Mallak (1998) developed a six-item scale instrument and was further developed by Somers (2009) with the addition of other factors. In the same vein, a survey was introduced by Lee et al. (2013) to measure how effective the resilience of strategies utilised in organisations are. However, currently, a widely accepted measurement scale of organisational resilience is presently unavailable, given that there is no agreement on the definition of organisational resilience (Linnenluecke, 2017).

In the absence of a universally accepted measurement for resilience, in this study, the organisational resilience of each participating firm was measured based on the achievement or failure to achieve a *status quo* or exceed the *status quo* in the firm's operations with either a corresponding decrease, stable or increase in annual profit margin. This implies that in situations where a firm returned to stable operations and recorded a lower annual profit, the firm was assumed to have achieved a survival resilience outcome. Similarly, in a case where the firm did not return to stable operations and recorded a lower annual profit, it was also assumed to have achieved a survival resilience outcome.

On the other hand, in a situation where a firm exceeded normal operations and recorded a higher annual profit, the firm was assumed to have achieved a growth resilience outcome. However, if the firm returned to normal operations and recorded a relatively similar annual profit to the previous year following the response to the disruption, then the firm was assumed to have achieved the stability resilience outcome. How organisational resilience is measured in this study is summarised in Table 2.2.

Table 2.2. Organisational Resilience measurement in this research.

Operations	Annual Profitability	Resilience Outcome
Failed to return to stable operations	Recorded lower annual profit	Survival
Returned to stable operations	Recorded lower annual profit	Survival
Returned to stable operations	Recorded relatively same annual profit	Stability
Exceeded stable operations	Recorded higher annual profit	Growth

In the next subsection, the core resilience research themes in the business and management domain are reviewed.

2.2.5 The Concept of Resilience in the Business Context

As discussed earlier, resilience studies in the business context originated from the work of Staw et al. (1981) and Meyer (1982). Progressing from the core studies by Staw et al. (1981) and Meyer (1982), studies of resilience in business have followed several streams. For example, according to Wishart (2018), for the past 20 years, resilience study streams in business have focused on employees, processes and business models, the anticipation, prevention, and response to difficulties.

2.2.5.1 Resilience Stream Focused on Employees

Studies following this stream have their roots in the field of psychology and are usually focused on the identification of aspects of individuals, such as their distinguishing quality or characteristics and competencies that tend to facilitate resilience in organisations (Luthans, 2002). The studies under this stream either focuses on identifying the relationship between employees that exhibit resilient characteristics and the resilience of the organisation (e.g., Luthans et al., 2007) or focuses on the generic attributes of employees that relate to resilience in organisations (e.g., Weick & Sutcliffe, 2006; Williams et al., 2017).

To identify the relationship between the exhibited employee resilience and the resilience of an organisation, Luthans et al. (2007), in their paper, developed a tool to measure the strengths of individuals known as the psychological capital measure. The variables in their paper that were found to have a relationship with organisational outcomes on favourable terms are resilience, hope, self-efficacy, and optimism. In addition, empirical tests have been conducted to explore the relationship between the variables (i.e. resilience, hope, self-efficacy, and optimism) and organisational outcomes (e.g., Youssef & Luthans, 2007; Avey et al., 2009). As aforementioned, another focus in this stream

of resilience studies in business is directed towards employees' generic characteristics that relate to resilience in organisations. In their paper, Williams et al. (2017) identified four competencies (e.g., cognitive and behavioural competencies) in employees who support adaptation to disruptions and, therefore, affect the resilience of an organisation. In this study, however, resilience on an individual level is not the focus. Instead, resilience on an organisational level and the possible contribution of individuals within the firm, especially the owner-manager, is explored.

2.2.5.2 Resilience Stream Focused on Process and Business Models

Scholars in this research stream explore the effect of business models or processes on the aftermath of disruptive situations. Therefore, some studies have examined the impact of processes such as the processing of information (Sutcliffe & Vogus, 2003), utilisation of available financial resources (Sutcliffe & Vogus, 2003; Gittell et al., 2006; and Bradley et al., 2011) on the achievement of favourable outcomes following a disruptive event. The studies in this stream have explored the effect of adaptation and resistance to disruptions, as relevant strategies are needed for resilience (e.g. Limnios et al., 2014; Van de Walle, 2014). They also argued the significance of having an appropriate culture as a strategy for responding to difficulties instead of continually making plans for disruptions in the future.

Popular studies conducted on supply chains are part of this research stream of resilience focused on processes and business models. For example, scholars have investigated the importance of supply chain redundancy and flexibility (Sheffi & Rice, 2005) and the creation of supply chains that have increased agility because of improved collaboration and transparency (Christopher & Peck, 2004). However, most studies on supply chain resilience are mostly conceptual (Wishart, 2018). Nevertheless, capabilities that foster the resilience of supply chains have been investigated empirically (e.g., Juttner & Maklan, 2011).

In this study, the effect of firm processes during the response to disruptions are explored, thus extending earlier studies under this research stream of resilience in the business and management domain.

2.2.5.3 Resilience Stream Focused on Anticipation, Prevention, and Response to Difficulties.

An additional stream in the study of resilience in the business context revolves around the proactive anticipation and prevention of threats and the responses made (Wishart, 2018). In this stream, researchers have advanced the concept of resilience capacity where threats are identified by combining factors such as those of the cognitive, behavioural and contextual nature (Legnick-Hall & Beck, 2005). Furthermore, resilience under this stream has been categorised into resilience that involves managing disruptions before escalation (i.e. precursor resilience) and the resilience category where a firm, after addressing an escalated disruption, returns to a state of normalcy (Boin & Van Eten, 2013).

Furthermore, when organisations collaborate effectively with each other during periods of disruptions findings highlight a reduction in the period organisations would have to face the disruption (provided there is a grounded understanding of the disruption and its predictability) (Van de Vegt et al., 2015). The collaboration between organisations is argued as strategically significant for anticipating and responding to likely disruptions (Seville, 2008). According to Williams et al. (2017), the organisations that are dedicated to having processes that foster the identification of difficulties at an earlier time are prone to exhibiting a higher resilience stance even after facing unexpected disruption.

Therefore, exploring resilience in the business context has focused on several subject areas that include employees, processes and business models and the process of anticipating, preventing, and responding to difficulties. However, it is arguable that the mechanism of resilience and the explicit role of dynamic capabilities (sensing, seizing, and transformation) during the response to disruptions is underexplored, especially in the SME context. Therefore, to confirm this stance, the literature on SMEs' organisational resilience is reviewed in the following subsection.

2.2.6 Organisational Resilience Practitioner Literature Overview

From a practitioner's point of view, according to Kerr, (2015, p. 3) "a resilient organisation is one that not merely survives over the long term, but flourishes - passing the test of time". However, resilience does not focus on what has happened to the organisation but rather on how it utilises

what happens to it (Kerr, 2015). Therefore, resilient organisations need to gaze beyond the risk prevention and recovery context, master the changes, adopt long term thinking habits and effectively learn from past occurrences.

According to the bsi group report (2015), several aspects of an organisation, such as its products, processes and people need to be considered for organisational resilience to be built in practice. Firstly, it is assumed that for an organisation to build resilience there is the need to introduce products that are considered new and may likely create new markets, thereby enabling the firm to stay ahead of their competing firms. Secondly, the firm needs to have reliable processes resulting in satisfied customers. Lastly, to build resilience as an organisation, the employee's attitude needs to align with the expectations of the organisation's customer.

In addition, according to the bsi group report (2017), resulting from the review of several standards such as the Guidance on Organisational Resilience (BS 65000), Code of practice for delivering effective governance of Organisations (BS 13500), Supply Chain risk management - Supplier prequalification (PAS 7000) and Risk management - Principles and guidelines (ISO 31000), there are several sets of aspects of organisational resilience. Firstly, the leadership, vision and purpose, reputational risk, financial aspects and resource management aspects are categorised under the leadership roles and responsibilities. Secondly, the culture, community engagement, awareness, training and testing, and alignment aspects are categorised under the organisation's human resources. Thirdly, the governance and accountability, business continuity, supply chain, information, and knowledge management aspects are categorised under the firm's processes. Finally, the horizon scanning, innovation and adaptive capacity aspects are categorised under the organisation's product.

In the practical and academic sense, organisational resilience has developed over time owing to two main drivers, i.e. the defensive (preventing disruptions or challenges from occurring) and progressive (ensuring positive events occur) responses to disruptions or crisis (Denyer, 2017). According to (Denyer, 2017), there are four ways to conceptualise organisational resilience: preventative control, mindful action, innovative adaptation and performance optimisation. By thinking of organisational resilience as a preventative control, resilience is achieved by setting up systems that safeguard the firm giving the firm the chance to return to stability. Nevertheless, by viewing organisational

resilience as a mindful action, the firm's people utilise their knowledge to forecast likely disruptions and adapt to them. The performance optimisation view of organisational resilience results from the continuous improvement of the firm's processes. Lastly, viewing organisational resilience as innovation adaptation implies that resilience is achieved through innovation and the adoption of new tools and ways of doing things.

Overall, organisational resilience is conceptualised by practitioners as "having no finishing line; instead, it's a process of continual improvement" (bsi group report, 2017, p. 11). In light of the recent pandemic, a practical framework to ensure that organisations are resilient has been proposed by the bsi group. The framework highlights four phases through which organisations can practically build resilience in response to the pandemic. First, the organisations go through the survival phase, which refers to a relatively safe place. Secondly, the organisations experience the stability phase where safety is maintained. Thirdly, the organisations are challenged with rebuilding in the rebuilding phase, preparing for the new normal. Finally, the firm arrives at the resilient phase, where plans are made towards achieving a stable future.

The practical literature regarding organisational resilience highlights the varying conceptualisation of the organisational construct similar to the academic literature. However, as earlier stated, organisational resilience is conceptualised as a process in this study that develops over time to explore the role of dynamic capabilities and the owner-manager in building and sustaining the organisational resilience of SMEs.

2.2.7 Organisational Resilience in SMEs

Several published literature references organisational resilience studies conducted in the large organisation context (Linnenluecke, 2017), yet SMEs are essential to the economy (Robbins et al., 2000). Studies exploring SMEs' resilience remain inadequate (Battisti & Deakins, 2015; Conz et al., 2015) irrespective of the contributions of SMEs across a variety of sectors that influence the day-to-day life in an economy (Sullivan-Taylor & Branicki, 2011) and are significant for economic growth. Additionally, SMEs' resilience is substantial to aid competitiveness in the global market (Gunasekaran et al., 2011).

Therefore, studies exploring SMEs' resilience are crucial because extreme events affect SMEs directly and indirectly, and SMEs are known to have fewer resources 'to plan, respond, and recover' (Sullivan-Taylor & Branicki 2011, p. 5568). As earlier stated in this chapter, SMEs are faced with various disruptions that have high variabilities and greatly influence the processes by which SMEs respond to these disruptions (Lee et al., 2013). Nevertheless, SMEs experience more uncertainties that provide opportunities to learn and develop more flexibility and responsiveness (Dahlberg & Guay, 2015).

Quite notably, small firms have proved to be resilient by adapting and learning (Battisti et al., 2019) as learning empowers "firms to question the status quo regularly and push for continuous improvement, leading to a more flexible and adaptable way of doing things" (Altinay et al., 2016, p. 879). This implies that learning fosters resilience in firms during times of disruption and difficulty (Weick & Sutcliffe, 2011), especially SMEs. In addition to learning, SMEs are encouraged to make investments necessary to boost resilience and reduce the rate at which they are vulnerable to disruptions (Herbane, 2010).

However, due to the lack of investments necessary to boost resilience, SMEs are considered unprepared for challenging situations, making them vulnerable when encountering disruptive events (Sullivan-Taylor & Branicki, 2011). Two broad perspectives refer to how SMEs are affected by disruptive events – the vulnerability perspective and the resilience perspective (Smallbone et al., 2012). Based on the vulnerability perspective, it is believed that the size of an SME makes it more vulnerable to disruptions resulting from the lack of resources (Dahlberg & Guay 2015). However, from a resilience perspective, most small businesses survive the immediate aftermath of a disruptive event. In most situations, the owner-managers know what steps to take to adapt to disruptions (Alesch et al., 2001). This implies that SMEs can be resilient despite the absence of resources compared to larger organisations (Dahlberg & Guay 2015).

Additionally, in SMEs, decisions are made quickly as they inherently have less bureaucracy and fewer processes. Therefore, within SMEs, communication is faster, which is an advantage they have over larger organisations (Sullivan-Taylor & Branicki, 2011). Thus, encouraging response to disruptions

promptly before it escalates beyond a point where the owner-manager with fewer damages can effectively control it.

However, SMEs often have a weak cash flow, reducing their capacity to implement long-term strategies required to promote resilience (Ates & Bititci, 2011; Pal et al., 2014). Therefore, access to finance is crucial for SMEs to be able to react resiliently to disruptions (Institute for Family Business, 2018), particularly in times of economic decline. SMEs with sufficient and continuous access to funds have proven to be more resilient (Cowling et al., 2014). Despite the crucial need for financial resources, SMEs also lack the needed external support and harmonic effects to improve their competitiveness (Pal et al., 2014). Thus, several factors are responsible for why SMEs fail. These factors include the lack of investment, minimal external support, minimum business experience, inability to capture and manage innovation, cash flow problems and inadequate planning (Ghobadian & Gallear, 1997). All these factors reduce SMEs' capacity to respond to significant disruptions, eventually causing them to fail.

These factors limit SMEs' ability to adjust to significant disruptions, which, in turn, affects an SMEs' ability to meet the demands of customers due to the high reliance of SMEs on market demands and close integration to the customers (Burnard & Bhamra, 2011). In periods when larger organisations are unable to overcome challenges, adequate efforts must be focused on ensuring SMEs are resilient to overcome uncertainties and these challenges (Bhamra et al., 2011) because they make up a large portion of the economy. According to Herbane (2013, p. 82), "despite their size as individual entities, however, the importance of SME resilience is recognised as a component of a broader community and economic resilience through their provision of human resources as first responders, and operational resources through direct supplies and subcontracted activities on behalf of larger enterprises." Also, resilience is crucial for building sustainable SMEs with a sufficient capacity to respond to changes (Gomes, 2016).

The effective capacity of SMEs to respond to change is crucial to its resilience (Ates & Bititci, 2011). This capacity can be significantly influenced by behavioural and organisational features that promote short-term orientation over long-term orientations in SMEs. This, therefore, "limits the ability of SMEs to change efficiently and effectively, thus their resilience" (Ates & Bititci, 2011; p. 5614). However,

the resilience response framework proposed by Burnard and Bhamra (2011), which is based on the work of Staw et al. (1981) and Barnett and Pratt (2000) presents a critical period during the resilience process, which involves the detection of threats (through feedback from environmental controls and analysis of operational conditions) and activation (through the deployment of resources which are relational and cognitive). The activation phase is followed by a response that can either be a negative adjustment or positive adjustment. The positive adjustment is defined "as the organisation taking a proactive approach during the phases of detection and activation" (p. 5590). Organisations can respond more efficiently to disruptions through this process.

To advance knowledge on how SMEs, despite their challenges, can foster their resilience, this study aims to explore SMEs' resilience mechanism towards achieving various organisational resilience. This advancement of knowledge is grounded in earlier studies that have argued that SMEs can be resilient (Dahlberg & Guay 2015), and their sustainability relies on resilience (Gomes, 2016). Furthermore, the UK's manufacturing industry has been exposed to business performance disruptions, which have resulted from manufacturing firms conducting their operations in environments that have grown to be increasingly complicated (Thomas et al., 2015). Therefore, with the increasing need for manufacturing firms to bounce back to normalcy or thrive after disruptions (Thomas et al., 2015), this study is crucial to SMEs' sustainability, especially those in the manufacturing industry, which are significant for the UK economy.

In the next subsection, the drivers of organisational resilience in SMEs are reviewed to understand the construct further in the SME context.

2.2.8 Drivers of Organisational Resilience in SMEs

2.2.8.1 The Role of Owner-Managers/Entrepreneurs

"Facilitators of resilience" as suggested by Demmer et al. (2011, p. 5409), are specifically relevant to SMEs. This includes ownership of management processes by managers, managers' intense dedication to being innovative, a dynamic pattern of making plans, continuous participation in customer-related tasks that focus on innovation and being mentally focused when recruiting and training employees (Demmer et al. 2011). A positive correlation has been empirically established

between entrepreneurs' resilience and the growth of SMEs (Ayala & Manzano, 2014), highlighting their importance to the resilience outcome achieved in an SME.

Ayala and Manzano, (2014) deduce that entrepreneurs who possess resilience abilities can manage businesses that would grow over time to be successful. This finding corresponds with the research conducted by Powell and Baker (2011). They argue that an SME's resilience is linked to the resourceful character of the owner-manager that ensures the full utilisation of limited resources. Also, whatever motivates an owner-manager's drive, has the potential to affect their organisation's character. Therefore, an owner-manager's "ideological or identity-based" motivations usually affects the resilience of an organisation (Wishart, 2018, p. 18). Furthermore, shared leadership, the responsibility to make decisions and the motivation of employees to be driven towards achieving the organisation's aims and objectives are contributors to an organisation's resilience (Sheffi & Rice, 2005).

However, SME managers are noticed to 'muddle through' challenges that may occur unexpectedly in the day-to-day organisational activities (Sullivan-Taylor & Branicki, 2011). Nevertheless, to become more resilient, SMEs need to develop and retain knowledge concerning how they respond to disruption. Earlier scholars have argued that this type of knowledge retention lacks in SMEs (Pal et al., 2014). The lack of such knowledge retention is due to the attention of entrepreneurs/managers being focused on instant gratification and which promotes inadequacies in strategic planning during the process of decision-making that in no small extent affects an SME's response rate significantly (Burnard & Bhamra, 2011). Nevertheless, SMEs' resilience depends on the owner-managers' ability to choose and utilise a variety of strategies that suit the disruption and environment (Coz et al., 2015).

Being flexible in the choice of strategy to implement fosters an even higher chance of SMEs' survival in turbulent environments (Wishart, 2018). In the study conducted by Smallbone et al. (2012), flexibility and adaptation are significant for an SME's resilience. Furthermore, the owner-manager's social capital and social skills foster the success of small businesses (Baron & Markman, 2000) when responding to disruptions. Social capital can be defined as "the actual and potential resources

individuals obtain from knowing others, being part of a social network with them, or merely from being known to them and having a good reputation" (p. 107).

Fisher et al. (2016) argue in their paper that entrepreneurs display resilience much more than individuals who make up the general population. At the individual level, resilience serves a factor that predicts entrepreneurial success. Nevertheless, there are no established correlations between the success of a firm and individual resilience in their study. However, it should be noted that resilience is not a trait in individuals but rather a process that manifests in individuals (Bernard & Barbosa, 2016) over a timeframe.

The study conducted by Doern (2016), exploring the effect of unexpected disruptions on small businesses in London, argues the significance of the owner-managers' mentality to the business's resilience. According to her, an owner-manager responds to disruptions rather than foresee them and make plans for the disruptions. The study further argues that firms where the owner-manager had the foresight mentality will positively affect the resilience of their organisations. Similarly, Doern (2016) argues that having experience of past disruptions by SME owner-managers will probably increase the SME's resilience. Besides from having the experience of previous disruptions, owner-managers will need to have experience-managing resources (e.g., financial, tangible, intangible, human, and networking) that foster resilience as well (Pal et al., 2014).

In summary, the reviewed literature in this subsection highlights the significance of the owner-managers' role through the transformation of the firm's "tradition and custom" (Billington et al., 2017, p. 427) towards ensuring the resilience of SMEs. In this study, the owner-managers' cognitive and behavioural roles in the resilience process are investigated, primarily towards enacting dynamic capabilities to achieve varying organisational resilience. In the next subsection, the role of capabilities in driving the organisational resilience of SMEs is reviewed.

2.2.8.2 The Role of Capabilities

Capabilities are relevant for the achievement of resilience in SMEs. Three types of capabilities are relevant to the SMEs' resilience (Battisti and Deakins, 2017). Capabilities referred to as the actual resource base (VRIN resources), i.e., the essential resources for a firm to carry out normal day-to-day activities. These capabilities are also classed as zero-order capabilities (Winter, 2003). The

capabilities that create, modify, and extend the resource base to promote response to dynamic environments are referred to as first-order capabilities (Winter, 2003) or dynamic capabilities (Teece et al., 1997). Also, there are capabilities, which are referred to as higher-order capabilities (Winter, 2003), such as learning.

Sullivan-Taylor and Branciki (2011) suggest that four groups of capabilities are required by the management-personnel of SMEs for the sustenance of resilience. These capabilities are rapid decision-making, resourcefulness, technical capabilities, and organisational capabilities. These capabilities can be thought to fall under the categories highlighted by Battisti and Deakins (2017) as rapid decision-making can be classified as a dynamic capability. On the other hand, technical and organisational capabilities, as well as resourcefulness, can be responsible for the day-to-day operations of an organisation.

Battisti et al. (2019) explored the role of various forms of learning to achieve resilient outcomes in small firms. Their study identified that a complex relationship exists between the various forms of learning, i.e. strategic, cognitive, and behavioural learning processes and growth, stability, and survival resilience outcomes. Therefore, through their study, it is established that learning has a relationship with small firms' resilience. Dynamic capabilities are created and developed through learning mechanisms (Eisenhardt & Martin, 2000), which are the main source of dynamic capabilities (Zollo & Winter, 2002). This implies, therefore, that small firms' resilience has a relationship with dynamic capabilities.

The resilience process comprises of firm processes and routines (Sutcliffe & Vogus, 2003) that are influenced by either zero-order capabilities (Winter, 2003; Sullivan-Taylor & Branciki, 2011; Battisti & Deakins, 2017) or dynamic capabilities (Teece et al., 1997; Battisti & Deakins, 2017). Therefore, the resilience of an organisation is ensured by storable, flexible, and convertible dynamic capabilities, and this makes the organisations cope effectively with challenges and crises (Zehir & Narcikara, 2016). Utilising the dynamic capabilities perspective can illustrate how firms handle unexpected events as the routines and processes that enable firms to recover from uncertain events are fostered by dynamic capabilities (Bogodistov & Wohlgemuth, 2017). Furthermore, dynamic capabilities are

crucial for an SME's resilience and a bounce back in environments composed of unexpected events (Battisti & Deakins, 2017). Battisti and Deakins (2017) empirically established that dynamic capabilities are crucial for strengthening SMEs in preparation for future turbulences by creating incident-recovery strategies via network building and extreme examination of the firm's adaptation mannerism.

Additionally, an efficient way to comprehend resilience in small firms is by establishing a discussion around the essential capabilities that promote such firms' abilities to handle dynamic and unexpected situations (Sullivan-Taylor & Branicki, 2011). SMEs cope with uncertain environments by continuously reconfiguring the firm resources, highlighting the need for dynamic capabilities (Parker & Ameen, 2017). Furthermore, an SME's resilience is a function of the capabilities and resources available in the firm (Bhamra et al., 2011), and resilience manifests itself over time (Bernard & Barbosa, 2016). Therefore, the dynamic capabilities theory that evolved from a resource-based view (RBV) is significant for SMEs' resilience and can serve as a vital lens through which resilience and its antecedents can be viewed (Parker & Ameen, 2017).

Therefore, establishing from extant literature, for the study of a small firm's behaviour following disruptions, the use of the dynamic capabilities theory is vital (Battisti & Deakins, 2017). Thus, a better understanding of how SMEs achieve resilience can be gained from focusing on the dynamic capabilities fostering it (Taylor & Branicki, 2011). Furthermore, using dynamic capabilities as a lens for studying resilience sheds more light on the role of the owner-managers during "the deployment of resources and how their perceptions of environmental volatility impact the deployment of resources" (Battisti & Deakins, 2017, p. 79). Extant studies have also highlighted that the perception of owner-managers affects the enactment of dynamic capabilities (Thomas et al., 2015; Ambrosini & Bowman, 2009) because of how the environment is perceived differently by the owner-managers (Argon-Correa & Sharma, 2003).

In Summary, the progression of resilience into the business management domain from its ecological origin has been reviewed, as well as the definitions and conceptualisations of resilience. Also, the literature on organisational resilience in SMEs and its drivers have been reviewed. The review has

highlighted that dynamic capabilities represent a firm's ability to learn and adapt to new circumstances quickly and therefore provides an ideal theoretical lens to underpin this study. This review identified that the process through which dynamic capabilities promote resilience in SMEs (by our knowledge) needs more attention from scholars in the business and management domain. Therefore, to advance the knowledge of resilience as a process possessing dynamism driven by dynamic capabilities, there is a need for adequately understanding the dynamic capabilities construct. Thus, in the following section, an overview of the dynamic capabilities literature is presented.

2.3 Introduction to Dynamic Capabilities

In the preceding sections, it has been discussed that SMEs and organisations in dynamic environments should expect variations and to respond to them accordingly (Eriksson, 2014). The capability to respond systematically to variations is termed as a dynamic capability (Teece, Pisano, & Shuen, 1997). Understanding the competitive advantage of firms over a period is considered as the principal aim of utilising the dynamic capabilities approach (Teece & Pisano, 1994), although other outcomes result from utilising the construct. As a construct, dynamic capabilities traces its origins to strategic management but has had applications in several areas such as marketing, innovation management, entrepreneurship, risk management, and logistics (Eriksson, 2014).

In this section, an overview of the definition, critique, operationalisation, importance and elements that affect dynamic capabilities are discussed before reviewing the literature highlighting dynamic capabilities in SMEs.

2.3.1 Overview of Dynamic Capabilities

The dynamic capabilities concept made its original appearance through the work of Teece, Pisano, and Shuen (1990, 1997) and Teece and Pisano (1994), as there were growing studies on how firms acquired competitive advantage and maintained it as well. Prior to this, the resource-based view concept was advanced by scholars to explain mainly the competitive advantage of firms. Barney (1991) proposed from the resource-based view perspective that firms are a pool of resources with different characteristics, and firms can achieve competitive advantage when their resources are inimitable, rare, non-substitutable, and valuable. The resource-based view intended to explain how

firms achieved a competitive advantage based on their resources and capabilities. Resources are known as "stocks of available factors that are owned and controlled by the firm." In contrast, capabilities are known as "a firm's capacity to deploy resources, usually in combination, using organisational processes, to effect the desired end" (Amit & Schoemaker, 1993, p. 35).

However, the resource-based view had a limitation. It was characterised as lacking dynamism and unable to explain how firms maintained a competitive advantage in response to rapid and unpredictable change, especially with the rise of turbulence in the corporate world (Wiggins & Ruefli, 2005). It was also considered "conceptually vague" and needed more clarity as to how the resources aided competitive advantage (Eisenhardt & Martin, 2000; p. 1106). In response to these limitations, the dynamic capabilities concept was conceptualised as a means of shedding light on the progressive nature of a firm's resources and capabilities (Wang & Ahmed, 2007). The dynamic capabilities concept proposed an answer to the question raised regarding why some firms are systematically able to maintain alignment between their resources and the changing environment (Helfat & Winter, 2011).

Teece and Pisano (1994, 1997) argue that the dynamic capabilities concept extends the resource-based view by taking into consideration the changing nature of the firm's environment and the strategic adaptation, integration, and transformation of "skills, resources and functional competences" (Teece & Pisano, 1994, p. 537) that are either internal or external to the firm in response to the changing environment. According to Teece and Pisano (1994), the dynamic capabilities concept provides a framework that integrates pre-existing conceptualisations and literature. Therefore, the dynamic capabilities concept is built upon theoretical frameworks such as the Schumpeterian theory (Schumpeter, 1934) and various scholars' views (e.g., Williamson, 1975, 1985; Nelson & Winter, 1982; Barney, 1986; and Teece, 1988).

In the term 'dynamic capabilities' as proposed by Teece et al. (1997), the word "dynamic" refers to the capacity to regenerate existing competencies to adapt in response to changing environments. The term "capabilities" highlights strategic management's primary responsibility in the correct adaptation, integration, and reconfiguration of resources and competencies either of internal or external origin to meet the demand of the changing environments. However, the term "Capability"

should offer essential dual functions: planning of activities and performance (Helfat & Peteraf, 2003). Capability can rarely be conceptually disassociated from “acting or practising” (Kurtmollaiev, 2020, p. 7) and should not be considered the same as the term “ability.” Ability refers to the evidential potential to execute, a task if the conditions are well suited to execute it (Carroll, 1993). Whereas, a capability relates to the action of completing the task repeatedly because the conditions are well suited to accomplish the task continuously. This implies that a firm's capability highlights that the firm has attained a base level of functioning that allows for the repetition of an activity, which differs from ad hoc activities that are not planned nor repeatable (Vijaya, Ganesh, & Rahul, 2019). Thus, dynamic capabilities are not similar to ad hoc activities (Winter, 2003).

The extant literature on dynamic capabilities highlights a contrasting difference between ordinary capabilities (or firm resource base) and dynamic capabilities. Ordinary capabilities which are also referred to as operational capabilities (Winter, 2003) and ‘zero-order’ capabilities (Zollo & Winter, 2002) are responsible for how the firm generates rents at the moment towards its normal functioning. Ordinary Capabilities are static routines that are unable to act as sources of competitive advantage because they rarely interact with the environment (Vijaya, Ganesh, & Rahul, 2019). Conversely, dynamic capabilities are responsible for a firm’s transformation (Laaksonen & Peltoniemi, 2018). In other words, ordinary capabilities are responsible for the effective operation of the organisation. In contrast, dynamic capabilities are responsible for sensing and seizing novel business opportunities (Teece, 2007) and reconfiguring ordinary/operational/zero-order capabilities to create opportunities (Eisenhardt & Martin, 2000). However, the difference between ordinary capabilities and dynamic capabilities is fuzzy, and capabilities may be equipped with both ordinary and dynamic intentions (Laaksonen & Peltoniemi, 2018), therefore requiring a definition of dynamic capabilities.

2.3.2 Definition of Dynamic Capabilities

The prominent definition of dynamic capabilities, as given by Teece (1997, p. 516; 2012, p. 1395), defines dynamic capabilities as “higher-level competencies that determine the firm’s ability to integrate, build and reconfigure internal and external resources or competencies to address, and possibly shape rapidly changing business environments.” The definition as given by Teece (1997, 2012) is the most commonly cited definition for dynamic capabilities amongst scholars, and this has

prompted other scholars to rethink the definition of dynamic capabilities (Breznik & Hisrich, 2014), therefore resulting in the emergence of several definitions and ideologies of dynamic capabilities.

Eisenhardt and Martin (2000, p. 1107) defined dynamic capabilities as “the firm’s processes that use resources - specifically the processes to integrate, reconfigure, gain and release resources - to match or even create market change”. Their definition suggests that dynamic capabilities are organisational routines through which organisations can achieve novel forms of existing resources strategically. However, achieving novel forms of the existing resources is not the only result that can be achieved using dynamic capabilities. The definition of dynamic capabilities by Winter (2003) highlights that ordinary capabilities are also the outcome of utilising dynamic capabilities as the scholar defines dynamic capabilities as “those that operate to extend, modify, or create ordinary capabilities.” (p. 340). For the purpose of achieving a comprehensive definition of dynamic capabilities, the ideas of several key contributors, including Teece, Winter, Helfat, and Peteraf have been merged to create a more comprehensive definition. “They define dynamic capabilities as the capacities of a firm to purposefully create, extend, and modify its resource base” (Breznik & Hisrich, 2014, p.371)

The aforementioned definitions of dynamic capabilities do not represent the entire definitions that have been proposed for the construct, as there are other definitions proposed by several scholars (e.g., Zollo & Winter, 2002; Zahra et al., 2006; Helfat et al., 2007; Wang & Ahmed, 2007; Danneels, 2008; Barreto, 2010, etc.). Nevertheless, the varying definitions of the concept, especially regarding its nature, responsibility, conceptualisation, etc. signals a lack of agreement in the dynamic capabilities literature. Scholars conceptualise it as a skill (e.g., Miller & Shamsie, 1996), an ability (e.g. Teece et al., 1997), a capacity (e.g., Helfat et al., 2007, p. 4) or organisational routines (e.g., Eisenhardt & Martin, 2000; Winter, 2003). Furthermore, dynamic capabilities have been classified as “routines” (Eisenhardt & Martin, 2000, p. 1107), and these routines are “upon which [dynamic capabilities] rest” (Teece et al., 1997, p. 525). Therefore, organisational routines are “a repetitive pattern of activity.” (Nelson & Winter, 1982, p. 97) encompassing dynamic capabilities within it.

The definition of dynamic capabilities by Eisenhardt and Martin (2000) highlights dynamic capabilities as unique and observable processes. In agreement with an earlier definition given by Nelson and Winter (1982), Zollo and Winter (2002) highlighted that dynamic capabilities are stable and learned

patterns, i.e., they occur often and can be predicted within the organisation. However, in this study, *dynamic capabilities are defined as processes that utilise, change and build the firm's resource base in response to changes in the firm's internal and external environment* in line with the definition given by Teece, Winter, Helfat, and Peteraf (2009).

According to earlier studies, there are several examples of dynamic capabilities in literature, for example, new product development (Helfat, 1997), re-engineering (Zollo & Winter, 2002), capability to create dynamic capabilities (Helfat & Peteraf, 2003), knowledge management capability (Wang et al. 2007), problem-solving and reasoning (Helfat & Peteraf, 2015), reconfiguration (Fainshmidt & Frazier, 2017), sensing (Helfat & Peteraf, 2015; Fainshmidt & Frazier, 2017), and seizing (Helfat & Peteraf, 2015; Fainshmidt & Frazier, 2017) among others.

Although there are several examples of dynamic capabilities, dynamic capabilities have faced several criticisms from scholars. Literature highlighting the critical scholastic perspectives of the dynamic capabilities is reviewed in the next subsection.

2.3.3 Critique of the Dynamic Capabilities Concept

Although several studies by scholars highlight the significance of the dynamic capabilities concept and its relevance to managers and researchers alike, the approach faces several major criticisms. These criticisms are arguably due to the lack of an agreement in its literature and differences in the conceptualisation of the concept combined to form the dynamic capabilities literature. During the introduction of the concept by Teece and Pisano in 1994, they considered the "processes, positions and paths" as strategic aspects of an organisation. However, Teece et al. (1997), considered dynamic capabilities as rooted in the firm's processes. Furthermore, in 2007, Teece proceeded to disaggregate dynamic capabilities into three capacities through which dynamic capabilities are operationalised: sensing, seizing, and reconfiguration. This made scholars consider the concept of dynamic capabilities as being vague, elusive, and lacking practical relevance (e.g., Kraatz & Zajac, 2001; Zahra et al., 2006; and Arend & Bromiley, 2009).

In addition, the research conducted on dynamic capabilities by other scholars has been critiqued for being largely conceptual (Davis, 2004). However, it is noteworthy to recognise that this criticism has

been discounted by the systematic literature review conducted by Vijaya, Ganesh, and Rahul (2019). The systematic review results demonstrate that of the total papers reviewed, only 29% were conceptual and lacking empirical methods. Furthermore, the "routine" classification of dynamic capabilities (Eisenhardt & Martin, 2000; Zollo & Winter, 2002; Teece, 2007) has been criticised for making "it difficult to identify the source of dynamism in firms" and hinders the extent to which dynamic capabilities can affect change (Salvato & Vassolo, 2018, p. 1729).

In response to the article published by Teece, Pisano, and Shuen (1997), where the dynamic capabilities were discussed in terms of organisations operating in environments characterised by fast technological variations, Eisenhardt and Martin (2000) argued that dynamic capabilities could also be found in firms that operated in environments having moderate dynamism and are significant. The "moderately dynamic" environments refer to environments where "change occurs frequently, but along predictable and linear paths." (Eisenhardt & Martin, 2000, p. 1110). In contrast with fast-changing markets, dynamic capabilities in moderately changing environments have a different nature, corresponding to the common understanding of routines widely termed as 'best practice' (p. 1106).

Conversely, other scholars have argued, "a volatile or changing environment is not a necessary component of a dynamic capability" (e.g., Zahra et al., 2006, p. 922). In agreement with the argument by Zahra et al., (2006), other scholars (e.g., Zollo & Winter, 2002) argued that dynamic capabilities are also useful and enacted in environments having low variation rates. Yet the scholars (Zollo & Winter, 2002 and Zahra et al. 2006) agreed with the argument that dynamic capabilities are more significant in environments characterised by rapid change. Nevertheless, the sustenance of dynamic capabilities in environments characterised by high dynamism is laborious (Eisenhardt & Martin, 2000).

In the current context, this study aims to make a contribution(s) that sought to advance the dynamic capabilities literature empirically. This study also explores the dynamic capabilities in firms operating in environments with moderate dynamism (food and drink industry), extending Eisenhardt and Martin's (2000) argument that dynamic capabilities are discoverable in firms operating in moderately dynamic environments. Therefore, dynamic capabilities' criticisms offer this study an opportunity to

make contributions that extend and debunk claims. However, to make relevant contributions, a review of how dynamic capabilities have been operationalised theoretically needs to be reviewed.

2.3.4 Operationalisation of Dynamic Capabilities

According to several empirical studies conducted on dynamic capabilities, the concept has been operationalised mainly in four ways (Laaksonen and Peltoniemi, 2018). First, it begins with the:

Managers' evaluation – a situation where dynamic capabilities are operationalised based on the managers' perception of the organisation's performance. The studies that have operationalised dynamic capabilities in this manner have mostly focused on the effect of dynamic capabilities on the organisation's performance or the influence of firm or owner features on dynamic capabilities. Second is the *Financial Data* – where dynamic capabilities are operationalised based on financial information. The dynamic capabilities are assumed to have affected the firm's financial status, thereby highlighting the operationalisation of dynamic capabilities. It follows with the *Company's experience, actions, and performance* – where dynamic capabilities operationalised based on "the past experience, actions and performance" (p. 191). Dynamic capabilities operationalised in this manner are based on the notion that if the firm could carry out a particular task, the firm possessed the capacity to do it. Thereby highlights the operationalisation of dynamic capabilities and affecting indicators used to measure profitability, survival, etc. Finally, *Managers' or employees' experience, actions, and performance* – where dynamic capabilities operationalised based on the quality and number of human resources. Studies operationalising dynamic capabilities in this manner assume that the concept is operationalised through the managers and employees and assumed to affect indicators used to measure performance such as sales.

In this study, dynamic capabilities, which have been operationalised, based on *the company's experience, actions and performance and the managers' evaluation*, are studied. The effect of dynamic capabilities on SMEs' resilience process and its corresponding organisational resilience measured using the firm's operations and profitability. The operationalisation of dynamic capabilities based on the experience, deeds, and performance of an organisation aligns with the conceptualisation that capabilities (especially dynamic capabilities) are grown through experience (Helfat et al., 2007). In a previous study, Eisenhardt and Martin (2000) proposed that experience is

relevant for building dynamic capabilities to become experienced in several situations. However, an organisation's wealth of experience does not imply that the organisation has dynamic capabilities that provide the appropriate fitness. However, it improves the organisation's chances of overcoming novel challenges, having learned a thing or two afterwards (Laaksonen & Peltoniemi, 2018).

According to Teece (2007; 2012; 2014a), dynamic capabilities can be operationalised as sensing, seizing, and reconfiguring. In the next sub-section, the literature highlighting the meaning of these components of dynamic capabilities is reviewed.

2.3.4.1 Sensing, Seizing and Reconfiguration

According to Schlemmer and Webb, (2008), dynamic capabilities can be categorised into three sub-categories: learning and building resources, integrating internal and external resources, and resource reconfiguration. However, for operational purposes, dynamic capabilities activities are clustered into three clusters: capabilities for sensing opportunities and threats, seizing opportunities, and transformation or reconfiguration of resources (Teece, 2007; Teece 2012; Teece 2014a). Agreeing with Teece's view, Heger and Boman (2014, p. 148) stated that "the core dynamic capabilities are sensing, seizing and recombination or reconfiguration".

On the one hand, sensing refers to activities linked to the identification and assessment of opportunities (Teece, 2012) and threats (Teece 2007; Matysiak, Rugman, & Bausch, 2018). Sensing involves scanning, the interpretation of situations, learning (Teece, 2007) and threat neutralisation (Matysiak, Rugman, & Bausch, 2018). Organisations can operationalise this dynamic capability to identify opportunities by accessing information that already exists by accessing new information from either within or outside the firm (Helfat & Martin, 2015a). Also, identifying opportunities (and threats) will require a commitment to the scanning, searching, and the exploration of markets (Nelson & Winter, 1982). The identification of opportunities (or threats) starts with the owner-managers interpreting the new information (Teece, 2007), thereby utilising "managerial cognition" (Helfat & Peteraf, 2015).

On the other hand, seizing refers to activities that address the opportunities that have been sensed through the creation of new processes, services, or products (Teece, 2007; Froehlich, & Bitencourt,

2019) and actions which capture opportunities to navigate threats (Popadiuk, Luz, & Kretschmer, 2018). These activities usually involve mobilising resources (Teece, 2012) and usually consists of making investments with the right timing in mind (Matilda Bez, & Chesbrough, 2020). However, according to Teece (2007), organisations are challenged with knowing “when, where, and how much to invest” (p. 1327) because the investments usually require the commitment of financial resources. Therefore, it should not come as a surprise when organisations identify opportunities but cannot seize it (i.e invest).

Finally, *Reconfiguration* refers to activities, which ensure the firm's growth sustainability by the recombination or conversion of existing organisational structures and assets (Teece, 2007; Gumusluoglu, & Acur, 2016; Froehlich, & Bitencourt, 2019). Reconfiguration is mostly operationalised in response to the changes in the firm's environment (Teece, 2012), which are either opportunities or threats (Matilda Bez & Chesbrough, 2020). The activities aim to reorganise operating routines already in use (Pavlou & El Sawy, 2006). However, the reorganisation of routines can be capital intensive (Teece, 2007).

In contrast to both Teece's (2007) and Heger and Boman's (2014) views, Arnold and Thuriaux (1997) presented a framework that clusters dynamic capabilities into three clusters: internal, external, and strategic dynamic capabilities. Firstly, strategic capabilities demonstrate how organisations are enabled to manage and use their capabilities in the market. Strategic dynamic capabilities are also known as adaptive capabilities (Wang & Ahmed, 2007). Secondly, the internal capabilities refer to an organisation's ability to evaluate its condition, allocate skills needed, plan precisely, put to action change where and when needed, and locate and manage its tangible infrastructure concerning competitive requirements. Thirdly, external capabilities are external and involve regulating the interaction between the organisation and the resources required external to the firm (Arnold & Thuriaux, 1997).

However, in this study, the clustering of dynamic capabilities for operational purposes into sensing, seizing, and reconfiguration/transformation is adopted as indicators of operationalised dynamic capabilities. Given that dynamic capabilities are embedded within the firm processes and routines (Teece, 1997; Eisenhardt & Martin, 2000; Zahra et al., 2006), identifying dynamic capabilities

operationalised as sensing, seizing and reconfiguration provides considerable ease towards identifying its operationalisation and presence for analysis. Operationalised dynamic capabilities have been theoretically known to produce relevant outcomes.

Studies conducted on dynamic capabilities (both theoretical and empirically) have argued in favour of a direct correlation between dynamic capabilities and firms' performance (Teece et al., 1997). Similarly, other scholars (e.g., Makadok, 2001) have argued that an organisations' generation of economic wealth occurred because of dynamic capabilities. In the same vein, Zollo and Winter (2002) argued that there is a positive correlation between an organisation's outstanding performance and dynamic capabilities. In contrast to the scholars that have argued the direct correlation between the performance of an organisation and dynamic capabilities (e.g., Teece et al., 1997; Makadok, 2001; Zollo & Winter, 2002; and Teece, 2007), some other scholars have argued in favour of an indirect relationship between dynamic capabilities and the performance of an organisation (e.g., Eisenhardt & Martin, 2000).

Dynamic capabilities are not linked directly to the performance of an organisation but rather impact the performance of an organisation through the transformation of an organisation's resources or processes. To summarise the relationship between dynamic capabilities and organisational performance, Helfat and Peteraf (2009) stated that "dynamic capabilities have a direct effect on firm performance and competitive advantage, as well as an indirect effect through resource reconfiguration" (p. 97).

Therefore, the extant literature implies that the relationship between outcomes such as performance of the firm (Teece et al., 1997; Eisenhardt & Martin, 2000), competitive advantage (Teece, 2007; Sirmon et al. 2010), market share, value creation and value sustenance (Vijaya, Ganesh, & Rahul, 2019) and dynamic capabilities have received considerable attention from scholars. However, it is arguable that the relationship between dynamic capabilities and organisational resilience outcomes is under-researched to date. Thus, this study aims to explore explicitly the role of dynamic capabilities (sensing, seizing and reconfiguration) in building SMEs' resilience.

For dynamic capabilities to be essential and produce relevant outcomes, they depend on organisational resources and processes. In the next section, the literature highlighting the organisational resources and processes needed by dynamic capabilities is reviewed.

2.3.5 Components Affecting Dynamic Capabilities

Drawing from the definition of dynamic capabilities as given by Eisenhardt and Martin (2000); Teece (1997) and Zahra et al. (2006), dynamic capabilities are built on firm-specific resources and processes (routines). Therefore, in this subsection, the resources and processes found in SMEs upon which dynamic capabilities are commonly built (Vijaya, Ganesh, & Rahul, 2019) are reviewed. First are the *behavioural processes*. Eight behavioural processes have been found to foster the development of dynamic capabilities in the existing literature: strategic decision-making, shredding, sensing and shaping, seizing, reconfiguring, attacking rivals, evolutionary learning/co-evolutionary learning, and isolating mechanisms. Second are the *transformation processes*, which refers to the utilisation of 'innovation routines' as it is required to create and modify operational routines that, in turn, build dynamic capabilities. However, this process has met resistance to change commonly found in organisations, which then requires the management of this resistance, highlighting another transformation process necessary for developing dynamic capabilities.

Third, are the *work processes*. Five effective work processes foster the development of dynamic capabilities: the investigation, soaking up and utilisation of knowledge; the regulation of knowledge that is a crucial aspect of the learning process; the gathering of organisational experience; integration of soaked up knowledge with the gathered organisational experience and; the management of processes to ensure stability. Fourth are the *financial resources*, which are relevant as they influence different aspects of an organisations commercial plan. Financial resources are appropriate for the maintenance of the operational capabilities and the creation of dynamic capabilities. The costs incurred by utilising processes and other resources are settled with financial resources. Also, the operationalisation of the dynamic capabilities, significantly seizing, requires investments made with financial resources (Teece, 2007).

Fifth are *infrastructure resources*. These resources such as organisational buildings, networks of communication, etc. make up the infrastructural resources upon which dynamic capabilities can be

built. Sixth are *information or knowledge resources*. These are the dominant knowledge that exists inside or outside the organisation, which is a vital resource. Relevant knowledge that is discrete or openly known is essential for the building of dynamic capabilities. Next are *social networks and relationships resources*. This posit, "alliance may be joining of forces, for a specified or indefinite period, to achieve a common objective" (p. 40). Inter-organisational alliances are considered more relevant than intra-organisational partnerships to build dynamic capabilities, as strategic relationships are built when two or more organisations collaborate to achieve a common goal. The inter-organisational relationship fosters knowledge sharing. Finally are the core *human resources* that enable organisations to adapt strategically to dynamic environments. Human resources are essential for the process as the resource is crucial for learning and adaptation in organisations. These resources are especially relevant in the operationalisation of dynamic capabilities through sensing, seizing, and reconfiguration as they each depend on the 'managerial cognition' of the owner-manager (Eggers & Kaplan, 2013; Felin et al., 2015; Helfat & Peteraf, 2015).

Accordingly, the individual(s) at the upper echelon of management leading an organisation is (are) vital to the instigation of several roles such as the planning, formulation, and implementation of strategies and making decisions (Adner & Helfat, 2003; Helfat & Peteraf, 2015; Teece, 2007). Studies conducted by several scholars have highlighted the positive influence of leadership on the dynamic capabilities in organisations through the management of success traps (Wang et al., 2015), the intentional composition of dynamic capabilities (Kor & Mesko, 2013), creation of strategies, making plans and budgets, giving directions and mindfully observing the environment (Rosenbloom, 2000; Bititci et al., 2011).

Actions exhibited by managers significantly affects dynamic capabilities (Martin, 2011). This is so for several reasons. Firstly, managers are responsible for developing capabilities crucial for the formulation and implementation of relevant strategies. Secondly, managers are tasked with the organisation's overall performance and, finally, the proper and efficient utilisation of the organisational resources and processes that are relevant for the development of dynamic capabilities (Vijaya, Ganesh, & Rahul, 2019).

In the extant literature, several scholars have highlighted the actions exhibited by managers that influence dynamic capabilities: keeping track of firm performance, utilisation of resources, management of employees, firm premises and communication with customers (Davenport, 1993), performance management, building relationships, change management, knowledge management (Bititci et al., 2011) and the utilisation of 'managerial cognition' (Helfat & Peteraf, 2015). These actions have been proposed to positively influence dynamic capabilities, as managers' actions can foster change when firms experience sudden environmental disruptions (Salvato & Vassolo, 2018).

Disruptions are manifold, and so are their effects on small firms. The extent to and way in which small business owners respond to these opportunities and threats depends on their ability to adapt to the firm's resource base (Teece, 2012). The dynamic capabilities view emphasises the critical role of managers in the deployment of resources and how their perception of the disruption impacts the deployment of those resources. Therefore, it is argued that dynamic capabilities lie within the firm's core management (Teece, 2007; Helfat & Martin, 2015; Helfat & Peteraf, 2015). The managerial judgment influences the deployment of dynamic capabilities (Ambrosini & Bowman, 2009). Therefore, similar firms deploy different dynamic capabilities because of the differences in their managers' perception of disruptions (Aragon-Correa & Sharma, 2003). However, it is worth noting that the deployment of dynamic capabilities is not restricted to the organisation's top management members. Employees can also deploy it given the right conditions and relationships in the organisation (Salvato & Vassolo, 2018).

This study builds on Teece's (2007) core dynamic capabilities of sensing, seizing and reconfiguration to explore how cognitive, behavioural and relational capability endowments (Williams et al., 2017) of small business owners are enacted in the day-to-day practices of preparing for and adapting to disruptions. Studies focusing on the individuals of the upper echelon (owner-managers) of the organisation has been critiqued for overlooking the "creativity of lower-level employees" (Salvato & Vassolo, 2018, p. 1729). However, the decision to focus on the owner-managers has not been taken to conceal employees' contribution to the resilience process, but as a starting point in investigating the role, dynamic capabilities play in the resilience process.

Therefore, firms having dynamic capabilities are expected to have one or more of the resources or processes, stated above. However, the resources can either originate from within the firm or be obtained from outside the firm. Irrespective of the origin of the resources, dynamic capabilities require resources they can extend or modify (Teece, Winter, Helfat, & Peteraf, 2009) and processes through which it is operationalised (Eisenhardt & Martin, 2000).

In the next subsection, the literature focused on dynamic capabilities in the SME context is reviewed to present an overview.

2.3.6 Dynamic Capabilities in the SME Context

According to Di Stefano et al., (2010), the core papers produced as a result of the development of research work on the dynamic capability concept present explicit or implicit attention on the occurrence of dynamic capabilities in large (mostly multidivisional or multinational) organisations (e.g. Teece et al., 1997; Eisenhardt & Martin, 2000; Galunic & Eisenhardt, 2001; Zollo & Winter, 2002; Zahra et al., 2006; Augier & Teece, 2007; Teece, 2007, 2014). However, the characteristics of SMEs make them unique. Thus, scholars cannot consider SMEs as smaller models of large organisations (Saunila et al., 2014). As discussed earlier in this chapter, SMEs differ in their structure from large organisations, have limited resources (human and financial capital) and rely on the patronage of a small number of customers in markets that are limited (Hudson et al., 2001; Hausman, 2005). Nevertheless, innovation and change management are fostered in SMEs due to the flat and flexible structures available (Tallott & Hilliard, 2016).

Taken as a whole there is a shortage of research work that has explored dynamic capabilities in smaller firms or SMEs (Zahra et al., 2006), and little effort has been directed to remedy the situation (Tallott & Hilliard, 2016). Furthermore, there is the rise in speculations concerning the application of the dynamic capability construct explored in a large organisational context to SMEs (Hausman, 2005; Sawers et al., 2008). However, only a few studies focus on the implications of the construct for SMEs (e.g., Branzei & Vertinsky, 2006; Ruzzier et al., 2006; Zahra et al., 2006; Nedzinskas & Pundziebe, 2013). Therefore, it is relevant to conduct a systematic literature review of the published articles highlighting the studies conducted on SMEs' dynamic capabilities to provide clarity on what has been explored and what needs to be explored, especially in this present study.

In this section, the literature on dynamic capabilities has been reviewed. The review highlighted the origin, definition of dynamic capabilities, and what scholars have critically argued in regards to the construct. Also, how scholars have measured the construct, its importance and factors that influence the construct have been reviewed. In addition, the literature regarding dynamic capabilities in SMEs was reviewed to highlight the presence of dynamic capabilities in SMEs.

In summary, in this chapter, the SME, resilience, organisational resilience and overview dynamic capabilities literature have been reviewed. The review in this chapter has highlighted the significance of exploring organisational resilience in SMEs, especially those operating in the food and drink industry. Given that SMEs are operating in increasingly unstable environments, the reviewed literature in this chapter highlighted the significance of dynamic capabilities in SMEs for an efficient response to the environment. The next chapter follows with a systematic literature review using relevant search words to summarise the existing studies in this area and thereby make enquiries into studies that have explored the relationship between dynamic capabilities and the organisational resilience of SMEs.

CHAPTER THREE

SYSTEMATIC REVIEW OF DYNAMIC CAPABILITIES IN SMEs

3.1 Introduction

"A systematic literature review is characterised by an explicit, rigorous, and transparent methodology" (Korber & McNaughton, 2017, p. 2). Therefore, in pursuit of this, the method through which scholarly articles were obtained is outlined. Secondly, this present study highlights how the scholarly articles were analysed to produce the crucial conversations engaged in by scholars before presenting the results of the overall systematic literature review. The pursuit stimulates the systematic review to demonstrate the extent to which research exploring dynamic capabilities in small and medium enterprises (SMEs) have been conducted and, thus, highlight what has been done and what can be done in the context of this present study. In this research, the systematic review procedure utilised by other scholars (e.g., Laaksonen & Peltoniemi, 2018) is adopted to meet the objectives of the review, which is:

- To review critically the scope of research conducted on dynamic capabilities in SMEs, and
- Identify literature needed for the formulation of a conceptual framework linking Dynamic capabilities and resilience in SMEs.

3.2 Methodology

Despite several studies exploring dynamic capabilities since its inception in 1994, little attempt has been made to present the findings systematically, especially when it relates to SMEs. This study's systematic review has been conducted through several stages to provide a systematic and explicit procedure for the review. The following steps are followed in this study to conduct the systematic literature review:

1. The researcher identified keywords on the subject based on the preliminary reading of articles related to dynamic capabilities and a series of mind juggling thoughts. The identified keywords included the following; Dynamic capabilities, Small and Medium enterprise, Small company, Small companies, Small firm, Small firms, Small business, Small businesses, Small

enterprise, Small enterprises, Small-and medium-sized, Small and medium-sized, Small-and medium sized, Small-and medium-size, Small and medium-size and Small-and medium size, among others.

2. The keywords were structured into search strings (for a Boolean search) to ensure that the peer-reviewed articles contained the words "dynamic" AND "capabilit*" AND "small and medium enterprise" OR "small company" OR "small companies" OR "small firm" OR "small firms" OR "small business" OR "small businesses" OR "small enterprise" OR "small enterprises" OR "small-and medium-sized" OR "small and medium-sized" OR "small-and medium sized" OR "small and medium sized" OR "small-and medium-size" OR "small and medium-size" OR "small-and medium size" OR "small and medium size" OR sme OR smes in the title or abstract.
3. A search was conducted on the University of Portsmouth's database called business complete EBSCO (which is a top-class database) using the keywords. The database is a relevant tool containing peer-reviewed business journals essential for business students. The database is restricted to the business area. It consists mainly of articles in the business and management context, thereby eliminating articles that would have otherwise populated the search outcome but not relating to business and management.
4. The researcher read the abstracts and removed ones that did not highlight the study of dynamic capabilities in the SME context on a firm-specific level. Studies that were not empirical were kept depending on their relevance to this present study.
5. By using the inclusion and exclusion criteria (Appendix 11), the articles were grouped by the researcher into three categories after reading the abstracts. Category A = articles with relative/particular relevance with empirical data, category B = articles partially relevant and mostly conceptual and category C = articles with no relevance. Some articles, which were relevant, but conceptual, were added into the category of relevant articles. The articles in category B and C were reread, and relevant articles were added to category A in the next stage, whereas, some papers from category B and most papers from category C were removed.

6. The researcher downloaded the full-text versions of the qualifying articles.
7. The relevant articles were exported into the Mendeley software, and the whole text read rigorously. At this stage, an article was included in the final sample only if it discussed at least one construct that was identified as a dynamic capability and firm-specific.
8. The researcher wrote sections as the articles relevant to particular themes were reviewed.

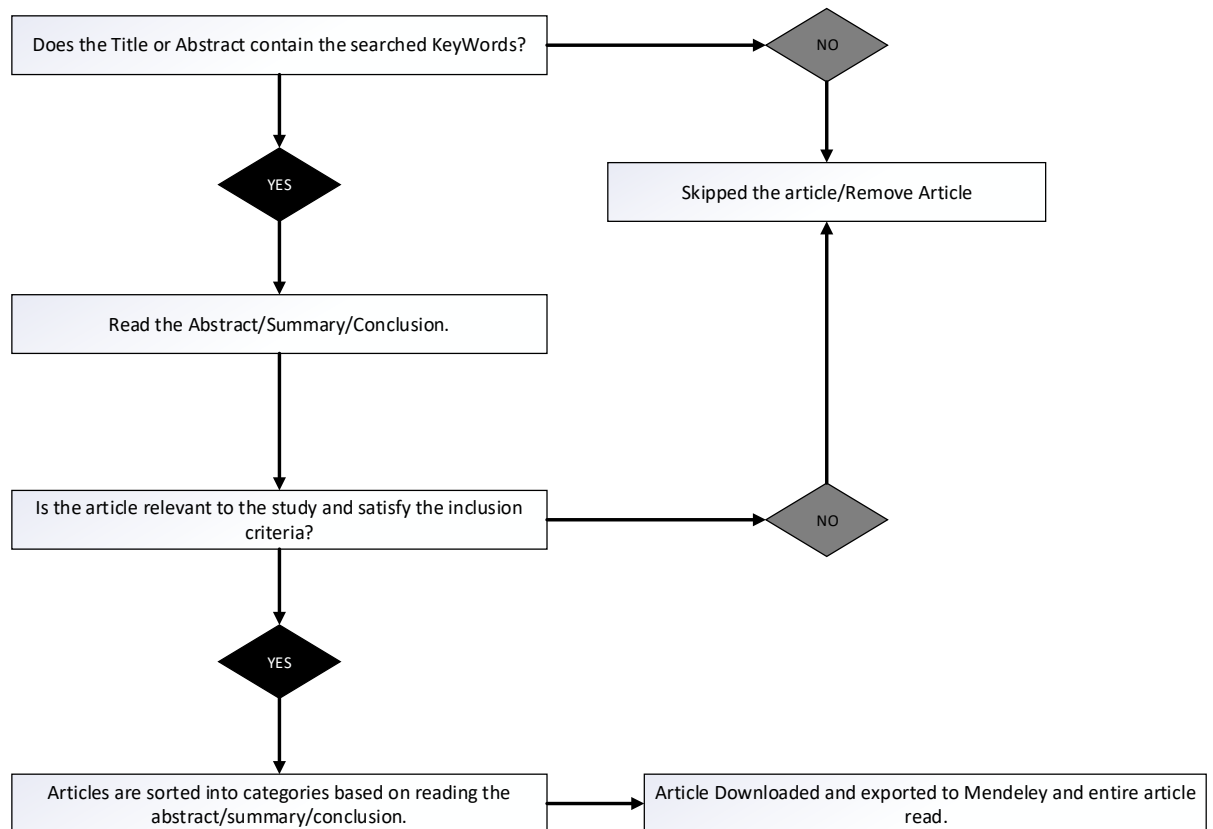


Figure 3.1: The systematic literature search and review process.

3.3 Methodological Challenges

The subject of dynamic capabilities has been studied widely in several disciplines using a range of methodologies. In this review, the focus was placed on the study of the construct in SMEs and not large organisations. Consequently, there were inherent issues and limitations in the approach used.

Summarily, a search was conducted using 'Dynamic' and 'capabilit' AND "SMEs" at the initial stage of the review produced relevant papers. Nonetheless, after assessment by other authors, it was discovered that several other relevant articles were not discovered through the first search and

therefore not included in the result. Based on other authors' suggestions, further search for relevant articles was conducted by searching through top-rated business journals and small business journals individually. The suggested process proved to be time-consuming and posed a major challenge given that the PhD programme is strictly a time-based study. However, the challenge was resolved using SME variations that were obtained from the article titled; Inter-organisational relationships involving SMEs: A bibliographic investigation into the state-of-the-art by Lara Agostini and Anna Nosella (2018).

3.4 Systematic Literature Search Evidence Base

In the first stage of the search, using the search term to conduct a Boolean search for peer-reviewed articles on the business complete EBSCO database in the abstracts and titles produced 184 articles and 28 articles, respectively (search performed on the 14/07/2020). These articles revealed that dynamic capabilities has been studied in several areas within the business and management domain. These areas included organisational behaviour, entrepreneurship, operations management, economics, leadership, marketing, and strategic management. Furthermore, several journals have published these articles.

Also, the search term `dynamic capabilit*' aided in the inclusion of relevant articles. However, it also resulted in the addition of papers that were not relevant. The focus of such irrelevant articles are on capabilities, which have not been explored as dynamic capabilities. In addition, the variations of SMEs used for the literature search ensured that the resulting articles were presenting studies conducted in the context of SMEs and not large organisations. Nevertheless, this also produced articles that presented studies where dynamic capabilities were studied in contexts that were not acceptable for this study, such as hotels and small and medium-sized suppliers. In the end, after sifting through the resulting articles using the exclusion and inclusion criteria, there were 72 articles (see Table in Appendix 5) considered relevant for summarising the scholarly work that has been conducted on dynamic capabilities in the context of SMEs. The outcome was considered relatively low, given the significance of SMEs to countries' economies and the proposed importance of dynamic capabilities to foster competitive advantage and the performance of organisations (Teece et al. 1994, 2007).

The countries that feature within the studies form a basis through which the papers reviewed can be analysed. The results indicate that there is a higher number of studies conducted in the United Kingdom followed by those conducted in Spain and then the United States of America. The number of studies focusing on SMEs in the UK compared to other countries indicates, in light of the proposition of this study, that scholars in the United Kingdom have made an average contribution to the subject. Consequently, it is noteworthy to recognise that the percentage of articles focusing on the UK SMEs is low compared to the total number of articles obtained from the search (7 out of 72 articles), which is approximately 5%. This would suggest that there is still a need for more effort to study dynamic capabilities empirically in the SME context, especially focusing on SMEs operating in the UK. Accordingly, this present study contributes in this regard. Table 3.1 below presents a summary of the number of papers and its corresponding origin.

Table 3.1: Table showing the number of papers and country of research obtained through the systematic search.

Country	Number of papers
Australia	2
Brazil	1
Canada	2
China	5
Croatia	1
Denmark	2
Estonia	1
Finland	3
Germany	5
Greece	1
India	2
Indonesia	1
Italy	2
Ireland	2
Israel	1
Korea	1
Lithuania	1
Mexico	1
Netherlands	5
New Zealand	1
Norway	3
Pakistan	2
Poland	1
Portugal	1
Scandinavia	1
South Africa	2
Spain	5
Sri Lanka	1
Sweden	2
Switzerland	1
United Kingdom	7
United States of America	6
Total	72

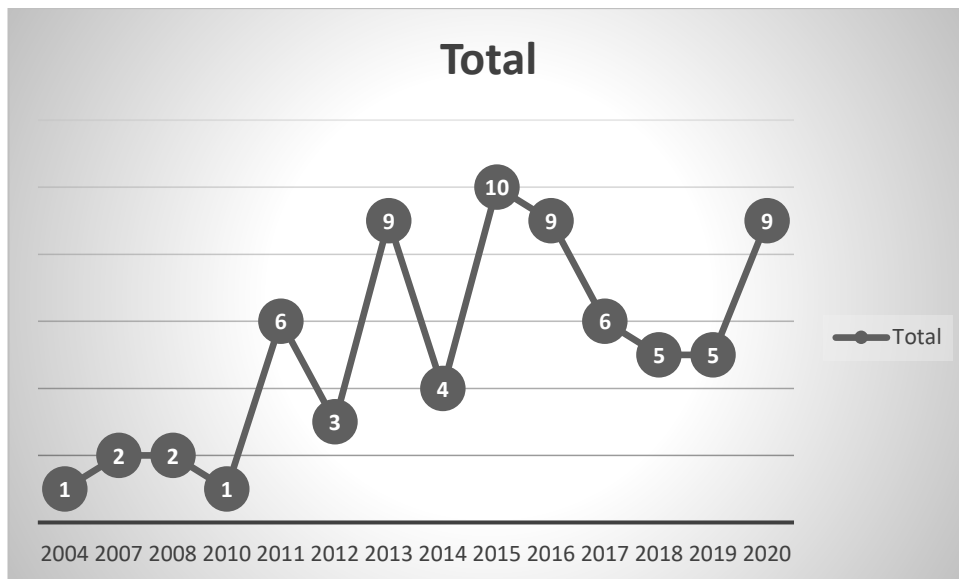


Figure 3.2: Figure presenting the number of articles per year.

The year of publication forms another basis through which the papers reviewed can be analysed. The result highlights that the study of dynamic capabilities in the context of SMEs is relatively recent. The reviewed 72 papers span from 2004 to 2020 (Papers presented in Appendix 5 and figure 3.2 above illustrating these findings). The result highlighted an upward trend in the study of dynamic capabilities in SMEs between years 2010 to 2011 and followed by a decline in 2012. However, the number of publications peaked again in 2013 and declined in 2014. Between 2015 and 2016, articles published maintained an average of nine articles but was followed with a decline in the number of publications held between 2017 and 2019. This finding indicates that the area is relatively new for investigation and research like this study can perhaps make a significant contribution to the research area as the results suggest a growing interest in the study of dynamic capabilities in SMEs' context.

In the following section, this study discussed the empirical studies conducted on dynamic capabilities in the SME context based on the themes that emerged from the articles found through the systematic literature search.

3.5 Emerging Themes from the Empirical Research of Dynamic Capabilities in the Context of SMEs

There have been advancements empirically to understand the micro-foundations of dynamic capabilities with an emergence of various studies indicating a well-illustrated connection between

processes, resources, and individuals within a particular context. Although SMEs may not have been an area of interest for previous studies, they have not been left unattended (Rice et al., 2015). They have provided a context for studies into dynamic capabilities.

The search for themes in the articles identified through the systematic literature review provided the following themes: drivers/enablers of dynamic capabilities in SMEs and outcome of dynamic capabilities in SMEs. The following discussion is an attempt to discuss each theme's significant aspects, based on the empirical literature of the identified articles.

3.5.1 Drivers/Enablers of Dynamic Capabilities in SMEs

3.5.1.1 Individual/Owner-Manager/Entrepreneur

Dynamic capabilities are available in SMEs, including start-ups, and these dynamic capabilities in start-ups have manifested in the several forms including sensing, seizing and reconfiguration (Ma, Zhou, & Fan, 2015; Tallott, & Hilliard, 2016). However, the owner-managers or entrepreneurs are the enactors of the dynamic capabilities' development in SMEs (Peters, Snowden, Schlemmer, & Webb, 2008). They are the source of dynamic capabilities as they are the founders themselves and have imported them into the firm. Hence, from the very beginning, SMEs have dynamic capabilities (Arend, 2014).

In more cases than one, owner-managers of SMEs 'spin-off' from other organisations start their own business and thus take along with them the parent company's cognitive, managerial and social skills (Laviolette, 2019). Therefore, capabilities are present in individuals who can be intentional when combining and organising resources to create value. For example, sensing dynamic capabilities resides only in the owner-manager or in some cases, the responsibility is shared with the closest collaborators. Accordingly, depending on the changes in the environment, seizing and allocating resources can be enacted by members of the executive team (Garbellano & Da Veiga, 2019).

Changes in a firm's environment can either create opportunities or pose threats to the firm (Khan, Atlas, Xuehe, Khan, & Khan, 2020) and owner-managers operationalise the sensing dynamic capabilities successfully depending on their cognitive capabilities. Cognitive capabilities play an essential role in identifying opportunities and threats in the business environment (Eriksson,

Nummela, & Saarenketo, 2014). This implies that owner-managers can scan their environment and based on their cognitive capabilities; they can perceive it either as opportunities or threats (Khan, Atlas, Xuehe, Khan, & Khan, 2020).

However, the cognitive capabilities of owner-managers are influenced by several factors such as the manager's experience, knowledge and education (Sternad, Jaeger, & Staubmann, 2013; Koryak, Mole, Lockett, Hayton, Ucbasaran, & Hodgkinson, 2015; Ma, Zhou, & Fan, 2015; Carrick, 2016; Khan, Atlas, Xuehe, Khan, & Khan, 2020), social networks (Mudalige, Ismail, & Malek, 2016; Khan, Atlas, Xuehe, Khan, & Khan, 2020), scenario planning and early warning scanning (Ramírez, Österman, & Grönquist, 2013). It is noteworthy to recognise that in SMEs, the search for opportunities is not usually conducted systematically but traditionally based on intuition (Kuuluvainen, 2012). The routines serving as the foundation for the sensing process can switch between automatic and conscious cognitive mode, depending on what is needed (Gajendran, Brewer, Gudergan, & Sankaran, 2014). Thus, highlighting the significant role of the psychological state of the owner-manager.

Similarly, seizing opportunities and the reconfiguration of resources to avert threats are impacted by the owner-manager's cognition (Gajendran, Brewer, Gudergan, & Sankaran, 2014). However, seizing opportunities depends mostly on the mobilisation and orchestration of external resources in small firms (Ma, Zhou, & Fan, 2015). Seizing opportunities is conducted through collaborations (Salehi, Zolkiewski, Perks, & Bahreini, 2018) and reconfiguration depends on the internal and external resources available to adapt to opportunities and change directions if needed to respond to threats (Ma, Zhou, & Fan, 2015). However, the enactment of the sensing, seizing, and reconfiguration dynamic capabilities do not always occur systematically, as SMEs' decision-making process is not structured. Nevertheless, owner-managers can develop the dynamic capabilities to an optimal level required by the firm. This is because the firm learns from previous challenges and gradually establishes effective processes to combat past errors (Massa, Andreassi, Lana, & Lyra, 2020).

Through strategic decision-making and learning, managers can deliberately develop sensing, seizing, and reconfiguration dynamic capabilities (Ma, Zhou, & Fan, 2015). However, to do this successfully, owner-managers will be required to exhibit leadership qualities with the possession of an entrepreneurship mindset and behaviour (Abro, Memon, & Arshdi, 2011). An entrepreneurship mind-

set and behaviour is significant as this creates a foundation for dynamic capabilities to play a role in the firm (Woldesenbet, Ram, & Jones, 2012) and positively influences the development of dynamic capabilities (Mudalige, Ismail, & Malek, 2016). The entrepreneurship mindset and behaviour is characterised by forward-thinking (Abro, Memon, & Arshdi, 2011; Heger, & Boman, 2015), cultural awareness and a global mentality (Eriksson, Nummela, & Saarenketo, 2014), social capital (Mudalige, Ismail, & Malek, 2016) and self-efficacy (Kevill, Trehan, & Easterby-Smith, 2017). Therefore, owner-managers sense for opportunities and threats through entrepreneurial orientation (Eriksson, Nummela, & Saarenketo, 2014) depending on their existing knowledge, gathered experience and external information (Ma, Zhou, & Fan, 2015; Carrick, 2016), to capture opportunities by mobilising resources and do necessary reconfigurations (Woldesenbet, Ram, & Jones, 2012).

As an added advantage, the employees' actions also lead to the creation of new opportunities alongside the owner-managers' action (Macpherson, Herbane, & Jones, 2015). Therefore, owner-managers alone do not affect the development of dynamic capabilities but also employees who have important roles to play in the organisation (Mennens, Van Gils, Odekerken-Schröder, & Letterie, 2018). Nevertheless, irrespective of who influences the development of dynamic capabilities (either the owner-manager or key employees), deliberate actions are crucial for enacting the development process. Activities such as taking care of external networks to aid resources accretion (Macpherson, Herbane, & Jones, 2015) and developing dynamic capabilities based on their expertise (Garg, & Kumar, 2014). Therefore, action or implementation is more important than just having an idea (Rungi, 2013) as owner-managers need to make decisions quickly when operating in turbulent environments (Pavlou, & El Sawy, 2011). Thus, performance is facilitated by the successful deployment of dynamic capabilities (Rice, Liao, Galvin, & Martin, 2015).

In summary, the discussion in this subsection highlights that in SMEs, individuals primarily in the owner-manager and some employees drive sensing, seizing, and reconfiguration capabilities and other capabilities. In this study, the exploration of the role played by the owner-manager towards enacting the dynamic capabilities during the resilience process is attempted to contribute to the knowledge of the role of owner-managers in SMEs towards achieving varying resilience outcome.

3.5.1.2 Learning/Knowledge Acquisition

For SMEs to create the dynamic capabilities required to cope with sudden changes in the market place, they need to take advantage of their relationships, especially those that give them access to relevant new information (Carlos, 2011). In SMEs, informal sources serve as the source of information for SMEs. The received information is usually combined with market information to make decisions (Kuuluvainen, 2012). The informal source of information usually refers to the customers, as they are the primary source of information and learning in an SME (Bhatti, Larimo, & Servais, 2020). Therefore, successful firms effectively explore and deeply analyse their customer data to identify changes in behaviour, trends and emerging needs. This provides knowledge and learning that impact the firm's macro-level factors (Bhatti, Larimo, & Servais, 2020).

Furthermore, a proactive learning culture is crucial for SMEs wishing to achieve success. This is because a proactive learning culture fosters the development and refinement of dynamic capabilities (Gnizy, Baker, & Grinstein, 2014). However, to achieve a proactive learning culture, skills that promote the transfer of knowledge within the firm is needed, as it is significant for the learning process to be efficient (Cyfert, & Krzakiewicz, 2016). The capability to derive and transfer knowledge in an organisation is a skill of much significance in the process of learning (Cyfert & Krzakiewicz, 2016).

Dynamic capabilities originate from the learning conducted by a strategist or an entrepreneur (Fernandes, 2017) and learning is part of dynamic capabilities (Fernandes, Ferreira, Gimenez, & Rese, 2017). Thus, dynamic capabilities such as dynamic learning and knowledge management developed in SMEs through the acquisition of knowledge and utilisation of transformation capabilities are essential especially when needed to overcome SMEs' challenges (Calderón, Fayos, & García, 2018). The relative significance of ordinary and dynamic capabilities changes depending on a firm's capacity to process information (Qaiyum, & Wang, 2018). For the utilisation of sensing and seizing dynamic capabilities, learning and education, experience, and financial resources are required to enable dynamic capabilities (Kuuluvainen, 2013).

The discussion in this subsection highlights the importance of learning as part of the dynamic capabilities process development. In addition, the findings highlight the importance of customers

towards the accumulation of information needed by firms. In this study, learning, especially in the form of sensing dynamic capabilities, will be explored as an operationalisation of dynamic capabilities and an indication of events that have taken place after the resilience process.

3.5.1.3 Resources

SMEs need resources because resources in a firm can be reconfigured to respond to changes in the firm's environment that were previously sensed and seized (Gajendran, Brewer, Gudergan, & Sankaran, 2014). Therefore, without resources, there will be nothing for dynamic capabilities to act upon to enable a response to the changes in the environment. Therefore, the owner-managers of SMEs need to search for resources when the firm lacks the necessary resources required to respond to changes in the firm's environment. This accumulation of resources can be achieved through what is called 'resource accretion'. During periods of crisis, entrepreneurs respond by accreting resources, because this expands the firm's resource options and supports the firm's adaptation to environmental crisis by overcoming constraints within the firm such as lack of foresight, technical knowledge or risk management (Macpherson, Herbane, & Jones, 2015). Thus, resources are crucial if a firm wishes to excel (Fernandes, Ferreira, Gimenez, & Rese, 2017).

Similarly, appropriate information systems in SMEs foster dynamic capabilities (Jones, Beynon-Davies, Wang, & Shi, 2011) as the information itself is a useful resource for every organisation. Also, information technology (IT) infrastructure significantly plays a role in establishing the ability of SMEs to organise and coordinate resources (Wang & Shi, 2011). ICT capabilities influence the dynamic capabilities of small firms. In addition, they promote the evolution of various dynamic capabilities, contributing to the competitive edge of SMEs (Parida et al., 2016).

Therefore, resources form the foundation for dynamic capabilities to thrive in small firms in response to the changes in a firm's internal and external environment. In this study, the utilisation of resources in response to disruptions during the resilience process will be explored as an enabler of dynamic capabilities in the resilience process.

In summary, the discussion in this subsection has highlighted the three drivers of dynamic capabilities in SMEs. In the next section, the discussion highlights the studied outcome of dynamic capabilities investigated in the SME context.

3.5.2 Outcome of Dynamic Capabilities in SMEs

The extant literature documenting the investigation of dynamic capabilities in the SME context highlights several dynamic capabilities present in SMEs. For example, dynamic capabilities such as research and development, recruitment capabilities, managerial capabilities, market-oriented sensitivity, social-networking capability, sensing capabilities, seizing capabilities, transformation capabilities, etc. (Chang 2012; Kuuluvainen, 2012; Salehi, Zolkiewski, Perks, & Bahreini, 2018).

In most of the studies conducted in SMEs exploring dynamic capabilities, scholars have sought to explore the relationship between the different forms of dynamic capabilities and other constructs such as performance, competitive advantage among others of the firms that took part in the study. For example, some studies investigated the relationship between dynamic capabilities and the firm's profitability (Caloghirou, Protogerou, Spanos, & Papagiannakis, 2004; Guo, & Cao, 2014). Dynamic capabilities such as dynamic managerial capabilities are directly linked profitability (Caloghirou, Protogerou, Spanos, & Papagiannakis, 2004) while some other dynamic capabilities have a negative relationship with the profitability of a firm (Guo, & Cao, 2014).

In addition, several other scholars explored the relationship between dynamic capabilities and partnership success (Sawers, Pretorius, & Oerlemans, 2008), the scope of accounting services (Døving, & Gooderham, 2008), export efficiency (Villar, Alegre, & Pla-Barber, 2014), innovation performance (Nolsøe Grünbaum, & Stenger, 2013; Naldi, Wikström, & Von Rimscha, 2014), sales growth (Uhlener, van Stel, Duplat, & Zhou, 2013), technological innovation and operational performance (Ju, Park, & Kim, 2016), public procurement (Calderón, Fayos, & García, 2018) and product value creation (Khalil, & Belitski, 2020). The relationships are mostly positive (Døving, & Gooderham, 2008; Nolsøe Grünbaum, & Stenger, 2013; Villar, Alegre, & Pla-Barber, 2014; Naldi, Wikström, & Von Rimscha, 2014; Ju, Park, & Kim, 2016; Calderón, Fayos, & García, 2018; and Khalil, & Belitski, 2020) although some are positive through mediating factors such as product and process innovation (Uhlener, van Stel, Duplat, & Zhou, 2013) and technological innovation (Ju, Park, & Kim, 2016). Also, outcomes such as partnership success have a positive relationship with external dynamic capabilities but a negative relationship with SMEs strategic and internal dynamic capabilities.

Recently scholars have explored the relationship between dynamic capabilities and outcomes such as business sustainability (del Mar Alonso-Almeida, Buil-Fabregà, Bagur-Femenías, & Aznar-Alarcón, 2017; Eikelenboom, & de Jong, 2019), stakeholder engagement (del Mar Alonso-Almeida, Buil-Fabregà, Bagur-Femenías, & Aznar-Alarcón, 2017) and environmental performance (Mahmud, Soetanto, & Jack, 2020; Sánchez-Medina, 2020). The studies found a positive relationship between both constructs further emphasising the relevance of dynamic capabilities for the realisation of several outcomes in SMEs. Examples of the dynamic capabilities found to have a positive relationship with business sustainability; stakeholder engagement and environmental performance are individual dynamic capabilities (del Mar Alonso-Almeida, Buil-Fabregà, Bagur-Femenías, & Aznar-Alarcón, 2017), external integrative dynamic capabilities (Eikelenboom, & de Jong, 2019) and organisation capabilities for change (Sánchez-Medina, 2020) respectively.

Nevertheless, under this theme, most of the studies are focused on four main outcomes of dynamic capabilities and the relationship between these outcomes and dynamic capabilities. Outcomes such as organisational performance (Garcia-Morales, Lloréns-Montes, & Verdu-Jover, 2007; Mulders, Berends, & Romme, 2010; Pavlou, & El Sawy, 2011; Guo, & Cao, 2014; Wang, Senaratne, & Rafiq, 2015; Rice, Liao, Galvin, & Martin, 2015; Dong, Garbuio, & Lovallo, 2016; Mukhtar, Baloch, & Khattak, 2019; and Wang, 2020), competitive advantage (Alegre, Sengupta, & Lapiedra, 2013; Adeniran, & Johnston, 2016; Parida, Oghazi, & Cedergren, 2016; Fainshmidt, & Frazier, 2017), financial performance (Wang, Senaratne, & Rafiq, 2015; 56, 71) and non-financial performance (Nedzinskas, Pundzienė, Buožiūtė-Rafanavičienė, & Pilkienė, 2013) in SMEs. The relationship between dynamic capabilities and the organisational performance appears to be the earliest relationship explored by scholars in the SMEs context.

However, the type of relationship depends on the type of dynamic capabilities and other factors. For example, organisational learning dynamic capabilities have a positive relationship with the firm performance (Mulders, Berends, & Romme, 2010) as do sensing, coordinating and integrating dynamic capabilities (Pavlou, & El Sawy, 2011), strategic flexibility (Guo, & Cao, 2014), generative sensing (Dong, Garbuio, & Lovallo, 2016) and digital marketing capabilities (Wang, 2020). Dynamic capabilities also positively correlate with organisational performance when mediated by

organisational culture, corporate entrepreneurship and environmental dynamism (Mukhtar, Baloch, & Khattak, 2019). Although, the relationship between organisational performance and dynamic capabilities appears to be, mostly positive, however, success traps can weaken it (Wang, Senaratne, & Rafiq, 2015) when the success encourages taking advantage of available competences but hinders the discovery of novel competences, and ultimately discourages the development of dynamic capabilities in SMEs.

The relationship between dynamic capabilities and competitive advantage are also mostly positive and depending on the dynamic capabilities such as knowledge management (Alegre, Sengupta, & Lapedra, 2013), ICT dynamic capabilities (Parida, Oghazi, & Cedergren, 2016), sensing, absorptive, adaptive, innovative, networking and integrative dynamic capabilities (Adeniran, & Johnston, 2016). The competitive advantage and performance of an organisation have long been thought to be the primary focus of dynamic capabilities (Teece, 1994). However, other outcomes have been explored as the evidence above highlights.

In addition, financial (Wang, Senaratne, & Rafiq, 2015; Absah, & Harahap, 2020; Ojha, Patel, & Sridharan, 2020) and non-financial performance (Nedzinskas, Pundzienė, Buožiūtė-Rafanavičienė, & Pilkienė, 2013) outcomes have been explored. The relationship between dynamic capabilities and non-financial performance is positive, whereas the relationship is negative for financial performance (Ojha, Patel, & Sridharan, 2020). Some studies have demonstrated that the relationship is positive if the relationship is mediated by innovative (Absah, & Harahap, 2020) and operational (Ojha, Patel, & Sridharan, 2020) capabilities. For example, dynamic capabilities such as dynamic strategic planning have a negative relationship with financial performance unless mediated by operational capabilities (Ojha, Patel, & Sridharan, 2020) as adaptive capabilities and absorptive capabilities have a positive relationship with financial performance through innovative capabilities.

Therefore most of the studies reviewed highlight that dynamic capabilities have been explored in relation to several outcomes such as profitability, partnership success, organisational performance, competitive advantage, scope of accounting services, financial and non-financial performance, export efficiency, innovation performance, sales growth, technological innovation, operational performance, business sustainability, stakeholder engagement, public procurement, product value creation and

environmental performance. This implies that studies exploring the relationship between dynamic capabilities and organisational resilience are limited in the SME context as only three studies make mention of or refer to resilience. However, this study aims to extend the previous studies focused on exploring the relationship between dynamic capabilities and organisational resilience.

3.6 Dynamic capabilities and Resilience Studies in SMEs

Following the analysis of the articles obtained through the systematic literature search using the keywords "dynamic" AND "capabilit*" and variations of SMEs, the researcher identified three papers linking dynamic capabilities to the resilience of SMEs. This result highlights a considerably rare amount of studies focusing on resilience in SMEs supporting the claim made by Battisti and Deakins (2017). The three articles explored resilience in different ways and contexts. However, of the three articles, only two had their findings backed-up by empirical data. One of the three articles is purely conceptual. Therefore, this present study offers the empirical attention needed to study organisational resilience and its relationship with dynamic capabilities in small firms.

The article which is conceptual, advocated for research exploring the relationship between dynamic capabilities and resilience in SMEs to be given attention because dynamic capabilities are relevant for the building of organisational resilience towards disruptions and unforeseen challenges (Battisti & Deakins, 2017; Bogodistov, & Wohlgemuth, 2017). Therefore, in their conceptual paper, Bogodistov and Wohlgemuth (2017) advocated for studies that intend to investigate how dynamic capabilities help firms build resilience towards unforeseen circumstances. This advocacy arose because of dynamic capabilities providing routines and processes that enable recovery from unforeseen challenges, especially in SMEs, as they have a smaller set of resources.

In the second of the three articles identified, Zehir, and Narcikara, (2016) explored the relationship between authentic leadership and resilience and their effect on productivity. Although the study finds that authentic leadership has a connection with the firm's performance. However, it is mediated by resilience. Nevertheless, the study is limited in its exploration of the relationship between resilience and dynamic capabilities because it focuses on an owner-manager's role as an authentic leader and how the employees are supported to build organisational resilience. This implies that the study did

not explore other relevant aspects of the owner-manager's role, such as the owner-manager's cognition and how this can potentially impact organisational resilience.

Several studies have highlighted the influence of the owner-managers' cognition on the firm's performance (Adner & Helfat, 2003) and their response to disruptions (Koryak, Mole, Lockett, Hayton, Ucbasaran, & Hodgkinson, 2015). During periods of unexpected changes, it is based on the owner-managers' perception, that opportunities or threats are perceived following the disruption (Khan, Atlas, Xuehe, Khan, & Khan, 2020). Therefore, it is important to explore the cognitive role of owner-managers, especially their perceptions of organisational resilience, because an organisation's resilience is "often not determined just by organisational resources and capabilities alone" (Linnenluecke, 2017, p. 25).

The review of extant literature earlier highlighted the absence of a universally accepted definition of resilience (Fisher, 2019). Therefore, several definitions of the term are being utilised depending on the research area or context. Given that, the perception of the owner-managers affects their response to disruptions (Battisti & Deakins, 2017; Khan, Atlas, Xuehe, Khan, & Khan, 2020); this implies that exploration into how owner-managers in SMEs perceive resilience can potentially provide insight into the effect that different perceptions may have on the varying resilience outcomes of small firms. It is worth knowing that how owner-managers perceive certain constructs influence their actions (Giannacourou, Kantaraki, & Christopoulou, 2015) and subsequently affects the outcomes they achieve. Therefore, understanding how the owner-managers' perception of organisational resilience affects the achieved resilience outcome is relevant because it is important to "understand how psychological factors impede as well as encourage" (Koryak, Mole, Lockett, Hayton, Ucbasaran, & Hodgkinson, 2015) organisational resilience in small firms. Therefore, this present research will advance Zehir and Narçıkara's (2016) work from understanding the role of owner-managers in supporting employees to develop organisational resilience to having a deeper understanding of how their perception of the resilience construct affects the achieved resilience of the organisation.

The third article, which is the second empirical study by Battisti and Deakins, (2017) explored the relationship between dynamic capabilities and resilience. The researchers focused on the role of dynamic capabilities in a post-disaster environment. The dynamic capabilities explored were the

regenerative (proactive posture) and renewing (resource integration) dynamic capabilities. Although they empirically explored dynamic capabilities, their study did not explicitly explore the core dimensions of dynamic capabilities such as sensing, seizing and reconfiguration (Eisenhardt & Martain, 2000; Zollo & Winter, 2002; Tecce, 2007; Ambrosini & Bowman, 2009; Ambrosini et al., 2009). Sensing and seizing can be referred to as renewing dynamic capabilities, and reconfiguration as a regenerative dynamic capability (Makkonen et al. 2014). However, this was not explicitly mentioned in their research, but rather the focus was on proactive posture and resource integration. Thus, this highlights an opportunity to explicitly explore the relationship between sensing, seizing, reconfiguration, and small firms' resilience empirically. Furthermore, the study focused on firms in a post-disaster environment, whereas this study focuses on firms that experience disruptions on a day-to-day basis. Therefore, this study aims to explore the role of dynamic capabilities in developing the organisational resilience of small firms facing low-probability but highly disruptive situations daily.

In addition, extant literature has established the role of owner-managers in the enactment of dynamic capabilities (Carlos, 2011). However, "practical insights are needed regarding how organisations can activate resilience and the specific resources, structures and processes" required for a response to diverse disruptions (Linnenluecke, 2017, p. 25). Therefore, this study explores the role owner-managers play in utilising dynamic capabilities to develop organisational resilience as there is little knowledge on "how organisations particularly SMEs, can achieve degrees of resilience" (Bhamra, Dani, & Burnard, 2011).

In addition to the three articles highlighting the relationship between dynamic capabilities and resilience, the researcher included manually the paper authored by Battisti, Beynon, Pickernell and Deakins, (2019). Their study highlights three categorisations of organisational resilience outcomes: survival, stability and growth organisational resilience outcomes. Battisti et al., (2019) explored the relationship between strategic, cognitive and behavioural learning mechanisms and a small firm's achieved resilience outcome. Learning mechanisms enhance dynamic capabilities (Zollo & Winter, 2002; Zott, 2003). However, their study did not explore the relationship between dynamic capabilities such as sensing, seizing and reconfiguration and their effect on the achievement of either survival, stability or growth organisational resilience outcomes. Therefore, this study aims to extend their

study by exploring the achievement of either survival, stability or growth organisational resilience in small firms by enacting sensing, seizing and reconfiguration within the firm.

In Table 3.2, the key articles identified through the systematic literature review highlighting a relationship between organisational resilience and dynamic capabilities are presented.

Table 3.2: Showing the existing studies in SMEs, highlighting a relationship between organisational resilience and dynamic capabilities and the research gaps.

Article	Findings	Gap
Enterprise risk management: a capability-based perspective (Yevgen Bogodistov & Veit Wohlgemuth, 2016)	The study conceptually highlights the significance of dynamic capabilities in building organisational resilience towards unforeseen challenges. The paper advocates for studies that can investigate how dynamic capabilities help firms build resilience towards unforeseen circumstances as dynamic capabilities provide routines and processes that enable recovery from unforeseen challenges especially in SMEs as they have a smaller set of resources. Also, dynamic capabilities are not solely focused on avoiding disruptive events (as does risk management) but also on the blossoming of organisational resilience to respond to disruption yet to happen as most firms face a considerable amount of low-probability but highly influential situations.	The study lacks empirical results to validate the significance of dynamic capabilities in building organisational resilience.
Effects of Resilience on Productivity under Authentic Leadership (Cemal Zehira & Elif Narcikarab, 2016)	The relationship between authentic leadership and resilience and their effect on productivity is explored in this study. Authentic leadership capitalises on the theory of individual resilience that ensures that individuals receive the support they needed to recover from disruption and thrive. Authentic leadership is empirically found to have a relationship with performance and resilience mediates the relationship.	The study focused on the role of owner-managers in supporting employees to make the firm resilient. However, other aspects of the owner-manager, such as their perception of organisational resilience, were not explored in their study.

<p>The relationship between dynamic capabilities, the firm's resource base and performance in a post-disaster environment (Martina Battisti & David Deakins, 2017)</p>	<p>The study finds that proactive posture and capability to integrate resources are relevant for discovering new opportunities in a highly volatile and uncertain environment. The study gathered empirical evidence on the relationship between dynamic capabilities, disaster-related changes to a small firm's resource base and its performance in a post-disaster environment.</p>	<p>The relationship between dynamic capabilities as sensing, seizing, and reconfiguration was not explicitly explored in the study. The study focused only on disaster-related disruptions and not day-to-day disruptions faced by SMEs, especially in the food and drink industry.</p>
<p>Surviving or thriving: The role of learning for the resilient performance of small firms (Martina Battisti, Malcolm Beynon, David Pickernell & David Deakins, 2019)</p>	<p>The study explored the relationship between strategic, cognitive and behavioural learning mechanisms and a small firm's achieved resilience outcome.</p>	<p>The study did not explore dynamic capabilities (sensing, seizing and reconfiguration) relationship with the achieved resilience categories of a small firm</p>

3.7 Conceptual Framework

As discussed earlier, SMEs are faced with disruptions, especially SMEs operating in the hospitality (Senbeto, & Hon, 2020) food and drink manufacturing sectors (Thomas et al., 2015). The hospitality industry's environment is dynamic because of the disruptions, crises, and changes that regularly occur within the industry (Burnett, & Johnston, 2020). This implies that for SMEs operating in such an environment there is the need to respond effectively to the disruptions in order to remain resilient. Resilience can be conceptualised as either a process or outcome (Duchek, 2019; Fisher, 2019). Conceptualising resilience as a process provides the opportunity to identify how resilience is achieved in an organisation (Boin & Van Eeten, 2013). In addition, conceptualising resilience as a process rather than an outcome suggests that resilience is a dynamic construct (Akgun & Keskin 2014; Billington et al., 2017) that can be studied using a dynamic construct such as dynamic capabilities as a theoretical lens (Parker & Ameen, 2017).

Theoretically, organisational resilience has been identified to result in three outcomes known as survival, stability and growth resilience (Battisti et al. 2019). The organisational resilience outcome suggests resilience has been achieved but should not be considered resilience itself (Fisher et al., 2019). Therefore, the resilience process in an SME leads to the achievement of varying resilient

outcomes. However, given that the firm's environment is dynamic and characterised by uncertainties, capabilities are essential for achieving resilience. There are three types of capabilities – actual resource base, dynamic capabilities and learning (Battisti and Deakins, 2017). However, for effective response to dynamic environments, the capabilities that create, modify and extend the resource base are essential. These capabilities are known as dynamic capabilities (Teece et al., 1997). Dynamic capabilities are regarded to be embedded within the firm's processes and routines (Teece, 1997; Eisenhardt & Martin, 2000; Zahra et al., 2006). This implies that dynamic capabilities are plausibly embedded within the resilience process. Therefore, an organisation's resilience is ensured by storable, flexible, and convertible dynamic capabilities, which makes the organisations cope effectively with challenges and crises (Zehir & Narcikara, 2016).

Dynamic capabilities are greatly influenced by the owner-managers of the firms (Adner & Helfat, 2003; Helfat & Peteraf, 2015; Teece, 2007) because the owner-managers or entrepreneurs are the enactors of the dynamic capabilities' development in SMEs (Peters, Snowden, Schlemmer, & Webb, 2008). Cognitive capabilities play an essential role in the utilisation of dynamic capabilities in the business environment (Eriksson, Nummela, & Saarenketo, 2014; Gajendran, Brewer, Gudergan, & Sankaran, 2014). In SMEs, the owner-managers are considered the key players that determine the organisation's survival, stability or growth (Sadler-Smith et al., 2003). The existing literature highlights the various conceptualisations of organisational resilience, the significance of resilience in organisations and the crucial need for utilising dynamic capabilities in response to environments characterised by uncertainties. However, there are some gaps in the literature.

Firstly, earlier studies have explored various definitions of the organisational resilience construct. However, this has mostly resulted from studies conducted in large organisations (Sullivan-Taylor & Branicki, 2011; Linnenluecke, 2017) with scholars overlooking the owner-managers of SMEs perception of the construct. In addition, the cognitive capabilities (making sense of the disruption and being aware of the firm's environment) of the owner-manager has been given considerable attention by scholars (Duchek, 2019), leaving their perception of resilience construct lacking empirical investigation. Secondly, SMEs usually possess fewer resources than their larger counterparts (Linnenluecke, 2017). Although several scholars have highlighted the significance of

dynamic capabilities for the achievement of resilience in small firms (Yevgen Bogodistov & Veit Wohlgemuth, 2016; Battisti & Deakins, 2017), there is a lack of knowledge of how resilience works in small firms (Linnenluecke et al., 2019) and how dynamic capabilities are utilised in the resilience process. This highlights a gap requiring an empirical study to explore the role of dynamic capabilities in building small firms' resilience. Furthermore, although owner-managers are theoretically known to play a significant role in the utilisation of dynamic capabilities, especially in SMEs, there is a lack of knowledge on how they utilise the dynamic capabilities to achieve the varying resilience outcomes of survival, stability and growth.

In summary, this study contributes to the organisational resilience and dynamic capabilities theory by adopting the conceptual framework highlighted below.

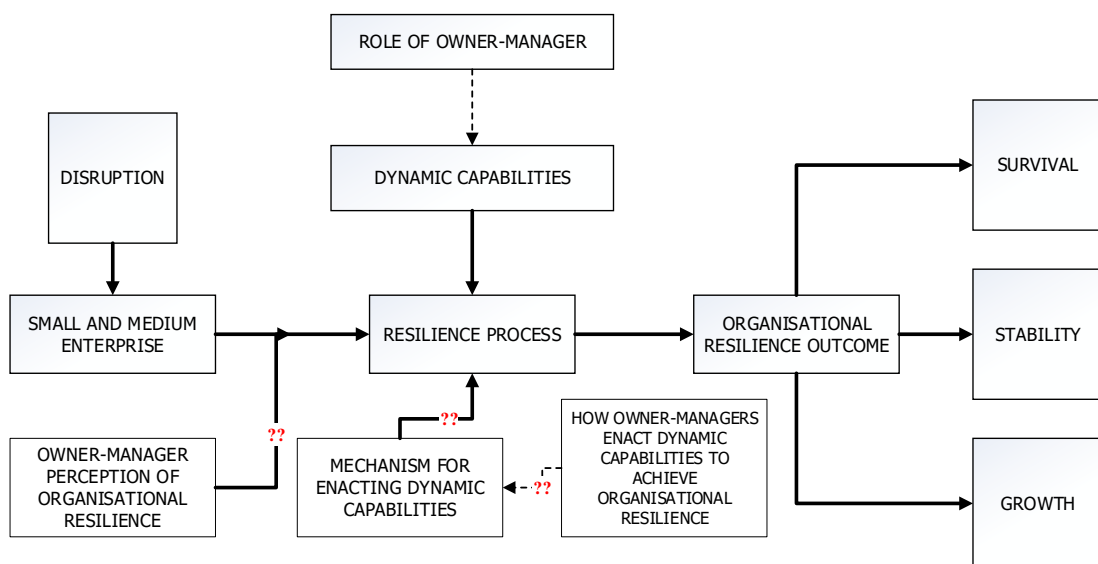


Figure 3.3: Conceptual Framework for explorative study on the role of dynamic capabilities in building resilient SMEs.

The conceptual framework presented in the figure 3.3 depicts the relationship between the disruption experienced by an SME, its resilience process and its organisational resilience. Although this is a simplified framework that does not fully account for the dynamic and complex relationship between the disruption faced by SMEs and the firm's organisational resilience, it is an attempt to illustrate the role of dynamic capabilities on SMEs' resilience process.

3.8 Research Aim, Objectives and Research Questions.

This study aims to explore the roles of owner-managers and dynamic capabilities in fostering SMEs' resilience. To meet this aim, the objectives and operationalising research questions of this study are discussed below.

As noted, the resilience of organisations, especially SMEs operating in the food and drink industry, is significant because SMEs are relevant to several countries' economies. Dynamic capabilities are argued to be essential for achieving resilience in SMEs (Battisti & Deakins, 2017). In addition, SMEs are greatly dependent on their owner-managers (Cartan-Quinn & Carson, 2003; Piperopoulos, 2010). This study, therefore, focuses on the role of dynamic capabilities in building resilient SMEs. Based on the aforementioned scholars' arguments, the first research question of this study is to explore whether the owner-managers have different perceptions of organisational resilience in the context of their firms. To buttress this research question, a supplementary question is asked to explore whether factors influence their perception of organisational resilience. These research questions aim to satisfy the objective of exploring how owner-managers of manufacturing SMEs operating in the UK food and drink context perceive organisational resilience.

Consequently, the overarching research question this study aims to answer is whether SMEs require dynamic capabilities, operationalised as sensing, seizing and reconfiguration to achieve survival, stability or growth resilience outcomes and whether the resultant processes influence the achievement of the different resilience outcomes. The second research question is extended to explore whether owner-managers promote resilience through certain activities and whether they influence the use of dynamic capabilities to achieve varying resilience outcomes. The research questions aim to satisfy the objective of exploring the role of dynamic capabilities in building and sustaining resilience in SMEs and exploring the owner-manager's role in promoting resilience through dynamic capabilities.

In summary, the existing dynamic capabilities literature in SMEs was reviewed in this chapter. The chapter highlighted a systematic literature review of the existing literature regarding dynamic capabilities studied in the SME context. A review of the articles obtained from the systematic literature review highlighted the absence of adequate empirical research into the role of dynamic

capabilities (sensing, seizing, and reconfiguration) towards the achievement of organisational resilience outcomes and the role owner-managers play during the resilience process. Therefore, the research aims and questions were identified and presented. In the next chapter, how this study aims to answer the research questions is discussed.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

An essential and initial start to conducting a proper empirical research is to identify the presence of a research gap(s), research question(s), and aim(s) in the existing literature (Eisenhardt & Graebner, 2007). The literature review is followed by selecting the appropriate method for deriving data to answer the suggested research questions required to fill the gaps identified, thereby achieving the research's aim. This study takes a linear-analytical format, which begins with a literature review that advanced an in-depth comprehension of the field under study and definition of the fundamental constructs focused on in this study.

In this chapter, the research methodology is explored by identifying the research philosophy and approach, basis upon which participating firms and participants (in this case, the owner-managers) are selected, and the method utilised to analyse the data. The core sections are the research philosophy that discusses the ontology, axiology, and epistemology; the research approach and design leading to an in-depth qualitative interview; data analysis methodology which buttresses why the researcher chose to utilise thematic analysis and Nvivo qualitative data analysis software; discussion of the achievement of data quality and other considerations regarding the research methodology.

Therefore, given the chapter's rationale has been outlined, it follows with the discussion of this study's research philosophy.

4.2 Research Philosophy

The purpose of this research is to gain an in-depth understanding of the owner-managers' experiences while responding to disruptions and towards achieving organisational resilience. This involved exploring their thoughts, reflections, and perceptions to derive insight into how they make sense of and understand their lived experience. The study argues that the most appropriate way of capturing the needed understanding is to derive detailed accounts, and thus, this research is a

qualitative study. Therefore, this study posits that meanings are not objective but subjective and socially constructed, leading to variations in reality, depending on the context and the actors within it. Three core components provide foundations for conducting social science qualitative research – Ontology, Epistemology, and axiology (Carter & Little, 2007). Epistemological, ontological, and axiological issues are addressed by the research philosophy and highlights the researcher's worldview (Denzin & Lincoln, 2011; Savin-Baden & Major, 2013).

As a branch of philosophy, ontology sought to examine reality's nature, primarily what is understood about it and what it is (Lee & Lings, 2008; Savin-Baden & Major, 2013). In research, ontology refers to a category of beliefs covering what is under study. Bryman and Bell (2015) argue that "Ontological assumptions and commitments will feed into the ways in which the research questions are formulated, and research is carried out" (p. 23). Therefore, according to the research questions formulated following the literature review, it is observable that the researcher's ontological assumption of reality is subjective and not objective, socially constructed by social actors. The researcher acknowledges that multiple realities result from individuals' perceptions and actions (Lee & Lings, 2008; Savin-Baden & Major, 2013).

The researcher and the participants' relationships steer towards subjectivism (Cunliffe & Karunanayake, 2013; Savin-Baden & Major, 2013) as the researcher would have to be empathic and view the world through the eyes of the participant. Therefore, the researcher is not an external spectator but considered part of the process (Vries, 2005; Hlady-Rispal & Jouison-Laffitte, 2014). Consequently, this will not produce an objective, 'true' account of the participants' experience. By assuming reality to be multiple and created by social actors, the knowledge of reality is gathered through social constructions, such as documents, tools, language, and other records (Klein & Myers, 1999). Therefore, the researcher's ontological assumptions influence the researcher's assumption of what constitutes relevant knowledge (Bryman & Bell, 2015).

What is "acceptable knowledge" and how an individual knows a phenomenon is examined by epistemology (Bryman & Bell, 2015, p. 727) in the field of research (Creswell, 2013). The epistemological assumption of a researcher is crucial to a study. The researcher's epistemological stance needs to be clarified as it directly influences the methodology adopted and equally provides

justification for the method adopted to collect data. Three different epistemological stances can be seen as positions on a continuum rather than distinct (Madill et al., 2000). At one extreme, there is the realist stance where knowledge is assumed to be pre-existing and should be discovered through an objective and unattached manner by the researcher (Myers, 2013). At the other extreme, there is the radical constructionist stance, where knowledge is considered a social construction (Madill et al., 2000). Then there is the contextual constructionist stance between both extremes adopted in this study (Madill et al., 2000).

In this study, the researcher has a socially constructed ontology that accepts knowledge derived from visual, textual, and narratives data as constituting acceptable knowledge (Bryman & Bell, 2015). The researcher believes that meaning can be lost in numerical data that would have otherwise been gleaned from textual and non-numerical data. Therefore, the researcher's epistemology is inclined towards opinions (not facts), written, spoken and visual accounts (not numbers), attributed meanings (not observed facts), individuals, and context-specific (not law-like generalisations).

The researcher's ontology develops the axiology, and it is regarding the researcher's values. The axiology answers the question of what the research aims to achieve (Lee & Lings, 2008). It is the researcher's firm belief that the study should be relevant in practice, as the researcher has committed to the research in a business context. This research is concerned with understanding how owner-managers perceive resilience and, based on their experience, how dynamic capabilities are enacted to ensure resilience in SMEs following disruptions, which the researcher anticipates will have a practical application.

In this study, the researcher sought to explore the perceptions and thoughts of the participants. Therefore, the methodology is grounded on interpretivism's methodological and theoretical principles rather than 'positivism' methodological and theoretical principles (Lindlof & Taylor, 2002; Kelliher & Henderson, 2006; and Lee & Lings, 2008). Earlier research conducted by social science scholars were based on positivism, which focused more on "consistent and accurate" and "correct answers" assessments (Savin-Baden & Major, 2013, p. 4). The use of positivism was followed by an increased use of interpretivism in social science studies due to its potential to provide intense contextual comprehension of the research subjects' experiences (the contextual constructionist stance). Being

opposed to the positivist's expectation, that researchers should not interact directly with their research subjects, leading to the isolation of the research subjects from their social context, and creating an inadequate acceptance of the social world's dynamic nature led to the use of the interpretivism stance (Silverman, 2011; Bryman & Bell, 2015), in summary, this study adopts the interpretivist philosophical stance.

However, there are limitations associated with utilising the interpretivist philosophical stance. There is a limitation concerned with generalisation of the study's findings. Researchers have voiced concerns regarding the significance of data obtained from small samples and its representation of what widely occurs (e.g., Rodham, 1998; Saunders et al., 2012). However, Watson (2001, p.7) suggests that studies with small sample sizes offer data by which generalisations regarding an individuals' processes can be made rather than what happens to the general population, such as 'all managers' or 'all organisations'. Besides, "provided there is no pretence that the whole population is represented, there is no reason why an intensive study should be less objective about its particular subject than an extensive study" (Sayer 1984, p. 83). This study's approach and design will now be discussed.

4.3 Research Approach/Design

The studied phenomenon's nature determines the methodological approach selected for a study (Morgan & Smircich, 1980). For this study, the choice of methodology is made with the research aim and philosophy in mind. The methodological approach selected is flexible to the extent of progressing the development of a deep comprehension of a SMEs' resilient process. However, the methodology is somewhat structured to accommodate dynamic capabilities constructs originating from theory to enhance the research structure and explain the phenomenon studied with improved reliability and validity. To this effect, a qualitative approach is adopted to identify and explain social behaviour in order to understand how individuals enact dynamic capabilities in SMEs (Yin, 2011; Cresswell, 2013).

A qualitative approach is commonly used in a study where the researcher sought to understand participants' behaviour as a means of deriving conclusions and theories, unlike when a quantitative approach is used to test hypotheses and theories (Yin, 2011; Strauss & Corbin, 2015). Also,

considering that the research area under-study is under-researched, the purpose of the research design is to be explorative with a qualitative research methodology to uncover in-depth empirical data and enable deep comprehension of the studied phenomenon (Bygrave, 1989; Eisenhardt & Graebner, 2007). In addition, for the study of the decision-making processes in SMEs, scholars (Gilmore & Carson, 1996; O'Donnell & Cummins, 2006) have suggested the adoption of qualitative research methods. Qualitative research methods are utilised to identify dynamic capabilities embedded in the organisational processes and routines that would otherwise prove challenging to identify using quantitative research methods (Eisenhardt & Martin, 2000). However, this has not hindered the effective use of the quantitative approach for SMEs studies (McDonald et al., 2004).

The utilisation of a qualitative approach brings to light more facts that stimulate the understanding of participants, which leads to progressively creating theories and conclusions (Yin, 2011; Strauss & Corbin, 2015). In support of utilising the qualitative approach, some scholars have argued that quantitative methods create a vast number of questions than answers (Nolan & Garavan, 2016). However, quantitative methods can be very efficient for analysing data from a large number of origins. For example, the use of surveys/questionnaires to obtain data from a large population which applies to the general population (Silverman, 2011; Bryman & Bell, 2015). Nevertheless, this is not suitable for a study that involves SMEs due to the structured nature of quantitative tools, such as a questionnaire (Nolan & Garavan, 2016). Qualitative research, such as Hullova et al.'s (2016) case study, and interviews, offered valuable information obtained from experienced participants in the food and drink industry. Therefore, this would suggest that utilising the qualitative approach would be appropriate for studies conducted in SMEs operating in the UK's food, drink industry, and will provide useful data needed to generate conclusions. Furthermore, qualitative methods are adopted to understand the sophisticated owner-manager role within their natural setting (Aodeheen O'Donnell, 2004). Hence, the exclusive adoption of the qualitative research approach for this study.

The difference between the qualitative and quantitative research approaches is not solely in the difference between its data forms but also in the study where it performs a function (Gibson & Brown, 2009; Silverman, 2011). Tucker, Powell, and Meyer's (1995) argued that the use of qualitative research is well suited for business research because it *"can answer numerous questions about the*

who, what, when, where, why, and how of communication" (p. 395). It further efficiently grants the researcher an opportunity *"to get in touch with the feelings, concerns, and needs of the business community"* (p. 396). Research in social contexts is well investigated by utilising qualitative analysis (Fossey, Harvey, McDermott & Davidson, 2002) as it can be potent and flexible (Casswell & Symon, 2006). Nevertheless, some scholars have criticised qualitative research methods as they are said to lack rigour, validity, and reliability, compared to when quantitative methods are adopted (Yin, 2011). However, this may not be an issue if the research utilises primary data (Yin, 2011). In this research, primary data has been utilised by obtaining data from respondents through a semi-structured interview and secondary data has been from the internet sources such as the participating SMEs' website.

Following the research philosophy and subject, the research commenced following an abductive approach of reasoning. Utilising the abductive approach offers the possibility of rising above the challenges of specifically inductive and deductive research. An integrative approach is followed when abduction is utilised that is not otherwise found when either induction or deduction is utilised. By utilising the abductive approach, the researcher relies on using existing literature or theories in the relevant search area and integrates these with the collection of data (Dubois & Gadde, 2002). The use of an abductive approach is common in a research employing a methodological qualitative choice which aims to analyse, describe and understand the processes within a sample leading to the creation of conclusions, theories and concepts as opposed to the assessment of a hypothesis and theories using a deductive approach (Yin, 2011; Strauss & Corbin, 2015). Also, considering that this study aims to understand how dynamic capabilities lead to several resilience outcomes. This suggests a pattern searching exploratory type of research that an abductive line of reasoning is well suited for as observations may be incomplete but provide bases for best prediction of how the dynamic capabilities lead to the various outcomes (although the conclusions can be fallible).

4.3.1 Consideration of Research Strategy

Scholars have adopted several research strategies associated with qualitative research. Research strategies such as case study research, grounded theory, and ethnographic research (Robson, 2002) have popularly been adopted in business and management research. Although the strategies

mentioned are associated with qualitative research and have similar ontological and epistemological backgrounds (as well as characteristics), there are differences between the strategies especially regarding their emphasis and procedures (Saunders, Lewis & Thornhill, 2012).

Firstly, ethnography involves studying a group of people, usually over a long period, as a means of studying their habits, day-to-day life, and culture. The time spent in the field and the researcher's degree of involvement in the individual/group's everyday life understudy differentiates the ethnographic research strategy from other qualitative research strategies. Also, theory development is avoided before the field research (data collection) is conducted in an ethnographic-based study (Klein & Myers, 1999) and the data from ethnographic research tends to be unstructured (Denzin & Lincoln, 1994). If this present research were aimed at understanding the culture and language of individuals/organisations, the ethnography strategy would have been well suited as a research strategy. However, this research focused on understanding specific organisational processes through the participants' experiences; unfortunately, ethnography as a research strategy will not be well suited to achieve this.

Grounded theory, much like ethnography, does not proceed to state theoretical propositions before data is gathered. Similar to ethnography, grounded theory is also unstructured in its approach. When the grounded theory research approach is utilised, obtained and analysed data serves as the bedrock for theory building. The data gathering process is conducted without prior exposure to theory by the researcher in line with the procedures established by Glaser & Strauss (1967). However, this study is premised on Carson and Coviello's (1996) recommendation by developing an understanding of the research area before developing the research aims and objectives from the existing literature after conducting a literature review. This was done to identify potential gaps in the literature that the study can aim to fill. Also, given that this study intends to understand the resilience process within the organisation based on the "lived experience" of the participants, the grounded theory strategy, which according to Willig (2013) focuses on social processes (rather than psychological processes) will not be suitable for this study.

Therefore, given that the initial aim of this study is to understand how the participants perceive a phenomenon and have achieved organisational resilience through their perceptions and lived

experience, IPA as a research strategy is best suited for this research where the richness of data derived by focusing on the research context and process (Steyart, 2007; Hjorth et al., 2008) is relevant to the study. Thus, the study aims to derive in-depth descriptions of the participants' experience by adopting the IPA research strategy. The IPA research strategy will be discussed in detail for a better understanding of the strategy.

4.3.1.1 Rationale for Selecting IPA

In this research, the IPA research strategy has been adopted as the most appropriate strategy for several reasons. Although it was originally adopted for research in the health psychology domain, the research strategy has gained impetus within the entrepreneurship business research area (Cope, 2011), but have yet to be applied to study organisational resilience and dynamic capabilities in the business and management domain. An absence of applying the methodological approach for studying organisational resilience and dynamic capabilities in the business and management domain should not serve as a deterrent but should be seen as an opportunity. In addition, IPA has been argued to be relevant for explorative research that seeks to explore an area that has been under-researched (Reid et al., 2005). This seems particularly relevant to this study as empirical investigations aiming to explore the perception of organisational resilience from the perspective of the owner-manager, and the relationship between organisational resilience and dynamic capabilities seem to be scarce. The IPA approach will also allow for the possibility of new and unexpected knowledge to be gleaned from this research.

Regarding the analytic process, the IPA approach offers a detailed step-by-step guide to aid researchers analyse the data effectively (Smith et al., 2009). Having a detailed step-by-step guide analysing the data appealed to the researcher as it provided some level of comfort. Therefore, this study aimed at adhering to the general principles in order to complete the data analysis process. In addition, the dynamic nature of the analytic process appealed to the researcher given that the process is cyclically interactive, ensuring that in-depth immersion into the data was feasible and important.

4.3.1.2 Limitations of IPA

By adopting the IPA approach, this study aimed to obtain the perspective of an insider's experience by listening to and analysing the language used by participants to express their experience related to the phenomenon being studied. This implies that much of the research depends on the participants' ability to articulate their thoughts and feelings. However, this may prove challenging for the participant, mainly when they are not accustomed to having in-depth discussions about their experiences (Willig, 2013). Also, "our interpretations of experience are always shaped, limited and enabled by language" (Smith et al., 2009, p. 194), and this highlights another challenge. Given that language is in its-self limited, this may create hurdles to the full dissemination of our understandings (Jaeger & Rosnow, 1988).

An additional limitation of IPA arises because it cannot explain the reason behind the experience of a phenomenon but is focused on the description, exploration and comprehension of the participant's thoughts. Also, the researcher sees things through the participant's eyes and makes sense of the data by interpreting it. It has been argued that the researcher may lack the impetus and aptness to conduct proper interpretation, reflection and sense of the data (Brocki & Wearden, 2006). This is a particularly concerning assertion, given that the researcher is a novice that finds comfort in the guidelines offered by the IPA strategy.

4.4 Interpretative Phenomenology Analysis

In studies where IPA has been adopted, the researcher has adopted the approach to achieve two core aims. Firstly, to pay attention to the participant to gain a first-hand perspective of the studied phenomenon through listening and secondly, to attempt interpreting the narratives to derive its meanings to the participants in their context (Larkin et al., 2006). The IPA approach is founded on three core areas; phenomenology, hermeneutics and idiography (Smith, 2011).

As a research strategy, Husserl (1931) conceptualised and theorised phenomenology as a means of understanding the 'lived experience' of research participants and the interpreted meaning of their experience(s). However, phenomenology as a concept has long been developed as a theory by various theorists following its novel conceptualisation and theorisation to establish it as the qualitative research methodology it is at present (e.g. van Manen, 1990; Moustakas, 1994). van Manen (1990)

is considered the most significant theorist that has developed the phenomenology approach. van Manen established the hermeneutical phenomenology (Alase, 2017) extensively. van Manen (1990) stated that hermeneutical phenomenology refers to the 'lived experiences' of those participating in research and the interpretation attached to their real-life experience. In the same vein, Moustakas (1994), being another significant theorist that developed the phenomenological concept focused mainly on the 'lived experience' of those participating in research but was less focused on interpreting the experience of the researcher.

The phenomenological research strategy examines the subjective human experience. However, the phenomenological research strategy is governed by two schools of thought, which determines the research findings produced (Lopez & Willis, 2004). The two core phenomenological approaches prevalent in literature are the descriptive phenomenology and interpretative phenomenology.

The descriptive phenomenological approach originated from Husserl's (1970) philosophical ideas regarding how science should be conducted (Cohen, 1987). Following the descriptive approach, researchers are required to rid themselves of all existing private knowledge of the phenomenon under study to fully understand the participants' lived experience. This implies that the researcher is required to conduct the research free of all expert knowledge and personal biases (Natanson, 1973). To fulfil this criterion, it implies that the studies seeking to adopt the descriptive tradition would typically not be required to conduct an extensive literature review and not have particular research questions other than the keen interest to describe what the participant has experienced concerning the subject matter (Streubert & Carpenter, 1999). Therefore, in this tradition, the reality is considered objective rather than subjective. The meaning derived following this tradition is assumed to represent the studied phenomenon's true nature free from the context and history (Allen, 1995). Therefore, to follow the descriptive tradition, the bracketing technique is utilised to satisfy the desire for scientific rigour associated with the tradition.

On the other hand, the interpretative or hermeneutic phenomenological tradition originated from the ideas of Heidegger (Cohen, 1987). The term hermeneutic originates from the name of a Greek god called Hermes, which means interpretation (Thompson, 1990). As a long tradition, hermeneutic has been adopted for revealing the hidden meanings embedded within the biblical texts (Myers, 2013).

When adopted for studying human experience, hermeneutics looks beyond describing the main concepts and essences to discover the meanings hidden in the usual life experience. These meanings are not usually noticed by the participants themselves but can be identified from their responses. Thus, the focus is on the participant's experience and not their conscious knowledge of the studied phenomenon (Solomon, 1987). Following the interpretative phenomenological tradition, the participants are thought to be part of their world, and their experiences are connected to the context (Heidegger, 1962) which directly opposes Husserl's (1962) concept. Research that adopts the interpretative phenomenology focuses on interpreting the narratives provided by the participant about the context.

Another fundamental philosophical assumption associated with the IPA approach is the researcher's prior knowledge of the phenomenon and expert knowledge. In this tradition, both the researcher's previous and expert knowledge are relevant for conducting the research. According to Heidegger (1962), it is not possible to shed the researcher's existing knowledge because it has contributed to why the researcher decided to conduct the study in the first place (Koch, 1995). This implies that due to the researcher's knowledge of the phenomenon through a literature review, the research is led to conduct a study in an area, which has received little attention from scholars. Therefore, the researcher's knowledge is relevant for conducting research where the interpretative or hermeneutic phenomenological approach is adopted (Geanellos, 2000). This opposes the ideas put forward by Husserl (1962) and disregards the bracketing technique needed when adopting the descriptive phenomenological approach (Le Vasseur, 2003).

IPA is argued to be ideographic (Smith, 2004). This implies that the research focuses on the personal experiences and perceptions of specific individuals and not aimed at making claims, which are on the group level. Although IPA can make significant contributions through single cases, researchers use multiples cases to search and identify similarities and differences between participant perceptions to discover patterns and themes. Therefore, taking the IPA's ideographic nature into account, this study does not aim to produce generalisable results but rather results that can potentially be transferable from one context to another (Hefferon & Gil-Rodriguez, 2011).

Therefore, in this study, IPA is adopted. The researcher has conducted an extensive literature review and has expert knowledge of the phenomenon under study, and the approach does not make ineffective conceptual frameworks and research questions (Lopez, & Willis, 2004). The researcher also sought to understand the resilience process based on the participants' narrated lived experience in the SME context without the desire to produce generalizable findings. The research sought to provide 'theoretical generalisability', which encourages the reader to utilise their existing knowledge and expertise to decide if this study's conclusions apply to their domain (Smith et al., 2009).

4.4.1 IPA Study Design

In this study, the researcher decided to undertake a study that draws on the principles of IPA developed by Smith et al. (1999) and adopted by Cope (2011) to study entrepreneurial learning from failure. The researcher decided to develop multiple holistic cases with each participating firm forming a single unit of analysis to investigate the phenomenon under study. The research design and analysis is informed by the principles of IPA adopted in this study.

Following the review of the existing literature and the development of a conceptual framework and research questions, the researcher selected the participating firms based on certain criterias, which ensured that the participants had a shared experience of the phenomenon under study as well as other similarities that made it possible for narratives useful to the study to be obtained. Given that the researcher aimed to collect data, which provides a rich and in-depth detailed account of the phenomenon under study, each participant's account was fully appreciated fulfilling a primary concern of IPA.

The researcher aimed to collect the data in a natural setting using semi-structured interviews. This fulfilled the researcher's aim of deriving a first-hand narrative of the experiences that highlight the phenomenon under study. Semi-structured interviews allow for an engagement between the researcher and participants as their interpretations are both taken into consideration during the analytical process.

This study followed the systematic guidelines for analysing the data by moving from the description of the data to its interpretation with a detailed analysis of one case leads to the analysis of other cases (Smith, 2004). Utilising multiple cases allowed for the identification of relationships and

clustering themes that distinguished between unique and replicated cases (Eisenhardt, 1991). An overview of the research design is presented in table 4.1.

Table 4.1. Overview of Research Design

Research Purpose	Exploratory
Research Approach	Abductive
Research Questions	<p>Research Question 1a- What are the organisational resilience perceptions of owner-managers within their firms?</p> <p>Research Question 1b– What factor influences the organisational resilience perceptions of owner-managers within their firms?</p> <p>Research Question 2a - SMEs require what dynamic capabilities (sensing, seizing, or reconfiguration) to achieve survival, stability, or growth resilience outcomes and how do the resultant processes influence the achievement of survival, stability, or growth resilience outcomes in SMEs?</p> <p>Research Question 2b - What do the owner-managers undertake to promote resilience outcomes within their business, and how do the owner-managers influence the use of dynamic capabilities to achieve resilience outcomes?</p>
Objectives	<p>Objective 1: Investigate the owner-managers' perception(s) of organisational resilience in the food and drink industry context.</p> <p>Objective 2: Explore the role of dynamic capabilities in building and sustaining resilience in SMEs and exploring the owner-manager's role in promoting resilience through dynamic capabilities.</p>
Research Strategy	Interpretative Phenomenology Analysis: In-depth interviews and internet data; Thematic Analysis; Cross-case and pattern-matching Analysis.
Sample	Owner-managers are responsible for taking key decisions and running the SMEs. Therefore they made up the sample.
Research Instrument	Semi-structured In-depth Interviews and secondary data.

4.5 Generalisation of Findings

This research sought to improve the understanding of a social phenomenon and not to validate the findings, as would be the case in a positivist-based study (Johnson & Duberley, 2000). Therefore, the conclusions derived following the analysis of data acquired from the participating organisations

are not representations of the population and cannot be generalisable. Through this study, the researcher sought to generate theory (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). Essential findings of several phenomena, which offer in-depth understanding, have emerged from studies having small samples and single cases (Lawson & Samson, 2001; Mayer & Kenney, 2004; Ayuso et al., 2006; Teoh et al., 2008).

Although essential findings can be achieved from a single case (Lawson & Samson, 2001; Mayer & Kenney, 2004; Ayuso et al., 2006; Teoh et al., 2008), however, studies adopting a multiple case design makes cross-case analysis, the progression of theory, and the contrast between key constructs possible (Miles & Huberman, 1994). Assuming a multiple case design allowed for the emergence of patterns in the data and relationships by comparing the cases. The comparison between the cases in this study highlighted the different resilience processes and mechanisms through which the firms achieved resilience and the role dynamic capabilities played in these processes. There are no guidelines regarding how many participants are required to conduct an IPA study. Earlier published studies have had the number of participants ranging from one to fifteen participants. IPA studies having a larger sample number are feasible but not common (Pietkiewicz, & Smith, 2014). The justification for selecting the cases (recruitment criteria) is discussed below.

4.6 Participants Selection

In this section, an argument and discussion are made to highlight the criteria adopted for selecting the organisations that took part in this study. The data gathering process began with the critical step of selecting, contacting, and obtaining access to the participating organisations (Langley & Abdallah, 2011).

To derive essential findings, the participating organisations in this research were strategically selected using the purposive logic (Yin, 2009). The organisations were selected based on their ability to highlight the researched processes through the narratives given, similar to experiments conducted in the laboratory, which do not adhere to sampling logic (Yin, 2003). As argued by Patton (2002, p. 230), there is a high importance in selecting *"information-rich cases" "from which one can learn a great deal about issues of central importance to the purpose of the study."* Based on the contribution

to theory, the organisations were selected (Yin, 2003). Also, the samples used in this research are different in one way or another but having experienced an event that involved disruptions.

"Purposive" sampling is adopted following the criteria for conducting an IPA study (Greening et al., 1996). Participants are selected based on particular exhibited features or expert knowledge and experience in facing disruptions in purposive sampling. However, gaining access to informants indicating the required features was problematic (Baker et al., 2012). Purposive sampling is synonymous with "judgement" sampling (Marshall, 1996) or "criterion-based" sampling (Mason, 2002). The existing literature for SMEs highlights that the SME sector is highly heterogeneous. Therefore, to achieve theoretical replication, this study is based on diverse SMEs from a population of SMEs in the United Kingdom.

At the beginning of this study, the Isle of Wight was the sole focus due to the presence of a high concentration of SMEs operating in the food and drink industry and the proximity of the location to the researcher studying at Portsmouth. However, due to some factors (discussed in detail from page 103), the researcher's focus was steered to other parts of the southern part of England before shifting focus further to other parts of the UK in order to increase the number of participating firms. For the purpose of conducting this study, the owner-managers of thirteen firms were selected to participate in this study. These participating owner-managers allowed the researcher to explore and explain the mechanisms responsible for the processes being investigated using the IPA research approach.

4.6.1 Company Age

According to existing literature, dynamic capabilities resulting from their nature take time to develop in a firm (Liao et al., 2003; Cope, 2005). The dynamic capabilities needed in established firms differ from those required in the younger ones (Zahra et al., 2006). Therefore, the firms selected for this study had to have been in operation for five years or more. This selection criterion eliminates those firms facing challenges familiar to start-ups, such as growth volatility experienced mostly in the firm's initial four years (Gilmore et al., 2001).

4.6.2 Company Size

The company size is noted as a significant variable to be considered when selecting the participants. Firms having full-time employees of zero to four (0-4) were not included in this research, as the number of employees can potentially serve as agents in the phenomenon investigated. All the firms participating in this research had full-time employees numbering from five to forty-nine (5-49).

4.6.3 Independent Small Business

The firms participating in the research had to be independent as per sensing, seizing, and reconfiguration dynamic capabilities are influenced by the cognitive and emotional abilities of owner-manager/Entrepreneurs in SMEs (Fainshmidt & Frazier, 2017). Therefore, the firms had to be independent to make their own unique decisions and not the decisions stimulated by a large trading body or parent company.

4.6.4 Food and Drink Sector

In the UK, the food and drink industry is the largest manufacturing sector that employs over 117,000 individuals and further makes an annual contribution of £28.2 billion to the UK's economy (Food and Drink Federation (FDF), 2017). More than 8000 fresh products are supplied to the market by the food and drink manufacturers (Food and Drink Federation (FDF), 2018). However, the food and drink industry is regarded as being part of a group of industries categorised as industries that require low technological processes and dedication to research and development (R&D) considered to be lower than 1% (Lager, 2011). This explains why dynamic capabilities research in the food and drink industry in the UK is low as the relationship between dynamic capabilities, and the environment is predominantly perceived to exist mainly between dynamic capabilities and rapidly changing environments characterised by high technology (Teece et al., 1997).

In this research, however, the researcher sought to contribute to the empirical research conducted on dynamic capabilities in the food and drink industry in the UK. The food and drink industry SMEs have been coerced to possess competitive strategies to continue operations in the markets (Carraresi, Mamaqi, Albisu & Banterle, 2016). In recent times, the food and drink industry has experienced negative impacts resulting from economic, technological and societal disruptions (Baker,

2013), suggesting the importance of exploring the organisational resilience of food and drink manufacturing small firms.

In general, several disruptions and challenges have impacted the hospitality and tourism industry requiring the firms within such industries to respond effectively and adapt to reduce the risk of going out of business (Burnett, & Johnston, 2020). Disruptions such as the varying customer needs and wants, severe competition in the market place, and an unforeseen future (Senbeto, & Hon, 2020). According to Burnett, & Johnston, (2020), the hospitality industry is generally an unstable industry, susceptible to several factors. Although it can be argued that the hospitality industry has experienced growth, the industry still experiences disruptions and crises (Wang & Ritchie, 2010; Bharwani, & Butt, 2012; Senbeto & Hon, 2018). Because the hospitality industry is exposed to variations, the industry's environment is characterised by a high level of dynamism, which creates a rise in demand for the firms operating in the industry to focus on their survival in the long-term (Senbeto, & Hon, 2020).

The hospitality industry in the UK is also a significant contributor to the economy. The industry provides a vast number of jobs (UKHOSPITALITY, 2018). However, following the UK's decision to withdraw from the EU, the industry faces several challenges. Challenges such as a severe loss of skills and an impacted supply chain which would increase the price for food and drink (Hotel Owner, 2018). According to KPMG, the hospitality industry requires more employees, mainly from the EU, to ensure its stability and growth. However, this may be difficult given the recent occurrence (Institute of Hospitality, 2019). More recently, small firms have experienced a heavy blow due to the pandemic and are faced with financial difficulties requiring external aid (Bartik et al., 2020). Therefore, the hospitality industry is significant to the UK economy but remains susceptible to disruptions and crises. A study like this present study, which seeks to explore the role of dynamic capabilities in building and sustaining the UK's manufacturing food and drink SMEs' resilience, will therefore prove relevant.

Furthermore, the literature review conducted by the researcher highlighted the lack or a limited number of studies conducted in SMEs operating in the UK' food and drink industry. This study also posits that the UK food and drink industry comprises of a complex supply-chain system, which requires some form of resilience and is located in an environment lately impacted by high-levels of

challenges stirred up by the competition, internationalisation (Banterle, Cavaliere, Carraresi & Stranieri, 2014) and uncertainty (Branicki & Sullivan-Taylor, 2011).

Therefore, this study expected that the complex supply-chain system, recent disruptions and other dynamic factors such as competition in this industry would foster the need for dynamic capabilities; and thereby provide the respondents with narratives that illustrate how dynamic capabilities have been effectively utilised in their firms to provide in-depth information that can be used as data to inform this study. Therefore, the participating firms had to be operating in the UK food and drinks industry, manufacturing their products.

4.6.5 Manufacture to sell directly to customers

The participating firms had to be manufacturing firms that manufactured their products. This indicates that the firms have established processes that possibly involves utilising dynamic capabilities as they are mostly embedded in the process (Eisenhardt & Martin, 2000). The manufactured products also had to be sold by the firm directly to its customers in a marketable form carrying the firm's brand, as this would indicate a complex system managed by the firm requiring some form of resilience. Therefore, making the respondents more equipped to discuss about disruptions that may have occurred within the firm with regards to their products.

4.6.6 Final Sample Set

As stated earlier, at the start of the research, the researcher originally aimed to focus on SMEs located on the Isle of Wight (part of the Solent LEP area). Therefore, the researcher conducted a google search for SMEs that operated on the Isle of Wight and had the possibility of satisfying the participant inclusion criteria. Forty-six (46) SMEs were contacted; however, only thirty-nine (39) SMEs met the inclusion criteria. After a couple of months attempting to recruit the participants' only one (1) SME on the Isle of Wight volunteered to participate in this study. For one reason or the other, the other thirty-eight (38) SMEs declined to take part in this study. For example, some owner-managers gave reasons such as being busy or unwilling to face the stress of taking part in a PhD study.

Following the failure to recruit as many participants as intended from the Isle of Wight, the researcher expanded the focus to the Solent LEP area, which comprised areas like the New forest, Southampton, Eastleigh, Fareham Gosport, Portsmouth and Havant. The researcher attempted to gain access to the Solent LEP area database. However, following a phone call with a Solent LEP area representative, the researcher was informed that the database was strictly for members only. Therefore, the researcher could not use this means to recruit participants. Consequently, the researcher manually searched for SMEs located in the Solent LEP area through several google searches. Of the eighteen (18) firms the researcher contacted, eleven (11) SMEs met the selection criteria. However, only six (6) volunteered to take part in this study.

To increase the number of participants in this study further, the researcher then reached out to some individuals working at the University of Portsmouth, including supervisors that had links with food and drink SMEs linked to the University of Portsmouth. The researcher requested contacts of food and drink SMEs they may have relationships with, which met the participant selection criteria. This aided the researcher to avoid cold calling firms to volunteer and being rejected. In the end, the researcher was able to recruit one (1) firm through this means to participate in the research.

To increase the number of participants for this study further, the researcher accessed the Hampshire fare local food and drink producer's database (<https://www.hampshirefare.co.uk/local-produce/industry-services>). Sixty-one (61) firms were listed on the database. However, only five (5) firms met the inclusion criteria and were recruited as participants for this research through cold calling the firms.

In an attempt to increase the number of participating firms in this study, the researcher began to contact firms that meet the participant selection criteria on a UK wide scale. However, this led to the addition of only one (1) firm located in Wales as a participant in this study. Although the researcher experienced difficulties whilst trying to engage small firms, this was expected (Curran & Blackburn, 2001), and ultimately sufficient numbers of respondents were able to be included in the study.

Below table 4.2 and 4.3 summarise the details for the participating firms and their owner-managers (owner-managers are co-terminus with the firm).

Table 4.2: Firm Characteristics

SME	FIRM AGE (Years)	SECTOR	FTE	REGION	FIRM STRUCTURE
SG	5	AL. B	12	Solent LEP	Flat
TPW	9	AL. B	6	Solent LEP	Flat
EPV	9	AL. B	7	Solent LEP	Hierarchy
NJ	8	F	5	Solent LEP	Flat
CRB	6	AL. B	6	Solent LEP	Flat
AB	7	AL. B	5	Enterprise M3 LEP	Flat
CHM	7	AL. B	8	Solent LEP	Hierarchy
SHC	9	F	5	Enterprise M3 LEP	Flat
CAR	45	F	9	Enterprise M3 LEP	Flat
WHC	15	AL. B	5	Enterprise M3 LEP	Flat
BW	32	F	7	Solent LEP	Hierarchy
BAL	13	AL. B	7	Solent LEP	Flat

ASS	23	AL. B	23	Wales	Flat
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AL. B – Alcoholic Beverage

F - Food

FTE - Full Time Employees

The Participating owner-managers had the following characteristics.

Table 4.3: Owner Characteristics

SME	AGE (Years)	GENDER	MANAGERIAL EXPERIENCE (Years)
SG	43	Male	15
TPW	59	Male	40
EPV	47	Male	18
NJ	50	Female	8
CRB	61	Male	35
AB	47	Male	10
CHM	36	Male	7
SHC	61	Male	36

CAR	68	Male	14
WHC	47	Male	15
BW	73	Male	50
BAL	61	Male	35
ASS	-	Female	40

It is believed that the final set of participating firms are relatively homogenous given that they operate in the same industry in the UK, are small independent manufacturing firms and are prone to disruptions in compliance with the suggestion made by Smith et al. (2009) when adopting IPA. The sampled firms had owner-managers that could share and offer insight into their experiences, responding to disruptions that led to some form of organisational resilience.

4.6.7 Participants' Recruitment

The firms' contact details were mostly obtained from their company websites, and an initial email (containing an information sheet) was sent to the firms informing them of the research and what their participation would entail. After a couple of days, the researcher called up (cold calling) the firms using their contact details obtained on their websites.

If the participant showed interest in taking part in the study after the first call, the research sent the participant the relevant documents such as the participant information sheet, consent forms and then planned an interview meeting time and location or medium through which the interview could be conducted.

4.7 Method of Data Collection

The study's primary aim of adopting the IPA approach is to gain a first-person description of the participant's experience related to a particular phenomenon. Therefore, the participant had to be in a position to talk (Cope, 2005b) freely. Thus, the primary data gathered in this research was achieved using 'phenomenological interviews' which has been described by Thompson et al. (1989) as " the most powerful means of attaining an in-depth understanding of another person's experiences" (p. 138).

4.7.1 In-depth Interviews

Following the phenomenological interview approach, the interviews were not structured. The interview started with a broad question asking the participant for their views on the term performance. In this study, one-to-one semi-structured interviews were conducted with the firms' owner-managers, as the researcher perceived them to have the necessary expert knowledge needed given that they are the main decision-makers in the firm (Zahra et al., 2002). Also, the owner-manager is a significant factor in enacting dynamic capabilities (Fainshmidt & Frazier, 2017). Furthermore, the management team determines how a firm is managed in dynamic environments using dynamic capabilities (Zollo & Winter, 2001). Therefore, the owner-manager served as the primary data source since they play a significant role in small firms.

To understand the owner-manager's experience, the researcher had to get as close as possible to the participants to gain an in-depth understanding (Watson, 1994). The utilisation of semi-structured interviews offered the participants opportunities to "discourse freely on topics capturing [their] interest"(Johannessen & Dolva, 1995, p. 369) and facilitated a deep conversation. Utilising a semi-structured interview also allows the researcher to follow-up with issues that arise unexpectedly during the interview. However, it is vital for the researcher to develop an interview protocol in advance to facilitate the conversation in a natural style and allow the researcher to cover topics and areas of interest (Pietkiewicz, & Smith, 2014).

During the interview protocol construction, the researcher focused on developing questions that were flexible, open, and provided opportunities for questions following initial responses to be asked (in case something interesting was said), thus improving the researcher's understanding (Robson,

2011). The questions asked concentrated on exploring memories of disruptions experienced by the owner-managers in the past five years. Thus, the questions were suitable for conducting an IPA study (Pietkiewicz, & Smith, 2014). The researcher also ensured that academic terminologies such as sensing, seizing, reconfiguration, dynamic capabilities, etc., were not mentioned as part of the interview protocol. The researcher also made sure to use simple and plain English words to make it easy for the participant to understand the questions. The researcher conducted the interview sessions based on the respondent's pace following the interview protocol.

The qualitative interview protocol preparation process, as suggested by Mason (2002, p. 72), was adopted in this research.

First Step - General research topic

What role do dynamic capabilities play in the building of resilient SMEs?

Second Step - Breakdown of the Research questions

How do owner-managers perceive the term resilience in their firms?

How do dynamic capabilities support SME's achievement of one resilience outcome to another?

How does the owner-manager utilise dynamic capabilities to achieve one resilience outcome to another?

Third Step - Interview phenomena that can be possibly covered.

Organisational resilience

The role of dynamic capabilities

The role of owner-manager

Fourth Step - Cross-referencing

To ensure the research questions are in correspondence and assist in revealing the studied phenomenon, and answer the general research question, cross-referencing was conducted.

Fifth and Sixth Step - Flexible interview structure

The experiences of the participant concerning disruptive situations

The participant's thoughts and particular processes applied in response to disruptions.

Seventh Step - Cross- Referencing

To ensure the validity of the gathered data, the researcher had to cross-reference to ensure the interview structure is in synchrony.

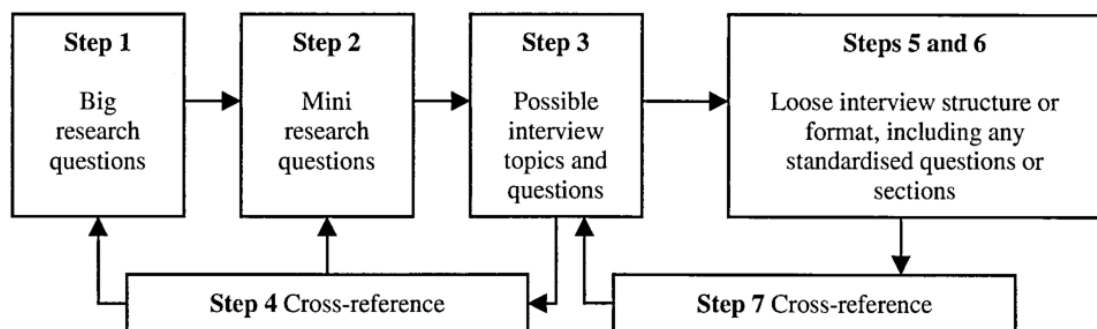


Figure 4.1: Overview of the Qualitative Interviews preparation and planning, according to Mason (2002, p. 72).

4.7.2 Internet-Sourced Information

The researcher searched the web to find data supporting evidence to validate the participant's responses made during the interview. Also, more information concerning the discussed resilience process during the interview was gleaned from the company's website and other reliable online platforms such as Twitter to add more depth to the data.

4.7.3 Research Diary

Diary/notes of the interview process and interesting cues picked up by the researcher were kept to help the researcher interpret what the participant said during the interview. During the data analysis using the NVivo software, the researcher also documented annotations and memos.

4.8 Pilot Test of the Interview Guide

Testing the interview protocol is an important and relevant aspect of the research design. This was conducted to ensure that any possible problems associated with data collection, which can likely affect the research validity, reliability, and process, was identified before the data collection process began.

A single Pilot study was conducted before the data collection started. The researcher contacted the company for a pilot study on the 18th of January 2019. The pilot interview was carried out on the 5th of February 2019. The company selected is a small healthcare agency operating in Portsmouth, United Kingdom. The company is a healthcare agency that is four years old. The participant was the owner-manager. Although the firm in question was not a manufacturing firm operating in the food and drink industry. However, the researcher proceeded to conduct the pilot interview to validate the likely responses that could be obtained using the interview protocol created to steer the in-depth semi-structured interview in the required course. The researcher also went ahead to conduct the pilot interview with the owner-manager to validate the ease by which an owner-manager can understand the questions in the protocol to stimulate responses giving an account of experiences.

After the pilot study, the researcher was content with the interview protocol structure and the words used to produce the interview protocol. However, the researcher was concerned about the time required to go through the questions and hoped this wouldn't be a challenge as the researcher aimed to gain in-depth data through the semi-structured interview but during a time suitable for the participant.

4.9 Data Collection

The in-depth semi-structured interviews were conducted with the owner-managers as the only participants from each firm (case). The owner-managers were chosen as participants because the researcher assumed they would be most knowledgeable to provide the needed information. The interviews were carried out on a one-to-one basis with the interviews typically lasting for between 30-50 minutes. Most of the interviews were conducted over the telephone except for two interviews that were conducted at the firm's premises in Portsmouth. Therefore, the interviews conducted within the firm premises allowed the researcher to observe the firm's structure and processes.

4.10 Analytical Strategy

This section outlines the developed strategy for analysing the data obtained. For the elimination of bias and production of strong analytic conclusions, the analytical strategy was developed and utilised

in this research. In addition, an analytical strategy is useful to promote internal and external validity (Miles & Huberman, 1994).

According to Smith et al. (2009), several stages are involved during the data analysis process in studies where IPA has been adopted. These stages can be utilised flexibly to aid the data analysis process. In this study, the analytic process required a move from focusing on the participant to acquiring a shared comprehension from a level of description to a level needing interpretation (Smith et al., 2009). For the purpose of the data analysis in this study, see Table 4.3 to illustrate the stages involved in the data analysis (adapted from Smith et al., 2009). Although the illustrated steps in the table may seem linear, it should be noted that it was a cyclical process. The cyclical process was followed by being conscious of the hermeneutic circle in order to understand the relationship in part or whole.

Table 4.4: Stages of interpretative phenomenological analysis.

Stage	Activity
1. Reading and re-reading	The process began by transcribing the responses of the participants. One transcript was selected and read, as the audio recording was being listened to hear how the participant shared their experience. Initial documents and recollections of the interview were taken note of, in an attempt to bracket them and pay close attention to what was being said.
2. Exploratory commenting	At this stage, after reading and re-reading, the topics of significance and their meanings were noted to make sense of the data. The significant topics were coded, and similar codes brought together. The objects of concern in the content were commented on; the type of language used was commented on as well as conceptual comments.
3. Developing emergent themes	At this stage, the discrete chunks of texts (codes) were identified to recall what was identified through the exploratory commenting. Emergent themes were developed to identify and reflect the understanding derived from the chunk texts (codes).
4. Identifying connections across themes	At this stage, the themes were drawn together to identify commonalities between the themes (abstraction), the emergent theme then becomes the subordinate theme. At this stage, several subordinate themes were created from emergent themes that are related.
5. Movement to the next case	The other twelve transcripts were analysed by following stages 1 – 4. From each transcript, new themes were allowed to emerge.
6. Identifying for patterns across cases	At this stage, relationships between the cases were identified. Emergent and subordinate themes were re-titled and transformed. Subordinate themes that were not apparent in half the transcripts (at a minimum) were eliminated. The subordinate themes were grouped with each group having several subordinate themes.

4.11 Qualitative Data Analysis Software

The NVivo 12 computer software package for qualitative data analysis was used to support the coding process, categorising and analysing the large volume of narrative data collected in this research. The software has been created to effectively meet qualitative researchers' needs working with very rich text-based information. The software's usefulness is not limited to text-based information but can also be used to analyse multimedia information. In addition, the software is delivered in a cloud-based format; this implies that the software can be used without installing the software on a device physically. The interviews were first transcribed by the researcher and proofread. Then the researcher uploaded the transcribed data, and each case was labelled. The researcher coded significant topics (codes serve as pockets or folders). The researcher performed the coding process intending to recognise themes, constructs and patterns fundamental to the studied phenomenon (Braun & Clarke, 2006).

In accordance with the interpretative epistemological stance of the study, the researcher applied analytical induction. This study was guided by the data and observed how it connects with the existing literature concepts (such as sensing, seizing and reconfiguration dynamic capabilities, process or outcome organisational resilience etc.). Thus, the researcher drew the logical inference from what was observed compared to existing theory to form new theory. The data collection process and the data analysis process both took place simultaneously, ensuring that the theory being developed has a firm empirical basis and developed in a repetitive manner (Hartley, 2004). The researcher made considerable effort to listen to the recorded interviews and transcribe it on the same day of the interview. The researcher also read the notes taken during and after the interview to add more detail to the data.

4.11.1 Data Analysis Code Book

A codebook was documented during the data analysis stage of the research for the researcher to demonstrate that the coding process is similar for all thirteen cases from which data is collected. Thus, this implies that the coding process conducted is repeatable and is evidently in correspondence with the codebook.

The transcribed interviews were uploaded onto the NVivo software and organised as cases with codes. Coding can be considered as the organisation of unanalysed data into conceptual categories. “Codes are tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study. Codes are usually attached to ‘chunks’ of varying size – words, phrases, sentences or whole paragraphs” (Miles & Huberman, 1994, p. 56). As has been discussed earlier, the NVivo software was efficient for carrying out the coding process.

4.11.2 Data Reduction

Following the data gathering, the 205 emergent codes were remaining after the removal of 36 emergent codes. The codes were collected into code clusters with the same meaning, thereby reducing individual codes to 62 subordinate themes after the second coding phase. In the final coding of the phase, the clusters were categorised into 15 superordinate themes, reducing the data much further. (coding process can be viewed in appendix 8). The data analysis process was flexible and not rigid. The emergent codes the researcher identified to start the coding process were provisional codes as new codes were sometimes created, highlighting the flexibility of the coding process.

4.11.3 Data Display

For conclusions to be drawn from the bulk of data, a presentable display of the data in the form of a grid was created in correspondence to the suggestion by Miles and Huberman (1994) which states that a researcher would be in a better position to know better what he/she can display. On the grid, the main headings are represented by the main themes forming from the categorisation of codes. This, therefore, supports the researcher’s ability to view the dominant codes concerning the resilience process illustrated during the interview.

In addition, the researcher diagrammatically represents the resilience process in each case, and according to the observed empirical data representing the events that occurred during the process, the researcher clusters based on the sequence of events. The process diagram utilised to illustrate each case's resilience process has been adopted from the work of Fisher (2019).

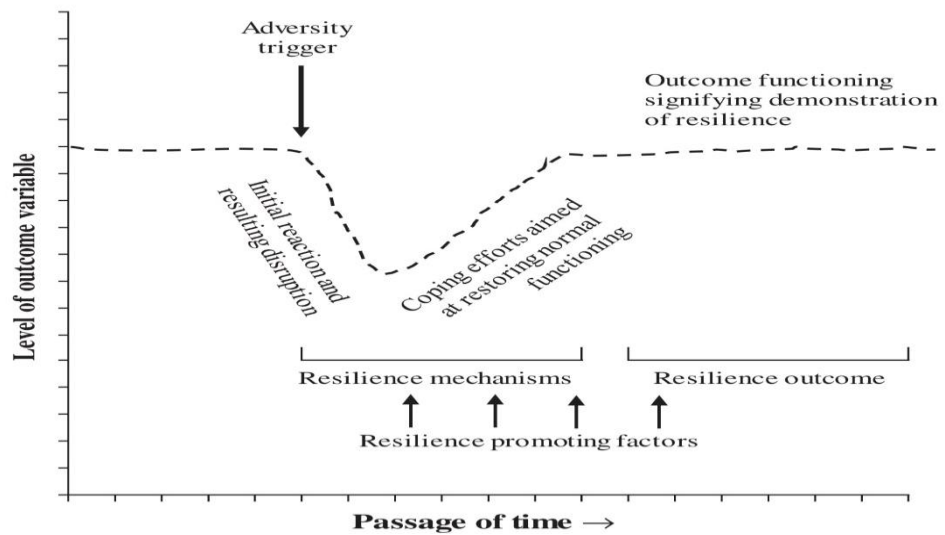


Figure 4.2: Resilience Process adopted by Fisher (2019).

The diagram is adopted for analysing the resilience process of the firms participating in this present study for the following reasons:

- The diagram portrays the significance of an adversity/disruption trigger during a resilience process and can easily highlight the disruption trigger that stimulated the need for resilience in the studied firms.
- The diagram provides the opportunity to present the resilience mechanisms of the studied firms. This comprises the owner-manager's initial reaction, the disruption that resulted, and the ad hoc activities aimed at restoring the firm to a state of normality.
- The diagram highlights the significance of a resilience outcome that portrays the end of the resilience process with the achievement of resilience.
- Lastly, the diagram can be adopted to highlight the resilience promoting factors such as dynamic capabilities during the resilience process.

The reasons stated above for adopting the resilience process diagram supports the aim of this present study, which explored resilience as a process, and the role of dynamic capabilities. Furthermore, illustrating the findings in a process-like diagram makes it easier for the reader to comprehend the resilience process in each firm explored in this study.

Using the NVivo software, the researcher compared the codes of two cases as a form of cross-case analysis. Data is displayed indicating the commonalities and the differences between two cases based on the data coded for each case. This data display supports the conclusion drawing and verification process.

4.11.3.1 Conclusion Drawing/Verification

The process of comparing the different cases was iterative until the point where the researcher could identify a set of constructs that offer the opportunity to explain differences and similarities (Eisenhardt, 1989). Thus, the findings informed the existing theory on the roles dynamic capabilities play in small firms' resilience process. In this study, the researcher aimed to develop a valid and robust argument with the support of data. Therefore, links were established between the resilience process and the dynamic capabilities (sensing, seizing, and reconfiguration) present in the participating firms. The researcher highlighted the differences and similarities across the various participating firms and discovered relationships between the cases. This is discussed in more detail in the chapter covering the cross-case analysis. This study aimed to identify unexpected and contradictory data (even data that confirms the researcher's ideas), thus not falling into the trap of being data selective. To obtain significant comparisons of both constructs and cases, the researcher conducted a within-case and cross-case analysis (Yin, 2009). The study presented the findings in chapter five.

4.12 Qualitative Research Quality

Reliability and validity are terms often used to assess the significance of a study. However, as Willig (2013) argued, the reliability and validity criteria are related to the positivist and realist perception of how qualitative researchers should view reality and knowledge. Therefore, in place of reliability and validity, terms such as quality, trustworthiness and credibility have been adopted by qualitative researchers at an accelerating pace to evaluate the value of their research (Golafshani, 2003). Scholars have developed guidelines to assess the value of qualitative research (e.g. Elliott et al., 1999; Yardly, 2000; Tracy, 2010). It is assumed that the guidelines can be adopted irrespective of the methodology adopted. Also, Smith (2011) developed guidelines for assessing the value of IPA

research. The researcher has reflected on the guidelines, and its application in this research is discussed.

According to Yardly (2000), to promote credibility, this study needs to show consideration for the wider context in which the research was conducted, and this can be realised on several levels. Firstly, the researcher made themselves aware of the context in which the study was conducted. This required the researcher to conduct a literature review and be familiar with the extant literature on organisational resilience and dynamic capabilities in general and SME context. Also, the researcher had to be aware of the IPA theoretical underpinnings. Elliott et al. (1999) argue that the researcher must be aware of the participant context. To this end, the researcher documented the details of the participants interviewed. This step aids theoretical generalisation.

The semi-structured interviews appear to be another context that requires reflection by the researcher. Prior to conducting an interview, the researcher spent some time building rapport with the participant to help the participant relax. The researcher was aware of the likely imbalance in power between themselves and the participant. To this end, the researcher emphasised the flexible nature of the interview, hinting to the participants that there were no right or wrong answers, but the focus was on what they had to say regarding their experience and perceptions. With this said, the researcher hoped the participants would be more relaxed and willing to speak up freely. The researcher aimed to be empathetically attentive to what the participant said throughout the interview session. This required the researcher to be sensitive to both verbal and non-verbal cues to avoid upsetting the participant by enquiring deep into the area of high sensitivity, such as their annual profits.

Another feature that assesses the value of research involves conducting the research process with dedication and rigour. This requires the researcher to engage with the topic being investigated over an extended timeframe (Yardly, 2000). The researcher achieved the rigour and dedication needed by conducting a pilot study that aided in verifying the interview protocol, receiving graduate training to conduct interviews and analysing the data following set guidelines for IPA study. The researcher also demonstrated rigour by recruiting participants that would be able to provide information sufficient to answer the research questions and achieve the research aim (Tracy, 2010). During the

data analysis, in line with the IPA guidelines, the researcher was interpretative and identified the relevant themes of significance in the data. The researcher has attempted to achieve rigour throughout the research.

Another quality of valuable research is transparency and consistency (Yardly, 2000). The researcher has made efforts to ensure that the reader can identify the coherence between the methodology selected and how it is suitable to answer the research questions. The researcher has also included the process for developing the interview protocol, how participants were recruited, the type of interview conducted and how it was conducted and how the data analysis process was conducted. The researcher has also made available quotes from the transcript in the cross-case analysis and pattern searching analysis chapter for the reader to reflect on this study's interpretations and possibly develop other interpretations.

Regular credibility checks (Elliot et al., 1999) or scrutiny (Smith et al., 2009) carried out by the project supervisory team increased this study's trustworthiness. The supervisory team reviewed the entire research, from the interview protocol, data analysis process, to the written thesis. The aim of this was to produce a credible final report – thesis.

Finally, a relevant feature of a reputable qualitative study is that it has some significance and value (Yardly, 2000). This tends to begin with the selection of a relevant topic (Tracy, 2010). It can be argued that the SMEs are vulnerable to disruptions and anything that could offer a better understanding of how the owner-managers of such firms can ensure the firms remain resilient to the disruptions is actually worthy for scholars, policy makers and practitioners. It is expected that this study will enlighten a previously understudied area (the relationship between organisational resilience and dynamic capabilities as sensing, seizing and reconfiguration). It is also expected that this study will stimulate further research in this area and encourage practitioners and policy makers to think of the plausible implications of this study and its applicability to their practice.

4.13 Research Ethics

Prior to the commencement of this study, the researcher ensured that all matters regarding ethics were mitigated and that the study in every aspect fulfilled all ethical requirements. As stipulated by

the Portsmouth Business School (PBS), the ethical guidelines were followed during the designing phase of the research. Furthermore, the researcher attended the workshop organised by the University of Portsmouth's graduate school to educate researchers on the relevance of ethics and how to ensure the requirements are duly followed. The researcher is aware that he represents the University of Portsmouth and not just himself by carrying out this research. Therefore, the researcher has made sure all ethical requirements have been fully adhered to at the uttermost. The PBS ethics committee reviewed, and a favourable opinion was awarded to the research project on 21/12/2018. (Appendix 1). The requirements were adhered to, to ensure that the research adheres to ethical standards.

An invitation letter along with an information sheet detailing more about the research was sent to the participants to gain informed consent and ensure that all the participants agreeing to take part in the research were well knowledgeable about the direction and process of the study before deciding to commit. The invitation letter and information sheet can be viewed in appendices 3 and 2, respectively. This implies that the participants were in their own right to choose to participate or entirely refuse to participate in the research. Therefore, gaining the consent of the participant was of high importance in this study. The informed consent of every participant was audio recorded before commencing with the interview session. All the requirements of informed consent were strictly followed.

Additionally, to protect the research participants, the participants were made anonymous in this study. The owner-managers and the organisations were all unknown. The data of the interviewee and firm were only shared with the research supervisors. The participants and organisations' real names were anonymised throughout the thesis, transcripts, and in future publications. The Data Protection Act (1998) (Information commissioner's office, 2001), was adhered to by the researcher. As a means of ensuring confidentiality, the collected data is securely stored in the University of Portsmouth storage system and will be kept there for five years after the research has ended. The data is kept this long in case an additional validity check is needed in the future. Within five years of completion of the research, the data will be securely destroyed.

In addition, all the participants were allowed to withdraw from the study at any time. The rights of the participants and implication(s) of the study were communicated to the participants by the researcher with efforts geared towards absolute comprehension. (Robson, 2011). The researcher collected only data significant to the research, and the consent of the participant was received before the researcher commenced to collecting the data. Thus, the researcher adhered to the ethical code of practice. The researcher's obligation was accurately documented and established as well as all procedures, which the researcher carried out.

4.13.1 Safety and Risks

No risks for the participants and the University of Portsmouth were foreseen before the research. Any risk concerning the researcher's safety was significantly reduced by the researcher ensuring that the health and safety regulations were adhered to when visiting the research locations, and by effectively informing the researcher's supervisors about the research locations and whom the respondent was. Also, the researcher assessed all risks involved with visiting the participants for the interview before embarking on the trip. The researcher researched the participant, the place where the meeting will be held, and other risks, which could affect the researcher's well-being to conduct a risk assessment. The researcher identified any potential harm during the research, and effective steps were taken to address them appropriately.

In summary, the research methodology can be viewed as the strategies that illustrate how researchers should conduct research (Lindlof & Taylor, 2002; Lee & Lings, 2008). Therefore, it connects the methods used and the research objectives while adequately noting the underlying philosophical and theoretical assumptions and their influence on the chosen method(s). The literature review, the research question's nature, and the research's interpretivist background determined this research methodology. The researcher adopted the interpretivist philosophical stance in this research. The researcher's ontology is subjective as the researcher sought to understand the meanings of the phenomenon under study, which are socially constructed; hence, the reason behind adopting the interpretivist philosophical stance. The researcher approached the study in an abductive manner, given that the researcher aimed to develop inferences by moving forth and back between the observations made and existing theory. By adopting an abductive

approach in this study, the researcher employed a phenomenological research strategy in line with a qualitative research design.

Following the qualitative research design for conducting research, the researcher chose to use the in-depth interview qualitative method. Utilising the in-depth interview qualitative data collection technique was suitable given that the researcher aimed at receiving as much in-depth information as possible. The in-depth qualitative interview method promoted in-depth data accumulation on the studied phenomena in its real context (SMEs). The researcher collected the data in each firm (case) by using a semi-structured in-depth interview. After the data collection from each case, the data was analysed thematically using a qualitative data analysis software. A cross-case and pattern matching analysis of the data were conducted to discover the possible relationships, and commonalities between the owner-managers' narratives and, most importantly, highlight the mechanisms causing the resilience events observed in each case.

In the next chapter, an overview of each participating firm is discussed, and the findings from each case are presented.

CHAPTER FIVE

RESEARCH FINDINGS

5.1 Introduction

This chapter aims to provide a phenomenological and interpretative narrative of the findings from this research. Seven superordinate themes emerged following the interpretative analysis. The superordinate themes were shared by all thirteen participating firms: 'disruption trigger', 'resilience mechanism', 'resilience promoting factors', 'resilient outcome', 'learning', 'resources' and 'resilience perception'. The superordinate themes have several related subordinate themes and are presented below in table 5.1.

Table 5.1: Superordinate Themes and the corresponding subordinate themes

Superordinate Theme	Subordinate Theme
Disruption	BREXIT Change in legislation Climate change Faulty equipment Increased competition Increased product demand Poor infrastructure Loss of significant client Raw material diseases Contaminated raw material Extreme weather
Resilience Process	Coping mechanism Resulting disruption Initial reaction
Dynamic Capabilities	Sensing Seizing Reconfiguration
Organisational Resilience outcome	Growth Stability Survival
	Learnt to use the right raw material Learnt about sector best practices

Learning	Learnt from past occurrences Learnt not to panic Learnt not to produce substandard products Learnt to be more organised Learnt to do retrospective scanning of firm Learnt to employ more staff Learnt to invest more into the business Learnt to make business projections Learnt to scan the environment Learnt to survive Learnt to understand the disruption Still learning from the previous disruption
Resources	Financial resources Employee contribution Effective collaboration Knowledge acquisition Role of the owner-manager
Owner-Manager Resilience Perception	Adaptation – process-based perception Availability of funds – resource-based perception Survival – endurance-based perception

5.2 Case TPW

Case TPW is an alcoholic beverage manufacturing company founded in 2010. It has six full-time employees. The company has its manufacturing site on the Isle of Wight (an Island in the southern part of England) and an annual turnover of £100,000 in the financial year before the interview. The company has two owner-managers (from here onwards O-MS), with the participating owner having managerial experience of forty years. The participating manager was fifty-nine years old at the time of the interview.

Disruption: A change in legislation. There was a change in legislation regarding the wordings presented on the firm's product.

Resilience Process: The firm was surprised by the change in legislation as the firm thought it had been operating on the right side of the law by following the best advice it needed to produce its

products. The disruption resulted in slowing production of the products and an unexpected expenditure for the firm. The firm took the necessary steps to gain the professional advice needed to make the relevant changes in response to the disruption. Also, the owner-managers appealed to the government for an extended time period in which to make the changes while still selling already labelled products. The firm won the appeal and sold their products whilst still using the bottles that had the previous labels during the label transformation period. The ability to use up the bottles reduced the losses accrued by the firm.

Dynamic Capabilities: During the resilience process, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat (after the disruption occurred) by interpreting what the problem was, thereby learning and becoming more aware of what was going on. In addition, the O-Ms spoke to professionals to understand what the change in legislation meant for their firm and the best solutions that they could adopt.
- Seizing: Given that the O-Ms did not sense opportunities, they failed to mobilise resources to capture an opportunity.
- Reconfiguration: As a means of adapting to the change in legislation, the O-Ms changed the product label gradually until they were totally compliant with the new legislation.

Achieved organisational resilience outcome: The product labels were successfully changed in order to comply with the change in legislation. The successful change of the product labels resulted in a return to normal operational capacity. However, it also resulted in the reduction of the profit made by the firm in the financial year following the disruption. Therefore, the firm achieved the survival resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being endurance-based. The O-M played a leadership role by being the key decision-maker in the firm. In addition, the O-M utilised the following internal and external resources during the resilience process:

- Financial Resources: The O-M utilised financial resources as part of its response to the disruption. The firm had the financial resources within the firm and did not require borrowing from outside the firm.
- Knowledge Acquisition: The O-M utilised information obtained from outside the firm, mainly from professionals during the resilience process.

The O-M implied that the experience acquired during the resilience process highlighted the fact that they (both O-Ms) have learnt more about the business after going through the difficulty considering different backgrounds were completely different from the business.

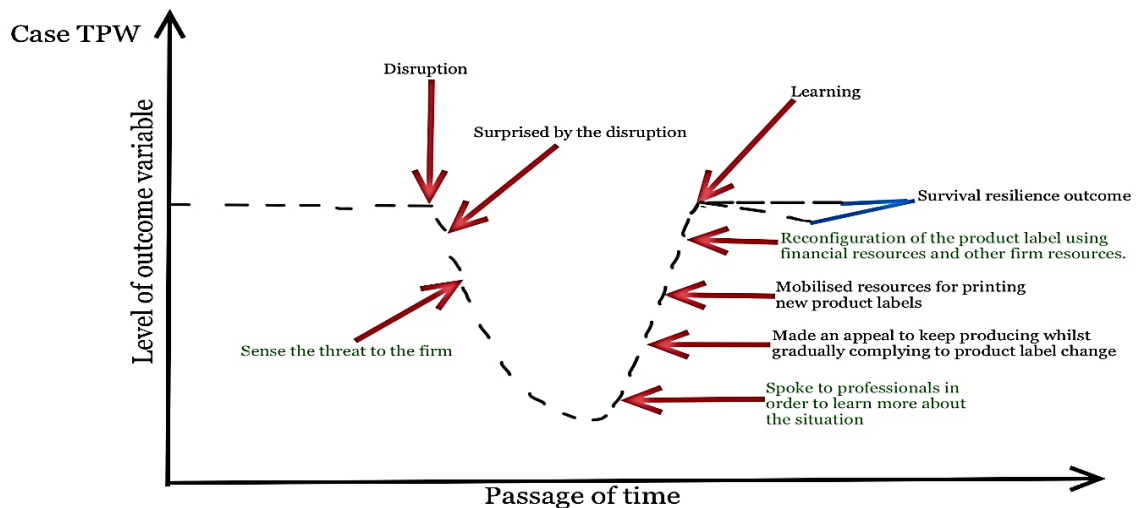


Figure 5.1: Figure showing a depiction of the resilience process in case TPW according to the participant's narrative.

5.3 Case EPV

Case EPV is an alcoholic beverage manufacturing company founded and bought by the current owner in 2009 (although the vineyard was initially planted in 2003). It has five full-time employees and its manufacturing site on the mainland and the southern part of England and recorded an annual turnover of £1.8 million before the interview. The company has one owner who is ninety years old, and a manager who is forty-seven years old at the time of the interview and the participant in this research that manages the company and works collaboratively with an internationally renowned

winemaker (an employee). The participant has been with the company since 2010 but has an overall managerial experience of eighteen years.

Disruption: Adverse weather condition. The firm was faced a challenging extreme cold weather disruption that influences the firm's day to day processes.

Resilience Process: The firm was surprised by the severe change in weather condition. This affected half the firm's vineyard and reduced the raw material that could be harvested. The disruption also caused the harvesting process to last longer than normal. Therefore, the disruption impacted the firm's production capacity negatively. The O-M decided to utilise the firm's stock to ensure that there were products available to be sold in the market place.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat (after the disruption occurred) by deliberately interpreting the problem, thereby learning and becoming more aware of what was going on. The firm also sensed for a future-proof solution to disruption in case it occurred again in the future.
- Seizing: Given that the O-Ms did not sense opportunities, they failed to mobilise resources to capture an opportunity.
- Reconfiguration: To adapt to the disruption, the firm changed how they harvested the raw materials by harvesting more than once.

Achieved organisational resilience outcome: The firm successfully made products available to be sold in the market as a means for generating revenue during their response to the disruption. The firm's production capacity returned to normal, and the profit margin (because of the stock) was maintained in the financial year following the disruption. Therefore, it led to the achievement of the stability organisational resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being resource-based. The owner-manager played a leadership role by continuously learning how to

improve the firm. In addition, the O-M utilised the following internal and external resources during the resilience process:

- Slack Resources: The firm had stored products, which supported the firm during the resilience process.
- Knowledge Acquisition: The firm had to seek information from outside the firm to make sound decisions to enable the firm to come through the resilience process and not succumb to the same disruption in the future.

The O-M indicated that the experience taught him to be more aware of threats in the firm's environment. The firm is still researching the best ways to prevent/respond to an occurrence of a similar disruption in the future.

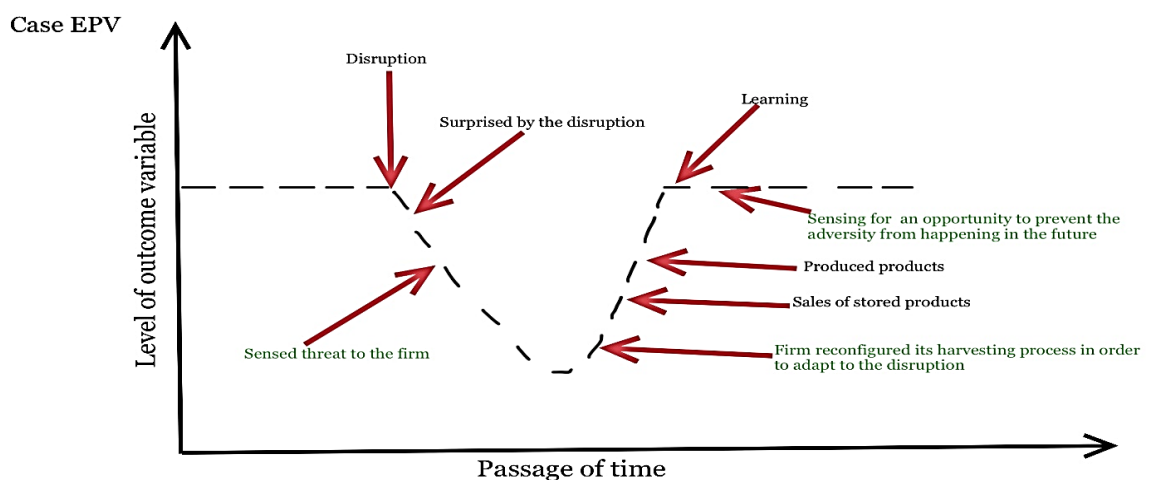


Figure 5.2: Figure showing a depiction of the resilience process in case EPV according to the participant's narrative.

5.4 Case NJ

Case NJ is a jam manufacturing company founded in 2011 and had five full-time employees. The company has its manufacturing site in the southern part of England and made an annual turnover of £40,000 before the interview. The company has one O-M who has eight years of managerial business and was fifty years old at the time of the interview.

Disruption 1: Loss of the firm's premises. The firm suddenly lost its premises, and this impacted the firm negatively.

Resilience Process 1: The O-M was surprised by the loss of its firm premises. The disruption led to a drop in the firm's turnover/revenue because the firm could not manufacture products on a large scale. The O-M began making products in small batches in her house kitchen.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat (after the disruption had occurred). The O-M consciously searched for a new premise on the internet.
- Seizing: The O-M decided to mobilise funds to acquire a building and construct an operational kitchen that would allow the firm to manufacture products on a large scale.
- Reconfiguration: No reconfiguration was made in regards to this disruption.

Achieved organisational resilience outcome: The firm successfully discovered a new premise. The firm successfully returned to normal production. However, the firm was unable to maintain its profit margin in the financial year following the disruption. Therefore, the firm achieved the survival organisational resilience outcome.

Disruption 2: The loss of a significant customer. The firm lost its main customer, which was a hotel. This disrupted the business severely.

Resilience Process 2: The firm was surprised by the change in the ordering pattern of the significant customer and then the eventual loss of the customer. It led to a drop in the firm's turnover/revenue. The firm supplied to smaller customers.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat (after the disruption occurred). The O-M sensed for new customers (and successfully discovered a new market). The O-M also sensed for professional advice to help the firm strategise properly.
- Seizing: The O-M decided to mobilised resources to provide services needed to capture and satisfy the newly sensed market.
- Reconfiguration: The O-M changed its business model to capture the newly sensed market in response to the loss of its primary customer.

Achieved organisational resilience outcome: The owner-manager successfully diversified the business, which led to the maintenance of the firm's operations. However, the firm was not able to maintain its profit margins in the financial year following the disruption. Therefore, the firm achieved the survival organisational resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being process-based. The owner-manager played a leadership role by leading the firm through challenges and motivating the employees. In addition, the O-M utilised the following internal and external resources during the resilience process:

- Financial Resources: The firm had the necessary financial resources needed during the firm's resilience process with no need to obtain this from outside the firm. As a result, the firm did not collaborate with an external firm during the process.
- Knowledge Acquisition: The firm had to seek information from outside the firm to make sound decisions to enable the firm to come through the resilience process and not succumb to the same disruption in the future.
- Employee Contribution: The O-M implicitly stated the employees played a useful role in the resilience process.

The O-M indicated that the experience required a lot of learning, and the O-M learnt all that was needed to ensure the firm survives the disruption.

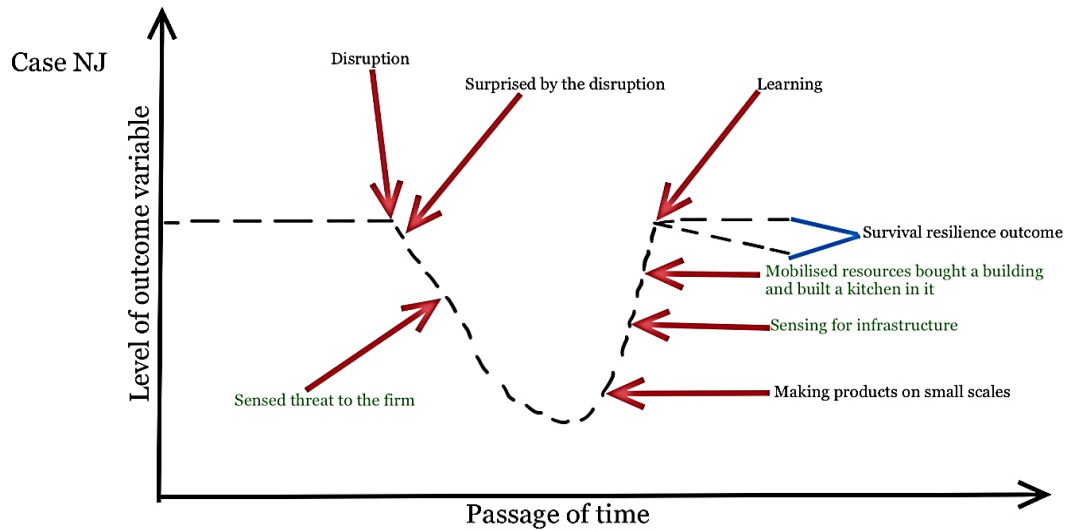


Figure 5.3: Figure showing a depiction of the resilience processes in case NJ according to the participant's narrative.

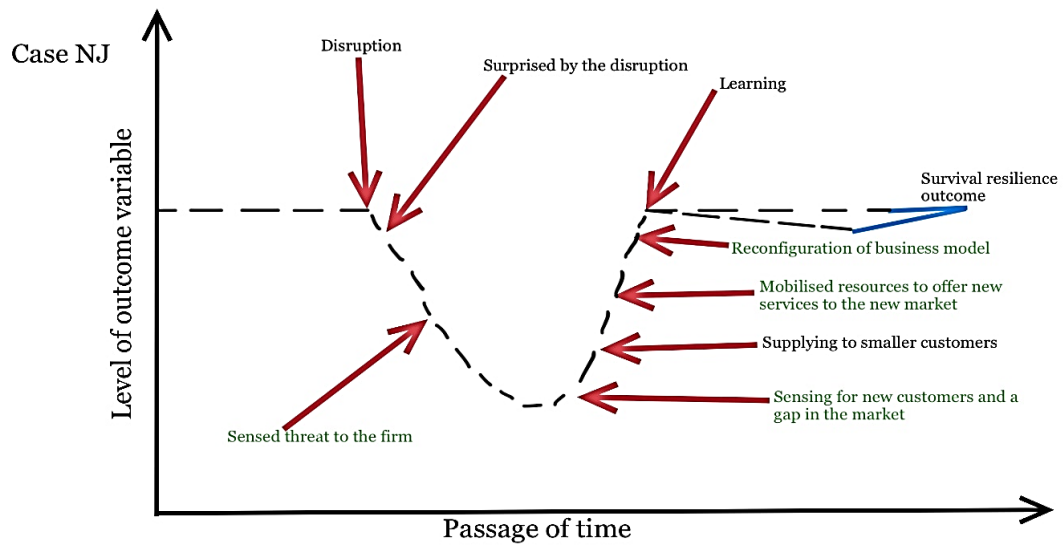


Figure 5.4: Figure showing a depiction of the resilience processes in case NJ according to the participant's narrative.

5.5 Case BAL

Case BAL is an alcoholic beverage manufacturing company founded in 2006 and has seven full-time employees. The company has its manufacturing site on the mainland south of England and made an annual turnover of £570,000. The company has two O-M, with the participating owner having managerial experience of thirty-five years and being sixty-one years old at the time of the interview.

Disruption: An increase in competition. A firm was established in the same locality as the participating firm and operated in the same sector as the participating firm.

Resilience Process: The O-M was surprised by the loss of customers due to the new business, which opened in the same area. This resulted in a drop in the market share of the business. The firm took steps to foster relationships with the customers and focused on maintaining the relationship.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the disruption before it occurred, and while maintaining a relationship with the customers, the firm sensed the opportunity to introduce new products that the customers wanted.
- Seizing: The O-M decided to invest in the manufacture of new products that appealed to the customers.
- Reconfiguration: There was no continuous change to the firm organisational structure and assets during the resilience process discussed during the interview. This is due to the return to stability following the seizing process.

Achieved organisational resilience outcome: The firm successfully maintained market share and continued operations as usual. The firm's profit margin stayed the same in the financial year following the disruption resulting in the achievement of stability resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being endurance-based. The owner-manager played a leadership role by leading the firm, motivating the employees and communicating effectively. In addition, the O-M utilised the following internal resources during the resilience process:

- Financial Resources: The firm had the necessary financial resources needed during the firm's resilience process with no need to obtain this from outside the firm. As a result, the firm did not collaborate with an external firm during the process.

- Employee Contribution: The O-M implicitly stated that the employees played a role in the resilience process.

The O-M indicated that the experience had taught him to pick up changes in the environment before they happen.

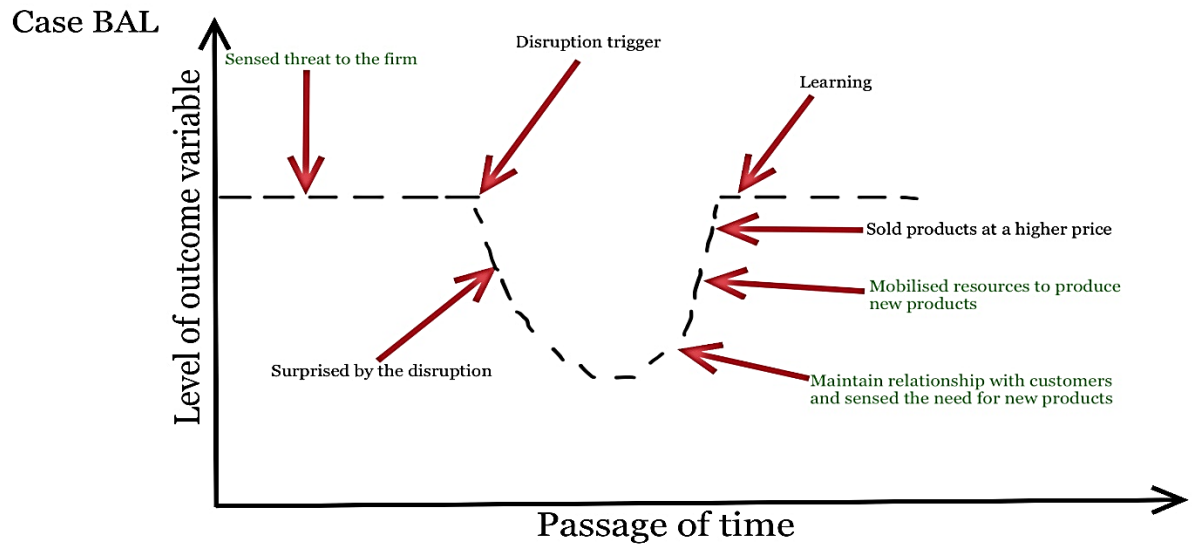


Figure 5.5: Figure showing a depiction of the resilience processes in case BAL according to the participant’s narrative.

5.6 Case SG

Case SG is an alcoholic beverage manufacturing company founded in 2014 and has 12 full-time employees. The company has its manufacturing site on the mainland south of England and made an annual turnover of £480,000 the year before the interview. The company has three O-M (one participated in the research), having managerial experience of fifteen years and being forty-three years old at the time of the interview. The company opened up to the public to make investments worth £300,000 into the business for 10% equity. So far, the company has realised and surpassed this target, making funds available for the realisation of the company’s targets.

Furthermore, the company is known as one of the top ten successful breweries in the country and has announced plans to expand as it has secured funds from the crowdfunding scheme and other investors.

Disruption: Faults with the firm's raw materials. The utilisation of an inappropriate raw material led to the production of products un-fit for consumption.

Resilience Process: The O-M was surprised by the challenges resulting from the disruption. The disruption caused the firm to lose its products and revenue. The O-M endeavoured to retrieve the poorly made products from the customers, and it was disposed of.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The firm sensed the threat (after the disruption occurred). In addition, the firm sensed new raw materials and what other firms were doing to manufacture the products properly.
- Seizing: Given that the O-Ms did not sense opportunities, they failed to mobilise resources to capture an opportunity.
- Reconfiguration: There was a change to the firm organisational structure and assets during the resilience process.

Achieved organisational resilience outcome: The firm successfully replaced the faulty raw material and reviewed the production process. The firm's production capacity returned to normal, and the profit margin (because of the stock) was maintained in the financial year following the disruption. Therefore, it led to the achievement of the stability organisational resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being endurance-based. The owner-manager played a leadership role by learning continuously and played a manager's role by multi-tasking and handling most roles in the firm. In addition, the O-M utilised the following internal and external resources during the resilience process:

- Financial Resources: The firm had limited financial resources needed during the resilience process within the firm.
- Employee Contribution: The comments of the O-M imply that employees played a role in the resilience process.

- Effective Collaboration: The firm had to collaborate with the bank in order to have the necessary funds needed to finance the resilience process.
- Acquired Knowledge: The firm had to receive information from outside its domain to aid better decision-making.

The O-M indicated that every day the business makes it through offers an opportunity for the firm to learn, and this experience was no exception.

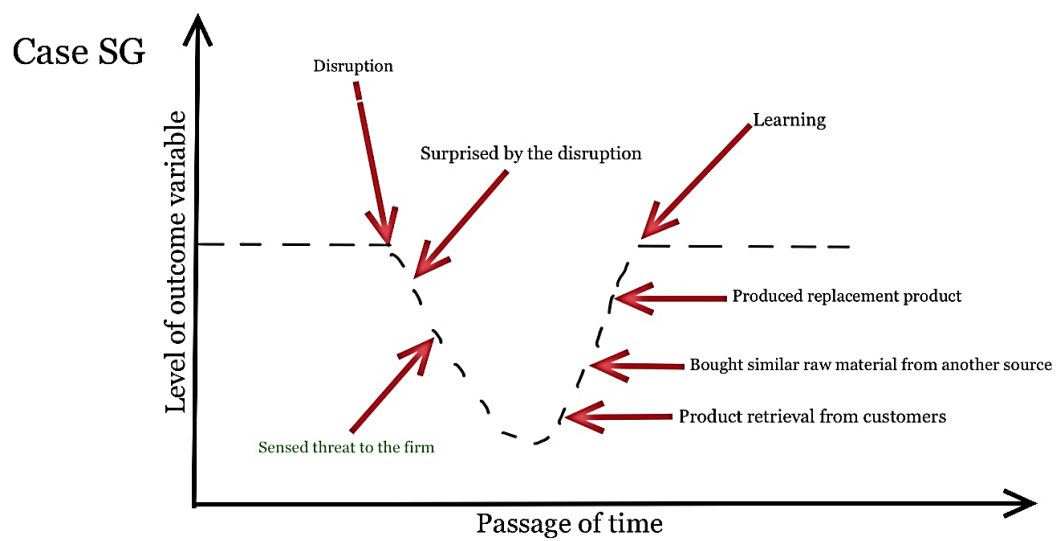


Figure 5.6: Figure showing a depiction of the resilience processes in case SG according to the participant's narrative.

5.7 Case CRB

Case CRB is an alcoholic beverage manufacturing company founded in 2013 and has six full-time employees. The company has its manufacturing site on the mainland south of England and recorded annual revenue of £160,000 the year before the interview. The company has two O-M, with the participating owner having managerial experience of thirty-five years and being sixty-one years old at the time of the interview.

Furthermore, the company is known as one of the top ten successful breweries in the country and has announced plans to expand as it has secured funds from the crowdfunding scheme and other investors.

Disruption: Infrastructural Challenges. The toilets on the firm's premises were unsuitable for use by the female customers.

Resilience Process: The O-M was not surprised by the disruption as they sensed the threat before the disruption became a crisis. Therefore, the firm responded to the disruption early. However, the disruption caused a reduction in the number of customers that patronised the business. The firm took the necessary steps to build a relationship with the customers.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat before it became a manifested disruption, and after the disruption was sensed, the firm sensed the opportunity to introduce new products.
- Seizing: The O-M decided to invest in building an entirely new pub with toilets appealing to the customers and offered new services mostly to female customers. The O-M also mobilised resources for the manufacture of new products, which appeal to the customers.
- Reconfiguration: There were no reconfiguration activities.

Achieved organisational resilience outcome: The firm successfully built a new pub having new toilets. The firm also introduced more products appealing to the customers leading to an increase in the number of customers. The production capacity increased as the firm manufactured new products, and the firm's profit margin increased in the year following the disruption. Therefore, the firm achieved the growth organisational resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being endurance-based. The owner-manager played a leadership role by being the key decision-maker in the firm and communicating effectively. The owner-manager also exhibited managerial qualities by multi-tasking and handling several other roles in the firm. In addition, the O-M utilised the following internal and external resources during the resilience process:

- Financial Resources: The firm had the financial resources needed during the resilience process within the firm.

- Effective Collaboration: The firm had to collaborate with friends during the resilience process.
- Employee Contribution: The O-M's comments implied that the employees played a role in the resilience process.

The O-M indicated that you learn from doing things even if they do not work the first time they are done.

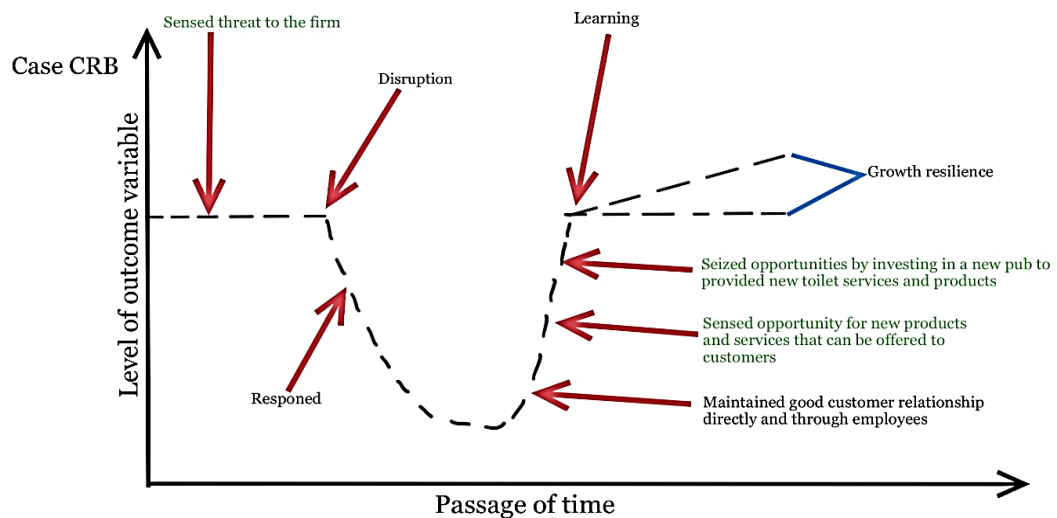


Figure 5.7: Figure showing a depiction of the resilience processes in case CRB according to the participant's narrative.

5.8 Case AB

Case AB is an alcoholic beverage manufacturing company founded in 2012 and has five full-time employees. The company has its manufacturing site on the mainland south of England and recorded annual revenue of £90,000 the year before the interview. The company has one O-M with the managerial experience of ten years and forty-seven years old at the interview time.

In 2017, the company expanded and therefore moved to a new location due to growth beyond previous premises.

Disruption: The use of contaminated raw materials. Unknown to the O-M, the raw material was contaminated before it was used to manufacture products un-fit for consumption.

Resilience Process: The O-M was surprised by the outcome as the utilisation of new raw materials was intended to satisfy the customers and increase the firm's revenue. This resulted in producing a massive batch of products, which the firm expected would be sold during the festive period. However, it was discovered that the product was not fit for consumption and could have a damaging effect on the firm's reputation. The disruption led to the loss of products and expected revenue. The firm took the necessary steps to retrieve the products from customers and thereby fostering stronger relationships, and worked hard to rebuild the stocks, which were lost.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat (after the disruption occurred) by deliberately finding out the problem, thereby interpreting and learning. The O-M sensed the opportunity to build a relationship with the customers.
- Seizing: Given that the O-Ms did not sense for opportunities, they failed to mobilise resources to capture an opportunity.
- Reconfiguration: There was no continuous change to the firm organisational structure and assets during the resilience process.

Achieved organisational resilience outcome: The firm successfully purchased the new and right raw material and produced replacement products, satisfying the customers. The firm returned to normal production capacity. However, the firm lost its profit margin in the financial year following the disruption. Therefore, the firm achieved survival organisational resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being endurance-based. The owner-manager played a leadership role by motivating the employees. In addition, the O-M utilised the following internal resources during the resilience process:

- Financial Resources: The firm had the necessary financial resources needed during the firm's resilience process with no need to obtain this from outside the firm. As a result, the firm did not collaborate with an external firm during the process.

- Employee Contribution: The O-M comments implied that the employees played a role during the resilience process.

The O-M indicated experience acquired during the resilience process and highlighted that if the firm is faced with the same situation, he/she is well equipped to overcome the challenge.

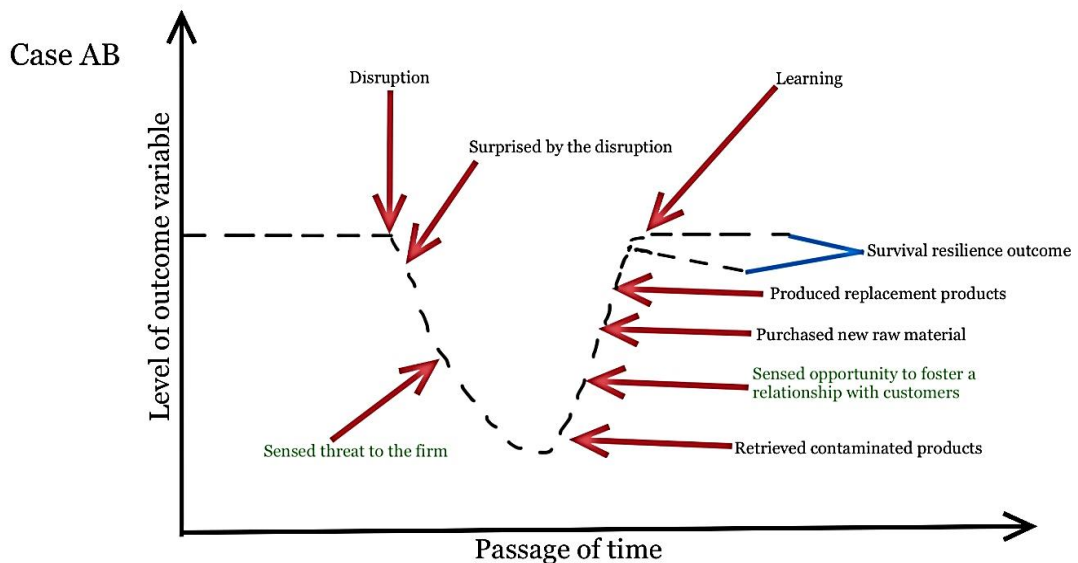


Figure 5.8: Figure showing a depiction of the resilience processes in case AB according to the participant’s narrative.

5.9 Case CHM

Case CHM is a manufacturing company founded in 2016, has eight full-time employees. The company has its manufacturing site on the mainland south of England and recorded annual revenue of £274,000 the year before the interview. The company has two O-Ms, with the participating owner having managerial experience of seven years and thirty-six years old at the time of the interview.

The company is a product of the amalgamation of two micro-businesses to form the small business it was at the time of the interview. The previous firms were incorporated in 2013 and 2012, respectively.

Disruption 1: The firm was making a very low turnover.

Resilience Process: The O-M was not surprised by the loss of revenue as this was sensed before it became a manifested disruption. However, the disruption led to a reduction in the firm's turnover/revenue. The O-Ms began having meetings to understand the situation better.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-Ms sensed the threat before it became a fully manifested disruption. The O-Ms sensed for a niche market.
- Seizing: The O-Ms mobilised resources to amalgamate their separate businesses to seize the opportunity discovered.
- Reconfiguration: The business models for the individual firms were changed during the formation of CHM due to the niche market found.

Achieved organisational resilience outcome: the firm successfully took advantage of the niche market and seized the opportunity. The firm had an increase in production capacity and profit margins in the year following the disruption, thus leading to the achievement of growth organisational resilience outcome.

Disruption 2: Poor infrastructure. The firm had trouble manufacturing due to the location of the firm and its proximity to other firms.

Resilience Process 2: The firm responded to the disruption trigger as it was sensed before it manifested into a crisis, and the O-Ms planned a response. The disruption caused the firm to produce at a lower capacity because the firm could not manufacture during the day but only at night.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat before it became fully manifested disruption as the employees made complaints of neighbouring organisations operating within the area. The O-Ms sensed for another premise.

- Seizing: The O-Ms mobilised resources to relocate to another premise and build a kitchen that can support the firm to meet its customers' growing demands.
- Reconfiguration: The firm did not reconfigure in response to this disruption.

Achieved organisational resilience outcome 2: The firm successfully relocated to another premise, which offered the firm the freedom to manufacture in large quantities at any time of the day. The firm had a higher profit and production capacity in the year following the disruption. Therefore, this led to the attainment of the growth organisational resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being resource-based. The owner-manager played a leadership role by being strategic. In addition, the O-M utilised the following internal resources during the resilience process:

- Financial Resources: The firm had some financial resources needed during the firm's resilience process with a need to obtain this from outside the firm.
- Effective Collaboration: The firm collaborated with the bank and private individuals to acquire funds needed for the investments made. Also, for the low revenue challenge, the two firms collaborated to overcome the problem.

The O-M indicated that the experience gained from the resilience processes has made the firm more confident to face future challenges as the O-M had learnt.

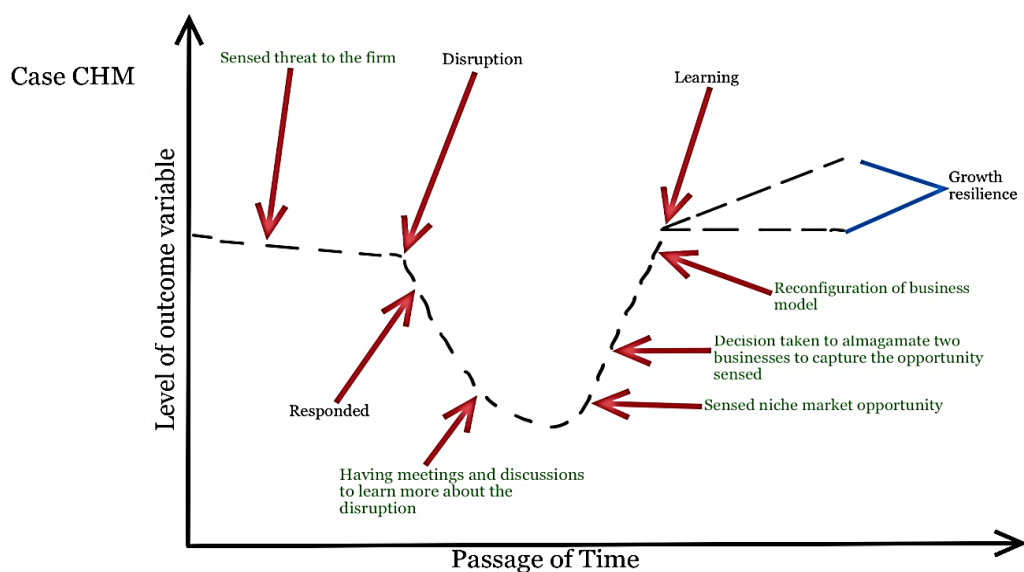


Figure 5.9: Figure showing a depiction of the resilience processes in case CHM according to the participant's narrative.

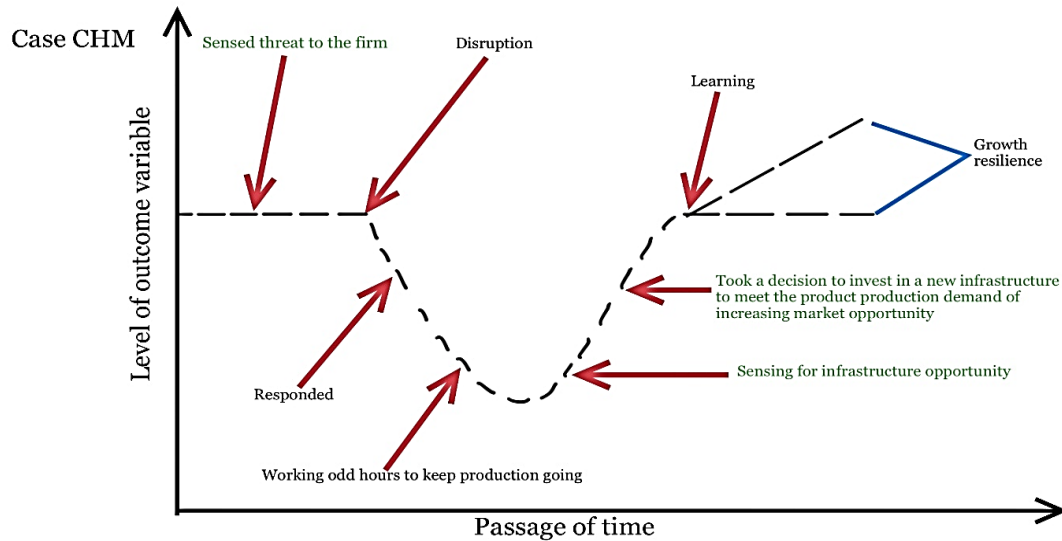


Figure 5.10: Figure showing a depiction of the resilience processes in case CHM according to the participant's narrative.

5.10 Case BW

Case BW is a butchering and meat-based manufacturing company founded in 1969 and has seven full-time employees. The company has its manufacturing site on the mainland south of England. The company has two O-Ms, with the participating owner having managerial experience of seven years and seventy-three years old at the time of the interview.

Disruption: A disease affecting the sector's raw material. The firm's raw material was affected by an animal-related disease.

Resilience Process: The O-M was surprised by the disruption trigger as it unexpectedly happened in the sector. Therefore, the O-M sensed the threat after the disruption occurred. The disruption led to a reduction in the number of customers, leading to a decline in revenue. The firm kept selling its products and continued building a strong relationship with the customers.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat (after the disruption occurred) by deliberately finding out the problem, thereby interpreting and learning.
- Seizing: The O-M mobilised resources to manufacture new products to satisfy customers.
- Reconfiguration: The O-M changed how they did things by taking customers to the source of their raw materials as a means of adapting to the disruption.

Achieved organisational resilience outcome: The firm successfully maintained its market share. The production capacity and profit margin were maintained in the year following the disruption. Therefore, the firm achieved the stability organisational resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being process-based. The owner-manager played a leadership role by being the firm's key decision-maker and a good communicator and ensuring that goals and objectives are met. The owner-manager also exhibited managerial traits by ensuring that the standards are maintained. In addition, the O-M utilised the following internal resources during the resilience process:

- Effective Collaboration: The firm effectively collaborated with the firm where the raw materials are sourced from during the resilience process.
- Employee Contribution: The O-Ms comments suggest that the employees played a role during the resilience process.

The O-M learnt that building a relationship with the customers is everything to a business.

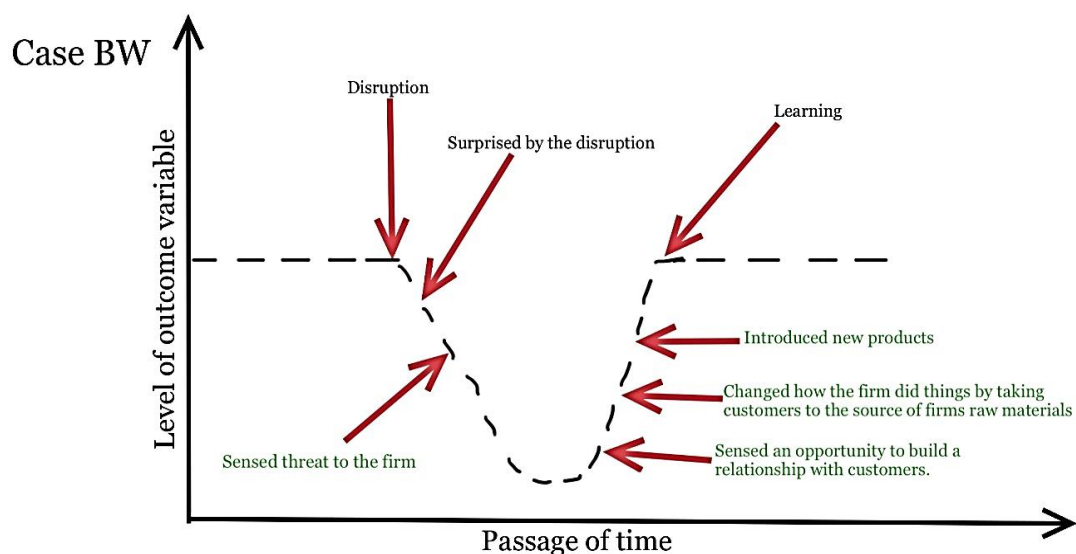


Figure 5.11: Figure showing a depiction of the resilience processes in case BW according to the participant's narrative.

5.11 Case CAR

Case CAR is a manufacturing company of pure organic nut and seed butter, raw organic chocolate spreads and chutneys, mustard, and pickles founded in 1974 and has nine full-time employees. The company has its manufacturing site on the mainland south of England and recorded annual revenue of £800,000 the year before the interview. The company has two O-Ms, with the participating owner having managerial experience of fourteen years and sixty-eight years of age at the time of the interview.

Disruption: Lack of raw materials due to climate change. The disruption resulted from adverse weather conditions over a period of time that affected the participating firm's ability to obtain raw materials.

Resilience Process: The O-M was surprised by the lack of raw materials from its supplier, as it was never expected. This led to the absence of manufactured products for sale in the market, which affected the firm's revenue. The firm maintained a relationship with the customers in this period.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat (after the disruption occurred) by deliberately finding out the problem, thereby interpreting and learning. The O-M also identified the products that the customers demanded the most. In addition, the O-M sensed for new sources for an opportunity to purchase the raw materials in bulk.
- Seizing: The O-M mobilised resources to acquire resources from another source and capture the opportunity to buy them in bulk.
- Reconfiguration: The O-M reconfigured the firm's process to ensure a large proportion of products are produced to enable the firm to keep stock.

Achieved organisation resilience outcome: The firm successfully purchased the raw materials and manufactured the products needed to meet the customers' demands. The firm restored its production capacity and maintained its profit margins in the year following the disruption. This led to the attainment of the stability organisational resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being endurance-based. The owner-manager played a leadership role by being a good communicator and ensuring that goals and objectives are met. In addition, the O-M utilised the following internal and external resources during the resilience process:

- Financial resources: The firm had moderate amounts of financial resources needed during the resilience process.
- Effective Collaboration: The firm collaborated with the bank to secure more funds.

The O-M indicated that it was learnt that to avoid being in such a situation, the firm learnt to keep stock. To achieve this, the firm invested (alongside collaborations) to build a large factory providing storage space for the stock.

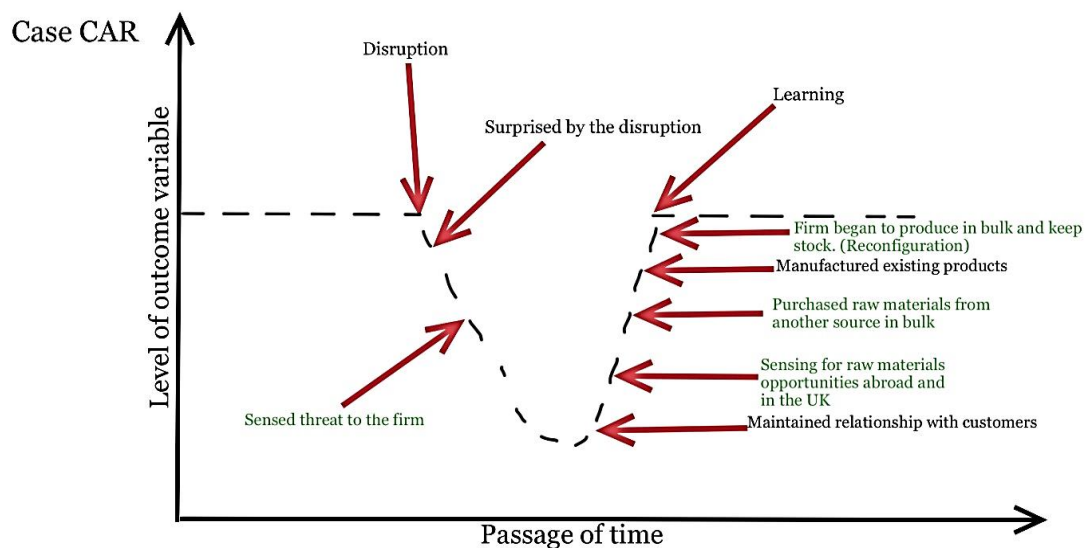


Figure 5.12: Figure showing a depiction of the resilience processes in case CAR according to the participant's narrative.

5.12 Case WHC

Case WHC is a manufacturing company that manufactures cider juices and vinegar founded in 2004 and has five full-time employees. The company has its manufacturing site on the mainland south of England and recorded annual revenue of £500,000 the year before the interview. The company has one O-M having managerial experience of fifteen years and forty-seven years of age at the time of the interview.

Disruption: Poor crop yield due to climate change. Due to weather conditions, the raw material needed to manufacture the products did not meet the O-M's expectation.

Resilience Process: The O-M was surprised by the poor yield, as it was never expected. This led to the absence of manufactured products for sale in the market. Therefore, this affected the firm's revenue. The O-M organised in-house meetings with employees.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat (after the disruption occurred) by deliberately finding out the problem, thereby interpreting and learning. Also, the firm sensed for new sources for the raw materials. In addition, the firm held in-house meetings to understand how to approach disruption.
- Seizing: The O-M did not mobilise resource to capture any opportunity.
- Reconfiguration: The O-M decided to change how it operated by allowing the employees to work longer hours to adapt to the disruption.

Achieved organisational resilience outcome: The firm successfully purchased the raw materials and manufactured the products needed to meet the customers' demands. The firm maintained its production capacity and annual profitability in the year following the disruption. Therefore, the firm achieved the stability organisational resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being endurance-based. The owner-manager did not discuss any leadership or managerial roles exhibited. In addition, the O-M utilised the following internal resources during the resilience process:

- Financial resources: The firm had the financial resource needed during the resilience process.
- Employee Contribution: The firm’s employees played a useful role during the resilience process.

The O-M indicated that it was the resilience process that provided an avenue for learning to occur for the future.

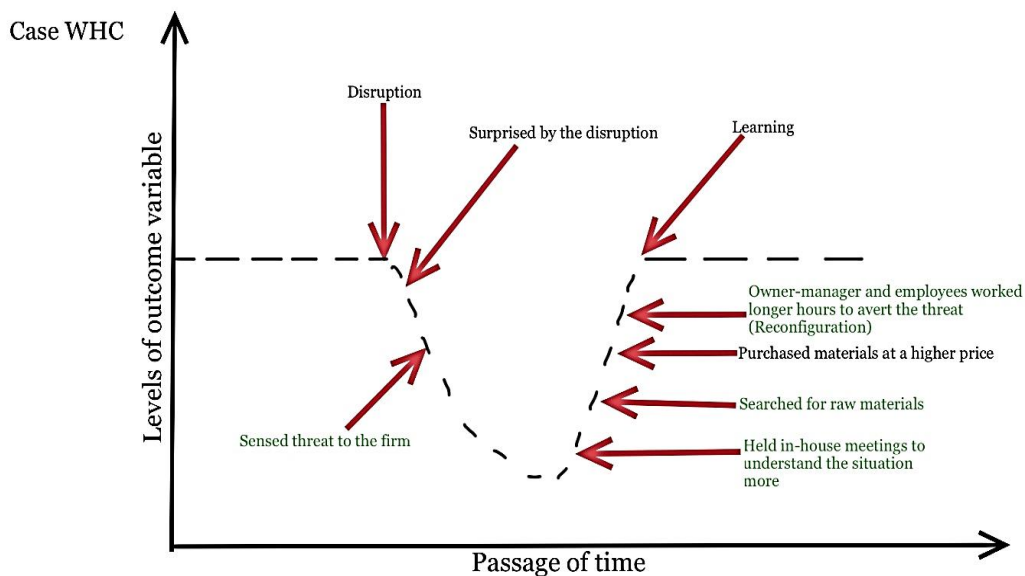


Figure 5.13: Figure showing a depiction of the resilience processes in case WHC according to the participant’s narrative.

5.13 Case SHC

Case SHC is a manufacturing company of hot chocolate products founded in 1983, has five full-time employees. The company has its manufacturing site on the mainland south of England and recorded annual revenue of £450,000 the year before the interview. The company has two O-Ms. One O-M having managerial experience of thirty-six years (participant), and the other O-M having managerial experience of fifteen years. However, the participating O-M was 61 years old at the time of the interview.

Disruption: Increase in demand for products by a client. The major customer demanded for more than double the number of products they usually ordered.

Resilience Process: The O-M was surprised by the change in demand, as the client did not warn the firm of this change. Although the firm was not prepared for this change, the O-M perceived this as an opportunity and treated it as such. The disruption overwhelmed the firm. However, the O-M organised an in-house meeting to address the issue at hand.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat (after the disruption occurred), but rather than allow it to cause a harmful problem to the firm, the O-M perceived it as an opportunity.
- Seizing: The O-M invested resources towards creating new resources by employing more people to seize the sensed opportunity.
- Reconfiguration: The O-M changed how the firm operated by allowing the employees to work more hours and on the weekends to adapt to the change to capture the opportunity.

Achieved organisational resilience outcome: The firm successfully met the demand of the client and has since grown. The firm's production capacity increased as well as its annual profitability in the year following the disruption. Therefore, the firm achieved the growth organisational resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being process-based. The owner-manager played a leadership role by ensuring that goals and objectives are met. In addition, the O-M utilised the following internal and external resources during the resilience process:

- Financial resources: The firm had moderate amounts of financial resources needed during the resilience process.
- Effective Collaboration: The firm moderately collaborated with the bank during the resilience process.

- Employee Contribution: The firm’s employees played a useful role during the resilience process.

The O-M indicated that it was the resilience process that provided an avenue for the firm to learn how to deal with large orders and realise the need to mechanise its operation.

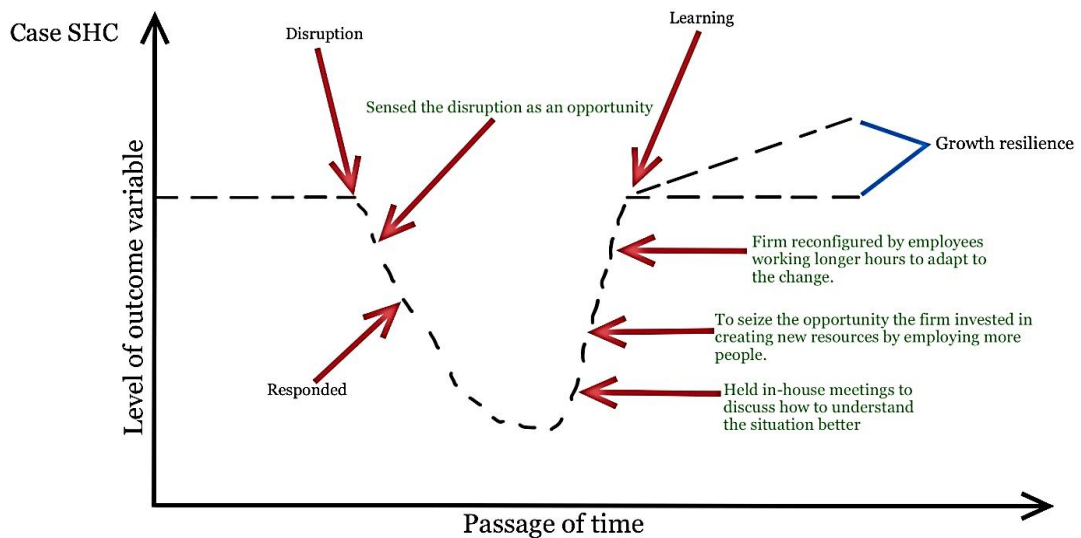


Figure 5.14: Figure showing a depiction of the resilience processes in case SHC according to the participant’s narrative.

5.14 Case ASS

Case ASS is a company founded in 1996 and has twenty-three full-time employees. The company has its manufacturing site in Wales. The company has two O-Ms, with the participating owner having managerial experience of forty years. The participating O-M declined to offer information regarding her age and the firm’s turnover.

Disruption: BREXIT. The firm exports products to the EU and was impacted by the UK’s decision to leave the European Union.

Resilience Process: The O-M was surprised by the vote to leave the European Union. The uncertainty and forex disruption resulting from the vote disrupted the firm’s processes, i.e. mainly it’s export to the EU. The O-M organised in-house meetings.

Dynamic Capabilities: During the response to the challenging situation resulting from the disruption, the following activities were conducted during the response to the disruption experienced by the organisation. The activities are outlined below;

- Sensing: The O-M sensed the threat (after the disruption occurred) and sensed for more information regarding the situation by hosting meetings with the professionals and employees.
- Seizing: There was no mobilisation of resources to capture an opportunity.
- Reconfiguration: The O-M reconfigured its business model to adapt to the disruption.

Achieved organisational resilience outcome: The firm successfully reduced its export to the EU and increased its focus on the UK market. The firm's production capacity and profit margins were maintained in the year following the disruption. Therefore, the firm achieved the stability organisational resilience outcome.

Role of owner-manager: The owner-manager has the perception of organisational resilience as being endurance-based. The owner-manager played a leadership role by learning continuously to aid the firm. In addition, the O-M utilised the following internal and external resources during the resilience process:

- Knowledge Acquisition: The firm efficiently acquired information from outside the firm to enable the firm to make the right decisions.
- Employee Contribution: The firm's employees played a useful role during the resilience process.

The O-M indicated that learning is significant if a firm wishes to make adjustments that will enable the firm to adapt to the environment's changes.

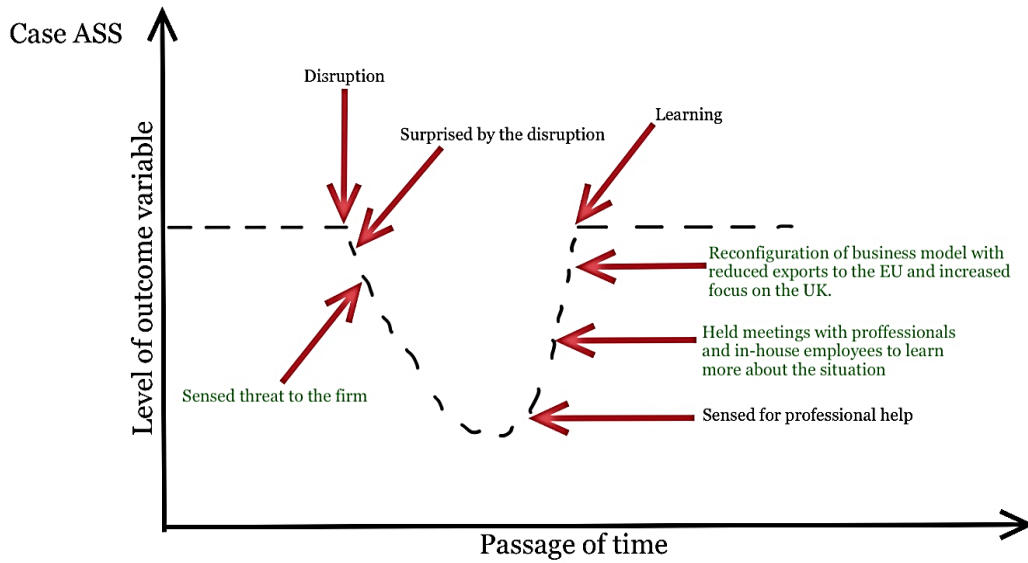


Figure 5.15: Figure showing a depiction of the resilience processes in case ASS according to the participant’s narrative.

In this chapter, the findings has been presented. In the chapter that follows, the findings are further analysed to identify cross-case divergence and convergence before identifying the data's patterns.

CHAPTER SIX

CROSS-CASE AND PATTERN-SEARCHING ANALYSIS

6.1 Introduction

This chapter aims to bring together and elaborates on the phenomenological and interpretative findings from the thirteen cases, presented in the findings chapter. Therefore, in this chapter, the convergence and divergence between the experiences of the owner-managers are captured in an attempt to address the research objectives, which are to:

1. Investigate the owner-managers perception(s) of organisational resilience in the food and drink industry context.
2. Explore the role of dynamic capabilities in building and sustaining resilience in SMEs and exploring the owner-manager's role in promoting resilience through dynamic capabilities.

In view of the objectives mentioned above vis-à-vis the research questions of this study, the present cross-case analysis is organised with the following sections: presentation of the owner-managers' resilience perceptions, categorisation based on the achieved resilience outcomes, presentation of findings regarding the operationalisation of dynamic capabilities, the resources utilised and the role of the owner-managers. It follows with the presentation of the pattern-searching analysis findings from the cross-case analysis. The enactment process (based on the narratives) through which the dynamic capabilities enable the achievement of organisational resilience is presented, thereby presenting the findings that address this study's research questions.

6.2 Resilience Perception

Insight from extant literature highlighted that the term resilience is a multidimensional construct, defined and understood in different ways depending on the field of study. For the researcher to gain a rich contextual understanding of the phenomenon, questions asked during the interview elicited responses that could potentially provide insights into the owner-managers' perception of the construct resilience from the practical day-to-day context of their firms. Consequently, this study aims to explore whether the perceptions have an influence on the organisational resilience achieved following the resilience process. From the narratives given during the semi-structured interview,

during the data analysis phase, subordinate themes of the different perceptions began to emerge. The subordinate themes are as follows: process-based perception, outcome-based perception, and resource-based perception.

6.2.1 Process-Based Perception

6.2.1.1 Adaptation

The owner-managers (from here forward O-Ms) of cases BW, NJ AND SHC have the perception of resilience as the process of getting the firm through a disruption irrespective of the type of disruption by adapting the organisation to the situation/adversity/disruption. For example, the comment of case BW's O-M suggests that the O-M's perception of resilience considers adaptation part of the resilience process a firm needs to undergo in response to a disruption. To achieve this, the firm will require a significant level of flexibility. In case BW for example, the firm had to break its usual protocol by connecting its customers to where the firm's raw material is sourced to boost the confidence of their customers towards purchasing their products:

"It means being flexible, making sure that one is being flexible and moving quickly with different trends and making sure we keep up to date with the latest things happening..."

(Case BW O-M)

Furthermore, the comments of case BW's O-M further suggests that the firm had to improve by producing desirable products as a means of adapting irrespective of the challenges the firm was faced with:

"You have to keep topping it all the time and never let down your standards slip because if you do, it will eventually come back negatively on the business." (Case BW O-M)

Also, when asked if the firm was resilient, the O-M said, *"Yes, we are. Because we are easy to adapt"*. The response validates the earlier comment of the O-M, highlighting in more detail the importance of a firm adapting as a means of being resilient.

The cases where the owner-managers had the perception of resilience as adaptation appear to manifest a trend of facing challenges that occurred suddenly and unexpectedly, with the disruption

originating from outside the firm. Therefore, requiring the owner-managers to adapt the firm's processes to these sudden changes as a means of being resilient. For example, in case SHC, there was a sudden and unexpected change in the client's demand for products. Consequently, the disruption required that the firm adapted its production processes to the sudden change to overcome the disruption. Therefore, this is the likely reason why the owner-manager of case SHC had the perception of resilience as adaptation. Also, in case NJ, rather than having an increased demand for their products like in case SHC, the firm lost a significant client. To overcome this disruption, the firm had to adapt to the sudden change by taking steps necessary to ensure its continuity as a business. When asked if the firm was resilient, the O-M responded:

"Yes, we are. Because we are easy to adapt. We are very much aware of outside changes, and we take on challenges and are prepared to work hard". (Case NJ O-M)

The comment suggests that the O-M is aware that changes will occur, and being adaptable to these changes when they happen is necessary for resilience. Similar to the narrative of case NJ's O-M, the O-M of case SHC's narrative suggests that both O-Ms share the same perception of resilience in the context of their firm as the firm adapting to the sudden changes that can obstruct the firm's set plans and goals:

"The challenges may change any time and adapting to those changes and meeting the objectives set for the company can be referred to as resilience." (Case SHC O-M)

The subsection has presented the cross-case analysis of the findings highlighting the O-Ms that have the perception of resilience as being process-based. The next paragraph presents the cross-case findings for the O-Ms that had the perception of resilience as being endurance-based.

6.2.2 Endurance-Based Perception

6.2.2.1 Survival

The O-Ms of cases ASS, BAL, CAR, SG, CRB, AB, TPW and WHC have the perception of resilience in terms of endurance (or survival). The narratives of the O-Ms suggest they had their perception of resilience as their firms' longevity irrespective of disruptions experienced. For example, the narrative from the O-M of case ASS suggests that the resilience perception is the continuity of its operations

and processes regardless of the changes experienced in the international economic scene (the business operates in the domestic and international market):

"It means being able to weather different economic climates. Challenges can come from different economies and not just one, especially when your products are being sold internationally." (Case ASS O-M)

"So being able to face these challenges coming from different economies positively is what we would consider as resilience" (Case ASS O-M)

Based on the narrative given by the case ASS's O-M, after the disruption (BREXIT), the firm was able to continue its operations domestically and internationally irrespective of the disruption and the political uncertainties surrounding the relationship between the UK and the EU. This was achieved with the continuity of the firm in mind. Similarly, the other firms in this category had the same perception of resilience. For example, the O-M of case BAL stated that:

"resilience, to me, means the ability to take on market challenges and basically present yourself as a prudent and trustworthy business, I think. The ability to maintain market share probably more than anything else". (Case BAL O-M)

The comment suggests that irrespective of the changes in the marketplace, the O-M was determined to ensure the firm's continuity by ensuring their market share was maintained through prudent means and being trustworthy. This perception of resilience held by the O-M of case BAL eventually reflected in the O-M's response to increased competition within the market.

Similarly, the other O-Ms of cases SG, CRB, CAR, WHC, AB and TPW had their perception of resilience as the longevity or continuity of their firms irrespective of the challenges or disruptions. The O-Ms stated the following:

"I would say in the context of this firm; I would say resilience is a day-to-day experience." (Case SG O-M)

"It means to me the ability to withstand the shocks." (Case CAR O-M)

"It means being able to keep going without going burst, I suppose, and weathering storms" (Case WHC O-M)

"To me, resilience means the business is coming through hard times. So, going through seasonal variances. So, when it goes quiet sometimes through the year, then you would have to be resilient to go through that, and if there are any problems, you need to be resilient to be able to come through the problem at the other side and see where it went wrong and try to make it get better" (Case CRB O-M)

"...I guess resilience is the action of continuing to put one foot in front of the other to keep going. Resilience is the ability to keep going in the face of negativity when things are going wrong and are not working. I think as a business owner there are many occasions, and I believe there will be many more where I will want to cease trading or want to give up the business or to stop" (Case AB O-M)

"We wanted to build a sustainable business, so we would look at resilience as is the business sustainable and can we from year after year even after market conditions change and we go through economic cycles, will the business still be successful. Even when market conditions or we go into recession and market conditions turn down, people will always continue to Uhhmm people will still come on holiday to destinations in the UK, including the Isle of Wight, and they will buy something to remind them of that holiday. To us, this suggests that our business is resilient" (Case TPW O-M)

The aforementioned comments provide evidence of the O-Ms' resilience perceptions directed towards the continued existence of their firms even when the conditions experienced seem to be adversely unfavourable, and the results indicate that the firm just exists. This fact is mentioned plainly by the O-M of case AB, who said that continuing could sometimes become unbearable, but the O-M ensures that the firm survives either way. Additionally, the narratives of cases TPW, CRB, and CAR O-Ms confirm that their perception of resilience is similar irrespective of the hardships experienced or unexpected shocks encountered.

This subsection has presented the cross-case analysis of the findings highlighting the O-Ms that had their perception of resilience as being endurance-based. The next paragraph presents the cross-case analysis of the findings highlighting the O-Ms that have their perception of resilience as being resourced-based.

6.2.3 Resource-Based Perception

6.2.3.1 Availability of Financial Resources

The O-Ms of cases EPV and CHM have their perception of resilience as having the essential financial resources available in the firm to respond to disruptions. For example, the O-M of case EPV highlighted the importance of having financial resources to ensure the firm's resilience:

"I suppose it means profitable sales and it boils down to sales again. Resilience without value will do no good. I mean, if you are not making a profit, you will not be able to carry on as a company..." (Case EPV O-M)

"So, therefore, resilience means that we are making sure we are putting measures in place in a way to avoid the company from going flopped..." (Case EPV O-M)

Similarly, in case (CHM), the O-M's resilience perception is in financial terms, as much emphasis is placed on the availability of financial resources within the business. The narrative of the O-M suggests that the resilience of the firm and its production processes are dependent on the availability of funds:

"So, I think we are more resilient than we have ever been, but I would recognise resilience as like having a war chest sort of like having a lot of cash in the bank..." (Case CHM O-M)

"Well, we are really generating more income through the means we have just mentioned, and we can be sustained as a business to the extent by which we are really able to achieve more turnover and hopefully have some profit..." (Case CHM O-M)

The comments of the O-Ms of case EPV and CHM suggest that the O-Ms have their perception of resilience in monetary terms, and in firm EPV, necessary steps are taken to ensure that there are no disruptions to the firm's ability to provide products in the market to ensure sales and the generation of revenue. The O-M of case EPV disclosed that he ensured that they had stock available to serve as

a buffer to avoid a situation where the firm lacked products for sale during their response to the frost disruption.

The response from case CHM's O-M suggests that the participant believes the firm's resilience is guaranteed, especially when the firm has accumulated much financial resource. This perception became evident during the O-M's response to the infrastructural disruption faced by the firm. The firm required funds to set-up its new infrastructure to the standard that suits an aspiring large capacity food-manufacturing firm. The O-M buttressed his point by saying:

"I suppose resilience is about just being able to keep running and be comfortable; we can do this in the long term." (Case CHM O-M)

The subsection has presented the cross-case findings for the O-Ms that have the perception of resilience as being resourced-based. Table 6.1 summarises the resilience perception and the cases where the O-Ms had such perceptions.

Table 6.1: Summary of each O-M's resilience perception (Y=Firm under the resilience perception category).

CASE	PROCESS-BASED PERCEPTION	ENDURANCE-BASED PERCEPTION	RESOURCE-BASED PERCEPTION
AB	-	Y	-
ASS	-	Y	-
BAL	-	Y	-
BW	Y	-	-
CAR	-	Y	-
CHM	-	-	Y
CRB	-	Y	-
EPV	-	-	Y
NJ	Y	-	-
SG	-	Y	-
SHC	Y	-	-
TPW	-	Y	-
WHC	-	Y	-

The preceding section presented the cross-case analysis of the owner-managers perception of resilience based on their narratives. The next section presents the cross-case analysis of the resilience outcomes achieved in the firms.

6.3 Achieved Resilience Outcome

In this research, the achieved resilience outcomes indicate a successful resilience process. As was established in the literature review section, the resilience outcome is not the resilience itself but indicates that resilience has occurred. The resilience outcome is an essential aspect of the resilience process as this facilitates firm categorisation based on the resilience outcome achieved and offers

opportunities that facilitate the in-depth exploration of the mechanisms that have led to the respective resilience outcomes.

Based on previous studies conducted on organisational resilience, this study adopted three organisational resilience outcomes and attempted to categorise the participating cases into these organisational resilience outcomes. The resilience outcomes are:

- **Growth**
- **Stability**
- **Survival**

6.3.1 Growth Resilience Outcome

This study's growth resilience outcome is defined as when a firm returns to stability levels (operational capacity and annual profit normalcy before the disruption) and advances beyond the *status quo* to a higher level of increased operational capacity and annual profit after responding to the disruption(s).

Based on the participants' narratives, cases CHM, SHC and CRB had their resilience processes result in outcomes that suggest the achievement of the growth resilience outcome. The O-Ms made the following comments when asked if the firm, following the disruption, recorded a growth, remained the same, or had a decline in operational capacity and annual profit:

"In both cases, we grew exponentially in both how we did things and our bottom line at the end of the year. As I have said to you earlier, we have grown exponentially well."

(CHM O-M)

"We expanded pretty much in all areas because we had to meet up with the sudden demand. So, we increased our operational capacity and very much increased our profits that year and have continued to do so. After the adversity, we bought more machines because we expected the demand for our products to continue to rise" (SHC O-M)

"After we changed the location of the taproom and built new toilets, we also increased the products we produced because we began having more customers and eventually more profit from the business" (CRB O-M)

The O-M of case CHM narrated two disruptions that the firm responded to, an infrastructural disruption and a potentially insufficient revenue disruption. After facing both difficulties, the firm was restored to *status quo* and surpassed its previous operational capacity. This significantly increased the profit made by the firm. During a visit to the establishment for an interview, the O-M was excited at the firm's progress and showed the researcher the industrial equipment the firm had installed to adapt the firm's operations to the growing demands for their products and the services offered by the firm.

Similarly, the O-M of case SHC's achieved an increased production capacity after the firm was surprised by the increased demand for its products by a major client. By increasing the production capacity, the firm successfully overcame the disruption. Consequently, the firm improved its annual profit margin. From that year on, the O-M also stated that the firm made a year-on-year increase in profits and made improvements to its processes and increased its production capacity. In the same vein, firm CRB challenged with poor infrastructural disruption experienced a loss in its market share. Customers reduced their patronage due to the poor state of the toilets that were shared by both sexes. The female customers complained more about it than their male counterparts did. However, after the firm responded by building a new pub and began offering new services and products, the firm increased its operational capacities because the number of customers increased, leading to an increase in the annual profit margin.

The narratives by the O-Ms of cases CHM, SHC, and CRB has been analysed in this subsection, highlighting the firms achieved the growth resilience outcome. In the next subsection, the O-Ms narratives of cases that achieved the stability resilience outcome are presented.

6.3.2 Stability Resilience Outcome

This study's stability resilience outcome is defined as the return to the *status quo* or maintained operational capacity and annual profit margin of the firm after responding to the disruption. Most of

the cases (CAR, ASS, EPV, BAL, SG, BW, & WHC) in this research were identified to have achieved this resilience outcome. The narratives from some O-Ms highlighted this resilient outcome:

"As a firm, we were able to return to normal operations after some time, and because we had stored products from the previous harvest year that we could ration alongside the produce we could get that year, which we sold to our customers, then we were able to maintain our profit for that year" (Case EPV O-M)

"We built a good relationship with our customers, and they had seen where we got our products from. This boosted their confidence in us, and they continued patronising us, and a good word spread to help us maintain our customer numbers. Our operations due to this returned to how it was but our profits that year did not change" (Case BW O-M)

"As soon as we were able to get the necessary raw materials, our production was restored, and we were able to get products out to our customers. At the end of the year, our profit remained the same however, maybe because the raw materials cost more than usual" (Case CAR O-M)

"We had to purchase the raw materials at a higher price as I told you earlier, and this helped us to restore our manufacturing process to produce products we needed to meet our customer demands. Unfortunately, our annual profits did not change due to the challenges we faced, but things got better in the years after" (Case WHC O-M)

Case CAR and WHC faced similar disruptions involving the raw materials that they used in their manufacturing processes. In both firms, steps were taken by the O-Ms to access the raw materials that were important for manufacturing the products the customers demanded. After obtaining the new raw materials, the production processes, according to the O-Ms, were returned to normalcy and resulted in the stability of both firms' annual profit margins. Likewise, in other cases, a return to the normal operations was achieved, and the annual profits were maintained as indicators of stability resilience outcome being achieved.

The narratives by the O-Ms of cases CAR, ASS, EPV, BAL, SG, BW, and WHC has been analysed in this subsection, highlighting the firms achieved the stability resilience outcome. In the next subsection, the narratives of the O-Ms of cases that achieved the survival resilience outcome is presented.

6.3.3 Survival Outcome

This study's survival resilience outcome is defined as the firm being unable to return to *status quo* in both the operational capacity and annual profit margin after the resilience process but still being able to continue production and make products available for their customers to generate the financial resources required to keep the business alive. Cases TPW, NJ, and AB achieved the survival resilience outcome in this study. Their O-Ms said:

"After winning the case in court, we continued to produce our products while we were changing our product labels. Our business was at that time in a growth phase, and that trajectory continued pretty much as predicted. Clearly, the cost to the business negatively affected our profit for that financial year equivalent to the additional labelling costs." (Case TPW O-M)

"After the loss of the premises and major customer-, I managed to recover, and although the business made a loss, I managed to keep the company going..." (Case NJ O-M)

"The contaminated raw materials were replaced, and then we were able to produce replacement products. Our customers were happy with that, but that year we did lose some profitability as a result. A few lessons learned that might have prevented a recurrence at a future date, but it is hard to quantify." (Case AB O-M)

Based on their narratives, the O-M of case TPW spoke about the processes that the firm had to undergo to resolve the legislative challenges encountered by the firm. However, this resulted in the firm experiencing a decline in its annual profit margin. Also, the narrative given by the O-M of case NJ highlights the relatively slow manifestation of the expected results after administering a solution to the challenges faced by the firm. The O-M of case NJ mentioned that it took some time to implement the strategies needed to respond to the disruption effectively. In case AB, the O-M

narrative suggests that the loss of contaminated products contributed to the firm's reduction in its annual profits recorded after the disruption despite successfully restoring its operational capacity.

In this category, most of the cases were able to produce the products needed to meet the demand of their customers, and in the case of TPW, the firm was able to adapt to the legislative change. However, the firms experienced a decline in annual profitability after responding to the disruption, therefore, failing to maintain the previous year's profit margins.

Table 6.2 illustrated a summary of the cases and the resilience outcomes after responding to the disruption(s).

Table 6.2: Summary of the resilience outcome achieved by each case

CASE	SURVIVAL	STABILITY	GROWTH
AB	Y	-	-
ASS	-	Y	-
BAL	-	Y	-
BW	-	Y	-
CAR	-	Y	-
CHM	-	-	Y
CRB	-	-	Y
EPV	-	Y	-
NJ	Y	-	-
SG	-	Y	-
SHC	-	-	Y
TPW	Y	-	-
WHC	-	Y	-

This section presented the cross-case analysis of the findings highlighting the resilience outcome achieved in the cases. The next section presents the cross-case analysis of the resilience promoting factors - dynamic capabilities enacted in each case.

6.4 Dynamic Capabilities

By analysing the narratives obtained from the owner-managers, the processes for responding to the disruptions experienced is identified. In addition, the dynamic capabilities enacted during the response process are categorised under several subordinate themes. In this section, narratives highlighting the instances where dynamic capabilities were enacted as sensing, seizing, and reconfiguration activities in each case are analysed to highlight the areas of convergence and divergence between the cases.

6.4.1 Sensing

In the context of this study, sensing as an aspect of dynamic capabilities refers to activities, which are linked with the identification and assessment of opportunities (Teece, 2012) and threats (Teece 2007). Sensing involves scanning activities, the interpretation of situations, and learning (Teece, 2007). Therefore, according to the narratives, the researcher interpreted activities that align with the definition to mean that sensing activities were conducted. The following sensing activities occurred during the resilience processes in the thirteen firms.

6.4.1.1 Post-Disruption Sensing of the Threat

In all the cases, comments received from the O-Ms suggest that threats to the firm resulting from the disruption(s) were identified sometime during the resilience process. However, when the threat(s) were identified (i.e. before or after the disruption fully manifested), it may differ from one firm to another or be similar. According to the narratives, the discussion that follows presents the cases where they sensed the threat after the disruption fully manifested.

According to the comments of the O-Ms of cases (BW, EPV, SG, ASS, CAR, WHC, TPW, SHC NJ, & AB), the threat of the disruption to their businesses was identified after the disruption fully manifested. For example, in the case EPV the employees and O-M were surprised to find half the vineyard frosted by the cold Siberian winds. Therefore, the threat was not identified until after the

frosting had occurred. Similarly, in case NJ, the O-M realised a reduction in revenue because of a change in the firm's major client's buying behaviour who suddenly pulled out from buying products from the business entirely. According to the O-M, this struck a heavy blow to the company, mostly because it occurred unexpectedly. Notably, it was only after the disruption that the O-M was able to understand the threat this posed to the firm:

"In the business environment, I will be honest with you, most of the time it has been on a hit because we have not noticed the changes come up and customers are always changing as well."

(NJ O-M)

Similarly, the O-Ms of cases SG and AB identified the threat after the disruption occurred. Cases SG and AB manufactured products that did not meet the standards expected by the O-Ms. In case AB, a contaminated product was produced because one of the raw materials used was contaminated before the manufacturing process. The disruption was assessed, and the cause was identified. The owner-manager understood the corresponding threat of the disruption to the business sometime after the disruption occurred:

"We contaminated three whole brews of beer; I discovered what the problem was and stopped using that yeast."

On the other hand, the product produced did not taste as the O-M and customers had anticipated in case SG. The firm tried manufacturing the product on a smaller scale, and it was appealing to the customers who tasted it and the O-M. However, after producing the same product on a larger scale, it tasted different from what was expected. To identify the problem, the O-M examined the production process and determined that the disruption originated from the manufacturing process's raw materials. Therefore, the identification of the corresponding threat occurred after the disruption:

"It was our first beer, and we followed the recipe on the same scale as we did for the smaller sample portions and expected it to taste the same, but it turned out different." (SG O-M)

Cases SG and AB lost their products, as the products did not meet the expected quality needed to satisfy the consumers. Similar to the cases discussed (SG, AB, NJ, & EPV), cases TPW, ASS, and BW

identified the threat of the disruption to their firms after the disruption occurred. Similar to case EPV, the challenges experienced by these cases were of an external origin (happened outside the firm). For example, for case TPW, the disruption experienced resulted from a change in the legislation regarding the words printed on its product labels. The O-M of case stated that the firm was informed of the change in legislation. Therefore, the firm discovered the threat to its business after the law had been passed. However, for case ASS, the difficulty experienced resulted from a possible change in the UK and the EU's political relationship following the recent BREXIT elections in the UK.

The O-M of case ASS stated that the firm was surprised by the successful vote to leave the EU by the UK. As a firm having an international presence, the firm investigated the effect of this disruption to the business, thereby identifying the potential threat the disruption would pose to the company. Additionally, case BW was challenged with an industry-wide disruption that affected the livestock used as raw materials to manufacture their products. This disruption caused the customers to withdraw from purchasing the products, resulting in a decline in the firm's revenue. Similar to the firms mentioned above, the firm discovered the threat after the disruption had occurred. The O-Ms made the following comments:

"The first solution we came up with is to understand the BREXIT situation; this involved a lot of learning and speaking to professionals about the potential outcome of the BREXIT decision" (Case ASS O-Ms)

"And when the legislation changed, we were notified that the legislation had changed and we were therefore required to change our labelling. So, we took advice from a set of lawyers that specialise in the labelling of alcoholic products" (Case TPW O-M)

Similarly, cases CAR and WHC maintained the trend of recognising the threat after the disruption occurred. For example, in case CAR, the firm had no products available for sale to the customers because the raw materials needed to manufacture the products were unavailable due to climate change. The firm usually obtained its raw materials from abroad and had a complicated supply chain, which the O-M stated is susceptible to climate change and BREXIT. Therefore, the firm identified the threat after no raw materials were available to manufacture products, as the O-M's comments would

suggest. Case WHC, relied on the yield from the firm's farmland to manufacture its products. However, due to climate change, the harvest was lacking in quality and quantity. The firm realised the threat to the business after the farmland brought forth the low yield that season. The O-Ms made the following comments:

"We had issues of the poor crop, and this was a very big deal. The crops, which we harvested, were quite small, and we needed more than that..." (Case WHC O-M)

"Because of the nature of our supply chain, we realised we would be affected by both climate change and BREXIT." (Case CAR O-M)

"There was a time we had an E.coli and foot and mouth diseases, which affected the trade really badly. People were not confident to buy from butchers and supermarkets because of this..." (Case BW O-M)

Additionally, in the case SHC, the O-M identified the possible threat of increasing demand after the firm's major client suddenly increased demand for products. The owner-manager stated that the order increased surprisingly from an order worth £30,000 to an order worth £150, 000:

"For us, it was one of our customers in America who we sold products worth £30,000 in one year and in the following year they gave us an order of £150,000."

6.4.1.2 Pre-Disruption Sensing of Threat

In three cases (BAL, CHM, & CRB), the threats were identified before the disruption became fully manifested. Firstly, in case BAL, the O-M identified another firm setting up in the same locality where firm BAL operated daily. The new firm setting-up was also operating in the same industry as firm BAL, which stimulated a competitive situation for case BAL. Therefore, the O-M identified the threat before the disruption occurred:

"The case was a brewery that was set up in quite a large way but not as big as us but quite large and immediately started under-cutting us in price". (Case BAL O-M)

Differing from the cases mentioned above, the interview narratives from the O-Ms of two cases indicate that the O-Ms anticipated the threats that may result from potential disruptions. Case CRB

was challenged with an infrastructural disruption, but the O-M identified the potential threat before the disruption manifested fully:

"I was lucky. I knew I had to move the taproom away from the brewery and build new toilets."

(Case CRB O-M)

Sensing the threat before the disruption occurred made the O-M fortunate. This offered the firm the opportunity to respond to the disruption in time to avert its corresponding threat. Similar to the O-M of case CRB, the O-M of case CHM anticipated the threats that the disruptions they experienced would have on the business before the disruptions occurred.

The O-M of case CHM spoke about two occasions when the firm had faced disruptions in the past five years. Firstly, the O-M spoke of when the firm (when the O-Ms independently ran their business before merging), faced challenges with its sales/revenue:

"So we noticed at our events that takings were going down and down, so we had to change how we do things to kind of survive as a fairly small business."

The interview response suggests that although the firms were making sales, the sales/revenue were gradually dropping. The O-M and his partner identified the threat this would pose to their businesses if the potential disruption causes the company to have no sales at all. In addition, the O-M of firm CHM spoke of the infrastructural difficulty that challenged the firm. According to the O-M's interview comment, *"we were in an old garage that we converted to a kitchen, and it was just not sustainable,"* the response suggests that the firm was operational in the vicinity. However, the firm would be significantly affected in the long run as it would not meet its aimed manufacturing volume objectives. The O-Ms anticipated this threat before the potential disruption caused the firm to lose its customers due to being unable to meet their demands resulting from an inefficient production process.

In summary, the O-Ms of ten cases (BW, EPV, SG, ASS, CAR, WHC, TPW, NJ, AB, and SLH) sensed the threat to their firms after the disruption manifested fully. However, in cases BAL, CHM, and CRB, the O-Ms identified the threat before the disruption occurred or manifested fully.

6.4.1.3 Post-Disruption Sensing of Opportunities

After identifying the disruption, in cases like NJ and CHM the O-Ms scanned for new infrastructure and market opportunities. In response to the infrastructural challenges faced by both cases, the comments of the O-Ms suggest that it was essential to search for a new location to operate in:

"I began looking for another premise that was affordable and was rural because of the story and kind of business I have, so I really needed a rural location..." (Case NJ O-M)

"We started to softly lookout for new places that we could move into, and none of them came up except for this location..." (Case CHM O-M)

Additionally, the O-Ms scanned for new markets as they were both faced with disruptions that threatened their revenues:

"So what we found is a gap where there weren't that many people helping small companies step-up having their products manufactured by someone else. They either had to go from doing 20 litres at home in a small kitchen up to doing a 1000 litres for large manufacturing that is a big job that a lot of people can't take..." (Case CHM O-M)

"To overcome this, we literally began targeting the right market and began getting in more customers and changing the business..." (Case NJ O-M)

The O-M of case CRB stated that they *"monitor what market is growing, and at the moment there is a growing market for gin, and therefore we offer fourteen different gins."* The statement suggests that the O-M scanned the market to discover what is in trend and appealing to customers. The trending products were made available in the newly built pub. Additionally, in case CRB, after developing a close relationship with the customers, it was sensed that the customers wanted new products:

"Basically, I just spoke with customers and got their feedback, and also I spoke to the bar staff to find out what customers were saying. So that way, you soon get to see what the business is lacking and needs". (Case CRB O-M)

Also, there were opportunities sensed after identifying the threats by the O-Ms of cases BW, SHC, CAR and BAL. The O-Ms of cases BW and BAL sensed the opportunity to build a relationship with the customers after the disruption occurred. The relationship built with the customers aided the O-Ms of both firms to detect opportunities to introduce new products for their customers:

"The first solution that came to our mind was to build a relationship with our customers thereby building the trust." (Case BW O-M)

"I cannot really say why but I believe building a relationship with customers has a good effect on a business." (Case BAL O-M)

Similarly, in case CAR, the O-M sensed the opportunity to purchase raw materials in bulk to manufacture products in large quantities in response to the disruption. The firm purchased the raw materials from another source:

"We have been actively looking for other countries of origin for ingredients because we do not simply rely on the ones we have been relying on." (Case CAR O-M)

In a similar manner, the O-M of case SHC sensed an opportunity, but according to the O-M, the disruption was sensed as an opportunity. This implies that, rather than see the difficulty as a threat per se, the O-M perceived it as an opportunity for the firm to up-scale its manufacturing process:

"That meant we have to upscale all our operations to deliver that order on time and we were able to achieve that actually. The adversity initially affected the morale of everyone in the firm". (Case SHC O-M)

In summary, the O-Ms of eight cases (AB, BAL, BW, CAR, CHM, CRB, NJ and SHC) sensed an opportunity.

6.4.1.4 Post-Disruption Other-Sensing Activities

Narratives of the O-Ms suggests that several activities and processes occurred after identifying the disruption. However, most of these activities did not align with the definition mentioned above of sensing given by Teece et al. (2007), which has been adopted in this research. For example, in firms

SG and AB, the poorly produced products were retrieved from the customers. This sort of activity is considered as contributing to the coping mechanism in this research. However, some other activities suggested sensing occurred after the disruption was identified. Although, this type of sensing was not directed towards identifying opportunities. For example, in cases, WHC, AB, TPW, ASS, EPV, and SG, the comments of the O-Ms suggested that the O-Ms, after the crisis at some point, scanned for another source to obtain raw materials.

As stated earlier, in SG and AB cases, the raw materials used to produce the initial batches of products were identified as the cause for the disruptions they experienced. Based on the two O-Ms' comments, the search for another source for their raw materials was key to overcoming the challenge. For example, the O-M of case AB said:

"I discovered what the problem was and stopped using that yeast then discarded the contaminated beer. Then began looking for a better yeast supplier which most brewers in the same environment buy from". (Case AB O-M)

The comment from case SG's O-M also suggests that the firm did not just stop at sensing for another source of obtaining raw materials but also contacted the O-Ms of other firms in the same industry to gain knowledge from them:

"Speaking to other breweries that use the same products to find out if they have had the same problems as necessary." (Case SG O-M)

Additionally, the O-Ms of cases TPW and ASS scanned for professional help and discussed with professionals to understand better the situation after sensing the threat. Both firms were challenged with legislative and political disruptions, respectively. As part of the resilience process in firm ASS, the O-M commented that:

"The first solution we came up with is to understand the BREXIT situation; this involved a lot of learning and speaking to professionals about the potential outcome of the BREXIT decision." (Case ASS O-M)

Also, the O-M of firm TPW commented that;

"We took advice from a set of lawyers that specialise in the labelling of alcoholic products." (Case TPW O-M)

The comments suggest that the O-Ms scanned for professionals equipped with the knowledge to help the firms learn more about the disruption and to respond appropriately.

Furthermore, the O-Ms of two additional cases EPV and WHC, conducted some sensing activities after sensing the disruption. In the case EPV, the O-M continued to search for relevant information that can help the firm prepare for the occurrence of a similar disruption in the future. The O-M stated that:

"Until now, I am still looking for a permanent solution to the frost problem." (Case EPV O-M)

As part of their sensing activities, in case WHC, the O-M held in-house meetings with the employees to understand the disruption:

"Had a meeting with my employees and we resolved to necessary steps we could take to overcome the challenge." (Case EPV O-M)

Table 6.3 summarises the firms, the type of sensing exhibited and when the sensing occurred in response to the experienced disruption.

Table 6.3: Summary of the Sensing Activities in each case.

CASE	POST-DISRUPTION SENSING OF THREAT	PRE-DISRUPTION SENSING OF THREAT	POST-THREAT SENSING OF OPPORTUNITIES	POST-THREAT OTHER SENSING ACTIVITIES
AB	Y	-	Y	-
ASS	Y	-	-	Y
BAL	-	Y	Y	-
BW	Y	-	Y	-
CAR	Y	-	Y	-
CHM	-	Y	Y	-
CRB	-	Y	Y	-
EPV	Y	-	-	Y
NJ	Y	-	Y	Y
SG	Y	-	-	Y
SHC	Y	-	Y	-
TPW	Y	-	-	Y
WHC	Y	-	-	Y

6.4.2 Seizing

In this research, another component of dynamic capabilities (subordinate theme) is known as seizing which refers to activities that address the opportunities sensed through new processes, services, or products (Teece, 2007) and actions which by capturing opportunities navigate threats (Teece, 2007). These activities usually involve mobilising resources (Teece, 2012) and usually involves making investments (Teece, 2007).

6.4.2.1 Mobilisation of Resources to Capture Opportunities

In response to the disruption experienced, the comments of case NJ's O-M suggests that the firm carried out some seizing activities. After the infrastructural disruption (which resulted in the firm losing its premise), the O-M engaged in some form of coping activity. The coping activity involved manufacturing small batches of products in her home kitchen to keep the firm afloat whilst making plans to acquire another premise:

"I literally did an adding up session to find out what things were going to cost and weigh the impact of stopping production for a while and then building up production again and the logistics of the move. But we ended up making products in small batches at home until we got another premise". (Case NJ O-M)

However, to increase production, the O-M's comments suggest that there were investments made towards purchasing a new building and more investments made towards constructing a kitchen, which met the industry health standards and allowed the firm to produce more products:

"We found the right building, and then I built a kitchen in the building basically because I couldn't find an industrial workspace which was friendly for food manufacturing, and it has to be the right thing according to policies." (Case NJ O-M)

Also, more comments from case NJ's O-M suggest that the firm diversified due to the disruption (i.e. the company losing its major customer). As part of the resilience process, the organisation sensed a new market. The O-M believed the company would be able to capture the opportunity because of her experience. According to the O-M, a decision was taken to mobilise resources needed to train the employees and employ new people to meet the needs of the newly found market and offer services:

"I did a lot of diversification in the company and trained people up and brought them into the company to do all that was needed. We could then go out and advise people on their business".
(Case NJ O-M)

Additionally, the comments of cases BW, BAL, and CRB O-Ms suggest they decided to mobilise resources required to manufacture new products to satisfy the customers' sensed needs. The O-Ms of the three cases, built close relationships with their customers, and this fostered the relationship and increased their chance of sensing the opportunities:

"Strangely, another thing that seemed to have worked for us was to introduce new products and increase our prices slightly and not reduce them..." (Case BAL O-M)

"We built a relationship with the customers by letting them know where we sourced our raw materials from, and in that same period, we began introducing products, which appealed to the customers." (Case BW O-M)

"So we are just trying to create new products and brands to keep people interested, and we are doing that all the time." (Case CRB O-M)

In case CRB, resources were mobilised in response to the infrastructural disruption. The firm sensed the opportunity to provide new services to its customers, especially the female segment. Therefore, a new pub was built with a more appealing toilet and new product offerings to entice female customers:

"We had to do some work there anyway, so I said the first thing we were going to do was put a dedicated ladies' toilet. We made the women's toilet very nice; there are perfumes, hair spray, and other women's bits and pieces there. We also offer wine now, especially for the ladies as they prefer to drink pricey wines rather than beer..." (Case CRB O-M)

Case CAR captured an opportunity by purchasing raw materials in bulk to manufacture products and kept stock in response to the raw material shortage disruptions:

"When they are available, they are available; we buy in large quantities and just hold more stock of finished products." (Case CAR O-M)

Quite differently from the cases discussed above, other cases mobilised resources for different reasons other than manufacturing new products. For example, the comments of case SHC's O-M suggest that resources were mobilised to capture an opportunity to increase the firm's production volume by creating new resources, i.e. employing more people because the firm at that moment could not afford to buy new machines:

"We had to employ more people also at that point in time. Currently, we have upgraded our machinery so that the employees are not working many hours" (Case SHC O-M).

Similarly, after facing an infrastructural disruption, the comments of case CHM's O-M suggest that resources were mobilised to rent a premise and build a kitchen that enables the firm to maximise its

potential to produce on a larger scale to meet the demands of its customers. In the previous building, the firm could not manufacture as many products as needed because the building housed other firms. The raw material caused discomfort for the other firms' employees. The discomfort caused the other firms' employees to complain—thereby forcing case CHM to manufacture only at odd-hours, which had its limitations. By mobilising the resources to have the kitchen built, it ensured that the future needs of the firm were met, highlighting seizing:

"We built a kitchen which we said in two years' time will still be useful." (Case CHM O-M)

Furthermore, in response to another disruption (declining revenue), firm CHM's O-M comments suggest that resources were combined through the amalgamation of the two individual businesses that came together to form CHM. The decision to merge and mobilise the resources came about because of the niche market opportunity sensed by the firm:

"So what we found is a gap where there weren't that many people helping small companies step-up having their products manufactured by someone else. They either had to go from doing 20 litres at home in a small kitchen at home up to doing 1000 litres for large manufacturing that is a big job that a lot of people can't take. So we kind of came in and asked for a middle ground to get to the stage where we can take on small manufacturing and help them jump up but not too much..." (Case CHM O-M).

Table 6.4 summarises the cases where seizing activities occurred in response to the experienced disruptions were identified.

Table 6.4: Summary of the cases that mobilised resources to capture Opportunities.

CASES	MOBILISED RESOURCES TO SEIZE OPPORTUNITIES.
AB	-
ASS	-
BAL	Y
BW	Y
CAR	Y
CHM	Y
CRB	Y
EPV	-
NJ	Y
SG	-
SHC	Y
TPW	-
WHC	-

6.4.3 Reconfiguration

Another subordinate theme in this study is reconfiguration. It refers to activities, which ensure the firm's growth sustainability through the recombination or conversion of organisational structures and assets (Teece, 2007). Reconfiguration is usually conducted in response to the changes in a firm's environment (Teece, 2012). According to the comments made by the O-Ms, the following nine cases (TPW, NJ, ASS, CHM, CAR, EPV, WHC, BW, and SHC) changed how they did things (reconfiguration activities) in response to the disruptions they experienced. However, this section's reconfiguration processes are classified under two categories: either adapting to the disruption or responding to opportunities. This does not imply a difference in how the reconfiguration process itself is enacted but rather a categorisation based on the outcome the O-Ms sought to achieve.

6.4.3.1 Reconfiguration Activities Aimed at Adapting to the Disruption

In this subsection, the O-Ms of the firms reconfigured an aspect of the firm's process, business model, or products to adapt to the threat identified. After the manifestation of the disruption experienced by case TPW, the company began printing new product labels. Without compliance, the

firm would be stopped from manufacturing its products and generating revenue. The process of changing the information on the product labels suggests a transformation/reconfiguration process:

"Then, we invested in the changes and printed our new labels." (Case TPW O-M)

Similarly, comments of case ASS's O-M suggest that to adapt to the change resulting from the UK's vote to leave the EU, the O-M had to transform the business model to ensure that the firm mitigated the risks to its ability to make a living. Therefore, the firm changed its business focus by exporting less to the EU and focusing more on the UK market:

"Before the referendum, we were exporting over 30% of our production. We decided to concentrate our limited resources on growing our UK business, so as we have grown, the proportion has fallen, but we still export 25%, most of which goes to the EU. The EU is important to us, not just for trade." (Case ASS O-M)

Additionally, the O-Ms of cases EPV, BW, CAR, and WHC changed how they did things in response to the disruption they experienced. Firstly, in case EPV, as part of overcoming the disruption, the firm had to harvest their raw materials twice. However, although it was expensive, it ensured that the raw materials were fit for manufacturing their products. Secondly, in the case BW, the owner-manager changed how they did things by taking customers to the source of the firm's raw materials as a means of overcoming the disruption. Thirdly, in case CAR, in an attempt to adapt to the disruption, the owner-manager changed how much they produced. They began to manufacture in large quantities and keep stock to stop the lack of products, which customers desired, thereby maintaining revenue generation for the firm. Finally, in case WHC, to avert the threat, the owner-manager changed how the employees operated by implementing longer working hours to ensure that the firm had products available to be sold in the market after acquiring the raw materials needed for manufacturing. The O-Ms said:

"The decision was made to pick each plot twice. In the first harvesting pass, we picked the ripest fruit that was most susceptible to botrytis. Thus, ensuring these grapes were harvested at optimum quality..." (Case EPV O-M)

"We had to expressly tell our customers how we source our products and where we source it. In some cases, we had to take some of the clients over to the farm to see the health conditions of the livestock..." (Case BW O-M)

"When they are available, we buy in large quantities and just hold more stock of finished products." (Case CAR O-M)

"Because we could not afford to buy new machines, we just had to work more hours..." (Case WHC O-M)

6.4.3.2 Reconfiguration Activities Aimed at Responding to an Opportunity

In this subsection, the cases reconfigured an aspect of the firm's process or business model in response to the opportunities identified. The comments provided by the O-Ms of case NJ and CHM suggests that they had to transform their business models. After case NJ lost its major customer, to generate another revenue source for the organisation, the O-M diversified the business by starting another aspect to meet the needs of the market gap that the O-M sensed. In case CHM, the O-Ms transformed the business model in response to the sensed niche market to increase the firm's revenue generation:

"But what I have done now is to open up other aspects to the business to supplement the other side. Changing the business, so the business encompassed our resource..." (Case NJ O-M)

"So we noticed at our events that takings were going down and down, so we had to change how we do things to kind of survive as a fairly small business..." (Case CHM O-M)

Similarly, in the firm SHC, the O-M changed how they did things to position themselves in the right position to meet the demands of their primary customer. Due to the sudden increase in demand for products, the firm could not acquire new machines required to upgrade the manufacturing process. However, to overcome this, the firm changed how the employees worked (even working on weekends) to meet the firm's goal:

"We had to get everyone involved in the process so that everyone understood the challenge that we had. This resulted in working more hours like working into the evenings and on weekends to achieve the target we had..." (Case SHC O-M)

Table 6.5 summarises the cases where reconfiguration activities occurred to either respond to opportunities or adapt to the disruption.

Table 6.5: Summary of the cases that Reconfigured/Transformed to avert threat/Respond to Opportunity.

CASE	RECONFIGURATION ACTIVITIES AIMED AT RESPONDING TO AN OPPORTUNITY	RECONFIGURATION ACTIVITIES AIMED AT ADAPTING TO THREAT
AB	-	-
ASS	-	Y
BAL	-	-
BW	-	Y
CAR	-	Y
CHM	Y	-
CRB	-	-
EPV	-	Y
NJ	Y	-
SG	-	-
SHC	Y	-
TPW	-	Y
WHC	-	Y

This section presented the cross-case analysis of the dynamic capabilities enacted. The next section presents the cross-case analysis of the case resources utilised during the resilience process.

6.5 Resources

According to the O-Ms' comments, there were complementary activities that contributed to the resilience process and possibly influenced the resilience outcome achieved. In this study, the complementary activities are termed as the firm's resources (a superordinate theme). The findings relating to resources were categorised into two categories, each having subordinate themes: internal resources and external resources.

6.5.1 Internal Resources

6.5.1.1 Financial Resources

According to the comments of a few O-Ms, in their firms they had resources in the form of funds/money utilised during the resilience process, especially towards the enactment of the seizing dynamic capability (which required some form of investments). However, the degree to which each firm had this resource available was different. In the cases where financial resources were present for response to the disruption, it was present at a moderate degree or at a high degree. For example, cases such as BW, EPV, and ASS did not explicitly require funds to overcome the disruption they experienced. Therefore, this resource was not mentioned during the interview sessions with the O-Ms. Nevertheless, cases like TPW, NJ, BAL, CRB, WHC, EPV, and AB required funds to overcome their disruptions and based on their comments their firms had the financial resources at a high degree. Therefore, there was no need to borrow from the bank or from other individuals:

"Yes, it was the only money we required. We took money from one part of the business to another..." (Case AB O-M)

"Basically, the experience of the market and some money to produce new products. We had them within the firm..." (Case BAL O-M)

"Getting a location/ premises were immediate success..." (Case NJ O-M)

"In terms of financial resources, we had enough money within the business to make those changes..." (Case TPW O-M)

"Money was put in from the business and none from the bank or anywhere else." (Case CRB O-M)

"We could have been able to borrow money as another alternative, but since we do not have any building or lands of our own, we could not. But sadly, resources within the firm in the form of money has gone down." (Case WHC O-M)

In cases such as CAR, CHM, SHC, and SG, they had financial resources but at a moderate degree and had to seek for additional funds from outside the firm. They got extra funds from the bank, friends, and close family members. For example, case CHM required money to rent a new premise and build a kitchen that would support production on a large scale for a long time. Some of the funds were available in the firm; however, the firm had to make up the required funds by borrowing from family and friends. The O-M made the following comment:

"We didn't really have all the resources within the firm. We had to borrow a little bit of money from family and friends, not a lot but enough just to keep us going. We needed the money to do the whole thing, or we wouldn't have started using the kitchen". (Case CHM O-M)

Similarly, the O-Ms of cases CAR, SHC, and SG had to obtain the extra funds from outside the firm. The O-Ms of these cases made the following comments:

"We had certain resources within the company, such as some money..." "We had to borrow money from the bank, and we had to apply to the European research development fund for help to build the factory because we couldn't have a million pounds." (Case CAR O-M)

"Some of the money we needed was available within the business, but on many occasions, we had to get support from investors and the bank as well." (Case SG O-M)

"We needed financial resources from the business and the bank..." (Case SHC O-M)

The O-M of case SHC borrowed from the bank to be able to equip the firm with more workers and pay for additional wages to the employees for their increased working hours in response to the increased demand for its product. Similarly, the O-Ms of cases (SG, SHC, & CAR) borrowed from the bank except for the O-M of case CHM that borrowed from family and friends as an addition to the funds that were available in the business.

The findings from the O-Ms narrative of their experience presented here highlights the degree of available financial resources (money) required during the resilience process. In the following subsection, a cross-case analysis of the findings highlighting the utilisation of Human resources is

presented.

6.5.1.2 Human Resources

According to the O-Ms, there were contributions made by the employees during the resilience process. There are cases where the O-M did not mention the employees' participation during the resilience process. Therefore the resource was not considered to be present. Nevertheless, some O-Ms stated explicitly that the employees played a role in the resilience process. In some other cases; the O-Ms suggested utilising the resource but did not explicitly state it. The cases where the O-Ms suggested that there were contributions made by the employees but not explicitly are NJ, BAL, CRB, BW, AB, and SG. For example, the O-M of firm AB believes individuals in the firm are crucially important to how the firm is run and how successful it becomes:

"I think humans are key to everything in how the business functions and how successful it is."

(Case AB O-M)

The comments made by the other O-Ms also suggest employees contributed to the resilience process:

"Although we don't have very much employees and a small company, we expect everybody to work in the best way they can to improve our resilience and market share. Employees can contribute to the resilience of the firm by working towards the same aim as the management and myself..."(Case BAL O-M)

"We also have a very big blackboard where we do a lot of mind mapping. Put ideas down even if they are radical so that we just see how many ideas we can have down as possible to see what is what and how we feel about things..."(Case NJ O-M)

"Also, as I said, the people working here. There is nothing as important as the people you have front facing your business and people behind the scenes. It is hard to know what makes the business resilient, but as I have said, I think it is people."(Case SG O-M)

"Well, I choose to believe that business is run by people, and the people have to make efforts to ensure the business is safeguarded from problems. So, this would involve learning from the past for the future." (Case CRB O-M)

"We didn't really need many resources to achieve what we did. Just a matter of having people skills." (Case BW O-M)

The above comments of the O-Ms suggest some form of participation by the employees in the resilience process. However, the cases where the O-M explicitly stated that the employees contributed are WHC, SHC and ASS. In all three firms, the O-Ms made important decisions for the contribution of the employees. In cases WHC and SHC, the employees actively worked hard to ensure the firms were able to overcome the disruption that they faced:

"Had a meeting with my employees and we resolved to necessary steps we could take to overcome the challenge, and this proved fruitful because they felt involved and that way was more interested in putting effort" (Case WHC O-M)

"We have a team meeting once a week, where we review our objectives against each month. Everyone would have a contribution to how we are doing every month against each target and compare it with our performance in previous years. We had to have a team meeting and talk about the different ways we could achieve the objective. However, we had to go through each of the suggestions given as a team and try to work out which one is best, but it was not just one thing that came up." (Case SHC O-M)

"The business is not run by one person but involves the contribution of several people. If we are not able to communicate properly amongst ourselves, we would not be able to fully understand challenging situations as a team. We have a meeting with all our core teams from all departments to work together as a team. We explain the issue and get views on which option best deals with the situation. Therefore, you can say we pool our skills together and make decisions." (Case ASS O-M)

As the comments above suggest, the employees of firms WHC, SHC and ASS contributed to the resilience process.

The findings from the O-Ms narrative of their experience presented here highlights the role played by the employees during the resilience process. In the following subsection, a cross-case analysis of the findings highlighting the utilisation of slack resources is presented.

6.5.1.3 Slack Resources (Stock)

According to the O-M, the firm had resources in the form of stock that supported the firm during its response to the disruption. According to the O-M, the firm stored products from the previous harvest year:

"We make non-vintage wines, and that is our selling point. We keep stocking in stainless steel tanks, and we do not bottle everything for one year every year. We keep our stock for a long while. So, therefore, we don't sell everything in one go". (Case EPV O-M)

This resource, according to the O-M, ensured that the firm maintained its profit margin at the end of the year as the firm could sell products despite the disruption.

Table 6.6 summarises the internal resources and the cases that utilised them.

Table 6.6: Summary of the cases utilising Internal Resource.

CASE	FINANCIAL RESOURCES	HUMAN RESOURCES	SLACK RESOURCES
AB	Y	Y	-
ASS	-	Y	-
BAL	Y	Y	-
BW	-	Y	-
CAR	y	-	-
CHM	y	-	-
CRB	Y	Y	-
EPV	-	-	Y
NJ	Y	Y	-
SG	y	Y	-
SHC	y	Y	-
TPW	Y	-	-
WHC	Y	Y	-

Y=explicitly present, y=implicitly present

6.5.2 External Resources

6.5.2.1 Effective Partnerships

According to some O-Ms, they collaborated with external organisations/individuals such as family, friends, and other organisations during the resilience process. This resource was not utilised in some firms (cases where the O-Ms did not collaborate with friends/family and other firms). The O-M of case CRB utilised these resources:

"So, a friend of mine help build the bar. I helped do the back bar and some of the plumbing. A friend of mine did the electric connections and rewiring. So it was a contribution from me and some specialist friends as well." (Case CRB O-M)

Additionally, the O-Ms of two other cases (BW and CHM), utilised this resource strategically. For example, the O-M of case BW stated that he collaborated with another firm during the resilience process. The firm that provided the raw material for case BW and collaborated with the O-M of case BW to assure the customers that the raw materials were safe for consumption. According to the O-M of case CHM the firm overcame its revenue challenge through the effective partnership between the two O-Ms when they each ran independent firms, which eventually resulted in the amalgamation of the firms to seize the new market opportunity, which was sensed.

The findings from the O-Ms narrative of their experience presented here highlights the utilisation of effective partnerships during the resilience process. In the following subsection, a cross-case analysis of the findings highlighting the utilisation of professional support/advice is presented.

6.5.2.2 Accessing Professional Support/Advice

According to some O-Ms, they suggested that in their cases they utilised information from outside the firm during the resilience process. These O-Ms obtained information from professionals, other firms or the World Wide Web.

According to the O-M of case EPV, information from the internet and other firms were obtained:

"The internet, books, and advice from older and more experienced vineyard managers or owners and fellow employees." (Case EPV O-M)

In case SG, the O-M obtained information from another firm to guide the decision regarding its raw material choices in the future:

"For something like yeast, it is difficult because it comes down to laboratory analysis. Speaking to other breweries that use the same products to find out if they have had the same problems was necessary". (Case SG O-M)

Other cases where the O-M obtained relevant information from external sources are cases ASS, NJ and TPW. The comments of the O-Ms suggest that these cases obtained information from professionals. In case TPW, the O-M spoke to professionals regarding what best steps to take in response to the change in legislation concerning the product labels. Similarly, in case ASS, the O-M spoke to professionals regarding what the firm should do in response to the UK wanting to leave the EU. Additionally, in case NJ, the O-M spoke with professionals to ensure the firm was meeting its revenue goals after losing its major customer:

"Talking amongst ourselves and seeking guidance from our lawyers. What we didn't know we asked professionals so that we don't make mistakes that would cost us more than it what it naturally should." (Case TPW O-M)

"The first solution we came up with is to understand the BREXIT situation, this involved a lot of learning and speaking to professionals about the potential outcome of the BREXIT decision but as it is until today no one really knows what will happen for sure." (Case ASS O-M)

"We needed the expertise of people, which was hard to find, especially if you don't have a large budget which we don't." (Case NJ O-M)

Table 6.7 summarises the external resources utilised and the cases that utilised them.

Table 6.7: Summary of the cases utilising External Resources.

CASE	EFFECTIVE PARTNERSHIP	ACCESSING PROFESSIONAL SUPPORT/ADVICE.
AB	-	-
ASS	-	Y
BAL	-	-
BW	Y	-
CAR	-	-
CHM	Y	-
CRB	Y	-
EPV	-	Y
NJ	-	Y
SG	-	Y
SHC	-	-
TPW	-	Y
WHC	-	-

Y= cases that collaborated with other firms or cases that acquired knowledge

y= cases that collaborated with family, friends and other firms.

This section presented the cross-case analysis of the superordinate theme resources. The next section presents the cross-case analysis of the subordinate theme role of owner-managers.

6.6 Role of Owner-Manager

In this section, a cross-case analysis of the O-Ms' comments, highlighting the roles of the O-Ms in aiding the firm to overcome the disruptions and remain resilient, is presented. The functions of the O-Ms are categorised under two emergent themes: Leadership role and Management role.

6.6.1 Leadership role

According to the O-Ms comments, all thirteen O-Ms stated that they performed one leadership role or the other to ensure their firm's resilience. The different leadership roles identified in this study are as follows:

6.6.1.1 Continuous Learning

The O-Ms of three cases (ASS, EPV & SG) stated that they always had to continue learning as part of their role in the firm. This role ensures that the firm successfully adapts to the disruption (as in case ASS) and the O-Ms have up-to-date knowledge of the industry (EPV & SG).

"Yes, I will think so, although it is an ongoing process. Learning is the key to being able to adapt to any situation at all, and that is what we are doing." (ASS O-M)

"I do my best to constantly educate myself about the business and the industry." (EPV O-M)

"Similarly, I see myself as someone who learns from everyone else. I cannot learn everything or know everything. I have to be constantly learning." (SG O-M)

6.6.1.2 Effective Communication

The O-Ms of four cases (BAL, BW, CAR & CRB) stated that they had to communicate effectively as part of their roles in the firm. This mostly entailed effective communication with customers.

"Personal skills on my part are important as well, such as communication skills. I have had to be a good communicator. I was being very versatile and being able to apply myself to the challenges that occur. Basically, you need a good frontman. A person with good communication skills." (BAL O-M)

"Yes, I think so. I am good to our customers, and I have acquired good people skills, which has helped me to build trust with the customers." (BW O-M)

"Then make sure we make it clear to our customers if we fail to supply them or something that the reason is for the outcome." (CAR O-M)

"You learn to listen to people and take advice from people." (CRB O-M)

6.6.1.3 Ensure Achievement of Firm Goals and Objectives

The O-Ms of three cases (BW, CAR, & SHC) stated it is their responsibility to ensure that their firms achieved the set goals and objectives corresponding to the set period.

"I also encourage everyone to achieve the goals we set to achieve as a firm on a monthly base." (BW O-M)

"I suppose it is my job to make sure that the company is fulfilling a satisfactory level of sales fulfilment. That is what I try to do." (CAR O-M)

"I give my point of view as to how we can achieve the objectives and then listen to what other people think of that and try to come to an agreed conclusion and get on with the task based on that. The thing is, I would never ask anyone anything I would not do myself, and I do whatever it takes to get the job done." (SHC O-M)

6.6.1.4 Leading the Firm

The O-Ms of two cases (BAL & NJ) stated it is their responsibility to lead the firm as a source of guidance for the employees by encouraging them to be better and providing the opportunity for skills to be harnessed.

"I am guiding and leading the firm." (BAL O-M)

"Well, I am the main instigator. Literally, I am the main person who sees the challenges. So my role is to lead people and guide them." "Also, being a leader and being able to identify the skill sets of my employees and encouraging them." "I have become more of a leader and an influencer by influencing people more on their abilities to do things within the company." "When you are a leader of something, you will need to show people what to do, and as they are learning, you will need to educate them." (NJ O-M)

6.6.1.5 Motivator

The O-Ms of three cases (AB, BAL, & NJ) stated that it is their responsibility to motivate the employees to perform at their best.

"It is a small business, so I think that any person that has a business maybe under 50 people, the business is totally dependent on people coming through the door in the morning and doing the job." "So, probably as the owner, I have a lot bit more input to

ensure that at the end of the day, everyone has done something to influence the business positively.” (AB O-M)

“Again, it comes back to experience and has the skills to guide and promote people within the business.” (BAL O-M)

“People don’t necessarily have the foresight to sit back and say actually we don’t know how to do this and so instead of them quitting their jobs it is my job to encourage them and teach them what to do. So, they have the ability to do it; all they just needed is the training to do it.” (NJ O-M).

6.6.1.6 Decision Maker

The O-Ms of four cases (BW, CRB, TPW, & WHC) stated that it is their responsibility to make the firm's decisions, especially the tough choices.

“I make the decisions around here, and sometimes it can be hard, but someone has to make it.” (BW O-M)

“You don’t act on their opinions, but you listen to their opinions and form in your mind what you think is best for your business, then you try to grow your business appropriately.” (CRB O-M)

“Our role is to identify the future challenges, identify future opportunities, to look out for current threats to the business, and to adopt strategies that make our business to be resilient as possible moving forward.” (TPW O-M)

“Well, I know we need a decision-maker, and that tends to be me, I have to be responsible, and someone has to be responsible for what goes on in the business. Decisions have to be taken especially when prices of crops change and more than double.” (WHC O-M)

6.6.1.7 Being strategic

The O-M of one case (CHM) stated that it is the O-Ms' responsibility to be strategic and focus on critical aspects of the business rather than focus on day-to-day processes.

"I think we have now realised we have staff capacity and people do most of what we use to do, which gives us the time to be more strategic about how we do things. So, both our roles have gone from being in the kitchen cooking to doing the accounts, organising schedules, checking the cash flow are ok, and making sure everything is done as it should."

"So, in terms of the firm meeting its objectives, we have a lot more power than we use to because I can now pretty much sit most of the day and strategise, and we had just started, which we never use to do before because everything was adhoc is to have a quarterly strategy review. So basically, my role as an owner has shifted from less of a day to day activity of working with stuff to being able to be strategic in our planning and becoming a manager basically."

6.6.2 Management Role

Some O-Ms also stated their management roles. The management role involved maintaining industry standards within the firm (case BW) and multitasking (cases SG & CRB).

"Also, I keep everyone on their toes so that standards don't slack around here. Even when I am not here, they know what to do and not to do so that we don't slip in any way." (BW O-M)

"I try to manage things as best as I can. I look after the accounts, and I do the wages, I drive the business forward, I deal with the websites, I do the advertising, I do the purchasing. I try to run the whole business myself, and my partner does the brewing." (CRB O-M)

"I personally think you end up as a company owner being the head brewer, bar manager, sorting out everything and doing all the computer-based jobs, but what you end up realising is that you have a responsibility to everyone working for you." (SG O-M)

"I also find it is my responsibility to ensure that whoever I employ has the required resources and environment required for them to do their jobs, and this sometimes means having to sit behind the computer and setting up those relationships." (SG O-M)

Table 6.8 summarises the role of the O-Ms in terms of the leadership role expressed.

Table 6.8: Summary of the cases and leadership roles played by the O-Ms.

Leadership Roles	Cases
Continuous Learning	ASS, EPV and SG
Effective Communication	BAL, BW, CAR and CRB
Achievement of Goals and Objectives	BW, CAR and SHC
Leading the Firm	BAL and NJ
Motivator	AB, BAL and NJ
Decision Maker	BW, CRB, TPW and WHC
Being Strategic	CHM

This section presented the cross-case analysis of the superordinate theme role of O-Ms. The next section presents the pattern analysis conducted with the findings from the cross-case analysis.

6.7 Pattern-Searching Analysis

In this current section, the cases are grouped based on the cross-case analysis, depending on the superordinate themes; resilience perception, resilience promoting factors (dynamic capabilities, resources), O-M's role, and the resilience outcome achieved following the resilience process. A group of cases were found to exhibit the opportunity-focused pattern, and another group found to exhibit the disruption-focused pattern.

The patterns were identified by conducting a pattern-matching analysis using the findings presented in the findings chapter and during the cross-case analysis by using a matrix (see appendix 7). A quantitative data analysing software (where variables were inputted as present -1 or absent -0 for each case) was used to triangulate the result obtained from the pattern matching analysis technique.

Firms with the propensity to achieve the growth resilience outcome exhibited the opportunity-focused pattern. Conversely, firms with the tendency to achieve the survival resilience outcome exhibited the disruption-focused pattern. This section begins with highlighting the cases exhibiting each response pattern, followed by a summary presenting the distinct and moderate differences between the response patterns and finally, the mechanism by which the resilience promoting factors - dynamic capabilities contribute to the achievement of a resilient outcome.

6.7.1 Cases Exhibiting each Pattern

The cases are categorised based on the two identified response pattern. Firstly, the firms where the O-Ms are found to respond following the opportunity-focused pattern. The O-Ms of seven cases (SHC, CRB, CHM, BAL, BW, CAR, & NJ) exhibited this response pattern. Secondly, the firms where the owner-managers are found to respond following the disruption-focused pattern. The O-Ms of six cases (ASS, EPV, SG, WHC, AB, & TPW) are found to respond following the disruption-focused pattern.

6.7.2 Pattern Comparison

In this subsection, a comparison is made between the two categories of owner-managers to highlight the sharp contrast(s), moderate contrast(s) and no contrast. The comparison is presented below as follows:

6.7.2.1 Sharp Contrast

The O-Ms exhibiting the opportunity-focused pattern enacted the sensing dynamic capability to search for opportunities to provide new products and services to their customers or raw materials in large quantities after successfully identifying the threat. Conversely, although the O-Ms were exhibiting the disruption-focused pattern, they enacted the sensing dynamic capability after identifying the threat. However, it was less towards sensing for opportunities but more towards identifying solutions required to overcome the disruption. Solutions such as a source for new raw materials or professional advice. This finding highlighted the two different approaches that can be taken in response to a disruption in SMEs, i.e. the O-Ms could either search for opportunities to overcome the difficulty or explore for immediate solutions to overcome the disruption.

Furthermore, as the resilience process progressed, the O-Ms exhibiting the opportunity-focused pattern mobilised resources to capture the opportunity they sensed by enacting the seizing dynamic capability. To seize the opportunities identified, the O-Ms mobilised resources such as financial resources and human resources. Conversely, the O-Ms exhibiting the disruption-focused pattern were more likely to be unable to utilise the seizing dynamic capability because the O-Ms did not sense for opportunities earlier but conducted other-sensing activities (sensing for replacement raw materials or sources for professional information). Consequently, this led to no identified opportunity because the O-Ms were not scanning for opportunities but immediate solutions. This suggests that seizing is enacted depending on the sensing dynamic capability's outcome (i.e. in response to disruptions, the outcome of the sensing conducted influences the enactment of the seizing dynamic capability).

Therefore, the sharp contrast between the two patterns is a direct consequence of enacting the sensing and seizing dynamic capabilities to identify opportunities and capture them by the O-Ms. Additionally, the findings demonstrate that a difference in the purpose of enacting the sensing dynamic capability impacts utilising the seizing dynamic capability in a resilience process.

6.7.2.2 Moderate Contrast

The O-Ms responding through the opportunity-focused pattern had a more process-based perception of resilience, which implies they had their perception of resilience as being an adaptation process. Conversely, the cases where the O-Ms responded through the disruption-focused pattern (where none of the O-Ms had the process-based perception) were more likely to have an endurance-based perception. This implies that the O-Ms exhibiting the disruption-focused pattern had their perception of resilience more in terms of longevity. However, things might not be exactly going as economically expected. Furthermore, regarding the achieved resilience outcome, the O-Ms following the opportunity-focused response pattern were more driven to achieve the growth resilience outcome than the O-Ms expressing the disruption-focused response pattern. Whereas the O-Ms exhibiting the disruption-focused pattern was more inclined towards the achieving of the survival outcome.

By exhibiting the opportunity-focused response pattern, the O-Ms demonstrated a higher tendency to sense the potential threat before the disruption manifested fully. On the other hand, the O-Ms

exhibiting the disruption-focused response pattern were relatively more likely to detect the disruption's threat after the disruption had been established. This implies that by responding through the opportunity-focused response pattern, the O-Ms were more proactive than the O-Ms responding through the disruption-focused response pattern. Therefore, utilising the sensing dynamic capability to identify threats before the disruption occurs in a resilience process potentially leads to achieving a higher resilience outcome (growth).

During the response or reaction to the disruption, O-Ms exhibiting both response patterns enacted reconfiguration. However, the O-Ms exhibiting the opportunity-focused response pattern were more likely to reconfigure firm processes or the business models to pursue the opportunities sensed. In contrast, the O-Ms exhibiting the disruption-focused response pattern were more likely to reconfigure the firm processes or the business models to adapt to the disruption. In order to make the decisions required for the reconfiguration of the firm process or business models following the disruption-focused pattern, the O-Ms predominantly relied on obtaining advice or support from professionals. The O-Ms exhibiting the opportunity-focused response pattern utilised their connection with friends and business partners as leverage during the resilience process, thereby effectively partnering with other individuals or firms.

Additionally, the O-Ms following the opportunity-focused response pattern exhibited relatively more leadership qualities such as effective communication with the customers (such as maintaining a relationship with the customers), ensuring the achievement of goals and objectives, leading the employees, and being strategic. The O-Ms following the disruption-focused response pattern exhibited fewer leadership qualities such as motivating the employees and making the firm's decisions.

6.7.2.3 No Difference

The variables discussed above caused a sharp or moderate contrast between the opportunity-focused response pattern and the disruption-focused response pattern. However, there are other variables, which had no contrasting effect between the two patterns. For example, variables such as the resource-based view of resilience, the stability outcome, financial resources and human resources.

In summary, the O-Ms exhibiting the opportunity-focused response pattern were more inclined to have the process-based perception of resilience, achieving a growth outcome, sensing the threat before the disruption, sensing opportunities, and seizing the opportunities, reconfiguring in response to opportunity, effectively partnering, and exhibiting more leadership qualities. On the other hand, the O-Ms exhibiting the disruption-focused response patterns were more inclined to have the endurance-based perception of resilience, sensing the threats after the disruption occurred, reconfiguring to adapt to threats, and accessing professional support/advice and exhibiting fewer leadership qualities.

Table 6.9 summarises the variables that produced a sharp and moderate contrast (Note: the colour codes will be utilised in the process diagram).

Table 6.9: Summary of the variable producing a sharp and moderate contrast between the opportunity-focused firm's pattern and the disruption-focused firm's pattern.

Sharp Contrasting Variables Unique to the Opportunity-focused firm response Pattern	Moderately Contrasting Variables Predominantly present in the opportunity-focused response Pattern	Moderately Contrasting Variables Predominantly present in the Disruption-focused response Pattern	Sharp Contrasting Variables Unique to the Disruption-focused response Pattern
Sensed Opportunity after Identifying Threat.	Process-Based Perception	Reconfiguration to adapt to the disruption.	Other-Sensing Activities
Mobilised Resources to capture Opportunities.	Growth-Outcome	Accessing Professional Support/Advice.	
	Sensed Threat before disruption		
	Reconfiguration in response to Opportunity		
	Effective Partnership		
	Leadership		

6.7.3 The Mechanism for Enactment of Each Response Pattern

The process diagrams (figure 6.1 & 6.2) highlighting the enactment of the sensing, seizing, and reconfiguration dynamic capabilities during the resilience process following the opportunity-focused response pattern and the disruption-focused response pattern:

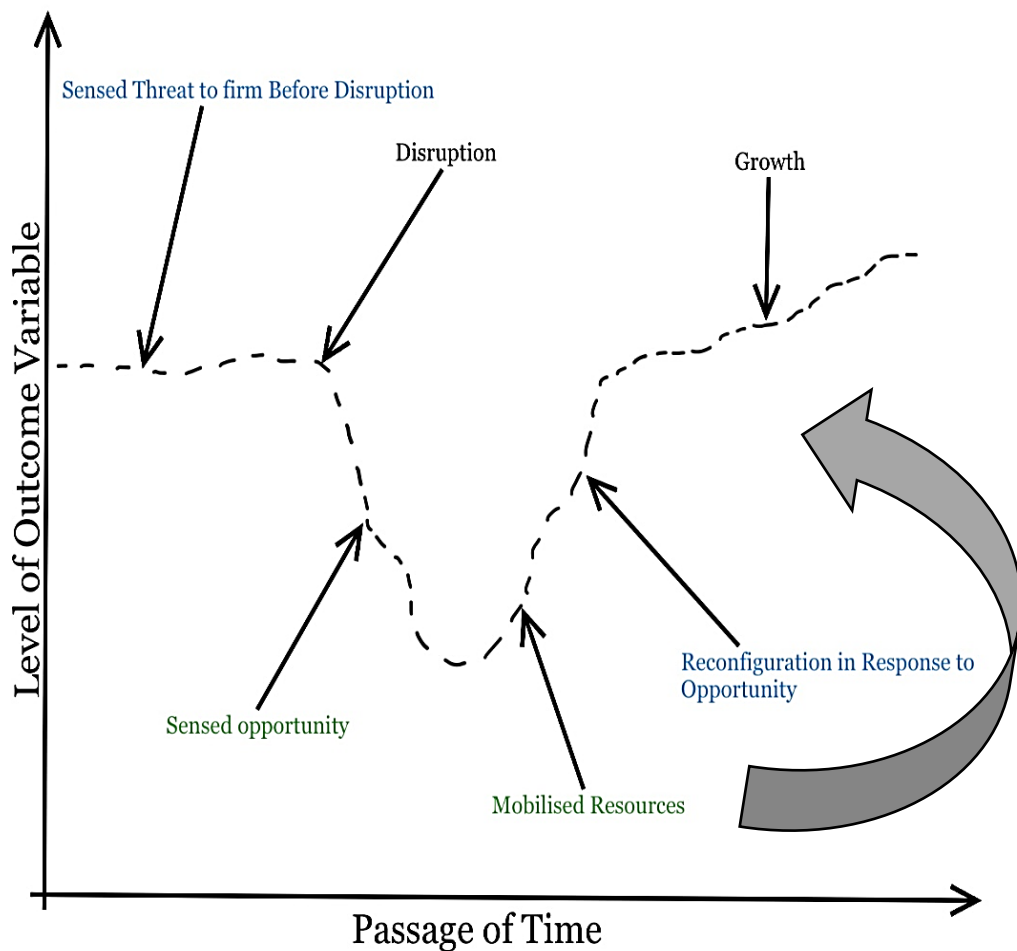


Figure 6.1: Figure illustrating the Enactment of Dynamic capabilities in the Opportunity-focused Pattern.

As the process diagram illustrates above, the O-Ms start by sensing the threat, followed by detecting for opportunities, which leads to the mobilisation of resources to seize the sensed opportunity and progress to the reconfiguration of the business model/ processes to respond to the sensed opportunity before achieving the resilience outcome¹. Seizing can also be the last enacted dynamic capability before achieving the resilience outcome. The dynamic capabilities coloured blue highlights the dynamic capabilities that produced a moderate contrasting effect between the two response patterns but mostly present in the opportunity-focused response pattern. Whereas the dynamic capabilities coloured green produced a sharp contrasting effect between the two patterns present in the opportunity-focused pattern.

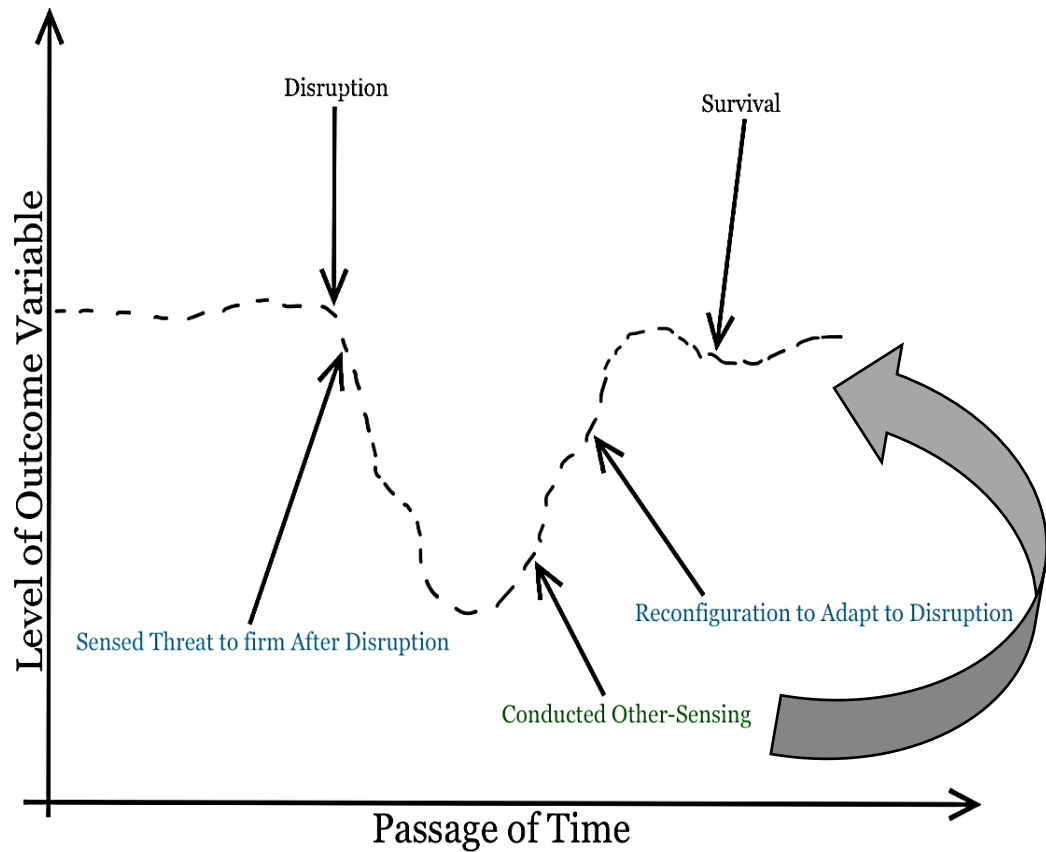


Figure 6.2: Figure illustrating the Enactment of Dynamic capabilities in the Disruption-focused Pattern.

As the process diagram illustrates above, the O-Ms start by sensing the threat after the disruption has been established, followed by detecting for ways to overcome the disruption but not towards identifying opportunities and then the reconfiguration of the business model/ processes to adapt to the disruption before achieving the resilience outcome¹. The sensing dynamic capabilities can be the last enacted dynamic capability step before achieving the resilience outcome. The dynamic capabilities coloured light blue highlight the dynamic capabilities that produced a moderate contrasting effect between the two patterns, mainly present in the disruption-focused pattern. The operationalised dynamic capabilities represented in light green produced a sharp contrasting effect between the two patterns but present in the disruption-focused pattern.

¹ Note that the standpoint of this study is not to imply that seizing does not or cannot coincide with reconfiguration).

Therefore, from the process illustrations, the findings suggest that all three dynamic capabilities (sensing, seizing, and reconfiguration) play a role during the resilience process (although they may not all be enacted in every case).

6.7.4 Pattern-Searching Analysis Summary

Taken as a whole, the patterns emerged mainly due to the dynamic capabilities enacted towards sensing opportunities and mobilising resources to capture the opportunities. As a whole, the findings suggest that by following the opportunity-focused response pattern, the perception of resilience is more towards being a process that involves pre-disruption sensing, which is followed by the post-disruption sensing for opportunities, which are exploited through the mobilisation of resources. If needed, the business processes or models are reconfigured in response to the opportunity. Also, effective partnerships and leadership skills exhibited by the O-Ms have proven useful in arriving at a resilience outcome leaning towards growth.

In contrast, the findings suggest that by following the disruption-focused response pattern, the perception of resilience is more towards the business's longevity that involves the post-disruption sensing of threat, which is followed by the post-disruption sensing for immediate solutions. If needed, the business processes or models are reconfigured in response to the opportunity. Also, accessing information from professionals, having slack resources, and limited leadership skills have proven useful in achieving resilience outcomes leaning towards the stability outcome.

In summary, this chapter presented the cross-case analysis of the findings from the thirteen-participating cases based on the O-Ms' lived experiences exploring how their resilience perception, the resilience outcomes, resilience-promoting factor - dynamic capabilities enacted resources and role of the owner-managers. The cross-case analysis is structured based on the themes, which emerged from the coding analysis using the NVivo software, as was similarly done during the within-case analysis. The chapter concluded by presenting the pattern-searching analysis that entailed a comparison of the response patterns and illustrated the enactment of dynamic capabilities within the opportunity-focused response pattern and the disruption-focused response pattern.

In the next chapter, these findings are synthesised with the discussion conducted in light of extant literature and contributions to existing knowledge, the discussion of limitations of this study, and directions for future research.

CHAPTER SEVEN

DISCUSSION OF KEY FINDINGS

7.1 Introduction

This chapter presents the discussion of the key findings from this study to answer the research questions, which sought to explore the owner-manager perception of resilience, the role of dynamic capabilities during the resilience process and the role of owner-managers when responding to disruptions in the context of their firm. This chapter's discussion provides the basis for this research's main contribution to theory: how sensing, seizing and reconfiguration are enacted to achieve resilience outcome inclined towards achieving growth or survival.

This chapter structurally begins with the researcher presenting a conceptual framework highlighting the key findings from this study to illustrate the contributions this study has made to the dynamic capabilities and organisational resilience theory. This is followed by a series of discussions where the findings are put into context with existing literature.

7.2 Conceptual Framework after Data Analysis

Following the data analysis stage of this study, the owner-managers' perception of organisational resilience was explored and its potential effect on the achieved resilience outcome. It is found that the owner-managers' perception of the construct does not solely influence the resilience outcome achieved following response to disruption(s). However, the findings highlight that the owner-managers who had a process-based perception were more inclined towards achieving growth resilience. Also, the relationship between the dynamic capabilities enacted in response to disruptions and the achieved resilience outcome is indirect as the owner-managers mediate the relationship.

It has been identified that the owner-managers exhibiting the opportunity-focused pattern in response to disruptions enacted sensing, seizing, and reconfiguration to achieve a survival, stability, or growth resilience outcome. However, this response pattern was consistently found to be inclined towards achieving the growth resilience outcome. Conversely, the owner-managers who exhibited the disruption-focused pattern in response to the disruptions enacted sensing and reconfiguration

consistently inclined to achieve the survival resilience outcome. Taken as a whole, the owner-managers who followed the opportunity-focused pattern exhibited more entrepreneurial traits than those who responded following the disruption-focused pattern. Figure 7.1 presents the main findings of this study.

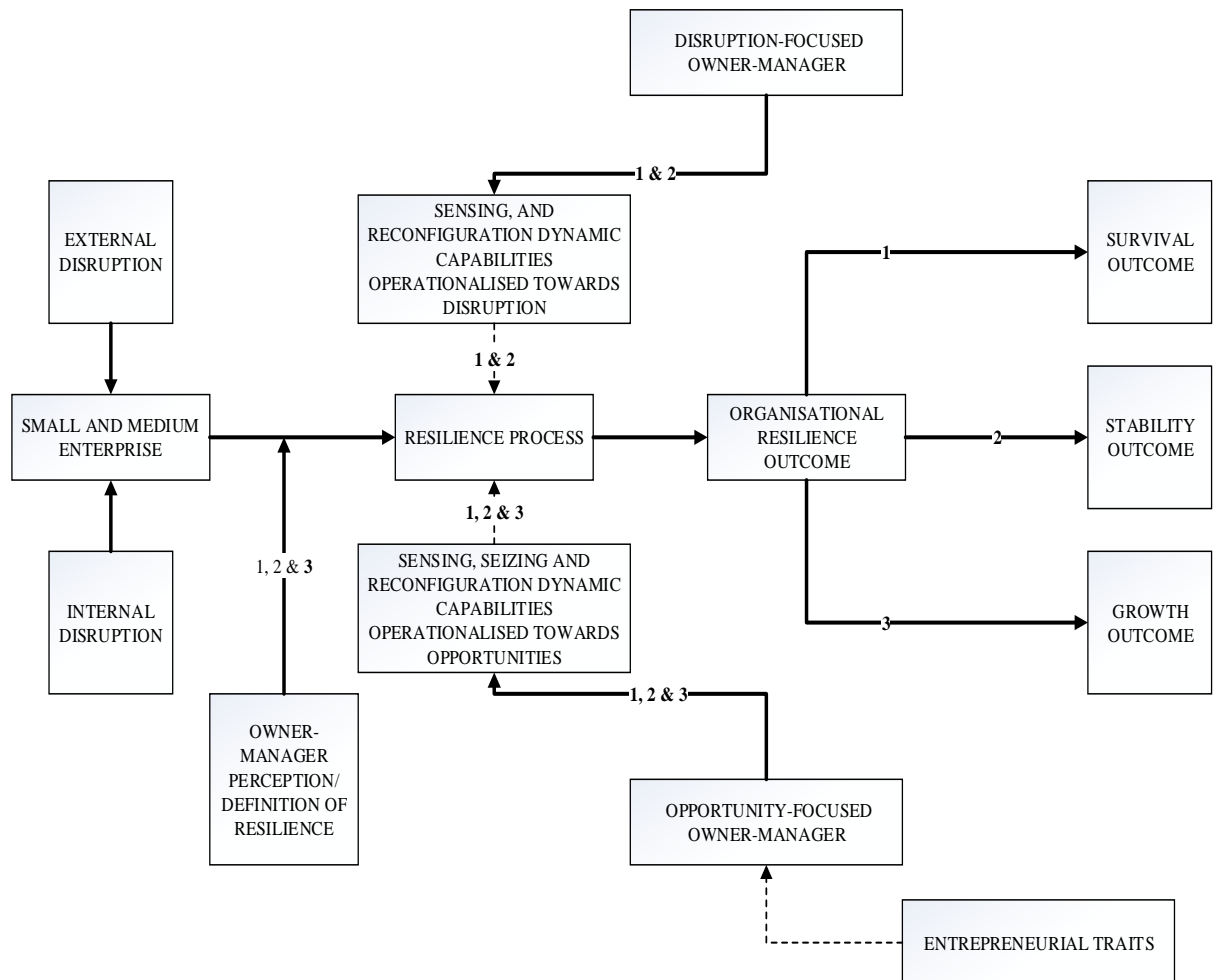


Figure 7.1: Conceptual Framework Highlighting Main Contributions from this study.

7.3 Perception of Resilience

This section discusses the key findings regarding the perception of organisational resilience, identified after analysing the narratives obtained from the semi-structured interviews conducted with the owner-managers. Before collecting data, it was apparent from the literature review that there was a likelihood of identifying different perceptions of the phenomenon as resilience is theoretically defined differently according to the context in which it has been explored. In this study, the

researcher sought to investigate how the owner-managers perceived organisational resilience. This would give relevant insight into how the owner-managers operating in the food and drink industry (especially in the UK) perceived resilience from their lived experiences.

Furthermore, while conducting the literature review, the researcher identified through a Boolean search in the titles and abstracts of peer-reviewed articles that there is no known published empirical research focused on SMEs in the food and drink industry, especially in the UK context, that explores organisational resilience. Therefore, leading to an alertness to the possibility of contributing to the body of knowledge and organisational resilience theory in this regard, given that the perception of organisational resilience from the standpoint of owner-managers in charge of SMEs operating in the food and drink industry is potentially absent. Even though there is the availability of several definitions for the resilience construct theoretically, it was necessary to understand organisational resilience in the owner-managers context because of SMEs' heterogeneous nature and because SMEs are likely to experience disruptions differently. Thus, their owner-managers might have distinctively different understandings of resilience. In the small business literature, resilience is still an emergent topic, with a detailed "bottom-up" understanding of what resilience means to owner-managers still lacking. Understanding multiple interpretations of resilience is relevant as it allows us to understand the different ways in which resilience is enacted.

The finding demonstrated that the owner-managers had three perceptions of resilience: a process-based perception, endurance-based perception, and resource-based perception. This finding, as well as other findings, are discussed in more detail in the following subsections.

Research Question 1a: What are the organisational resilience perceptions of the owner-managers within their firms?

As aforementioned in the literature review, resilience is a multidimensional construct (Robertson et al., 2015; Vanhove et al., 2016), having multiple definitions depending on the context in which it is explored. Resilience is defined differently when individuals (Fisher, 2019) or organisations (Vogus & Sutcliffe, 2007; Lengnick-Hall et al., 2011; Ortiz-de-Mandojana & Bansal, 2015) are being

investigated. Interestingly, in instances where the study has focused on only organisations, several definitions of organisational resilience have theoretically emerged, differing one from the another.

This study collected empirical evidence on the owner-managers' perception of resilience in their firms' context and aligning with earlier findings from the literature review; the participating owner-managers perceived organisational resilience differently although they operated in the same industry. The owner-managers had either a process-based perception, an endurance-based perception, or a resource-based perception. Therefore, identifying varying perceptions did not come as a surprise to the researcher. The different perceptions identified through this study are discussed in more detail in the paragraphs that follow.

Firstly, the owner-managers of cases BW, NJ, and SHC managed companies that manufactured different products. However, the findings demonstrated that they have a process-based perception, i.e. perceiving resilience as a systematic process that depended on the company's specific actions to come through disruptive situations. This perception of resilience aligns with the definition of organisational resilience earlier given by Lengnick-hall et al. (2011), where the scholars highlighted the need to adjust during periods of change. For example, the owner-manager of firm BW that had the process-based perception stated that to be resilient, actions such as *"being flexible and moving quickly with different trends and making sure we keep up to date with the latest happenings"* are essential in response to disruptions. In like manner, the owner-managers of firms NJ and SHC stated the need for adaptation to foster their firms' resilience.

Secondly, the owner-managers of cases ASS, BAL, CAR, SG, CRB, AB, TPW, and WHC, mostly managed companies that manufactured similar products except for the owner-manager of firm ASS. However, the findings demonstrated they had an endurance-based perception, i.e. perceiving resilience as an outcome that signifies successful resilience has occurred. This perception of resilience corresponds with the definition of organisational resilience given by Horne and Orr (1998), where the focus is on the outcome achieved as an indicator of resilience (Fisher, 2019). Having the endurance-based perception implies that for these owner-managers, resilience is mostly about surviving through challenges. Therefore, the findings highlight that the owner-managers in this category were more concerned with their firms' longevity. For example, the owner-managers

considered having gone through several economic situations or times of difficulty with their firms operational as resilience. However, the finding also suggests that the company's health in other key areas, such as their finances, is usually not considered.

Thirdly, the owner-managers of cases EPV and CHM managed firms that manufactured different products. However, the findings demonstrate they had a resource-based perception, i.e. perceiving resilience as the availability of firm resources, especially financial resources. This perception agrees with the definition of resilience given by Boin and Eeten (2013). They considered resilience as being capable of preventing or forecasting disruptions from becoming or being critical with the support of available resources. The findings suggest that the resources the owner-managers of cases EPV and CHM referred to were predominantly financial resources. Therefore, the finding implies that these owner-managers think their firms are resilient as long as there are adequate financial resources at their disposal. However, it is worth noting that the resource-based perception of resilience identified in this study differs from the resource-based definition of resilience highlighted by Fisher (2019). Fisher (2019) referred to resource-based resilience regarding the owner-manager on an individual level. However, in this study, the resource-based perception of resilience has been identified as applicable on an organisational-level.

Compared with the earlier reviewed literature in the business and management domain, this study's findings align with earlier resilience definitions and theoretical conceptualisations, where organisational resilience is mostly conceptualised as either an outcome or a process (Duchek, 2019; Fisher, 2019). This implies that the process-based perception and the endurance-based perception identified in this study correspond with the process conceptualisation of resilience and the outcome conceptualisation of resilience. However, the resource-based perception is in line with the conceptualisation highlighted by Fisher (2019) but on an organisational level.

According to the extant literature, scholars (e.g., Sutcliffe & Vogus, 2003; Linnenluecke et al., 2012; and Akgun & Keskin 2014) have advocated for resilience to be conceptualised as a process because it highlights the dynamism of the process and brings to light more information regarding the various activities exhibited by the resilient firm to achieve resilience (Sutcliffe & Vogus, 2003). Thereby suggesting how resilience is achieved. Conversely, the outcome conceptualisation of resilience

suggests nothing of what occurred but just highlights that resilience had happened through the outcomes (McLarnon & Rothstein, 2013). In this study, using the data, we investigated whether having a process perception is more rewarding than having an outcome perception, to identify possible relationships existing between the resilience perceptions and the achieved organisational resilience outcomes. This study aimed to explore the resilience perceptions of the participating owner-managers. The phenomenon will be understood better by delving deeper to investigate the relationship between the perceptions and the resilience outcomes. The conclusions may inspire future research that can investigate the relationship further.

The findings demonstrated that in cases AB, NJ and TPW, the survival resilience outcome was achieved; in cases ASS, BAL, BW, CAR, EPV, SG, and WHC, the stability resilience outcome was achieved. Finally, in cases CHM, CRB and SHC, the growth resilience outcome was achieved. Also, the findings demonstrated that the owner-managers of cases BW, NJ, and SHC had the process-based perspective, the owner-managers of cases AB, ASS, BAL, CAR, CRB, SG, TPW, and WHC had the endurance-based perspective and the owner-managers of cases CHM and EPV had the resource-based perspective. Analysing the result indicated that the owner-managers' perception of resilience does not significantly affect the resilience outcome achieved. However, the pattern-searching analysis findings demonstrate that the owner-managers with the process-based and resource-based perceptions had a higher chance of achieving the growth resilience outcome. Conversely, the firms where the owner-managers had the endurance-based perception had a higher chance of achieving the survival resilience outcome.

At first glance of the findings, the findings suggest that the owner-managers' perception does not influence the achievement of a specific resilience outcome. However, caution is needed regarding such interpretations of the result because of the complexity of the resilience process. Several factors influence the resulting resilience outcome of an SME. For example, SMEs struggle with limited resources (Carson, 1990; O'Donnell et al., 2001; Verhees & Meulenber, 2004), and this influences how they respond to changes such as disruptions within their firm and environment (Battisti & Deakins, 2017) and ultimately the resilience outcome they achieve. Additionally, the firm's

resourceful nature and how the firm employs resources (Powell & Baker, 2011) can significantly influence the archived resilience outcome.

Therefore, by identifying and exploring the different perceptions of resilience held by the owner-managers in the context of their firms operating in the food and drink industry, this study has made an extension to the organisational resilience literature. This extension has been made regarding the definition of the construct. In addition, by highlighting the weak relationship between the perception of organisational resilience and the resilience outcome achieved. This study demonstrates that the resilience perception of an SME's owner-manager does not solely determine the organisation's organisational resilience because the resilience process is dynamic and can be influenced by several factors, affecting the resilience outcome.

Research Question 1b: What factor influences the organisational resilience perceptions of owner-managers within their firms?

The resilience perceptions identified in this study have been discussed in the preceding subsection. In this subsection, this study presents a discussion on the factor that influenced the resulting perceptions identified. The perceptions identified were process-based, endurance-based and resource-based.

When conducting the interview, the participants were tasked with narrating their experience of disruptions experienced five years ago. However, it should be noted that at the time of the interview, the owner-managers stated their perception of organisational resilience at that moment in time. By linking the disruptions narrated by the owner-managers and their perceptions of organisational resilience, the analysis demonstrated that the owner-managers' experience influenced their organisational resilience perceptions. This implies that the different perceptions appear to have stemmed from the owner-managers' different experiences consistent with their response to the disruption they narrated during the interview. For example, according to their narratives of the owner-managers of cases BW, NJ and SHC, they had to follow a systematic process to resolve the disruption they experienced. Consequently, the findings demonstrated that the owner-managers had the process-based perception that perceives resilience as a systematic process.

On the other hand, according to cases AB, ASS, BAL, CAR, CRB, SG and TPW owner-managers, they each faced unforeseen disruptions such as contaminated products, BREXIT, change in legislation etc., that they successfully overcame with their firms having survived. Consequently, the results demonstrate that the owner-managers had the endurance-based perception of resilience that perceives resilience as longevity. For example, the owner-manager of firm AB spoke of when he felt the need “to cease trading or want to give up the business and stop” due to the challenges experienced at that time. Nevertheless, the firm kept on operating regardless. Additionally, according to cases CHM and EPV owner-managers’ narratives, they faced disruptions that required financial resources in their response, such as buying a new infrastructure or affording to harvest the raw materials twice, respectively. Consequently, they had the resource-based perception that perceives resilience as having the resources needed to be resilient.

Logically, there may be other explanations for the identified perceptions of resilience. However, experience appears to be the most logical reason because other reasons, such as their formal education or training, may not suffice to explain the situation. Knowledge may influence human cognition (Koryak et al., 2015), is relevant, and can affect how an owner-manager perceives resilience. However, the non-systematic ways of doing things in SMEs (Carson 1998; Beaver & Prince 2004), encourage experimentations being conducted (O'Dwyer et al., 2009). Therefore, practice-based learning will be more dominant in such firms (Battisti, Beynon, Pickernell & Deakins, 2019), causing perceptions shaped by experience to emerge. Practice-based learning is synonymous with gathering experience, which will occur more frequently in SMEs. Therefore, this study's empirical evidence demonstrates that the owner-managers' experience is likely the prominent and foremost reason for their perceptions of resilience identified in this research. This aligns with the positions of previous studies that have highlighted the influential effect on an owner-managers’ experience (e.g., Kuuluvainen, 2013; Koryak, et al., 2015; Carrick, 2016; Khan, et al., 2020).

7.3.1 Contribution to the Organisational Resilience Theory.

The study contributes to the organisational resilience theory by exploring the owner-managers’ perceptions of resilience in the context of SMEs operating in the food and drink industry, which before now, was absent in the literature. Additionally, the theoretical contribution to the

organisational resilience literature lies in the extension of other scholars' work by demonstrating the presence of the resource-based perception or conceptualisation of resilience on an organisational level, which before conducting this study, predominantly related to the individual level of resilience in the business and management literature. Additionally, this study identifies that the owner-managers' perception does not strongly influence the resilience outcome achieved. Nonetheless, the findings demonstrate that to some degree; it determines the achievement of survival resilience outcome if the owner-manager has the endurance-based perception and the achievement of the growth resilience outcome if the owner-manager has the process-based or resource-based perceptions.

The study has also contributed to the organisational resilience theory by highlighting the factor that possibly influences the resilience perception of the owner-managers. Therefore, elucidating on the impact of psychological factors on how an individual perceives a construct and perhaps the firm's growth (Koryak, et al., 2015). Thus, creating opportunities for further studies.

Therefore, by answering the first research questions, **1a** and **1b**, on what are the organisational resilience perceptions of the owner-managers within their firms and what factor influences the organisational resilience perceptions of owner-managers within their firms, this study has contributed to the organisational resilience literature. This contribution to the organisational resilience theory is presented in the conceptual framework (figure 7.1).

7.4 The Relationship between Dynamic Capabilities and Resilience in SMEs

This section presents the discussion based on this study's results regarding the relationship between dynamic capabilities and SMEs' organisational resilience, as presented in the conceptual framework (figure 7.1). Earlier studies have highlighted the significance of dynamic capabilities for the achievement of resilience in SMEs. However, studies exploring the relationship between dynamic capabilities and organisational resilience in SMEs are scarce. Earlier studies exploring the relationship did not explore dynamic capabilities explicitly as sensing, seizing, and reconfiguration. In this study, however, the results explicitly highlight the utilisation of sensing, seizing, and reconfiguration in

SMEs' resilience process and their influence on the resilience process to achieve organisational resilience. All these issues are discussed in more detail below.

Research Question 2a - SMEs require what dynamic capabilities (sensing, seizing, or reconfiguration) to achieve survival, stability, or growth resilience outcomes and how do the resultant processes influence the achievement of survival, stability, or growth resilience outcomes in SMEs?

During the semi-structured interview, open-ended questions requiring the owner-managers to speak of their lived experience in relation to a time when they were challenged with disruption was asked. Based on their responses, the resilience mechanism and other activities were identified by the researcher. The resilience mechanism comprised of initial reactions, the disruption(s) or potential disruption(s) that resulted, and activities aimed at enabling the firm to cope despite the disruption(s) or potential disruption(s) (Fisher, 2019). However, some activities could not be categorised as simply being part of the resilience mechanism category as they went beyond being initial reactions and coping activities. The activities involved identifying threats or opportunities, the decision to mobilise resources to capture opportunities, and the transformation of existing resources to adapt to the disruption or fully take advantage of opportunities. The activities aligned with the definition of the components of dynamic capabilities as given by Teece, (2007, 2012, 2014a), known as sensing, seizing, and reconfiguration, respectively. Hence, the activities were classified as resilience, promoting factors during the data coding process.

Firstly, the activities, which involved the owner-managers identifying threats or opportunities, were classified as sensing because sensing consists of scanning the environment for opportunities and threats (Teece, 2007; Teece 2012; Matysiak, Rugman, & Bausch, 2018). Identifying market segments and varying customer needs, occurred through sensing (Popadiuk, Luz, & Kretschmer, 2018). Additionally, sensing included the activities that involved searching for relevant information needed during the resilience process (Helfat & Martin, 2015a). The owner-managers identified the disruptions, opportunities and solutions during the resilience processes.

Secondly, the activities that involved the mobilisation of resources towards capturing the sensed opportunities were classified as seizing. Seizing involves the orchestrated utilisation of resources (usually financial resources) in the form of investments to take advantage of sensed opportunities or avert sensed threats (Teece, 2007; Popadiuk, Luz, & Kretschmer, 2018; Froehlich, & Bitencourt, 2019; Matilda Bez, & Chesbrough, 2020). For example, the owner-manager of firm BAL, mobilised resources to manufacture new products that appealed to their customers to avoid losing them entirely to their competition. Additionally, some other owner-managers mobilised resources to take advantage of opportunities to satisfy their customers (SHC, CAR, CRB & BW), venture into new markets (CHM) and purchase other relevant resources needed by the firm (NJ & CHM).

Finally, the activities, which involved the transformation of existing resources, were classified as reconfiguration. Reconfiguration involves the recombination or conversion of existing organisational structures and assets to create new ones required for adapting to or averting threats or maintaining the firm's growth following the sensing and seizure of an opportunity (Teece, 2007; Gumusluoglu, & Acur, 2016; and Froehlich, & Bitencourt, 2019). For example, the owner-manager of firm NJ and CHM reconfigured existing resources to establish the changed business model needed to capture the sensed opportunity to venture into a new market. Additionally, the owner-manager of firm SHC reconfigured the business model to seize the opportunity of satisfying an unexpectedly large order from a customer. Also, the owner-manager of the firm ASS reconfigured the firm's business model to adapt to the BREXIT uncertainty that disrupted the firm's international trade. Other owner-managers (of cases BW, CAR, EPV, TPW & WHC) also reconfigured existing resources to adapt to their firm's disruptions.

Therefore, these findings demonstrated the presence and utilisation of sensing, seizing, and reconfiguration during the SMEs' resilience process in the food and drink industry. Thus, in line with earlier scholars, the findings indicate that dynamic capabilities are present in SMEs' resilience process in response to disruptions (Zehir & Narcikara, 2016; Battisti & Deakins, 2017) and this contribution to the dynamic capabilities theory is illustrated in the conceptual framework (figure 7.1).

With evidence from extant literature, scholars have done little towards understanding the relationship between organisational resilience and dynamic capabilities as sensing, seizing and reconfiguration in

SMEs, especially those operating in the food and drink industry. As the systematic literature review highlighted, few studies have explored the relationship between an organisation's resilience and dynamic capabilities in the SME context. Therefore, exploring the relationship between the constructs will enable scholars to understand how resilience works in SMEs practically. SMEs are usually less equipped with resources than their larger counterparts (Linnenluecke, 2017). Additionally, it will expand our knowledge of the domain, as little is known about how SMEs achieve resilience (Bhamra, Dani & Burnard, 2011).

Therefore, after analysing and categorising the findings into themes and conducting a pattern-searching analysis, the analysis demonstrated how sensing, seizing and reconfiguration led to the achievement of the resilience outcomes – survival, stability and growth. An investigation of the thirteen participating firms' resilience processes highlighted the possibility of categorising the firms into two groups based on their responses to the disruptions using dynamic capabilities. First, a group where the owner-managers responded following the opportunity-focused pattern and second, a group where the owner-managers responded following the disruption-focused pattern. By responding following the opportunity-focused pattern, a firm had a higher likelihood of achieving the growth resilience outcome (illustrated as the dynamic capabilities enacted to achieve resilience 1, 2 & 3 in figure 7.1). Conversely, by responding following the disruption-focused pattern, a firm had a higher likelihood of achieving the survival resilience outcome (illustrated as the dynamic capabilities enacted to achieve 1 & 2 in figure 7.1).

In the firms where an opportunity-focused response pattern to the disruption was displayed, the response progressed as a process that involved *ex-ante* sensing of the disruption. Not only was the disruption sensed before it occurred, but the findings also suggest that it was interpreted as an opportunity after the disruption occurred. The opportunity was quickly exploited through the mobilisation of resources to reconfigure their business. Mobilisation of resources typically meant investing in new or improved products or processes to reconfigure the business to exploit the emerging opportunity. This pattern of response corresponds to what has previously been termed proactive posture (Battisti & Deakins, 2017), "a firm's strategic and behavioural readiness to respond to early warning signals of change in the organisation's internal and external environment before

they escalate into crisis” (Lee et al., 2013, p. 34). Exhibiting a proactive posture was found to be a key determinant of recovery after experiencing a disruptive event (Lee et al., 2013).

In contrast, the firms where a disruption-focused response pattern is displayed were characterised by owner-managers sensing the disruption *ex-post*. Once they sensed it, they perceived the disruption as a threat. No seizing occurred, meaning that owner-managers did not mobilise any resources. Instead, they tended to focus on reduction and cutting down existing resources. As a result, reconfiguration only happened to a limited extent and was focused on reinstating the status quo.

The findings demonstrated that the dynamic capabilities enabled the achievement of organisational resilience achieved by acting on resources during the response process by following the different response patterns. However, the two response patterns are underpinned by different dynamic capabilities. To achieve an organisational resilience outcome tended towards growth, the dynamic capabilities (sensing, seizing and reconfiguration) are enacted. Conversely, to achieve an organisational resilience outcome tended towards survival, the dynamic capabilities (sensing and reconfiguration) are enacted. Therefore, irrespective of the response pattern adopted and the resilience outcome achieved, it is consistent with the findings that the primary role of dynamic capabilities is to act on the firm's resources during a response process.

In addition, the findings demonstrate that sensing, seizing, and reconfiguration have an indirect but positive relationship with organisational resilience because the owner-managers mediate the relationship. The positive but indirect relationship between sensing, seizing, reconfiguration, and organisational resilience found in this study is similar to earlier findings regarding the relationship between dynamic capabilities and other constructs (mostly outcomes) in SMEs. For example, the relationship between dynamic capabilities and other constructs such as financial performance (Absah, & Harahap, 2020; Ojha, Patel, & Sridharan, 2020), sales growth (Uhlener, van Stel, Duplat & Zhou, 2013), operational performance (Ju, Park, & Kim, 2016) and organisational performance (Mukhtar, Baloch, & Khattak, 2019) that are found to be mediated by other factors as well.

This study's findings further demonstrate the role of the owner-managers in ensuring the achievement of resilience in SMEs. Their roles are discussed in the following section.

7.5 Drivers of Resilience in SMEs

In this section, this study presents the discussion regarding the role of the owner-managers towards promoting organisational resilience by exhibiting leadership and managerial skills, utilising external and internal resources and enacting sensing, seizing or reconfiguration at different times and patterns. The findings highlight that by enacting dynamic capabilities at different times and patterns, the achieved organisational resilience outcome is influenced. The drivers of resilience in SMEs demonstrated by this study's findings are discussed in more detail below in the context of existing literature.

Research Question 2b - What do the owner-managers undertake to promote resilience outcomes within their business, and how do the owner-managers influence the use of dynamic capabilities to achieve resilience outcomes?

7.5.1 Exhibit Entrepreneurial Traits

The results suggest that the achievement of growth resilience outcome is more likely when the owner-manager exhibits entrepreneurial traits. The entrepreneurial traits ensure that the owner-managers' perception, talents, energies, plans, and preferences (Piperopoulos, 2010) are geared towards opportunity identification, seizure, and reconfiguration of resources towards the sensed opportunity. This is in line with earlier studies that have argued that an entrepreneurship mind-set and behaviour is crucial because it creates a foundation for dynamic capabilities to play a role in a firm (Woldesenbet, Ram, & Jones, 2012). The entrepreneurial mind-set also depends on existing knowledge, gathered experience, and external information (Ma, Zhou, & Fan, 2015; Carrick, 2016), to capture opportunities by mobilising resources and do necessary reconfigurations (Woldesenbet, Ram, & Jones, 2012). Therefore, an entrepreneurship mind-set and behaviour positively affects the development of dynamic capabilities (Mudalige, Ismail, & Malek, 2016) and its role during the resilience process within an SME.

The entrepreneurship mind-set and behaviour is characterised by forward thinking (Abro, Memon, & Arshdi, 2011; Heger, & Boman, 2015), proactive-posture (Battisti & Deakins, 2017), which enables the owner-managers to sense for threats and opportunities effectively, through the utilisation of their entrepreneurial orientation (Eriksson, Nummela, & Saarenketo, 2014). For example, the O-M of case SHC focused on the organisation's disruption as an opportunity rather than a disruption. The O-M utilised the disruption as a stimulant to stir the firm towards expanding its production capacity. This finding aligns with Kerr (2015)'s argument that resilience does not focus on the disruption but on how the disruption is utilised to ensure that the firm is more resilient. In addition, the O-Ms acknowledged during the interview that they learnt from the experience after their response to the disruptions. This also supports Kerr (2015)'s argument that resilient organisations learn from experience.

The owner-managers of the firms that were inclined towards achieving growth resilience outcome exhibited this entrepreneurship mind-set and behaviour. Conversely, the achievement of survival resilience outcome is more likely when the owner-manager exhibits little to no entrepreneurial traits but is driven by the disruption to pursue solutions rather than opportunities. However, with a small sample size, caution is needed, as the findings may not be generalisable to all SMEs.

7.5.2 Utilise External and Internal Resources

As has been highlighted in the extant literature, SMEs struggle with resource constraints (Carson, 1990; O'Donnell et al., 2001; Verhees & Meulenbergh, 2004; Singh et al., 2008) and struggle with challenges that require resources to survive and even thrive. In this study, the results demonstrate that resources are utilised while responding to the organisations' disruptions. The results further demonstrate that the resources are found within the firm or are obtained from outside the firm. The external resources are sourced from outside the firm to complement the resources available within the firm. Overall, the results highlight that resources such as financial resources, human resources, slack resources, effective partnerships, and access to professional support are found to be the common forms of resources needed during the resilience process.

The utilisation of resources during the resilience process sheds more light on the relationship between dynamic capabilities and organisational resilience, given that dynamic capabilities require

resources to produce results. In line with bsi group's report (2015), for resilience to be built in an organisation, the participants in this study have highlighted the significance of products, processes and people. In different instances, the owner-managers utilised resources to introduce new products and services, transformed the firm processes and involved their employees during the resilience process. Therefore, in the absence of resources, there would be nothing for dynamic capabilities to "integrate, build and reconfigure" (Teece, 1997, P. 516). Thus, this study further demonstrates that the resources are significant during the resilience process, primarily for the dynamic capabilities to promote the achievement of resilience.

The analysis of the results highlighted that the utilisation of employees during the response to disruptions could positively affect the resilience process. Employees constitute the human aspect of the resources that were utilised by owner-managers. Employees were of much significance to the resilience process such that the owner-managers went as far as offering incentives to stimulate their employees' corporation (Popadiuk, Luz & Kretschmer, 2018), which corroborates the findings of earlier studies that have highlighted the relevance of employees towards achieving organisational resilience (e.g. Macpherson, Herbane & Jones, 2015; Mennens, Van Gils, Odekerken-Schröder & Letterie, 2018). However, the research area focusing on the contribution of employees to organisational resilience is understudied and requires researchers' attention. Thus, this study's findings may stimulate research towards investigating employees' resilience perception and its influence on the organisational resilience outcome achieved.

The findings further demonstrate the significance of slack resources that served as a cushion for the organisation while facing disruption. According to the owner-manager's narratives of the firm EPV, the stored-up products from the previous harvest season ensured that the firm had products available to generate revenue while responding to the disruption experienced. This finding demonstrated the relevance of having slack resources for periods when the firm is challenged with disruption or a disturbance to its processes. The finding corresponds with the arguments stated earlier by Hamel & Valikangas (2003), highlighting the importance of slack resources.

Additionally, the results demonstrated that having close ties with individuals outside the firm proved useful in responding to the disruptions. For example, the owner-manager of other firms was

contacted to address challenges in firm SG and EPV. Other establishments were partnered with to convince customers of the raw materials' safety in firm BW, and friends supported the building of new business infrastructure in firm CRB. The results demonstrate that effective partnerships like those formed by the owner-managers of the cases SG, EPV, BW and CRB are identified to be significant for resilience in agreement with the arguments made by Mudalige et al. (2016) and Khan et al. (2020). Also, the results demonstrate further that in some firms, professional support was sought after to enable the owner-managers to make effective decisions in the firms TPW and ASS agreeing with the study conducted by Macpherson, Herbane, and Jones (2015).

Concerning the two response patterns identified in this study, the analysis of the results demonstrated that in the firms where the opportunity-focused pattern of response was followed, relational capabilities in the form of effective external collaborations supported the resilience process and made it more likely that the firm's performance improved relative to its performance before the disruption. One possible explanation for this finding is that the owner-managers developed effective-partnerships to acquire resources that were not found within the firm (Macpherson et al., 2015) but were needed for the dynamic capabilities to act on, to achieve a resilience outcome leaning towards growth.

7.5.3 Exhibit Leadership Qualities

The results in this study suggest that the owner-managers predominately had to exhibit leadership qualities in the face of the disruption (Adner & Helfat, 2003; Teece, 2007; Helfat & Peteraf, 2015). The owner-managers' leadership qualities in this study include continuous learning, effective communication, clearly stating the firm's goals and objectives, leading the firm, motivating the employees, making the decisions, and being strategic. The leadership qualities exhibited during the resilience process in this study agree with the arguments made in previous studies (e.g. Abro, Memon, & Arshdi, 2011; Zehir, & Narcikara, 2016) and the bsi group report (2017), regarding the significance of leadership in SMEs towards the achievement of dynamic capabilities.

Therefore, for the promotion of organisational resilience, the owner-managers needed to exhibit leadership and other roles in agreement with Zehir and Narcikara (2016)'s findings from their study of authentic leadership of owner-managers and how it affects the performance of the firm. This

finding gives credence concerning the leadership exhibited by owner-managers in the face of disruptions (Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017) and further raises other interesting questions for future research, such as which leadership quality produces the most effect on the organisational resilience of SMEs.

Other than exhibiting entrepreneurial traits, utilising resources and exhibiting leadership qualities, the findings from this study further demonstrated that the owner-managers enacted sensing, seizing and reconfiguration during the resilience process following the two distinct patterns of response known as the opportunity-focused and the disruption-focused patterns as is presented in figure 7.1.

7.5.4 Enacting Dynamic Capability Following the Opportunity-Focused Pattern

The results demonstrate that by following this pattern of responding to a disruption, the owner-managers enacted sensing dynamic capability to identify the disruption before its full manifestation or as an opportunity after it fully manifested. For example, case CRB's owner-manager identified the threat the firm's infrastructure posed on the firm, and the owner-manager of firm CHM identified the gradual reduction in the firm's turnover and the negative impact their firm premises had on their firm's operations. One possible explanation for enacting sensing dynamic capability in this manner is that they were conscious of their environmental changes and, therefore, took note of what could potentially become disruptive to the firm or the disruptions were such that could be observed before they became critically disruptive to the firm. However, it can be argued that it is the owner-managers cognitive ability and perception (Ambrosini & Bowman, 2009; Koryak, et al., 2015) of the disruption that influenced the enactment of the sensing dynamic capability in this fashion.

Following the enactment of the sensing dynamic capability to identify the disruption, the owner-managers enacted the sensing dynamic capability to identify opportunities in response to the earlier sensed disruption. For example, Some owner-managers sensed for infrastructural opportunities (NJ & CHM), new market opportunities (NJ & CHM), opportunity to find out what the business is lacking and better ways to satisfy the customers (CRB), opportunity to build a better relationship with the customers (AB, BW & BAL), opportunity to purchase raw materials in large amounts (CAR) and the opportunity to upscale (SHC). An explanation for enacting sensing dynamic capability towards identifying opportunities is that the owner-managers were entrepreneurial (Eriksson, Nummela, &

Saarenketo, 2014) and characterised with a forward-thinking attitude (Abro, Memon, & Arshdi, 2011; Heger & Boman, 2015). However, their sensing for opportunities appears consistent with their perception of the disruption faced (Aragon-Correa & Sharma, 2003). For example, although the owner-manager of firm SHC identified the disruption after it manifested, the owner-manager perceived the difficulty as an opportunity to increase the organisation's production capacity.

The analysis demonstrated that for the sensed opportunity to be of relevance, the owner-manager needed to enact the seizing dynamic capability by mobilising resources to capture the opportunities. The seizing dynamic capability predominately occurred by creating new processes, services, or products and made decisions to capture the sensed opportunities as part of their response to the disruption (Popadiuk, Luz, & Kretschmer, 2018). The enactment of the seizing dynamic capability required the commitment of financial resources (Teece, 2007). However, to fully capture the opportunities and have them profitable for the firm in the future, the owner-managers enacted reconfiguration in some firms, for example, by changing the business models (in the firms CHM & NJ) and processes (in the firm SHC).

The analysis further demonstrates that the owner-managers understanding of resilience served as the cognitive underpinning for their strategic response, i.e. how they deployed their dynamic capabilities following the opportunity-focused response pattern. The owner-managers found responding with this pattern had the process-based and resource-based perception of resilience. According to the practical perspective of organisational resilience, some O-Ms in the study have the process-based perception of organisational resilience that requires constant improvements. However, some O-Ms perceived organisational resilience as being resourced-based, which is similar in some ways to thinking of organisational resilience as a preventive control. For example, the O-M of case EPV ensured there were stored raw materials (stock) should there be a disruption in the future. This way of perceiving organisational resilience aligns with Denyer (2017)'s preventative control conceptualisation of organisational resilience in practice.

Sensing includes owner-managers' *alertness and attention* as it allows owner-managers to recognize disruptions early and respond to them in a timely and effective manner (Helfat et al. 2015). Their understanding of resilience as a resource also supports the opportunity-focused response. The

resource-based understanding seems to stimulate the owner-managers seizing dynamic capability by focusing their attention on *preparing* for the disruption and extending and modifying their resources (Williams et al., 2017). This is often achieved by integrating external resources through access to a 'reservoir' of resources (Anderson & Jack, 2002, p: 195) such as, through effective external collaborations.

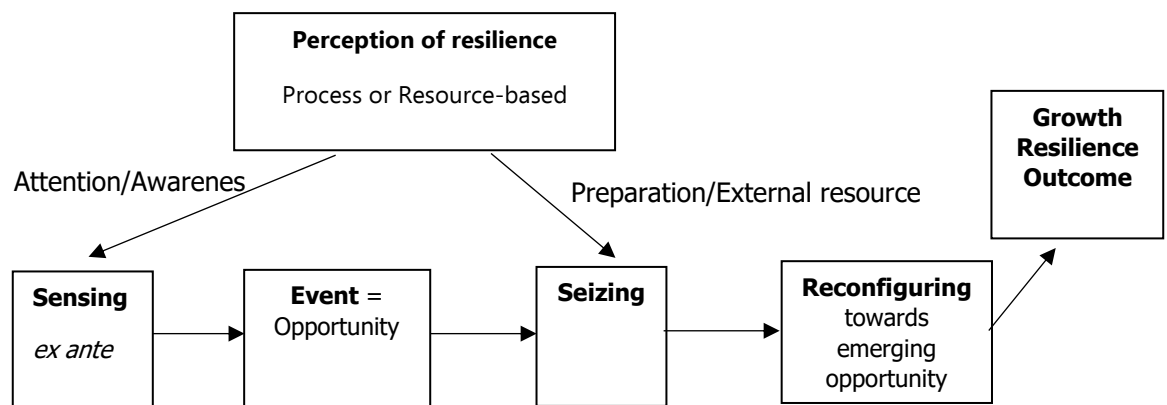


Figure 7.2: Opportunity-focused strategic response pattern

7.5.5 Enacting Dynamic Capability Following the Disruption-Focused Pattern

Conversely, the results demonstrate that by following this pattern of responding to a disruption, the owner-managers enacted sensing dynamic capability to identify the disruption after it had fully manifested. One possible explanation for enacting sensing dynamic capability in this manner is that the disruption experienced occurred unexpectedly. For example, disruptions such as a frosted vineyard (EPV), diseased livestock (BW), contaminated raw materials or products (AB, SG), changed legislation (TPW), poor crop yield (WHC), climatic change (CAR), the decision to withdraw from the EU (ASS), a sudden increase in demand for products (SHC) and sudden loss of the firm premises or loss of significant customer (NJ). Therefore, sensing the threat before it occurred may have been difficult and unlikely in situations like this. However, the findings suggest that the firm NJ's owner-manager identified the disruption signs before they manifested, but the signs were ignored. Similarly, in the firm BAL, the findings highlight that the owner-manager identified a threat because of increased competition and ignored it until it fully manifested. Again, the results further demonstrate

the enactment of sensing dynamic capability depends on the cognitive ability and perception (Ambrosini & Bowman, 2009; Koryak, et al., 2015; Battisti & Deakins, 2017) of the disruption.

After the enactment of sensing dynamic capability to identify the disruption, the owner-managers enacted the sensing dynamic capability again to identify solutions in response to the earlier sensed disruption. For example, they were searching for another source of raw materials (in firms WHC, AB & SG), relevant information from the websites and books (in EPV) and for professional advice (in firms ASS & TPW). One possible explanation for enacting the sensing dynamic capability in this manner is that the owner-managers were focused on maintaining a *status quo*, i.e. a return to normality. Therefore, because of no opportunities sensed, the enactment of seizing does not occur following the disruption-focused response pattern. However, to return to normalcy, the owner-managers enact the reconfiguration dynamic capability. For example, the change in the existing product label (in the firm TPW), the change in the business model (in the firm ASS), the changed harvest process (in the firm EPV), change in customers relations (in the firm BW), began keeping stock (in the firm CAR) and changed employee working hours and patterns (in the firm WHC) as solutions to the disruption faced. These changes allowed the firms to adapt to the challenges they faced and gave them relief.

The analysis further demonstrated that the perception of resilience as an outcome consistent with this response pattern does not sufficiently stimulate dynamic capabilities development and deployment. Only after the disruption is so severe that it threatens the firm's survival, owner-managers start to respond. However, their response is disruption-focused, meaning that their sensing is too late and seizing in terms of mobilizing resources does not happen. Reconfiguration is subsequently limited to trying to maintain the *status quo*.

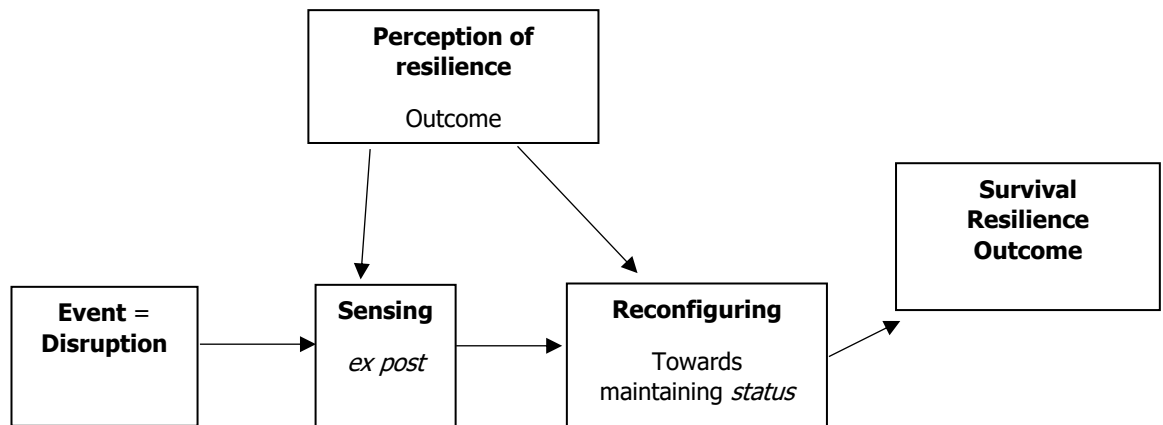


Figure 7.3: Disruption-focused strategic response pattern

Overall, the findings agree with the extant literature on the role that owner-managers play in enacting dynamic capabilities in an organisation, especially in SMEs (Martin, 2011; Vijaya, Ganesh, & Rahul, 2019). The role of enacting the dynamic capabilities is consistent with the owner-manager's cognition (Helfat & Peteraf, 2015) and their perception (Battisti & Deakins, 2017) of the changes that have occurred in their environment. Their cognition and perception appear to influence their behaviour, which leads to the enactment of the dynamic capabilities at different times and in different ways, as has been identified in this study leading to the achievement of varying resilience outcomes.

7.5.6 Contribution to the Dynamic Capabilities and Organisational Resilience Theory

This study contributes to the dynamic capabilities theory by demonstrating that sensing, seizing and reconfiguring are relevant and enacted in response to day-to-day disruptions in SMEs. Thereby suggesting the relevance of these dynamic capabilities in SMEs operating in the food and drink industry. By extending the works of earlier scholars (e.g. Battisti & Deakins, 2017) that argued the importance of dynamic capabilities for the achievement of resilience in SMEs in a post-disaster environment by demonstrating its significance in response to disruptions that are of less magnitude but experienced daily in SMEs this study has made a contribution to the dynamic capabilities and organisational resilience theories.

Additionally, the theoretical contribution to the dynamic capabilities and organisational resilience theories of this study lies in the further demonstration of how dynamic capabilities (sensing, seizing and reconfiguration) lead to SMEs' resilience. The findings suggest that sensing, seizing and reconfiguration lead to varying resilience outcomes by acting on the firm's resources through two

distinct response patterns, which are the opportunity-focused and disruption-focused response patterns. By demonstrating this finding, this study extends the work of Battisti et al. (2019), where the relationship between learning and the resilient outcomes was investigated. However, this study highlights the relationship between sensing, seizing, reconfiguration and resilient outcomes and sheds light on how the dynamic capabilities potentially lead to achieving the varying resilience outcomes. Thereby providing the potentially much-needed answers to what dynamic capabilities enable a firm to respond to disruptions (Bogodistov & Wohlgemuth, 2017) and how resilience works in SMEs (Linnenluecke et al., 2019).

Lastly, this study contributes to the dynamic capabilities and organisational resilience theories by demonstrating the owner-managers' role in influencing the dynamic capabilities to achieve varying resilient outcomes. The findings demonstrate that the enactment of sensing, seizing, and reconfiguration is consistent with the owner-managers' cognition and perception. Therefore, based on how the owner-managers understand resilience and the disruption(s), they enact different dynamic capabilities through different patterns. Additionally, the findings from this study extend Zehira and Narçıkara (2016) work by demonstrating the owner-managers' actions to ensure the resilience of SMEs. In their research, Zehira and Narçıkara (2016) investigated owner-managers' influence through leadership on their employees to make an SME resilient. However, this study's findings demonstrate the effect of the owner-manager through leadership, utilising resources and enacting dynamic capabilities to make an SME resilient.

Therefore, these findings provide empirical answers to the research questions **2a** and **2b**, to contribute to the dynamic capabilities and organisational resilience theories.

7.6 Summary of Contribution to Theory.

Table 7.1 summarises the gap from earlier studies conducted in SMEs exploring the relationship between organisational resilience and dynamic capabilities. The contributions made from this study to the body of knowledge in response to the identified gap are presented in Table 7.1.

Table 7.1: Presenting the existing resilience studies in SMEs concerning dynamic capabilities, research gaps, and contribution to Theory made by this research.

Title of Article	Gap	Contribution to Theory from this study
Enterprise risk management: a capability-based perspective (Yevgen Bogodistov & Veit Wohlgemuth, 2016)	The study lacks empirical results to validate the significance of dynamic capabilities in building organisational resilience.	This study provides empirical results that validate the significance of dynamic capabilities in response to unforeseen disruptions in SMEs. Thereby contributing to the dynamic capabilities theory.
Effects of Resilience on Productivity under Authentic Leadership (Cemal Zehira & Elif Narcıkarab, 2016)	The study focused on the role of owner-managers in supporting employees to make the firm resilient. However, other aspects of the owner-manager, such as his/her perception, are relevant to the resilience process but were not explored in the study.	This study identifies the role of owner-managers during the resilience process and highlights their perceptions of organisational resilience. The study finds that the perception does not solely determine the resilience achieved, but other factors, as well as their perception, may influence the resilience outcome. The study also finds that consistent with the owner-managers cognition and perception, the enactment of the dynamic capabilities to achieve resilience is influenced differently. Thereby contributing to the organisational resilience theories.
The relationship between dynamic capabilities, the firm's resource base and	The relationship between dynamic capabilities in the form of sensing, seizing, and reconfiguration was not explicitly explored in the study. The study focused only on	This study, similar to the study by Battisti and Deakins (2017), finds that dynamic capabilities play a role in SMEs' resilience. However, this study finds that sensing,

<p>performance in a post-disaster environment (Martina Battisti & David Deakins, 2017)</p>	<p>disaster-related adversities and not day-to-day disruptions faced by SMEs, especially in the food and drink industry.</p>	<p>seizing, and reconfiguration dynamic capabilities are enacted in the resilience process and in an opportunity-focused pattern or disruption-focused pattern in response to disruptions.</p> <p>Thereby contributing to the organisational resilience theory using the dynamic capabilities theory to interrelate the two concepts.</p>
<p>Surviving or thriving: The role of learning for the resilient performance of small firms (Martina Battisti, Malcolm Beynon, David Pickernell & David Deakins, 2019)</p>	<p>The study did not explore dynamic capabilities – sensing, seizing, and reconfiguration relationship with the achieved resilience categories of a small firm</p>	<p>This study finds that sensing, seizing, and reconfiguration dynamic capabilities enacted in an opportunity-focused pattern enables a firm to have a higher propensity to achieve a growth resilience outcome. In comparison, the enactment of the sensing and reconfiguration dynamic capabilities in a disruption-focused pattern enables a firm to have a higher inclination to achieve a survival resilience outcome.</p> <p>Thereby contributing to the dynamic capabilities and organisational resilience theories.</p>

7.7 Contribution to Practice

The findings from this study have both theoretical and practical implications. This study has expanded the understanding of resilience by highlighting the situated meaning provided by the owner-managers to gain insight into how they understand resilience in their firms' context. Instead of applying a general definition of resilience to small firms, this study applies a "bottom-up" approach that highlights that their understanding of resilience influences how they enact it in their day-to-day activities. Small business owners, who understand resilience as a process, are more likely to thrive as they follow an opportunity-focused pattern that strongly builds on their cognitive capabilities of sensing the disruption *ex-ante* and preparing for it and sensing the opportunities inherent in the disruption. Through their behavioural capabilities, they then exploited these opportunities through mobilising resources and adapting their business models. As such, this study's findings have extended our understanding of how small business owners enact resilience by exploring critical dynamic capabilities and how they dynamically interact to enable resilience. The practical implications are grounded in a better understanding of why some small firms adjust better to disruptions, particularly the role of the owner-manager's cognitive and behavioural capabilities.

Therefore, in practice, based on the findings from this study, owner-managers are advised to enact dynamic capabilities focusing on opportunities rather than on providing quick-fix solutions to the disruption. This will involve the enactment of sensing to identify disruptions before they become incredibly disruptive and to sense for opportunities that will enable the firm to overcome disruptions and generate rents for the firm during and after the response to the disruption. The owner-managers also need to mobilise resources and not ignore early warning signs. In some cases, the firm will need to make changes simultaneously to the firm's processes or model to sustain the benefits realised from seizing the opportunities.

In the next chapter, the contribution and substantive findings from this research are discussed, along with recommendations made from this study for future research.

CHAPTER EIGHT

CONCLUSION

8.1 Introduction

This chapter discusses the contributions made to the body of theory, practice, and policy development relating to SMEs from this study, following an exploration to understand how dynamic capabilities build SMEs' resilience and an owner-manager's role during the process. Also, in this chapter, research limitations are examined before making some recommendations for future research.

This research project is the first study to explicitly explore the relationship between sensing, seizing, and reconfiguration dynamic capabilities in SMEs operating in the UK's food and drink industry. Given the significance of SMEs to the economy and the inadequacy of research in the SME context regarding how resilience work (Linnenluecke, 2017), this study's findings are relevant to theory and practitioners alike.

8.2 Summary of the Substantive Findings and Contributions

This study has examined the relationship between sensing, seizing, reconfiguration and the organisational resilience of SMEs by addressing its main question on how dynamic capabilities build and sustain resilience in SMEs vis-a-vis its two objectives, which are discussed below.

The first objective was to explore how the owner-managers perceive the term resilience in their firms' context. This study, found resilience to be perceived differently as either an endurance-based, process-based or a resource-based construct. As demonstrated by the findings, the perception of the resilience construct is consistent with the owner-managers' experiences dealing with disruptions as they arise in their day-to-day operations. In addition, the influence of their perceptions on the firm's resilience appears to be weak as the resilience process is dynamic and influenced by other factors, which affect the outcome achieved.

The second objective was to determine the role of dynamic capabilities in building and sustaining organisational resilience in SMEs and exploring the owner-manager's role in promoting SMEs'

resilience. In all the participating firms, dynamic capabilities played a role by acting on the firm's resources to achieve resilience. The dynamic capabilities transformed resources such as funds, employees, social networks, etc., during sensing, seizing, and reconfiguration activities within the resilience process. Therefore, dynamic capabilities have a positive relationship with the resilience of SMEs.

In this study, two types of owner-managers were identified: those who are opportunity-focused and those that are disruption-focused. The owner-managers enacted dynamic capabilities differently depending on their focus, which in turn influenced their behaviour and cognition. Thus, the owner-managers acted as the mediator between the dynamic capabilities and organisational resilience. In addition, the results highlight the significance of leadership when challenged by disruptions.

8.2.1 Contribution to Theory

The conclusions derived from the analysis of the relationship between sensing, seizing, reconfiguration and resilience in SMEs undertaken in this study contribute to theory, practice and policy in the areas of both dynamic capabilities and organisational resilience in SMEs, and these contributions are discussed below.

Firstly, although there are several definitions for organisational resilience theoretically, little has been contributed towards understanding how the owner-managers of SMEs perceive resilience in their firms' context. The perception of organisational resilience by owner-managers in an SME context has been previously overlooked in the organisational resilience literature, which has been dominated by a focus on organisational resilience from the perspective of larger organisations (Linnenluecke, 2017). SMEs are relevant to the economy (FoodDrinkEurope, 2020), hence exploring the owner-managers' resilience perspectives.

According to the findings from this research, it is understood that the owner-managers of SMEs operating in the UK food and drink industry have three broad perceptions of organisational resilience, which are process-based, endurance-based, or resource-based perceptions. An analysis of the relationship between the resilience perception of the owner-manager and the SME's resilience highlighted that the relationship is weak. Other factors influence the resulting resilience outcome of

the firm. Additionally, the owner-managers' perception is found to be likely influenced by the owner-managers' experience. Therefore, this study contributes to the SME organisational resilience literature by highlighting how the owner-managers perceive organisational resilience in the context of their firms, the relationship between their perceptions and the resilience outcomes of the SME and what influences their resilience perceptions.

Secondly, this study contributes to the dynamic capabilities literature regarding dynamic capabilities in SMEs. Existing studies have highlighted that dynamic capabilities are relevant for achieving resilience in SMEs. However, this study demonstrated the presence and significance of dynamic capabilities (sensing, seizing and reconfiguration) during responses to disruptions experienced by SMEs (Battisti & Deakins, 2017). In addition, a contribution is made to the dynamic capabilities, and organisational resilience theory as the findings of this study demonstrates that the influence of sensing, seizing and reconfiguration on organisational resilience is positive as the dynamic capabilities facilitate the transformation of resources required for the firm to respond to disruptions and remain resilient by achieving survival, stability or growth resilience outcomes. However, given that the owner-managers, enact sensing, seizing, and reconfiguration, mediate the relationship between the dynamic capabilities and the firm's achieved resilience outcome.

Therefore, this study also contributes to the strategic management domain by highlighting the role of owner-managers in facilitating the achievement of varying organisational resilience outcomes in SMEs. Earlier studies have found that authentic leadership promotes an SME's performance (Zehir & Narcikara, 2016). However, this study highlighted that the enactment of dynamic capabilities towards achieving organisational resilience is consistent with the owner-managers' cognition and perception, further influencing their behaviour and response patterns whilst enacting dynamic capabilities leading to different outcomes. The owner-manager's opportunity-focused response pattern enhances the firm's possibility to thrive beyond stability and achieve the growth resilience outcome. However, in contrast, the owner-manager's disruption-focused response pattern enhances the firm's potential to survive if it is unable to achieve stability. In addition, the leadership and entrepreneurship qualities of an owner-manager and their ability to utilise internal and external resources while enacting sensing, seizing, and reconfiguration are found to promote the firm's organisational resilience.

More importantly, previous scholars studying dynamic capabilities in the SME context have overlooked the UK food and drink industry. The results from the systematic literature review conducted in this study highlighted this overlooked area. This suggests that this study has contributed to the limited dynamic capabilities literature in the context of SMEs operating in the UK food and drink industry.

8.2.2 Contribution to Practice

This study also contributes to practice and policy based on the findings of this research. Given the relevance of SMEs to economies (including the UK's economy), this study's conclusions provide the opportunity to offer the participating organisations and probably other SMEs relevant information that can be utilised during their response to disruptions. The contribution to practice and policy is especially relevant, given the increasingly changing environment in which businesses operate (Sullivan-Taylor & Branicki, 2011), mostly following the covid-19 pandemic, which has disrupted a vast number of business processes and operations. A summary of the recommendations made to this study's participating organisations and possibly other SMEs is given below.

Firstly, based on this study's findings, the owner-manager of SMEs should make it a custom to scan their firm's internal and external environment for threats and opportunities. This recommendation will prove useful to owner-managers of firms where disruptions are likely to occur suddenly without prior knowledge of what is to come. For example, the disruptions experienced by EPV, NJ, and ASS cases may not have been a surprise because there were opportunities to identify the disruptions they experienced before manifestations. Earlier identification of the potential disruption could have enabled the owner-managers of those cases (EPV, NJ, & ASS) to prepare. Thus, owner-managers can learn from the owner-managers of cases CHM and CRB. They were conscious of their environment and identified the potential disruptions, leading them to act in time to avoid the consequences of a fully manifested disruption.

Secondly, based on this study's findings, it is recommended that owner-managers learn the importance of developing an entrepreneurial acumen required to see past the disruption(s) and identify the potential opportunities that disruptive situations can offer irrespective of the type of disruption and when it is identified. In this study, several owner-managers provide examples of such

acumen utilised. In recent times, given the disruptions caused by BREXIT and Covid-19, firms are more likely to survive and possibly thrive if their owner-managers think beyond the disruption and search for opportunities. For example, small businesses began searching for online opportunities during the lockdown, and quite a few were able to identify such opportunities (Bearne, 2020). This suggests that if more owner-managers begin focusing on finding opportunities, perhaps their firms' chances of surviving, stabilising, and growing will be much higher in response to the recent pandemic affecting the world's business and economies.

Thirdly, based on this study's findings, it is recommended that once an opportunity has been identified, it should actively be followed-up with actions required to capture it. The results from this study highlight that certain owner-managers identified opportunities, for example, to build a relationship with the customers (case AB) but failed to do so. This could be a similar experience for many SME owner-managers, where opportunities are identified. Still, nothing is done to respond to it in such a way that ensures it is captured. The lack of pursuit for sensed opportunities may result from negligence on the part of the owner-manager, or it could be due to the lack of resources within the owner-manager's firm and reach. This study's results have highlighted that the seizing of opportunities actually creates a significant contrast between firms with a higher chance of thriving and those who only survive. Therefore, it is recommended that owner-managers identify opportunities and strategically endeavour to capture them accordingly.

Lastly, based on this study's findings, it is recommended that after disruptions are identified, owner-managers need to develop the skills required to know what resources are needed to respond appropriately to the disruption. In cases where the necessary resources are not available, the owner-managers are advised to develop networks that enable sourcing for these resources from outside the firm. Without the necessary resources, there can be no appropriate response to disruptions. Additionally, without resources, there can be nothing for the dynamic capabilities to transform to promote resilience. Furthermore, the owner-managers are advised to develop the ability to change existing structures within the business to enable a valid response to disruptions. For example, some firms in this study, adapted disruptions because the owner-managers were willing to reconfigure

their existing resources to create new ones that were relevant to the times and well suited for responding to the disruption. Even more, this study contributes to policy.

8.2.3 Implications for Policy

There are also important policy implications arising from the findings of this study. Policies should be set in place to ensure that successful SME owner-managers that have developed and exhibited entrepreneurial insight required to identify opportunities during periods of disruption be mandated as an act of national contribution to educating other owner-managers through online seminars conferences on how to strategically deal with disruptions. This is more likely to improve the proactivity of owner-managers and discourage resistance to change in the face of disruptions and its aftermath. This study aims to disseminate the findings of this study through the practitioner and academic literature and events.

The benefit of utilising the methodological approach used was discussed earlier in the thesis. However, it is also essential to acknowledge the limitations of this approach and other limitations identified in this study. These limitations and recommendations are discussed in the following section.

8.3 Recommendations for Further Research

This study has examined the resilience processes and experiences of thirteen owner-managers to understand how owner-managers perceive resilience in the context of their firms and how sensing, seizing and reconfiguration build the resilience of SMEs. The findings have offered several implications for academia and practice. However, there are limitations associated with this study and recommendations for future studies, which are discussed below.

8.3.1 Limitation of the Research Methodology and Areas for Future Research

This section builds on the description of the research design and methodology in chapter four. It reflects the methodological approach, the limitation outlined here, and the potential improvements to the process.

Firstly, this qualitative research was conducted using thirteen SMEs, operating in England (except for one firm operating in Wales). However, all thirteen SMEs are operating in the UK. Although the SMEs are located in the UK, they are not a representative of the broader population of SMEs (Saunders et al. 2012) in the UK. Given that the research is qualitative, generalisations have not been sought after. Instead, this study sought to understand the relationship between dynamic capabilities and resilience in an SME context from the participants' lived experience. The methodological approach focused on utilising in-depth interviews held with owner-managers. The interpretive lens enabled the researcher to understand how dynamic capabilities influence SMEs' resilience and the possible factors responsible for the achieved resilience outcome.

Secondly, access to the sample was limited to the participants' availability or interest in the research topic. Due to the research's voluntary nature, where participants were unwilling to take part in the study, this posed many difficulties. At the start of the research, the researcher sought to recruit participants from the Isle of Wight because the researcher aimed to restrict the study to a limited geography that could provide an ecosystem. Ultimately, however, only one firm located on the Isle of Wight was willing to participate in the study. However, of the numerous SMEs contacted, thirteen suitable firms took part in the study. The researcher progressed successfully with the thirteen firms participating in the study to identify the findings presented in this thesis.

Lastly, the in-depth interview itself also posed some limitations in terms of the participants' ability to recall their experiences to disruptions. There is the possibility that the responses narrated were different from what transpired or incomplete. Thus, relevant information could have been purposefully or unconsciously omitted, which in some cases was identified through data triangulation (cases EPV & ASS).

Given the limitations of this present study, some ideas for further research were identified and presented.

Firstly, further research is required to extend this study's results by adopting a multiple case-study approach to investigate the findings' implication in other SMEs in the same industry or other industries. Conducting research exploring the relationship between sensing, seizing, reconfiguration,

and SMEs' resilience following the disruptions caused by the BREXIT and Covid-19 by adopting a multiple case-study approach will provide rich insight extended from the results of this present research. Therefore, more research is called for to explore the relationship between the two phenomena in SMEs. Recent occurrences around the world, such as Covid-19, have signalled to the research community that there is still much to learn to promote the survival of organisations and possibly ensure that they thrive in the face of disruptions. The pandemic also provides a common disruption which provides an opportunity to conduct a research involving the cases participating in this study to extend the findings of this study.

Secondly, in the future, adopting a longitudinal study is essential to keep track of the relationship between sensing, seizing, reconfiguration, and SMEs' resilience over time. It will be interesting to examine if firms with opportunity-focused owner-managers continue to achieve the growth resilience outcomes and vice versa over a long period of probably ten years. It will also be interesting to explore the determinants of such opportunity-focused response to disruptions and explore how every other owner-manager can possess the skills required to respond following such a pattern. Again, it is recommended that the researcher adopt a case-study approach to investigate the matter.

Thirdly, a study exploring the perception of resilience from the standpoint of other owner-managers and employees in the food and drink industry will extend this study's findings. In this study, the perception of the key owner-managers was taken into consideration. In some organisations, the other owner-managers' perception was not considered due to this research's time limitation. Similarly, the perception of employees was beyond the scope of this research. However, it is recommended that future studies incorporate their perceptions.

Additionally, the relationship between the owner-managers perception of resilience and the firm's achieved resilience needs to be further investigated to explore the true relationship by utilising a quantitative or mixed-method approach. In this research, the relationship was explored as a starting point for future studies to explore it in depth. Thus, providing an opportunity for scholars in the future to isolate other factors and examine the relationship.

Lastly, it is recommended that future studies conduct similar research but include owner-managers of SMEs that have failed to be resilient to disruptions and, as a result, stopped all operations and folded up. The Covid-19 pandemic presents a potential opportunity to identify firms that have failed to cope with the disruption and those that were able to manage and returned to stability or possibly thrived.

8.4 Concluding Remarks

This doctoral study has examined the role of dynamic capabilities (sensing, seizing, and reconfiguration) in building SMEs' resilience in the UK food and drink industry by adopting the IPA approach and utilising a research design in-depth interviews with the owner-managers of thirteen firms. The data generated from this study has indicated that sensing, seizing, reconfiguration are used to achieve resilience in SMEs. The dynamic capabilities have a positive relationship with an SME's resilience. However, analysis of the data reveals that the relationship is indirect and mediated by the owner-manager. The research also highlights that the participating owner-managers have three resilience perceptions: process, endurance, and resource-based perceptions. The perceptions were found not to influence the resulting resilience outcome on their own.

In summary, after conducting the literature review, the researcher expected a relationship between dynamic capabilities and organisational resilience because of the arguments made by earlier scholars. However, the researcher kept an open-mind free of assumptions to avoid influencing the results during and after the data analysis. Nevertheless, the study's results met the researcher's expectation regarding the presence of a relationship between the two phenomena. Although the findings met the researcher's expectation, the results also exceeded them with unexpected insights that offered the opportunity to contribute to the dynamic capabilities and organisational resilience theories. Therefore, this research has extended the studies conducted by earlier scholars in the SME context regarding the relationship between dynamic capabilities and organisational resilience. This study contributes in a way that a foundation for future studies in the research domain has been established, especially concerning the recent disruptions resulting from the Covid-19 pandemic. This implies that the work of a researcher studying the resilience of organisations, especially SMEs, is yet to face a new dawn.

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APPENDICES

Appendix 1: Ethics Certificate



Williams Ali
Faculty of Business and Law
Richmond Building
Portland Street
PO1 3DE

FAVOURABLE ETHICAL OPINION

Study Title: The Role of Dynamic Capabilities in Building Resilient Small and Medium Enterprises (SMEs)

Reference Number: BAL/2018/E533/ALI

Date Resubmitted: 21/12/2018

Dear Williams

Thank you for resubmitting your application to the Faculty Ethics Committee and for making the requested changes/ clarifications.

I am pleased to inform you that the Faculty Ethics Committee was content to grant a favourable ethical opinion of the above research on the basis described in the submitted documents listed at Annex A, subject to standard general conditions (*See Annex B*).

Please note that the favourable opinion of the Faculty Ethics Committee does not grant permission or approval to undertake the research/ work. Management permission or approval must be obtained from any host organisation, including the University of Portsmouth or supervisor, prior to the start of the study.

Wishing you every success in your research

A handwritten signature in blue ink, appearing to be "A. E.", located at the bottom of the letter.

Peter Scott, Chair of the Faculty of Business
and Law Ethics Committee

ANNEX A Documents reviewed

The documents ethically reviewed for this application

<i>Document</i>	<i>Version</i>	<i>Date</i>
Application Form	1	24/11/2018
Application Form	2	17/12/2018
Application Form	3	21/12/2018
Sample Interview Questions	1	24/11/2018
Sample Interview Questions	2	17/12/2018
Sample Interview Questions	3	21/12/2018
Invitation Letter	1	24/11/2018
Invitation Letter	2	17/12/2018
Invitation Letter	3	21/12/2018
Participating Organisation Information Sheet	1	24/11/2018
Participating Organisation Information Sheet	2	17/12/2018
Participating Organisation Information Sheet	3	21/12/2018
Consent Form for Organisation	1	24/11/2018
Consent Form for Organisation	2	17/12/2018
Consent Form for Organisation	3	21/12/2018
Supervisor Email Confirming Application	1	24/11/2018
Supervisor Email Confirming Application	2	17/12/2018
Supervisor Email Confirming Application	3	21/12/2018

ANNEX B - After ethical review

1. This Annex sets out important guidance for those with a favourable opinion from a University of Portsmouth Ethics Committee. Please read the guidance carefully. A failure to follow the guidance could lead to the committee reviewing and possibly revoking its opinion on the research.

2. It is assumed that the work will commence within 1 year of the date of the favourable ethical opinion or the start date stated in the application, whichever is the latest.

3. The work must not commence until the researcher has obtained any necessary management permissions or approvals – this is particularly pertinent in cases of research hosted by external organisations. The appropriate head of department should be aware of a member of staff's plans.

4. If it is proposed to extend the duration of the study beyond that stated in the application, the Ethics Committee must be informed.

5. Any proposed substantial amendments must be submitted to the Ethics Committee for review. A substantial amendment is any amendment to the terms of the application for ethical review, or to the protocol or other supporting documentation approved by the Committee that is likely to affect to a significant degree:

- (a) the safety or physical or mental integrity of participants
- (b) the scientific value of the study
- (c) the conduct or management of the study.

5.1 A substantial amendment should not be implemented until a favourable ethical opinion has been given by the Committee.

6. At the end of the work, a final report should be submitted to the ethics committee. A template for this can be found on the University Ethics webpage.

7. Researchers are reminded of the University's commitments as stated in the Concordat to Support Research Integrity viz:

- maintaining the highest standards of rigour and integrity in all aspects of research
- ensuring that research is conducted according to appropriate ethical, legal and professional frameworks, obligations and standards
- supporting a research environment that is underpinned by a culture of integrity and based on good governance, best practice and support for the development of researchers
- using transparent, robust and fair processes to deal with allegations of research misconduct should they arise
- working together to strengthen the integrity of research and to reviewing progress regularly and openly.

8. In ensuring that it meets these commitments the University has adopted the UKRIO Code of Practice for Research. Any breach of this code may be considered as misconduct and may be investigated following the University Procedure for the Investigation of Allegations of Misconduct in Research. Researchers are advised to use the UKRIO checklist as a simple guide to integrity.

Appendix 2: Information Sheet



Research student: Williams Ali

Faculty of Business and Law Postgraduate Centre,
University of Portsmouth,
Portland Building, Portland Street,
Portsmouth, PO1 3AH.

Tel: 07440298150

Email: Williams.Ali@myport.ac.uk

First supervisor: Prof David Pickernell.

Faculty of Business and Law,
University of Portsmouth,
Richmond Building, Portland Street,
Portsmouth, PO1 3DE.

Tel: 02392844184

Email: david.pickernell@port.ac.uk

Participant Information Sheet: Organisations.

Title of Project: The Role of Dynamic Capabilities in Building Resilient SMEs (small businesses).

REC Ref No: (BAL/2018/E533/ALI)

I would like to invite your organisation to take part in my PhD research study. The interviewee's consent to participate is being sought on the basis of the University's public interest in conducting research. Joining the study is entirely based on your free will. Prior to taking a decision, I would like you to comprehend why the research is being conducted and what it would mean for you as a participant. I will go through this information sheet with you, to help you decide if you would be taking part in this research or not and answer any questions you may have. This would likely take about five minutes of your time. Please also discuss this with colleagues and please contact me if there are any points that are not clear.

What is the purpose of the study?

This study is concerned with exploring how firms employ dynamic capabilities to achieve/ attain resilience and also explore how resilience can be utilised as an alternative non-traditional performance measure. The research is important because it will aid the researcher to achieve his aim to be awarded a PhD degree and also generate new knowledge. We are seeking participating organisations who should be small businesses having an employee base of 5-49. Participation in the research would require you to attend an interview session and take approximately 1 hour of your time. The participants would comprise of the owner-manager.

Why has my organisation been invited?

Your organisation meets the sampling requirement of the research by being a small business having an employee base of 5-49 and operating in a dynamic industry with a supply chain system. More also the period of operation of the organisation suggests the organisation will be able to offer data which will aid in answering the research questions. The owner-manager will be the relevant person in the company to participate in the research.

Does my organisation have to take part?

No, taking part in this research is voluntary. It is up to you to decide if you want to volunteer for the study. We will describe the study in this information sheet. If you agree to take part, we will then ask you to sign the attached consent form, dated [12/02/2019](#), version number, [001](#).

What will happen to the organisation and our staff if we take part?

The owner-manager will participate in an interview process, which will last for no more than an hour. Generally, this will involve the participant answering questions in a less formal/ structured manner as the interview process is semi-structured, therefore implying that the interview process will assume a comfortable, conversational manner.

The interview process will be audio recorded to assist the researcher in having the complete data for transcription at a later date. The data obtained from the interview will be securely stored on a University computer having a University of Portsmouth drive which is password protected (The data may be shared with authorised people (i.e. supervisors) for academic purposes, and then only within a secure environment). The data will be stored for a period of ten years as per the University of Portsmouth Research Data Management Policy.

However, the data will not be linked to the participant during publication and in the results which the researcher hopes to offer the organisation after the research has been concluded as the researcher aims to strictly make the participant anonymous by giving codes of identification only recognised by the researcher.

Expenses and payments

The researcher hopes the organisation will voluntarily participate in the research. The researcher plans to conduct the interviews at the organisation so as to ensure participants do not incur any costs for attending the interview session.

Anything else the organisation will have to do?

The organisation is not required to do anything else but to freely participate in the research by signing the consent forms and returning it to the researcher.

Once individual participants have been identified and contacted, the researcher will arrange a convenient time and place to meet with them for the interview.

What data will be collected and/or measurements taken?

Verbal data from interviews will be collected through the research. As stated earlier, this data will be audio recorded to assist the researcher in transcribing it on a later date, and necessary actions will be taken to ensure the security of the data and participants.

What are the possible disadvantages, burdens and risks of taking part?

There are no significant risks associated with taking part in the research.

The owner-manager will be kindly asked to sacrifice an amount of time to the research study (approximately one hour per interview). However, all interviews will be organised to minimise disruption to the work of participants.

What are the possible advantages or benefits of taking part?

The organisation will have the opportunity to have a better understanding of what processes or activities are required to lead to the resilience of the organisation to uncertainty and dynamic environments. This could potentially lead to sensitivity to these processes or activities for continuous usage.

Will my data be kept confidential?

The researcher will make an effort to keep all data obtained from the research confidential through anonymization. This will lead to the removal of reference to the organisation, the participants, organisation's location and products. The organisation will be coded, which will be used to help the researcher identify the data and aid transcribing. Copies of the consent forms giving both codes and identifying data will be stored in separate files on the University of Portsmouth secure drive from all other data to facilitate the security of the organisation. Care will be taken to preserve the anonymity of the organisation, and when reporting to the company gatekeepers, only anonymised data will be presented.

However, the data, when made anonymous, may be presented to others at academic conferences and published as a project report, academic dissertation or in an academic journal or book. It could also be made available to any commissioner or funder of the research.

Anonymous data, **which does not identify you**, will be publicly shared at the end of the project and made open access. A CC-BY licence will be applied to this publicly shared data. This will allow anyone else (including researchers, businesses, governments, charities, and the general public) to use the anonymised data for any purpose that they wish, providing they credit the University and research team as the original creators. No restrictions will be placed on this shared anonymised data limiting its reuse to only non-commercial ventures.

The raw data will be retained for a minimum of 10 years. When it is no longer required, the data will be disposed of securely (*e.g.* electronic media and paper records/images) destroyed. Note the policy for retention of research data requires retention for between 10 to 30 years and can be accessed from section 7, (and subsections) at the following links:

http://www.port.ac.uk/departments/services/corporategovernance/recordsmanagement/uop_retention/

<http://www.port.ac.uk/accesstoinformation/policies/researchandknowledgetransferservices/filetodownload,189755,en.pdf>

What will happen if the organisation do not want to carry on with the study?

As a volunteer, you can stop any participation in the interview or withdraw from the study up to one week after the completion of the interview, without giving a reason if you do not wish to. If you do withdraw from a study after some data have been collected, you will be asked if you are content for the data collected thus far to be retained and included in the study. If you prefer, the data collected can be destroyed and not included in the study. Once the research has been completed, and the data analysed, it will not be possible for you to withdraw your data from the study.

What if there is a problem?

If you have a query, concern or complaint about any aspect of this study, in the first instance, you should contact the researcher if appropriate. Considering that the researcher is a student, there is also an academic member of staff listed as the supervisor whom you can contact. If there is a complaint and there is a supervisor listed, please contact the Supervisor with details of the complaint. The contact details for both the researcher and any supervisor are detailed on page 1.

If your concern or complaint is not resolved by the researcher or their supervisor, you should contact the Head of Department:

Professor Paul Trott,
Head of Department,
Strategy, Enterprise & Innovation,
University of Portsmouth,
Richmond Building,
Portland Street, Portsmouth.
PO1 3DE.

Direct Line: (023) 9284 4245

Email: paul.trott@port.ac.uk

If the complaint remains unresolved, please contact:

The University Complaints Officer
023 9284 3642 complaintsadvise@port.ac.uk

Who is funding the research?

This research is self-funded by the researcher.

Who has reviewed the study?

Research involving human participants is reviewed by an ethics committee to ensure that the dignity and well-being of participants is respected. This study has been reviewed by the Faculty of Business and Law Ethics Committee and been given favourable ethical opinion.

Thank you

Thank you for taking the time to read this information sheet and for considering volunteering for this research. If you do agree to participate your consent will be sought; please see the accompanying consent form. You will then be given a copy of this information sheet and your signed consent form, to keep.

Further Information.

If you would like to know further details of research in the University, please follow the link below to the University of Portsmouth research website:

<http://www.port.ac.uk/research/>

If you would like details on the research carried out in the Faculty of Business and Law, please follow the link below to the Faculty of Business and Law research website:

<http://www.port.ac.uk/departments/facilities/portsmouthbusinessschool/research/>

Appendix 3: Invitation Letter



Research student: Williams Ali

Faculty of Business and Law Postgraduate Centre,
University of Portsmouth,
Portland Building, Portland Street,
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Tel: 07440298150

Email: Williams.Ali@myport.ac.uk

First supervisor: Prof David Pickernell.

Faculty of Business and Law,
University of Portsmouth,
Richmond Building, Portland Street,
Portsmouth, PO1 3DE.

Tel: 02392844184

Email: david.pickernell@port.ac.uk

Title of Project: The Role of Dynamic Capabilities in Building Resilient SMEs (small businesses).

REC Ref No: (BAL/2018/E533/ALI)

Dear Potential Research Participant,

My name is Williams Ali, and I am a PhD student conducting research on the relationship between dynamic capabilities and resilience in food-manufacturing small businesses. My research focuses on exploring how small business employs dynamic capabilities in dynamic environments in order to attain resilience and possibly thrive.

I am interested in working with a small number of small businesses to gain understanding into how strategic processes and activities are purposely employed by a small business for the building of resilience in the organisation and explore how the processes/activities cause a change from one level/form of resilience to another.

I know that your organisation has been operating in the food and drink industry for a number of years and this would imply that there are processes and activities which have stimulated this sustainability and growth of the organisation irrespective of turbulence and uncertainties likely faced by the organisation.

The research will involve an in-depth interview with the owner-manager of the organisation. The interview will be expected to last no more than an hour. The interview questions will be aimed at understanding resilience as an outcome, how dynamic capabilities (as an input) lead to resilience and the role played by the owner-manager in promoting resilience in the organisation.

All information provided to me as part of the study will be securely kept in a secure University of Portsmouth drive. A short report will be presented to the organisation's management at the end of the research, but all individual data will be kept confidential- participant names will not be used in any report. In all academic publications, there will be no reference to individual or company names as data in the research will be anonymised.

Please contact me via email or telephone if you are interested in taking part in this research. Participating in the research is voluntary. Please contact me if you have any further questions.

Yours faithfully,

Williams Ali.

Appendix 4: Consent Form



Williams Ali
Ph.D. Student,
Strategy, Enterprise & Innovation
Faculty of Business and Law

Direct Line: 07440298150

Email: Williams.Ali@myport.ac.uk

12th February 2019

Faculty of Business and Law
University of Portsmouth
Richmond Building
Portland Street
Portsmouth PO1 3DE
United Kingdom

Consent form for participants

Title of Project: **The Role of Dynamic Capabilities in Building Resilient SMEs.**

Name and Contact Details of Researcher(s): Williams Ali: Williams.Ali@myport.ac.uk, 07440298150

Name and Contact Details of Supervisor (if relevant): David Pickernell; david.pickernell@port.ac.uk

University Data Protection Officer: Samantha Hill, 023 9284 3642 or data-protection@port.ac.uk

Please
initial box

Ethics Committee Reference Number: (BAL/2018/E533/ALI)

1. I confirm that I have read and understood the information sheet dated 12/02/19. (Version 01) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time prior to data analysis (not more than one week after the interview) verbally or in writing.

3. I understand that data collected during this study could be requested and looked at by regulatory authorities. I give my permission for any authority, with a legal right of access, to view data, which might identify me. Any promises of confidentiality provided by the researcher will be respected.

4. I consent for my interview to be audio recorded. The recording will be transcribed and analysed for the purposes of the research (the storing and destruction of recordings and/or transcripts following University of Portsmouth protocols).

5. I consent to verbatim quotes being used in publications; I will not be named, but I understand that there is a small residual risk that participants could become identifiable.

6. I understand that the results of this study may be published and/or presented at meetings or academic conferences, and may be provided to research commissioners. I give my permission for my anonymous data, which does not identify me, to be disseminated in this way.

7. I agree to the data I contribute being retained for any future research that has been approved by a Research Ethics Committee.

8. In line with the University of Portsmouth's policies with regards to research data, I agree that my data, after being anonymised in line with the process outlined, will be made open access, using the appropriate University of Portsmouth protocols and systems.

9. I agree to take part in the above study

Name of Participant:

Date:

Signature:

Name of Person taking Consent:

Date:

Signature:

Note: *When completed, one copy to be given to the participant, one copy to be retained in the study file*

Appendix 5: Systematic Literature Review Coding Process

Article title	Authors	Year	Findings/Conclusion
Industry-Versus Firm-specific Effects on Performance: Contrasting SMEs and Large-sized Firms	Yiannis Caloghirou, Aimilia Protopogerou, Yiannis Spanos and Lefteris Papagiannakis	2004	The results obtained provide strong evidence that firm factors such as dynamic capabilities and assets exert a much stronger impact on the profitability of the firm than industry factors, in both SMEs and large enterprises. The dynamic capabilities studied are managerial processes of coordination and integration, learning and the capacity to change. 1
Safeguarding SMEs dynamic capabilities in technology innovative SME-large company partnerships in South Africa	Jill L. Sawers, Marthinus W. Pretorius and Leon A.G. Oerlemans	2007	The research found that SME's strategic and internal dynamic capabilities are negatively associated with partnership success, whereas external dynamic capabilities are positively related to partnership success between SMEs and large organisations. 2
Influence of personal mastery on organizational performance through organizational learning and innovation in large firms and SMEs.	Vi´ctor J. Garcı´a-Morales, Francisco Javier Llore´ns-Montes and Antonio J. Verdu -Jover	2007	The results reveal that in both large firms and SMEs: (1) personal mastery influences organizational performance directly and indirectly through organizational learning (dynamic capability) and innovation; (2) organizational learning (dynamic capability) influences organizational performance positively, both directly and indirectly through organizational innovation; (3) organizational innovation influences organizational performance positively 3
The managing director and the development of dynamic capabilities	Frank Schlemmer and Brian Webb	2008	The paper suggests that managing directors "enact" in the development of dynamic capabilities if they believe that dynamic capabilities are a source of competitive advantage. If they do not appreciate the importance of dynamic capabilities, they can get trapped in a vicious circle 4

Dynamic capabilities as antecedents of the scope of related diversification: the case of small firm accountancy practices	Erik Doving and Paul N. Gooderham	2008	Dynamic capabilities have a distinct impact on the scope of services in small firm accountancy practices. Therefore, small firm accountancy practices are encouraged to develop dynamic capabilities relevant to their firms 5
Dynamic capability and staff induction practices in small firms.	Deborah Mulders, Peter Berends and Georges Romme.	2010	The study confirms that dynamic capabilities are geared towards the firm's longevity and performance and not towards ad hoc activities such as staff induction. Thus, confirming Winter's theory regarding dynamic capabilities being rare compared to ad hoc activities. 6
Social capital and dynamic capabilities in international performance of SMEs Jose (Conceptual)	Jose ´ Carlos M.R. Pinho	2011	The paper provides a framework to encourage future studies. However, the findings indicate that for SMEs to create dynamic capabilities needed to cope with sudden changes in the market place, then they need to take advantage of their relationships that give them access to relevant new information. 7
Knowledge management and innovation performance in a high-tech SMEs industry	Joaquín Alegre, Kishore Sengupta and Rafael Lapiedra.	2011	The study found that Knowledge management practices through KM dynamic capabilities foster continuous competitive advantages in the innovation performance of firms in the biotechnology industry. 8
Dynamic Capabilities and Firm Performance: A Case of Two SMEs in Pakistan	Qazi Muhammad Moinuddin Abro, Nafees Ahmed Memon and Pir Irfanullah Shah Arshdi	2011	The study finds that for firms to build strong dynamic capabilities to promote innovation at a continuous pace, then the firms will need leadership possessing entrepreneurship mindset and character with a combination forward-thinking to seize opportunities utilising ICT and the ability to manage effectively internal resources geared at fostering innovation through ICT. 9
Understanding the Elusive Black Box of Dynamic Capabilities	Paul A. Pavlou and Omar A. El Sawy	2011	Their study highlights that dynamic capabilities (sensing the environment, learning, coordinating, and integrating) have an effect on performance but through an indirect

			<p>relationship via the reconfiguration of operational capabilities that suit the new environmental demands. More also, their study finds that dynamic capabilities play a significant role in environments of any dynamism. The study focused on helping managers make decisions quickly while operating in turbulent environments.</p> <p>10</p>
Supplying large firms: The role of entrepreneurial and dynamic capabilities in small businesses	Kassa Woldesenbet, Monder Ram and Trevor Jones	2011	<p>The study finds that entrepreneurial qualities possessed by a manager play a significant role in creating a bedrock for dynamic capabilities to play a role in enabling the firm to operate in new product markets. The entrepreneur senses and utilises dynamic capabilities to capture the opportunity and do necessary reconfigurations.</p> <p>11</p>
Thrive, not just survive: enhance dynamic capabilities of SMEs through IS competence	Yi Wang and Xinping Shi	2011	<p>The study finds that competent information systems in place in a firm fosters the dynamic capabilities required for gaining competitive advantage required for surviving in dynamic environments. For example, IT infrastructure influences learning, coordinating, and integrating capabilities. Also, IS integration enable firms to respond better to market changes.</p> <p>12</p>
Influential Capabilities and Their Development in a Project Business: Results of an Estonian Survey	Mait Rungi	2012	<p>The study finds that sensing business opportunities, exploiting new emerging technologies and HR development as dynamic capabilities which have been well developed in SMEs. The study also confirms they are saying that implies that action or implementation is more important than just having an idea. More also, the study finds that dynamic capabilities such as M&A management, entering into a new market and external R&D need more development. Nevertheless, the well-developed DCs may not always be the ones to create profit for the firm.</p> <p>13</p>

International Growth of a Finnish High-Tech SME: A Dynamic Capabilities Approach	Arto Kuuluvainen	2012	The study confirms the utilisation of sensing and seizing dynamic capabilities by a high-tech SME operating a hypercompetitive environment during its international presence growth. Learning and education, experience and financial resources enable the dynamic capabilities. 14
How to concretize dynamic capabilities? Theory and examples	Arto Kuuluvainen	2012	The study confirms examples of dynamic capabilities utilised by an SME during their international growth process. Examples such as searching for opportunities, the search has not been conducted in a systematic manner but based on a hunch. That is, informal sources serve as the source of information for the firm, which is combined with market information to make decisions. More also, the firm utilised modernisation dynamic capabilities which meant that the firm bought old production lines and adapted them to modern ways of doing things to meet modern standards thus reducing costs of buying new production lines. 15
The impact of dynamic capabilities on SME performance in a volatile environment as moderated by organizational inertia	Sarunas Nedzinskas, Asta Pundziene, Solveiga Buozė - Rafanavičė and Margarita Pilkiene.	2013	The study finds that dynamic capabilities positively influences the non-financial form of organisational performance but does not influence the financial form (although this may not just be observable due to the time gap needed to capitalise on the resulting new products, new customers and new suppliers. Thus, DCs relate to financial performance indirectly). More also, the level of inertia of the firm moderates dynamic capabilities and the corresponding organisational performance negatively in a volatile environment. 16
Strategic flexibility and SME performance in an emerging economy	Hai Guo and Zhi Cao	2013	The study finds that the relationship between strategic flexibility and firm performance is positive but moderated external such as the intensity of competition and environmental generosity and internal factors such as a

			combination of resources activity, as well as bridging factors (managerial ties). 17
Exploring the role of knowledge management practices on exports: A dynamic capabilities view	Cristina Villar *, Joaquín Alegre and José Pla-Barber	2013	The study finds that KM dynamic capabilities have a mediating effect on exports. Therefore, knowledge management practices are significant for improving exporting but not a sufficient condition; rather, they depend on dynamic capabilities to reconfigure these capabilities. 18
Dynamic capabilities of resource-poor exporters: A study of SMEs in New Zealand	Dietmar Sternad, Sabina Jaeger and Christina Staubmann	2013	The study finds that the top managers of SMEs play a significant role in the export performance of the firm by developing dynamic capabilities that are export-related. The managers play a role by adapting product and services, recognising opportunities, fostering relationships required to gain information to develop knowledge. 19
Dynamic Capabilities: Do They Lead to Innovation Performance and Profitability?	Niels Nolsøe Grünbaum and Marianne Stenger	2013	The study reveals a positive relationship between dynamic capabilities and innovation performance. However, it was not possible to establish a positive relationship between dynamic capabilities and profitability. 20
Disentangling the effects of organizational capabilities, innovation and firm size on SME sales growth	Lorraine M. Uhlaner, André van Stel, Valérie Duplat and Haibo Zhou	2013	The study finds that external sourcing as an organisational capability has a direct influence on both product and process innovation while having an indirect effect on sales growth. Effects that are more positive are found for smaller firms. 21
An exposition of resource capabilities for SMEs in the emerging markets (Conceptual)	Ritam Garg and Kalyan Kumar De	2013	The study highlights that dynamic capabilities in SMEs should be developed based on their expertise. Therefore, SMEs can have dynamic capabilities but not ones that necessarily relevant. 22
A study of how ICT capabilities can influence dynamic capabilities	Vinit Parida, Pejvak Oghazi and Stefan Cedergren	2013	In trying to highlight how small firms can utilise DC to transform their internal resources to meet the uncertainties

			<p>of their business environment, the study finds that ICT capabilities influence and facilitates the development of dynamic capabilities of small firms and contributes to their competitive advantage.</p> <p>23</p>
Scenarios and early warnings as DC to frame managerial attention.	Rafael Ramirez, Riku Osterman and Daniel Gronquist.	2013	<p>In the study scenario planning and early warning, scanning is considered as dynamic capabilities. They both support the framing and reframing of managerial attention.</p> <p>24</p>
Entrepreneurship and dynamic capabilities: how firm age and size affect the 'capability enhancement-SME performance' relationship	Richard J. Arend	2014	<p>The study finds that entrepreneurial SMEs have dynamic capabilities that positively impact firm performance and that the differences in their age and size different expressions of how dynamic capabilities impact firm performance. They find that SMEs have DC from the very beginning as they were imported by the founders. They also find that being a young firm is useful but being small hurts.</p> <p>25</p>
Dynamic capability in a Small global factory	Taina Eriksson, Niina Nummela and Sami Saarenketo	2014	<p>The study finds that cognitive capabilities play a significant role in the identification of opportunities. Cultural awareness and a worldwide view mentality enable and motivate top managers to identify entrepreneurial opportunities through entrepreneurial orientation. Therefore, cognitive capabilities foster dynamic capabilities. Also, managerial capabilities are found to be essential.</p> <p>26</p>
Deconstructing dynamic capabilities: the role of cognitive and organizational routines in the innovation process	Thayaparan Gajendran, Graham brewer, Siegfried Gudergan and Shankar Sankaran	2014	<p>The study finds that automatic and cognitive organisational routines were maintained and thus enabled the sensing, seizing and reconfiguration processes. More also, the routine serving as the foundation of the sensing process can make the switch between automatic and conscious cognitive mode depending on what is needed. Also, it was found that resources in the firm can be reconfigured to respond to changes in the environment that were sensed and seized automatically by routines.</p>

			27
Proactive learning culture. A dynamic capability and key success factor for SMEs entering foreign markets	Itzhak Gnizy, William E. Baker and Amir Grinstein	2014	The study finds that for SMEs to achieve success, it starts with a proactive learning culture, which fosters the development and refinement of capabilities that are needed especially in the pursuit of foreign market opportunities as the case may be. 28
The process of dynamic capability emergence in technology start-ups – an exploratory longitudinal study in China	Xiaofeng Ma, Zhao Zhou and Xiuhong Fan	2015	This study aims at highlighting what dynamic capabilities are in start-ups and how they manifest themselves. The study finds that specifically for start-ups sensing capabilities for identifying opportunities are dependent on the existing knowledge of the entrepreneur as well as gathered experiences and external information; capabilities for seizing opportunities rely much on the mobilisation and orchestration of complementary external resources; start-ups are quicker to reconfigure internal resources and external resources (contacts) to adapt to opportunities and change directions if needed to also respond to threats and; the relationship between sensing, seizing and reconfiguring capabilities form a process for the development of dynamic capabilities in start-ups. 29
Entrepreneurial leadership, capabilities and firm growth (conceptual)	Oksana Koryak, Kevin F Mole, Andy Lockett, James C Hayton, Deniz Ucbasaran and Gerard P Hodgkinson	2015	The study finds that human capital (owner-manager cognition and motivation) in the form of education and experience influence the behaviour of owner-managers in organisations. Managerial cognition impacts the development of substantive and dynamic capabilities. More also, the perception of the leader affects how resources are allocated as well as information. The findings highlight that the beliefs of the owner-manager greatly influences the type of action that will be displayed under conditions of uncertainty. How a situation is cognitively framed impacts the relevant actions to be utilised. The authors suggest that

			<p>future studies should explore an understanding of how psychological factors block and also promote the selection of, and strive towards growth goals.</p> <p>30</p>
<p>Developing dynamic capabilities through resource accretion: expanding the entrepreneurial solution space.</p>	<p>Allan Macpherson, Brahim Herbane and Oswald Jones</p>	<p>2015</p>	<p>The study finds that for entrepreneurs to respond to the crisis, there is a need for resource accretion. This expands the firm's resource options and supports the firm's adaptation to the environmental crisis by overcoming the constraints within the firm, such as the lack of foresight, technical knowledge or risk management). More also, the actions of the entrepreneur and the employees lead to the creation of novel opportunities. Furthermore, the implementation of new capabilities results from deliberate actions. Taking care of external networks is relevant to the creation of DCs in small firms. The study finds three patterns for resource accretion in small firms when responding to crisis – combined coping, network extension and recurring types – depending on the type of social and structural relationship.</p> <p>However, the antecedents for dynamic capabilities when a firm responds to a crisis is three-fold: restructuring of the firm's processes; an accretion of resources through maintaining old relationships or creating new ones and; the process has to be intentional in order to create new solutions.</p> <p>31</p>
<p>Success Traps, Dynamic Capabilities and Firm Performance</p>	<p>Catherine L. Wang, Chaminda Senaratne and Mohammed Rafiq</p>	<p>2015</p>	<p>The study finds that success traps have a very strong negative impact on dynamic capabilities, which then have a weak positive effect on the firm's performance. More also, dynamic capabilities are exhibited through absorptive and transformative capabilities, and that internal factors affect the development of dynamic capabilities such as success traps than external factors such as the market dynamism. More also, the study found that the relationship between</p>

			dynamic capabilities and financial performance is direct but weak. 32
Networked foresight—The case of EIT ICT Labs	Tobias Heger and Magnus Boman	2015	The study highlights that the results of network foresight are predominantly used for sensing activities. 33
How Dynamic Capabilities Affect the Effectiveness and Efficiency of Operating Routines under High and Low Levels of Environmental Dynamism.	Hendrik Wilhelm, Maren Schlömer and Indre Maurer	2015	The study suggests that dynamic capabilities have varying performance impacts in high-dynamic and low-dynamic environments. However, the effectiveness of the operating routines is enhanced by dynamic capabilities in environments having both high and low dynamism. Although, when the efficiency of operating routines was analysed, taking into consideration the costs of increased effectiveness, dynamic capabilities seem to offer rewards exclusively in environments having high levels of dynamism. High levels of dynamism create new opportunities. The effectiveness of the firm can also be improved by reducing the cost incurred by the operational routines. 34
Dynamic Capabilities and Performance	Lucia NaLdi, Patrik Wikström, and M. BjørN VoN rimscha	2015	The study finds that both sensing and seizing capabilities have a positive impact on the innovative performance of firms. Although the positive effect does not come immediately but after overcoming a threshold level. 35
Developing dynamic capabilities for learning and internationalization; A case study of diversification in an SME	Margaret Tallott and Rachel Hilliard	2015	The study finds that dynamic capabilities can be identified as sensing, seizing and reconfiguration. They can be intentionally developed by managers through the strategic decision making and learning deliberately 36
A configuration-based approach to integrating dynamic capabilities and market transformation in small and	John Rice, Tung-Shan Liao, Peter Galvin and Nigel Martin	2015	The study finds that performance is facilitated by the successful deployment of dynamic capabilities. However, the performance is mediated by intentional market transformation strategies.

medium-sized enterprises to achieve firm performance			37
The role of opportunity sensing and learning process in shaping DC in Polish enterprises.	Szymon Cyfert and Kazimierz Krzakiewicz	2015	The study finds firstly that the key dynamic skills in the opportunity sensing process rely on the ability to scan the environment, focusing on creating new needs among customers and getting aware of variations in the environment. Secondly, high awareness of changes in the environment does not imply the creation of new ideas. More skills, which promote the transfer of knowledge within the organisation, are significant for learning processes. 38
Exploratory Study on Relationship between Entrepreneur Characteristics and Dynamic Capabilities in Export SMES	Darshana Mudalige, Noor Azizi Ismail and Marlin Abdul Malek	2016	The study finds that the characteristics of an entrepreneur influence the development of dynamic capabilities in organisations positively. Characteristics such as entrepreneurial orientation, human capital and social capital. 39
R&D resources development in life sciences ventures: a dynamic capabilities perspective.	Jon Carrick	2016	The study finds that R&D resources are developed due to a unique set of past decisions, opportunities in the future, assets, capabilities, and routines. This shows that breakthrough in science, opportunities to have partnerships, the experience of the founder and the integration and learning ability of the firm are important for the development of R&D resources. 40
Does the Size Matter for Dynamics Capabilities? A Study on Absorptive Capacity	Marlon Fernandes Rodrigues Alves, Jessâmine Thaise Sartorello Salvini , Ana Claudia Bansi , Elio Galli Neto , and Simone Vasconcelos Ribeiro Galina	2016	The study finds that the sizes of the organisations affect the influence of dynamic capabilities on performance. The presence of DCs takes different configurations depending on the size of the organisation. 41
Causal relationship between supply chain dynamic capabilities, technological innovation, and operational performance	Ki-Jung Ju, Byeonghwa Park and Taikyoo Kim	2016	The study shows that technological innovation and operational performance of a firm is positively influenced by supply chain dynamic capabilities. More also, technological

			innovation plays a mediating role between supply chain dynamic capabilities and operational performance. 42
Generative Sensing: A design perspective on the micro foundations of sensing capabilities. (Conceptual)	Andy Dong, Massimo Garbuio and Dan Lovallo	2016	The study highlights the importance of generative sensing in organisations. Also highlights the role of framing and abduction in the sensing process. (43)
What facilitates dynamic capabilities: The role of organisational climate for trust	Stav Fainshmidt and Lance Frazier	2016	The study finds that a trust climate directly relates to competitive advantage and in-directly relates to competitive advantage through dynamic capabilities 44
The impacts of ICT utilisation and dynamic capabilities on the competitive advantage of South African SMEs	Tejumade V. Adeniran and Kevin A. Johnston	2016	The study finds that ICT utilisation had positive influences on competitive advantage. Although this ability of ICT to impact competitive advantage lies in its usage and not just having it. The study also found that DC attributes (sensing, absorptive, adaptive, innovative, networking and integrative capabilities) had impacts on competitive advantage. More also, the study found that DC positively impact ICT usage. 45
Enterprise risk management: a capability-based perspective (conceptual)	Yevgen Bogodistov and Veit Wohlgemuth	2016	The study conceptually highlights the significance of dynamic capabilities in building organisational resilience towards unforeseen challenges by relying on risk transformation. 46
Effects of Resilience on Productivity under Authentic Leadership	Cemal Zehira and Elif Narçkarab	2016	The relationship between authentic leadership and resilience and their effect on productivity. Authentic leadership capitalises on the theory of individual resilience that ensures that individuals receive the support they needed to recover from disruption and thrive. Authentic leadership has a relationship with resilience and resilience mediates the relationship. 47
The challenges of organizational agility (part 1) (conceptual)	Steven H. Appelbaum, Rafael Calla, Dany Desautels and Lisa Hasan	2017	The study finds that organisational agility increases the ability to respond proactively to environmental changes that

			are unexpected. This depends on leadership and decision-making dynamics, down to the skills and interpersonal relationships of the individuals implementing the agile strategy. 48
The challenges of organizational agility (part 2) (conceptual)	Steven H. Appelbaum, Rafael Calla, Dany Desautels and Lisa Hasan	2017	The study finds that increased agility fosters the ability to proactively respond to environmental changes that are unexpected. 49
Perceiving 'capability' within dynamic capabilities: The role of owner-manager self-efficacy	Alex Kevill, Kiran Trehan and Mark Easterby-Smith	2017	The study finds that self-efficacy influences the enactment of dynamic capability in several ways and suggests that perceived self-efficacy is an important aspect of dynamic capabilities. Self-efficacy will affect what dynamic capabilities will be enacted and how it will be enacted. 50
Shedding Light on Sustainable Development and Stakeholder Engagement: The Role of Individual Dynamic Capabilities	María del Mar Alonso-Almeida, Marian Buil-Fabregà, Llorenç Bagur-Femenías and Juan Pedro Aznar-Alarcón	2017	The study finds that individual dynamic capabilities have a positive impact on the sustainability of a business. Individual managerial capabilities are a positive factor in the long-term success of a firm. More also, individual dynamic capabilities positive influences stakeholder engagement. 51
The inception of dynamic capabilities in SMEs	Bruno Fernandes et al.	2017	The study finds that resources are significant for firms to do well and their mastery of the periods in their lifecycle is sustained by the entrepreneur's learning process. They are thus highlighting that learning is part of dynamic capabilities. 52
The relationship between dynamic capabilities, the firm's resource base and performance in a post-disaster environment	Martina Battisti and David Deakins	2017	The study finds that proactive posture and capability to integrate resources relevant for discovering new opportunities in a highly volatile and uncertain environment. The study gathered empirical evidence on the relationship between dynamic capabilities, disaster-related changes to a

			small firm's resource base and its performance in a post-disaster environment. 53
SMEs dynamic learning capabilities in international public procurement	Teresa Fayos Gardó et al.	2018	The role of dynamic learning capabilities on fostering public procurement. 54
Understanding internal conditions driving ordinary and dynamic capabilities in Indian high-tech firms	Sameer Qaiyuma, and Catherine L. Wangb	2018	The study finds that ordinary and dynamic capabilities relative significance changes with organizations' information processing capacity. However, we do not interpret our results as the dismissal of congruence framework. In fact, our results complement it. Our findings suggest that just because a dynamic environment favours dynamic capabilities does not necessarily mean that firms have the information processing capacity to support them. 55
Dynamic strategic planning and firm competitive performance: A conceptualization and an empirical test	Divesh Ojha , Pankaj C. Patel, and Sri V. Sridharan	2020	The study finds that Dynamic strategic planning has a negative but non-significant association with financial performance; however, it positively influences financial performance through operational capabilities. 56
The impact of dynamic capabilities on the sustainability performance of SMEs	Manon Eikelenboom and Gjalt de Jong	2019	The empirical results highlight the importance of external integrative dynamic capabilities for all three pillars of sustainability performance in SMEs. 57
Dynamic capabilities for firm performance under the information technology governance framework	Sabine Khalil and Maksim Belitski	2020	The study finds, First, managers should focus on developing digital dynamic capabilities, with greater orientation on digital skills within the managerial and strategic domain of IT governance. IT governance mechanisms are critically important because of the substantial impact of digital capabilities on product value creation 58

Exploration of capability and role development in an emerging technology network	Fatemeh Salehi, Judith Zolkiewski, Helen Perks and Mohammad Ali Bahreini	2018	The findings highlight that Actors developed sensing capabilities in the pre-collaboration stage, which drove joint new product development. During the collaboration, seizing capabilities were developed where resource commitment and alignment of resources among actors were essential. 59
Organizational capability for change and performance in artisanal businesses in Mexico	Patricia S. Sanchez-Medina	2020	This study provides empirical evidence proving the positive and significant impact of OCC on the economic and environmental performance of pottery businesses. 60
Dynamic Capability & Firm Performance: Mediating Role Of Learning Orientation, Organizational Culture & Corporate Entrepreneurship: A Case Study Of Sme's Of Pakistan	Muhammad Ahsan Mukhtar, Naveed Akhtar Baloch and Sajid Rahman Khattak	2019	The results have stated that organizational performance can significantly enhance even in an uncertain business environment if a firm develops dynamic capabilities based on its factors that are learning orientation, organizational culture, and corporate entrepreneurship. The findings illustrated that dynamic capability positively and significantly linked with firm performance. It also found that learning orientation, organizational culture and corporate entrepreneurship also mediated between dynamic capability and firm performance. Environment dynamism also moderates the relationship between dynamic capability and firm performance. 61
Mental Models and Dynamic Capabilities in a Brazilian Family Company	Massa, R. M., Andreassi, T., Lana, J., and Lyra, F. R	2020	The case study, however, shows that, in general, the managers of the firm act intuitively, without any formal long-term planning, which prevents them from exercising strategic decision process in a structured way, as it is suggested to low dynamic markets (Helfat, 1997). Still, it is noticeable that, in some cases, even without the use of technical tools, managers have developed one of the proposed dynamic capabilities very well in the company: the leverage of existing resources. This is because the company has gone through previous crises that imposed the need to develop it, such as the freezing of the prices

			<p>during Collor’s mandate, creating a process repeated several times that allowed the company to encode experiences and learn from errors in order to gradually develop an effective process to create new products for its existing audience</p> <p>62</p>
Exploring antecedents of service innovation performance in manufacturing SMEs	Mennens, K., Van Gils, A., Odekerken-Schröder, G., and Letterie, W.	2018	<p>The study substantiates that employee collaboration has a positive impact on the development of a dynamic knowledge capability (ACAP). This finding advances the dynamic capabilities literature, where less attention has been devoted to the context of SMEs (Kevill et al., 2017) and which has focused predominantly on organization-level outcomes (Battisti and Deakins, 2017; Rice et al., 2015; Vickers and Lyon, 2014). We illustrate that in an SME context, ACAP is a sequential process, such that RACAP builds on PACAP. Prior research also reveals increasing consideration of a micro-foundations perspective on dynamic capabilities, and the role of managers in particular (Helfat and Peteraf, 2015; Kevill et al., 2017; Wilden et al., 2016; Winter, 2013). However, in addition to managers, other organizational actors affect the development of dynamic capabilities as well (Helfat and Peteraf, 2015). In support of this assertion, we show that it is not just managers but also employees who have important roles in the development of dynamic capabilities. Dynamic capabilities depend on the ability of organizational members to act (Wilden et al., 2016), as reflected in the link between employee collaboration in the service innovation process and ACAP as a dynamic capability</p> <p>63</p>
Spin-Offs as Micro foundations of Dynamic Capabilities in Rapidly Growing SME	E.M. Laviolette	2019	<p>This paper analyses how spin-offs can contribute to the micro-foundations of dynamic capabilities in rapidly growing SMEs. Building on a multi-case study, three functions of spin-offs are analysed at a supra level boundary spanning</p>

			to sense opportunities, flexible organizing to seize them and ambidextrous orchestration to reconfigure them. At an infra level, dynamic managerial foundations include a repertoire of cognitive, managerial and social skills that both the parent company owner-managers and the spin-off entrepreneurs share. However, they leverage those skills differently in terms of scope, speed and depth, thus complementing each other at different stages of the spin-off process. 64
Firm functions and the nature of competitive advantage in internationalising SMEs	Haapanen, L., Hurmelinna-Laukkanen, P., and Hermes, J	2018	Findings from our multiple-case study on internationalizing SMEs indicate that investments in marketing and R&D functions <i>per se</i> are necessary though not sufficient condition for building dynamic capabilities and competitive advantage. Rather, the extent to which companies are able to follow their own strategies is closely tied to the micro-foundations of dynamic capabilities. 65
Dynamic capabilities in the context of BREXIT and international wine business: An exploratory two-country study	Abel Duarte Alonso and Seng Kok1	2019	In this context, dynamic capabilities become vital for many wineries; this relevance was proposed (Figure 1) as a preamble of the three clusters or mechanisms on which the theory is grounded. Indeed, reflecting on the potential tangible and intangible impacts of BREXIT is essential for wineries. For instance, based on Teece's (2007) paradigm, the importance of sensing, seizing, and transforming was underscored. In fact, being able to sense turbulence ahead, in this case, through the aftermath of an external issue, that is, beyond the control of winery owners/managers, would be followed by planning and executing remedial strategies. 66
The mediating role of dynamic managerial capabilities: The interplay between dominant logic	Khan, K. U., Atlas, F., Xuehe, Z., Khan, F., and Khan, S.	2020	A manager's approach to respond to external environment by using their managerial capabilities (HC, SC and MCs) and its ultimate effect on performance. Top-level managers play

<p>and small- and medium-sized enterprises performance in China.</p>			<p>a key role in the achievements of an organization. Changes occurred in the outside environment create opportunities and pose threats to the firm. Firms identify, capture, evaluate, and effectively use information and knowledge, which is consistent with the knowledge management approach and help build HC (knowledge stock) of the managers in the organization (Kotarba, 2011; Shin, Holden, & Schmidt, 2001). Managers scan their environment through DL and perceive it either in a perspective of opportunities or threats, and managerial capabilities such as managers' experience, knowledge, education level, skills, and social networks of family, friends, and colleagues and MC can help managers to perceive the external environment and make decisions accordingly. Firms can be successful with a proactive approach while making strategic decisions regarding the allocation of key valuable resources. Managers, in order to scan and perceive the external environment, use their HC and SC to get key information and valuable resources. To respond to the effects of the external environment, DL is suggested as a complete spectrum to shape up the managerial capabilities. With Dominant logic, DMCs are better shaped through the firm's learning from their experience in different market conditions. Firms need to change their strategic decisions in response to the external environment's changes for these reasons; this study investigates the impact of DMCs on strategic decisions that leads SMEs to gain superior performance. Managers use these improved DMCs to make important resource allocation decisions that ultimately lead to superior performance in terms of efficiency, growth, or profit.</p> <p style="text-align: center;">67</p>
<p>Dynamic capabilities in Italian leading SMEs adopting industry 4.0.</p>	<p>Garbellano and Da Veiga</p>	<p>2019</p>	<p>The study confirms that the capabilities "reside" (Teece, 2017, p. 698) in people, notably in who has the</p>

			responsibility to “orchestrate” (Teece, 2017, p. 704), combine, and organize resources to create value. Some capabilities (e.g. sensing, searching and selecting the right source of digital knowledge) reside either in the entrepreneur only or is shared among his/her closest collaborators; other (e.g. seizing and orchestrating internal and external assets, physical and digital resources) reside in the executive team; other are diffused in a granular way among many people as it occurs for manufacturing processes 68
Environmental management and product innovation: The moderating role of the dynamic capability of small manufacturing firms.	Mahmud, M., Soetanto, D., and Jack, S.	2020	This study found that environmental management practice has a positive impact on product exploration and product exploitation (H1a and H1b) which is in line with recent findings from the literature on environmental management and sustainability (e.g. Papagiannakis et al., 2019; Masri and Jaaron, 2017; De Medeiros et al., 2014; Azman et al., 2013). Moreover, the study also found that dynamic capabilities matter. The role of dynamic capabilities towards a firm’s environmental orientation has been confirmed in numerous recent studies (e.g. Jiang et al., 2018; Zhou et al., 2018). Furthermore, it allows them to leverage available resources and knowledge to update and exploit product innovation in response to changing business environments (Qiu et al., 2020). For product exploration, the alignment between environmental management and transformative capability produces a significant and positive impact on product exploration, while environmental management and absorptive capability have a significant but negative impact on product exploitation. Generally, in most literature, dynamic capabilities are suggested to be a strong predictor for environmental management practices among firms (Arend, 2014). However, in this study, we find that different types of dynamic capability (transformative or

			absorptive capability) can have different impacts depending on a firm's product innovation activities. 69
Digital marketing capabilities in international firms: a relational perspective.	Wang, F.	2020	The study finds that DMCs contribute positively to performance. Firms with greater entrepreneurial orientation leverage DMCs more effectively and have better performance. Small firms with strong digital capabilities perform as well as medium-sized firms. Large firms perform marginally better than small and medium-sized firms do. 70
Dynamical Capabilities of Small and Medium Enterprises (SMES) Through Supply Chain Strategy and Its Relationship On SMES Financial Performance.	Absah, Y., and Harahap, R. H	2020	In this study, the author tested a theoretical model that specifies innovative capabilities as the mediation variable that links dynamic capabilities, such as adaptive capabilities, absorptive capabilities, and marketing capabilities to financial performance. The results indicate that the model fits well with the data; All hypothesized path coefficients are positive and significant. 71
Relationship learning: A conduit for internationalization.	Bhatti, W. A., Larimo, J., and Servais, P	2020	The study contributes by identifying the customer as a primary source of learning in the organizational value chain, helping align offerings with identified needs. The results highlight how organizations learn through individual-level interactional processes, contributing to an organizations' customer need comprehension. These interactions are an essential instrument at the micro-level, providing knowledge and learning that consequently influence an organizations' macro-level factors. The outcomes of individual actions eventually are transformative by connecting identified opportunities into organizational growth. The results depict that successful organizations effectively explore and deeply analyse their consumer data to identify the change in behaviour, trends and emerging needs 72

Colour Legends

Individual/Owner-Manager/Entrepreneur

Learning or Knowledge Acquisition

Resources

Outcome of Dynamic Capabilities in SMEs

Outcome	Relationship	Dynamic capabilities
Profitability (1) (17)	Direct Negative	Managerial DC (1) Dynamic Capabilities (17)
Partnership success (2)	Negative Positive	SMEs strategic and internal DCs External dynamic capabilities
Organisational performance (3) (6) (10) (17) (32) (37) (43) (61) (70)	Positive Weak positive due to success traps (32) Positive but mediated by organisational culture, corporate entrepreneurship and environmental dynamism (61)	Organisational learning Dynamic Capabilities (6) Dynamic Capabilities (32) (37) (61) Sensing, learning, coordinating and integrating (10) Strategic flexibility (17) Generative sensing (43) Digital marketing capabilities (70)
Scope of accounting services (5)	Positive	Dynamic Capabilities
Competitive advantage (8) (23) (44) (45)	Positive Mediates trust climate	Knowledge Management Dynamic Capabilities (8) ICT Dynamic Capabilities (23) Dynamic Capabilities (44) Sensing, absorptive, adaptive, innovative, networking and integrative Dynamic Capabilities (45)

Non-financial form of organisational performance (16) Financial performance (32) (56) (71)	Positive Positive and direct but weak (32) Negative (56) Positive through operational capabilities (56) Positive through innovative capabilities (71)	Dynamic Capabilities (16)(32) Dynamic strategic planning (56) Adaptive capabilities and absorptive capabilities (71)
Export (18)	Positive	Knowledge Management Dynamic Capability
Innovation performance (20) (35)	Positive	Dynamic Capability (20) Sensing and seizing (35)
Sales growth (21)	Positive through product and process innovation	Dynamic Capability
Technological innovation (42)	Positive	Supply chain Dynamic Capabilities
Operational performance (42)	Positive but mediated by IT	Supply chain Dynamic Capabilities
Business Sustainability (51) (57) Stakeholder engagement (51)	Positive	Individual dynamic capabilities (51) External integrative Dynamic Capabilities (57)
Public procurement (54)	Positive	Dynamic learning capabilities
Product value creation (58)	Positive	Digital Dynamic Capabilities
Environmental performance (60) (69)	Positive	Organisation capability for change (60) Dynamic Capability (69)
Resilience (53)(49)(48)(47)(46)(73)	Positive	Dynamic Capabilities

Appendix 5b: Articles Highlighting the Relationship between Dynamic Capabilities and Organisational Resilience

Enterprise risk management: a capability-based perspective (conceptual)	Yevgen Bogodistov and Veit Wohlgemuth (2017)	2016	The study conducted in the field of risk management. The study conceptually highlights the significance of dynamic capabilities in building organisational resilience towards unforeseen challenges. The paper advocates for studies that can investigate the how dynamic capabilities help firms build resilience towards unforeseen circumstances as dynamic
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			<p>capabilities provide routines and processes that enable recovery from unforeseen challenges especially in SMEs as they have a smaller set of resources. More also, dynamic capabilities are not solely focused on avoiding disruptive events (as does risk management) but also on the blossoming of organisational resilience to respond to disruption yet to happen as most firms face a huge amount of low-probability but highly influential situations.</p> <p>46</p>
Effects of Resilience on Productivity under Authentic Leadership	Zehir, C., and Narçkara, E.	2016	<p>The relationship between authentic leadership and resilience and their effect on productivity. Authentic leadership capitalises on the theory of individual resilience that ensures that individuals receive the support they needed to recover from disruption and thrive. Authentic leadership has a relationship with performance and resilience, mediates the relationship.</p> <p>47</p>
The relationship between dynamic capabilities, the firm's resource base and performance in a post-disaster environment	Martina Battisti and David Deakins	2017	<p>The study finds that proactive posture and capability to integrate resources relevant for discovering new opportunities in a highly volatile and uncertain environment. The study gathered empirical evidence on the relationship between dynamic capabilities, disaster-related changes to a small firm's resource base and its performance in a post-disaster environment.</p> <p>53</p>
Surviving or thriving: The role of learning for the resilient performance of small firms	Battisti, M., Beynon, M., Pickernell, D., and Deakins, D.	2019	<p>The study highlights the relationship between strategic, cognitive and behavioural learning processes and three resilience performance categories – sustained performance, stability and survival.</p> <p>73</p>

Appendix 7: Summary Grid for Cross-Case and Pattern-Searching Analysis

CASE	DYNAMIC CAPABILITIES (DYNAMIC RESPONSE)	PROCESSES (DYNAMIC RESPONSE)	MECHANISMS (DYNAMIC RESPONSE)	PRODUCTION PROCESSES	RESILIENCE (DYNAMIC RESPONSE)	RESILIENCE (DYNAMIC RESPONSE)	DYNAMIC CAPABILITIES (ENACTING)
	RESPONSE	RESPONSE	MECHANISMS	PRODUCTION PROCESSES	ANNUAL PROFIT	RESILIENCE	ENACTING
EP/CASE V	Seized the disruption of the change in production to the business and found ways about the change by speaking to performance.	Absent	The product label was changed by the firm manufacturing the clothing products. Public outcry, financial downturns and other firms decisions to adopt the firm to the change in leadership and thus increasing the firm's market.	Returned to stable production process	Firm was resilient to annual profit margin.	Stability	Entrepreneurship-Process of Production
EP/CASE V	Seized the disruption the disruption posed for the business. Also created an in production solution to avoid the same challenge in the future.	Absent	To overcome the disruption, the firm changed how they operated with regards to the process of production.	Returned to stable production process	Firm profit margin remained stable that year due to production of altered products.	Stability	Entrepreneurship-Process of Production
NE/CASE I	The owner manager seized the disruption of the production to the business to build momentum. Also the owner manager invested in market and research to determine what they started seeking the business and investigated for a new location for the business to build firm.	Firm is decision to establish momentum, establish to capture the new market opportunity and build a new location and build a new location in the new process.	Reconfiguration of business model to adapt to the loss of the owner and meet the needs of the new market.	Firm returned to stability by successfully manufacturing a new product for the firm and built a public approved location which added product production.	Firm returned to stability as the firm was able to reach a loss in annual profit due to the disruption.	Stability	Entrepreneurship-Process of Production
BA/CASE L	The firm seized the disruption of the other business on the firm and by getting close to the customer, the owner manager seized the customer's wanted new products in addition to the existing products offered by the organization.	Additional resources to produce the new products to capture the opportunity.	Absent	Returned to stability by successfully manufacturing their product line and sustained operation.	Firm returned to stability and the profits for the year remained the same.	Stability	Entrepreneurship-Process of Production
SE/CASE G	Seized the disruption the disruption had on the business and also found what other firms have done right regarding the new market they seek.	Absent	Absent	The firm returned to stability by successfully capturing the early stage market and introduced a product which the market accepted and subsequently produced more products.	Firm returned to stability as it's operations and profit remained the same.	Stability	Entrepreneurship-Process of Production
CB/CASE H	The owner manager seized the disruption the firm had in production and the business and sought to capture the customer's wanted new products and investment was made.	The firm took a decision to establish momentum to build a new market with focus on having top-quality products to capture the customer's wanted new products and investment was made.	Absent	Returned to stability by successfully building a new product with appealing looks and introduced new products to increase the percentage of the business.	Firm had a growth in it's customer and profit margin that year.	Growth	Entrepreneurship-Process of Production
AB/CASE B	Seized the disruption to the business and opportunity to build a close relationship with the customer that led to an opportunity.	Absent	Absent	Returned to stability by successfully producing new products which were fit for customer's requirements and sustained business operations.	Firm returned to stability but succeeded lower profit margin.	Stability	Entrepreneurship-Process of Production
CH/CASE M	Seized a niche market where the business was produced and built the product from the production of other businesses. Also seized an individual opportunity which will support the firm to produce products.	Firm is decision to establish momentum, establish to capture the new market opportunity and build a new location in the new process.	There was a change in the business model of the individual opportunity to build the business model based on CB/EP.	Firm returned to stability and grew production by successfully capturing their customer's wanted new products and sustained business operations.	Firm had a growth in customer and profit margin.	Growth	Entrepreneurship-Process of Production
BW/CASE W	Seized the disruption of the change on the business and also found the opportunity to build a close relationship with the customer.	Returned to meet to the production of new products.	To overcome the disruption, the firm changed how they operated by offering customers firm's knowledge of where they wanted they new products.	Firm returned to stability by successfully manufacturing their product line after the crisis.	Firm profit margin remained the same.	Stability	Entrepreneurship-Process of Production
CA/CASE H	Seized the disruption the disruption had on the business and seized the opportunity to produce the new market opportunity in firm.	Firm advantage of customer's wanted new products and investment was made.	To adapt to the loss of new markets, the firm began to produce in both and large scale.	Firm returned to stability by successfully adopting the new market's required for producing products.	Firm profit margin remained the same.	Stability	Entrepreneurship-Process of Production
WH/CASE C	The firm seized disruption to the product production process and had to focus on meeting to customer's disruption.	Absent	To cover the disruption, the firm changed how they operated by the customer's wanted firm's firm.	Firm returned to stability by successfully being able to capture new markets required for producing products.	Firm's profit margin remained the same.	Stability	Entrepreneurship-Process of Production
NE/CASE IC	The firm seized the disruption the disruption posed for production in an opportunity to capture the firm's market production process. To capture the firm's market, the firm had to focus on growth.	To seize opportunity the firm returned to capture the new market opportunity by capturing new products.	To adapt to the change in customer's wanted the firm had to change how they operated by seeking new products and on customer's.	The firm grew by successfully meeting the demand of the market and the firm's customer's wanted new products.	Firm had a growth in it's profit margin.	Growth	Entrepreneurship-Process of Production
AB/CASE B	Seized disruption of RESILIENCE on the business and had to focus on producing to properly capture the customer's wanted for them as a firm.	Absent	Reconfiguring the business processes to adapt to the change in the business environment. The firm's business model supported the decision to focus on the firm's market.	The firm returned to stability by successfully manufacturing operations that were both the customer's and firm's market after adapting to the product disruption.	Firm profit margin remained the same.	Stability	Entrepreneurship-Process of Production

Appendix 8: NVivo Coding Process

EMERGENT THEMES	SUBORDINATE THEMES	SUPERORDINATE THEME
BREXIT Influence on Prices	BREXIT Disruption	DISRUPTIONS
BREXIT Uncertainty		
BREXIT Anxiety		
Products sold to the EU		
BREXIT Challenge		
BREXIT Mess		
Possible effects of BREXIT on Trade		
BREXIT effect on the exchange rate		
BREXIT effect on the cost of producers.		
Change in the law regarding product details	Change in Legislation disruption	
Challenges faced due to change in legislation	Climate Change disruption	
Challenges faced due to climate change		
Raw material directly dependent on the climate		
Lack of raw materials due to climate change	Faulty Equipment disruption	
Loss of products due to faulty equipment		
Increase in competition	Increase In competition disruption	
Impact of a rise in competition	Increase In Product demand disruption	
Sudden Increase in demand for products		
Impact of increased demand for products	Infrastructural disruption	
The negative influence of firm premises on business production		
Impact of poor infrastructure on the business growth rate		

Council refused to make changes to firm premises		
Production times influenced by infrastructural challenges		
Decline in customer numbers due to poor toilet facilities		
Female toilet not appealing to the female customers		
Sudden loss of firm premises		
Change in customer buying strategy	Loss of Major Customer disruption	
Demoralised by loss of major customer		
Poor harvest of crops used for production	Poor Crop Yield disruption	
Impact of poor crop harvest		
The diseased raw material for the production of products	Raw material Diseases disruption	
The decline of customers due to raw material disease		
No resilience without disruption	Resilience dependent on disruption	
Unexpected disruption		
Small firm able to quickly adapt to disruption if disruption can be controlled		
Use of contaminated raw material	Use of Contaminated Raw material disruption	
Loss of products due to contaminated raw materials		
Knock on effect of lost products due to contaminated raw materials		
Extremely cold weather effects on the business	Extreme Weather disruption	

After the effect of the cold weather challenge		
Financial indicators do not give the full picture	The disadvantage of using financial indicators	FINANCIAL MEASURE OF PERFORMANCE
Needed for forecasting	Reasons for using financial Indicators	
Used to assess the firm for upgrade		
very easy to use financial indicators to measure		
Needed for accessing loans from the bank		
Financial indicators help firms to measure its goal		
Due to financial investments made into the business		
Investing in the business	Effect of financial investments on firm performance	
Turnover improved by investments		
Profit, revenue and monetary terms used to measure performance	Measuring performance with financial indicators	
Performance viewed in terms of turnover, sales and monetary terms	Financial View of Performance	
Difficult to Measure	Disadvantages of using non-financial measures	NON-FINANCIAL MEASURE OF PERFORMANCE
Number of customers	Measuring Performance using non-financial Indicators	
Employee contribution		
Personal experience of customers		
Viewing Performance in terms of non-financial indicators	Non-financial view of Performance	
Performance measured using customer feedback and turnover	Measuring Performance Using Financial and non-financial indicators	MIXED MEASURE OF PERFORMANCE
Performance measured using sales		

and employee attitude			
Performance measured using sales and employee involvement			
Performance measured using sales and customer satisfaction			
Performance of the business in all areas	Multi-dimensional view of performance		
Performance viewed as profitability or staffing			
Performance as setting goals and objectives			
Performance as being multifaceted			
Performance as team collaboration			
Performance as doing your best compared to past records			
Performance as the way a business works			
Adapting to change that is met with		Adaptation - (Process-Based Perception)	
Coping against the change			
Resilience as being flexible			
Available funds in the business	Funds Availability - (Resource-Based Perception)	PERCEPTION OF RESILIENCE	
Maintaining Market share	Survival - (Endurance-Based Perception)		
Pushing through daily			
Weathering the different storms			
Withstanding product competition			
Withstanding the shocks			
Putting measures in place			
Coming through hard times			
Emotional impact of struggling			

Resilience as the continuity of the business		
Changed pattern of trading with the EU	Reconfiguration	RESILIENCE PROMOTING FACTORS
Reorganised processes to meet the needs of a niche market		
Diversification of the business		
Upscaling production processes		
Change of firm existing product labels		
Transformation of the firm Kitchen to increase production		
Decided to invest in replenishing lost products		
Decided to focus on the UK market more than the EU market		
Decided to introduce new products and sell them at higher prices		
Decided to take customers to the source of raw materials		
Decided to buy raw materials in large quantities		
Decided to look for another source for raw materials		
Decided to merge to small firms to form one		
Decided to invest into the purchased infrastructure		
Decided to leave the compromising premises		
Decided to introduce new products appealing to the female customers		

Decided to introduce new products as an addition to existing ones to satisfy customers		
Decided to invest in building a new infrastructure		
Decided to invest in changing the harvest process to ensure raw materials were of quality		
I decided to work more hours		
Decided to employ more workers		
Decided to invest in the changing of the product labels		
Decided to purchase raw materials at a higher price		
Discovery of the damage	Sensing	
Discovery of the cause of damage		
Scanning for opportunities to produce products after the disruption		
Identification of threats such as BREXIT, competitors, climate change, legislation change,		
Understanding the disruption		
Discovery of the damage from customers		
Scanning for other sources for purchasing raw materials		
Discovery of a niche market		
Discovery of alternative infrastructure		
The continuous search for a lasting solution to disruption		

Retrospective analysis of the firm		
Discovery of faults in raw materials and equipment		
Seeking advice from professionals and other firms		
Identification of upscale opportunities		
Recalling products from customers	Coping Mechanisms	RESILIENCE MECHANISM
Destruction of contaminated products		
Maintaining and building a relationship with customers		
Running around to quickly find raw materials		
Holding in-house meetings		
Having entrepreneur meetings		
Working at unsustainable times		
Utilising stored products during the rationing period		
Taking legal actions		
Contamination of raw materials	Resulting Disruptions	
Shut down of product production process		
Financial loss in the firm		
Increased anxiety within the firm		
Decreased or no turnover/sales in the firm		
Drop in the number of customers patronising the firm		
Non-sustainable production times		
Slowed impetus within the firm		
Less money for other investments		

Surprised by the occurrence of the disruption	Initial Reaction	
Not surprised by the occurrence of the disruption		
Took a decision to makes investments there were results	Varying times	STRATEGIC CHANGES OR DECISIONS CAN TAKE A WHILE
Took a decision to make investments but results took time		
Learnt to use the right raw material	Learnt to use the right raw material	LEARNING
Learnt best practices through training	Knowledge of sector best practices	
Learnt to do things in the right way		
Learning from the past for the future	Learning from past occurrences	
Learning from things that don't work		
Learnt better skills from the past		
Learnt not to panic	Learnt not to panic	
Learnt not to send out substandard products	Learnt not to send out substandard products	
Learnt to more organised	Learnt to more organised	
Learnt to do retrospective scanning of the firm's activities	Learnt to do retrospective scanning of the firm's activities	
Learnt to employ more staff	Learnt to employ more staff	
Learnt to invest more into the business	Learnt to invest more into the business	
Learnt to make projections for the future	Learnt to make projections for the future	
Learnt to identify changes in the environment	Learnt to scan the environment	
Having an awareness of the good and bad times in the sector		
Having an awareness of not being sensitive		

to environmental changes			
Learnt to survive	Learnt to survive		
Learnt to understand the disruption	Learnt to understand the disruption		
Learnt to use the right raw material	Learnt to use the right raw material		
Still learning from the challenges for the future	Still learning from the challenges for the future		
The firm had financial resources available	Financial Resources	RESOURCES	
Firm lacks collateral to borrow from the bank			
Unable to diversify due to lack of financial resources			
Effective in-house communication	Employee contribution		
Employee understanding the firm aims and objectives			
Incentives are given to support employee learning and educating employees			
Obtaining loans from the banks	Effective Collaboration		
Talking to professionals			
Receiving help from other businesses and friends			
Collaboration with bigger firms			
Obtaining information from the internet	Knowledge Acquisition		
Obtaining information from professionals			
Obtaining information from other firms			
Obtain information by studying other firms			
Be a team player	Role of Owner-Manager		
Responsible for running the firm			

A versatile and good communicator		
Being strong emotionally		
Leading and guiding the firm		
learn continuously		
Make the decisions that direct the firm		
Use relevant experience in handling disruption		
Detecting areas of the firm in need of improvements		
Responsible for employing the right person		
Responsible for firm achieving objectives		
Responsible for gaining more knowledge		
Responsible listening to others		
Responsible for motivating employees		
Sense the challenges and opportunities ahead		
Understand the importance of change		
Be aware of the firm's competitor's activities		
Business goals have met personal goals	Satisfied with firm performance	RESPONDENTS ASSESSMENT OF THE FIRM'S PERFORMANCE
Steady performance over the years		
Employees are being paid		
Over 90% performance rating		
Turnover tripled		
Continuous Growth of the firm		
Exponential growth		
Things can be much better	Dissatisfied with firm performance	
We need to sell some more		

Business goals are not met		
Desire to take the business further		
The firm has been struggling		
Increased Operation capacity from the level prior to the disruption and experienced an increase in profit following response to the disruption (s).	Growth	RESILIENCE OUTCOME
Maintained Operations Capacity as it was before the disruption and also maintained profit following response to the disruption (s)	Stability	
Maintained Operations Capacity as it was before the disruption but experienced a loss following response to the disruption (s)	Survival	

Appendix 9: Interview Protocol

1. What is your view of the term performance?
2. How do you measure the performance of the firm and how do you rate the performance of your firm in the last 5 years?
3. Have you changed this in the last five/ten/fifteen years? How? Why? (A chart will be provided to illustrate the change pattern over a period). **Has this always been the way you measure performance?**
4. Compared to competitors, how would you rate the performance of your firm? What makes your firm perform better or worse?
5. Does the current performance of the firm meet the personal goals that was anticipated to be achieved? **How? Why?**
6. In the context of your firm, what does resilience mean to you?
7. Would you describe your firm as being resilient?
8. So, what makes it resilient?
9. Why is the firm being resilient through the above-mentioned means?
10. Can you tell me more about a typical major adverse, challenging or uncertain event, which the firms has had to face in the past 5 years?
11. How did it affect the performance of the firm?
12. How did you realise that the event will be adverse, challenging or uncertain? Will probe further.
13. Back to the strategies. How did you identify possible solutions/ways forward/strategies?
Can you remember the first solution that you had identified?
14. Were you able to identify other solutions/strategies?
15. How did you evaluate the different options? Will probe further.
16. In the end, what option(s) did you choose?
17. How was the adverse situation handled?
18. What actions did you take? Will probe further for the specific actions taken and ask why.
19. Which ones have been successful and why?
20. Which ones have not been successful and why?

21. Referring back to what you said about your strategies, what kind of resources did you need to successfully implement the strategy?
22. Did you have the resources within the firm already or did you have to acquire them? Will probe further to discover the types of resources.
23. Returning to your view of the firm's performance, how do you see your role as the owner-manager in how the firm has developed, overcome challenges and met its performance objectives? Will probe further.
24. Do you think the way you handled the adverse, challenging and uncertain situations has contributed to the firm being resilient or more resilient? How? Why or why not?
25. Do you think this experience has prepared you well for future challenging situations? How? Why or why-not?

Appendix 10: UPR16

FORM UPR16

Research Ethics Review Checklist

Please include this completed form as an appendix to your thesis (see the Research Degrees Operational Handbook for more information)


Postgraduate Research Student (PGRS) Information		Student ID:	793118	
PGRS Name:	WILLIAMS ALI			
Department:	DEPARTMENT OF STRATEGY ENTERPRISE AND INNOVATION	First Supervisor:	DAVID PICKERNELL <small>PhD/PhD</small>	
Start Date: <small>(or progression date for Prof Doc students)</small>	02/10/2017			
Study Mode and Route:	Part-time	Full-time	MPhil	MD
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
Title of Thesis: THE ROLE OF DYNAMIC CAPABILITIES IN BUILDING RESILIENT SMALL AND MEDIUM ENTERPRISES (SMEs)				
Thesis Word Count: <small>(excluding ancillary data)</small>				
70,049				

If you are unsure about any of the following, please contact the local representative on your Faculty Ethics Committee for advice. Please note that it is your responsibility to follow the University's Ethics Policy and any relevant University, academic or professional guidelines in the conduct of your study

Although the Ethics Committee may have given your study a favourable opinion, the final responsibility for the ethical conduct of this work lies with the researcher(s).

UKRIO Finished Research Checklist: <small>(if you would like to know more about the checklist, please see your Faculty or Departmental Ethics Committee rep or see the online version of the full checklist at: http://www.ukrio.org/what-we-do/code-of-practice-for-research/)</small>	
a) Have all of your research and findings been reported accurately, honestly and within a reasonable time frame?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
b) Have all contributions to knowledge been acknowledged?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
c) Have you complied with all agreements relating to intellectual property, publication and authorship?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

d) Has your research data been retained in a secure and accessible form and will it remain so for the required duration?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
e) Does your research comply with all legal, ethical, and contractual requirements?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

Candidate Statement:	
I have considered the ethical dimensions of the above named research project, and have successfully obtained the necessary ethical approval(s)	
Ethical review number(s) from Faculty Ethics Committee (or from NRES/SCREC):	BAL/2018/E633/ALI
If you have not submitted your work for ethical review, and/or you have answered 'No' to one or more of questions a) to e), please explain below why this is so:	
Signed (PGRS):	Date: 29/12/2020
	

End of document

Appendix 11: Inclusion and Exclusion Criteria

Table below showing the exclusion and inclusion criteria adopted during the systematic review process.

- **Inclusion and Exclusion Criteria:**

The citations identified were reviewed according to the inclusion and exclusion criteria.

The inclusion criteria for the systematic literature review are as follows;

1. Language: English.
2. Date of Publication: No date restrictions in the selection of publications. This is done in order to retrieve as much papers as possible putting into consideration the limited amount of research conducted in the SME context.
3. Document type: Journal papers.
4. The abstract of the citations must be related to the keywords used in the search and provide answers to the research questions.
5. The articles to be used will most likely be of an empirical methodological standing. Although some conceptual based papers will also be used depending on it relevance to the research.

The exclusion criteria for the systematic literature review at this stage corresponds to the opposite of the inclusion criteria stated above.