ENTREPRENEURSHIP OF ORDINARY PLACES: SME ADAPTATION IN RESOURCE-LIMITED CONTEXTS

By

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ABSTRACT

This thesis examines the adaptive forms of small meat processing firms and their ability to thrive within resource-limited contexts. The primary aim of the research was to investigate how small meat processing firms in the West Midlands, UK, adapt to resource constraints by identifying various forms of adaptation and exploring the relationship between adaptive strategies and environmental limitations. The central research question addressed was: How do small firms adapt in a resource-limited context? The study was grounded in multiple theoretical frameworks, including the Resource-Based View (RBV), Dynamic Capabilities Theory (DCT), organisational adaptation frameworks, Strategic Contingency Theory, and Environmental/Institutional Theory. These perspectives collectively emphasised that adaptive behaviour is closely linked to a firm's internal resource base and the conditions of its external operating environment. Given the heterogeneous nature of small firms, the thesis adopted a qualitative multiple case study approach, which involved twelve small meat processing firms in the West Midlands. Data were collected through semi-structured interviews and documentary evidence and analysed thematically using NVivo software. Cross-case analysis was conducted to identify both similarities and variations in adaptive forms across firms. The findings revealed that small firms adopted different adaptive forms, broadly categorised as conservative, reactive, and strategic adaptation. However, these forms were not sustained individually over time. Instead, firms exhibited a composite form of adaptation, integrating multiple adaptive strategies simultaneously or sequentially, as a response to persistent resource constraints and a dynamic business environment. This thesis makes a significant contribution to the fields of organisational adaptation, dynamic capabilities, and resource-based theories by providing new insights into how small firms in resource-limited contexts develop composite adaptive strategies. A key limitation of the study is its geographic and sectoral focus, which may affect the generalisability of the findings beyond the small meat processing sector in the West Midlands.

Key Words: SMEs, Resource-Limited Context, Adaptation, Adaptive Form, Composite Adaptor, Dynamic Capability

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CHAPTER 1: INTRODUCTION

1.1. Overview

Adaptation is fundamental to the study of organisations (Greve, 2011; Chakravarthy, 1982; Meyer, 1982). It refers to the ability of the firm to adapt and overcome challenges in the external environment (Vergne and Depeyre, 2016). Given the magnitude of the challenges, entrepreneurs need to make decisions and position the firm in a superior position. This raises difficult questions about the different adaptive responses, and the uncertainty about the implications and effectiveness of the outcomes from these responses (Walrave, van Oorschot, and Romme, 2011). This thesis investigates the adaptation of small firms through the lens of resource-based view, dynamic capabilities, organisational adaptation, and strategic contingency approaches, aiming to investigate how the firms adapt in resource-limited context. Central to this thesis is the assumption that adaptation signifies a crucial component for the survival and growth of small businesses. In this context, adaptation is defined as the relevant modifications made within the business operations to survive with limited resources and in challenging business environment (Schindehutte and Morris, 2001; Chakravarthy, 1982).

The thesis recognises the significance of resource-based theories (RBTs), dynamic capacity theories, and adaptation theories in explaining firm-level strategies and adaptation for sustaining competitive advantage (Teece, Pisano, and Shuen, 1997; Barney, 1991). This thesis argues that there is a lack of an integrated, context-based theory that helps to explain how small firms adapt in resource-limited contexts (Jones, 2004). Moreover, a dearth of qualitative studies exists within the literature that comprehensively presents the approaches and decisions undertaken by small firms during the adaptive process (Quansah, Hartz, and Salipante, 2022; Quansah and Hartz, 2021; Jones, 2004). To address this gap, this thesis aims to bridge the deficiency in adaptation literature, providing invaluable insights and tools tailored for owner-managers and policymakers within small meat processing firms.

The scope of this thesis is particularly relevant to strategic management and entrepreneurial studies, specifically exploring adaptation within resource-limited settings. The motivation lies in proposing a framework to provide an understanding of the adaptation dynamics of small, traditional firms, such as the meat processing firms which are striving for viability and growth within contexts constrained by limited

resources. This chapter provides an overview of the contextual and theoretical underpinnings that lay the groundwork for this thesis. Commencing with the context of small business operations and the theory of adaptation within SMEs, it subsequently delineates the study's objectives, research questions, themes, contributions to knowledge, research rationale, and the overall organisation of this thesis.

1.2. Background of Study

1.2.1. Small Business Context

Small and medium-sized businesses (SMEs) play a pivotal role in the economic vitality of numerous national economies (OECD, 2019; Department for Business and Industrial Strategy [BEIS], 2019; Ayagari, Demirgüç-Kunt, and Beck, 2011). Constituting over 90% of businesses, SMEs are integral to the economic development of nations (Savlovschi and Robu, 2011; OECD, 2019; World Bank, n.d). Their disruptive creativity drives competition, stimulating productivity, and fostering economic growth. In the United Kingdom, SMEs, numbering around 6 million, employ approximately 15.8 million individuals and contribute to nearly 20% of the country's GDP (Dey et al., 2018). Forecasts indicate an anticipated 19% increase in SMEs' contribution to the UK's economic prosperity by 2025 (Dey et al., 2018).

The SME context encompasses a diverse range of firms characterised by varying profiles, objectives, and business models (Department for Business and Innovation Skills, 2013). The Commission of European Community (2005) defines size classification based on assets, annual turnover, and the number of employees. In simple terms, the SME is defined as firms with less than 250 employees. The SMEs operate with comparatively limited resources, often managed by owner-managers who make independent decisions, face restricted market entry, and operate within constrained scopes and scales of activities (Holmes and Schaper, 2018; OECD, 2019).

Despite SMEs' significant net contribution to GDP, they grapple with distinctive competitive challenges. A small proportion of SMEs achieve substantial impact and persist in their small-scale operations over time (BEIS, 2019). Access to competitive resources such as skills, knowledge, networks, finance, technology, and markets poses challenges distinct from those faced by larger corporations (OECD, 2019; Dey et al., 2018). It has been reported that financial institutions often perceive small firms' activities as risky, resulting in limited access to financial resources (Njue and Mbogo, 2017).). In addition, hostile business environment, such as recessions and pandemics,

disproportionately affect small firms due to reduced consumer demand and restricted credit facilities (Mandviwalla and Flanagan, 2021). Today, SMEs continue to contend with the prolonged effects of the 2017/2018 global crisis compounded by subsequent challenges arising from BREXIT, the COVID-19 pandemic, and geopolitical tensions, leading to noticeable disparities in productivity between SMEs and large firms.

Large businesses employ strategies underpinned by critical resources, significantly impacting all relevant stakeholders. Conversely, small firms rely more on limited resources confined within the firm, exerting minimal influence which impedes their strategic development (Dey et al., 2022). Many activities and strategies necessary to address challenges are often unavailable to SMEs. A significant percentage lack business plans, formalised systems to access strategic resources, and exhibit weak managerial and leadership skills (IBIS, 2013; Thong, 2001). Given their continuous constraints, there exists no standardised model for SMEs to evolve and grow (Levie and Lichenstein, 2010). Strategies crafted within the small business context necessitate analysis of evolving behavioural patterns and resource allocation (Schindehutte, 2001). However, these behavioural patterns are intricate, often irregular, contributing to performance disparities within the small business domain (IBIS, 2022).

Since there is a growing demand for locally manufactured food substances, locally processed meats have gained much attention, not only from consumers but also from researchers (Darby et al., 2008). Nevertheless, major factors such as the lack of resources including space for slaughtering, skills, and processing machines hinder the ability of small meat processors in accessing opportunities the food market (Johnson, Marti, and Gwin, 2012). Mason et al. (2021) notes that the small meat processors face resource constraints that limit their ability to develop new approaches and achieve the required level of production (Mason et al., 2021). This situation raises generates issues about how the small meat processor can develop and growth. Although the broader food system has gained significant scholarly attention, not much have specifically devoted to the meat processing sector (Jie, Parton, and Cox, 2013). Specifically, there is a notable lack of literature examining the obstacles faced by small meat processors (Syukron and Su, 2022). Research on the challenges the small firms encounter and the potential strategies to address these issues remains limited (Okpala, Nwobi and Korzeniowska, 2021).

Adaptation emerges as a relevant concept for small businesses, with entrepreneurs dealing with critical challenges which are primarily uncertain and risky.

Beyond scarce resources and a hostile business environment, the development of business plan to exploit opportunities presented by uncertainty remains crucial (Schindehutte and Morris, 2001). Prior studies advocate extensive adaptation for small enterprises to thrive (Sarta, Durand and Vergne, 2020). Given their smaller size, they are usually more adaptable to changes in their surroundings, whether there be opportunities or threats (Eggers, 2020). Additionally, the proximity of business owners to the customers and other stakeholders allows them to receive useful market information which is helpful for adapting to situations (Eggers, Hansen, and Davis, 2012). An alternative perspective posits that small enterprises may exhibit resistance to adaptation due to a range of factors including limited capacity to assess the environment and capitalise on opportunities (Sarta and Durand, 2021). This constrained capacity emanates from inherent limitations in resources unique to small firms. The literature on adaptation primarily focuses on external environmental issues (Linnenluecke and Griffiths, A., 2010) with little emphasis on adaptation within resource-constrained context.

1.2.2. The Meat Processing Industry Overview

The World Food Summit in 1996 enjoins all countries to ensure that food security, which includes availability, access and safe utilisation of food, is achieved (Da Silva et al., 2018). The meat processing industry plays a crucial role in the UK economy not only by contributing significantly to employment and trade, but also to food security. In this thesis, processed meat (including poultry) products are characterised as “chilled and frozen poultry and red meat which has been changed from its original carcass form and has been taken a stage further than cutting into portions or adding a marinade or sauce, and which are typically eaten as part of a main meal” (Shilling, 2024; p.74). Citing the World Cancer Research Fund (2007), Grasso et al (2014) also defines processed meat as smoking, curing, salting or addition of chemicals to change original flavour. Some of the processed meat products include bacon, sausages, burgers, sausages, chicken nugget, coated poultry (breaded or battered portions). Additionally, the industry classifies meatballs, cooked meat pieces and luncheon meat/corned beef as processed meat,

Figure 1.1 shows that over the past five years, the industry has shown modest growth, averaging a 1.0% annual increase from 2018 to 2023 with demand expected to

increase tangentially (IBISWorld, 2024). The UK meat processing industry recorded an annual turnover exceeding £12.1 billion and employed more than 24,000 employees (IBISWorld, 2024). Between 2024 and 2029, industry revenue is projected to grow at a compound annual growth rate (CAGR) of 3.7% (IBISWorld, 2024).

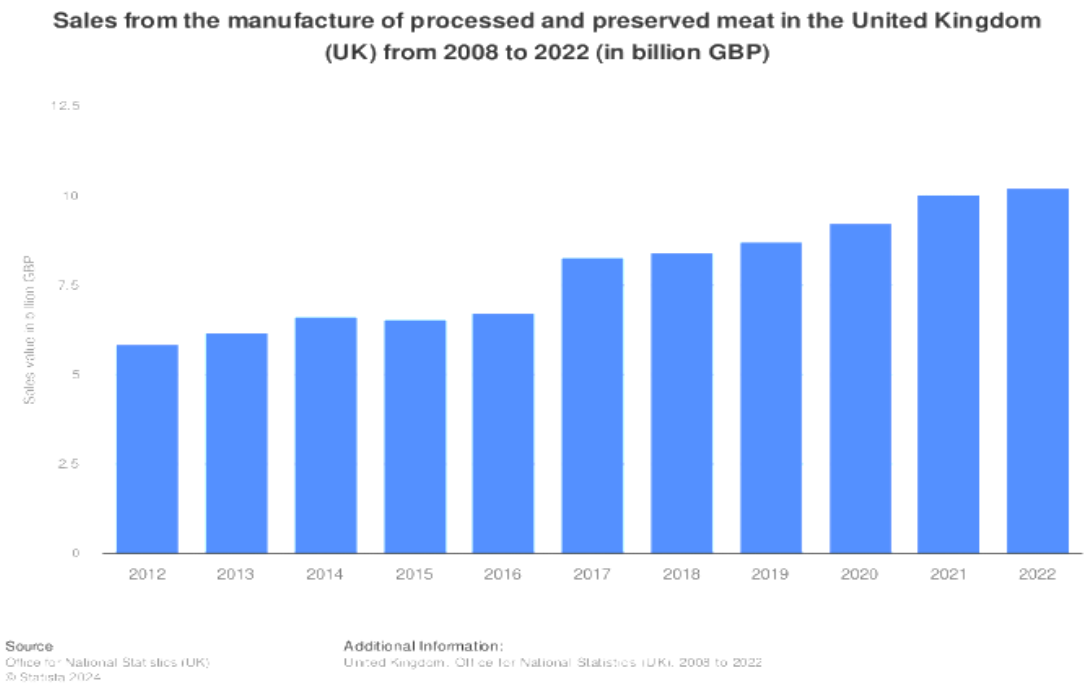

Figure 1. 1 Sales from processed meat

Source: Statista (2023)

As a highly regulated sector, meat processing firms are embedded in complex domestic and international supply chains. The industry comprises a diverse range of firms, from large multinational corporations to small and medium-sized enterprises (SMEs), all operating within a landscape shaped by evolving consumer preferences, technological advancements, and regulatory requirements. Figure 1.1 shows the number of firms (1,036 as at 2021) responsible for the processing and preserving of meat, and the production of meat products, including poultry, in the United Kingdom (UK) from 2008 to 2021, by sector (Statista, 2022). The number of meat processors has remained generally stable overall in the period under consideration. Figure 1.2 and Table 1.1 illustrate the number of firms (1,036 as of 2021) engaged in meat processing, preservation, and poultry production in the UK from 2008 to 2021 (Statista, 2022).

Despite fluctuations, the overall number of meat processors has remained relatively stable during this period.

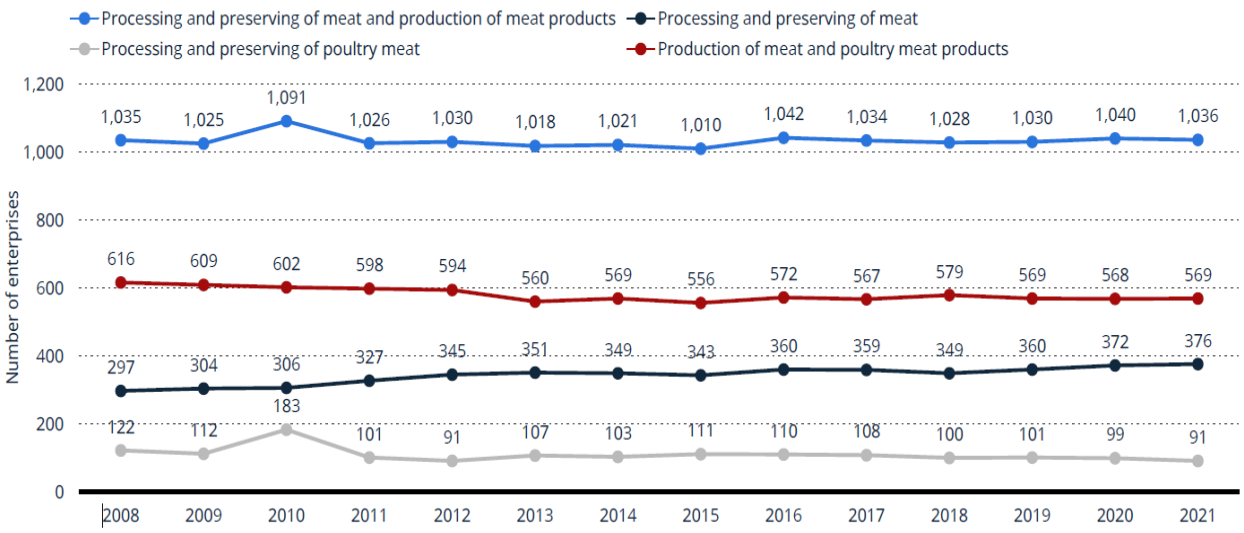

Figure 1. 2 Number of Meat Processing Enterprises (Including Poultry) in the UK, 2008–2021, by Sector

Source: Retrieved from Statista (2022).

The UK meat processing market is highly concentrated, with a small number of large firms dominating production, while numerous smaller businesses operate at regional and local levels (British Meat Processors Association [BPMA], 2024). The firms in the food supply chain are similar, that is from the farms, abattoirs, cutting, processing, manufacturers, distributors, and retailers/supermarkets that finally sell products to the final consumer. The industry is responsible for supplying safe, wholesome, and quality meat and meat products to people across the UK and further afield (BMPA, n.d). The sector is also heavily influenced by strict food safety, hygiene, and animal welfare regulations, many of which were inherited from EU policies and continue to shape industry standards post-Brexit (Strong and Wells, 2020). Consumer preferences are also shifting. According to Shilling (2024), 74% of UK consumers are increasingly concerned about the health implications of processed meat, driving demand for higher-quality and health-conscious alternatives. At the same time, post-Brexit labour shortages, rising inflation, and global disruptions have led to higher costs and reduced profit margins for meat processors.

Table 1. 1 Key Statistics of the UK Meat Processing Industry (2023)

Metric	**Value**	**Description**
Global Market Size (2024)	US$336.40bn	Total revenue generated by the meat processing industry in the UK.
Average Annual Growth Rate (2024)	5.04% (CAGR)	Percentage change in market size from the previous year.
Volume of processed meat (by 2029)	41.08bn kg	Expected volume
Volume growth rate by 2025	1.7%	Volume growth
Number of Businesses	1036	Estimated number of meat processing businesses operating in the UK.
Number of SMEs	385	Estimated number of meat processing SMEs
Employment	90,000	Total number of employees working in the meat processing industry.
Export Value	£2.5 billion	Total value of meat products exported from the UK.
Import Value	£1.8 billion	Total value of meat products imported into the UK.
Characteristics	**Description**	
Primary Negative Factors	Changing consumer tastes; veganism.	
Consumer Preferences	Increasing demand for organic and ethically sourced products	
Key Market Drivers	GDP per capita and consumer spending per capita.	
Key Factors	Labour supply shortage; Brexit	
Major Processing Methods	Smoking, salting, curing, or given chemical preservatives	
Processed Products	Fresh, chilled or frozen meat, sausages, bacon.	
Major Competitors	Supermarkets	Major competitors in the meat processing, including small meat processing firms.

Source: Multiple literature sources

While the UK's growing population is expected to increase demand for processed meat, challenges such as trade policy changes, supply chain disruptions, and pandemic-related effects continue to hinder growth (IBISWorld, 2025; DEFRA, 2024). These pressures have led to intense competition, particularly among supermarkets, which dominate the sector. To remain viable, firms have had to adapt their business strategies. Large meat processors are increasingly focusing on innovation, consolidation, and automation, while smaller processors are carving out a niche by emphasising premium quality and specialty markets (IBISWorld, 2025).

Market Characteristics and Firm Behaviour: Yoruk and Gilman (2023) introduced the concept of the "SME Drag Effect," to describe that, despite their overall contribution to the West Midlands economy, SMEs tend to exhibit slower growth potential than larger firms. The UK meat processing industry is highly price-sensitive, with firms operating on thin margins due to rising input costs, wage inflation, and regulatory compliance expenses. Other significant challenges are regulatory and institutional pressure. Firms are required to adhere to strict food safety, hygiene, and environmental regulations, which have become even more complex in the post-Brexit landscape (IBISWorld, 2025). Additional bureaucratic requirements for meat exports to the EU have placed a disproportionate burden on smaller firms, making it increasingly difficult for them to remain competitive in international markets (Poppy, Baverstock, and Baverstock-Poppy, 2019). Labour market constraints also pose a major challenge for the sector. The industry has long relied on EU migrant workers, particularly in processing and slaughterhouse roles. However, Brexit-induced immigration restrictions have led to severe labour shortages, which have, in turn, driven up production costs and lowered overall productivity (DEFRA, 2024). This issue has been further exacerbated by broader demographic shifts and a declining domestic workforce willing to take on such demanding roles (IBISWorld, 2025)). Beyond workforce concerns, supply chain disruptions have added another layer of challenge to operations. Firms face ongoing volatility in sourcing livestock and maintaining stable distribution networks (Guilbert et al., 2022). Rising transportation and logistics costs, fuelled by fluctuating fuel prices and trade barriers, have made supply chain management increasingly unpredictable. These disruptions not only affect the cost of production but also impact the ability of firms to meet consumer demand in a timely and efficient manner. In addition to the forgoing challenges, changes in consumer trends is redefining the industry's landscape (Gokirmakli and Bayram, 2017). Demand for ethically sourced, organic, and plant-based alternatives continues to rise (Grasso et al., 2014).

Larger firms have responded to the challenge through technological innovation and automation as a means of improving efficiency and offsetting labour shortages {Shilling, 2024). Investment in digitalisation and mechanised processing systems has helped streamline operations. Small meat processors, however, are typically constrained by various constraints, which includes high upfront costs associated with these technologies presenting a significant challenge for SMEs. Other notable resource constraints associated with the small meat processors include small facilities, lack of

improved infrastructure and technology, and lack of space available for all the productive functions (Johnson, Marti, and Gwin, 2012). Despite the high-level competition, small meat-processing businesses distinguish themselves by maintaining traditional processing methods and contributing significantly to local economies by promoting local produce. Some of the SMEs have also successfully capitalised on these trends by developing niche, high-value products that cater to specific consumer preferences (Shilling, 2024). However, growth and productivity persist amongst SMEs as they find it difficult to compete against low-cost imports and the dominant pricing strategies of large supermarket chains, making it increasingly challenging to maintain profitability in a rapidly evolving market. As a result, a growing divide has emerged between larger, well-capitalised firms and smaller businesses that struggle to afford these resources, leading to disparities in productivity and overall competitiveness.

The West Midlands: The West Midlands is recognised as a rapidly expanding economic hub and a key contributor to the UK economy (Local Industrial Strategy for West Midlands, 2019). The business landscape of the region is predominantly made up of SMEs, yet it holds a distinctive position within the UK meat processing industry due to its historical significance as a food production and distribution centre. As one of the most industrialised regions in the UK, the West Midlands has a strong network of agribusiness firms, wholesalers, and logistics providers, making it an essential player in both national and regional meat supply chains. The region is home to a mix of traditional family-run abattoirs and modern processing facilities, many of which rely on migrant labour, a factor that has come under increasing burden post-Brexit. Furthermore, the region's proximity to major transport routes and urban centres makes it a strategic location for meat distribution, serving both domestic retailers and export markets.

1.2.3. Theoretical Background

Quality case studies, in Yin's opinion, are based on theoretical assumptions (Yin, 2016). The assumption grounding this thesis is based on the concepts of adaptation, dynamic capability theory (DCT), resource-based theories (RBTs), and strategic contingency theories (SCT). These theories help to explain the capacity of firms to readjust their internal resources to adapt to changing external business environments. The concept of adaptation has its origins in scientific management and industrial

administration in the early 20th century (Sarta, Durand, and Vergne, 2020). The concept has endured to this day, with different viewpoints emphasising the important role of adaptation in explaining the performance of organisations. The strategic management and organisational theory literature implicitly supports the position that firms have the capacity to analyse their environment and leverage opportunities to take effective action, enhance success, and increase the likelihood of organisational survival (Sarta, Durand, and Vergne, 2020). Chakravarthy (1982) asserts that adaptation enables businesses to deal with both changes brought about by internal business processes and those changes in the external environment. He further argues that firms adapt through their adaptive forms, or "strategy of structure," which is considered as an effective response for leveraging resources for dealing with challenges in the business environment (Chakravarthy, 1982: 35). However, the conceptualisation of adaptation is nuanced, necessitating a deeper contextual understanding. This viewpoint captures the various adaptations that have been documented in the literature, including hybrid strategies (Alnoor et al., 2022), the taxonomy of strategic postures by Miles and Snow (1986) (Hagen et al., 2017; Dionysus and Arifin, 2020), and competitive strategies by Porter (1996). Schindehutte and Morris (2001:4) also view adaptation as "changes in strategic behaviour" to maintain or improve competitive positioning and achieve a fit between the environment and the firm. Businesses cannot stay fundamentally stable for an extended period of time due to the constantly changing environment, and some alterations are inherently part of how businesses operate. Nonetheless, the extent of adaptation and the outcomes of adaptation are subject to contextual factors (Child et al., 2017) It is unclear for small businesses whether gaining a competitive edge is their goal. There is rarely any empirical evidence showing how small firms adjust to a setting when essential resources are scarce (Quansah and Hartz, 2021)

Central to the ability of firms to adapt are their resources, which are the assets that contribute to their adaptive behaviour and competitive position. The second strand of argument under which this thesis is founded is the RBTs. RBTs have been applied significantly in strategic management literature. The major proposition from the BRTs is that for businesses to achieve favourable performance outcomes, their resources must be heterogenous and possess valuable rarity, inimitability, and organisational attributes (Barney and Clark, 2007). Previous studies have documented that a firm's resources and specific context are closely related to adaptability (Sarta, Durand, and Vergne, 2021; Saebi, Lien, and Foss, 2017; McKee, Varadarajan, and Pride, 1989). Thus, RBTs

and DCT are relevant tools for explaining how firms utilise resources and develop unique market positions in alignment with changes in the business environment to achieve success (Tehseen et al., 2021; Barney, 1991). Extant research argues that there is a fundamental weakness in the application of RBV and DC theory to the context of small businesses because the small firms' context differs from the underlying hypotheses and assumptions that those theories were based on (Tehseen et al., 2021; Tehseen et al., 2019;). The theories also fail to consider how competitiveness can be achieved through ordinary resources or the different ways in which resources can be modified (Arend and Bromiley, 2009). The perspective of Chakravarthy (1982) is that adaptation is possible with a "strategy of structure" for coping with changes in the environment by leveraging slack resources. He concluded that the extent and nature of resources available in the environment and the capacity to leverage those resources help the firm to survive the challenges in the environment. While this viewpoint has gained popularity in strategic management literature, its applicability is restricted because it does not fully use lean or limited resources throughout the adaptation phase.

The third theoretical context for this thesis is the Strategic Contingency Theory (SCT). The SCT has been classed as ideal for explaining how the firm aligns or fits its resources and competencies with the changing business environmental factors (Tehseen et al., 2021; Hofer, 1990; Daft et al., 1984). However, the 'deterministic' nature of firm choices makes SCT a weaker foundational theory for expounding SME adaptation. This is because SMEs are known to be more flexible in their decision-making process and therefore difficult to predict adaptive behaviours within the contingency framework (Brozović, Jansson, and Boers, 2023)

The process of adaptation is intricate and involves many different elements. Adaptation, RBV, DCT, and SCT serve to clarify the factors that influence how small firms adapt to resource-constrained environments and the different adaptive forms that emerge, even though some of the theories have obvious weaknesses. Understanding adaptation processes and contextual factors has the potential to guide small meat processing firms and policymakers to find solutions to survival and underdevelopment within the small business context. The theories provide a broad foundation for discovering how small meat processors might adjust for growth and survival in a resource-limited context.

1.3. Statement of the Problem

Processed meat products have historically emerged as a necessity to preserve meat (Vandendriessche, 2007). Over time, food processing technologies have evolved significantly, from basic thermal applications such as cooking, roasting, frying, and drying in ancient times, to more advanced modern technologies like high-pressure processing, pulsed electric fields, cold atmospheric plasma, and ultrasound (Knorr, Augustin, and Tiwari, 2020). In the 21st century, food manufacturers face increasing demands: prolonging shelf-life, diversifying sensory qualities (e.g., taste, texture, aroma), addressing nutritional requirements, minimising defects, and delivering visually appealing, safe, and environmentally sustainable products (Fellows, 2022; Knorr and Watzke, 2019).

Traditionally, the small food sector has lagged behind in adopting advanced technologies and investing in innovation (Rahman and Ozuem, 2019). Yet, recent trends show growing incorporation of sophisticated processes and physical infrastructure to improve operational efficiency and product quality (Fellows, 2009). Despite these developments, small and medium-sized enterprises (SMEs) in the meat industry face substantial barriers in aligning with these standards.

SMEs often contribute to sustainable food production through unique, localised methods. However, their outputs frequently fall short of optimal expectations for safety, quality, and consistency due to resource limitations which included limited finances, outdated equipment, insufficient technical competence, and underdeveloped organizational structures (Rahman and Ozuem, 2019). Inadequate energy supplies, lack of skilled labour, and obsolete machinery compound these issues, resulting in poorly processed products vulnerable to microbial contamination, storage degradation, and quality loss (Raak et al., 2017; Adams and Brown, 2007). Additionally, challenges such as irregular supply chains and seasonal availability of raw materials further destabilise their operations (Syukron and Su, 2023).

Moreover, the inherent liability of smallness makes SMEs more susceptible to internal inefficiencies and external shocks due to their limited access to finance, weak market presence, and vulnerability to competitive pressures (Ulvenblad and Barth, 2021; Eggers, 2020; Aldrich and Auster, 1986). In this context, adaptation becomes a critical capability particularly for small firms. Previous studies particularly Schindehutte and Morris (2001) assert that the flexibility, minimal bureaucracy, and informal processes of small firms theoretically allow for faster adaptation. However,

empirical evidence often contradicts this assumption, indicating that many SMEs stagnate or fail to scale due to their inability to effectively adapt under constrained conditions (Anyadike-Danes and Hart, 2018).

Focusing specifically on the meat processing sector, small firms face additional pressures such as evolving consumer preferences, strict regulatory standards, environmental sustainability concerns, and demands for innovation (BMPA, 2019). These firms are expected to meet the same product quality, safety, and packaging aesthetics as large corporations despite lacking access to the same levels of technology, expertise, or infrastructure (Rahman and Ozuem, 2019; Fellows, 2009).

Importantly, there is a notable gap in academic research on how small meat processing firms operating in resource-limited environments adapt to these critical challenges. While existing studies have addressed issues such as value addition, food quality defects, and consumer safety (Rahman and Ozuem, 2019), very few have explored the adaptive strategies and behaviours that enable small meat processors to function, survive, or thrive despite significant constraints. Current literature lacks insight into how these adaptations are formed, the processes involved, and their implications for growth and long-term sustainability. This research aims to fill this gap by examining how small meat processing firms in resource-limited contexts respond to internal and external pressures, and what adaptive forms (if any) contribute to their resilience and value creation.

1.4. Purpose of Research

The purpose of the thesis is to investigate how small meat processors adapt in resource-limited contexts, particularly in the West Midlands region of the UK. Throughout this thesis, the term ‘adapt’, or ‘adaptation’ is used to collectively refer to the intentional decisions undertaken to adjust the firm’s operations or market position in order to reduce the effect of limited resources and environmental conditions on its performance. The ‘resource-limited context’ refers to the range of limited resources and the environmental conditions that create a scarcity of important resources for the firm.

To enhance adaptation of small firms, resources are the source of the firm’s competitive edge. This claim aligns with the body of current research on strategic management. Although the majority of RBT studies favour large businesses, it is believed that the application of RBT is relevant for the SME sector (Darcy et al., 2014).

The DC theory offers a complementary paradigm for emphasising how a firm adjusts its resources to create value. The SCT further provides understanding of how various contextual factors influence adaptation process. The RBV, DCT and SCT, however, fall short in terms of helping to sufficiently explain how small firms adapt and develop. The application of the theories must be tailored to the small business context since SMEs are neither smaller versions of their larger counterparts, multinational corporations, nor are their traits and reactions the same (Kishore and Sundaram, 2018). This in-depth investigation will close the gap.

1.5. Research Objectives

The research objectives which this study seeks to address are to:

1. Explore how resources and capabilities are viewed, defined, or characterised in a resource-limited context.
2. Explore the nature of the business environmental factors and their impact on resource availability and small meat firm adaptation.
3. Explore a range of adaptive forms adopted by the small meat firms within the resource-limited context.

1.6. Research Questions

The research questions which are addressed by the study are:

1. How are limited resources and capabilities viewed, defined, or characterised by small firms operating in a resource-limited context? This question raises issues with the key resources that trigger adaptive responses within the firm. It also provides key potential empirical challenges or opportunities associated with the characterisation of resources by the small meat processing firm.
2. How does the nature of the external environment (including institutional factors) relate to adaptive forms of small meat processing firms in a resource-limited context of a developed country? This question provides further understanding of contextual factors, i.e., external environmental (including institutional factors) impacting the availability of resources and adaptation?
3. How is the firm positioned to adapt with limited resources and the firm's external (and institutional) factors? The question helps to determine the variety of activities,

choices, and strategies (adaptive forms) employed within a resource-limited context?

1.7. Research Rationale

There is a worldwide recognition that small business enterprises contribute significantly to the economic development and stability (Marom and Lussier, 2014), as well as the creation of employment and wealth for national economies (OECD, 2019; Hussain and Matlay, 2007). A plethora of studies and policy documents of governments (e.g., OECD, 2019; Global Entrepreneurship Monitor [GEM], 2013; McKeever, Jack, and Anderson, 2015) have since the 1980s advocated for the support of small businesses to utilise their capabilities and reduce the periodic resource and environmental challenges. Yet, scholars and experts have done very little for small businesses to identify strategies that enable them to contribute meaningfully to the local economy. Small businesses are encouraged to focus on adaptation processes within the changing business environment conditions (Kumar, 2012). The thesis explores adaptive forms of small businesses in the meat processing industry which have operated for at least five years. The outcome from thesis may guide small business owners on how to adapt their businesses in the face of resource constraints and business environment challenges in support of their contribution to employment creation and economic development.

This thesis has empirical, theoretical, and practical significance. It addresses gaps in the literature and extends previous studies on organisational adaptation. Most existing studies focus on the different forms of adaptation, adaptive capacity, and the extent of adaptation in large firms (Sarta, Durand, and Vergne, 2021; Schindehutte and Morris, 2001; Chakravarthy, 1982). Studies on small firms typically explore how adaptation is influenced by external forces, entrepreneurial characteristics, and organisational attributes (Schindehutte and Morris, 2001). However, there is a lack of research investigating adaptation in resource-limited contexts, specifically within the small meat processing sector in the UK. First, much of the earlier research on organisational adaptation focuses on large and established companies, as the large firms rather than small firms, control considerable resources and capabilities that are considered as important requirements to undertake significant reconfiguration and improvement of processes in reaction to changes in the environment (Zahra, Petricevic, and Luo, 2022). Also, adaptation strategies can vary significantly across different

sectors, yet there is a noticeable lack of research examining how limited resources impact small meat processing firms in the study location. For example, small firms in manufacturing might face different types of limited resources compared to those in services or agriculture, but these differences are rarely explored in detail. Small meat processing firms, which operate under limited resources are often underrepresented in studies of organisational adaptation, giving rise to a gap in understanding the unique challenges they face. This thesis aims to fill this empirical gap by examining the various forms of adaptation adopted by small meat processors in such contexts. The thesis also contributes to contingency and resource-based theories. These theories elucidate contextual factors (such as resources and external environmental influences) and their influence on adaptation. Despite the contribution of small firms to national economies, evidence suggests that small firms in developed countries face significant challenges within environments constrained with limited resources (OECD, 2019). The theories enhance the understanding of resources and contingency factors that form the basis for the adaptation of small firms. To ensure the growth and survival of small firms, it is important to identify the factors influencing adaptation and examine the forms of adaptation they employ. By understanding the contingencies of adaptation, small meat processing firms can strategically focus their efforts on effective adaptation.

The outcomes of this thesis have several practical applications. In many transitional and developed economies, including the UK, the SME sector has often been neglected in favour of supporting large-scale enterprises (Aidis and Sauka, 2005). This neglect has resulted in fewer resources available for SMEs to develop their capabilities and opportunities (OECD, 2019). The findings of this thesis can inform specific actions and decisions to meet the needs of small meat processing firms. Understanding how small firms identify and respond to limited resource and changes in the environment is crucial for their competitiveness. Therefore, to be effective, it is important for small firms to consider the specific factors they encounter in their environments (North, Aramburu, and Lorenzo, 2020; OECD, 2019; Indris and Primiana, 2015; Aidis and Sauka, 2005; Baucus and Human, 1995). These factors provide insights into the challenges negatively impacting the development and growth of small firms. Improving strategies for the adaptation of small firms, especially in resource-constrained environments, is essential for their success and for contributing to the growth of national economies. In summary, major stakeholders, including meat processors, food

processing regulators and policymakers, consumers, and the general public, can benefit from understanding the adaptive forms in resource-limited factors.

1.8. Definition of Key Terms

Limited Resources: The term is described as resource scarcity or constrain (Woschke, Haase, and Kratzer, 2017), negative slack (Mishina, Pollock, and Porac, 2004), scarce resources (Shah, Shafir, and Mullainathan, 2015), or the gap between a firm's existing resource pool and a preferable, valuable set of resources managed by another firm (Cannon, Goldsmith, and Roux, 2019).

Dynamic External Environment: The changes or hostility in the operational environment of the firm (Eresia-Eke, Dele-Ijagbulu and Moos, 2019).

Resource-Limited Context: A terminology used to describe the operational environment context where limited resources such as financial, human or machinery are present, and environmental factors such as economy, technology or inflation are hostile or highly dynamic. These factors can affect the position of the firm in the market.

Adaptive Capability: It is the capacity of the firm to respond quickly to changes in the firm's environment and resource-limited context (Dewi et al., 2020).

Adaptive Behaviour: This term refers to the catalyst for responsive actions, enabling an organisation to adjust its business activities to better align with changing environmental conditions (Andersen and Nielsen, 2009).

Adaptive Strategy: This involves independent plan of actions employed by the firm to respond to the limited resources or dynamic business environment (Andersen and Nielsen, 2009; Ganesh et al., 2004).

Adaptive Form: Adaptive form refers to the modification to a firm's strategies, systems, structures or decisions in the resource-limited context in an attempt to gain advantage in the market (Hagen et al, 2017). The adaptive strategies or behaviours moderate the adaptive forms.

Small and Medium Enterprise (SME): Based on the UK definition, the SME is defined by assets, annual turnover, and the number of employees. In simple terms, the SME is defined as firms with less than 250 employees and annual turnover of €50 million (Department of International Trade [DIT], 2018).

Small Business Enterprise (SBE): The UK defines the SBE to be a firm with not more than 50 employees and yearly turnover under €10 million (DIT, 2018).

1.9. Structure of the Thesis

This section provides a clear outline and direction for the readers of the thesis. The goal of Chapter 2 is to firmly establish the relevant academic theories within the field. First, the theoretical context (adaptation and resources) is established. Subsequently, three major theories in relation to resources, adaptation and dynamic business, namely resource-based theories (RBTs), contingency theories and adaptation theories, characterising the current debate on adaptation in resource-limited context are critically reviewed. The chapter critically reviews RBTs as they serve as foundational concepts for understanding the role of resources in adaptation. After that, different strands of arguments and perspectives about the nature of the business environment and how they lead to resource availability and adaptation are also reviewed. The overall conclusion of the chapter is to synthesise the three theories as a basis for explaining the dynamic interaction between adaptive forms, limited resources, and dynamic business environments. The discussion of adaptation in resource-limited context is approached in three ways, which are the adaptive forms and resource-limited context (limited resources and dynamic business environment). In this chapter, conceptualisation of limited resources and their classifications are discussed. The classifications of limited resources which are the inputs/sources for adaptation is considered and applied in the present context. The nature of the business environment is reviewed to determine the factors of the external environment including institutional factors and extent of dynamism on resource availability. In the adaptation section, the characterisation, adaptive response, and adaptive form is considered. The chapter concludes with a proposed theoretical framework which will form the basis for comparison with the any theory which might emerge from the qualitative data.

The empirical part of the thesis is captured in Chapter 3. The chapter is qualitative in nature from multiple case study and cross-sectional. The purpose of the Chapter is to investigate the triad relationship between limited resources, dynamic environment, and adaptive forms. The thesis uses the Saunder's Research Onion to organise the chapter consistently. The chapter discusses the research philosophy, research design, taking into consideration the sources of data and data collection methods. Subsequently, the distinct factors for examining adaptation are distinctly defined and operationalised. The rigour of the multiple case study and the data analysis is also discussed. The chapter also discusses limitation and delimitation of the study.

Chapter 4 focuses on the main findings of the thesis. The data is described in terms of the code and theme from both manual and digital tools such as QSR NVivo 12 Pro. Also, the data are summarised for the major themes using the qualitative comparative analysis process. After that a within-case analysis is conducted for background characteristics of the cases, and the emerging themes around adaptive forms, limited resources and dynamic business environment. A cross-case analysis about emerging themes is also discussed as a separate section in this chapter. Specifically, the thesis analyses dynamic relationship between adaptive forms, limited resources and business environment factors. A comparative analysis of the qualitative data is employed to analyse the relationship between the emerging themes.

Chapter 5 is dedicated for discussing the research findings in the context of the literature review covered in Chapter 2. The chapter discusses the extent of discrepancies between the empirical results and the previous literature on the major themes discovered in the thesis. The theoretical framework in chapter 2 is revisited to position the discussion in the proper context. After that, the different adaptive forms are discussed in the light of the research questions. Also in this final chapter, this thesis concludes by discussing the major findings, implications, and limitations of the thesis, and makes suggestion for the conclusion and implications for further studies.

CHAPTER 2: LITERATURE REVIEW

The purpose of this chapter is to critically review the new adaptation debates in the field of strategic management and entrepreneurship. The main questions that researchers often ask in the field of strategic management is how firms achieve sustained competitive advantage or how do firms leverage their unique strengths to succeed whilst others fail (Makadok, Burton, and Barney, 2018). Previous studies on adaptation have generally focused on adaptive capacity, degree of adaptation and the types of adaptation strategies (Schindehutte and Morris, 2001), as well as on strategic postures (Hagen et al., 2017), strategy typology (Miles and Snow, 1978), entrepreneurial orientation (Lumpkin and Dess, 1996), and hybrid strategy (Alnoor et al., 2022). The variety in the perspectives demonstrates that adaptation is a complex and multifaceted issue. To fully understand and enhance the effectiveness of adaptation of small businesses in a resource-limited context, adaptive forms (i.e. adjustments to the firm's position with limited resources and dynamic business environment) is the focus in this present thesis.

This critical review of previous work helps to establish the relevance of this empirical study and the research questions of this thesis. The review further provides theoretical understanding upon which a theoretical framework of the thesis can be established. Table 2.1 provides the outline of the theories and concepts upon which this thesis is grounded. The table shows the organisation of three interrelated dimensions: Internal Context, Environmental Context, and Adaptation Theories.

Table 2. 1 Literature Review Outline

Internal Context	**Environmental Context**	**Adaptation Theories**
Definition and Characterisation of Firm Resources	Dynamic Environment	Dynamic Capability Theory
Resource-Based Theories	Institutional Theory	Theory of Firm Adaptation
Conceptualisation and categorisation of Limited Resources	Strategic Contingency Theory	Adaptive Forms
SME Adaptation Theory		

This categorisation reflects an attempt to map the multifaceted factors influencing SME adaptation in resource-limited context.

First, the internal context is established as the foundational characteristics of firms, particularly their resource endowments. In line with the view of Miller (2019), a firm is a "bundle of resources, capabilities, or routines" (p.1). The review begins with a critical examination of the definition and characterisation of firm resources, drawing upon the resource-based view (RBV) and its variants to understand how internal resources and capabilities (e.g., skilled workforce, financial, machinery, organisational), can serve enablers or constraints of firm adaptation. A review of the concept and categorisation of limited resources is also presented. The concept of limited resources is to position the adaptation debate for small firms which is structurally predisposed to resource scarcity.

The second strand is the environmental context, which considers the exogeneous and institutional environment in which the firm operates. This includes a critical review of the extent of dynamism of economic, market, regulatory, social and institutional factors. The section reviews key external shocks such as COVID-19 and Brexit in relation to institutional theory, which emphasises how formal rules, norms, and cultural-cognitive structures influence firm behaviour. These institutional pressures are shown to vary in intensity and form, ranging from regulatory turbulence to competitive dynamics, and are visualised in Figure 2.1, which illustrates the interplay of key environmental factors (e.g., technology, finance, labour availability, and government policy) that influence SME adaptive decisions.

The third strand covers adaptation theories. This section combines various theoretical perspectives to explain how firms evolve in response to internal and external pressures. This includes a review of the dynamic capability theory which posits that firms must reconfigure their capabilities to survive the dynamic environments. The theory of firm adaptation also offers a broader lens in understanding how firms adapt in the different ways with their limited resources in dynamic environments. Strategic Contingency Theory further contributes by highlighting the need for alignment between organisational structures and environmental conditions, while the concept of Adaptive Forms encapsulates the flexible, responsive organisational configurations that emerge under resource-limited context.

Lastly, a synthesis is provided of the major theories, including the theory of limited resources, dynamic business environment and firm adaptation. This provides a

non-linear and iterative integrated framework as a means for understanding how small firms adapt in resource-limited context, offering a robust foundation for the subsequent empirical analysis.

2.1. Internal Context

This thesis is situated within the debate on how small firms adapt in resource-limited contexts, with a particular focus on small meat processing firms in developed economies. While substantial work has explored adaptation in SMEs generally, there is a notable gap in literature concerning how firms in small, regulation-intensive industries like meat processing develop adaptive strategies amid chronic resource limitations and demanding institutional environments. This research aims to address this knowledge deficit by exploring how such firms define their limited resources, how contextual factors influence adaptation, and what specific adaptive forms they deploy in practice.

To explore the research questions, the theoretical foundation draws from an integrative framework combining the Resource-Based View (RBV), Dynamic Capability Theory (DCT), and Strategic Contingency Theory (SCT). Together, these perspectives offer a multi-level understanding of both internal resource mobilisation and external contextual responsiveness, providing a comprehensive lens through which to examine adaptation in under-resourced, small-scale meat processing firms.

Adaptation, in this context, refers to the deliberate, often improvised actions taken by firms to reorient operations, resource usage, and strategic focus in response to changing environmental or institutional pressures (Stoica and Schindehutte, 1999). This is especially relevant for small meat processors which are not only challenged by limited access to finance, skilled labour, and technology but also face highly regulated environments with fluctuating supply chains and changing consumer expectations.

The Resource-Based View (RBV) (Wernerfelt, 1984; Barney, 1991) posits that firm-level resources and capabilities are the primary determinants of competitive advantage. However, in the context of small meat processing firms, this theory faces limitations: it often presumes the availability of “valuable, rare, inimitable, and non-substitutable” (VRIN) resources, which may be absent or underdeveloped in such firms. Therefore, the use of RBV in this thesis lies not in confirming advantage through

abundant resources, but in understanding how firms make sense of and mobilise what scarce resources they do have directly addressing Research Question 1.

To overcome static biases of RBV, the thesis turns to Dynamic Capability Theory (DCT) (Teece, Pisano & Shuen, 1997), which focuses on how firms reconfigure internal and external competencies in response to changing conditions. DCT is especially relevant to this thesis because it highlights the importance of micro-level actions such as learning, sensing, and reconfiguring, which are essential when firms must innovate under resource constraints. This framework complements RBV by offering explanatory power for how small firms modify routines and resource configurations to adapt over time, also addressing Research Questions 1 and 3.

However, neither RBV nor DCT sufficiently explains the external environmental pressures that influence resource limitations or adaptation needs especially those stemming from institutional, regulatory, and market forces. To fill this gap, the thesis draws on Strategic Contingency Theory (SCT) (Lawrence and Lorsch, 1967; Kim and Pae, 2007) and environmental dynamism (including institutional factors). SCT posits that effective adaptive choices are contingent on the fit between internal capabilities and external environmental demands. This theory is instrumental in addressing Research Question 2, as it guides the examination of how local environmental and institutional factors, such as food safety regulations, market volatility, and supply chain inconsistencies, positively influence or constrain adaptive strategies in meat processing SMEs.

Emerging literature also supports the idea that firm-specific strategies such as bricolage, frugality-based innovation, informal knowledge sharing, and adaptive learning, can be crucial survival tools for small firms in resource-limited contexts (Baker and Nelson, 2005; De Massis et al., 2017). These methods, while often informal or improvised, allow small meat processors to remain operational despite limited access to finance, skilled staff, or advanced technology. Understanding such micro-level adaptations directly supports Research Question 3, which investigates how these firms strategically position themselves in their local context.

This thesis develops an integrated conceptual framework combining RBV, DCT, and SCT to understand adaptation in small meat processing firms. This framework not only provides a theoretical foundation for analysing how firms perceive and utilise their limited resources but also illuminates the influence of the institutional environment and identifies the strategic mechanisms deployed for survival and resilience. By focusing on

a highly specific yet under-researched industrial sector, this thesis contributes to a more focused and contextually sensitive understanding of SME adaptation under resource constraints thereby filling a critical gap in the existing literature.

2.2. Firm Resources

2.2.1. Definition and Conceptualisation

Resources remain central to contemporary economic and management theories, providing explanatory power for firm performance, growth, and strategic decision-making (Otola, 2018). However, a unified definition of "resources" remains elusive, reflecting the diversity of theoretical perspectives and empirical contexts. Traditionally, firms require a resource base to produce goods and services (de Witt and Meyer, 2010), but what constitutes this base, and how it is interpreted, varies significantly, particularly between large and small firms, and across different environmental and institutional settings.

The common framing, especially within the Resource-Based View (RBV), sees resources as assets that enable firms to achieve competitive advantage (Barney, 1991). They are typically viewed as the internal strengths that differentiate a firm from its competitors. Foundational scholars such as Penrose (2009), Wernerfelt (1984), and Barney (1991) have each contributed influential categorizations, ranging from assets used to perform market-relevant tasks (Penrose) to bundles of tangible and intangible resources strategically employed (Barney, 1991). Kellermanns et al. (2016) broaden this view by highlighting that capabilities, systems, and human capital are critical in enabling firms to create value and formulate strategies. Yet, while these conceptualisations provide valuable insights, they often reflect assumptions relevant to large, resource-rich firms. This introduces a limitation in applying such frameworks to small firms operating in resource-limited contexts, such as the small meat processing firms studied in this thesis. In these firms, the characterisation of resources becomes a fundamental empirical challenge. Unlike larger firms, these organisations may not possess a clearly defined resource base; instead, they operate with minimal, improvised, or non-traditional resources. Therefore, the question of *how resources are viewed, defined, or characterised* (RQ1) is not merely theoretical, it is also deeply contextual and influenced by perception, necessity, and opportunity.

The distinction between tangible and intangible resources remains useful but requires reinterpretation in resource-constrained environments. Tangible resources

include physical infrastructure, finance, machinery, and raw materials (Kamasak, 2017; Balbreath, 2004), but for small firms, these are often limited or improvised. Intangible resources, such as human skills, reputation, customer relationships, and embedded local knowledge, become more prominent and potentially more strategic (Utami and Alamanos, 2022; Abeysekera, 2019). Recent literature highlights that intangible and relational resources like networks, trust, and informal partnerships can serve as reasonable substitutes for financial or technological capital in small firms (Demirkan, 2018), offering a limited answer to how adaptation can occur despite resource scarcity (RQ3).

Moreover, traditional financial reporting and regulatory frameworks often fail to capture the full spectrum of resources that small firms leverage (Balbreath, 2004). This points to a literature gap: while existing research acknowledges resource heterogeneity, few studies critically examine how firms in resource-constrained contexts conceptualise their own resources, or how these characterisations inform strategic responses to environmental challenges.

From a strategic management lens, this neglects the context-specificity of resource interpretation (Seppänen, 2009). Many small business owners may not explicitly identify or label their resources in line with academic definitions; rather, they operate through tacit knowledge and necessity-driven improvisation. Entrepreneurship literature offers alternative views, such as Stevenson's (1983:2) concept of "*pursuing opportunity without regard to the resources currently controlled*", which better reflect the fluid, emergent, and often reactive nature of resource usage in such firms.

This has direct implications for the second and third research questions. The influence of local institutional and environmental factors (RQ2), including regulatory frameworks, supply chain dependencies, and labour availability, interacts closely with how firms perceive what constitutes a usable or strategic resource. Additionally, these contextual constraints influence the firm's strategic posture and adaptive capacity (RQ3), particularly when traditional resource acquisition is not feasible.

Thus, this thesis defines *firm resources* as the tangible and intangible assets (whether formally recognised or informally mobilised) that enable a firm to conceive of and implement adaptive strategies in response to internal and external constraints. This definition emphasises not only the functional role of resources but also the contextual and perceptual dimensions of how resources are interpreted and leveraged in practice, marking a critical departure from generic, large-firm-centric models.

2.2.2. Resource-Based Theories

The objective of firms embarking on any decision to improve their market positions, focuses on critical questions such as "what are our key resources and capabilities?", and "how can we utilise our critical competences and capabilities to improve this area?". The resource-based theories (RBTs) have contributed to the rethinking and reorientation in a way that decision-making is carried out in firms (Foss, 1997). The RBTs provide a framework that emphasises how an organisation's internal resources and capabilities contribute to its competitive advantage and long-term success (Utami and Alamanos, 2022). The theories highlight the importance of a firm's capabilities and resources in determining its performance, long-term viability, and capacity to obtain a competitive advantage.

There are some notable concerns regarding the weaknesses in the theories and constraints in developing practical managerial applications (Cardeal and Antonio, 2012; Kraaijenbrink, Spencer and Groen, 2010;). Yet they have not contributed to understanding how small firms develop adaptive strategies. The specific theoretical propositions under the RBTs which are critically reviewed in this section are the theory of the growth of the firm (Penrose, 2009), resource-based view (RBV), and the VRIO framework).

Theory of the Growth of the Firm. The first theoretical framework considered for analysis in this thesis is Penrose's (1959) theory of the growth of the firm (TGF). Typically, firms have existed to gradually grow and expand using their own internal resources and capabilities. One key characteristic of firms is the amount and quality of productive resources and capabilities they control. According to the theory, growth is driven by the use of excess or underutilised resources, which enable a variety of strategic actions, facilitate adaptation in dynamic business environment, and enable the quick pursuit of newly emerging opportunities (Utami and Alamanos, 2022; Nason and Wiklund, 2018; Kim and Bettis, 2014; Sirmon, Hitt, and Ireland, 2007). The theory affirms further that the firm represents an administrative model that interconnects individual and bundled resources to generate a competitive advantage (Bowman and Ambrosini, 2007). The proposition from Penrose's TFG raises challenges on two fronts: first, the definition of productive resources and the nature of the administrative framework for managing these resources in small businesses. This position is inconsistent with the structure of small business sector. Small businesses lack a uniformly defined administrative framework to manage productive resources, relying

instead on flexible and informal structures (Jennings and Seaman, 1994; Schindehutte and Morris, 2001). Secondly, the theory does not adequately provide useful information on resource versatility, which falls short of giving small businesses operating in resource-constrained environments useful insights into which resources might offer the biggest growth opportunities. Additionally, TGF underlined the heterogeneity of productive resources among firms within the same industry, suggesting that firms could leverage the value in heterogeneous resources from similar firms. TGF does not provide sufficient useful strategy directions to accomplish this. TGF also failed to consider small firms due to their limited resources. Yet, the concepts from TGF have helped forming the foundation of strategy decision making and the means of gaining a long-term competitive advantage (Rugman and Verbeke, 2002).

Resource-Based View. The second theoretical foundation, resource-based view (RBV), conceptualises that firms can achieve competitive advantage from the firm's distinctive, critical resources (Nothnagel, 2008; Barney, 1991; Wernerfelt, 1984). The theory assumes that competitiveness or superior performance is only possible with the possession of *critical resources*. Thus, the relative control of resources by the firm and heterogeneity in resources across firms can influence performance differences amongst firms in identical environmental conditions (Nason and Syracuse, 2015). Penrose's TGF and RBV share many similarities that are often emphasised (Barney, Ketchen, and Wright, 2011; Armstrong and Shimizu, 2007), but they also differ in specific regards. TGF underlines that versatile and productive resources can be used to create a range of products and services (Penrose, 1959). In contrast, RBV emphasises the contribution of valuable, rare, inimitable, and organised (VRIO) resources in helping the firm create efficient strategies (Barney, 1991).

In their review about the implication of RBV on adaptation, Poole and Van de Ven (2004) showed that because of its significant focus on important, firm-specific resources, the RBV has a strong inclination toward adaptation. The unique resources of the firm are expected to contribute to firm survival and its capacity to adapt to changing business environment. In view of this position, the responsibility of managers is to identify, mobilise, configure and reconfigure strategically valuable resources to gain sustainable competitive advantage as well as utilise those resources and other streams of rents against pressures from the business environment (Amit and Schoemaker, 1993). Yet the theory does not clearly state whether a single source or a combination of

resources are useful for developing adaptive strategies. RBV also proves especially challenging in small, multi-sector industry and cross-sectional studies (Poole and Van de Ven, 2004).

The VRIO Framework: The VRIO framework, a strategic tool developed in the 1990s by Barney (1991, 1995), is widely used to analyse a company's resources and capabilities, assessing their potential to generate a sustainable competitive advantage. This framework builds upon the Resource-Based View (RBV), which argues that a firm's unique resources are central to its competitive edge. The VRIO framework operationalises this theory by identify four key issues, namely, Valuable, Rarity, Inimitability, and Organisation, related to the firm's resources.

The perspective that a firm's competitive advantage arises from the uniqueness of its resources is effectively emphasised by RBV. This idea has its roots in empirical studies by Wernerfelt (1984), Barney (1991), and more recent work by Nothnagel (2008). The importance of VRIO resources is emphasised by RBV and its subsequent development through the VRIO framework (Barney, 1991; Barney and Clark, 2007). The transition from RBV to VRIO was made with the intention of improving knowledge of the characteristics of resources required for long-term competitive advantage. Capturing the characteristics of resources, the VRIO framework outlines how valuable resources mitigate environmental threats and enhance competitive strategies (Barney and Clark, 2007; Cardeal and Antonio, 2012). Furthermore, it emphasises the importance of rare resources by emphasising that, unless a resource is rated in the industry, its mere value does not guarantee a competitive advantage (Knott, 2015).

The concept of imperfect imitability clarifies why some resources are difficult to duplicate, particularly those that are rooted in a company's history or complex social networks (Barney and Clark, 2007). Cardeall and António (2012) discuss how organisational resources play a crucial role in converting imitable, valuable, and rare resources into competitive advantages by exploiting opportunities. For instance, new product development and market entry are made possible by specialised knowledge and technical skills (Prahalad and Hamel, 1990). Similarly, the cognitive capacities of entrepreneurs also facilitate the identification and exploitation of opportunities (Alvarez and Busenitz, 2001). Firms with VRIO resources are enabled to formulate and implement efficient strategies (Barney, 1991), such as pricing and market expansion

strategies (Nason and Wiklund, 2015). Businesses lacking unique resources find it difficult to follow growth strategies and have comparable success (Barney, 1991). Firms lacking VRIO resources may pursue other strategies. However, their inability to emulate the strategic endeavours of firms possessing VRIO resources will limit their potential for growth compared to firms equipped with unique resources (Nason and Wiklund, 2015). Despite its widespread adoption, the VRIO framework has faced significant criticism over the years (Chatzoglou et al., 2018; Kraaijenbrink et al., 2010; Lockett, Thompson, and Morgenstern 2009). One of the main critiques is that while the framework effectively analyses internal resources, the focus on the VRIO framework is static in nature, particularly in managing of the dynamic interactions of resources and capabilities (Lopes da Costa, Geraldes, and Geraldes, 2019). While the framework identifies valuable resources, it does not fully address how these resources evolve over time or interact with market forces. Previous research emphasises the importance of understanding the dynamic interplay between scarcity, value-add capabilities, and search in determining the value of a resource (Baia, Ferreira, and Rodrigues, 2020; Collis and Montgomery, 1995). However, the VRIO framework, as it stands, remains somewhat static, limiting its effectiveness in dynamic environments where the value of a resource and competitive advantage are constantly variable (Lopes da Costa, Geraldes, and Geraldes, 2019). In line with previous studies such as Cardeal and António (2012) and Lopes da Costa, Geraldes, and Geraldes, (2019), “O” in the VRIO should be regarded as a dynamic capability. This implies that companies should be able to reconfigure their resources and capabilities continuously to adapt to external challenges (Teece, 2007). By doing so, the VRIO framework could better account for the nature of resources and the competitive landscape, thus enhancing its relevance and applicability in a dynamic business environment.

Following from the VRIO perspective, previous studies present that resource constraints hinder the competitiveness of small firms and how they would necessitate the acquisition of VRIO resources (Bicen and Johnson, 2014; Kostopoulos, Spanos, and Prastacos, 2002; Barney, 1991). Greene, Brush, and Brown (1997) argue, however, that for small businesses with constrained resources, resources may enable growth without being the sole prerequisite for success (Greene, Brush, and Brown, 1997). This perspective challenges the conventional understanding of the role of valuable resources for effective strategies and competitive advantage.

There appears to be a gap in applicability of the existing theory to small firms in resource-limited contexts. The RBV primarily evolved within the context of large established firms, offering limited guidance on how small firms, operating in resource-constrained environments, can develop capabilities and compete effectively (Baker and Nelson, 2005; Kellermanns et al., 2016). However, controlling VRIO resources might enable small firms to achieve some competitive advantage since they are difficult to transfer or buy (Hafiz et al., 2022; Adnan et al., 2018). Small firms with VRIO resources are more likely to be more adaptable and agile in a resource-limited context and dynamic business environment, allowing it to maintain a competitive edge (Hafiz et al., 2022). A small firm can access external resources from its local environment, and social and external networks, which is in line with the RBV (Fang, Wang, and Chen, 2017). This suggests that the nature of the firm's interconnectedness with the environment and social networks can influence their resourcefulness and value. Nevertheless, there is suggestion that small firms can adapt more cautiously with limited resources than in resource-rich firms and environments (Deakins and Bensemann, 2019). For instance, accessing finance or recruiting appropriate skilled human resources are not readily available for the small firms (North, Baldock, and Ullah, 2013). Thus, the small meat processing firm in the UK presents a unique context for contributing to literature to bridge the research gap (Lang, Fink and Kibler, 2014).

2.3. The Concept of Limited Resources

There is currently no consensus within the literature regarding the definition or conceptualisation of limited resources. The term has been described variously as resource scarcity, constrained resource, limited resource (Woschke, Haase and Kratzer, 2017), or as a *negative slack* (Mishina, Pollock, and Porac, 2004). In this context, "slack" refers to the excess beyond the minimum required resources that can improve organisational performance (Nohria and Gulati, 1996). Cannon, Goldsmith, and Roux (2019) discussed limited resources as the discrepancy that exists between the firm's current resource capacity to a desired or valuable standard of resources. Shah et al. (2012:682) described resource scarcity as a "mindset" characterised by perceiving or experiencing a state of possessing fewer resources. (p. 682). According to Mullainathan and Shafir (2013: 86), the subjective perception of having more needs than resources available is what characterises scarcity or limitation.

Notwithstanding the variations in the definitions of limited resources, one notable commonality is the existence of unacceptable discrepancy in resource levels (Haase and Kratzer, 2015). Drawing on Cannon, Goldsmith and Roux (2019), this thesis defines limited resources as the gap between a firm's existing resource pool and a more preferable, valuable set of resources. This discrepancy can significantly influence the strategies and adaptive behaviour of the firm. Limitation can manifest in various resource categories such as financial resources (Kolade, Obembe and Salia, 2019; Senaratne and Wang, 2018; Franco and Haase, 2010; Grando and Belvedere, 2006;Thong, 2001), human resources (Teece 1998; Thong, 2001; Wilson et al., 2003; Halim et al., 2020), technology resources (Hofer and Schendel, 1978; Harindranath, Dyerson and Barnes, 2008; Halim et al., 2020), physical resources (Hofer and Schendel, 1978), and organisational resources (Hofer and Schendel, 1978; Greene and Brown, 1997).

In the literature, there appears a necessity for a systematic and comprehensive understanding of limited resources that can serve as a foundation for exploring the various types of limited resources, their interconnections with distinct firm characteristics, and their influence on adaptive strategies. These resource categories include human, social, organisational, financial resources and physical resources (Table 2.2).

2.3.1. Financial Resource

SMEs facing difficulty to access financial resources, such as liquidity, access, knowledge and skills, is a topic of substantial study of interest for academics and policy makers worldwide (Hussain, Salia and Karim, 2018). The limitation of financial resources, as evidenced in previous research, encompasses various characterisations. Scholars such as Thong (2001) and Franco and Haase (2010) define limitation of financial resource as an insufficiency of funds or liquidity constraints, hindering operational activities beyond routine operations. Welsh (1981) argued that the performance difference between SMEs and larger firms can be attributed primarily to SMEs facing significant financial constraints. Other studies also highlighted the restricted access to finance for SMEs compared to their larger counterparts, potentially impeding their development and growth efforts (Thong, 2001; Senaratne and Wang, 2018; Kolade, Obembe, and Salia, 2019; OECD, 2020).

Table 2. 2 Limited Resource Categories of Small Firms

Limited Resources	**Characterisation**	**Source(s)**
Financial	Inadequate amount of funds, Limited access to capital, High cost of financing options, Preference for self-finance, Lack of financial literacy.	Welsh (1981), Thong (2001) Edelman, Brush, and Manolova (2002), Senaratne and Wang, 2018. Kolade, Obembe and Salia, 2019. De Massis et al., 2018 OECD, 2020. Carbó-Valverde, Rodríguez-Fernández and Udell (2016)
Human	Lack of/shortage in skilled workforce, Deficiencies in expertise, Limited tacit knowledge, Lack of/inadequacies in training and skills development, Lack of experience and qualification, Varying nature of experience.	Thong, 2001. Wilson et al., 2003 Teece, 1998. Franco and Haase, 2010. Green and Martinez-Solano, 2011. Greene, Brush and Brown, 1997.
Technological	Absence of computer technology use, Technology obsolescence, Low adoption of e-commerce, Low investment in IT.	Levy, Powell and Worrall, 2005. Wymer and Regan, 2005. Pritchard, 2006. Harindranath, Dyerson and Barnes, 2008.
Physical	Lack of machinery, production facilities, raw materials, plant.	Andersén, 2012; Greene, Brush and Brown, 1997.
Social	Relationship between firm and its local partners such as customers, Personal network, Relationship with family and friends.	Putnam, 1995. Green et al., 1997 Runyan, Huddleston, and Swinney, 2007
Organisational	Coordinating systems and processes, Informal relationships and structure, Weaker policies, Knowledge of the people including owners, Machinery and material	Hofer and Schendel, 1978 Dollinger, 1995 Greene and Brown, 1997 Edelman, Brush, and Manolova, 2002

SMEs, by their very nature, struggle to access the more affordable financing options available in the market (Edelman, Brush, and Manolova, 2002; De Massis et al., 2018). The availability of financial resources significantly shapes small firms' strategic development and growth prospects, as they influence SMEs' ability to fund

essential projects for their advancement (Thong, 2001; Franco and Haase, 2010; Kolade, Obembe, and Salia, 2019; Halim et al., 2020).

The impact of limited financial resources is particularly severe for SMEs. The challenge of accessing external finance hampers their development and growth (Franco and Haase, 2010; Halim et al., 2020; OECD, 2020). Carbó-Valverde, Rodríguez-Fernández and Udell (2016) argue that a lack of financial knowledge and education of small firms make it difficult for them to access external funding, and their chances of adaptation, growth, and survival (Hussain, Salia and Karim, 2018). Thong (2001), in his assessment of resource constraints in Singaporean SMEs, highlighted that low financial resources compel firms to invest in cost-effective but potentially mismatched market options. The lack of financial resources is most likely to form the basis for acquiring other types of resource. In the absence of financial resources, small firms are often limited by their ability to undertake a reasonable decision-making process for the business or to sufficiently evaluate various options, giving rise to business failure (Smith, 2011).

2.3.2. Human Resource

All the people who work for an organisation are considered human resources (Greene, Brush and Brown,1997). Any issue or attribute that affects the people to function efficiently in the organisation is human resource limitation. In their exposition of resources of small firms, Greene, Brush and Brown (1997) describes human resources to include years of experience, the nature of experience and literacy of the people. This is in line with Thong (2001), and Green and Martinez-Solano (2011) who posited that limitation of human resources includes several characteristics, notably a shortage in number of employees, deficiencies in skills and expertise, inadequacies in training, and skill. Teece (1998) also highlights the rarity and significance of tacit knowledge inherent in employees, particularly as a crucial yet scarce resource for small firms. Moreover, Green and Martinez-Solano (2011) argue that the inherent informality of SMEs often results in a lack of financial resources allocated for training and development of necessary expertise, impeding the acquisition of high-quality human capital that is vital for firm success. Within SMEs, the formal qualifications and experiences of top managers, especially owner-managers, may also constitute a source of resource limitation.

Studies consistently highlight how human capital resources can significantly drive the development and growth of businesses. Formal qualifications and experience exhibit a positive correlation with favourable firm performance outcomes (Franco and Haase, 2010). Citing Green and Martinez-Solano (2011:25), Wilson et al. (2003:7) articulated the cyclical relationship between product quality and human capital in small firms as, "Products are poor because the workforce skills to produce better ones are often lacking, and skills are poor because existing product-market strategies do not demand high level of skills and because work has been organised and jobs are designed to require low levels of skills and discretion".

Conversely, some studies propose that SMEs can effectively devise strategies and adapt without extensive reliance on highly capable human capital, attributing SME success more to owner-manager strategies than to the organisational structure, as observed in larger firms (Chandler and Hanks, 1994; Senaratne and Wang, 2018; Halim et al., 2020). Instances reported in Germany and the UK illustrate SMEs achieving notable performance levels despite severe constraints in accessing finance, human, and technological resources (Halim et al., 2020). This thesis investigates human resources in small firms, and their ability to leverage that resource to creatively solve problems and achieve objectives.

2.3.3. Technological Resource

Technology as a resource is a complex group of physical inputs, processes, equipment, designs, patents, and management systems that support effective business operations (Halim, Andalib, Ahmad, and Ramayah, 2020). The absence of technology adoption has been identified as a notable limitation impeding the development and performance of SMEs. In their study on ICT adoption among UK SMEs, Harindranath, Dyerson, and Barnes (2008) argue that SMEs often grapple with technology obsolescence. They contended that the limited utilisation of technology led to SMEs lagging in technological capabilities, hindering their ability to develop best-practice solutions comparable to those of larger firms. Despite this evidence, only a few studies suggested that lack of access to technology had any impact on firm strategies. Halim et al. (2020), for example, found that the use of technology was indirectly related to the growth of SMEs, but that only a small percentage of SMEs saw technologies as potentially limited resources. The study did not investigate how SMEs adapt when

technology is scarce or unavailable, even though the results support the idea that the companies may have found other ways to gain a competitive edge.

2.3.4. Physical Resource

Physical resources are considered important to the contribution of the growth of the small firms. The different types of physical resources include tools, machinery, production systems technology, materials, and plant (Andersén, 2012; Greene, Brush and Brown, 1997). In general, physical resources often have the potential to provide temporary advantages for small firms, but because of their tangible nature, it can be easier for competitors to copy and make them unable to remain competitive (Andersén, 2012). However, integration of physical resources with other resources can make them function more importantly (Barney, 1991). Owner managers of small firms emphasise the importance of sophisticated and up-to-date machinery in making SME more profitable. Therefore, it is reasonable to take into consideration physical resources, which are characterised as machinery, production facilities, raw materials, plant when investigating limited resources of meat processing firms.

2.3.5. Social Resource

Social resource is one of the types of intangible resources which is related to the performance and competitiveness of firms. The discussion of social resources draws from the works of several authors who define the concept as close relationships, networks, interconnectedness and relationship between the firm and its key stakeholders (Bourdieu, 1983; Portes and Sensenbrenner, 1993; Putnam, 1995; Gulati, 1995). Putnam (1995), and Portes and Sensenbrenner (1993) characterise social resource as an intangible resource with roots in social structures and relationships. Social capital is also obtained from consumer behaviour (Miller and Kim, 1999; Runyan, Huddleston, and Swinney, 2007), networks (Lin, 2017) and the social theory (Coleman, 1988). Social capital generally refers to the concept that social relationships serve as resources that enable people in organisations to act more effectively (Serageldin and Grootaert, 2017). This implies that close relationships among major stakeholders can foster obligations, trust, and expectations, particularly for small firms to access knowledge, skills, capabilities and other production factors from the local community (De Massis et al., 2018).

Bourdieu (1983) defined social resource as the personal networks and the social learning experiences of business owners. His perspective draws attention to early research on entrepreneurship that emphasised the value of social learning, familial ties, and ethnic relationships in acquiring resources (Glade,1967). This also includes informal relationships, inter-firm relationship and managerial ties which are considered important resources for small firms (Paul, Parthasarathy, and Gupta, 2017). Businesses do not operate in vacuum; they operate as part of a network of relationships with people, firms, and other social forces to create value and improve performance.

For small businesses, lack of access to critical resources, such as machines and finance, would direct them to utilising their network for other resources. In their review of exporting challenges of SMEs, Paula, Parthasarathyc and Gupta (2017) identify the lack of knowledge, the lack of experience and bureaucratic challenges as possible gaps for making social resources valuable for small firms. This emphasises the significance of relationships and social learning in mobilising resources critical for small firms to improve performance and competitiveness.

2.3.6. Organisational resources

Organisational resources include systems, structures, organisational routines, and policies (Tomer, 1987; Dollinger, 1995; Greene and Brown, 1997). The organisational resource is intricately linked to the nature of the firm. It significantly helps in fostering positive stakeholder relationships, enhancing employee skills, and boosting overall efficiency and effectiveness (Greene, Brush, and Brown, 1997). This resource works well in a specific context, and this is not transferrable. Research by Dhanaraj and Beamish (2003) asserted that organisational resources and capabilities have positive impact on operational activities, corporate strategy and performance. In line with the position of Barney (1991), not all organisational resources are strategically significant. He argues that the resource may either prevent the firm from conceiving of or implementing strategies or can reduce the effectiveness and efficiency of the firm in general (Barney, 1991).

One of the aims of this thesis is to understand the range of limited resources in small firms. Since resource is context specific, a better understanding of how small businesses define limited resources gains importance in contributing to our knowledge. This prompts the formulation of the initial research question: How do firms conceptualise or define limited resources?

2.4. External Environment Context

The external environment context critically affects the performance and survival of firms, particularly those operating with limited resources. Firms that effectively adapt to external changes are more likely to succeed. The environment presents both opportunities such as access to resources or new markets, and constraints, including regulations, competition, and institutional barriers (Ferreira, Serra, and Reis, 2011). For small meat processors, which typically operate in resource-constrained settings, environmental dynamics become especially important. These firms must cope not only with market forces but also technological, institutional, and socio-political changes that challenge their adaptability and survival (Cingöz and Akdoğan, 2013; Hitt, 2007; Skordoulis, 2004).

This section conceptualises the dynamic business environment and focuses on how small firms, especially in developed but resource-limited contexts, experience and respond to change. It examines environmental dimensions: volatility, hostility, munificence, and regulation, and the local institutional context that influences adaptive choices and capability development. The discussion contributes to bridging a literature gap by interrogating the underexplored interplay between environmental dynamism and how small meat processing firms characterise and adapt their resources.

2.4.1. Definition and Conceptualisation

The business environment comprises external economic, political, technological, institutional, and cultural forces that influence firms' adaptive strategies (Shehu and Mahmood, 2014). These environmental forces affect how firms access and deploy resources. In resource-limited contexts, firms must grapple with regulatory complexity, weak infrastructure, limited financing, and shifting consumer demands. Environmental conditions can both enable and constrain firm adaptation. Historical antecedents such as Kodak and Encyclopaedia Britannica illustrate how failure to respond to environmental change can lead to adaptive obsolescence (Wang, 2016; Johnson, Scholes, and Whittington, 2008). Thus, understanding environmental dynamics is critical, especially for small firms lacking adaptive buffers and capabilities. Four dimensions are particularly relevant: dynamism (rate and unpredictability of change), hostility (intensity of environmental threats), munificence (availability of external resources) (Prajogo, 2016; Shehu and Mahmood, 2014), and institutional factors. These frame the

investigation in the thesis of how small firms adapt in resource-constrained and environmentally or institutionally complex settings.

2.4.2. Environmental Dynamism

Environmental dynamism concerns the extent of uncertainty and volatility of prospective changes and developments in the market that could be generated from the business environment. (Sirmon, Hitt and Ireland, 2007; Eresia-Eke, Dele-Ijagbulu and Moos, 2019). This unpredictability is characterised by the constant change in the environment which can threatens the survival of businesses but can also stimulate opportunities for innovation and growth (Prajogo, 2016). The threat created in the environment is the result of intense competition, limited resources and information asymmetry required for effective acquisition, sales growth rates, shrinking of economy, and changes in customer demand (Magaji, Baba, and Entebang, 2017).

Environmental dynamism is conceptualised differently from different perspectives. Bourgeois and Eisenhardt (1988) and McCarthy et al. (2010) conceptualise the environment as having high velocity, reflecting the rapid and discontinuous changes occurring across multiple dimensions. McCarthy et al. (2010) identifies changes in technology, demand, product enhancements, regulations and competition as measures characterising the dynamic environment. Referred to as market dynamism, Wang and Ahmed (2007) elucidated dynamism in the environment from a combination of several external factors such as change in technologies, regulation, economic cycle and the level of competition within the industry. They argued further that market dynamism was a primary antecedent to dynamic capabilities, implying that environmental dynamism is a factor capable of influencing the establishment and progression of a firm's dynamic capabilities and adaptability (Wang and Ahmed, 2007).

Dynamic business environment is generally categorised as low dynamic environment or high dynamic environment. In a low dynamic environment, changes are less frequent and more predictable (Wang, 2016; Wilhelm et al, 2015). High dynamism, on the other hand, is often accompanied by market volatility, information asymmetry, and competitive pressures that challenge the firms' ability to plan and execute long-term strategies. Changes occur frequently, sporadically, and in an unpredictable, turbulent manner (Wang, 2016). The rapid changes to technology use,

market demands, and possibility of exogeneous factors, for example, can have impact on the conventional structure and standards of the industry in high dynamic markets. For resource-constrained SMEs, this presents a particular challenge: limited capital, human expertise, and infrastructure reduce their ability to respond rapidly to turbulence (Zahra and George, 2002). Studies have suggested, for example, that the food industry is susceptible to high levels of volatility of demand and supply which is likely to deprive smaller firms of access to critical resources for adaptation (Ghadge et al., 2020). Studies also assert that firms operating in highly dynamic markets might necessitate adaptability to manage frequent changes (Cingöz and Akdoğan, 2013; Hitt, Keats, and DeMarie, 1998). Particularly, SMEs with limited market share are directed to develop tailored activities and strategies to surmount market constraints (Kolade, Obembe, and Salia, 2019). Whilst firms operating in a relatively stable environments can plan for resource acquisition and control, a firm in a highly dynamic environment needs to adapt, and for SMEs, need to make use of existing resources to adapt to changes for survival (Ramdani, Chevers and Williams, 2013). However, a highly dynamic environment presents risks and lack of opportunities to acquire critical resources and capabilities for small firms

Previous studies assert that the dynamic environment is not merely a constraint but a potential trigger for innovation and strategic reorientation. For instance, Wang and Ahmed (2007) and Eresia-Eke, Dele-Ijagbulu and Moos (2019) describe how environmental dynamism can catalyse the development of dynamic capabilities, that is, the firm's ability to reconfigure its resource base in response to environmental change. Previous study further argues that dynamism can compel firms to engage in risk-taking activities and increase performance (Magaji, Baba, and Entebang, 2017). These arguments propose that SMEs may adopt different approaches to address dynamism because limited resources render the development and implementation of some strategies excessively expensive to smaller firms.

Other studies, suggest that threats in the firm's environment equally generates new market opportunities and stimulates the firm for new strategy formulation (Baker and Nelson, 2018; Prajogo, 2016). In this instance, firms explore diverse resources and leverage capabilities to address environmental hostilities (Sirmon, Hitt and Ireland, 2007). Nevertheless, SMEs are bound by resource constraints, yet Baker and Nelson (2018) opine that entrepreneurs adopt two main strategies to remain buoyant in dynamic environment: a) reduce the impact of limitations by repudiating the

opportunity to pursue deals with limited resources and adopt new strategic posture such as dissolution, abandonment, mitigation, or b) exploit existing resources and capabilities to reduce the effects of the threats. This perspective is also shared by Wilhelm, Schlömerand and Maurer (2015) who provide alternative view of environmental dynamism. They concur that in highly dynamic environments, opportunities arise, making agility a critical factor for firms to maintain strong performance.

In either case, dynamic environmental conditions would most likely compel firms to adapt. However, adapting in a highly dynamic environment poses significant challenges for managers. Several obstacles hindering adaptive capabilities in such dynamic environments have been linked to organisational inertia, firm size, inadequate governance, as well as organisational and social cultural factors (Cingöz and Akdoğan, 2013). Extant studies have highlighted that a correlation between environmental dynamism and small business strategies exists (Shehu and Mahmood, 2014; Islami, Mulolli and Mustafa, 2018; Eresia-Eke, Dele-Ijagbulu and Moos, 2019), but the distinct divergence in the results of the studies demonstrates why more empirical studies are required in entrepreneurship studies to explore the effects of dynamic business environment on SME adaptation (Sirmon, Hitt and Ireland, 2007). Empirical findings of Shehu and Mahmood (2014), and Aziz and Yasin (2010) indicate that the positive correlation between dynamic environments and business model or performance is not supported. Whereas, studies of Islami, Mulolli and Mustafa (2018), and Eresia-Eke, Dele-Ijagbulu and Moos (2019) showed that the environment is a contributing factor for entrepreneurial action amongst small businesses. Yet for small firms, such reconfiguration often relies on improvisation, bricolage, and leveraging existing resources rather than acquiring new ones.

In the meat processing sector, environmental factors ranging from food safety regulations to changing consumer preferences, demand responsive, resource-efficient strategies. SMEs often engage in strategic selectivity, focusing on feasible objectives within their constraints (Kolade, Obembe, and Salia, 2019). This behaviour illustrates an adaptive logic distinct from that of larger, resource-rich firms.

2.4.3. Environmental Munificence

Environmental munificence is reviewed as the basis for understanding contextual factors towards adaptation of SMEs. Environmental munificence is defined variably as the abundance (or scarcity) of important resources available in a firm's external environment, including capital, knowledge, human skills, and infrastructural support (Sirmon, Hitt and Ireland, 2007; Alemayehu and Van Vuuren, 2017; Neirotti, Raguseo and Paolucci, 2018). The environment can be described as a high or low munificent environment. A high munificent environment is characterised by the abundance of resources, low competition, and availability of multiple opportunities (Alemayehu and Van Vuuren, 2017). Resource availability allows for flexibility in selection in the environment and enables a wider range of objectives, strategies, and adaptive forms (Brittan and Freeman, 1980; Barney, 1991). On the contrary, a low munificent environment is generally hostile with a greater competition for limited resources available (Castrogiovanni, 1991). Lack of resources within the environment have been demonstrated to restrict strategy development process and impede firm's adaptability. (Tang, 2008).

Previous studies have identified the munificence of skilled workforce and competencies as critical determinants of firm growth. For SMEs, a low munificent environment is associated with increased competition for scarce resources, limited state or institutional support, and constrained strategic options. Small meat processing firms frequently operate in such environments. They face challenges such as limited access to skilled labour, difficulties securing financing, and burdensome regulatory compliance costs (Ollinger and Moore, 2009; Franco and Haase, 2010). The scarcity of munificent conditions can suppress growth potential, forcing firms to rely on strategic networks, entrepreneurial creativity, and capability enhancement through internal resource reconfiguration (Neirotti, Raguseo, and Paolucci, 2018). Extant research also emphasised a positive correlation between environmental munificence, strategy and dynamic capability (Arun and Ozmutlu, 2022). Yet, there has not been any sufficient evidence that demonstrates how a munificent environment influences firm's strategies and adaptive forms (Chen et al., 2017). This thesis engages with munificence not merely as a structural condition but as a contextual factor shaping firm strategic posture and adaptive behaviour. The thesis interrogates how firms characterise and respond to resource availability and how their environment either constrains or enables the evolution of resource-based adaptation strategies.

2.4.4. The Industry Environment

The industry environment is characterised by companies of similar types, business activities, objectives, threats, and opportunities (Aithal, 2017). Industry analysis provides clarity on the impact of factors such as economic size, market trends, regulation, technological changes, competition, and consumer behaviour on company performance. For instance, intense competition within an industry often compels firms to allocate significant resources to developing new strategies to outpace rivals (Aithal, 2017). The introduction of disruptive technology, a competitive force that alters the dynamics and norms of an industry, is typically described as "Schumpeterian creative destruction" and represents a significant external shock (Sirmon, Hitt, and Ireland, 2007). Such shocks can render industry processes and techniques obsolete. The rise of social media is a striking example of an external factor that has transformed and impacted every aspect of the traditional industry framework.

Beyond the immediate environmental factors which create uncertainties in the markets, the industrial sector could also be impacted by unexpected events, interruption and cessation of normalcy (Sirmon, Hitt, and Ireland, 2007). The "Great Recession" of 2008-2009 is an example of how exogeneous factors can truncate the structure of industry. In their longitudinal study of how environmental turbulence affected UK SMEs, Sainidis and Robson (2016:3) underlined the negative effects of the recessionary period on SMEs, suggesting that SMEs were hindered from reacting favourably to the economic developments due to inadequate resources. Similarly, most SMEs concentrated on niche markets, and that the strategies and actions of SMEs did not demonstrate extreme diversification in the SME population (Sainidis and Robson, 2016).

Industries are usually structured on the basis of the strength of institutions and legislations to support and regulate activities of industry players. Institutional frameworks and infrastructures are embedded in the firm's local environment. Studies suggest that SMEs in rural areas encounter different levels of institutional and infrastructural challenges (Kolade, Obembe and Salia, 2019). Usually, the tightly controlled institutional regime would make SMEs with limited financial resources unable to cope. Regulations, on the other hand, is expected to uphold and protect the quality and safety of products. The need to ensure that firms comply with the basic industry practices and regulations of high-quality products/services and processes has

led to the development and integration of growth-oriented policies (Ghadge, Er Kara, Mogale, Choudhary and Dani, 2020). In particular, the supply chains in the agricultural sector consist of a dynamic environment characterised by quality, safety, and viable production methods (Ghadge et al., 2020). Nonetheless, for meat processing SMEs, lack of support from the institutions and limited or excessive legislations and international regulations complicates the supply chain network (Ghadge et al., 2020) and hinders their development and existence (Franco and Haase, 2010). Previous studies indicates that regulation remains the second most serious challenge for small meat processors after lack of skilled workforce (Syukron and Su, 2023). Other studies (e.g., Ollinger and Moore, 2009) has found that small meat processors encounter higher costs compared to large firms when complying with food safety regulations. There is also reported evidence to suggest that meat processing SMEs in the EU suffer from what they consider as excessive bureaucracy and unreasonable regulations which constrain their development efforts (Franco and Haase, 2010).

Suppliers are significant component of supply chain networks within an industry. The relationship between the supplier and local firm for enhancing firm development has been firmly articulated in extant studies (Grimm, Hofstetter, and Sarkis, 2014; Ghadge et al., 2020). Previous studies suggested that several scandals such as the "Mellanine Milk (2008)", and "European Horse Meat (2013)" affected the agricultural industry which needed to safeguard the quality and safety of food items, and the sturdy relationship between the supplier and the firm provides that assurance (Ghadge et al., 2020:4), However, small meat processors, a lack of trust may hinder relationships between these firms and their suppliers, as financial capabilities and the inherent characteristics of the firm have been shown to play a crucial role in this process (Ghadge et al., 2017).

Demand for products and services, particularly those in the food processing sector, has witnessed exponential growth over the years. Whilst this is a positive indicator for industry players, SMEs in food supply chains for example have been subject to lack of adequate supply (Ghadge et al., 2020). The over-dependence of energy-intensive resources, financial and human resources due primarily to the perishable nature of the products explains why the supply chains demand uninterrupted number of requisite resources for production and distribution. Historically, the food industry is constrained by primary producers and other resources in respect of how SMEs can develop within the industry context. Johnson, Marti, and Gwin, (2012) argue

that small meat processors encounter a range of challenges, including both physical and financial constraints. Most common constraints include insufficient infrastructure, inadequate facilities, and limited space for slaughtering, storing, and cooling carcasses, which restrict their ability to scale up production (Syukron and Su, 2023). Additionally, these enterprises struggle with limited access to capital, technology, and market networks, all of which are crucial for their growth and development (Sergaki and Michailidis, 2020). These challenges are compounded by the industry's overdependence on traditional practices and the difficulty in adopting new technologies and practices that could enhance efficiency and product outcomes (Sergaki and Michailidis, 2020). The industry-specific limitations and resource constraints faced by SMEs are significantly more pronounced compared to those encountered by larger enterprises (Shibin et al., 2018). The collective influence of these factors affects the growth potential and development of small firms in the meat processing industry, emphasising the need for context-specific interventions and support to address historical challenges and foster sustainable growth.

Firms must exploit regulations designed to ensure quality and safety, which often impose higher compliance costs on smaller meat processors (Syukron and Su, 2023). In rural or peripheral regions, institutional constraints such as inadequate infrastructure, poor access to training, or weak local governance can further hinder adaptive potential (Kolade, Obembe and Salia, 2019). Exogenous shocks like Brexit or COVID-19 have intensified institutional uncertainty and disrupted supply chain stability, disproportionately impacting resource-constrained SMEs (Sainidis and Robson, 2016). Thus, analysing the meat processing industry requires examining how regulatory, institutional, and resource structures interact with firm-level adaptation. The inherent characteristics of the sector which includes stringent standards, fragmented supply chains, and rural disadvantages, affect the strategic responses of small firms. These factors form the empirical and conceptual foundation for understanding how small meat processors define resources, develop capabilities, and adapt in complex environments.

2.5. Institutional Theory and SME Adaptation

Institutional theory offers a valuable and complementary framework for understanding the behaviour of small and medium-sized enterprises (SMEs) beyond the traditional focus on internal capabilities and resource configurations. While theories

such as the Resource-Based View (RBV) and Dynamic Capabilities Theory (DCT) emphasise how firms utilise and transform internal resources to achieve competitiveness and adapt to change, they often underplay the role of external institutional environments in shaping organisational strategies. In contrast, institutional theory places emphasis on the regulatory, normative, and cultural-cognitive structures that influence organisational behaviour (North, 1990).

Institutions, as defined by North (2018; 3), are the "rules of the game" in a society, comprising both formal structures (e.g., laws, regulations, enforcement mechanisms) and informal arrangements (e.g., norms, values, conventions). These structures establish the parameters within which firms operate, offering both constraints and opportunities. For SMEs operating in highly regulated and resource-constrained sectors such as meat processing, these institutional forces significantly influence their capacity to respond to market and environmental disruptions. Unlike larger firms, SMEs often lack the organisational slack and institutional leverage to resist or reshape these pressures, making their adaptive strategies more tightly bound to the institutional context (Graafland and Smid, 2017).

One of the central contributions of institutional theory is the concept of legitimacy - the notion that organisations conform to institutional norms not merely to improve efficiency, but to secure acceptance, credibility, and survival (Suchman, 1995; Struckell et al., 2022). In the UK meat industry, this drive for legitimacy is illustrated through high-profile scandals such as the 2013 Horsemeat Scandal (Yamoah and Yawson, 2014), the 2017 Sisters Food Group hygiene breach (Pointing et al., 2020), and the 2018 Russell Hume case. These events catalysed regulatory reforms and heightened public scrutiny, reinforcing the importance of institutional norms around food safety, transparency, and accountability. For SMEs, these incidents translated into more stringent compliance requirements, with significant implications for operational costs, process redesign, and stakeholder engagement.

Institutional theory explains strategic responses through the lens of isomorphic pressures. DiMaggio and Powell (1983) identify three forms of isomorphism: coercive, mimetic, and normative. Coercive isomorphism refers to the formal pressures exerted by regulatory bodies such as the UK Food Standards Agency (FSA) and the Environment Agency. These institutions enforce compliance through inspections, certifications, and penalties, thereby directing SME behaviour. For example, smaller

meat processors must invest in hygiene monitoring systems or traceability protocols, often at significant financial cost to remain operational.

Mimetic isomorphism, driven by uncertainty, leads SMEs to imitate successful peers or industry leaders. In response to the uncertainty introduced by Brexit and COVID-19, many SMEs adopted digital solutions and restructured their supply chains based on the practices of larger firms or industry exemplars. While such imitation can facilitate rapid adaptation, it also carries risks, that is, practices that are effective for well-resourced organisations may not be suitable or sustainable for smaller firms. This underscores a critique of institutional theory: its tendency to overemphasise conformity and undervalue strategic agency (Battilana, 2006).

Normative isomorphism, meanwhile, stems from professional standards and shared values within industry networks. It influences SMEs through peer-to-peer knowledge exchange, participation in trade associations, and adherence to ethical sourcing practices. These socialised expectations play a particularly important role in conservative sectors like meat processing, where long-standing cultural practices and community standards heavily influence operational norms (Dwivedi and Pawsey, 2023).

In addition to formal pressures, informal institutions such as local norms, trust networks, and reputational concerns, play a crucial role in SME adaptation. These informal frameworks become especially salient when formal institutional support is limited or inaccessible. For instance, SMEs often rely on local supply chain partnerships, personal trust relationships, and informal labour arrangements to maintain business continuity amid disruption. These networks enable knowledge exchange, buffer against external shocks, and facilitate resource sharing (Spence et al., 2003; Mesquita and Lazzarini, 2008).

From a regulatory perspective, SMEs in the UK meat sector face high compliance costs due to complex food safety, environmental, and employment regulations. These costs can limit their flexibility and innovation capacity. While government schemes have attempted to support SMEs through access to finance, training, and compliance tools, many small businesses remain sceptical or self-reliant, often preferring informal support mechanisms due to perceived bureaucratic hurdles (Donbesuur et al., 2020; Hansen-Addy et al., 2024).

Ultimately, institutional theory helps to conceptualise how multiple, interacting pressures (both formal and informal) shape SME behaviour, particularly in resource-

limited contexts. Figure 2.1 illustrates the multi-dimensional institutional environment influencing SMEs. The diagram highlights key institutional and contextual pressures such as regulatory compliance, labour availability, financial access, and technological change, all of which interact to shape firm-level decision-making and adaptation. The dynamic interaction of institutional forces drives adaptive behaviours that range from compliance and imitation to innovation and strategic collaboration. While institutional constraints can hinder SME growth, they can also serve as catalysts for organisational learning, network formation, and legitimacy-building especially when supported by adaptive capacity and context-sensitive governance structures.

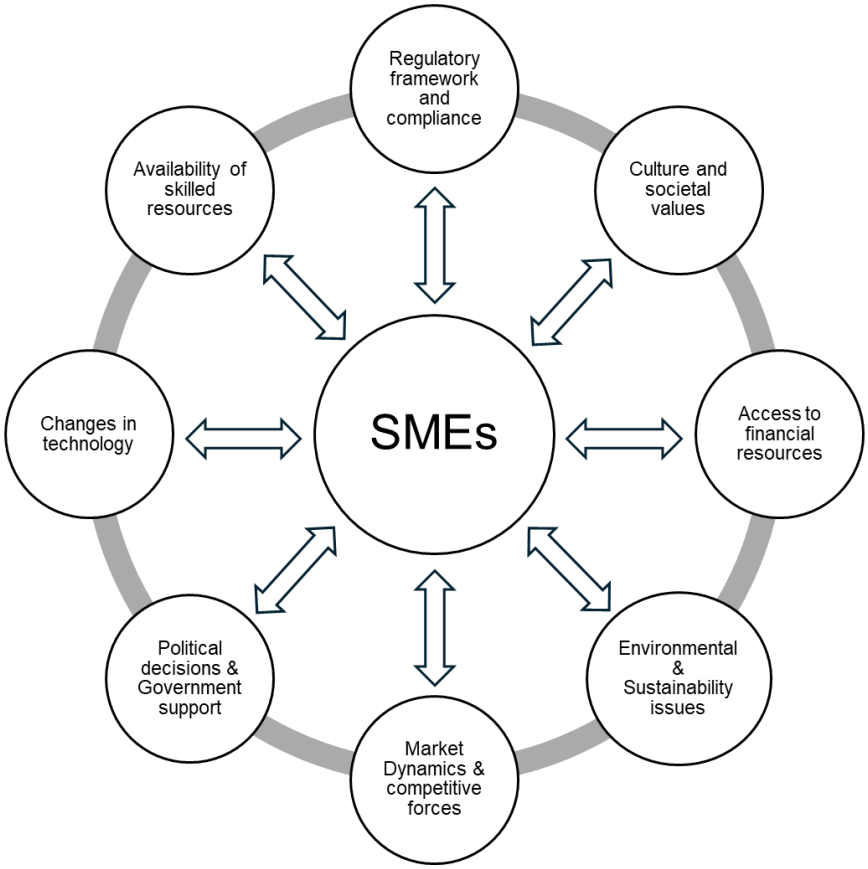

Figure 2. 1 Institutional Factors influencing SME adaptation

Source: Adapted from Balzano, Marzi and Turzo (2024)

2.6. COVID-19, Brexit and SME Adaptation

The COVID-19 pandemic and Brexit have further intensified the influence of institutional pressures. The outbreak of SARS-CoV-2 and the global spread of COVID-19 marked an unprecedented exogenous shock. As shown, SMEs are subject to interlinked external pressures that are exacerbated during crises such as the pandemic. Governments were compelled to implement emergency containment measures, such as

social distancing, mask mandates, and business closures, in alignment with WHO guidelines (WHO, 2020). These policies disrupted supply chains and reduced consumer demand across various sectors (Perdana et al., 2021), while also distorting labour market dynamics (Peñarroya-Farell and Miralles, 2022). SMEs, in particular, faced acute vulnerabilities due to limited access to financial, human, and technological resources (Thorgren and Williams, 2020). Policy interventions such as loan guarantees, tax deferrals, wage subsidies, and direct support (Gourinchas et al., 2020; Akkad and Mouselli, 2023) served to buffer SMEs from collapse. This included a prevention of roughly 9% of failures in affected economies. In the UK, schemes like *Eat Out to Help Out*, operational leniencies, and temporary fiscal assistance allowed food-based SMEs to sustain operations (DEFRA, 2021; Fatouh, Giansante, and Ongena 2021). Nonetheless, research suggests SMEs often possess adaptive capabilities, such as agility and entrepreneurial resilience, that enable them to respond innovatively to crises (Soluk, Kammerlander, and De Massis, 2021; Siahaan and Tan, 2022).

Simultaneously, the 2016 Brexit referendum and the formal activation of Article 50 created a second major institutional disruption that reshaped the UK's regulatory and economic frameworks. Historically embedded in EU regulations governing food hygiene, safety, trade, and labour standards, the industry has suffered significantly from post-Brexit fragmentation. Over 400 EU regulatory instruments once applied to meat processing; navigating their replacement has created substantial compliance burdens (Benton et al., 2019; BPMA, 2024). Brexit dismantled long-standing EU-linked institutional arrangements concerning labour mobility, product standards, and market access (Coulter and Hancké, 2016), thereby creating institutional voids that disproportionately impacted SMEs (Brown, Liñares-Zegarra, and Wilson, 2018). BPMA (2024) reports that labour shortages have become especially pronounced due to immigration policy shifts, with declines in the availability of skilled and semi-skilled workers. As Figure 2.2 shows, labour availability is a critical component of external environment in which the SME is embedded. For a sector that is labour-intensive and previously reliant on EU workers, institutional constraints have compounded productivity losses and raised operational costs (Brown et al., 2019). SMEs generally lack the strategic buffers of large corporations which includes diversified markets or excess capital and thus face increased exposure to institutional change. As indicated previously, factors such as changes in regulation, skilled labour availability, and access to financial and market resources are critical to SME survival. Post-Brexit, many of

these factors became sources of instability. For example, SMEs reported reduced access to EU-based financing, disrupted supply chains, and increased bureaucratic complexity in trade operations (Brown et al., 2018; Sarta et al., 2021). The Brexit-induced reconfiguration of regulatory and market institutions serves as natural research in institutional uncertainty and SME adaptation.

Although many studies have examined resilience strategies such as innovation, diversification, and retrenchment (Kitching et al., 2009; Nguyen and Kock, 2011), they often downplay the extent to which institutional constraints restricted adaptive choices. Institutional theory provides a robust framework for analysing SME adaptation in environments underpinned by constraints and uncertainties. It reveals how external rules, norms, and expectations intersect with internal capabilities to influence adaptive behaviour. In highly regulated and resource-constrained sectors like the UK meat processing industry, the institutional dynamics is crucial for crafting policies and strategies that support SME resilience, legitimacy, and long-term competitiveness. This thesis builds on literature by interrogating how SMEs in resource-constrained environments, particularly food sector firms, adapted to institutional and environmental uncertainties.

2.6. Strategic Contingency Theory and Adaptation

The thesis has already reviewed the nature of environmental dynamism, munificent environments and environmental factors as triggers of resource scarcity and adaptive behaviour or strategies. The literature has reviewed that there is relationship between the dynamic business environment and adaptive strategies. There is limited study to suggest that there exists any adaptive form which are ideal for all businesses irrespective of the nature of resources and the environmental conditions they are embedded (Hofer, 1990). This section reviews a theoretical understanding of how firms adapt and deploy strategies that departs from the perspective of resource-based theories. The strategic contingency theory (SCT) conceptualises how the firm aligns with the state of the business environment. The SCT has basically argued for the fit between organisational structure (Drazin and Van de Ven, 1985) and strategies (Zajac et al., 2000) with the business environment. The theory advocated that environmental factors determine a firm’s pursuit to attain strategic fit, emphasing that the firm constantly adapts in line with changes in the business environment (Kim and Pae, 2007).

Prior research has investigated how the environment influences the adaptation and strategic positioning of businesses (Herhausen, et al., 2021). Adaptation becomes more relevant when the firm encounters hostility in the environment. Adaptive behaviours or the various forms of adaptation are the means to manage uncertainties in a dynamic environment. The extent of adaptation, nature of adaptive forms and strategies for adaptation depends on the state of the business environment: stable and dynamic environments (Kim and Pae, 2007). The adaptive responses of firms to dynamic and relatively stable environments can necessarily be diverse. The initial stance suggested that firms were significantly influenced by the dynamic environment. However, other authors have pointed out that owner-managers possess the capability to mitigate environmental threats by adapting their processes, products, and resources, thus overcoming adverse effects imposed by the environment (Kotey, 2014). As suggested by Kim and Pae (2007), the dynamism of business environment calls for diverse adaptive responses and utilisation of resources from different firms. Sawyer (1993) also found that within a highly dynamic environment, firms engage in more extensive information processing, leading to increased adjustments and adaptations compared to relatively stable environments. This implies that, the rate of adaptation is anticipated to be lower in stable environments compared to dynamic environments (Schindehutte and Morris, 2001).

Table 2.3 provides a summary of adaptative strategies and extends the propositions outlined in the preceding sections. The business environment serves as a stock of resources and knowledge, critical for facilitating adaptive behaviours within firms. The firm's capacity to adapt relies on both the reservoir of resources at its disposal from the environment and its adaptive capability to effectively implement strategies for adaptation.

As previously indicated, environmental factors and the behavioural patterns demonstrated by industry players often exhibit a greater degree of predictability in relatively stable environments (Ferreira, Serra, and Reis, 2011). Previous research suggested that firms adopted a strategy of repeating what has been effective in the past in stable contexts (Nelson and Winter, 1982; Argyris, 1985). Ferreira, Serra, and Reis (2011), for instance, argued that firms in stable environments employ an exploitation or defensive positioning with existing resources and capabilities. Firms in stable environments persist in maintaining the same routines, norms, procedures and their

current portfolio of products and markets, particularly their behaviours and strategies that worked best in the past (Zander and Kogut, 1995; Shepherd and McKelvey, 2009).

Table 2. 3 Nature of Business Environment and Adaptation

State of Business Environment	**Adaptive Form**	**Adaptation Strategies**
Stable Business Environment	- Prospector - Defender - Amorphous	- New product/service development. - Strategic alliance - Market diversification - (Schindehutte amd Morris, 2001; Lavie and Fiegenbaum, 2003) - Inter-Firm Networks to compete - Expansion on current products / Skills - Consolidate market position. - Reciprocal Networking Relationships - Continuous learning and process improvement (Quansah, Hartz, and Salipante, 2022; Ferreira, Serra, and Reis,2011)
Dynamic Business Environment	- Reactor - Myopic - Analyser - Adaptive	- Ongoing product/service development - (Schindehutte amd Morris, 2001; Lavie and Fiegenbaum, 2003) - Partnership with others - (Schindehutte amd Morris (2001) - Verhees and Meulenberg (2004); Lindelof and Lofsten (2006), Kotey (2014) - Reactive and competitive (Miles, Arnold, and Thompson (1993) - Strategic adaptation; - Diversify – markets and products. - Strategic Flexibility. - Develop new capabilities. (Quansah, Hartz, and Salipante, 2022; Ferreira, Serra, and Reis (2011)

Alternative perspectives, such as those presented by Dodgson (1993) and Mason (1993), suggest that within such stable environmental conditions, firms are inclined to make fewer adjustments to their resources, organisational structures, and previous behavioural patterns to consolidate their positions.

Dynamic business environment characterises higher levels of hostility in the environments. For instance, Covin and Slevin (1989) characterise dynamic environments as challenging, uncertain, overwhelming, and deficient in slack resources and opportunities. Dynamic business environment creates limited opportunities and fluctuation factors in which small firms have no control (Davis et al., 1991). In line

with the primary construct of SCT, which is the congruence between the key features of the firm (resources, goals, structure) and contingent factors in its environment (Tehseen et al., 2021), small firms in these instances are challenged to adapt to the opportunities or threats through utilisation of resources and capabilities. This suggests that, in dynamic environments, small firms develop the capacity to withstand the threats or develop new resources or re-arrange existing resources to take advantage of the hostile environment (Sarta, Durand, and Vergne, 2021). One of the adaptive approaches is marketing intelligence (Verhees and Meulenberg, 2004) and information gathering (Lindelof and Lofsten, 2006) for reducing the threats and risks in the dynamic environment.

In a dynamic environment where resources are scarce and profits are anticipated to decrease, proactive, cautiously competitive, and resource-conserving approaches were recommended as adaptive strategies (Kotey, 2014). For instance, a study conducted by Kotey (2014) about small firms in rural Australia found that, in highly dynamic environments, firms adopted 1) marketing position using promotion and selective pricing strategies, 2) human capital approach through retention, motivation and training and development, and 3) strategic alliances with networks and support with partners and customers. Miles, Arnold, and Thompson (1993) advocated for a reactive and cautious competitive approach, emphasising selective pricing strategies as the suitable strategy in a hostile environment. In contrast, small firms adopt strategic nonadaptation, a form that shows a lack of reaction to environmental hostility, with the view that the condition of the business could negatively impact the prospects of the organisation (Vergne and Depeyre, 2016). Some studies found negative relationship between environmental dynamism and entrepreneurial behaviour (Miles, Arnold, and Thompson, 1993), and innovative strategies (Wolff and Pett, 2006). A significant contextual component of the limited-resource context that this thesis addresses is the changing business environment. The literature review in this section does, however, draw attention to the lack of consensus regarding the relationship between adaptability and a changing business environment. The thesis explores the concept of adaptation in order to gain insight into its relevance within limited-resource context, given alternative views on the relationship between adaptation and dynamic environments.

2.7. Adaptation Theories and Strategic Change

The resource-based theories, including the literature of limited resources, provided a clear understanding regarding contextual factors surrounding firm adaptation. The characteristics of limited resources influences how small firms adapt in the business environment. A key factor influencing the development of adaptive behaviours is how firms utilise their resources to align with changing environment. Thus, this section critically reviews the various theories of adaptation including dynamic capability theory (section 2.5.1), and strategic change and adaptation theories (section 2.5.2). The last subsection critically reviews and details the specific forms of adaptation.

2.7.1. Dynamic Capability Theory

Capability has been defined as the firm's ability to perform a set of routines in a consistent basis (Helfat and Peteraf, 2003; Winter, 2003). Throughout the thesis, the researcher follows the definition of capability by Amit and Schoemaker (1993), as the ability of the firm to organise resources usually in combination, with the use of systems and processes, for maximum impact. At any given time, firms typically accumulate a variety of routines and practices, which may be either general in nature or specific to particular business functions (Pisano, 2017). According to Pisano (2017), a firm's capability strategy typically involves making deliberate choices and decisions about enhancing existing capabilities or developing new ones. Whilst firms can do both, limited resources can constrain their efforts.

For firms to survive and grow, they go through various operational activities and undertake different decisions. The different activities and decisions determine adaptation forms in which the firm adopts. Adaptation is a complex process given the complex nature of the firm environment. Within the field of strategic management, the Resource-Based Theories (RBTs) of the firm began to take shape, with scholars such as Teece (1980, 1982) emphasising the critical role that firm-specific capabilities play in gaining an advantage over competitors. RBTs emphasised on utilising unique resources to derive competitive rents. This perspective was based on works by Penrose (1959), Rubin (1973), and later developed by Wernerfelt (1984) and Barney (1986). However, RBTs could not sufficiently explain the dynamics of capability development and how competitive advantage was achieved (Cardeal and António, 2012). The theories could not explain the differences in capabilities between two homogeneous firms (Pisano,

2017). Additionally, the RBTs offer limited guidance to firms on the specific types of capabilities they should aim to develop to achieve or maintain a competitive advantage, beyond general attributes such as VRIO. While the VRIO attributes formed the basis of competitive advantage (Barney, 1991), they were heavily context-dependent, prone to change, particularly for Small and Medium-sized Enterprises (SMEs). SMEs which increasingly pivot from static operations to continuous adaptation (Arthur, 2009), face limitations within the RBTs static view of competitive advantage. Responding to this gap in the resource-limited contexts, dynamic capability (DC) theory is deemed to be more appropriate than the general application of RBTs (Bhattacharrya and Jha, 2015).

Dynamic capabilities were originally pioneered by D. J. Teece to refer to firm's capacity to "integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (Teece et al., 1997, p.516). Teece (2007) focused on three overarching capabilities namely, sensing, seizing, and transforming. These emphasise the identification of market opportunities, leveraging resources and adapting organisations to achieve desired outcomes. Previous research conceptualised that dynamic capabilities make firms develop strategies, identify which markets to enter, systems to operate, technologies to deploy, existing resource positions and organisational capabilities that help them create opportunities in those markets (Helfat et al., 1997; Deakins and Bensemann, 2019). Dynamic capability also demonstrates the process by which firm resources and capabilities are organised and progressed overtime, thus providing insight into how competitive advantage is achieved and sustained (Ambrosini and Bowman, 2009). The various perspectives of DC represent an antithesis within the RBTs that the uniqueness of resources a firm control does not guarantee competitive advantage but rather how the resources are managed. This introduces "decision-making capabilities" on how the firm integrates or re-aligns the resources in its environment (Deakins and Bensemann, 2019). Through the process, the firm may be able to acquire other forms of resources (e.g., social networks) and utilise its expertise to undertake the transformation process.

The dynamic capability literature has not been without its criticisms. The DC literature contributes limited empirical evidence on how to address the weaknesses associated with the application of resource-based theories (Cardeal and António, 2012). The theory provides little guidance on how firms choose between different capabilities. While the framework establishes connections among critical elements, achieving sustainable performance requires robust dynamic capabilities, VRIO resources, and

effective strategies. Consequently, firms with weaker capabilities may need distinct strategies compared to those with stronger capabilities (Teece, 2018). This argument supports the need for differential analysis between larger corporations (see Pisano, 2017) and small businesses. The efficacy of dynamic capabilities can be compromised by poor decision making, strategy and vice versa, significantly impacting how a firm organises its distinctive resources in line with its strategy (Teece, 2018). Given the inherent characteristics of SME - such as their small size and relatively limited resources and capabilities - these businesses may necessitate unique configurations and structural adjustments to cope with environmental changes.

The proponents of DC studies also fail to characterise how different types of firms adapt resources and competencies in different environments. For example, SMEs often encounter challenges in reconfiguring their limited resources such as limited access to external funding and difficulties in acquiring or retaining a competent workforce (Deakins and Bensemann, 2019). Instead, small businesses may adopt other methods in generating capital such as financial bootstrapping, and prudent use of existing limited resources (Lofqvist, 2017). Teece (2018) also emphasised the connection between Dynamic Capabilities (DC) and firm-level strategies, addressing the misalignment of internal elements and environmental conditions, yet these perspectives were rooted in firms operating in relatively stable environments. In contrast, SMEs operating in dynamic business environments are likely to develop alternative capabilities and strategies (Sirmon, Hitt, and Ireland, 2007). These perspectives challenge theoretical viewpoints suggesting that successful entrepreneurs solely thrive in environments with favourable conditions and accessible resources. The question of how dynamic capability is developed for adaptation within resource-limited contexts remains inadequately explored (McKelvie and Davidsson, 2009),

Despite the weaknesses of the DC theory, it contributes to understanding dynamic capabilities and how they influence the firm’s capacity to adapt to change and reconfigure their resources (Pisano, 2017). The DC theory is particularly relevant for firms that demonstrate adaptive capacity, as it conceptualises that firms exhibiting greater flexibility can effectively cope in uncertain environments (Pisano, 2017). Thus, understanding existing resources and how they affect adaptive capability of small firms is a prerequisite for owners or managers to make effective decisions regarding adaptive forms, and for researchers to develop a coherent theory. Consequently, the critical issue

regarding dynamic capabilities is to unravel how small firms identify and select capabilities that lead to adaptation with limited resources.

2.7.2. The Theory of Firm Adaptation

The firm, functioning as an open system, seeks to adapt to its environment to ensure its survival in a long run. Small firms encounter remarkable challenges in achieving success and longevity. The survival prospects for small firms today are notably more difficult than ever before, particularly when operating within resource-constrained environments. Eggers (2020) highlight the concept of the 'liability of smallness' by Freeman, Carroll, and Hannan, (1983), and stress that smaller firms tend to be more susceptible to both internal and external influences. The likelihood that the firm survives is determined by how well it fits into the environment in which it is embedded, and how its adaptations position it within this space (Rant, 2007). According to Helfat and Winter (2011), firms capable of adapting to dynamic business environments are more likely to sustain themselves and achieve superior performance. Conversely, businesses that fail to adapt may face adverse outcomes, leading to detrimental social repercussions within their communities (Reimann, Kosmol, and Kaufmann, 2017).

Adaptation is fundamental to the study of organisations (Meyer, 1982; Chakravarthy, 1982; Greve, 2011). Yet there exist various conceptualisations of adaptation. In literal terms, Leitch (2017) describes adaptation as a process, which refers to the reconfiguration or adjustment of one or more entities as a result of their interaction with or relationship to one or more objects. When it comes to a product, adaptability refers to the entity that arises from the interaction and synthesis of two or more actions (Leitch, 2017). In each of the instances, managers deliberately adjust their strategy and size, as well as restructure their network of relationships. The perspective of RBTs posits that the goal of adaptation is a minimisation of risks associated with uncertainty with resource scarcity (Rant, 2007). In general, the more uncertain the environment, the more firms try to adapt.

In a similar line of argument, Levinthal (1994:171) characterises adaptation as the firm's capacity to enhance resilience, framing it as a modification in a substantial organisational attribute, like a fundamental business strategy or organisational structure, in reaction to environmental changes. Adaptation constitutes substantive modifications

to every aspect of the business to overcome challenges in the external environment (Schindehutte and Morris, 2001; Luokkane and Rabetino, 2005; Vergne and Depeyre, 2016). As resources such as energy, materials, capital and skilled labour become scarce and uncertainty increases, firms are more likely to adapt to the condition.

Adaptation has also been described as actions of the business owners in processing information from the environment and adjusting the responses (Woo et al., 1990). Given the magnitude of the challenges, entrepreneurs need to make different decisions and position the firm in a historically superior position. This raises questions about the different choices and decisions, strategies or modifications invoked, and the uncertainty about the implications and effectiveness of the outcomes from the responses (Walrave, van Oorschot, and Romme, 2011).

2.7.3. Adaptive Forms

Different forms of firm adaptation have emerged as significant orientation of extant research in the fields of strategic management and entrepreneurship (Hagen et al., 2017). Researchers generally conceptualise about the periodic changes in firm's behaviours, structures, systems and processes (Hagen et al., 2017; Miller and Friesen, 1984; Mintzberg, 1983). The underlying assumption with this conception is that adaptive behaviour would most likely determine the performance outcome of firms. SMEs are usually susceptible to limitation of resources (e.g., human, financial, network, etc) and change in business environment, therefore it is reasonable to explore different ways for SMEs to adapt (Borocki et al., 2019). This section discusses the concept of adaptation and adaptive forms of SMEs, particularly in dynamic environments where resources are usually scant.

Research into adaptive forms has played a crucial role in the strategic management and entrepreneurship literature. However, there is no established definition or model that fully captures the breadth of current theories concerning effective adaptive form. The term has vaguely been expressed in literature to mean different orientations of the firm in their interaction with the business environment. Expressions such as strategic posture (Hagen et al., 2017), strategy typology (Miles and Snow, 1978), entrepreneurial orientation (Lumpkin and Dess, 1996), Porter's competitive strategies (Porter, 1998), resilience (Van Der Vegt et al., 2015), traditional risk management perspectives (Mithani, 2020), and hybrid strategy (Alnoor et al., 2022) have often been used generally to represent adaptive forms. Inherent in these

propositions is the suggestion that changes in the firm's internal or external environment could be a threat or opportunity, and the focus is to respond to the changes. The objective is for the firm to adapt in a way that aligns its capabilities with the current state of the environment, aiming for an optimal fit. Below strategic posture, strategy typology, entrepreneurial orientation and hybrid strategy concepts will be explained in detail.

Hagen et al (2017:7) define "strategic posture" as the way in which the firm would generally position itself and respond to its environment and argue that it is generally embedded in the firm's culture, structure, and routines. . They identified four strategy types (lack of strategy type, market/selling orientation, innovation/production-oriented type, entrepreneurial/growth-oriented type) which help to determine the adaptive behaviour in the market (Hagen et al., 2017). Because their focus was on internationalisation of small firms, the thesis does not consider these strategy types as grounds for investigating adaptive forms of small firms in resource-limited context.

Borocki et al. (2019) describe strategic posture as the most appropriate strategy required by the SME to survive and maintain their market position. Using the 'SPACE' model in determining the strategic posture, they identify Defensive, Aggressive, Competitive, and Conservative as the common strategic behaviours depending on specific criteria in the business environment. Their study is built upon the work of Miles and Snow (1978) who provided similar understanding and conceptualisation of adaptation by suggesting how strategic decisions of top managers are critical determinants of organisational structure and processes.

Miles and Snow (1978) argue that these decisions result in four distinct forms of adaptation, namely, Prospectors, Defenders, Reactors, and Analysers, each with their strategy choices. *Prospectors* identify the environment to be relatively hostile and uses its flexibility to exploit product and market opportunities (Saraç, 2019). *Defenders*, on the other hand, perceive the environment as relatively stable and cautiously approach strategy choices, focusing on smaller market segments due to cost implications. Firms in this position ignores the demands of the business environment to remain structurally and strategically consistent. The perspective put forth by Chakravarthy (1982) conceptualises the defenders as unstable, suggesting that firms attempt to shield themselves and diminish their adaptive capability against the hostile changes in the business environment (Sarac, 2020). While this mode of adaptation might yield short-term success, prolonged unresponsiveness could render firms vulnerable and

constrained in the long run (Chakravarthy, 1982). *Analysers* assume the role of prospectors and defenders, aiming to minimise risks while capitalising on opportunities in the market (Miles and Snow, 1978). *Reactors* exhibit a consistent tendency to adapt their structure, strategy, technology, and processes reactively to changes in the business environment (Saraç, 2019). Chakravarthy (1982) described this form as being in an unstable state, to wit, responding to the changes and demands from the business environment. Reactors generally signify a strategic failure or a "residual strategy" (Zubaedah, Fontana and Afiff, 2013:19) when other three fail in their implementation. Given the rise in competitiveness and globalisation, companies are increasingly relying on getting involved in inter-organisational networks and relationships (Jiang et al., 2018; Kofler and Marcher, 2018; Aureli, Ciambotti and Del Baldo, 2011). Inter-firm networks emerge as an adaptive strategy for firms to exchange resources, maintain competitiveness, and enhance processes and products (Huggins and Thompson, 2015; Rant, 2007). In highly competitive environments, firms tend to collaborate to facilitate growth challenges, build social capital, enable knowledge exchange, acquire valuable resources, and overcome challenges in finance, technology, marketing, and distribution. These networks help firms meet market demands and enhance their processes (Anderson, 2002; Westhead, Ucbasaran, and Binks, 2004). This inter-firm cooperation is particularly beneficial for SMEs as a resource-saving and risk-sharing strategy, particularly because they often lack the resources and capabilities to adapt effectively on their own (Kofler and Marcher, 2018). Kofler and Marcher (2018) stress that the importance of vertical and horizontal relationship which can provide primary instrument of market entry and growth strategies for firms to achieve a competitive advantage. Aligned with prior studies, Aureli, Ciambotti, and Del Baldo (2011) also confirmed that the network contract serves as a tool for pursuing strategic objectives (whether defensive/reactive or offensive/proactive) and for coping complex and unstable environments while enhancing competitiveness. However, there are various forms and motivations for cooperations amongst firms which may undermine the value in the inter-firm networks (Aureli, Ciambotti, and Del Baldo, 2011). Consequently, this thesis focuses inter-firm networks as a critical adaptive strategy in resource-constrained environments. Additionally, it seeks to explore whether and how adaptation occurs within inter-firm networks, taking into account the various actors, forms of interaction, and the overall success of these dynamics.

The hybrid strategy from the work of Alnoor et al. (2022) is considered an emerging and novel concept that leads to superior performance than pure strategies from the strategy typology of Miles and Snow (1978) and Porter's Competitive Strategy (Alnoor et al., 2022). The hybrid strategy involves "integrating a set of strategies" (Alnoor et al., 2022: page 4) for addressing different levels of challenges facing the firm. Previous research argues about the importance of hybrid approach, which includes leading to superior performance of firms, and built upon most relevant pure Miles and Snow, and Porter's Competitive strategies. The studies discussing Miles and Snow pure strategies identifies weaknesses in the strategies based on firm characteristics (Alnoor et al., 2022). For example, defenders and prospectors are required for innovation, whereas analysers are required for strategic decisions in uncertain environments (Albahri et al., 2021). Again, inappropriate strategy adoption can lead to failure of firms as the strategy may not be suitable for the capabilities of the firm. The hybrid form of adaptation based on the pure strategies is adopted in different firms to survive in the most challenging environments. Despite the benefits, several challenges with the hybrid form of adaptation exists.

Lumpkin and Dess (1996) introduced the concept of Entrepreneurial Orientation (EO), encompassing processes and decision-making practices that foster new product or market development. They identified five key adaptive orientations (innovativeness, autonomy, risk-taking, proactiveness, and competitive aggressiveness) that firms exhibit during new entry (Lumpkin and Dess, 1996). EO aligns with the notions of adaptation, acknowledging its dependency on external factors, internal aspects, and owners' characteristics. Innovativeness, risk-taking, and proactiveness collectively drive firms to pursue innovative initiatives, consistent with Miller's (1983) original conceptualization. Moreover, autonomy signifies a firm's ability to initiate and complete actions independently. Research indicates that firms demonstrating a strong EO effectively respond to market conditions (Teng, 2007). However, firms in resource-scarce environments are less likely to exhibit any orientation (Jiang et al, 2018). While these perspectives offer valuable insights, integrating additional features or tailoring EO dimensions to specific contexts is essential (George and Marino, 2011; Wales, 2016). Studies on EO in diverse contexts have yielded varied conclusions on objective pursuit (Kreiser et al., 2019). For instance, Alarifi, Robson, and Kromidha (2019) concluded that EO positively influences firm performance but acknowledged difficulties in substantiating different strategic processes. In general, EO has become a key concept in

strategic management and entrepreneurship, as reflected in the behaviour of senior managers of the firm (Sakari Soininen et al., 2013). EO is typically related to the preferences, beliefs, and behaviours of the firm's senior managers (Covin, Green, and Slevin, D.P. (2006),). The focus of EO in this thesis is concerned with owner characteristics, desires and goals in the pursuit of adaptive strategies and firm performance. The adaptive forms in Table 2.4 below exhibit similarities with nuanced differences.

Delmas and Pekovic (2015) argues that scarcity of resources in challenging business environments make firms adopt a pure, distinct form of strategy or adaptation. However, the RBTs provides the need to consider the external environment, internal environment and resource pool in determining strategy focus of the firm. The main challenge is for firms to adopt strategies or decisions that are more adaptive to the challenging situations (Liao, Zhang, and Jiang, 2016). There is little evidence in literature about the impact of internal and external environmental challenges on hybrid form of adaptation (Alnoor et al., 2022).

The pressure from the internal and external environment can force small firms to adopt a flexible organisational form (Claver-Cortés et al., 2012). Existing literature generally focus on achieving a fit between the strategy and organisational form, without the influences of the external and internal environment, integrated with hybrid form of adaptation. The hybrid form of adaptation is more suited to "agile and flexible system" (Alnoor et al., 2022:11), which is a characteristic of small firms.

The existing research explores the relationships among various adaptive forms. However, empirical verification remains partial, raising more questions than providing answers regarding the actions or behaviours leading to adaptive forms. It is imperative to understand the benefits of striking a balance between various adaptive forms and the combinations adaptive strategies/behaviours that might be relevant for a firm's goals. In resource-limited contexts, research on non-innovative small firms is especially scarce (Magri, 2009). Furthermore, there is a significant knowledge gap regarding the precise adaptive behaviours, adaptive form and the mechanisms that influence the performance of small firms. Firms often adapt in unique ways; therefore, it is impossible for a single theory to prescribe which adaptive form is suitable (Ferreira, Serra, and Reis, 2011).

Table 2. 4 Review of Adaptive Forms

Scholar(s)	Adaptive Forms	Definition	Adaptive Strategies
Miles and Snow (1986) Anwar and Hasnu (2017) Hagen et al. (2017)	Defenders	Conservative, stability-oriented position	Conventional Strategy - R&D, innovation, and consolidation
Borocki et al. (2019)	Reactors	Continuously reactive in strategy	Flexible; lack of consistent strategy
	Analysers	Moderately adaptive risk-takers.	Strategic posture
	Prospector	Boldly innovative, growth-centric firms	Aggressive Posture; new opportunities (e.g., products and services)
Hagen et al. (2017)	Lack of Strategy Type	No clear pattern of strategies and approaches	No adaptation
	Market/Selling Orientation	Adaptation of marketing strategies including price, communication.	Marketing mix activities Differentiation strategy
	Innovation/Production	New product development and production-focused attitude	New products/processes
	Entrepreneurial	Urge for international markets.	Niche strategy, growth aspirations, advantage seeking
Anwar and Hasnu (2017)	Consistent	Consistency in their adaptive behaviour	Continuity in strategies, strategy for extended period.
	Flexible	Quick response to hostile business environment	Adapt, change and exploit opportunities.
Anwar and Hasnu (2017) Alnoor et al. (2022)	Pure Hybrid	Mutually exclusive generic competitive strategies A combination of generic competitive strategies	Cost leadership, differentiation Non-emphasis approach.

Covin and Slevin (1991) Lumpkin and Dess (1996)	Entrepreneurial Strategic Posture/Entrepreneurship Orientation	Processes, practices, and decision-making activities required for new product and market development.	Innovativeness, Proactiveness, Risk-taking, Competitiveness, Autonomy
Chakravarthy (1982)	Unstable state	Protection of fragile firm from hostile environment.	Narrow market segment, non-adaption of products or assets, stabilise actions
	Stable state	Reactive to changes in business	Reactive, constantly adapting,
	Neutral state	Have adaptive capacity to withstand the challenges.	Anticipatory, innovative
Anderson (2002); Westhead, Ucbasaran and Binks (2004)	Network and Inter-firm relationships	Exchange of resources to build capacity and enhance competitiveness.	Acquire new resources. Exploit knowledge exchange Resolve challenges in supply and value chains.

The theory of adaptation typically offers two boundaries within the environment-firm continuum, namely the "environmental determinism" and "strategic voluntarism". It posited that with "environmental determinism", the adverse conditions within the environments could constrain the firm's ability to adapt and change, typically rendering role of management passive in highly volatile environments (Hrebiniak and Joyce, 1985; Gopalakrishnan. and Dugal, 1998). However, because organisations have inertial structures they cannot adapt easily; consequently, the environment determines the extent to which organisations can survive (Gopalakrishnan and Dugal, 1998).

The voluntarist perspective emphasises the manager's ability to craft strategies that offsets challenging environmental conditions on the firm. Gopalakrishnan and Dugal (1998) argue that strategic options are more limited for smaller firms compared to larger ones. Entrepreneurship studies suggest, however, that in highly adverse, resource-limited contexts, owner-managers innovate with available resources to forge new opportunities for survival (Baker and Nelson, 2018). These contrasting viewpoints on firm adaptation within the environment validate the significance of this study.

2.8. SME Adaptation Framework

The framework, called 'SME Adaptation Framework', provides a guideline for understanding the contextual factors leading to various forms of adaptation of small meat processing firms. Not much reseach has been dedicated to adaptation in small busineses in resource-limited context (Sarta, Durand and Vergne, 2021; Schindehutte and Morris, 2001). There is little or no evidence of adaptation of small firms in resource-limited context. There is need for a deeper understanding not just of adaptation as a phenomenon, but also of the limited resources and environmental factors leading to adaptive forms. For instance, whilst Sarta, Durand and Vergne (2021) inductively establish a baseline definition of organisational adaptation, and identify different attributes and levels of adaptation, the study did not establish the relationship between adaptation and resource-limited context. This section builds on the literature review to create a conceptual framework. The SME adaptation framework (Figure 2.2) is an extension of previous research which suggest that firm achieve sustained competitive advantage by employing strategies that exploit internal resources and capabilities to exploit the opportunities and threats through the changes in the external environment (Barney, 1991). The literature review on resource-based theories,

environmenal dynamism, and organisational adaptation provides the theoretical foundation for developing the framework for adaptive forms in resource-limited context. The framework identifies the following elements: resource-limited context factors (external environment characteristics, internal/firm characteristics), and adaptive forms, and how they are organised and interacted for intepretation of the phenomenon. Rather than isolating the concepts as in previos studies, this thesis is specifically interested in identifying a range of adaptive froms as the firm interacts with the dynamic business environment with its limited resources.

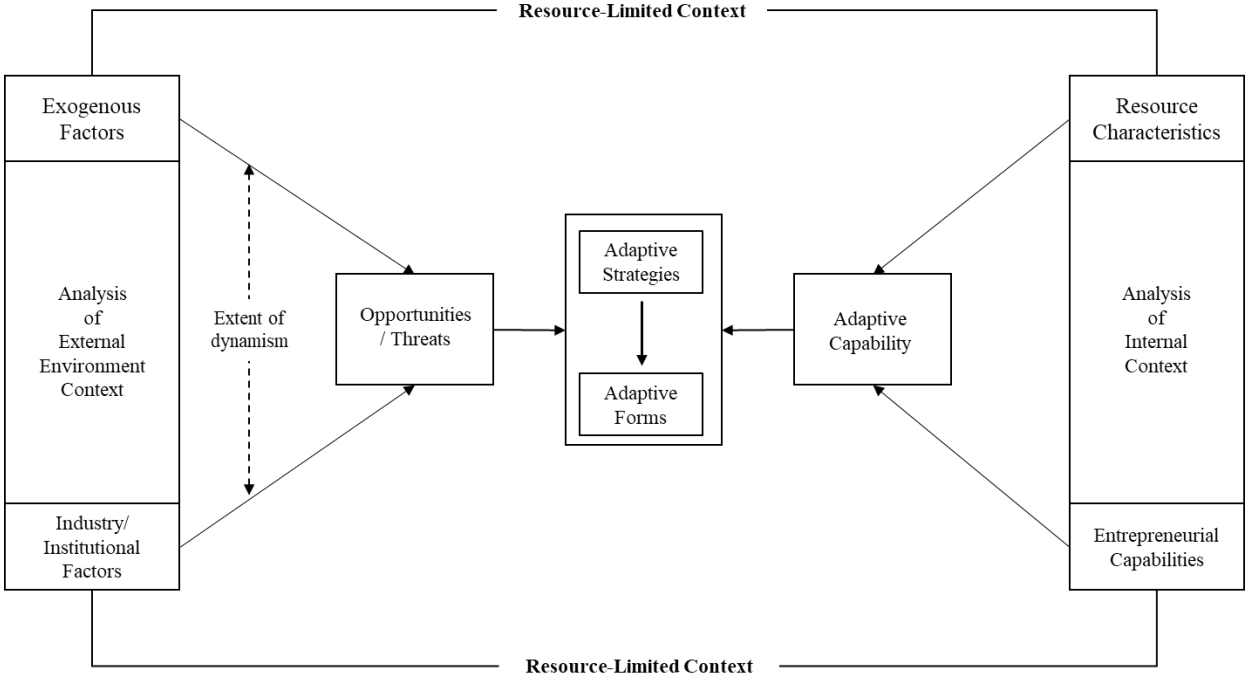

Figure 2. 2 SME Adaptation Framework
Source: Researcher's Construct
Notes: Arrows show influence and relationship between factors. The thick borders show the majors constructs under consideration whist the broken lines indicate the different dimensions or examples of the constructs.

The framework identifies and links three main constructs in the resource-based adaptation process: firm context (resources and capabilities), dynamic business environment, and adaptive forms. The constructs and the way they are related are considered in a specific geographical region and small firm context. The SME Adaptation Framework follows extant studies on organisational adaptation which seek to establish the relationship between controlled internal factors and dynamic business environmentThe basic assumptions upon which the framework is founded is that business owners find appropriate fit between internal strucures and external environments to develop strategies for improved performance (Borocki et al., 2019).

The Contextual Factors on Adaptation

Previous studies propose that the way in which firms adapt is determined by the firm context and the dynamic external environment in which they are embedded (Shanaz et al., 2021; Kim and Pae, 2007; Barney, 1991). This perspective is the position of the dynamic environment theory, strategic contingency theory, resource-based theory and organisational adaptation theories. Earlier studies conceptualise that the firm behaviours and strategies are contingent upon internal and external factors (Hannan and Freeman, 1984; Kim and Pae, 2007). The internal context is concerned with all the conditions embedded in the firm, including resources, abilities, and core competencies (Hitt et al., 2001). The external and internal factors surrounding the small firm define the resource-limited context of this thesis. Understanding these contextual factors, managers of firms are able to evaluate their decisions or develop adaptive positions (García-Pérez et al., 2014). The external environment context and the internal context (internal factors) are intricately linked, as seen in Figure 2.2. In line with previous studies, contextual factors include characteristics of the firm, firm size, external business environment and nature of industry in which the firm operates (Choudhury, 2018).

Analysis of External Environment Context: The framework shows the external business environment as a component of the resource-limited context. The external environment involves all the conditions outside the control of the company but which can potentially affect the company's market position or strategy (Sirmon, Hitt and Ireland, 2007; Willimans, 2001). The analysis of the external environment leads to two dimensions of environmental factors, namely, exogeneous factors and industry factors. The exogeneous environment imcludes changes in the social, cultural, political, legal, economic, technological, competitors and customer requirements which can influence the business (García-Pérez et al., 2014; Daft, 2007). From Figure 2.4, the industry environment represents the other dimension of the external business environment. The industry factors cover the condition of the industry of the firm, such as market size, market gorwth, institutional composition of the industry, industry-related regulations and the level of competition. The nature of the industry environment can influence the capability of the firm to accumulate resources for strategy development and adaptation. Previous theoretical and empirical studies show differences in adaptive behaviours and

performance outcomes across different sectors (McKenny, 2018; Hagen et al., 2017; Rant, 2007; Jones, 2004; Edelman, Brush, and Manolova, 2002; Schindehutte and Morris, 2001). The claim is that, depending on the industry sector, a firm's ability to adapt and survive may vary due to resource availability or accessibility (Watson, 2007). In a highly munificent industry context where resources are available, competition for resources is low, thus enabling firms to survive with diverse strategic entrepreneurial orientations (McKenny, et al., 2018).

The condition of the external environment can be described as stable or subject to frequent fluctuations and hostility that managers have to consider during decision-making process. The extent of dynamism or hostility in the business environment concerns the lack of certainty that leads to insufficient information for firms regarding resource utilisation and the strategies necessary to sustain a competitive advantage (Borocki et al., 2019; Sirmon, Hitt, and Ireland, 2007). There is competition of resources for firms to survive in an open market, and that the different decisions required for adaptation are based on an attempt to secure critical resources (Ghiasi et al., 2023; Pfeffer, Gerald and Salancik). In a dynamic envieonment, the firm develops the ability to cope with the challenges and threats arising from the market. For example, Ghadge et al. (2020) suggest that the food industry faces considerable fluctuations in both demand and supply, which can potentially result in limited access to critical resources and adaptive capability for smaller firms. Extant research also emphasises that the competitiveness within an industry necessitates firms to allocate a significant portion of their resources toward developing new capabilities and strategies to outperform competitors their (Aithal, 2017). Moreover, tighter regulations and excessive bureaucracy in the food industry make it difficult for small firms to access resources as compared with the large firms (Franco and Haase, 2010; Kolade, Obembe and Salia, 2019; Ghadge et al., 2020). Thus, the framework considers the extent of dynamism and hostility in the external environment, and the importance of these variables to the firm. The framework also considers how the firm responds towards external factors, which can determine availability or accessibility of resources and adaptive capability. The major finding from the work of Hall (1980) suggest that successful firms adopt adaptive strategies in response to hostile condition of the environment whereas firms which fail to engage in such strategies tend to have challenges (Bacot, Hartman, and Lundberg, 1992). In line with previous positions, the dynamism in the environment determines how the firm reacts and adapts (Sarta, Durand

and Vergne, 2021; Neirotti, Raguseo and Paolucci, 2018; Rant, 2007). The dynamic environment is often riskier for small firms. Thus, the threat of failure prompts firms to be more innovative and responsive, leading to high degree of adaptation efforts compared to firms in stable environments (Covin and Slevin, 1991). For instance, Sirmon, Hitt, and Ireland (2007) found that in dynamic environments, small firms are able to develop alternative adaptive capabilities and strategies. On the other hand, Miller and Friesen (1984) found that in stable environments, small firms might be less inclined to adapt due to a lack of external pressure. They propose that stability could lead to complacency and reduced motivation for adaptation. Whilst Sarac (2019) suggested firms adopt a cautious, defensive form of adaptation, others, for example, Barney (1991), and Ramdani, Chevers, and Williams (2013) suggested that in stable environments, firms plan for resource acquisition and control and allows for flexibility in resource selection and strategies. The framework provides understanding of "external alignment" construct, which explains the factors that enable the firm to develop adaptive capability and corresponding adaptive forms to achieve alignment with the environment (Yusof and Aziz, 2008: 111).

Analysis of Internal Context: The internal analyis of the firm environment is the other companent of the resource-limited context. The internal factors include two elements: the controlled resources (people, machinery, finance, etc), and entreprenuerial actions (strategic intent, objectives, culture, structure, leadership, knowledge) that lead to specific capabilities for the firm. The firm is defined as a bundle of resources which determines adaptive capability to utilise opportunities and survive in changing business environment. In line with the views of previous studies, the framework provides that the nature of resources a firm controls and the idiosyncratic entrepreneurial actions influence the firm's adaptive capabities which then affect adaptive strategies of the firm (Ghiasi et al., 2023; Barney, 1991). This implies that, a change in the firm's resource based is a positive antecendent to change in its adaptive adaptability (Eshima and Anderso, 2017). However, not every firm strategically controls important resources for strategy formulation and implementation (Barney 1991). The framework provides understanding that small firms with lac of essential resources and capabilities may stifle adaptive capability and the form of adaptation which emerges. According to Hewitt-Dundas (2006), the small firm context lacks resources in terms of the quality, number, and accessibility. Yet prior studies suggest that the flexibility of small firm make them

able to develop dynamic capability with limited resources (Sen et al., 2023; Chaudhary, 2019; Brozovic, 2018). Along with previous studies, the framework indicates that resources per se do not provide adaptive capability and adaptive strategy. Small firms may have to develop adaptive capabilities and deploy adaptive strategies (e.g., resource optimisation, defensive, reactive) for survival in the resource-limited context (Ghiasi et al., 2023). The framework also shows other internal factors such as the strategic intent, values, and experience adaptive capability and the adaptation process (Sarta, Durand and Vergne, 2021). The overall objective from the internal analysis is to understand the "internal alignment construct" which is the fit between the internal factors (resources, values, leadership, structures, processes) of the firm in order to better adapt in relation to the condition of the external environment (Yusof and Aziz, 2008: 111)

Adaptation Process: The final component in the framework is the adaptation process. Thus far, the theoretical framework (Figure 2.2) conceives that adaptation process consists of the integration of the fit of the internal firm context (resources, strategic intent, structure values) and the fit between the firm as an entity and the external environment. The adaptation process comprises of the adaptive capability and adaptive form. The framework shows that adaptive capability positively correlates with the adaptation process.

Adaptive Capability: - In line with the position of previous studies (Dewi et al., 2020; Bititci, Maguire, and Gregory, 2010; Teece, Pisano, and Shuen, 1997), adaptive capability arises when SMEs identify the need for a capability to identify and respond quickly to changes in the environment. One of the primary characteristics of adaptive capability is the capacity for immediate response (Dewi et al., 2020). To survive the dynamic and hostile environment, SMEs must cultivate adaptive capability by identifying relevant market opportunities, acquiring new resources, processing emerging information, and swiftly maintaining and reconfiguring their organisational structure and management (Dewi et al., 2020; Teece et al., 1997). Simultaneously, they must explore and exploit new knowledge, as these elements are crucial for strategy development and the company's survival (Dewi et al., 2020). As the framework indicates, adaptive capability is intentionally conceived to change the firm's limited resource base (those that would help the firm achieve its objectives), as a consequence of the dynamism and/or hostility in the external environment (Wiwoho, Suroso, and Wulandari, 2020). This occurs because adaptive capability emphasises effective

searching and the balancing of exploration and exploitation strategies (Wang and Ahmed, 2007) which is achieved through a "flexible resource adjustment, application, and renewal" (Ambrosini and Bowman, 2009; Wang and Ahmed, 2007: 37). As Teece (2012: 1396) indicates, adaptive capability is particularly critical for small firms, as it is rooted in entrepreneurial competencies, which involves "sensing, seizing, and transforming opportunities" (Teece, 2012: 1396). Adaptive capability enables small firms to manage these processes effectively, and in the process, influences the small firm adaptive strategies and performance (Wang and Ahmed, 2007). In line with the previous studies, the conception of adaptive capability is required to improve the position of SMEs in resource-limited context (Eshima and Anderson, 2016). The focus of this thesis is to provide understanding on how the adaptive capability of the firm can lead to the development of adaptive forms, particularly with limited resources and in a dynamic environment. Along with previous studies (e.g. Chryssochoidis, Dousios, and Tzokas, 2016; Chakravarthy, 1982), the framework shows that adaptive capability is not conceived as a static construct or one-size-fits-all concept; rather, it is a dynamic, interactive process that involves problem-solving abilities and rapid responsiveness (Dewi et al., 2020). Together, these elements form the foundation of adaptive form, which is inherently tied to the resource-limited context.

Adaptive Strategies and Adaptive Forms:- Managers of firms are focused on making adaptive decisions that dictate the course of business operations. Reconciling opportunities and constraints found in the organisation and its operating environment is often at the heart of adaptive strategies (Needle and Burns, 2010). The owner of a small firm with a potentially viable innovation face a decision dilemma as factors such as the size, limited production capacity, and limited finance become an increasing concern. Previous studies argue that, adaptive forms are the product of adaptative strategies, and these are inseparable from the firm and environment in which they are embedded (Needle and Burns, 2010; Barney, 1991; Chandler, 1962). The concept of adaptive strategy is based on the biological metaphor from the general systems theory, which proposes that firms constantly interact with its environment (Bess, Johnstone, and Dee, 2012). However, adaptive strategy is not the same as the linear, sequential or interpretive strategy that requires effective planning of resources and people that interact for mutual benefit (Brown, 2012). Rather, adaptive strategy is concerned with the development of fit between the dynamic environment, and the resources and capabilities to exploit those opportunities. The framework shows that companies

develop adaptive strategies based on their perceptions of the environment and their own adaptive capabilities from within the firm. The framework also shows that a positive relationship exists between adaptive capability and adaptive strategies leading to adaptive forms. Adaptive capability mitigates the impact of resource limitations and effectively produces visible actions and strategy through "attenuating, withholding, stimulating, or altering" those strategies (Chryssochoidis et al., 2016; 10). Empirical evidence supports the position that small firms constantly develop adaptive capability through resource reconfiguration, and managing consumer behaviour changes, as well as developing new products and services as a result (Makkonen et al., 2014). The framework conceptualises that adaptive capability and adaptive strategy of small firms generate adaptive form for superior performance outcomes through the management of limited resources and dynamic environment. From this perspective, it apparent that adaptive capability transforms and reconfigures adaptive strategy, leading to adaptive forms and enhanced performance outcomes.

In the framework, adaptive strategy is linked to adaptive forms. This position is relevant for the study of adaptive forms of SMEs in resource-limited context. Prior studies indicate that various forms of adaptation emerge as the firm interacts with resource-limited context (Alnoor et al., 2022; Borocki et al., 2019; Anwar and Hasnu, 2017; Hagen et al., 2017; Kotey, 2014; Zahra and George, 2002; Eisenhardt and Martin, 2000). Some of the adaptive forms includes analyser, prospector, reactor, defender, hybrid, conventional, competitor. Kotey (2014), for example, suggested that firms adopt a cautiously competitive and resource-conserving adaptive strategies. In contrast to their large counterparts, Zahra and George (2002) noted that smaller firms are more agile and adaptable when implementing changes. They argue that the smaller size allows for quicker decision-making, which aids in adaptation to changing circumstances. Studies by Eisenhardt and Martin (2000) also emphasise that an organic or flexible organisational structure is often associated with positive adaptation in small firms. Similarly, some studies identify entrepreneurial orientation, non-strategic orientation, innovation focused (Edelman, Brush, and Manolova, 2002; Hagen et al., 2017), evolutionary posture (Jones, 2004), and hybrid form (Alnoor et al., 2022; Anwar and Hasnu, 2017). These forms of adaptation are expected to achieve different degrees of fit with the changes in the business environment. The achievement of performance objectives depends on how managers achieve fit with resource limitations and dynamic

environments. To manage this alignment, mangers must choose the most appropriate form of adaptation for business success.

In conclusion and based on the discussions above, resource-limited context is a critical antecedent for adaptive capability, an organisational element central to the development of adaptive strategies and adaptive forms for achieving superior performance. To achieve superior performance with limited resources, SMEs require more than one ordinary adaptive capability to generate adaptive strategies and adaptive forms in a highly dynamic and hostile business environment. When the small firm has the capability to adapt, the company has the advantage to achieve its performance objectives. It also means that adaptive form is needed by the small firm to survive in the resource-limited context.

2.9. Chapter Summary

This chapter provided a comprehensive review of resource-based theories, adaptation theories, and the dynamics of the business environment, leading to the synthesis of foundational concepts for the theoretical framework of this thesis (Figure 2.2). Firm adaptation is influenced by the nature of internal resources, firm-specific characteristics, and external environmental dynamics. Examining adaptation in small firms in isolation does not offer a complete understanding; rather, their adaptive responses are best conceptualised through the interplay of multiple contextual factors. Understanding the broader context is therefore essential for analysing the adaptive strategies of small firms (Danermark et al., 2002). To gain deeper insights into this complex phenomenon, it is necessary to examine all contextual influences and their interrelationships.

The literature review critically explored small firm adaptation from multiple theoretical and empirical perspectives, focusing on key frameworks such as the Resource-Based View (RBV), Dynamic Capability Theory (DCT), adaptation theory, and theories of the dynamic business environment. These frameworks offer valuable insight into how small firms respond strategically within resource-constrained settings (Kim and Pae, 2007; Schindehutte and Morris, 2001; Teece et al., 2001). The review emphasised that limited resources and capabilities, and their effective utilisation, are central to the development of adaptive strategies. Despite their constraints, small firms can build adaptive capabilities, with Dynamic Capability Theory offering a particularly

relevant perspective (Teece et al., 1997). Furthermore, the review acknowledged the importance of the business environment in shaping resource availability and utilisation, drawing upon Strategic Contingency Theory to examine how firms align internal and external factors for strategic adaptation.

A significant portion of the review focused on firm resources, how they are conceptualised and how they influence adaptation and performance. Resources play a central role in influecing competitive advantage and strategic direction (Barney, 1991). However, studies suggest that debates around resources are often context-specific and have predominantly focused on larger firms (Seppänen, 2009; Kellermanns et al., 2016). This creates ambiguity in understanding how resources are characterised and utilised within small firms. While several scholars offer varying definitions of limited resources (Haase and Kratzer, 2015; Mullainathan and Shafir, 2013; Shah et al., 2012), these definitions vary across firms, industries, and geographic settings (Halim et al., 2020; Harindranath, Dyerson, and Barnes, 2008; Thong, 2001; Green and Brown, 1997). The review thus provides a foundation for understanding how small firms conceptualise limited resources and how these resources contribute to adaptive strategies.

The review of Resource-Based Theories (RBTs) provided theoretical grounding for understanding a firm's internal resources and capabilities as sources of competitive advantage. Theories such as Penrose's Theory of the Growth of the Firm, the RBV, and the VRIO framework were critically assessed for their relevance, limitations, and practical implications (Utami and Alamanos, 2022; Senaratne and Wang, 2018; Rugman and Verbeke, 2002). These theories are instrumental in the formulation of strategic responses but often fall short when applied to small firms with limited resources. Robins and Wiersema (1995) note that these frameworks do not adequately explain whether a single resource or a combination of resources leads to competitive advantage. Furthermore, while these theories advocate the acquisition of unique resources, some scholars argue that constraints are not the sole determinants of adaptation (Kolade, Obembe, and Salia, 2019; Franco and Haase, 2010; Thong, 2001). This thesis, therefore, focuses on identifying various types of resource limitations faced by SMEs and exploring their implications for adaptive capacity.

Dynamic Capability Theory and the Theory of Firm Adaptation were also examined to understand how small firms explore resource limitations in rapidly evolving environments. DCT provides a framework for understanding how firms

leverage existing resources to build capabilities and respond to market changes (Deakins and Bensemann, 2019). While the theory highlights firms' ability to make strategic decisions through capability reconfiguration, critics argue that this assumes access to cririca resources, which small firms may lack (Teece, 2018). Additionally, DCT struggles to account for how different types of firms reconfigure capabilities across varying contexts. Nevertheless, small firms often deploy alternative capabilities and develop own strategies to sustain performance (Löfkvist, 2017). The adaptation theory complements this view by categorising adaptive responses into typologies such as defenders, reactors, analysers, and agile/hybrid forms (Hagen et al., 2017; Anwar and Hasnu, 2017; Alnoor et al., 2022), underscoring the context-dependent nature of adaptation.

Institutional Theory was also considered to provide further depth in understanding firm adaptation, particularly in relation to external regulatory and normative pressures. Small firms operate within institutional environments influenced by laws, policies, norms, and societal expectations, which significantly influence strategic behaviour. Institutional disruptions such as Brexit and the COVID-19 pandemic have redefined the adaptive landscape by introducing new regulatory constraints, legitimacy concerns, and shifting consumer expectations. These institutional shocks have added another layer of complexity, forcing firms to adapt not only to resource and market challenges but also to evolving institutional frameworks (Scott, 2014; North, 1990). For example, Brexit has reshaped trade relations, while COVID-19 imposed supply chain disruptions and labour constraints, both of which have had profound effects on the UK meat processing sector (Doern et al., 2019; Ram and Jones, 2021).

The chapter further examined the influence of environmental dynamism on firm behaviour. External factors such as industry turbulence, environmental munificence, and market volatility were explored, highlighting their impact on small firms' strategic orientation. Drawing from Strategic Contingency Theory, this section underscored how the external environment interacts with internal capabilities to influence adaptation decisions (Donaldson, 1995). In dynamic and uncertain contexts, adaptive strategies become critical for survival, particularly for SMEs operating with limited resources.

Overall, the literature review critically analysed the strengths and limitations of each theoretical framework in explaining small firm adaptation in resource-constrained settings. This thesis moves beyond examining adaptation in isolation by considering the

interplay of multiple contextual factors, including institutional, environmental, and firm-specific dynamics. It identifies significant theoretical gaps, such as inadequate attention to the characterisation and reconfiguration of limited resources, and an overemphasis on strategy content over adaptive processes in small firms. This thesis addresses these limitations and contributes to a more nuanced understanding of the complex relationships between resources, capabilities, environmental conditions, and adaptive forms essential for SME survival and growth in resource-limited contexts.

CHAPTER 3: METHODOLOGY

3.1. Introduction

The empirical chapter of this thesis adopted a cross-sectional approach, aiming to examine the complex relationship between adaptive forms and resource-limited context as outlined in the preceding chapter. To formulate effective methodology chapter, the thesis followed the Research Onion model proposed by Saunders et al. (2016) in Figure 3.1. To address the research aim, the thesis used the specific methods (circled in Figure 3.1 and modified in Figure 3.2) of Saunders Research Onion. The chapter first focused on describing the research design, data collection techniques and analysis. But before that, the philosophical approach and paradigms which underpin the rationale for the research design were described, followed by a description of the qualitative method adopted for the study. The chapter also employed a multiple case study approach, treating the participating firms as individual "cases" (Yin, 2016), with each firm serving as the primary unit of analysis (Patton, 2002). This approach proved beneficial in understanding adaptive behaviours of firms. Employing multiple cases offered depth and insight by leveraging the distinct variations among firms, enabling an exploration of how contextual factors influence their application.

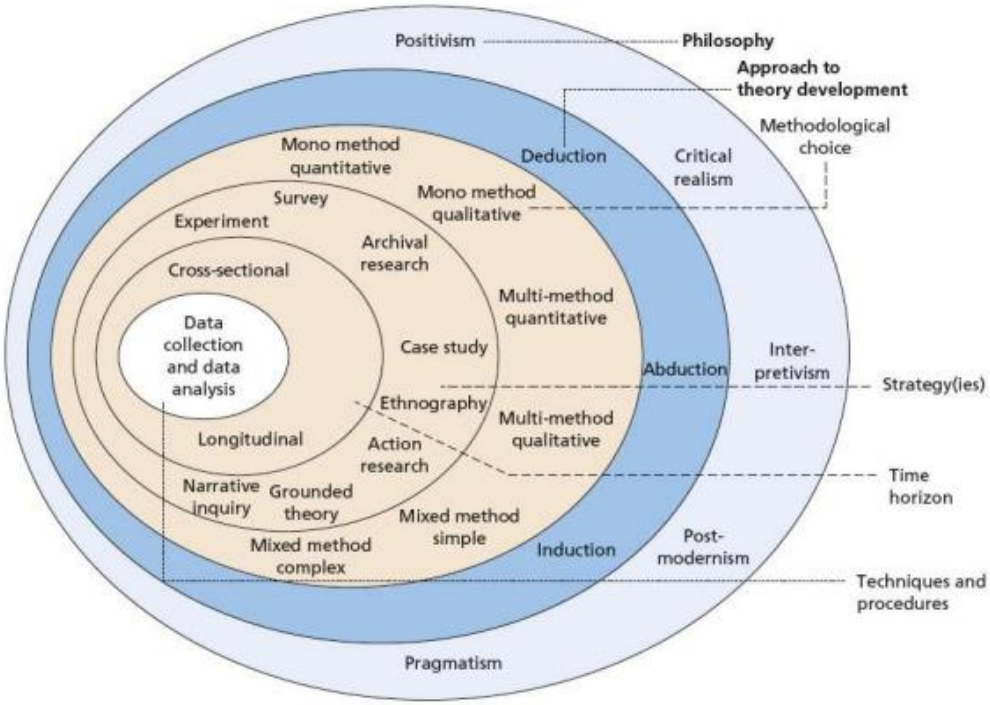

Figure 3. 1 Research Onion
Source: Adapted from Saunders et al. (2016)

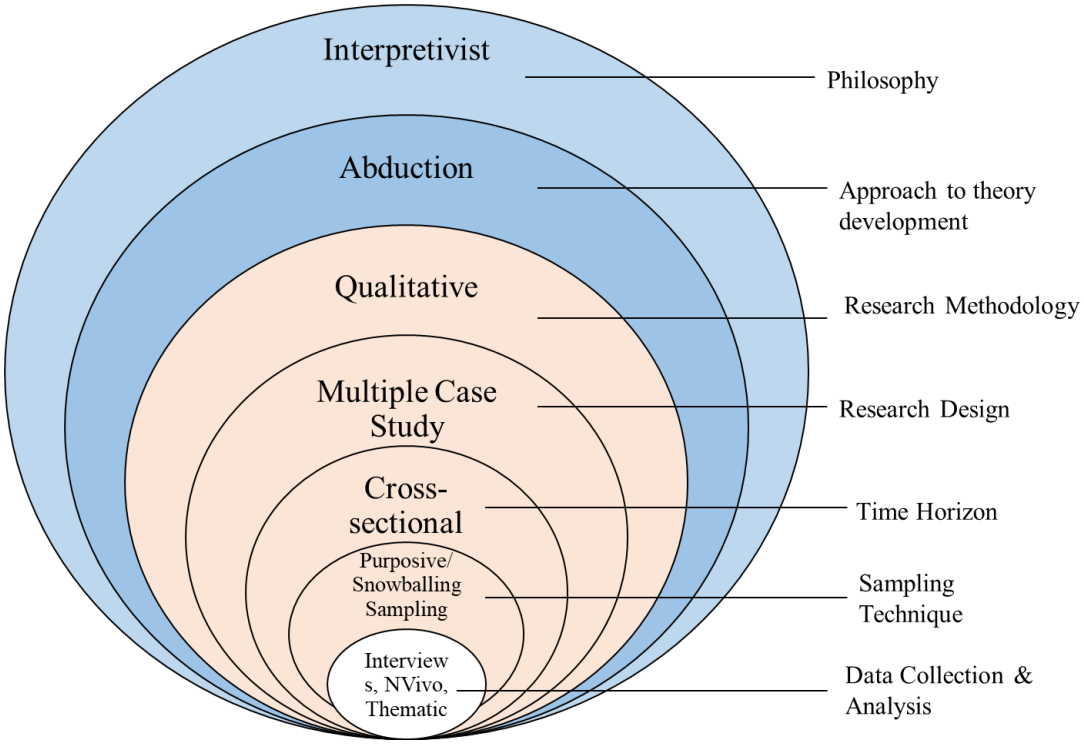

Figure 3. 2 Modified Research Onion

The chapter gives an account of the purposive sampling method adopted in extracting data on the different resource configurations and the different forms of adaptation in resource-limited contexts in the UK. The chapter includes discussion on how the interview guide was designed for the semi-structured interviews. The study also discusses the rigor in research (i.e., credibility, dependability, transferability, confirmability, triangulation), data analysis, and issues of ethics regarding the research study. Finally, the study shows how data is presented. The findings lead to an explanation of a framework of SMEs which addresses different forms of adaptation for survival and prosperity.

3.2. Research Philosophy

Adaptive forms of small firms in resource-limited contexts can be effectively explored by addressing fundamental research methodologies. A traditional research approach relies on a particular philosophical framework that consequently dictates the methods and tactics employed in the research process (Saunders et al., 2016). Though research techniques can help in providing grounds for conducting the qualitative studies, the research inquiry must be developed within a broad dominant assumption. The quality of qualitative or quantitative studies is shaped by competing research

paradigms, the philosophical assumptions, and the different data collection techniques (Salvador, 2016). This section describes the general philosophical assumptions and paradigms which is the foundation for developing research methods for answering the research question in this qualitative research.

Research philosophy describes a set of beliefs which is concerned with the principles, behaviour and thoughts guiding the conduct of the research (Salvador, 2016; Guba and Lincoln, 1994). Guba and Lincoln (1994, page 107) argue that they represent the researcher's "worldview" as it defines the place and relationship of the researcher in the entire research experience. Since research philosophy is based on beliefs and values, several critiques regarding assumptions for which research paradigm is suitable have been highlighted in extant research (Salvador, 2016). Scotland (2012) further argues that the knowledge under investigation influences the choice of research philosophy. Key investigative questions emphasising each of the paradigms have been provided and summarised to support the selection of which philosophy is ideal for this study.

There are four research philosophies: two traditions, namely, positivist and interpretivist (or social constructivist), and two contemporary, namely pragmatist and critical realist (Molis, 2008; Saunders et al., 2016). Moreover, Salvador (2016) argues that the interest regarding the assumptions of the social research is founded on the nature of social units, i.e., objectivism and constructivism. This thesis employs traditional interpretivist/constructivist philosophy. Positivism is not selected for this thesis because, whilst it emphasises objectivity, controlled experiments, and quantitative methods to generalise findings, it often neglects important factors such as individual attitudes and unique life experiences (Kamal, 2019; Peat et al., 2002). This limitation makes it less appropriate for business and entrepreneurial studies, where understanding personal perspectives and complex, context-specific factors is essential for more accurate and meaningful results (Scotland, 2012).

The ontological stance of Interpretivism/Constructivism is "relativism" which demonstrates that the inquirer uses subjective mindset to interpret reality (Salvador, 2016). In this paradigm, the researcher tries to understand the social phenomena which comprise of the cultural settings, values, beliefs, contexts in the social world (Neuman, 2011; Creswell, 2009). This thesis takes a stance aligned with the constructivist or interpretivist of epistemological assumption. As explained in the introduction chapter of this thesis, the thesis revolves around "adaptive behavioural" experiences of small firms

in environments constrained with limited resources. As a result, the thesis considered owner-managers and senior managers as the research participants. The social constructivist or interpretivist pursues the views and interpretations of selected participants which are constructed within the social context employing open-ended, semi-structured interviews and direct observation. The researcher asserts that by interpreting and reflecting on the experiences of key decision makers within the firms, valuable insights can be constructed, contributing to the understanding of adaptive forms of small firms. Whilst engaging with different participants is important to understanding adaptive forms, the thesis also acknowledges the influence of subjective viewpoints and assessments of the researcher (Kamal, 2019). This assertion aligns with the constructivist paradigm, which is also known as interpretive paradigm (Merriam and Tisdell, 2016). According to Nicholls (2017: 30), researchers adopting interpretivist philosophy "view the objectivity of the world as a subjectively lived phenomenon". From the perspective of the interpretivist's research approach, the inquiry of this thesis involves how firms adapt with limited resources and to comprehend the meaning of adaptation for small business owners through engaging with conversation, extracting textual insights from interviews, and phenomenologically analysing their data (Nicholls, 2017).

3.3. Approach to Theory Development

The second layer of Saunders et al. (2016) describes three primary methods for reasoning and theory development: deductive, inductive, and abductive. These approaches provide a range of systematic, logical, and widely accepted methods for developing and testing theories (Nicholls, 2017). The deductive approach involves starting from a broad idea and advancing towards specific conclusions, commonly used in the testing of theories. This approach focuses on generalising findings, typically employs quantitative data and allows for the application of statistical tests to validate hypotheses (Lyon, Marlow, and Staiger., 2017). It maintains a high level of structure, which is frequently observed in surveys and lab experiments, ensuring data replication of data (Kirongo and Odoyo, 2020). The deductive approach may not be suitable for this thesis as it begins with a particular theory or hypotheses, and are tested with the collection of data, which can limit the ability to capture detailed understanding and new insights (Hammersley and Atkinson, 2007). This is different from the open-ended and

exploratory nature of qualitative research which typically discovers the patterns, meanings, and complex social phenomena which may not be fully captured by established theories (Bryman, 2016). The rigid nature of deductive approach can restrict the flexibility associated with qualitative studies to adapt to emerging themes and complex findings (Creswell, 2018).

Conversely, inductive approach operates in a different manner. The approach starts with a challenge to explore and understand a phenomenon. It involves a comprehensive process that includes examining the immediate environment, engaging in active interviews, keen observation, and often diverging onto innovative approaches in gathering information (Nicholls, 2017). Carpenter and Suto (2008) suggested that the primary aim of this approach is to synthesise a theoretical understanding of a particular problem or phenomenon. As Nicholls (2017) emphasised, theories are the end product of the inductive process, which denotes a move from a collection of specific concepts to a more generalised conclusion. With this approach, the initial theories and concepts regarding the phenomena are not totally absent; rather, the researcher uses the objectives, research questions, and other key assumptions of the research to realistically guide the analysis (Armat, Assarroudi, and Rad, 2018).

Abductive approach is different from inductive and deductive approaches in so many ways. Deductive approach aims at validation of a theory in advance through hypotheses testing (Haig, 2005), while inductive approach relies on specific observations of particular events to analyse empirical data in order to develop and defend theory (Conaty, 2021). The propositions underlying abductive approach suggest that a new theory could be legitimate and accepted if other explanation is more valid, or if an existing theory can be expanded upon. Hence, abduction suggests a new or existing theory development (Armat, Assarroudi, and Rad, 2018). The abductive approach involves continuous analysis of data to enhance the research questions, either by developing new ideas or improves existing one. This approach aligns with the objective of this qualitative thesis as it draws upon prior literature evidence and attempts to improve on existing theories of resources and adaptation. The abductive approach is thus supported by the qualitative case study method, the research questions, and the conceptual framework, all of which are appropriate for this thesis.

3.4. Research Methodology

Research decisions are categorised according to the use of qualitative and quantitative research methods, a mixed method of both or using only mono methods (Saunders et al., 2016). Traditionally, most studies classify research decisions as either quantitative or qualitative (Kirongo, and Odoyo, 2020). Quantitative studies are known for its focus on numerical data, statistical analysis, and empirical evidence with a positivist philosophical framework (Saunders et al., 2016). The quantitative approach begins with a theoretical framework that defines a clear hypothesis before any research is conducted. Analysis is done using deductive generalisations after the research. Conversely, qualitative studies are conceptualised differently. Creswell (2009) defined qualitative studies as a method used for examining and understanding the importance that individuals or groups associate with a social or human phenomenon. The overarching objective of qualitative studies, according to Merriam and Tisdell (2016), is to discover the significance or understanding of an event from the perspective of those directly engaged or impacted by it. This implies that qualitative research seeks to understand how people construct and interpret their worlds and attribute meaning to their experiences (Merriam and Tisdell, 2016). As explained earlier, this makes qualitative studies inductive in nature, and initiated from the observation of reality (Kirongo, and Odoyo, 2020). It involves simultaneous processes of data generation, analysis, and theory development, using exemplar or analytic generalisations (Nicholls, 2017; Bran and Clarke, 2013). Unlike quantitative research which relies heavily on numerical and statistical data, and analysed in a structured form, qualitative research uses words as the primary form of data which are gathered and analysed through various and approaches (Braun and Clarke, 2013).

Previous studies emphasise specific characteristics of qualitative research which is acknowledged in this thesis (Merriam and Tisdell, 2016). First, the thesis recognises the need to focus on the experiences of the people involved in adaptive decision making. Secondly, the thesis identifies the researcher as the instrument for collecting and analysing data. The third component of this qualitative study follows abductive route which involves extracting concepts, hypotheses, or theories directly from the data (Kamal, 2019). Finally, the sources of primary data of the qualitative study include interviews, filed notes, and documents required to produce rich insights.

In general, the study uses qualitative method in order to gain insights into the adaptation of small meat processing firms in resource-limited contexts. The goal was

attained by exploring a range of limited resources and their relationship with adaptive forms. This research method allowed the researcher to discover diverse views, emotions, and thoughts of the participants, which produced rich insights from the investigation. The sensitivity of the qualitative method has been demonstrated in a report by Wales (2016), who argues that the use of qualitative study in entrepreneurship research is to help explore the complex relationship between social processes and the attitudes of owners, as well as provide deeper understanding of how the dimensions of entrepreneurs might be demonstrated and be empirically captured. The other advantage of using the qualitative method is that it focuses on examining individuals, groups, contexts, or cultures to gain a deeper insight into a phenomenon within a context (Wright et al., 2016). This aligns with the nature of small businesses, which are typically embedded with their local context. A major problem with the qualitative research methods is that they can overlook contextual sensitivity in favour of interpretations and experiences (Rahman, 2020).

The overall purpose of this qualitative study concerns the nature of the three research questions expected to guide and validate the research approach (Crotty, 2003). The thesis focused on asking 'how', 'which' or 'why' questions to understand the query of this thesis which is key to investigation. These questions allowed the participants of the thesis narrate their experiences about what resources and capabilities mean to them, how they provide sources of capabilities for firm adaptation, and the adaptive forms of small firms. The nature of the inquiry produced a detailed and broad data. Despite several advantages in using qualitative study, previous research identified potential weaknesses with the method, including wider research findings, potential biases and subjectiveness on the part of the researcher, and the influence of traditional philosophical assumptions and expectation of analysis (Diefenbach, 2009). By adhering to strict diligence and methodological standards, as well as critical review of qualitative methodologies, this thesis developed rich insights as captured in Chapter 4.

3.5. Research Design: Multiple Case study

Previous studies propose research strategies such as experiment, survey, case study, ethnography, action research, and grounded theory (Kirongo and Odoyo, 2020; Saunders et al., 2016). The thesis adopted a multiple case study design as the most effective research strategy. Yin (2016) recommended that in choosing a case study design for research, it is essential to consider specific conditions: the nature of the

research question, the degree of control the researcher possesses over the behaviours of the events, and whether the research is contemporary or historical in nature. There are advantages and disadvantages of multiple case study over the classical single case study. For instance, earlier scholars highlighted the costliness and time intensiveness of employing multiple case studies (Gustafsson, 2017; Baxter and Jack, 2008). Dyer and Wilkins (1991) particularly contended that the significance of a case study resides in the thorough examination of a single case to discover new relationships, thereby challenging Eisenhardt (1991)'s method of comparing multiple cases. However, other studies have provided different reasons why multiple case studies are significant for qualitative studies of this nature. First, the multiple case study is crucial as it facilitates the investigation of diverse data across various situations, enabling comparisons of outcomes within and between cases (Yin, 2014; Miles and Huberman, 1994). Second, Eisenhardt (1991) advocates for multiple case studies, stating that it enables replication among cases, thereby serving as a way to verify propositions. Third, Ridder (2017) further emphasises that this approach not only allows for replication but also extends the relevance of findings beyond the specific cases being investigated. The replication logic attracts substantial support due to its capacity for cases to examine and validate or refute findings initially identified (Zach, 2006). This process contributes to the formulation of an initial theory concerning phenomena in qualitative studies (Ridder, 2017; Eisenhardt, 1991). Lastly, Eisenhardt (1991) emphasises the need for a more methodological rigor in case study research. Adopting multiple case study as the qualitative study design in this thesis enhances the potential for replication, thereby rendering the conclusions drawn from the findings more relevant compared to those stemming from single case studies (Yin, 2016).

3.6. Unit of Analysis: The Small Firm

There is growing ambiguity in defining the unit of analysis in entrepreneurship and small business studies (Perren and Ram, 2004). Traditionally, the unit of analysis is defined as the element(s), "object(s)," or "unit(s)" that are the subject of investigation (Yurdusev, 1993: 19). In qualitative research, it refers to the entity about which information is gathered (van Rijnsoever, 2017), and it forms the central focus for interpretation and analysis (Fisher, 2019).

Previous studies have highlighted the challenges in clearly defining the unit of analysis within entrepreneurial research, primarily due to the blurred boundary between studying the entrepreneur as an individual, the personal entrepreneurial journey, or the firm itself (Perren and Ram, 2004). One perspective argues that the individual entrepreneur should be the unit of analysis, based on the assumption that entrepreneurs exhibit distinct characteristics and behavioural patterns that merit individual investigation. Another view holds that the firm should be the unit of analysis, given that entrepreneurship is inherently about the creation, development, and management of enterprises. This approach emphasises the firm's structural and strategic features and how these evolve over time. A third approach suggests that entrepreneurial activity or the process of entrepreneurship itself should be the unit of analysis, focusing on the actions that drive economic outcomes.

Patton (2002: 229) asserts that: "The key issue in selecting and making decisions about appropriate unit of analysis is to decide what it is you want to be able to say something about at the end of the study." Following Patton's guidance, this thesis adopts the small firm, specifically SMEs in the meat processing sector, as the unit of analysis. This choice reflects the view that these firms possess unique resource configurations and adaptation processes that are central to the research inquiry. The selection also aligns with Milne and Adler's (1999) argument that a broader and contextually grounded unit of analysis is appropriate in qualitative research, as it preserves the integrity of the context and facilitates meaningful interpretation of the data.

3.7. Sampling Process

3.7.1. Sample Size Selection

The thesis involves understanding the adaptive forms and strategies of 17 business leaders of 12 small meat processing firms operating in a resource-limited context. There is some ambiguity regarding sample size selection in qualitative studies in extant research (Sim et al, 2018; Kim, Sefcik, and Bradway, 2017). Very little objective explanation points to a particular preference (Vasileiou et al., 2018). Several studies (e.g., Dworkin, 2012; Sim et al., 2018) suggest that an ideal sample size typically ranges between 5 to 35 participants. This range is determined through various methods, including a priori considerations, statistical formulas, rules of thumb,

conceptual models, and numerical guidelines. The determination of a sample size through a priori is that sample size is "adaptive and emergent" and can pose inherent problems in qualitative studies and therefore should consider the issue of saturation (Sim et al, 2018). As suggested by Zach (2006), specific guidelines regarding the number of cases necessary to fulfil the replication strategy are not strongly defined in multiple case study design. Yin (1994) proposes that having six to ten cases is adequate if the findings provide compelling evidence to propositions originally set for the study. The relevance of depth of data over breadth of the sample size is more important to address the nature and complexity of the adaptation process, provide required saturation, produce quality data for analysis (Vasileoiou et al., 2018), and to develop insights for the phenomenon which is context-specific (Creswell, 2013). This is in line with previous research on qualitative studies that the number of participants involved, and the number of interviews conducted depend on the research design and sampling strategy adopted (Sandelowski,1995).

3.7.2. Sampling Strategy

The target population of the thesis comprised of small meat processing firms embedded in their local areas in the West Midlands area of UK. Small meat processing firms included firms which employed less than 250 employees. The firms were purposely selected aiming for diversity and the acquisition of "information-rich insights and comprehensive understanding" rather than focusing on empirical generalisations (Patton, 2002). The purposive sampling strategy was employed to determine the diverse adaptive forms among different firms which encountered various resource limitations in their local areas. Onwuegbuzie and Collins (2007) suggest that the selection of a sampling method would depend largely on the purpose of the research, for example, to gain insights and understanding into the phenomenon rather than provide generalisations. The purposive selection of the firms, settings and individual participants was needed to fulfil one or more of the SME criteria, categorisation and characterisation of their specific circumstances (resource-limited) which is consistent with the position of qualitative studies. This sampling approach align with the perspectives of experts on qualitative studies, who stressed the importance of deliberate sampling to enhance the generation of rich and comprehensive data (Moser and Korstjens, 2018). Eventually, the different sampling methods would help provide insight into the subject matter and address the research questions more directly. The

thesis inferred that deliberate/purposeful sampling was effective in explaining the differences in the adaptive behaviours in resource-limited contexts.

A list of small meat processors was obtained mostly from the FAME database (see Appendix A) and Yell Business Directory website[1]. In defining which meat processing firms to select, the thesis relied upon the definition provided by UK SIC (2007)[2] in the FAME database under the "processing and preserving of meat and production of meat products" category. Internal documents and other published data on the targeted sub-sector of the food processing industry were also used to support the sample frame. Given that the SME population is heterogeneous (OECD, 2019) and the adaptive responses to the resources may vary, the sample was carefully selected to include instances in which the phenomena under study are likely to be found (Zach, 2006). As at the time of sampling the data, there were 940 food manufacturers in the West Midland (Statista, 2023). On the FAME database, there were 205 small meat processing firms available. Using the Yell Business Directory as supporting source of firms, altogether 320 firms were identified as the total population (sample frame). These firms were first contacted through email. After online research, 58 of them were identified as potential cases and therefore were chased through phone calls. In both channels of communication, the details about the researcher's identity, the purpose of research and methodology, as well as the expected duration of the interview were provided. 22 cases of those contacted responded with positive and negative answers.

The cases (firms) for the final sample were purposely selected based on four main reasons. The participating firms should assign an informant who will be available and willing to participate in the interview. (1) Research context: The cases were typical small meat processing firms which encountered limited resources. (2) Some evidence for adaptation happening in the firm: The cases have modified their products/services, strategies, or market positions to a certain degree after encountering resource and environmental challenges. (3) Snowballing to improve the size and quality of the sample based on personal knowledge of researcher of small firms and recommendations from interviewees. Eligible small meat processors which matched the selection criteria were identified as suitable cases for the research (Table 3.1). Finally, a sample size of

[1] Yell - a leading marketplace for great local businesses

[2] https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007

12 firms were selected for investigation after extenuating circumstances such as unavailability, lack of knowledge, and disinterest shown in the investigative process.

Table 3. 1 Background Information of Interviewees

Firm	Business Type	Number of interviewees	Gender (M/F)	Age Group	Job Role	Education
SBE1	Partnership	1	M	30-40	Supervisor	GCSE
			M	40-50	Owner	Masters
SBE2	LLC	2	M	40-50	Owner Manager	First Degree
SBE3	Sole Trader	1	M	40-50	Owner-Manager	GCE A Level
			M	40-50	Owner-Manager	Undergraduate
SBE4	LLC	2				
			F	40-40	Owner-Manager	GCSE
SBE5	LLC	1	F	50-60	Owner-Manager	Level 4
			M	30-40	Owner-Manager	Grammar School
SBE6	Sole Trader	2				
			F	40-50	Owner-Manager	GCSE
			M	50-40	Owner-Manager	GCSE
SBE7	LLC	2				
			F	50-60	Owner-Manager	First Degree
SBE8	LLC	1	M	20-30	Manager	Masters
SBE9	LLC	1	M	50-60	Owner-Manager	None
SBE10	LLC	1	M	50-60	Owner-Manager	Masters
SBE11	Sole Trader	1	M	40-50	Owner-Manager	NVQ Level 2
			M	30-40	Owner-	GCSE
SBE12	Sole Trader	2	M	40-50	Manager Supervisor	GCSE

Source: Field Work

The research informants were selected based on their knowledge and experience in the business and the industry. They held a high-ranking position (e.g., owner, owner-manager, departmental manager/officer) within the firm and possessed substantial influence in the decision-making process concerning the firm's future resource selection and utilisation, as well as strategy development Efforts were made to recruit extra participants to provide further information to enhance maximum variation in the study. However, lack of availability of the people, and time constraints, meant that this

was not achieved for all the firms. In all, 17 informants comprising of owner-managers, managers and supervisors were interviewed.

3.8. Data Collection Method

In general, techniques involved in data collection are based on the type of data collected. That is, whether data is collected firsthand through primary data sources or from published or secondary data sources. Figure 3.3 provides a snapshot of the different techniques and strategies used in obtaining either primary or secondary data of qualitative studies. This thesis is qualitative in nature and therefore depends on primary data as the main source of data required for analysis. The primary source of information was the views and opinions obtained from semi-structured interviews and nonparticipant observation from owner-managers or key decision-makers of the small meat processing firms. The primary data was supplemented by secondary data sources retrieved from published documents such as research articles, company reports, government reports, and client and supplier history.

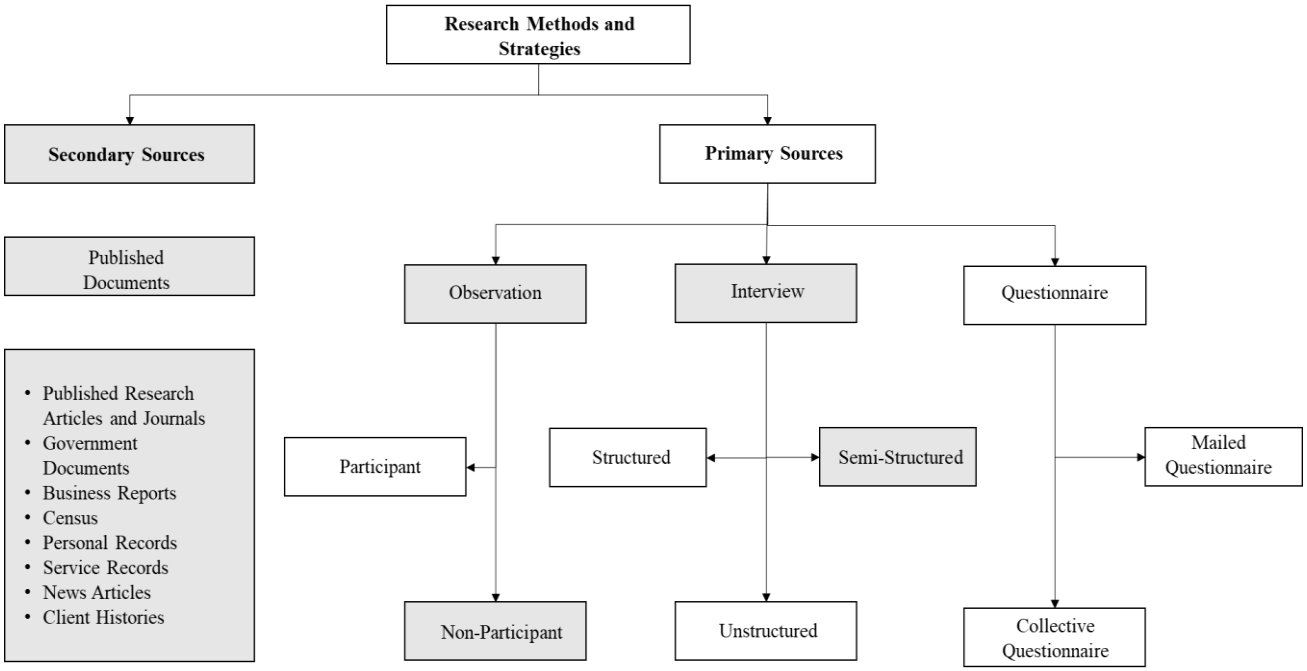

Figure 3. 3 Methods and Instruments for collecting data.
Source: Adapted from Kumar (2019).
Notes: *Darker regions are the selected methods and strategies employed*

Table 3.2 presents a summary of the key characteristics of the firms involved in this thesis. Each firm was assigned a unique identifier (SBE1 – SBE12) to ensure complete anonymity and confidentiality of the findings (Forrester and Sullivan, 2018). This is consistent with the qualitative studies of this nature. The thesis also gathered descriptive data on the firm type, location (rural, urban, or suburban), age in years, number of employees, and core meat processing activities. This table served as a foundational reference point, which helped in interpretating case-specific responses during analysis. This data also enables an evaluation of how firm characteristics such as size, age, and location influence adaptive decisions under resource-limited contexts. Whilst the focus of the thesis is not for statistical generalization, this firm-level data provides valuable background that enriches the qualitative analysis and supports cross-case thematic comparison.

The researcher collected information on the views and opinions of interviewees about the firms, through face-to-face, semi-structured interviews, as well as observations during site visits. The use of a single method for data collection is permissible under normal circumstances in qualitative studies, however as covered by experts of qualitative studies, using variety of methods such as in-depth interviews, observations, and data from secondary sources enhances the quality and trustworthiness, as well as the results of qualitative case study research (Kallio et al., 2016).

3.9. Implementation of Interview Process and Protocols

The richness of the data obtained from the semi-structured interviews was influenced by the quality of the interview guide. Since the researcher is the research instrument in qualitative studies with the responsibility of managing the communication flow and interpretation of data (Chenail, 2011), it is possible for the quality of the data to be undermined by the experiences, biases and personal opinions of the researcher. However, in this thesis, the interview guide directed the thesis towards the key issues addressed in the literature by obtaining information on the firms to address the research aim and address the research questions. The content of the interview guide was guided by a rigorous review of literature across multiple theoretical lenses, particularly the Resource-Based View (RBV), Dynamic Capability Theory (DCT), Strategic Contingency Theory (SCT), Dynamic Institutional Environment and theories of adaptation. Table 3.3 demonstrates how key theoretical constructs and empirical

Table 3. 2 Characteristics of the Firm

Firm	Business Type	Rural/Urban	Age (Years)	No. of Employees	Processing Activities
SBE1	Partnership	Rural	10	12	Butchering, freezing, processing, preservation
SBE2	LLC	Urban	12	10	Traditional cooking, freezing
SBE3	Sole Trader	Suburban	16	17	Butchering, freezing
SBE4	LLC	Suburban	10	11	Basic meat processing: sausages, minced, frozen meat
SBE5	LLC	Rural	37	10	Cutting, freezing, preservation into sausages and pies
SBE6	LLC	Rural	23	11	Cutting, roasting, freezing, slicing, cooking
SBE7	Sole Trader	Rural	166	12	Cutting, roasting, freezing, minced beef, pies, sausages
SBE8	LLC	Urban	11	14	Butchering, freezing, processing, roasting
SBE9	LLC	Rural	61	13	Cutting, sausages, curing, slicing, traditional cooking
SBE10	LLC	Urban	6	12	Cutting, processing, roasting, butchering
SBE11	Sole Trader	Suburban	33	10	Cutting, processing, freezing, roasting
SBE12	Sole Trader	Urban	134	5	Roasting, processing, freezing, smoking

insights contributed to the design of the interview questions. Each of the major concepts such as critical and limited resources, environmental condition, institutional influences, and adaptive strategies, is drawn from the literature. These were translated into focused lines of inquiry. This approach ensured that the interview guide thoroughly captured the complexity of SME adaptation, particularly in response to dynamic changes such as institutional factors, economic, market competition, COVID and Brexit. The table outlines the linkage between key constructs from the literature, their theoretical underpinnings, how these were operationalised in the interview protocol, and the thematic areas they correspond to. This systematic alignment supports the robustness and relevance of the data collection instrument.

The interview guide (in Appendix B) was developed on the basis of the interaction between the firm and its environment and help explore how existing resources and capabilities led to the adaptive behaviour of firms. Interviews provide researchers with a technique to explore experiences and opinions of participants by engaging in a structured dialogue involving a series of questions and corresponding answers (Grossoehme, 2014). The interview guide comprised essentially of questions which are open-ended and unbiased, and are designed to avoid any suggestive influence, ensuring that independent opinions and viewpoints of interviewees about the firm were obtained with little room for manipulation (Turner III, 2010; Chenail, 2011). The key areas covered in the interviews included characteristics of limited resources, nature of business and forms of adaptation. This allowed the researcher to follow systematic guidelines and structure and reduce the incidence of biases so that the research questions were addressed sufficiently.

Throughout the one-to-one, face-to-face semi-structured interview, a total of 42 questions were posed, encompassing mostly open-ended format. These questions were aimed at investigating the various adaptive forms employed by small business owners or executives in response to challenges posed by constrained resources and dynamic environments. The semi-structured interview protocol meant that pre-determined questions were used to clarify issues if required (Doody and Noonan, 2013).

Table 3. 3 Theoretical Constructs for Interview Guide

Key Concept	Theoretical Basis	Operationalisation in Interview Guide	Associated Themes
Resource-Limited Context	Small firms face scarcity of critical resources which affects strategy and performance (Barney, 1991; Teece, 1997).	Questions on firm constraints, resource access, and decision-making under limitation.	Limited resources, adaptation, strategy formation
Business Environment	Environment influences firm behaviour-via munificence, dynamism, and industry structure (Donaldson, 1995; Aldrich, 1979).	Interview items probing external changes (e.g., tech, competition, market demand, COVID, Brexit).	Environmental dynamism, regulation, market turbulence
Firm Resource Analysis	Internal capabilities affect how firms respond to change (RBV, DCT).	Queries on HR, finance, technology, networks, location-classified under resource types.	Human capital, finance, firm location
Critical vs. Limited Resources	Resources are critical if they add value, are rare, and costly to imitate (VRIO framework, Barney, 2001).	Respondents asked what resources are most valuable and difficult to access.	Critical vs. non-critical resources, VRIO application
Level of Munificence	Resource abundance influences strategy flexibility (Castrogiovanni, 1991).	Questions explore perceptions of opportunity and competition within the local market.	Resource abundance/scarcity, opportunity structure
Market Size and Demand	Small firms may lack access to markets due to constraints (Green and Brown, 1997).	Probing questions on market reach, access barriers, and customer segments.	Market access, customer demand, competitiveness
Institutions and Regulations	Regulatory frameworks and institutional pressures influence adaptation (Scott, 2014; DiMaggio and Powell, 1983).	Interview items on licensing, food safety, Brexit/COVID-related policies, and other formal constraints.	Institutional pressure, compliance, legitimacy
Competitive Rivalry & Technology	High environmental dynamism forces rapid strategic response (Teece et al., 2016).	Questions on how SMEs respond to new competitors, changing consumer tastes, or tech adoption.	Environmental dynamism, innovation, responsiveness
Adaptive Forms	Firms adapt in different strategic ways (Miles and Snow, 1978; Anwar and Hasnu, 2017).	Items explore whether firm is proactive/reactive, agile, or consistent in strategic behaviour.	Defender, prospector, reactor, agile/hybrid strategies
Competitive Posture	Firm response to external threats reflects its strategic orientation and resource deployment (Zahra and Pearce, 1990).	Questions on how firms compete—cost, quality, service, niche market strategy.	Strategic posture, market focus, value proposition

The semi-structured interviews also allowed the researcher to maintain consistency throughout the research process. As indicated in previous sections of this chapter, data was also obtained from company documents and websites to support analysis of results. The performance and operations of the business, as well as their press releases and social media reports provided guideline to the researcher about their adaptive responses to internal and external issues.

Before conducting the actual interviews, the researcher underwent ethical approval process with the Ethics Committee of Birmingham City University, which encompassed the review and approval of the interview questions, consent forms, and participation documents. Each interviewee received a consent form (see Appendix C), detailing the intended use of their information. This included assurances about protecting their identities and the strict utilisation of their data solely for academic purposes. To streamline the interview process, the researcher had previously gathered demographic information from the participants, minimising time spent during the actual interview. The researcher communicated through email and personal phone calls. The interview comprised 42 questions, covering specific areas of the research questions, and lasted around 45 to 60 minutes. Interviewees were informed that their participation in the interview was voluntary, and they retained the right to withdraw at any point if they felt uncomfortable. They were informed that the interviews would take place at a location in their business premises with their permission.

A pilot study on 4 firms was conducted leading to the changes to the final form of the interview guide. The first part of interview guide covered demographic information about the interviewee and the firm. The second part sought to characterise the firm resources, including the type of resources and nature of the firm from the perspective of the interviewees. The third part involved adaptive forms, including adaptive behaviours, strategies or specific actions employed when resources are limited. The final part of the interview guide covered the dynamic business environment, which involved the condition of the environment, its influence on the resource, and their impact (including ethical and cultural factors) on adaptive forms.

During the one-to-one, face-to-face interviews, the researcher audio-recorded all the interviews with the participants, except one participant who asked not to be recorded. In all the cases, the researcher additionally kept field notes about the interviews conducted for emphasis and clarity. The rationale for data documentation was to produce a systematic documentation of the information collected, views,

feelings, ideas, insights and description of key events related to the phenomenon under investigation (Akinyode and Khan, 2018). With the increasing complexity in the investigation process, data documentation helped the researcher to undertake meticulous interactive verification of emerging issues with the transcribed data. After completing the interviews with the twelve firms, the researcher experienced a sense of saturation of data has been achieved. This is consistent with the views Eisenhardt (1991) and Yin (2016) that data collection should stop when the researcher feels that no more information was needed to address the aim of the study.

3.10. Operationalisation of concepts

This section provides the operationalisation of theoretical concepts that served as essential elements within the interview guide. These fundamental constructs were derived from an extensive literature review in chapter 2 and were concisely outlined in the analytical framework in Figure 3.4. Operationalising these constructs enabled the researcher to deconstruct the terms, allowing informants to comprehend the questions and provide suitable responses.

Characterisation of Firm Resources. The resource is idiosyncratic and firm specific. Analysis of the firm provides a basis for understanding the nature of firm resources. A firm can have an infinite list of resources but there is no objective way in characterising firm resources. This thesis takes a holistic view of firm resources and capabilities in the literature review chapter. For the purposes of this thesis, limited resources were defined in the context of the meat processing industry. That is, how lack of resources enable small meat processing firms to adapt and create optimal food outcomes. To understand limited resources, the thesis explored a range of resources such as physical, finance, human, technological, machinery, networks, access to market, quality standard, regulation and support systems, brand image. The characterisation of limited resources was primarily determined by how informants viewed resources in terms of availability, accessibility, usage, quality, effectiveness, importance and substitutability.

Adaptive Form. A generally accepted definition of adaptive form is lacking. In the field of strategic management and entrepreneurship, various definitions of adaptation or adaptive form are found. The operational definition of “adaptive form” refers to the unique strategies and positions that a company takes in response to the

challenging business environment and resource limitations. This condition can ultimately impact on the firm's overall productivity and performance. This thesis adapts the definition first suggested by Miles and Snow (1978) who saw it as firm type based on the strategy focus and strategic orientation (Anwar and Hasnu, 2017). The firm types or strategic orientations are the prospectors, defenders, analysers and reactors. For Miles and Snow (1986), firm type reflects the condition of the business environment, product scope and use of technologies in solving problems (Anwar and Hasnu, 2017). In establishing strategic orientation of firms, Anwar and Hasnu (2017) broadly described strategic behaviours, which are consistency, flexibility, and viable strategies, to refer to adaptive strategies to changes in business environment. To distinguish between firm groups in terms of their adaptive strategies, the thesis followed the broad characterisation of previous studies who classified adaptive forms variously in terms of hybrid (Gabrielsson, Seppala, and Gabrielsson, 2016; Salavou, 2013), pure strategy (Parnell, Long, and Lester, 2015; Salavou, 2015), prospector, defender, analyser, and reactor (Miles and Snow, 1978). The thesis explored the various forms of adaptation in response to existing limited resources and changes in the environment. This is because there is little empirical and theoretical evidence of adaptive forms available for small firms, particularly resource-limited context in the UK.

Dynamic Business Environment. The firm does not exist in isolation; they operate in constant interaction with the environment. The dynamic business environment defines the exogenous factors and conditions of the local context which can influence adaptation of the firm. The environment influences availability and competition of resources, and adaptive behaviour of firms (Sarta, Durand, and Vergne, 2021; Ferreira, Serra, and Reis, 2011; Kim and Pae, 2007; Covin and Slevin, 1989). The literature review discussed that the business environment comprised of external environment and industry environment, each with different characteristics. To operationalise the business environment is difficult as several environmental factors can influence the adaptive form of the business. Thus, the thesis explored environmental constructs which are the level of munificence, the extent of dynamism and nature of industry. These constructs are likely to influence the resource availability, accessibility and ultimately the adaptive behaviours and adaptive forms of the small firm.

Finally, other contextual factors such as COVID-19, sustainability and ethics which were not originally contained in the interview questions were captured during the interview process. This is in line with the views of previous scholars that the interview

guide is flexible and semi-structured, and new data may continue to emerge until closure or "data saturation" has been reached (Moser and Korstiens, 2018).

3.11. Ethical Consideration and Biases

Ethics is a significant component, not only in research design but also in the realm of qualitative study as it deals with personal issues of a few number of participants. The quality of qualitative research is achieved by developing rich data when the researcher interacts and understands the phenomenon. This poses serious challenges not only to the researcher, but also to the participants involved (Silverman, 2016). The challenge arises as the instrument (researcher) interacts with the informants of which the beliefs, cultural norms and behaviour emerge in the research process (Flick, 2017). Hence, the qualitative research ethics was not only to follow legal protocols of the institutions, but also the behaviour of the researcher towards the rights of the participants including rights for participation, anonymity, and data protection (Santiago-Delefosse et al, 2016,) respecting the culture of the individuals (Arriaza et al., 2015), and demonstrating honesty and openness with participants and dissemination of research findings (Spencer, Ritchie, and O'Connor, 2003). For qualitative research underpinned by constructivist epistemology, the pursuit of social enquiry is intricate and context-based, calling for a responsible ethical consideration (Silverman, 2016).

The conduct of the research was guided by research and ethical governance frameworks such as the ethical guidelines of Birmingham City University and the British Educational Research Association (BERA). The researcher considered the following ethical issues for a credible qualitative study:

Informed Consent: The researcher informed the participants about the nature of the research, research process and use of the data, as well as the right to renounce their participation at any time (Forrester and Sullivan, 2018; Silverman, 2016). The informed consent form in Appendix C was presented to and agreed by the participants prior to the commencement of the interview.

Confidentiality: The researcher assured participants of protection of their personal information and data. However, the nature of qualitative did little to give complete anonymity as the object of interest was usually their personal information and data (Forrester and Sullivan, 2018; Silverman, 2016). In this case, the information on the business was mainly the focus of attention. The researcher states explicitly what the

data would be used for but would use codes to represent participating firms to ensure confidentiality.

Trust, Honesty, and Integrity: The researcher provided a reliable document by not misrepresenting or massaging the data (Forrester and Sullivan, 2018; Silverman, 2016). The researcher assured participants of full responsibility of the use of data and declared any potential conflict of interest should any arise. Data collected was verified through various collection methods to achieve triangulation, and was further corroborated by consulting with the participants, reinforcing the credibility of the findings.

3.12. Rigour in Qualitative Research

The criteria of "reliability, replicability, and validity," typically associated with showcasing rigor and consistency in quantitative research, hold less significance in qualitative approaches (Maher et al., 2018: 3). In qualitative studies, the requirement for rigor is based on the trustworthiness and reliability of the research. For example, criteria for demonstrating rigor in qualitative research include "credibility, dependability, transferability and confirmability" which is likely to influence the choice of a specific methodology for the study (Maher et al, 2018: 3; Cypress, 2017).

In this thesis, credibility was achieved by making the interview guide more comprehensible and tangible to the respondents. For example, all conceptual or theoretical definitions in the interview guide were translated into operational definitions pertaining to the thesis. Policy documents and written documents were also used to demonstrate confirmability of the data collected. The researcher verified information from the respondents and corrected errors to ensure consistency of facts. According to Noble and Smith (2015), such an approach allows the researcher to keep accurate records, and maintain a clear and transparent decision-trail, which can provide independent verification of findings.

Dependability was achieved by pilot-testing the three respondents of similar firms so that the instrument was verified for consistency and relevance. Engaging with the respondents of the small firms about their experience with adapting within resource-limited contexts helped decide which resources were relevant for enhancing the form of adaptation and survival of SMEs. Drawing upon the position of Creswell (2013) regarding dependability, the researcher entered the participants' setting through considerable amount of interaction to analyse and understand the perspectives by

comparing, contrasting, reproducing, categorizing, and classifying the object of study. Additionally, the researcher used the viewpoints of the participants to supplement the results of the thesis. The thesis took precautions to address potential biases by refraining from specific domains of inquiry and remaining committed to a rigorous process of inquiry and analysis. Lastly, the researcher linked all the items in the interview guide to the three research questions. This approach ensured transferability so that the experiences of owner-managers regarding adaptive behaviours of firms in resource-limited context were able to address the purpose of the study.

3.13. Limitations and Delimitations of the Study

The determinants for achieving rigor in this qualitative study have been well articulated. However, a number of important limitations needs to be considered. A detailed analysis of the limitations and delimitations of this study defined the boundaries within which the research framed and their implications for the outcomes of this study

Limitations of a study recognises the potential weaknesses and the scope of the study (Bloomberg and Volpe, 2018). In most cases, particularly for qualitative studies, conditions outside the control of the researcher limit the scope and the potential findings of the study. First, the generalisability of the findings was subject to certain limitations. For instance, the findings were influenced by the researcher's subjective interpretation of the data which was likely to introduce bias. Also, the small sample size in this qualitative study can limit the extent to which the results can be applied (Theofanidis and Fountouki, 2018). ., Contrary to a growing acceptance of the use of in-depth interviews to obtain rich information and insights, time taken to conduct the exercise could be a limiting factor and can constrain the integrity of the findings and the potential outcomes (Queirós, Faria and Almeida, 2017)., Since qualitative study is context-specific, its conclusions complicates the reproducibility and verification of data, potentially resulting in concerns regarding the "transferrable, confirmability, credibility, and dependability" of the results (Bloomberg and Volpe, 2018). These limitations mean that findings in this thesis need to be interpreted cautiously.

Delimitations refer to intentional constraints or limitations imposed by the researcher, typically aimed at improving the feasibility or practicality of the study. The researcher did not impose any constraints but the definitions in the thesis are set by the researcher as boundaries so that the aims and objectives of the thesis can be achieved

within the timeframe. The objective is to justify the rejection of certain courses of action in the research process (Theofanidis and Fountouki, 2018). In this thesis for example, the researcher examined the meat processing industry critically, which is important for both economic growth and food security, particularly in resource-limited contexts where it might be challenging to get a variety of protein sources. The purposive sampling technique and sample size were also selected because of time constraints, available resources and practical access to participant firms. In this thesis, the researcher also provided operational definitions of specific terms and concepts so that the thesis is constrained within the defined aims and objectivesThe other delimitation is the selection of top executives of small meat processing firms as interviewees. These people have responsibilities to take decisions regarding resources and adaptation of business operations. The overall strategy was to help increase consistency of analysis and viability. The activities adopted during the research process, as well as the reasons for the sampling technique adopted and ethical challenges encountered have all been thoroughly provided in the initial sections of this chapter.

3.14. Data Analysis

Data Analysis is an important yet complex part in qualitative research studies, Data analysis involves identifying patterns, interpreting them, and determining their meaning (Bernard, Wutich, and Ryan, 2016). The researcher employed various strategies and tools to process and organise data in a structured manner so that the data is meaningful to the reader. However, there is no proper way of conducting a rigorous data analysis on qualitative studies (Saldana and Omasta, 2018). Several studies conducting qualitative studies indicated that the method for the analysis of the qualitative data focused on the aim of the study, research questions, participants, resource-limited context, primary data and research framework (Creswell and Poth, 2018; Saldana and Omasta, 2018).

The thesis employed thematic analysis method, which involved content analysis of emerging themes with the use of variety of data collection tools and techniques, as well as explanation and interpretation of patterns and data to enhance rigour and trustworthiness of the research (Raskind et al, 2019). This study adopted the 3-step data analysis process proposed by Miles and Huberman (1994) and Assarroudi et al (2018). The three steps are preparation, organisation, and data visualisation and reports phase. In the *preparation phase*, data from the interviews, observations and literature sources

were reviewed, categorised, and tabulated to generate empirically based results. The phase typically involves gathering all the transcribed data files, converting all the field notes to pdf or word formats, in readiness for them to be imported into the NVivo software. This phase allowed the researcher to engage in a re-reading and review of interview responses and transcripts to condense recurring words and phrases, with the aim of identifying recurring themes. (Yin, 2014).

The second step is the *organisation phase* where the researcher developed the themes or categories based on identified patterns or elements within the data. A systematic coding process would become the critical analytic process for interpretation and elucidation of data from text to synthesise categories, themes, and patterns (Assarroudi et al, 2018). The objective is to develop an understanding and knowledge of the phenomenon under investigation (Assarroudi et al, 2018). A code is a descriptive term that assigns meaning to data, often unstructured, and is crucial for thematic analysis, occurring in multiple phases (Lester, Cho, and Lochmiller, 2020). Both manual and computerised coding processes were adopted to develop codes from the primary data (DeCuir-Gunby et al, 2011). The study utilised manual coding methods like A4 sheets, markers, and sticky notes, while computer-based qualitative analytic tools like NVivo, Word, and Microsoft Excel were used to develop categories, create short-named codes, and conduct a thematic analysis of the social context. The codes allowed major themes about the data to emerge. The thesis created a priori categories or themes from research questions based on the literature review and experiences of the researcher. This is consistent with the views of previous studies (Leedy and Ormrod, 2014). The coding process was adopted as non-linear as there was more than one code for some of the data, and the pre-prepared codes did not always match as new categories and themes emerged (Miles and Huberman, 1994). The summary of the codes has been presented in Appendix D. The codes detail the descriptions, criteria for inclusion, and exceptions. The use of NVivo Software helped to remove any data which was not relevant to answering research questions (Miles and Huberman, 1994). The manual process ensured that the researcher interacted with the data a couple of times so that emerging themes could be compared and considered (Maher et al, 2018). In accordance with conventional data analytic coding processes (Jackson and Bazeley, 2019), data was first examined and coded on an individual case basis for firm resource, resource utilisation, and type of resources in the firms, followed by adaptive strategies, adaptive forms, and business environment factors. This thesis achieved methodological

triangulation from the use of different methods for data collection. The data from the interviews was corroborated with data from non-participant observation, and company documents and websites to identify the different sets of resources, performance information and adaptive behaviours that have been recorded in the past.

The final step is the data visualisation and reports phase. This phase ensured that the analytical process was transparent, which is important for conducting a thematic analysis. Following the suggestion by Lester, Cho and Lockmiller (2020), three strategies were employed to ensure a) creating an analytical process map, b) establishing a comprehensive audit trail, and c) reporting coding frequencies. This strategy for creating an analytical process map outlines the progression from codes to categories and themes (Lester, Cho and Lockmiller, 2020). For the second strategy, the researcher established a comprehensive audit trail, which showed the relationships among data sources, codes, categories, and themes. The final strategy adopted by the researcher was to report coding frequencies, matrix tables, visualisation and maps, a process facilitated by the NVivo software. These strategies adopted by the researcher guaranteed visibility of the researcher's interpretation and coding process to an external reader or evaluator, thereby enhancing the trustworthiness regarding the interpretations made from the dataset (Lester, Cho and Lockmiller, 2020; Assarroudi et al, 2018).

The thesis used a mixed thematic analysis procedure by carrying out both deductive and inductive coding. This is in line with the abductive approach to theory development. In the deductive thematic analysis approach, pre-determined (*a priori*) codes were first determined. With this approach, the researcher aimed to explore whether the predefined themes extracted from the literature review were substantiated by the findings, considering the scarce empirical evidence pertaining to the adaptation of small meat processing firms within resource-constrained environments. By comparing the information collected to the deductive information, the thesis was able to synthesise similarities or differences for valuable insights. The inductive thematic analysis, on the other hand, was a bottom-up, data-driven analysis which focused on identifying patterns from the raw data and views of the participants so that no themes or sub-themes were left out of the thematic analysis process (Swain, 2018). The inductive process also helped to capture the insights that were grounded in people's experiences regarding the phenomena under study.

Data analysis for this thesis followed the "code to theory model" (Saldana,2016: 14). The development of themes is presented in Figure 3.4. First, the first-order analysis

labels or codes the original data. The lines from the raw data to the codes show the direction of data reduction. There can be more than 50 codes generated at the early stage of the analysis which can become difficult to handle or understand (Gioia and Corley, 2012). Second, as the research progresses, the researcher looks for similarities and differences, leading to a further data reduction to a few categories. This is the second order theme or categories/subthemes which provide the researcher an opportunity to make sense of the data in relation to theory. Second, there is a successive reduction from codes to categories/subthemes, the main theme, and finally any emergent theory. This phase also identifies any nascent theme that have emerged from the thesis.

With the first and second order themes in place, the thesis then builds the model shown in Figure 3.4. The model provides visual representation and shows how the data have evolved into themes. The model also provides the researcher to visualise and think of the data theoretically and not methodologically (Gioia and Corley, 2012). The whole process is iterative leading to overlaps amongst the coding cycles (Sigauke and Swansi,2020). This analytical process has been used to produce all the themes discussed in Chapter 4 of this thesis.

To ensure that the complex relationship between the different concepts are effectively presented, the thesis adopted carried out a comparative analysis of the qualitative data which involved analysing responses of interviewees for differences and similarities between themes.

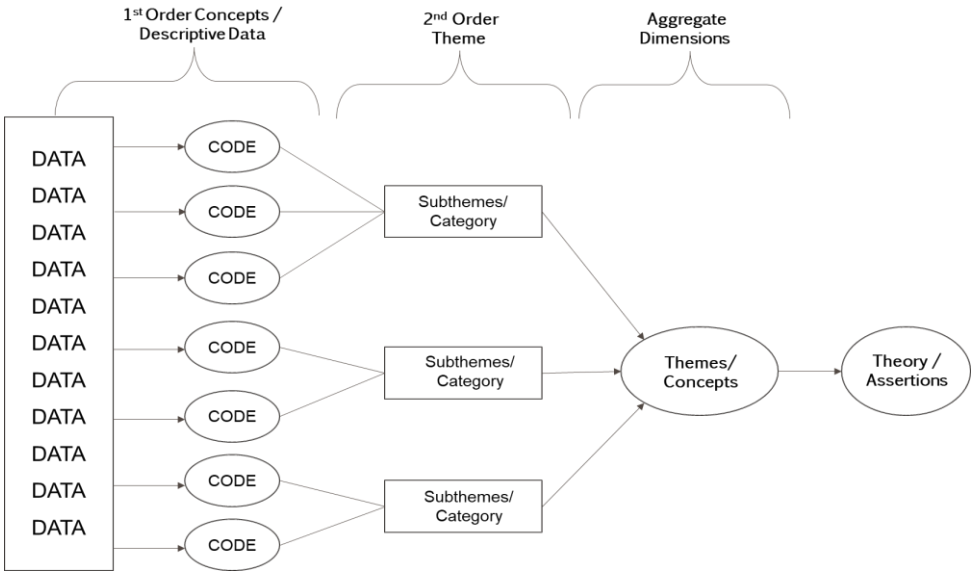

Figure 3. 4 A Streamlined code to theory model
Source: Adapted from Saldana (2016) and Gioia and Corley (2012).

Notable researchers have confirmed that this comparative data analysis is particularly useful for offering evidence-based and contextualised analyses of interview data in the light of current and emerging theoretical viewpoints (Gläser-Zikuda, Hagenauer, and Stephan, M., 2020; Bengtsson, 2016; Krippendorff, 2004). In line with this procedure, the codes were initially developed separately for relevant information and then compared with each other to extract commonalities and differences amongst themes (Meier and Peters, 2023).

3.15. Summary of Methodology

The research methodology of this study provided a systematic structure for addressing the research questions and purpose of the study. The chapter explored the theoretical stance on which the study is underpinned. The study adopted the constructivist or interpretivist of epistemological philosophy considering the nature of the phenomenon being investigated and the social context employing mostly open-ended interviews. Given the aim of the study and research questions, the study adapted the conventions championed by known scholars of qualitative studies such as Wales (2016), Yin (2016), Creswell (2013), Cypress (2017), and Kumar (2019). Hence, the study adopted a qualitative case study research approach to evaluate the existing phenomenon and explored how the complexity in the social processes and attitudes of entrepreneurs can be empirically captured (Wales, 2016). The sources of evidence were defined as emanating from interviews and documents/reports of case study firms and, official reports on the locality or firm. The study also provided logic for the planned procedure of data analysis and presentation. Lasty, all the issues regarding rigour of the qualitative study were thoroughly discussed and addressed.

CHAPTER 4: RESEARCH FINDINGS

4.1. Introduction

As small meat processors encounter dynamic environment with their limited resources, their risk of survival increases. The thesis analysed a range of adaptive forms that occurred in small meat processing firms, a subset of the food sector that supports the growth of the national economy, by focusing of the effects of the limited resources and dynamic environments. The firms in this thesis employed different forms of adaptation to respond to the threats of resource scarcity and dynamic environments. The adaptive forms are generally categorised into pure adaptors and multiple adaptors. In each of the categorises, the specific forms were either defensive (or passive reactor), reactors, strategic reactor (or analyser), and agile or hybrid.

In this chapter, the primary data which were obtained from 17 interviews of 12 firms are described and presented. The chapter is presented as follows. First, the thesis presents background characteristics of the twelve cases in Section 4.2. The background data of cases includes the location, years of experience, employment, performance indicators and business success, and details of respondents. The background characteristics of the cases provides indication and understanding of each case relative to the resources they control and adaptive forms they can employ. Secondly, Section 4.3 presents the thematic analytic process to uncover the patterns or themes within the data which are important to addressing the research questions. This analysis also presented the order of the data, leading to an in-depth understanding of the cases. The results provided grounds for developing cross-case analysis in Section 4.4.

4.2. Characteristics of the Firm

There are twelve cases in this thesis came from of meat processing small business enterprises (SBEs) in the food and drinks manufacturing industry. The results showed some variation in the cases such as years of establishment (EST), firm type as well as differences in the interviewees. There is one major interviewee from each case. However, the researcher had to interview one extra person from SBE2, SBE4, SBE6, SBE7 and SBE12, for follow-up questions and clarity in some of the interview questions. For the sake of confidentiality and the privacy of the cases companies, the researcher utilised pseudonyms to replace their actual identities: SBE1, SBE2, SBE3, SBE4, SBE6, SBE5, SBE7, SBE8, SBE9, SBE10, SBE11, and SBE12.

Location: The cases were located in the West Midlands area. Out of these, five were located in rural areas, 3 in suburban and 2 from urban centres (See Table 3.2). This represents a degree of diversity of resource availability and environmental conditions.

Ownership Structure: The firms exhibited various ownership structures, classified as limited liability companies (LLC), sole traders, or partnerships. Among these, seven firms reported being registered as LLCs, four as sole traders, and one as a partnership. When examining whether there had been changes in the ownership structure since their establishment, only two firms indicated undergoing a change. This description aligns with the expectation that small businesses typically remain relatively small in size, indicating minimal inclination towards structural changes.

Processing Activities: The major focus for most of the cases involves the production and processing of lamb, beef, sausages, and pork. Operational processing activities across ten out of twelve firms predominantly include freezing, traditional cooking techniques, cutting, and roasting. However, smoking and preservation methods are most referenced as integral processing techniques in a smaller subset, specifically mentioned by only two out of the twelve cases. This may indicate the nature of resources controlled by the firms and the type of response expected. The firms engaged in minimal processing, contrary to the increasing demand for ultra processing method to increase the quality, safety, and shelf life of processed food substances. Minimal processing in this context refers to the methods employed by the firm to preserve food substances whilst maintaining the nutritional quality and sensory characteristics by not relying on extensive heating or alteration of the product (Fellows, 2000).

Performance Objective: The most important considerations for goal setting amongst the firms were profits, sales, customer services enhancement and brand recognition. When looking at the goals and objectives of the sample firms, the thesis noted that almost all the firms (8 out of 12) indicated profit and sales growth. Only three firms regarded customer service and brand recognition as other their main goal. Growth orientation was emphasised very much by the firms. In terms of the performance of the sample firms in the last five years, the firms indicated they have been very successful.

Majority of the firms reported increased profit and sales volume. Two of the firms (SBE10, SBE7) have received multiple local awards and gained recognition for their remarkable contributions. The growth in financial performance or the recognition did not reflect in investment or expansion of their businesses.

Challenges faced: Notwithstanding the successes achieved by the firms over the years, most of them highlighted different levels of challenges, which had impacted on their businesses. With COVID and BREXIT set aside, changing customer demand and requirements, price increases, supply issues, human resourcing, competition and foot and mouth diseases were amongst some of the challenges mentioned by the firms. Four of them indicated that the changing demand was their major challenge. Two firms (SBE3 and SBE11) highlighted the issue of BSE, foot and mouth disease as critical issues on the business in the past, and four cases were concerned about the rising costs and price increases.

Target customers: The target customers varied among the cases, with some cases catering to individuals, small businesses (e.g., pubs and restaurants), and a mix of individual and internet customers. All the twelve cases were individual customers who visit the shops. Seven of the twelve cases served business or retail customers. It was found that one firm offered 70% of its sales online, whilst two firms also offer delivery services.

General Characteristics of Interviewees: Ten interviewees were Owner Managers, four Supervisors, two Directors, and one manager. Majority of the respondents (seven) have over 10 years of experience in the meat processing industry. The rest have between 5 to 10 years of experience. The researcher noted that these respondents are experienced individuals with considerable experience, providing in-depth insights into how the industry works. Regarding the range of their age, five between 40 and 50, three between 30 and 40, and three between 50 and 60 years. One was over 60 and one other belonging to 20 and 30-years old bracket. It is unclear to the researcher whether the concentration of participants within certain age brackets might impact the generational dynamics and approaches to industry challenges. Most respondents have completed their education up to GSCE or A Levels. Some (three respondents) have higher education such as Postgraduate or Level 4 education. The variation in educational backgrounds suggests a mix of formal education and hands-on experience. The educational background of some of the interviewees from the cases (SBE9 and SBE10) showed in the quality, logic and coherence in their responses, and

how they appeared to know the solution to their challenges. Interviewees emphasised more on the use of ordinary or less robust resources, informality of business structures and instincts (SBE5, SBE6, SBE9, SBE11). Time was a constraint in most cases, as some interviewees were interrupted by the need to serve customers.

4.3. Themes Development

The thematic analysis process follows six-phase framework of Braun and Clarke (2006). This process involves starting with interview transcription, becoming familiar with the data, generating initial codes using NVivo, searching for themes, review of themes, synthesis and writing up (Maguire and Delahunt, 2017). The researcher meticulously documented these themes, subthemes and descriptive data through multiple sessions involving the analysis of audio recordings, company documents, and field notes. These were used to analyse participant responses across the different cases of the study.

The thesis explored data regarding the adaptive responses and forms of the small meat processor with their limited resources. The contextual factors (limited resource and business environment condition) are expected to influence the adaptive behaviour and adaptions forms, were also investigated as major themes. The researcher used the descriptive codes and interviewee quotations which are relevant to the adaptive behaviour in resource-limited context regarding the three research questions, focused on a) characteristics of limited resources related to the RQ1, b) condition of dynamic business environment related to RQ2 and c) adaptation process (including adaptive strategies and adaptive forms), which is related to RQ3. Results about the relationship between dynamic business environment, limited resources and adaptive forms are also reported to address RQ3 and provide further insight into the SME adaptation in resource-limited context. The results from the 12 cases generated three major themes, five categories (or subthemes) and twenty-two descriptive codes. Table 3.1 above already provides information about the key interviewees and their respective firms. These interviewees were all business leaders (e.g., owners, owners- managers, managing directors, or managers) responsible for key ‘strategic’ decisions for the firm. Table 4.1 shows the codes used to identify the adaptive strategies employed by the firms, whereas the Table 4.2 and Table 4.3 show coding process for resource characteristics and dynamic environment respectively.

Table 4. 1 Code Labels: Adaptive Strategies

Adaptive Strategies	Description of Code	Criteria for Inclusion
Existing routines and practices	No change in existing practices, direction of strategies, or being resolute with limited resources	No evidence of change of posture, strategy or position or hostile environment.
Utilise resource	Reconfigure existing resource or acquire new ones.	Obtaining new or restructuring existing resources as a response to limitation of resources and/or hostile environment
Reaction	This describes adapting, adjusting, or responding to way of doing business because of lack of resources and changes in environment.	Not Provided.
Product/market development	Diversifying the way business is done.	New business operations including ecommerce, home delivery, payment system.
Smallness and Agility	Responds easily and frequently to circumstances.	Evidence that change occurs frequently.
Network and Relationships	A relationship-building strategy with key stakeholders such as suppliers, friends and family, customers, etc.	Relationship with key stakeholders as a response to limited resources and/or hostile environment.
Diversify	Complete divergence from the existing products/services and markets.	Evidence of new products, services, markets away from normal meat products range and market.
Reason for adaptation	Describes the reasons behind the (change in) strategic	Compelling reason for an existing or change in the position of firm, such improve quality, customer demand, regulations, etc.
Adapt_Culture	Actions and responses due to culture of customers.	Not provided.
Adapt_Ethics	Actions and responses due ethical issues, e.g. Halal, etc.	Not provided.
Adapt Carbon Footprint	Actions and responses in response to carbon footprint issues.	Not provided.
Adapt_COVID	Actions and responses due to the effects of COVID	Not provided.
Adapt_BREXIT	Actions and responses due to the effects of BEXIT	Not provided.
BREXIT Impact	Effect of BEXIT on need for change	Impact of BREXIT on resources and/or adaptation

Source: Field Work

Table 4. 2 Code Labels: Resource Characteristics

Resource Characteristics	Description of Code	Criteria for Inclusion
Limited Resource	Generic assets which can easily be traded, copied, or acquired easily by competitors.	Generic resources for past 5 years. This includes outdated assets, inefficient process, etc.
Critical	Very important resources without which the strategies and outcomes will be negatively affected.	All resources described as contributing to the quality, competitiveness and strategy.
Substitute	Resources used in place of important resources required.	Any resources that have been or desired, e.g. manual handling, borrowed money friends and family, etc.
Selection Criteria	The set of criteria for acquiring a resource, including cost, quality, purpose, etc.	No provided.
Time Constraint	Evidence of lack of time available for business.	Lack of availability of staff for normal work.
Resource Gap	Absence of a critical resource for processing or for strategy development.	Lack of capital, lack of automatic equipment, lack of skilled staff, etc.
Supply Issues	Lack of supply, ageing farmers, unavailability of animals.	Not provided.
Meat Quality	Major sources of meat, that is, animals which feed into the value chain to create value.	All animals especially cow, goat, chicken and pigs.
Computers at normal level	Lack of computer systems for easy and faster administrative duties.	Not provided.
Minimum financial capital	Evidence of poor credit history, borrowing from friends and family, and lack of access to credit from formal institutions.	Any evidence of liquidity problems
Lack of/low quality inputs	Lack of inputs, including animals, ingredients and basic supplies.	Not provided.
Lower-Level Equipment	Machinery unable to process meat products in large volumes and speed. Lack of functional power of existing equipment.	Evidence of simple tools, manual handling, and equipment not meeting industry standard.
Networks and relationships	Weak or lack of rapport and relationship with suppliers and customers.	Not provided.
Small facilities	Lack of capacity to process amount of meat, e.g., electric sausage machine, limited / unreliable production area	Size of processing space, smaller number of employees, supply issues.
Substitute resource	Resources used in place of critical resource.	Use of part-time workers, manual equipment, borrowed resource, finance from family, etc.
Unskilled workforce	Lack of basic skills and dexterity, availability of and education and training.	As indicated.

Source: Field Work

Table 4. 3 Code Labels: Dynamic Environment

Dynamic Environment	Description of Code	Criteria for Inclusion
Price Increase	The spate of price increases of the business environment which have impact on availability of resources and position.	Major price increase consistently over the period.
Economy	The changes in the economy which had impact on availability of resources and firm position.	Factors such as price increases, GDP, inflation, unemployment, immigration, etc are considered.
Regulation	The nature of regulation and legislation in influencing availability of resources or firm position.	Tightness or looseness of regulation or legislation that had impact on the firm
Technology change	Emergence of new technologies or new way of working that can influence resource availability or trigger a response.	New technologies or emerging new technologies, e.g. new processing systems, CRM systems, ecommerce, etc.
Customer Requirements	Changes in the needs and preferences of customers over time.	Customer demand from the normal products or services provided.
Competition	The level of competition in the food processing industry.	Competition from both large and small businesses.
Supply Issues	The availability of suppliers, and nature of meat suppliers.	Supply issues which affected need for change.

Source: Field Work

Table 4.4. shows the results from the coding process, which depicts the different adaptive behaviours/strategies and the corresponding forms of adaptation employed by the firms. In line with the position of Rant (2007), this thesis distinguishes between adaptation in response to limited resources and adaptation in response to a dynamic environment, based on the conditions of the environment. Table 4.5 presents the codes,

and their corresponding themes related to the resource-limited context, derived through continuous examination of interviewee narratives and cross-case data categorisation.

Table 4. 4 Codes, categories and aggregate dimensions in adaptive forms of SBEs

1st Order Codes	2nd Order Codes	Aggregate Dimensions
No change in strategy and position No change in direction of strategy Work with what we have Resolute Continue with existing practices Do not compromise on standard Rarely adjusted to limited resources Work around tight legislations Have not evolved much Organic Growth/Develop from within	Existing routines and practices	Conservative Adaptor
Use existing resources, e.g. equipment, employees Improvise with existing resources. Use brand image Replace existing resources	Resource Optimisation	
Explore networks and relationships Utilise network of major stakeholders Borrow from friends and family Collaborate with Uber Eats Borrowed machine from friends	Adaptation through network	
Explore new opportunities Use alternative resource Invested in new staff Try new products Bought from different sources.	New product/market development	Strategic Adaptor
Use new technology. Selling online Home deliveries Changes business style Adopted amazon model	Restructure business model	
Flexible and responsive Small and flexible Advantage of being small No long chain of command We respond incredibly quick Limited aggression Maintain agile deployment Use instincts	Smallness and agility	Reactive Adaptor

Source: Field Work

4.3.1. Emerging Adaptive Themes

This section summarises the key characteristics of the twelve small meat processing firms (SMPFs) sampled and the emergent adaptive patterns derived from their responses. Of the twelve firms, five were located in rural areas, four in urban centres, and three in suburban locations. The firms demonstrated considerable variation in context, yet all shared characteristics typical of small enterprises in the sector. On average, the firms were relatively mature, with a mean age of 43.2 years, and employed approximately 11.4 staff members. The primary business objective of the firms was consistently identified as profit maximisation. Notably, all firms operated locally and did not engage in export activities. Their production processes were generally classified as minimal processing, reflecting a consistent operational model across the sample.

The firms operated with resource limitations typical of the SMPF context. These limitations were evident across several domains such as machinery, financial, skilled resource, and capacity constraints, alongside a clear technological gap. Institution-specific and external environmental factors strongly influenced how these firms adapted to their environments. This was further compounded by a highly competitive marketplace and a regulatory environment that was widely perceived as unfavourable to small-scale operations. Three main adaptive forms were identified across cases: conservative, reactive, and strategic. The conservative form was primarily associated with internal constraints, particularly limited resources. In contrast, the reactive and strategic forms were responses to changes in the external environment. Reactive adaptation often emerged in response to immediate threats or challenges, whereas strategic adaptation reflected more deliberate and future-oriented planning, despite resource constraints.

4.3.2. Adaptive Forms

Previous studies characterise adaptation as a change in organisational attribute (Levinthal, 1994), modification in every aspect of the business (Schindehutte and Morris, 2001) or actions of business owners on adjusting to changes in the business environment. Adaptive forms, which characterise the state of organisations from changes in behaviour, actions or strategies, have also been defined differently by various authors. This thesis sought to investigate how the small firm adjust their businesses when confronted with limited resources and dynamic environment. The cases discussed various forms of adaptation with limited resources and dynamic

environments. Each of the twelve cases used their understanding of limited resources and challenges in the business environment to develop adaptive forms, supported the small firms to survive at least in the last five years. The adaptive forms are presented in Table 4.5 showing commonalities between the cases, and few discrepancies identified.

Whist there is some scepticism about the use of tick boxes or check lists (Ahmed, 2024), the thesis used these to provide a snapshot for ease of understanding, and to help explain the phenomena in detail. In line with the views of Shelton, Smith, and Mort (2014), the tick boxes helped with the transparency of the research process. For example, the thesis used tick "√" boxes in Table 4.5 in each cell where a form of adaptation occurred across the participating firms (SBE1 to SBE12). This approach helped translate the complex qualitative findings into a visual matrix and enhance the presentation and interpretation of qualitative data.

Table 4. 5 Forms of Adaptation

	SBE1	SBE2	SBE3	SBE4	SBE5	SBE6	SBE7	SBE8	SBE9	SBE10	SBE11	SBE12
Conservative Adaptor												
Use existing resources, routines, and practices	√	√	√			√	√	√	√		√	
Exploit Networks / Relationships		√								√	√	√
Reactive Adaptor												
React promptly				√	√	√	√		√		√	√
Agility and Smallness				√		√				√		
Acquired new resource					√			√				
Business promotion					√							
Strategic Reactor												
Restructure Business Plan/Model							√	√	√	√		
Diversification of products/markets						√		√	√		√	√
Brand positioning										√		

Notes: √ - occurrences of specific adaptive strategies

Source: Field Work

While qualitative research is fundamentally interpretive and rich in narrative detail, the use of the tick boxes also provided a structured way to summarise patterns

across multiple cases, thereby facilitating comparative analysis. It also helped to identify patterns and trends across cases, for example in the thesis, the table shows that under conservative adaptation, “use of existing resources” happens to be employed by 8 out of the 12 firms, suggesting a dominant adaptive behaviour. Table 4.5 shows the “Conservative Adaptor” strategies are discussed more frequently than the “Strategic Reactor” strategies, indicating variations in adaptive responses. Generally, the procedure was used to support thematic triangulation by showing how narrative themes which derived from interview data are reflected across multiple cases. This approach aligns with the principle of data condensation in qualitative research (Miles, Huberman and Saldaña, 2014), where qualitative data is systematically summarised without losing the richness of its meaning. It also supports pattern matching, a technique in case study research that compares empirically observed patterns with theoretically predicted ones (Yin, 2018). The majority were reactive in nature. However, there were activities that could be classified as conservative/non-adaptive involving the use of existing practice, routines, and resources. The cases were mostly concerned with reacting to constraints and challenges, so the adaptive forms were employed to address these issues. These adaptations are discussed below, organised into three thematic areas, namely, Conservative Adaptor, Reactive Adaptor, and Strategic Reactor.

Conservative Adaptor. The empirical findings from the thesis identified a conservative form as one of the ways in which the firms adapted. This form of adaptation is generally passive or stable, usually using existing resources, routines, and practices, restructuring existing or exploiting its network to cope with dynamic business environment and limited resources (Table 4.6). The visual representation of the table shows that all the firms, except SBE5, demonstrates reluctance to react despite resource constraints or changes in the environment context. Previous studies have characterised this form of adaptation as defensive (Chakravarthy, 1982; Miles and Snow, 1978) or conservative (Borocki et al., 2019) to characterise the position in which the firm remains adamant and unreactive to resource and environmental challenges. The thesis reflects on the non-adaptive form employed by the firm in reaction to limitation of resources.

Table 4. 6 Conservative Adaptor

Conservative Adaptor	SBE1	SBE2	SBE3	SBE4	SBE5	SBE6	SBE7	SBE8	SBE9	SBE10	SBE11	SBE12
Use existing routines and practices	√	√	√			√	√	√	√		√	
Resource Configuration	√	√	√	√		√	√	√		√	√	√
Exploit Networks / Relationships		√								√	√	√

Notes: √ - occurrences of specific activities

Source: Field Work

Use existing routines and practices

The responses from the interviews showed that the conservative approach was a core adaptive form amongst the majority of small meat processors. This implies that rational choices might not be the subject for the owners of small firms. The interviewees either expressed using their existing routines and practices or reconfigured their existing limited resources (Table 4.6). Majority of the responses (10: SBE1, SBE2, SBE3, SBE6, SBE7, SBE8, SBE9, SBE10, SBE11, SBE12) resulted from the analysis in terms of the use of existing routines and practices to maintain stability, ensure product quality, and foster brand reputation. The remarkable narration is typical of the cases involved in this form of adaptation,

"*We haven't changed anyway because I don't think we need to. We use the existing machinery, our staff, and methods to do what we do. We do not do anything specular thing*." (SBE1)

Most of the interviewees expressed unwillingness to change position or compromise on standards and quality but rather employed existing routines and practices, or reconfiguration of existing limited resources. The interviewees noted that despite existing limited resources, "*it doesn't change the direction of strategy*" but emphasised their "*resoluteness*" (SBE1) in the face of challenges. This reinforces the positions of Anwar and Hasnu (2017) who emphasises a cautious and rational approach in the face of challenges. The level of caution in adaptation expressed by the interviewees was obvious. Some of the interviewees emphasised that adaptation to unfavourable situations was not a regular feature in their strategic thinking, and in the words of (SBE5),

"We *don't often adjust much but adjusted only when we have to do but on rare occasions. We are restricted by the lack of resources."* (SBE5)

Resource Optimisation

Of these ten, eight of the cases emphasised resource optimisation, and a focus on existing processes, routines, and practices in coping with challenges with resources. The responses showed the emphasis of these firms on conservative form with the utilisation or reconfiguration of existing resources without significant use of acquisition of new resources. It seems to suggest that notwithstanding the presence of limited resources which affected their capacity, the firm is still able to adapt:

"*We just try to work with what we have until we are in a position to acquire equipment that we need. No, it's just I'm making the one till we can do better really*" (Interviewee 1, SBE2).

On the other hand, most of the firms demonstrated their adaptive capacity with existing limited resources. Indeed, it is interesting to find how these small firms seemed to find a way around their limitations and challenges. The interviewee representing SBE3 emphasised their ability to navigate around existing limited resources, highlighting that,

"*We usually used the resources we already have to solve our problems. We usually find a way around things which is part and parcel of life of our business*." (SBE3)

These views were shared by SBE12 who noted that,

"We *don't really often adjust as we find ways to replace those resources*. *We only adjust when it is absolutely necessary to do so. Even that we consider the resources we have available first*". (Interviewee 1, SBE12)

Interestingly, SBE4 and SBE6 showed disdain toward existing limited resources, with SBE4 noting that,

"*We have been resourceful in a nutshell as a business. We have had to use what we've got to do everything. We have done for a long time now*". (Interviewee 1, SBE4)

These findings further support the idea of dynamic capability which introduces decision-making capabilities, which involves realignment or integration of existing resources to mitigate challenges (Deakins and Bensemann, 2019). This reinforces their dependence of limited resource for adaptation. This viewpoint was echoed by the owner of SBE6 who stated that,

"*We looked at the strength of the team that we've got here, and we looked at the resources that we've got and said how can we use what we have to our best advantage*."
(Interviewee 1, SBE6)

It was interesting to find that, some of the interviewees used their "*gut feeling*" *and* "*instincts*" (Interviewee 2, SBE6). The views from the aforementioned firms are clearly characteristic of the lack of strategy form suggested by Hagen et al. (2017) who claimed no clear pattern of strategies and approaches in addressing problems. A major adaptive strategy of these small firms is to utilise limited skilled workforce to overcome equipment challenges. As indicated by SBE7 for example,

"*It is become our practice to keep on using the present equipment and the skilled staff who managed to use what we have to do the job*." (Interviewee 1, SBE7)

There is evidence of obvious capacity constraints. These findings relate to responses with limited resources in relatively stable environment. This confirms the perspective of Ferreira, Serra, and Reis (2011), Zander and Kogut (1995) and, Shepherd and McKelvey (2009) who stressed that in stable environments, firms employ defensive position with their existing resources and capabilities. However, the view from previous research does not establish whether those resources are relatively limited.

For these firms, the optimal adaptive strategy involved adapting through utilisation of critical resources. However, due to resource constraints, they were compelled to adopt a conservative approach, which entailed utilising existing practices and routines, or reconfiguring their limited resources to address existing challenges.

Adaptation through relationships and networks

Developing relationships and networks was important for some of the small meat processing firms. The network helps the firms in information sharing and knowledge exchange, as well as acquisition of resources. Thus, in addition to using resource optimisation and continuation with the same routines and norms, four cases (SBE2, SBE10, SBE11, SBE12) often exploited their networks and relationships to compensate for constrained resources. The use of inter-firm networks and relationships has emerged as an adaptive strategy employed by firms for resource exchange, product enhancement, process improvement, and meeting demands (Westhead, Ucbasaran, and Binks, 2004; Huggins and Thompson, 2015). An example of utilising networks for resource exchange was indicated by case SBE2. The interviewee mentioned the value of friends and families by indicating that for most financial resources limited, so they

"*Call upon friends or family to give us capital injection or short-term loans or just bridging facilities to fill our short-term working capital needs*."

(Interviewee 1, SBE2)

This quotation highlights the reliance on informal networks, particularly close family and associates, which play a critical role in supporting the business's operational continuity. Interviewee from SBE10 also utilised networks, albeit from the industry. The owner of SBE10 commented:

"*We used network from industry, influential persons and media organisations to enhance business promotion. We have intentionally built reputation amongst the business community, and we rely on their approval and support to drive our business growth*". (SBE10)

The interviewee from SBE12 had to depend on a network of small butchers in the locality in the absence of critical machinery. This is consistent with the view SBE11 which also relied on the network of suppliers and competitors. SBE11 indicated that,

"a *network of suppliers and even competitor helps us to find the best solution in the most difficult situations. I remember the support we received from our suppliers during COVID, when demand had escalated, and we needed help with both supplies and machinery*." (SBE11).

It is clear that networks and relationships serve as vital resource base when key resources are unavailable. This is reinforced in the literature review that in the absence of resources, firms exploit their networks to build capacity, exchange information and knowledge, and for resolving challenges in the supply chain (Deakins and Bensemann, 2019; Rant, 2007; Westhead, Ucbasaran and Binks; 2004). Instead of employing strategic adaptation or some complex modification towards resource and environmental challenges, some of the small firms found value in utilising their local network of friends and family, suppliers, competitors, customers and other industry players for improved capacity enhance.

Reactive Adaptor. So far, the evidence suggests that small firms rarely adapted positively to resource constraints. The evidence from the thesis suggests, however that, when encountered with dynamic or hostile business environment, some small firms resorted to reactive responses for acquiring or reconfiguring resource endowment with time (Table 4.7). The table reveals that eight firms react promptly, three firms use their smallness and agility respond, two firms react by acquiring new resources and one firm

engaged in promotion and marketing in reaction to changes in the external environment. One firm (SBE5) employ a combination of prompt reaction, acuision of new and promotion to adapt. External environment factors inducing various responses are fully articulated by strategy scholars (Sarta, Durand, and Vergne, 2021). When the dynamic environment was reviewed in Chapter 2, the thesis noted that in a hostile or highly dynamic environment, competition for resources increases, leading to a deprivation of resources for small firms (Ghadge et al., 2020; Ramdani, Chevers, and Williams, 2013). Limited access to materials, finance, skilled workforce and market, for example, can make the firm respond to the challenges. Other studies argue in contrast that small firms opt not to adapt to changes in the environment (Vergne and Depeyre, 2016).

Table 4. 7 Reactive Adaptor

Reactive Adaptor	SBE1	SBE2	SBE3	SBE4	SBE6	SBE5	SBE7	SBE8	SBE9	SBE10	SBE11	SBE12
React promptly				√	√	√	√		√		√	√
Agility and Smallness				√	√					√		
Acquired new resource						√		√				
Business promotion						√						

Most of the small meat processing firms rely heavily on finance, equipment, meat supply and skilled workforce, but these resources are generally limited. As indicated above, these factors do not constrain the development of small firms, however changes in the business environment might mitigate the pace of development. The evidence from the cases in adapting to changes in dynamic environment with limited resources corresponded with the conceptualisation implied in the small business research. Most of the cases identified various reactive responses to changes in the business environment, including reacting promptly, being flexible with their decision-making, acquiring new resources, and promoting businesses. This is consistent with SCT and previous literature regarding reactive processes that firms react promptly to changes in the environment (Miles and Snow, 1978; Teece et al., 1997; Sarac, 2019). Most small firms (7 cases: SBE4, SBE6, SBE5, SBE7, SBE9, SBE11, SBE12) exhibited prompt reaction

to environmental challenges. A narrative of the owner of SBE9 summarises a typical reactive response as,

"*To actually address these sorts of things you don't sit down and think about it, you just do it. Our business, particularly at this level, yeah you don't have board, you do have board meetings in the kitchen there and a cup of coffee around the table, but no formal rules of actually having to explain why you do it... you just react to things*." (SBE9)

Other examples of reactive responses are provided by cases SBE4, SBE6 and SBE10 mentioned how the smallness of the firm make them flexible and adaptable to changes in the environment. There is emphasis on the fact that the firms are small, allowing for prompt actions and intuition in their adaptation process. This position is no different from the views of Zahra and George (2002) that the smallness and agility of firm enable quicker decision-making. This was strongly articulated by SBE10 that,

"*The firm maintains agile deployment of what we choose our next planned action, so very limited aggression unfortunately, but certainly agility is our major strategy.*" (SBE10)

In two cases (SBE5 and SBE8), the firms were able to acquire new resources in a dynamic environment to capitalise on the opportunities. These results seem to contradict previous research that small firms are hindered in their ability to acquire new resources in a highly dynamic environment. Finally, in responding to how the firm adapts to resource limitations and environmental changes, case SBE10 affirmed:

"This small firm had to embrace technology really quickly, seeing what was happening in the market and our lack of critical resources. We believe that technology is one resource that can enhances our capacity to adapt quickly and conveniently". (SBE10)

This includes building ecommerce website to take advantage of increasing demand, illustrating the importance of adaptation towards environmental hostility. Considering that these were the actions and behaviours mostly articulated by the cases in their adaptation process, it was likely that the reactive form help achieve better results and service in resource-limited context. Indeed, all cases except SBE2, indicated having achieved a stronger business performance over the last five years when the environment was generally dynamic. This is inconsistent with previous studies that the consistent tendency to adapt to changes signify a strategic failure (Sarac, 2019).

Strategic Reactor. Contrasting viewpoints regarding the strategic behaviour of small firms exist in literature. Gopalakrishnan and Dugal (1998) for example contend that smaller firms have less strategic options in comparison to their larger counterparts. Baker and Nelson (2018) demonstrate how small firms are able to utilise limited resources to innovate and create opportunities for survival. The findings from this thesis provide behaviours and actions that suggest strategic adaptation. Strategic adaptation implies active response to changes in the external environment with deliberate and planned decisions, with a blend of instant reactions and long-term strategic considerations. For example, seven cases (SBE6, SBE7, SBE8, SBE9, SBE10, SBE11 and SBE12) provide evidence of restructuring of business model/plan, diversifying products and markets, and exploiting brand positioning. The risk-taker, analyser, innovative and decision-making activities leading to new product and market development align with the Entrepreneurial Strategic Posture espoused in previous literature (Covin and Slevin, 1991; Lumpkin and Dess, 1996; Borocki et al., 2019). However, the researcher did not get the sense that the adaptive behaviour employed by the firms was intentional or proactive. Instead, the cases employed strategic decision in a reactive form as they interacted with changes in the business environment rather than a resource constraint. For example, the try-and-error approach expressed by SBE9 sums up the perspectives of most of the cases in this research,

> "*We tried to diversify and try new products that customers might need. So, we do have new products and services. That is something we've done in the past. When some things become difficult, for example, because of regulation not acceptable and very tight for us, we increased the number of commercial patties we sell, so I would imagine that we work around tight standards and regulations*." (SBE9)

Only one of the cases (SBE10) seems to have engaged in a more proactive and conscious action by utilising its brand to gain some advantage in the market, as well as the development of "Amazon model". Even for SBE10, the owner admitted that COVID-19 accelerated the implementation of the Amazon model employed. This finding is not unexpected, as the owner of SBE10 has extensive commercial experience and a higher educational background, both of which seem to align with someone with high capability towards strategic adaptation (Halim et al., 2020). Contrary to the other cases, SBE10 is also one of the cases whose performance indicators are driven by environmental sustainability and core values and not profit.

The analysis of adaptive forms across the twelve cases reveals distinct patterns in adaptive responses. The predominant form of adaptation, observed in ten firms is conservative. This adaptive form is characterised by resource utilisation, use of existing norms and practices, and exploitation of networks and relationships. Consistent with previous literature, this form is also adopted when the environment is relatively stable. This is followed by reactive form, found in nine of the twelve cases. This adaptive form is also characterised by prompt response changes in the business environment and resource constraints, as well as the use of the firm's smallness and agility. Furthermore, one case engages in business promotion, while other two cases acquire additional resources in response to the changes in the environment. On a strategic form, seven firms adopt various approaches such as restructuring business plans/models, diversifying products/markets, and brand positioning. Notably, SBE10 emerges as an exceptional case, demonstrating a proactive, deliberate and comprehensive strategic approach by building its brand, leveraging media and other networks, and implementing an innovative delivery model. Despite these variations, a lack of consistency in adaptive strategies is apparent across most firms, with many employing a mix of non-adaptive, reactive and strategic forms, suggesting diverse and intricate attempts to addressing challenges.

4.3.3. Characteristics of Resources

The resource-limited context can be understood largely about the absence of critical resources and how they are considered. In an attempt to address the research question 1, the thesis investigated the characteristics of firm resources. Understanding the characteristics of the small firm helps to determine one of the contextual factors influencing adaptive forms. From the investigation, the leaders of the small firms identify what they considered to be critical/important resources and what are limited resources are. The word cloud in Appendix E shows the counts of resources available for a better understanding of the existing resources.

Critical Resource: The interviewees characterised some resources to be critically important for the survival and performance of the business. The interviewees discussed that the resources are either important for the firms or desirable. In all, there were 53 occurrences recorded in the interview (Table 4.8). So far, resources such as skilled workforce, advanced machinery, quality of meat supply, financial capital, technology,

customers, energy supply and branch image were identified to be the key resources which are currently desirable by the small meat processing firm.

Table 4. 8 Critical Resources

Critical Resources	**Number of Responses**
Skilled Workforce	17
Quality of Meat Supply	16
Advanced Machinery	7
Financial Capital	5
Advanced Technology	3
Customers	3
Energy Supply	1
Brand Image	1

Source: Field Work

Whilst these resources are typical of meat processing firms, there were differences in what constituted the most critical resource for small meat processos. About more than half of the responses considered the skilled workforce and quality of meat supply as critically important. Other resources such as technology, energy supply and brand image were considered to be low in preference Not surprisingly, only the owner of SBE10 who had a working experience as a top executive in a multinational company, considered brand image as an important resource for the small firm by highlighting in a famous statement:

"*Our brand is great quality that doesn't cost the Earth*." (SBE10).

The interviewee of SBE10 further explained:

"*The only size and weight that they used to their advantage is the brand reputation and standing within our industry* (*paraphrased,* SBE10).

Limited Resources: The characteristics of limited resources within the sample firms were examined to demonstrate that adaptive strategies were employed, beginning with the identification of those resource limitations. Interviewees discussed what constituted limited resources. From the coding process, 32 items characterise limited resources as contained in the firms (Table 4.9). The items are generally aggregated into limited

physical resource, limited human resource, limited financial resource, limited organisation resources and technology gap. The resource characteristics that emerged from the responses seemed to be typical of small firms. Yet the characteristics varied amongst the small firms (Table 4.10). Appendix F also details some of the quotations from the interviewees of the firms, regarding the limited resources.

Limited Physical Resource

The interviewees characterised limitation of physical resources in terms of outdated machinery and lack of raw materials. SBE3, SBE4, SBE5 and SBE12 characterise the resource as "outdated". Outdated here means that the machinery does not meet the required standard for optimal food outcomes. Except SBE4, the three cases characterised outdated resource in terms of unsuitable machinery and equipment in use. For instance, SBE3 specifically indicated that:

"*Modern equipment is lacking, which is essential for producing sausages at the required volume.*". (SBE3)

SBE3 reflected on the need for having electric machine for enhancing production efficiency which is crucial to maintaining high-quality output. This seems to suggest that operations and growth prospects, as well as optimum product outcomes may not be achieved with the existing limited resources. In a similar perspective as the interviewee from SBE3, the owner of SBE5 highlights specific resource deficiencies in machinery, noting that for the period of their existence, there has been lack of proper label manufacturing equipment. That notwithstanding, it was interesting to note that the absence of significant regulatory pressure in the meat processing industry affected their decision-making regarding equipment, with SBE5 opting to continue with their existing machinery. These findings emphasise the need for adaptive response towards less robust machinery to ensure sustained success in the industry.

On the other hand, an interviewee from SBE 12 described limited physical resources in terms of being cheaper or not specialised machine. SBE12 revealed:

"*The firm faced challenges due to a breakdown in essential equipment, specifically a sausage filler machine due to weaknesses in our machines*."

(Interviewee 2, SBE12)

Table 4. 9 Transcripts, Codes and Aggregation of Limited Resource Characterisation.

1st Order Coder	2nd Order Code	Aggregate Dimension
Inefficient Machinery Machines Not Sophisticated Not Good Machines Old Machines. Substandard Equipment Unreliable Machinery Few Machines	Outdated Machinery	Limited Physical Resource
Limited supplies and inputs Lack of/low quality inputs. Unavailability of livestock farmers cheaper suppliers unavailable	Lack of raw materials	
Lack of Skilled Workforce Lack of requisite skills Lack of education and training Low Staff Levels Skilled workforce unavailable Lack of managerial experience	Limited knowledge, experience, skills and size	Limited Human Resource
Lack of Finance Minimum Financial Capital Poor Credit History not enough money. Difficult to get cash	Limited access and availability of finance	Limited Financial Resource
Limited capacity Small facilities. Electric sausage machine Not enough room for processing Unreliable production area Lack of proper label machine	Capacity constraints	Limited organisational resource
Weak Rapport and Relationship Informal Systems and Structures	Informal systems	
Lack of Technology lack of efficient technology Manual processing Computers At Normal Level	Inefficient technology system	Technology Gap

Source: Field Work

Table 4. 10 Analysis of Limited Resource Characterisation

Case	Limited Access	Resource Gap	Outdated Resource	Capacity Constraint
SBE1	Lack of capital and machinery.	Machine gap. Machinery upgrades.		Lack of automatic machines to make thousands of products
SBE10	Limited processing due to financial and human resource constraints.	Skilled butchers' gap. Finding alternatives (e.g., part-time staff).		
SBE11	Limited access to markets and issues with suppliers.	Raw materials shortage.		
SBE12	Lack of expensive or specialised resources.	Machinery breakdowns. Replacements for broken machinery.	Resource not very expensive or very specialised Lack of correct machine to do the job	
SBE5	Lack of education, training, and machinery.	Skill and machinery gaps. Replacing machinery.	Lack of proper label machine – not in line with regulation	
SBE7	Need for financial resources and equipment.	Machinery capacity gap. Manufacturing equipment and refrigeration upgrades.		The machine we had wasn't suitable and it didn't have a capacity as we require.
SBE9	Technology needs.			
SBE6			Brand is less relevant amongst major stakeholders.	We need sufficient space to go out and process
SBE2	Financial constraints.	Equipment purchases challenges.	Outdated machinery is consistently in use in the past 5 years.	
SBE3	Skilled workforce needs.,	Ingredient quality concerns.		We lacked the sufficient chilling space to process more meat products.
SBE4	Technology and time requirements.		Existence of obsolete technology	
SBE8	Supplier liquidation and technology challenges.	E-commerce and efficiency gaps.		

Source: Field Work

The description of this resource by SBE12 indicated their machines were not highly expensive or specialised required for the business to thrive. SBE12 further highlighted that during the period of machine breakdown, there was absence of a readily available replacement machine, resulting in a significant operational interruption. This scarcity of a critical resource led to the need to borrow machinery from another shop to sustain operations. The issues related to machine breakdowns and the delay in obtaining the necessary equipment implies disadvantages for small firms. For being the oldest meat processing firm (134 years) in the sample, it is interesting to establish how the firm adapted with this obsolete resource consistently over the years.

In a rather different perspective, some interviewees from the sampled firms viewed limited physical resource in terms of lack of raw materials. Lack of raw materials is described by the interviewees as low-quality inputs and shortage of suppliers (i.e., farmers). SBE8 explained facing "a consistent shortage of suppliers", which is aggravated by supplier liquidations. This experience is shared by the owner of SBE9 who experienced a traditional supplier shortage due to demographic shifts. It is interesting to note that, SBE8 and SBE9 are quite different in terms of their location, experience, and structure, however, they seem to experience similar resource constraints. SBE11, akin to SBE8 and SBE9, emphasised physical resource limitation due to supply scarcity and disruptions in meat facilities.

Limited Human Resource

Limited resources were also distinguished by the limited human resource. The analysis from the interviewees identified four main attributes of limited human resources, namely, lack of requisite skills, lack of education and training, small employee size, and lack of managerial experience. Three cases (SBE5, SBE9, and SBE10) identified lack of people with the right skills. Case SBE5, for example, discusses several critical aspects of the meat processing industry, with emphasis on the labour-intensive nature of operations that necessitates both skill and dexterity. In characterising limited human resources, SBE5 observed constraints related to human resources as a challenge, acknowledging gaps in skills among their staff. The interviewee of SBE5 stated:

"*We lacked the right kind of skills…. I want to improve the skills of our staff, so education and training will be key because the human resources is one of our important resources*." (SBE5)

Thus, the owner of SBE5 emphasised the need for education and training to fill the skills gap. SBE9, on the other hand, identified a deficiency in managerial expertise, especially in managing challenging circumstances. The interviewee of SBE9 highlighted the lack of experience in dealing with unprecedented situations, which also emphasised the importance of adept management skills particularly during critical times. In a slightly similar vein, SBE10 recognised shortfall in the number of employees needed. As indicated by SBE10, because of the issue with a special skill required of the industry, the interviewee reiterated:

"*There are very few skilled butchers available to employ these days. They prefer to work in other industries than in the butcheries or meat industry*".(SBE10)

The findings align with the views of Green and Martinez-Solano (2011) who found limited human resources to include deficiencies in skills and expertise, inadequacies in training, and skill development. In line with the previous literature and views from cases, SBE10 also encounters a significant resource limitation in human resourcing due to its nature as a small business. The owner of SBE10 highlighted the difficulties in both recruiting and retaining skilled employees who resonate with the company's values and objectives. They further asserted that the scarcity of resources allocated for training and development amplifies the challenge of nurturing and retaining a proficient workforce. Expressing the importance of intrinsic knowledge in their operations, SBE10 revealed the specialised nature of meat processing, emphasising the need for deep-seated expertise regarding the species being processed and the meticulous preparation methods. The owner of SBE10 narrated,

"*When we talk about meat processing, it is highly specialised because you need to have intrinsic knowledge of the species that you're preparing and how to prepare it, and then how to be able to practically undertake that process work, cutting it into the different farmer cuts and then prepare them. So, we are geared around that apprenticeship model of learning knowledge, skills, and ability*." (SBE10)

This perspective reflects firm's reliance on an apprenticeship model that prioritises knowledge acquisition, skill development, and practical abilities to ensure precision in their operations.

Limited Financial Resource

Three cases (SBE1, SBE2, SBE6) characterised limited financial resources in terms of minimum financial capital, limited access to finance, and poor credit history. According to the interviewees, the small firm usually lacks access to finance or have difficulty getting cheaper financing, which affect their ability to acquire other important resources. The owner of SBE1 articulated the struggle to securing financial resources for essential machinery, by indicating that,

"*We don't have the money to get the kind of machines we need for the business. Money is everything is this business*" (SBE1)

In line with the perspectives of Thong (2001) and Franco and Haase (2010), limited finance aligns with operational constraints. This also echoes with the perspectives from Kolade, Obembe, Salia (2019), and Halim et al. (2020) on substantial impact of limited finance. The owner of SBE2 came across as having an ambitious business but seem to have been impeded by limited financial resources. The firm had focused on expanding into the B2B market but was severely constrained by its environment and resources. The owner of SBE2 expressed that financial limitations and restricted access to capital are the main limited resources affecting the firm. The owner highlighted inadequate cash flow as a major challenge, stressing that:

"*Most of the constraints they have faced "are all financially related with the ability or inability to purchase equipment."* (Interviewee 1, SBE2)

According to the owner of SBE2, the lack of funding was hindered by issues related to their creditworthiness. This finding is associated with the views of Salia (2019) and Halim et al. (2020) who emphasise the significant impact of financial limitations on firm's development and operations. In a similar tone, SBE6 stressed the struggle with limited access to finance. The owner of SBE6 narrated this:

"*Financial institutions we have contacted in the past were not ready to offer financial support because they (Banks) did not have experience with meat processing business*." (Interviewee 1, SBE6)

This viewpoint from the interviewee of SBE6 aligns with insights from Wilson et al. (2003) and Liang, Shih, and Chung (2010 about the problem of accessing finance for food and agricultural businesses.

Limited Organisational Resource

Seven items emerged from the analysis in terms of limited organisational resource characteristics. SBE1, SBE4, SBE6, and SBE7 from different locations, had different experiences and views regarding limited organisational resource. However, the characteristic that the firm mostly assigned to limited organisational resource was capacity constraints, which refers to smallness of facilities or machinery to process large quantities of meat. The interviewee from SBE7 conveyed that their machinery

"*Was not suitable as it didn't have a capacity as we require*, and also the *production area had become unreliable, and the choice was to replace the machinery*" (SBE9).

This characterisation underscores the critical importance of acquiring appropriate manufacturing equipment, highlighting potential impediments to operational efficiency and growth prospects. Yet, how SBE7 can adapt and overcome resource deficiencies is an important consideration in this investigative research.

Similarly, SBE1 grappled with capacity constraints, primarily stemming from challenges in its current machinery. The owners of SBE1 and SBE3 characterised this limited organisational resource in terms of limited production capacity of existing machinery by illustrating this by saying,

"There is a need for a machine that can automatically make thousands of products, and to improve the capacity of the existing machinery." (SBE1)

The owner of SBE3 also stated slightly different as:

"we are in need of an electric sausage machine to process high volumes of sausages". (SBE3)

SBE4 characterised the organisational resource constraint related to insufficiency of chilling space, impeding their capacity to process meat products efficiently. They presented that limitation posed a significant constraint on the firm's overall production capacity. This view is shared by SBE6 which recognised the necessity for adequate processing space as a limiting factor in their operations, constraining their ability to expand processing capacities. Referring to the perceived lack of robust systems and organisational networks, the interviewee from SBE11 labelled a lack of organisational resource as "*having weak rapport and relationship with the suppliers*." This aligns with the view that organisational networks and relationships are essential resource which

contribute to the development of various strategies of small firms (Runyan, Huddleston, and Swinney, 2007).

Technology Gap

The primary difference between the small business enterprise and large firm in this thesis was the utilisation of technology. Specifically, use of technology was not a one of the main resources commonly utilised by the sampled firms. The analysis of the interview responses revealed lack of efficient technology, manual processing, and normal computer systems are key attributes of technology gaps. The fact that all the small firms adopted minimal processing, suggests a lack of, or minimum use of technology. On busy days, small firms were constrained by lack of technology to handle more workloads as explained by the owner of SBE4:

"*Obsolete or inadequate technology affected the operational efficiency especially on busy days*." (Interviewee 1, SBE4)

This implies that the lack of up-to-date technology was a potential obstacle in their meat processing operations, leading to delays and inefficiencies. This is consistent with previous studies by Harindranath, Dyerson, and Barnes (2008) that SMEs often struggle with technology obsolescence. This also implies that there is a limitation of technology adoption for development of strategies. However, there was no indication that SBE4 improved its technology capabilities.

Discrepancies in limited resource characteristics

The thesis investigated how firms defined and characterised their limited resources as a major theme of this study. According to Tehseen et al. (2021), limited resources are assets that are not unique to a specific firm and can be readily found and traded in the open market. The study analysed categorical data to understand how the firms characterised limited resources. To ensure data credibility, the study employed various words and phrases in the interview questions to elicit participants' descriptions of limited resources or resource constraints. The key words and phrases included 'lack of resource', 'description of existing resource', 'substitute resource', 'resource improvement', 'important resource', and 'resource selection criteria'. Subthemes emerged inductively from the original pre-determined codes were considered for analysis.

There are positive outcomes for firms when they control relatively critical or important resources (Dul and Neumann, 2007). Unfortunately, small firms can be intrinsically constrained with limited resources. Regarding the theme of limited resource characteristics, the subthemes that emerged inductively from the qualitative data analysis include limited access, resource gap, capacity constraints, outdated/ordinary resource, and substitute resources. This is summarised in Table 4.11 with details of the limited resource characteristics defined by cases.

Table 4. 11 Discrepancies of resource characteristics and resource types across cases

Resource Type	Limited Access	Resource Gap	Capacity Constraints	Outdated
Machinery and Equipment	SBE1 SBE2	SBE1, SBE5, SBE12	SBE1, SBE4, SBE6, SBE7	SBE9, SBE2
Skilled Workforce	SBE1, SBE3, SBE4, SBE10, SBE12	SBE5, SBE9		
Financial Capital	SBE1, SBE2, SBE6, SBE9, SBE10	SBE3		
Technology				SBE4
Meat Supply	SBE8, SBE11			
Time	SBE7			

All the 12 cases mentioned at least one of the characteristics of limited resources. There were some commonalities as well as discrepancies in how the limited resources were described by the different cases. The opinions expressed by the interviewees of the firms in response to resource characterisation questions generally agreed with the conceptualisation that earlier research suggested (Halim, Andalib, Ahmad, and Ramayah, 2020; Kolade, Obembe, and Salia, 2019; Senaratne and Wang, 2018).

Resource Characteristics

The cross-case analysis also reveals the different ways by the resources were characterised. In all, four characteristics (limited access, resource gap, capacity constraint, and outdated resource) were identified. Eleven of the cases were identified

that typified limited access to resources, including skilled labour, financial capital, machinery and equipment, time, meat supply. Of these, five cases each described the difficulty in accessing skilled workforce and financial capital resource. A notable quote from SBE2 concisely captures the substance of this challenge:

"*Most of the constraints that we have faced are all financially related. I don't think we have got any resource that has got better quality than our competitors. Maybe you can talk our skills which is quite extraordinary".* (Interviewee 2, SBE2)

This response echoes across the cases, with SBE1 emphasising the confluence of challenges and the scarcity of competent personnel. However, SBE5 and SBE12, while recognising the limitation, underscore a resource gap in this category. The resource gap represents the performance difference between the existing resource and competitive resource. In terms of this category, six of the cases (SBE1, SBE5, SBE12, SBE5, SBE9, SBE3) described their resources (machinery, finance, skilled workforce) as having weaknesses, lacking specific quality and features, or not as good as competitors. The findings from this category align with the perspectives of Helfat and Lieberman (2002) that resource gaps are evident when resources are dysfunctional, failing to strengthen a firm's competitive position. This correlation emphasises the importance of possessing and effectively utilising superior resources for sustained competitiveness, aligning with the RBV perspective.

Furthermore, capacity constraint is identified by SBE1, SBE4, SBE6, and SBE7 as a major limitation within the Machinery and Equipment category, which is the only resource type in question. The capacity constraint relates to lack of ability of the resource to process the expected maximum volume or level. This view was articulated firmly by SBE1 as

"*I would want to have a machine that can automatically make thousands of products for me*." (SBE1)

This view is shared by the way Cannon, Goldsmith, and Roux (2019) characterised limited resources as the difference existing between the firm's current resource capacity and a desired or valuable standard of resources. Three of the cases characterised existing resources as no longer relevant, competitive, or useful because of the requirements of the industry. Words and phrases such as "resources not very specialised", "proper label machine", "outdated", "not good", etc, were used to describe

the resources as outdated or ordinary. Notably, Technology is identified as outdated in SBE4, showcasing a specific aspect of the limitation, whilst SBE2 and SBE9 identify machinery and equipment as outdated. Consistent with the views of Harindranath, Dyerson, and Barnes (2008), technology obsolescence is associated with the nature of small firm, and almost non-existence in non-innovative firms such as small meat processors.

Resource type

The cross-case analysis reveals a consistent theme across the firms, emphasing the challenge of certain types of resources including financial constraints, machinery scarcity, a shortage of skilled staff, limited access to meat supply, outdated technology, and time constraints. The primary discrepancy in terms of resource type is found in Machinery and Equipment. The phrase "*Most of the constraints that we have faced are all financially related*" from SBE2 encapsulates the financial barrier associated with machinery and equipment in these circumstances. Eleven occurrences from eight cases continually emphasise the limitation of this resource. Previous research has identified machinery and equipment as one of the critical resources for enhancing efficiency and effectiveness of a particular type of firm (Greene, Brush, and Brown, 1997). This is unsurprising as major component of the meat processing activity is based on machinery and equipment. Notwithstanding the criticality of modern machinery in operations, majority of the firms (7: SBE1, SBE3, SBE4, SBE10, SBE12, SBE5, SBE9) commonly emphasised skilled workforce as a significant resource constraint. In line with previous studies about the criticality of human resources to product outcomes, the comment from SBE4 encapsulates the important role of skilled workforce in overcoming the challenges in resource-limited context,

> "*The majority of our work is by your hands, yeah, and your hands is your tool. So, I wouldn't say machines are paramount, because you can always use your hands if you needed, but I'd say that skilled workforce is very critical and without it, it would be a disaster for the business*." (Interviewee 1, SBE4)

Financial capital also emerged as a commonality across five of the cases (SBE1, SBE2, SBE6, SBE9, SBE10) each characterising its scarcity differently. Previous research underscored limited access to finance as compared to large firms (Senaratne and Wang, 2018; Kolade, Obembe, and Salia, 2019). It was observed during the data

collection process that, the owners or their supervisors did not have enough time for interviews. Yet only SBE7 highlighted “time” as one of the limited resources. The researcher can infer that the smaller size of the firm poses threat to their resourcefulness.

While the limitation of Machinery and Equipment, Skilled Workforce, and Financial Capital is recurrent, the findings also revealed specific idiosyncrasies in resource characteristics such as outdated machinery and technology, limited meat supply, and time constraints. Together, the cases collectively highlight the complex and varied aspects of limited resources, which present a wide range of challenges that require intricate and diverse adaptive strategies.

4.3.4. Dynamic Business Environment

All the twelve firms operate in their local environment. They sourced their raw materials and other resources mostly from the local markets. The condition of the business environment was reported to have influence on the adaptive strategies of firms. Seven of the firms characterise the condition of business environment as “100% rough” (SBE1), “dramatic “(SBE3), “unstable” (SBE4, SBE7), “rapidly changing” (SBE8, SBE9), or “plummeted and fluctuated (SBE11) indicated in Table 4.12. The responses from the interviewees generally describe the environment within the firms operate as dynamic. In line with the strategic contingency theory (SCT), firms would naturally align in such dynamic environments.

Table 4.13 depicts the coding process of the external environment factors. The data shows specific environmental factors such as the Market/Industry Dynamics, Economic Dynamics, Competitive Environment, Regulatory Environment and Technological Environment which can impact on access to resources and/or adaptive strategies. A matrix coding query from NVivo on the factor conditions of the business environment shows the count from interviewee information. The major issues discussed under this theme includes demand factors, consumer trends, and supply chain issues, and their relationship with resource availability or accessibility, and adaptation.

Table 4. 12 Condition of business environment

Cases	Business Environment Condition	Exogeneous and Industry/Institutional Factors
SBE1	100% rough.	Market Demand: market demand was high about a year ago, and also customers have been looking new meat stuff Technological changes: We are also seeing improved methods for processing
SBE2	It has been reasonably stable	One, our inability to I suppose that the selling price of our products was too high. So we had difficulty adjusting or watering down the product to suit the market. I think the change in consumer tastes
SBE3	Dramatic	Changes in consumer behaviour Increase in Customer demand Supply changes: shortage of raw materials Price Increases: price of raw materials and when we had prices going up because of COVID
SBE4	Unstable business environment. The business has not been very stable. Things have been changing frequently	prices are going up Changes in the prices of meat products customer requirements have definitely changed. Price increases Yeah, and that's evident because the supermarkets are getting rid of all their bakers and butchers. So you can see that trend is slowly everyone just they're all disappearing, aren't they? Bakers and butchers are coming out of supermarkets, because people have actually had too much waste
SBE5	Steady but was rapid in COVID	Price Increases: there's been price increases with raw ingredients that go in some of our things and obviously fuel that's had an impact because we do deliver; Increasing price from our suppliers increase in demand competition with supermarkets
SBE6	relatively stable	We have more confidence with the customer. They are more aware of the quality that we do and more prepared to deal with us and accept what we do and what we say. We found that individual customers perhaps have a little less cash to spend. But then sometimes what we do is seen as a luxury so they will spend their small amounts on luxury. We will be negatively affected without customers and people, and I feel as if we treat them fairly, they come back us. Economic factors - What has helped us is immigration into the UK. We find that people who come in are more familiar with our products like what we do and want that Taste of Home. Competition: many competitors these days. Supply issues: Supply of the raw material has been quite difficult because the economy is contracted. The supply side is very challenging because farmers need land to grow, and if they can’t get their hands on land, it is a major issue for us.
SBE7	Unstable	The war in Ukraine has affected us though. Has pushed the prices of goods up. Ukraine war will have a knock-on effect, I think as a small meat processor, my concern is how these small abattoirs are actually pushed out by successive governments through legislation. That's unfair legislation which was really produced for the

		large operator. rapid growth in terms of the demand for the meat products over the past 5 years.
SBE8	Rapidly Changing	in increase in customers; the meat industry has been growing very significantly; number of competitors in the market as they've been decreasing. prices have quadrupled. demand for poultry has quadrupled. inflation as well as politically, this is because once inflation keeps rising the customers are very reluctant in buying, and they're very careful what they buy raw meat which seems to be more of a luxury as it is relatively expensive
SBE9	It's worse. I would say it has been rapid.	Rising costs changes in consumer behaviour: unpredictable and changing consumer trends government interference in the form of government regulations; changes in legislation and regulations. fluctuations in demand livestock farming is very buoyant.
SBE10	moderate	government political decisions consumer behaviour: education of the buyers is tough and it is being tough for probably 30 years. high energy costs, because we are still relatively energy intensive, we cannot escape the fact that we have to refrigerate our product, which therefore is intensive and uses significant cost of our business at the moment.
SBE11	plummeted and fluctuated	environmental issue: We had foot and mouth disease that affected the quality of the supply of the meat that we process. competition: Supermarkets started to expand as big shopping centres draw people across demand for customers dropped off except when it was COVID time changes in the economy
SBE12	a stable environment in the last five years	the energy prices Changes in customer requirements - anti-meat. the vegan trades has grown, hasn't it competition wise, probably other butchers aren't in competition anymore, because there's not that much about the small butchers, we're looking at your big supermarkets. so supermarkets are becoming more of our competition, price increases, food prices Bad reputation of the meat processing industry

Source: Field Work

Table 4.13 shows analysis of responses from all the cases highlighted dynamic environment factors which influenced adaptive forms. Major themes which emerged from the analysis found market or industry dynamics, economic dynamics, competitive environment, regulatory environment and technological landscape to be the key business environment factors characterise the environment.

Table 4. 13 Coding of Dynamic Environment Factors

1st Order Codes	2nd Order Codes	Aggregate Dimensions
High market demand Increase in customer demand Growing meat industry Rapid growth in demand for meat products	Market and Demand Factors	Market/Industry Dynamics
Changes in consumer behaviour Unpredictable/changing consumer behaviour Change in consumer tastes/requirements Anti-meat trends and growth of veganism	Consumer Trends	
Shortage of raw materials Supply of raw material has been difficult Supply side challenging due to land issues for farmers Foot and mouth disease affecting meat supply	Supply Chain Issues	
Price of raw materials high Rising cost of goods High fuel costs Prices quadrupled Inflation causing reluctance in buying Changes in prices of meat products Rising food prices Energy prices increasing	Price Fluctuations	Economic Dynamics
Increase in immigration helping business Economic contraction affecting supply Changes in the economy	Economic Influences	
Many competitors in meat industry Supermarkets expanding Competitors like bakers and butchers disappearing from supermarkets Supermarkets becoming main competition Small butchers not in competition anymore Number of competitors decreasing	Competition Landscape	Competitive Environment
Government interference through tight regulations Changes in legislation and regulations Unfair legislation favouring large operators Government decisions affecting small abattoirs	Regulatory and legislator Factors	Regulatory Environment
Improved methods for processing Exposure to media channels Social media	Technological Factors	Technological Environment

Source: Field Work

Table 4.14 also presents the frequency with which various dynamic environmental factors were identified by interviewees as influencing their business operations. The data highlights key external pressures such as competition, regulation, and market changes that contribute to environmental dynamism in the context of small meat processing enterprises. Notably, high levels of competition and tight legislation

and regulation were the most frequently cited factors, indicating the challenging and often volatile nature of the business environment in which these firms operate. It can also infer that these factors are most likely to influence resource availability and adaptive decisions.

Table 4. 14 Count of Dynamic Environment Factors

Dynamic Environment Factors	**No. of Counts**
High Level of Competition	12
Tight Legislation and Regulation	11
Price Increases	10
High Market Demand	9
Economic Fluctuations	9
Changes in Customer Needs	9
Supply Issues	7
Technology Change	3

Source: Field Work

Table 4.15 further depicts how the participants characterised the different environmental factors. From the three tables (Table 4.12, Table 4.13, Table 4.15), the interviewees reported that demand for meat products have been increasing over the period, leading to a significant growth of the meat industry (SBE1, SBE3, SBE5, SBE8). The demand for meat products has led to the variety of customer requirements. The interviewee of SBE12 lamented the changing consumer behaviour towards meat products:

"*there is unpredictable and changing consumer trends particularly with the rise and growth of anti-meat or the vegan trades*." (Interviewee 1, SBE12)

In line with this view, the interviewee from SBE8 also asserted that this consumer trend may have influenced the purchasing behaviour of consumers:

"*Most consumers are very reluctant in buying processed meat, and they are very careful with what they buy*" (SBE8)

This cognition of increasing consumer trends is likely to make small meat processing firms adjust to this environmental condition. Supply chain issues were also discussed by the interviewees as a limiting industry factor on resource availability and adaptation. Consider that the readily accessible and available meat supply is the main stay of the meat processing business.

Table 4. 15 Characteristics of Business Environment

	Characteristics of External Business Environment						
	Market Dynamics	**Social Factors**	**Economic Dynamics**	**Regulatory Environment**	**Technological Environment**	**Supply**	**Competitive Environment**
SBE1	High Market Demand				Improved technologies in processing		
SBE2		Consumer tastes changing	Price increases				
SBE3	High Market Demand	Customer behaviour changing	Price Increase			Shortage of supply	
SBE4		Customer behaviour changing	Price increase				Competition from supermarkets
SBE5	High Market Demand						
SBE6			Low disposable income of consumers. Positive Immigration			Shortage of supply	
SBE7				Unfair legislation			
SBE8	High Poultry consumption		High inflation Price Increases				Low competition amongst small firms
SBE9		Changing consumer behaviour	Rising costs	Government interference and legislation		Changes in supply, buoyant livestock productio n	
SBE10		Changing consumer behaviour	Rising energy costs	Government political decisions			
SBE11	Low demand					Shortage of supply	High competition from supermarkets
SBE12		Decrease in consumption of meat. Bad reputation in the industry.	Price increases in energy and products.				High competition from supermarkets

A small number of interviewees suggested various concerns about the gradual decline of the animal farmers which is attributed to tough legislations and changes in consumer behaviour, as the following comment suggests:

"*I think as a small meat processor; my concern is how these small abattoirs are actually pushed out by successive governments through legislation*."

(Interviewee 2, SBE7).

This viewpoint is rooted in the firm's local context. The findings therefore highlight that, limitations in the sources of raw materials (i.e., animals) may significantly influence how the firm adapts to its environment.

Economic Dynamics. The dynamics of economic environment emerged as a significant environmental factor which influences resource available or accessibility, and adaptation, and overall operation of the for small businesses. Interviewees expressed the primary economic challenges in terms of price fluctuations and changes in the size of the economy. SBE5 highlighted that there have been substantial increases in the costs of raw ingredients and fuel, which have directly impacted their delivery expenses. Additionally, the rising prices from suppliers have made raw meat increasingly unaffordable, effectively categorising it as a luxury item (SBE8). This sentiment was echoed by the owner of SBE2, who elaborated on the difficulties their business faced in adjusting or reducing the selling prices of their products to match market demands. They remarked,

"*Our inability to adjust our selling prices meant we had difficulty maintaining market suitability*." (Interviewee 1, SBE2).

The interviewee from SBE4 also observed a general upward trend in meat product prices, further adding to the financial strain on the industry. This trend was underscored by the owner of SBE12, who remarked that,

"*Over the past five years, energy prices have surged significantly, with food prices rising by nearly 50%*." (Interviewee 1, SBE12)

They reflected further on the broader impact of inflation, stating,

"*Inflation has indeed been a concern, but its impact has been relatively minimal. Interestingly, slight price increases in supermarkets help bridge the gap between our expenses and retail prices*." (Interviewee 1, SBE12).

The influence of price increases was expressed in a variety of ways. On one hand, supply of raw materials has become increasingly difficult, and negative impact on operations, due to contraction of the economy. This view was recounted by the interviewee 1 of SBE6:

"*Supply of the raw materials has been quite difficult because the economy is contracted. The demand for liquid milk and other inputs is contracted, which meant that my suppliers are finding things difficult themselves*….". (Interviewee 1, SBE6)

On the other hand, interviewees provided additional context, indicating that the surge in energy price and inflation have contributed to the overall economic strain. However, the impact has not been very substantial:

"While inflation is a concern, its direct impact has been minimal. However, supermarkets offering varying product grades help mitigate some of this economic strain by accommodating different budgets." (SBE11).

Competitive Environment. More than half of the sampled firms operated in rural and suburban centres in the West Midlands of UK. There is strong evidence of a high frequency of references to intense competition, indicating that the nature of competition significantly influences both resource availability and adaptive behaviours of firms. High level of competition in this case involves rising levels of competition necessitated by supermarkets, prices, consumer preferences and demographic changes amongst owners of firms. The interviewee from SBE12 illustrated a change in competition, highlighting that supermarkets are the primary competitors, and not small butchers. The evidence adduced from the interviewees indicated that competition was mainly based on price and not on quality. This evidence shows that this condition may have impact on access to important resources and adaptation. The owner of SBE12 observed:

"*Supermarkets are probably a little bit cheaper than we are, but most customers know that it's not the same quality*." (Interviewee 1, SBE12)

This cognition was further shared by the interviewee from SBE5, who pointed out that their customers are not typical supermarket shoppers. The owner of SBE5 explained:

"*Since the pandemic, customers have realized the difference, as supermarkets ran out of meat, and they came to the butchers*." (SBE5)

Similarly, the interviewee from SBE4 highlighted a trend where supermarkets are phasing out their bakers and butchers, leading to a decline in small-scale competitors.

This environmental change indicates a shift in consumer behaviour which can have impact on adaptive strategies of the small firm. Some of the interviewees shared insights on the increasing number of competitors over time. For example, the owner-manager (SBE6) noted:

"*When we started, we didn't have so many competitors, but we've got more now*."

(Interviewee 1, SBE6)

This increase in competition is seen as a significant change for many years, reflecting a more mature and diverse market. Moreover, other interviewees reported plant-based diets as a significant competitive threat as a more personal belief about its suitability:

"*…. the plant-based diet is a significant threat even though we don't think it's the right thing to do*." (SBE10).

In contrast, a demographic shift within the industry had affected the level of competition amongst small meat processing firms. The interviewee from SBE8 illustrated by saying:

"*The number of competitors in the market has been decreasing. This is because the average age of business owners is 40 plus, and the younger generation are more into office work*." (SBE8)

These observations within existing literature emphasise the impact of demographic trends and changing consumer preferences on the need for strategic adaptation within the industry (Williams, 2019). Beyond the experiences presented, adaptation strategies of small meat processing firms appear to be strongly influenced by the level of competition.

Regulatory Environment. Another theme that was recognised in the data was the regulatory environment which is characterised by complex and burdensome legislation. The regulatory environment concerns the different government regulations, legislations and standards which control the activities of the meat processing industry. The responses from the firms identified government interference, changes in legislation and regulations, and unfair legislation which disproportionately control the activities of the small meat processing firms. Divergent views were identified throughout the analysis. One concern expressed regarding the regulatory environment was the unfairness of legislation which seem to favour large processors. SBE7 expressed concerns about legislation that seems unfairly tailored to benefit large operators. The owner of SBE7 elaborated on the effect of legislation on small meat processors:

"*My concern is how these small abattoirs are actually pushed out by successive governments through legislation... it was up to each Member State to interpret these rules as they saw fit and unfortunately, successive British governments and ministries interpreted these to the letter of the law*." (Interviewee 1, SBE7)

This strict interpretation contrasts with more lenient practices in countries like France or Germany, where small processors are classified as craft butchers and face less stringent regulations (Kneafsey et al., 2013). Interviewee 2 from SBE7 echoed this sentiment, stating:

"*I believe in legislation... but when it is so changeable and unfair sometimes it's not always black and white*." (Interviewee 2, SBE7)

SBE7 highlighted again, a commitment to high standards but noted that the constantly changing regulations often do not favour smaller processors, creating a challenging regulatory environment. In line with the view of interviewees from SBE7, the owner-manager of SBE9 narrated the difficulties provided by frequent changes in legislation. The interviewee noted:

"*Government issues so many variations on regulations that the system literally couldn't keep up with it... the first I know about it, unless I actually find it in the trade magazines, is when I've infringed it*." (SBE9)

This uncertainty in the regulation adds stress and costs to the business, illustrating the administrative burden of compliance for small firms. Despite a historically good relationship with regulatory bodies, the interviewee from SBE9 acknowledged a "notable change", suggesting that,

"*There is a notable change in the meat industry. Maintaining compliance has become more complex and less predictable over time*." (SBE9)

Responses from SBE10 provided a narration of government-driven initiatives to reduce unhealthy ingredients in processed foods, which, while beneficial in the long run, create immediate challenges:

"*There is an amount of backlash in the industry now driven by certainly supported by the government... The quicker that accelerates, the quicker it will push people to the high-quality primary material*." (SBE10)

The most disturbing issue was on the implications of renewable energy policies. The policies include incentives for agricultural repurposing, such as solar farms, which could conflict with traditional farming and animal husbandry. The owner of SBE10 warned,

"*If farmers realised that there is greater and more sustainable profit... will turn all their farms into solar farms, then we're in trouble*." (SBE10)

This geopolitical risk emphasises the potential unintended consequences of ill-informed policies. On the one hand, the interviewee from SBE6 pointed out an advantage of being a smaller operator, noting that they "fly under the radar" of more stringent regulations that affect larger sectors. This understanding reflects broader themes in the literature regarding regulatory impacts on small businesses. Previous research suggests that whilst regulations aim to ensure high standards and protect consumers, they often impose incommensurate burden on small firms (Kolade, Obembe and Salia, 2019). Additionally, the nature of regulations is to help small firms to adapt, yet this adaptability constrains their development and existence (Franco and Haase, 2010). For small meat processors operating in this challenging environment, the fit between regulatory compliance and sustainability of operations remains a critical issue.

Technological Environment. Three issues emerged from the analysis of technological environment characteristics. Interviewees from two firms (SBE1 and SBE7) discussed key characteristics of the technological environment. Their insights centred on advancements in processing methods as well as the growing role of digital media.

At SBE1, the interviewee identified new trends related to *"improved methods for processing,"* highlighting ongoing innovation in production techniques. Meanwhile, the interviewee from SBE7 emphasised the strategic importance of digital marketing, stating that,

"There is the need to adopt modern methods available to promote the business, particularly through social media channels."

These perspectives illustrate how small businesses are engaging with both operational and promotional aspects of technological change. Referring to the relevance of social media, the owner-manager of SBE7 reported the important role of social media:

"*The social media has snowball effect, increasing the word-of-mouth recommendation which is very important in a small business like ours."*

This position emphasises the critical role of social media in facilitating sales and integrated communication, which is in line with current trends in digital marketing and its impact on small businesses (Cartwright, Liu, and Raddats, 2021). The owner-manager SBE1 has acknowledged that there are new and improved methods for meat processing:

"*There* are *improved methods for meat processing which has been contributing to enhanced efficiency and also for maintaining high product quality*".

Institutional Environment. This section isolates the key institutional environment factors that emerged from the qualitative analysis of the interview data. The findings show that the firms operate within a complex institutional environment influenced by regulative, normative, and cognitive factors. Institutional pressures manifest in the daily operations and adaptive responses of the participating firms, so these are further categorised into formal and informal factors (Table 4.16).

Regulative Pressure: For regulative institutional pressures, the owners of the firms consistently identified formal regulations as dominant factor. These include complexity of regulations, government interference and compliance with food safety regulations particularly heightened post-Brexit. For example, SBE9 noted,

"*Government interference in the form of government regulations has very complex and tighter for us. It puts pressure on us to conform. …… Changes in political decisions for example BREXIT affected changes in the local economy. We've had a problem with changes in legislation and regulations over the past years. For us we lack the capacity to respond immediately and sometimes unable to do anything*." (SBE9).

Similarly, firms such as SBE6 described the nature and impact of regulation on their business:

"*Regulations keep changing – it's like BREXIT threw everything up in the air. Government is making it harder – more and more rules*." (Interviewee 1, SBE6)

Some small firms underscored the necessity of adhering to food safety standards, particularly in response to recent food scandals that have negatively affected consumer trust in the meat processing industry. SBE3 particularly narrated:

"*We've past incidents such as Bovine Spongiform Encephalopathy (BSE) and foot and mouth disease outbreaks, as well as the infamous Edwina Currie egg scandal, had contributed to fluctuations in consumer trust*." (SBE3).

Table 4. 16 Institutional Environment Factors

Case	Institutional Factor	Quotation	Institutional Type	Institutional Formality
SBE1	Market Regulation and Processing Standards	Processing has improved.	Regulative	Formal
SBE2	Norms and Rules	Difficulty adjusting or watering down the product to suit the market, so we just follow the rules.	Normative	Informal
SBE3	Regulatory Legacy of Food Scandals	There's always been food scandals… BSE, foot and mouth, horse meat…	Regulative	Formal
	Health Promotion Regulation	People are thinking more about healthy eating now.	Normative	Informal
	Supply Chain Disruption	It's the raw materials that are the problem – prices are sky high now.	Cognitive	Informal
SBE5	Regulatory Environment on Competition	Supermarkets are the main competition.	Regulative	Formal
SBE6	Regulatory Volatility	Regulations keep changing – it's like BREXIT threw everything up in the air.	Regulative	Formal
	Government Regulation	Government is making it harder – more and more rules.	Regulative	Formal
SEB7	Regulatory Burden (UK vs EU Standards)	Small firms like us get squeezed by all these rules… the EU ones were simpler.	Regulative	Formal
	Global Disruption	The war in Ukraine shot prices up overnight.	Cognitive	Informal
SBE8	Price Shock Due to Inflation	Prices have gone up fourfold – chicken's gone mad.	Cognitive	Informal
	Public Health and Lifestyle Norms; Labour Shortage.	Meat is a luxury now – people are cutting back. Younger workers not interested in industry; older generation retiring	Normative	Informal
SEB10	Institutional Pressure (Plant-based)	There's a big backlash against meat… from government and society. Still relatively energy-intensive... and that's a huge cost we can't avoid	Normative	Informal
	Sectoral Decline	Independent meat processors have been struggling for years.	Cognitive	Informal
	Environmental Regulation & Pressure	They want us to cut energy and emissions, but there's no support.	Regulative	Formal
SBE11	Reputation and Media Influence	Meat has got a bad rap in the media lately.	Normative	Informal
	Cost of Living Pressure	Everything's gone up – food, energy, wages.	Cognitive	Informal
	Institutional Competition (Supermarkets)	Supermarkets set the price – we just follow.	Cognitive	Informal
SBE12	Regulatory Legacy of Food Scandals	We had foot and mouth disease that affected the quality of the supply of the meat that we process.	Regulative	Formal

Changing Consumer Values: Changing consumer preferences and values emerged as a prominent normative influence, which influence meat processing, branding, and marketing strategies. Across cases, firms reported changing dietary preferences, increasing demand for healthier products, and concerns over processed meat. The owner of SBE2 explained,

"The percentage of people wanting to eat better and less processed stuff has grown. They are going away from traditional sausages." (Interviewee 1, SBE2).

Firms also cited government campaigns targeting salt and fat reduction in processed foods as formal normative pressures supporting these shifts. SBE10 made this observation as:

"*There is an amount of backlash in the industry now driven by certainly supported by the government and little bit to reduce salt, saturated fats and sugars and all the other junk that goes into processed food*." (SBE10).

In addition to the government stance, other firms also noted the compounding influence of media narratives that discourage meat consumption, which they perceived as a form of indirect competition particularly detrimental to smaller firms. For instance, SBE11 described the reputational challenges facing the sector, stating:

"This trade always seems to get quite a bad reputation, sometimes through the press and you know you can have things like you look back to like the BSE over 20-30 years ago and then we're going to focus about the vegan side of things as well, so it's a bit of a constant battle really "(SBE11).

Cognitive Pressures. In terms of the influence of cognitive pressures, there is evidence in the way firms understood and adapted to consumer trust and perception about processed meat. As mentioned before, people often cited (though informally) industry scandals such as BSE and the horse meat incident as having a significant impact on customer behaviour and expectations. SBE3 remarked:

"Episodes where supermarkets were found to be selling horse meat also had a dual effect on consumer behaviour. While it did attract some individuals towards us as an alternative, it also resulted in certain consumers being dissuaded from consuming meat altogether due to the loss of trust in the reliability and transparency of food sources." (SBE3).

SBE11 further observed a noticeable shift in consumer preferences, highlighting the increasing number of people opting to reduce or eliminate meat consumption, either for perceived health benefits or due to external social influences. This shift was identified

as a growing source of competition for small meat-processing firms. As expressed by the interviewee:

"We've always got people who are anti-meat. You, you know the vegan trades has grown, hasn't it? You know which people are free to eat what they want. They haven't got to eat meat. So, you know, that's that vegetarian vegan side has grown a lot over the last 10 years as well, the meat free stuff, you know, that's becoming more competitive towards us." (SBE11).

These findings suggest that firms are aware of shared assumptions and social interpretations shaping their legitimacy in the eyes of consumers.

Interviewees further described a range of informal constraints affecting their operations. Skilled worker shortages, particularly the decline in interest among younger workers, were noted by several firms. SBE8 commented:

"This is also because typically within that industry the average age of business owners operating is 40 plus, and the younger generation are more into the office work. So, for that reason, a lot of the people already in this industry are sort of moving or transitioning into the retirement period. They're retiring and of course they're closing their businesses as well as just retiring, whereas a younger generation they don't really have any interest within this industry." (SBE8).

High energy costs and limited purchasing power also appeared as recurring issues. SBE10 noted,

"We are still relatively energy-intensive... and that is a huge cost we can't avoid." (SBE10)

Evidence of institutional complexity and uneven impact was observed amongst the firms. For example, while some firms perceived institutional change as a threat, others viewed it as a potential advantage. For example, SBE12, operating in a niche ethnic market, highlighted the role of immigration in strengthening demand:

"Immigration has helped us... people want that taste of home."

In contrast, SBE9 noted that government interference through regulation was difficult to cope: *"We lack the capacity to respond immediately and sometimes are unable to do anything."*

4.4. Cross-Case Findings

This section presents key themes that emerged from the cross-case analysis, focusing on adaptive forms within resource-constrained contexts. It synthesises how the twelve case firms coped with challenges posed by limited resources and a dynamic business and institutional environment. The analysis specifically examines the interplay between limited resource characteristics, environmental dynamism, and resulting adaptive forms. The thesis conducted a comparative thematic analysis to explore how these themes interact across cases. Figure 4.1 illustrates the thematic map developed through cross-case analysis. It simplifies complex and often nonlinear relationships observed in the within-case analyses, offering a conceptual framework to understand how adaptation unfolds among SMPFs in resource-limited context. The figure also demonstrates how adaptive forms are influenced by the dyadic challenges of environmental change and resource scarcity. In line with Rekik and Bergeron (2017), the analysis investigates how the *combined conditions* (e.g., dynamic environment and limited resources) contribute to *specific outcomes* (e.g., adaptive forms). The thematic map integrates findings from individual cases to highlight common adaptation patterns and strategic responses. Three key relationships emerged from the cross-case comparisons:

1. Between Limited Resources and Adaptive Forms – showing how constraints in financial, human, or technological gap influence whether firms adopt reactive, strategic, or conservative adaptation strategies.
2. Between External Environment and Adaptive Forms – revealing how shifts in market, regulatory, or economic conditions drive firms to react or stabilise their operations.
3. A Cyclical Relationship – indicating an ongoing interplay where resource limitations and environmental pressures reinforce one another, affecting adaptive behaviours of firms over time.

By mapping these relationships, the analysis offers a grounded understanding of how SMPFs typically adapt environmental and institutional conditions, and scarcity of resources. This addresses the key research question, "*How does the nature of the local environmental (including institutional factors) relate to adaptive forms of SMPFs*?

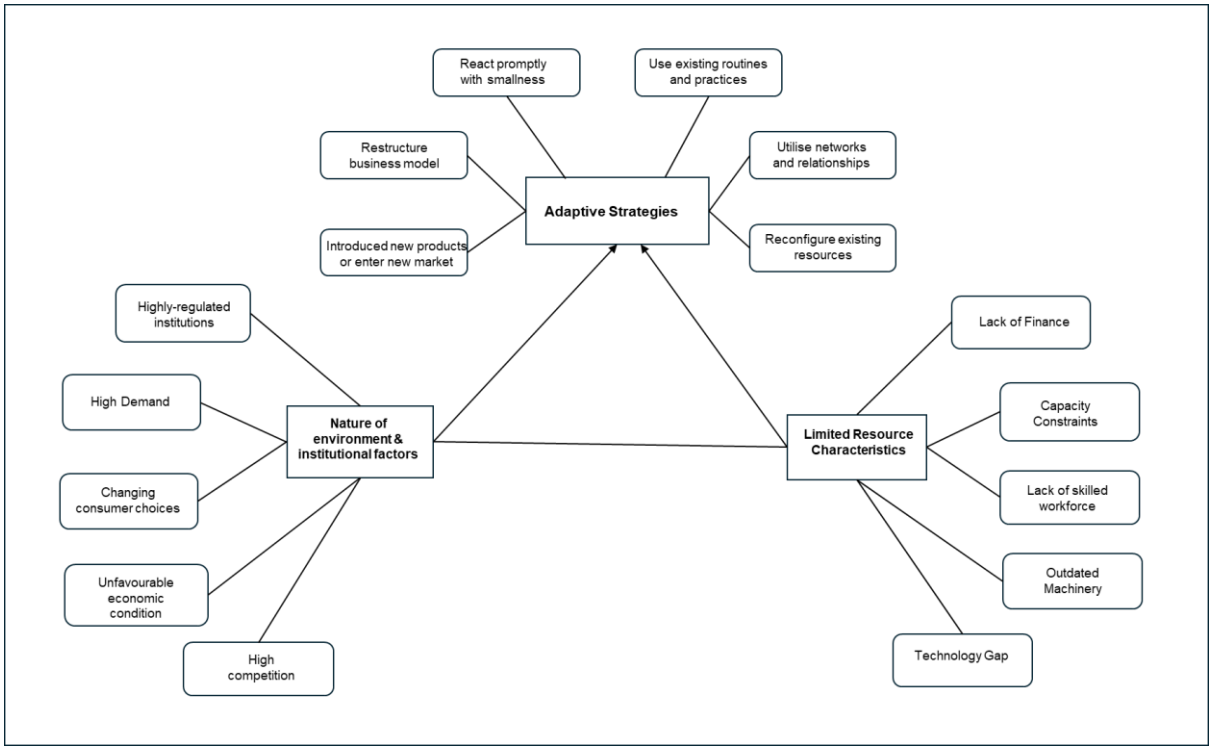

Figure 4. 1 A thematic map

Source: Researcher's Construct

This theme provides further understanding of how firms adapt in a resource-limited context, and is related to the third research question, *how is the firm positioned to adapt with limited resources and firm environment*? These themes address dynamic capability of the firm, leading to a variety of activities, choices, strategies, and behaviours leading to the development of adaptive forms within the resource-limited context. Other emergent themes, COVID-19 and adaptation, ethics, culture and adaptation, and sustainability and adaptation were also presented in this chapter.

The thesis considered a number of cases (SBE1 to SBE12) that the contextual conditions may influence adaptive forms. This includes:

1. Limited Resource: The thesis investigated the availability and/or accessibility of critical resources or the presence / absence of limited resources.
2. Dynamic Environment: The thesis is interested in adaptive forms exhibited by the small firms when faced with limited resources and dynamic environment. The tick box (√) shows how many times the firms reported or mentioned an item as a limited resource. Blank means no occurrence or any mention of the concept from the firm. Table 4.17 shows the range of limited resources from the transcribed data.

Table 4. 17 Limited resource and adaptive forms

Characteristic	Conservative	Reactive	Strategic	Cases
Limited Resource				
Financial Capital	√ √ √ √ √			SBE1, SBE2, SBE3, SBE6, SBE7
Outdated Machinery	√ √ √ √ √ √ √			SBE1, SBE2, SBE4, SBE5, SBE7, SBE9, SBE12
Skilled Workforce	√ √ √ √			SBE4, SBE5, SBE8, SBE10
Capacity Constraints	√ √ √			SBE1, SBE9, SBE11
Lack of Good Suppliers	√ √		√	SBE8, SBE10, SBE11
Dynamic Environment				
Economic Dynamics	√	√ √ √	√ √	SBE2, SBE3, SBE6, SBE8, SBE9, SBE10
Competitive change		√	√ √ √	SBE4, SBE8, SBE11, SBE12
Market Demand Factors		√ √ √ √	√ √ √ √ √√ √	SBE1, SBE2, SBE3, SBE4, SBE5, SBE6, SBE8, SBE9, SBE10, SBE11, SBE12
Regulatory Environment		√ √	√	SBE7, SBE9, SBE10
Technology Change	√			SBE1

Source: Field Work

4.4.1. Limited Resources on Adaptive Forms

The small firms in thesis followed the conservative form due mostly to limited resources. The category of "Limited Resources on Adaptive Forms" was analysed from the interviews to explain how small meat processing firms adapt to the constraints of limited resources. This analysis provides a detailed investigation and understanding of the impact of limited resources on adaptive forms employed by different cases. The transcripts from the interviewees illustrate key findings about the impact of limited resources on adaptive forms. In this section, the interviewees established that small firms are frequently constrained by limited resources, particularly in terms of outdated machinery, skilled workforce, financial capital and lack of operational capacity. The analysis and results reveal a complex relationship between limited resources and adaptive forms. The approach used in managing limited resources offers insight into the

adaptive strategies adopted and the underlying reasoning behind decision-making. This narrative explores the adaptive forms and the broader implications for small meat processors.

The results indicate that most small meat processing firms did not exhibit significant adaptation when faced with high levels of resource constraints. In those situations. In such situations, both reactive and strategic forms of adaptation were largely absent. The conservative form appears to manifest when firms are faced with limited resources, rather than a more natural adaptive strategies such as reactive and strategic adaptation strategies. For example, the thesis found 7 cases (SBE1, SBE2, SBE4, SBE5, SBE7, SBE9, SBE12) which did not adapt when faced with outdated machinery. SBE1, SBE2, and SBE7, in particular, emphasised the importance of working within their means and relying on existing resources. SBE1 maintained its operations using old machinery and current staff, without making significant changes, indicating a preference for stability and risk aversion. The interviewee of SBE1 noted,

"*We use the existing machinery, our staff, and methods to do what we do. We do not do anything spectacular*." (SBE1)

This evidence indicates how outdated equipment limits capacity for adaptation. Furthermore, financial constraints limited the capacity of the small firm to adapt. Despite achieving some successes, the lack of financial resources hindered the ability of 5 sampled firms (SBE1, SBE2, SBE3, SBE6, SBE7) to adapt. The owners of SBE2 and SBE12 reflected how leveraging social capital through "family and friends" was critical for accessing other resources which were not available or accessible. Particularly for SBE2, their decision stresses the critical role of social networks in overcoming resource limitations. With support from friends and family in accessing short-term loans, SBE2 demonstrated how social networks could provide critical financial support during times of need. Regarding how the firms adapted when faced with absence of machinery, the interviewee from SBE12 explained:

"*When we had a broken machinery, we had to borrow that machinery from a friend to solve our problem*s". (Interviewee 2, SBE12)

This adaptive strategy emphasises the role of social networks in providing access to resources and opportunities which may not be available through formal avenues. Other the other hand, since the firm could not afford new machinery, the interviewee from SBE2 explained how they relied on existing ordinary resources to address their problem. The interview recounted:

"*We relied on working with what we have until we are in a position to acquire equipment what we need*." (SBE2)

In a similar reasoning, SBE7 discussed how limitation of financial had affected access to machinery, and their overall impact on adaptive strategies. The owner of SBE7 recounted.

"*I certainly require more financial resources to acquire machinery, for example, in order to develop the strategies to advance*".

Similarly, the owner of SBE6 expressed how the firm adapted with capacity constraints,

"*We were in quite an old country. And we didn't have room to process what we needed to process and do, and we were running as fast as we could, and we still couldn't keep up*." (Interviewee 1, SBE6)

This sentiment reflects the significant impact that financial limitations can have on potential business growth and operations. The analysis reveals that small firms are unlikely to adapt their strategies when resources are limited. This form of adaptation agrees with the concept of path conservative adaptation required to operate within established routines and practices, which minimises the risk and uncertainty associated with significant changes (David, 1985). This insight can guide future decisions for small firms aiming to enact their adaptive forms.

With resource limitations evident, small firms developed different forms of adaptation to cope with their constraints. The owner of SBE11 uses its resources, practices and network (conservative form) to meet customer demands, stating,

"*What we do is use what we have and our network to get what the customer wants*." (SBE11)

SBE10 on the other hand articulated the flexibility of small firms in adapting to different form in shorter times, in which the interviewee said,

"*By the fact that we're smaller and our big competitors have rigid structures, in that we can be far more agile. So, if we decide to adopt a strategy change, we can enact that within days, even hours*". (SBE10)

This agility allows the firms to quickly adapt to changing circumstances and stay competitive. In terms of adaptation, interviewee from SBE5 focused on maintaining quality from supplier quality, stating,

"*We are quite fussy who we purchase our meat from and so if their quality went down that would have a big effect on us*."

The firms adapt by switching suppliers to maintain the desired quality standards. SBE12, taking a slightly different perspective on adaptation, emphasises the importance of regular maintenance and staff welfare to ensure continuity:

"*You make sure your staff are OK, you give them holidays. You have service checks on the machinery, so it works in circles again*". (Interviewee 1, SBE12)

This holistic approach helps them manage their critical resources effectively. The findings are in line with literature on resource-based theories (RBTs) of the firm, which suggests that competitive advantage arises from the internal resources a firm possesses and how well these resources are managed and utilised (Barney, 1991). Firms that can effectively leverage their limited resources through innovative and adaptive strategies are better positioned to sustain competitive advantage despite resource constraints (Wernerfelt, 1984). The analysis reveals that limited resources significantly impact the operations and strategies of small businesses. However, through various adaptive strategies, such as resource reconfiguration, utilising existing practices and processes, and maintaining agility and flexibility, these small processing firms are able to operate and even survive with limited resources. The adaptive strategies employed align with the RBVs and dynamic capability theory of competitive advantage, which emphasises the importance of effective resource management in dynamic environments (Teece, Peteraf, and Leih, 2016).

4.4.2. Dynamic Environment Factors and Adaptive Forms

The thesis explored the linkage between dynamic environments and adaptive forms of small business enterprises (SBEs). From Table 4.18, this thesis identifies how different configurations of environmental conditions influence the adaptive forms adopted by these firms. The evidence shows the detailed adaptive strategies involved with changes in the business environment. This perspective helps discover patterns and causal relationships within the data.

Table 4. 18 Linkages between dynamic environments and adaptive forms

Adaptive Forms	Economic changes	Market Demand	Competitive Change	Tight Regulation	Technology Changes
	Stable (S) Unstable (U)	Stable (S) Unstable (U)	Stable (S) Unstable (U)	Stable (S) Unstable (U)	Stable (S) Unstable (U)
Conservative Adaptor	SBE2 (S)	SBE1 (U) SBE2 (U)		SBE7 (U)	SBE1 (S)
Reactive Adaptor	SBE3 (U) SBE4 (U) SBE5 (S) SBE10 (U) SBE12 (U)	SBE3 (U) SBE10 (U) SBE4 (U) SBE7 (U)	SBE5 (S)	SBE10 (U)	
Strategic Reactor	SBE8 (1)	SBE6 (S) SBE8 (U) SBE9 (U) SBE11 (U)	SBE6 (S) SBE9 (U)	SBE9 (U)	

Source: Field Work

The responses from interviewees revealed that the perceived environmental conditions could be grouped into the following categories: economic fluctuations, shifts in market demand, competitive dynamics, regulatory pressures, and technological trends. These conditions were identified as either stable or unstable, with the majority of firms describing their operating environment as unstable. Only three cases characterised the environment as relatively stable over the past five years. In response to these conditions, the firms exhibited varying adaptive behaviours, which were classified into three distinct forms: conservative, reactive, and strategic.

Table 4.18 is quite revealing in several ways. First, unstable environment caused by economic and market demand factors can trigger reactive and strategic reaction forms of adaptation. Second, most small firms would react to changes in environmental factors. The results show that instability in economic conditions primarily leads to reactive adaptations among SBEs. For example, SBE3, SBE4, SBE5, SBE7, SBE10, and SBE12 successfully adapted by reacting to high market demand and changes in the economy. Firms respond to immediate pressures by modifying operations and extending existing resources. The small firms adjusted their business practices, extended working hours, and initiated new services to cope with economic instability. As the interviewee of SBE5 puts it,

"*We adjusted by extending the working hours. We did have to invest in another refrigerated van because of the demand*." (SBE5)

Similarly, SBE3 and SBE6 adopted a similar form of adaption: responding to demands as a intentional and deliberate effort to meet customer needs. According to the interviewees, they did not have to change to changing environmental but only did so because of the need to address customer demand. There is a feeling that characterises a careful consideration and dedication to customer satisfaction, underpinned by a practical approach to making necessary adjustments. This opinion was summarised by the owner of SBE3 to explain how they adapted to changes in the environment:

"*We did not really adapt much, but we adapted when we needed to do so. We needed to respond to the increasing demand from our customers during the period. It is our decision to continue to serve our customers, so we focus on doing that*." (SBE3)

These findings were supported by previous research on SME adaptation that, there is a strong positive connection between the small firm and the local environment, and their strategies (Schindehutte and Morris, 2001). Simultaneously, certain SBEs exhibit indications of adopting a strategic form of adaptation, characterised by proactive and deliberate planning. For example, in response to high competition and changes in the economy, SBE11 diversified business operations to mitigate the risks and ensure survival by exploring new products and markets:

"*We explored other markets as we didn't want to put all your eggs in one basket. We applied to game license and started processing and selling venison. We also acquired new machines and started barbecue processing. we did different things to survive*." (SBE11)

Similarly, SBE2 and SBE6 exhibited elements of strategic form of adaptation. SBE2 continuously assessed market dynamics and identified gaps to "experiment" with new products which would address the needs of customers in the short term, The interviewee 1 of SBE2 recounted:

"*We are in the process of experimenting with some jerk chicken wraps. Now in the market, there is nothing like that and so what we do is we go around, and we look and I'm saying so to my business partner Alan…. the dynamics in the market is changing that people still need to eat. You need to find we need to find a product that can reach people at their desired price point.*" (Interviewee 1, SBE2).

The second interviewee from SBE2 reiterated the need for continuous search for market opportunity for their product by asserting that:

"*Assess the market, get an opportunity that we can make this particular product, looking at ways that we can come up with a new product*". (Interviewee 2, SBE2).

For SBE6, the changes in the market required the need to find alternative products for customers, though these alternatives were more expensive, leading to smaller orders and some customers choosing to shop elsewhere. The interviewee of SBE6 recounted:

"*There is awful thinking went on 1st and a lot of caring concern because instable in the environment. We had to go out and find alternatives which we have done. We couldn't look at customers and tell them products that they have been shopping for a number of years, and all of a sudden, are not available in the marketplace. The alternatives we selected cost customers more money which meant that some of them made smaller orders, and some of them went elsewhere.*". (Interviewee 1, SBE6).

This response from SBE6 illustrates the absence of a planned and systematic strategic approach. Instead, it reflects the reactive and unstructured nature of adaptive decision-making, which is often associated with the operations of small meat processing firms.

In a similar perspective, SBE8, SBE9 and SBE10 also embarked on a strategic form of adaptation by employing new business models in response to the dynamic environment. With a reducing demand for products, the interviewee from SBE8 had to "*restructure the business by setting aside some employees until demands increases*." This viewpoint was echoed by another interviewee, who expressed the need for changing the business model in response to increasing demand by stating that:

"*We changed our business style, started deliveries such as a click and collect service which proved very popular, and we also changed our working hours*" (SBE9).

Reflecting the same position, the owner of SBE10 exhibited a strategic adaptive form which is described as a "local Amazon", as a response to changing buying habits and increasing demand:

"*The adoption of Amazon type model and ecommerce was to meet increasing demand. And, because there is change in buying habits… we strongly believe in the need to deliver to people and that the click deliver scenario is going to become a more significant aspect for us over the next 5 to 10 years*." (SBE10)

SBE10 was more forward-looking in their thinking and understanding that, rapid adaptation was necessary and a belief that the trend towards online shopping and delivery will continue to grow significantly in the coming years.

A key finding from the thesis is the ability of the small firms to adapt easily and quickly. This accords with earlier observations, which showed that the size of the small

firms makes them able to adapt quickly to environmental changes. The owner of SBE10 confirmed that they were able to "pivot quickly". One small firm, SBE6, showed strategic adaptation in reaction to regulatory challenges, with firm adjusting practices to comply with regulations and remain competitive:

"*I work with what's out there at the time. One of the advantages that we have as the small business is that we can be very fleet of foot or flexible*."

(Interviewee 1, SBE6)

These quotes demonstrate that the reactive and strategic adaptation for the firms was based primarily on the smallness of firms. Deviating from the reactive and strategic forms of adaption viewpoints, three firms SBE1, SBE2 and SBE3 generally embarked on a non-adaptive form. The lack of a reactive or strategic strategy could be explained by limited resources associated with small firms. There is a realistic understanding of the limitations faced by a small firm, emphasising the need to work within existing resources even during challenging environments:

"*We just continue to do with existing resources, because as a small business there is not much you can do*" (SBE1).

The findings of this thesis imply that, generally, small meat processing firms do not exhibit a specific form of adaptation in a resource-limited context, but a blend of conservative, reactive and strategic forms. These findings also fit well in existing literature that emphasises the reconceptualisation of adaptive strategies in dynamic environments through reconfiguration of limited resources (Teece et al., 2016; Quansah, Hartz and Salipante, 2022).

4.4.3. Linkages between adaptive form, limited resources and dynamic environment

Hagen et al. (2017) conceptualise periodic changes in a firm's behaviours, decisions, structures, systems, and processes in response to the nature of firm resources, and dynamic business environment. The subthemes that emerged from the analysis were Acquired Resource, Diversify, Network and Relationships, Reaction, Restructure Business Model, Smallness and Agility, and Existing Routines and Practices. It also emerged that the cases could be categorised into singular adaptors, that is those firms that adopted one response of adaptation consistently overtime, and multiple adaptors for firms employing more than one adaptive response.

Table 4.19 shows the dynamic relationship between business environment, limited resources and adaptive forms of small meat processors. The findings also show patterns and discrepancies in how adaptive forms manifest when confronted in both dynamic environments and limited resources. The thesis observed from the analysis that, firm behaviour did not present a systematic qualitative linkage between the forms of adaptation, and the dynamic environment and limited resources. There is no stronger correlation between limitation of resource or dynamic environment, and the form of adaptation employed to achieve success. Recall that the sampled firms are homogeneous in terms of their relative sizes, products, location in the West Midlands and minimal processing methods. This indicates that there may not be a strong support for a positive relationship between adaptive forms and resource-limited context. However, in this thesis, the findings have shown small firms (SBE1, SBE2, SBE3) exhibit a passive, non-adaptive approach to adaptation when it comes to reacting to limited resources. This may be attributed to the smallness of the firms being their natural orientation to internal structures and resources. However, majority of the firms (9: SBE4, SBE5, SBE6, SBE7, SBE8, SBE9, SBE10, SBE11, SBE12) reacted or strategically reaction with changes in the environment.

Table 4. 19 Cross-Case Analysis Matrix: adaptive form, business environment and limited resource.

Adaptive Form / ***Adaptive strategies***	**Limited Resource**	**Dynamic Environment**	**Key Quotations**
Conservative Adaptor *Continuation of existing practices*	Financial, Skilled Workforce, Automatic Machine	Unstable Market Demand, Technological Changes	"We use the existing machinery and staff, and the money we have. We haven't changed anyway because I don't think we need to. We are OK." (SBE1)
Use existing practices and networks	Financial Constraints, Equipment Challenges	Stable Economic Changes, Change in Consumer Taste	"Maintain existing routines and practices to avoid compromising on product quality." (SBE2)
Use of existing resources, No change in suppliers	Skilled Workforce, Sufficient Chilling Space	Unstable Market Demand, Consumer Behaviour Change, Price Increases, Shortage of Suppliers	"We usually used the resources we already have to solve our problems." / "We haven't changed our suppliers." (SBE3).
R**eactive Adaptor** *Prompt reaction, agile*	Obsolete Technology, Time	Price Increases, Change in Consumer Behaviour, Change in Market Conditions	"Reacted – change in how we do business."/" We are quite flexible." (SBE4)
Prompt reaction, resource acquisition, marketing orientation .	Skilled workforce. Education and Training, Label Machinery	High Demand, Competitive Changes, Price Increases	"We adjusted by extending the working hours. We did have to invest in another refrigerated van. Promoted our business." (SBE5);
Strategic Reactor *Utilise resources; Delivery service*	Financial Capital, Machine and Refrigeration Upgrades	Unfair Legislation, Growth in Demand	"Prompted actions without formal rules and processes. Constantly adapt to circumstances... explored technology and social media." / "We've turned the business into a delivery service."(SBE7)
Brand position.	Skilled	Government	"Made use of the brand reputation and

Diversify. Network and Relationships. Smallness and Agility	Workforce (PT Staff), Finance	Interference, Consumer Behaviour, High Energy Cost	standing within the industry." / "Used professional associations and media network to overcome challenges." "Modified business to the Amazon type delivery model to accommodate home deliveries" (SBE10)
Diversified into different products	Market Access, Farm Inputs	Environmental Issues, Competitive Changes	"Explored new product offerings to avoid over-dependence on a single market… Explored new markets." "Adjusted working hours; Do things with my instincts." (SBE11)
Exploring alternatives, Flexible decisions	Small Space for Production, Brand	Immigration, High Competition, Supply Issues, Increase in Demand	"Leveraged existing strengths and resources. Responded to market demand quickly and flexibly; advantage of being small businesses that can be flexible." "I react to circumstances and Found alternatives." (SBE6)
Reaction, Diversify, and Networks & Relationships.	Machine Breakdown, Lack of Specialized Machines	High Demand, Changing Consumer Requirements, Competition from Supermarkets	"Rely on a small network of people to manage resources… we reacted to the increase in demand, acquiring extra two people. Borrow someone else's machine... sometimes take our meat to other butchers." "Explore new markets, and new products." (SBE12)
Diversified products, improve structures	Market Access, Technology Challenges	Increases in Customers, Price Quadrupled, Inflation	"Modify business model to address resource challenges." / "We moved towards more poultry chicken because it's cheaper." (SBE8)
Diversify, Change Business model	Skills Gap, Inputs (Animals), Finance, Technology Gap	High Inflation, Changes in Consumer Behaviour, Tight Regulation, Fluctuation in Demand	"Leveraged agility for prompt actions. Incorporated delivery services to align with changing customer preferences and market conditions." (SBE9)

This finding corroborates the perspectives of previous scholars (Drazin and Van de Ven, 1985; Kim and Pae, 2007; Kotey, 2014) who advocated that changes in environmental factors make firms adapt constantly to secure important resources. This aligns with observed adaptive strategies like extended working hours and diversification. One business owner was blunt on their assessment of the role of increasing demand on their adaptive strategy, stating,

"*We adopted the Amazon type model and ecommerce to meet increasing demand*". (SBE10).

Four of the cases (SBE6, SBE7, SBE9, SBE10) mentioned their firms facing tight regulation, government interference, and environmental issues, which show the specific industry constraints for adaptation. These firms placed a high level of value on the role politics is negatively influencing the meat industry, which does not encourage access to farm inputs and essential resources. The view from SBE10 encapsulated the position of the rest, saying,

"*There is a scheme now where the agricultural industry is rewarded by the Government for using repurposing agricultural needs for energy generation, particularly solar farms and solar farms are incompatible with plant growth and animal husbandry. You can't use it for both. From a political standpoint, this could change our access to resources because if farmers realised that there is greater and more sustainable profit, clearly will be turning all their farms into solar farms…… That political drive could tip things in the wrong direction for us, so that could have an impact on access to resource*." (SBE10)

The diverse external environments, ranging from unstable demand to governance interference, highlight the complex challenges small firms face. This diversity requires context-specific adaptive forms. Environmental scanning is important for organisations to understand and respond effectively to diverse external factors, but it was not obvious from the findings that the small firms regularly carried out this task.

The cases also reflected upon the changes in the business environment on resource limitation and adaptive strategies. Their views varied across the twelve cases involved. In terms of the impact on resources, three of the cases (SBE6, SBE9, SBE12) recounted how changes in demand affected firm's skills gaps in human resources. The consistent need for a skilled workforce highlights the importance of human capital to organisational success. Responses from the cases to this core organisational issue can be seen in the strategies such as adding more employees, increasing workforce hours,

and showcasing their flexibility in meeting skill demands. The dynamic capabilities framework (Teece et al., 1997) supports the idea that organisations adapt by developing new capabilities, aligning with the varied strategies observed across cases. Some of the cases (3: SBE1, SBE2, SBE11) also observed the significant impact of the environmental changes on resources such as access to market, whilst SBE6, SBE9, SBE11 cited farm inputs and finance as the types of resources affected. Interestingly, none of the five cases (SBE3, SBE4, SBE5, SBE7, SBE8) mentioned the impact of environmental changes on resources. This group of firms responded to the changing environment with remarkably more reactive behaviour. The contextual nature of challenges is highlighted by the variation in key resources affected. This suggests that each case prioritises resources that are essential to a firm's survival, leading to different adaptive responses depending on the demands of the external environment. The distinctiveness of firm behaviours, from adopting a non-adaptive form, to reactive and strategic, emphasise the dynamism and heterogeneity in adaptive strategies, actions, and behaviours, which reflects the complex nature of organisational adaptation. This finding also reinforces the contextual nature of adaptation, which emphasises a complex relationship between dynamic environment, resource constraints and adaptive forms.

4.4.4. Interpretation of Adaptive Forms

Drawing from the perspectives of adaptation theories (Alnoor et al., 2022; Anwar and Hasnu, 2017; Hagen et al., 2017; Schindehutte and Morris, 2001; Zajac et al., 2000; Chakravarthy, 1982), different forms of adaptation emerge from the firm's interaction with its environment. This includes the firm not responding aggressively or responding with caution in line with changes (consistent, static, conservative, or defensive), or involved in aggressive or positive reaction to the changes (reactor, flexible), and strategically adapting to changes (intentional, proactive). Resources and environmental conditions are associated with the behaviour and decisions leading to different forms of adaptation. From the data analysis, two categories of themes have been identified: Single Adaptors and Multiple Adaptors (Table 4.20). The data shows that two of the sampled firms (SBE3, SBE10) both identified skilled workforce and changes in consumer behaviour to be contextual factors which impacted how they adapted.

Table 4. 20 Category of Adaptors.

Firm	Adaptive Forms / Strategies	Resource Types	Dynamic Environment	Multiple Forms of Adaptation
SBE1	Operational Stability (Continuation)	Financial, Skilled Workforce, Automatic Machine	Unstable Market Demand, Technological Changes	Single
SBE2	Operational Stability (Existing practices)	Financial Constraints, Equipment Challenges	Stable Economic Changes, Change in Consumer Taste	Multiple
SBE3	Operational Stability (Existing resources, No change in suppliers)	Skilled Workforce, Sufficient Chilling Space	Unstable Market Demand, Consumer Behaviour Change, Price Increases, Shortage of Suppliers	Single
SBE4	Reactive (Prompt reaction, agile)	Obsolete Technology, Time	Price Increases, Change in Consumer Behaviour, Change in Market Conditions	Single
SBE5	Reactive (Prompt reaction, resource acquisition, marketing orientation)	Skilled Workforce, Education and Training, Label Machinery	High Demand, Competitive Changes, Price Increases	Multiple
SBE6	Exploring alternatives, Flexible decisions	Small Space for Production, Brand	Immigration, High Competition, Supply Issues, Increase in Demand	Multiple
SBE7	Strategic Reactor (Utilise resources, Delivery service)	Financial Capital, Machine and Refrigeration Upgrades	Unfair Legislation, Growth in Demand	Multiple
SBE8	Diversified products, improve structures	Market Access, Technology Challenges	Increases in Customers, Price Quadrupled, Inflation	Multiple
SBE9	Diversify, Change business model	Skills Gap, Inputs (Animals), Finance, Technology Gap	High Inflation, Changes in Consumer Behaviour, Tight Regulation, Fluctuation in Demand	Multiple
SBE10	Brand position, Diversify, Network and Relationships	Skilled Workforce (PT Staff), Finance	Government Interference, Consumer Behaviour, High Energy Cost	Multiple
SBE11	Diversified into different products	Market Access, Farm Inputs	Environmental Issues, Competitive Changes	Multiple
SBE12	Reaction, Diversify, Networks & Relationships	Machine Breakdown, Lack of Specialized Machines	High Demand, Changing Consumer Requirements, Competition from Supermarkets	Multiple

SBE3, for example, embarked on a passive form of reaction to existing resources, whereas SBE10 reacted by utilising its networks and modifying business model. On the other hand, some of the firms employed a “confluent” form of adaptation. This implies

that small firms exhibited the same form of adaptation to different kinds of resource constraints and environmental conditions. Firms SBE8, SBE9 and SBE12, for example, engaged in strategic adaptation despite operating under different resource constraints and environmental conditions.

Single Adaptors: The data further revealed that three firms (SBE1, SBE3 and SBE4), exhibited a distinct form of adaptation irrespective of the nature of existing resources and condition of external environment. This type of firms can best be described as single adaptors. For example, SBE3 adapted using their existing routines, practices, and resources to resolve resource limitation challenges. This suggests a predisposition for resourcefulness and making use of existing resources as opposed to coming up with brand-new ideas or reacting to challenge. Similarly, Case SBE1 emphasised a consistent reliance on existing machinery, staff, and processes without the need for significant adjustments. SBE4 emphasised use of the firm's agility and smallness by reacting to resource limitations and environmental dynamism. Contrary to the limitation in adopting a defensive or non-adaptive position, SBE1 demonstrated a sense of feeling and contentment with their current practices, revealing that,

"We *use the existing machinery, our staff, and methods to do what we do. We do not do anything spectacular. We haven't changed anyway because I don't think we need to*." (SBE1)

With a sense of contentment in their operational setup and objective in achieving modest profit, the owner of SBE1 demonstrated no emotion for a change when they encountered a resource-limited context. The adaptive strategy indicates a preference for stability and an aversion for substantial changes. The data from SBE1 is consistent with the views of Chakravarthy (1982), Ferreira, Serra, and Reis (2011) and (Sarac, 2020) who conceptualise firms could be naturally resolute and unresponsive even when the challenges in the environment appear to be relatively volatile. SBE3 has been in the business much longer than SBE1. Despite characterising their resources as non-specialised or obsolete, SBE3 discussed how they processed high-quality products without modern equipment. This also shows a strategic use of alternative resources to achieve their production goals without solely relying on highly specialised machinery. This finding aligns with the view of Baker and Nelson (2016) that owners or managers of small firms with constrained resources often innovate with existing resources to create new opportunities for survival. SBE3 also revealed how their supplier

relationship has helped to maintain consistency in their adaptation despite resource challenges. Additionally, SBE3 indicated that it wanted to achieve small gains, which is a likely reflection of how the business objective affects its adaptive response. Similarly, SBE4 employed a singular form of adaptation. However instead of remaining relatively stable and defensive, SBE4 utilised the benefit of being flexible to respond to resource constraints and changes in the business environment. The interviewee of SBE4 indicated:

"*We were quite flexible. We change when things change. As I said, we are small and flexible. We could do whatever we want to do in a short time*." (Interviewee 2, SBE4)

This illustrates the degree of informality and adaptability in adaptive positions, demonstrating the importance of flexibility in resource management through swift adjustments. The extent of flexibility demonstrated by SBE4 shows in their response to how the firm adapted in hostile environment. The statement from the participant of SBE4 that "*We just didn't sleep, just kept working*," reinforced their commitment to continuous effort and adaptability in response to resource constraints and dynamic environments. This underlines the value of entrepreneurial orientation of continuous operation in entrepreneurial firms operating in uncertain environments (Covin and Slevin, 1989). It is interesting to report resilience of SBE4 for maintaining quality despite resource and environmental challenges. The interviewee of SBE4 recounted:

"*We're very stubborn about it because we won't compromise on quality*,"

indicating quality as a key driver of customer preference and leading to the range of adaptations that deliver value. As far as these firms were concerned, the ideal approach was to be resolute and focused in a particular form of adaptation. Remaining relatively stable is seen as important form of adaptation. For these firms, they do not change their form easily because of their nature and owner characteristics. Given this, the small firms wanted to achieve modest gain which may reflect in their choice of adaptation.

*Multiple Adaptors***:** It was also evident that majority of the small firms exhibited multiple forms of adaptation. Multiple forms of adaptation mean the firms adopted different strategies and modifications in reaction to resource-limited context. The data reveals that all the firms employed at least two of the three primary strategies: utilisation of existing resources and practices, networks and relationships, and product and market diversification. The stories of the nine firms (SBE2, SBE5, SBE6, SBE7,

SBE8, SBE9, SBE10, SBE11, SBE12) illustrate these adaptive strategies in rich detail. For some firms, utilising a combination of relationships and networks, along with product diversification, served as important coping strategies. In contrast, other firms relied on existing resources and practices, while adapting their business models to include delivery services. Both SBE2 and SBE11 both adopted similar form of adaptation: non-adaptive and strategic reactor. For example, SBE2 adapted with financial constraints by employing its networks and relationships with friends and family for financial injection. The owner of SBE2 remarked:

"*When resources are tough, I call upon friends or family to give us capital injection or short-term loans or just bridging facilities to fill our short-term working capital needs*." (Interviewee 1, SBE2)

This approach suggests their dependence of existing resources for overcoming working capital needs. The main reason is to avoid compromising product authenticity by opting instead for a "*try-and-error*" method, "*continuously tweaking and finding the right mix*" when facing a "*rocky road*." (SBE2). In addition to exhibiting a seemingly stable posture, SBE2 also considered introducing frozen meat products, driven by the necessity to explore alternative avenues when their existing business model faced challenges. This shift in adaptive form could be interpreted to be a proactive, strategic response to external pressures, indicating their commitment to diversification. This is also similar to SBE11 which diversified into other markets and products. The interview of SBE11 stated:

"By applying for a game license and started processing and selling venison… and barbecue processing." (SBE11)

This view illustrated a strategy to mitigate risks through product and market diversification. On the other hand, SBE7, a 166-year-old family business located in a rural area, used existing equipment and skilled staff to maintain operations, even when equipment was operating below capacity. This resilience and utilisation of limited resources enabled SBE7 to maintain a non-adaptive position and continued quality improvement. Similar to SBE12, SBE7 would adapt by transitioning from a traditional retail shop to a dynamic delivery service. The reason behind this form of adaptation is that it helps the firm to cope with the unfavourable market pressures. The owner of SBE7 explained:

"*The company copes with every market condition. We're obviously a retail shop. We have turned the business into a delivery service*." (Interviewee 1, SBE7).

This transformation illustrated the agility of SBE7 in responding to dynamic market conditions and commitment to diversification. SBE8, managed by the youngest interviewee with a postgraduate degree, employed different forms of adaptation in reactions to different challenges: use of existing practice, diversification and restructuring. The firm emphasised using existing strategies and practices to create new structures and solutions. It was significant to note how the firm was able to manifest different forms of adaptation easily and quickly. In reaction to resource constraints, the firm adapted through continuous adjustment and restructuring. This demonstrates innovative approach to adaptation in resource-limited context (Baker and Nelson, 2016). The owner of SBE8 explained:

"*Well, when we first started this business was completely organic growth. We are consistently adapting to changes to the resources that we have……we have depended on those resources as they have been empowering this growth over the last 7-8 years.*" (SBE8)

Additionally, SBE8 diversified its product by shifting towards poultry chicken processing due to cost considerations and market competition:

"*We are moving towards more poultry chicken, and the reason is because it's cheaper, but we don't have much profit within the chicken because obviously with the competitors they're offering the same prices*." (Owner, SBE8).

The benefits from organic growth and strategic restructuring, including downsizing until demand increases demonstrates high level of agility in adaptation. SBE12, another family business with over 134 years of history, relied on network and resource-sharing approach to address resource gaps, particularly during machine breakdowns. This is similar to the adaptation employed by SBE1, SBE2, and SBE4. This form of adaptation is a reflection of the critical role of inter-firm networks in efficiently managing constrained resources. SBE5 and SBE12 effectively coped with increased workloads by responding proactively to rising product demand, including extending operational hours and assuming additional responsibilities previously handled by others. These adaptive strategies are well documented with implications on the gains and performance objectives achieved. The interviewee explained:

"*We have to do extra work ourselves, so that's why we have to take on longer hours for work, covering other people's jobs*," (Interviewee 2, SBE12)

demonstrating their agility and a hands-on approach in response to resource constraints. Remarkably, SBE9 strategically reacted by introducing home deliveries, a

click-and-collect service, and adjusted working hours to cope with increasing demand. The firm acknowledged how they also employed a flexibility and informality in adapting to resource and environmental challenges. The owner of SBE9 shared:

"*I would say that we developed from within, that is the organic structure because if there is a problem, we tend to talk about it and find a solution*." (SBE9)

The owner of SBE10, with extensive experience in the downstream oil industry, leveraged brand reputation as a strategy for adaptation. Similar to the firms above, particularly SBE9, the firm utilised brand reputation, network of the media and other stakeholders, and employed home delivery services. There was clarity in the utilisation of resources, and strategic and forward-looking posture adopted by the firm. The owner of SBE10 recounted:

"*The only size and weight that we can use to our advantage is our brand reputation*." (SBE10)

Significantly, it emerged that the small firms exhibited two distinct adaptation strategies. Some of the firms demonstrated a singular form of adaptation, which implies consistently relying on existing routines and resources despite resource limitations and external environmental changes. The firms in this category adopted stability in operations, with the use of existing machinery, staff and processes without pursuing significant adjustments. For these firms, the emphasis is on utilising existing resources which reflects the objective of achieving modest profit goals. In contrast, majority of the firms exhibited multiple forms of adaptation, which involves adopting diverse strategies to cope with existing resource constraints and dynamic market conditions. The sort of transformation included shifting diversifying products and markets, changing business model to dynamic delivery services, utilising existing network and relationships, and strategic restructuring. This category of firms demonstrated agility to remain competitive and responsive to hostility in the external environment. Whilst some contextual themes influenced most of the firm to respond positively, a few firms remained adamant. However, it is most likely that the few firms would adapt positively when the contextual conditions become extremely challenging.

To sum up, the analysis of the forms of adaptation in the cross-case analysis reveals diverse patterns in adaptive strategies. There is no predominant form of adaptation found in the cases. A deeper understanding of the adaptive forms and their linkages with limited resources and dynamic external environments can be established by categorising the sampled firms into four distinct groups based on their adaptation

forms in resource-limited contexts. The adaptive forms were considered based on the works of previous authors such as Miles and Snow (1978) and Alnoor et al. (2022), They postulated four forms of adaptation for firms operating in a dynamic environment. The adaptive form was based on two contextual factors, limited resources (high/low) and dynamic external environment (high/low). The interviewees were asked to characterise limited resources and then indicate how the firm responded with limited resources. Similarly, the interviewees were asked to describe the condition of the local external environment and indicate how the firm adapted with changes in the external environment. The specific forms of adaptation emerging from the interaction between the firm and its resource-limited are reported. The findings from the thesis revealed that firms adapted differently in their interaction with different characterisation of limited resources and differed when interacting with different environmental variables. The findings give rise to a diverse range of adaptive strategies, leading to a composite form of adaptation for small meat processing firms (Fig. 4.2).

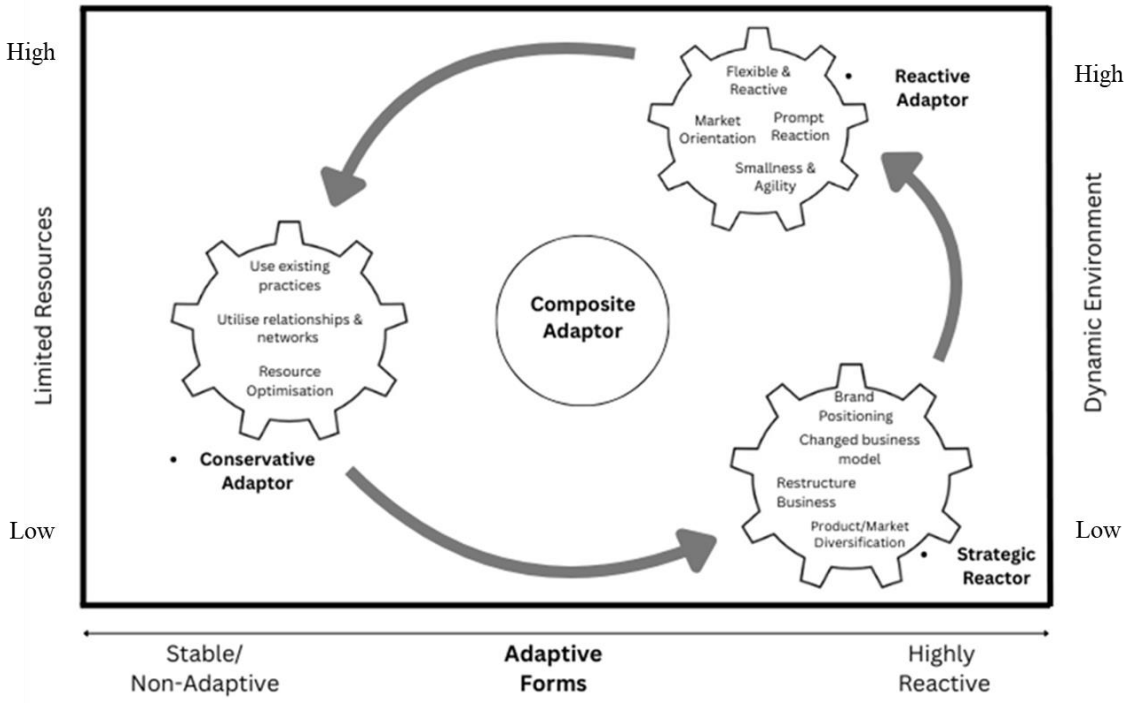

Figure 4. 2 Composite Form of Adaptation.

Source: Researcher's Construct

The thesis found that the firm is more stable and non-adaptive with their existing limited resources and networks, employing resource optimisation, non-formal structure and coping with resource constraints. Lack of consistency in adaptive strategies is apparent in how the firms adapt to challenging environment. The thesis observed that the firms oscillated between non-adaptor, pure rector and strategic adaptor forms when they encountered different conditions of environment and resource constraints. This finding largely reflects a more dynamic form of adaptation. This form of adaptation suggests a diverse and flexible approach to addressing challenges. The philosophical stance from the results of this study suggests that small firms employ a *Composite* form of adaptation. Composite form implies a blend of adaptive strategies or decisions employed at different times to cope with different types of resources and environmental challenges. The composite form differs from existing hybrid strategies by emphasising the contextual flexibility and variability observed in in SMPFs. Unlike the predefined hybrid strategies which are often proactive and intentional, composite adaptation is reactive and emergent influenced by the immediate hostile environmental and limited resource pressures. This idea aligns with the perspectives of agile and flexible nature of small firms (Zahra and George, 2002), which can provide positive outcomes for small firms (Eisenhardt and Martin, 2000). The thesis notes that the performance of the firms is generally profit-making for the business survival and family, is based on the perception of the owner manager, but this has not been verified from real data. However, having survived in the industry for an average 43.25 years, the thesis assert that the composite adaptive form is positive for the small firm in coping with challenge of resource-limited context.

4.4.5. Other Emergent Themes

Three themes, *COVID-19 and adaptation*, *Ethics, Culture and Adaptation*, and *Sustainability and Adaptation* emerged from the analysis across cases.

COVID-19 and Adaptation

This thesis focused on examining adaptation with resource-limited in the past five years. The cases discussed how the COVID-19 pandemic affected their businesses during the interview. A thorough cross-case analysis reveals a variety of adaptive strategies as shown in Table 4.21. Interestingly, a common theme emerges: ten of the twelve cases - aside from SBE7 and SBE2 - had to deal with an increase in demand during the pandemic, which prompted a range of reactive adaptations, leading to

significant rise in the sales volume.

Table 4. 21 Impact of COVID-19 Pandemic

Impact of COVID-19 Pandemic						
	Effect on Business			Adaptive Form		
Cases	Sales and demand	Price	Resources	No adaptation	Reactive	Strategic
SBE1	Demand increased ↑				Extended working hours	
SBE2	Sales volume decreased ↓					Diversified into new market
SBE3	Sales volume increased ↑				Acquired new resource	
SBE4	Sales volume increased ↑		Limited access to finance		Extended working hours	
SBE5	Demand increased ↑	Price Increases ↑		Used resources and practices		
SBE6	Internet sales increased ↑				Extended working hours	
SBE7	Sales volume increased ↑			Used resources and practices		
SBE8	Demand increased ↑	Price Increases ↑	Cost of resources increased		Product rationing	
SBE9	Demand increased ↑				Extended working hours; Acquired new resource	
SBE10	Sales volume increased ↑					Diversified business model
SBE11	Sales volume decreased ↓					Diversified into new market
SBE12	Demand increased ↑		Limitation on staff and equipment	Used resources and practices		

Source: Field Work

The remarkable observation by SBE10, for instance, emphasised the strategic and reactive response of small firms in responding to substantial increase in demand. SBE10 narrated:

"*When I talk about rapidly, our volume and turnover at the two shops increased by 300% within a space of weeks. That was a challenge in terms of resourcing it*."
(SBE10)

This perspective aligns with findings from extant literature that highlight the capacity of small firms in adapting to changing times for survival (Katare, Marshall, and Valdivia, 2021).

A notable theme that emerged was varied approaches to capacity management in dealing with unexpected environmental changes. For instance, five cases (SBE1, SBE3, SBE4, SBE6, SBE9) reacted through capacity expansion by extending working hours and/or acquiring new equipment to meet the escalating demand challenge. For example, SBE3, faced with threefold increase in meat sales, acquired new resources to meet heightened demand. This aligns with the resource-based view (RBV) literature, emphasising the strategic importance of acquiring and deploying resources to gain a competitive advantage (Barney, 1991). However, this was interesting observation given that small firms encountered limited financial constraints. SBE1, on the other hand, responded to the growing demand quickly by extending its business hours.

On the contrary, three cases (SBE5, SBE7, SBE12) were not responsive to increase in demand for products. The cases utilised their existing resources, and previous routines and practices in coping with the changes in the market. The concept of leveraging existing resources and practices in coping with environmental challenges have been discussed extensively in previous literature (Kolade, Obembe, and Salia, 2019; Senaratne and Wang, 2018; Franco and Haase, 2010; Teece 1998). Four cases (SBE6, SBE8, SBE9, SBE12) emphasised the need to adapt their product offerings to cater to the different needs of the customers.

However, not all cases experienced positive outcomes. Two cases (SBE2, SBE11) faced a decline in sales volume and responded by diversifying into a new market. For example, SBE2, pivoted away from the business-to-business segment due to reduced sales during the pandemic. SBE12 faced financial and resource strain due to the

pandemic but managed to cope with the demand by diversifying its business model to deliver products and services.

This strategic adaptation is consistent with the literature emphasising the importance of diversification as a risk mitigation strategy during uncertainties in the business environment (Dhir and Dhir, 2015; Mithani, 2020). In line with the perspectives of Katare, Marshall, and Valdivia (2021), this "strategic shift" may not be effective as not all adaptive strategies lead to improved results for the firm. Largely, the cross-case analysis highlights the dynamic and diverse nature of adaptive responses to challenges of COVID-19 pandemic. Small meat processors demonstrated adaptability and resilience by adapting through diversifying, expanding their capacity, or using existing resources and practices to cope with unexpected challenges. Common themes emerge across the cases, highlighting familiar challenges and choices that influenced adaptive forms s during this crucial time.

Ethics, Culture and Adaptation

The thesis conducts a detailed cross-case analysis that looks at how the twelve cases responded to ethical and cultural issues. The analysis identifies unique patterns of adaptive strategies that each case used. Figure 4.3 and Table 4.22 show a range of adaptive strategies exhibited by the twelve firms. SBE1 and SBE11 demonstrate a rather inflexible adaptive position and little flexibility, implying less accommodating adaptive behaviour towards ethical and cultural concerns of the meat products.

The rest of the cases, except SBE4, which was unwilling to disclose its position, demonstrate the extent of adaptation with ethical and cultural concerns. The cases recognised the necessity of adjusting strategies to cater to specific dietary and religious preferences, as highlighted by the owners of SBE2 and SBE12. This emphasises responsiveness to changing habits influenced by cultural shifts and a commitment to meeting varied customer preferences.

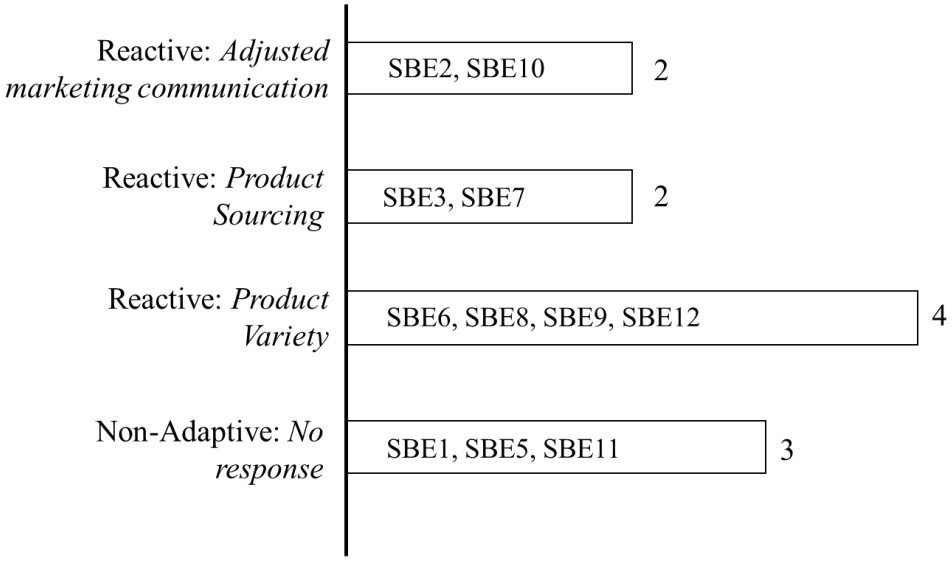

Figure 4. 3 Adaptive strategies to ethical and cultural concerns

Source: Field Work

The perspective of SBE12 sums up the general position of majority of the cases, who expressed about how the firm adapted with buying habits of consumers:

"*We've had to adapt because people's buying habits have changed...They want more different flavoured meats...They're not so traditional, so we will change to peoples need really, you know, we can change to anybody needs and you've got to listen to your customers*."

In contrast, SBE3 and SBE7 centre adaptation around product sourcing, with a longstanding commitment to ethical considerations. This also includes how communication strategies play significant role in adapting to cultural preferences, as evidenced by SBE10 and SBE2. The reactive strategies employed by the small meat processors are complex and diverse. The general approach allows these firms to balance cultural considerations with operational realities, showcasing a dynamic and adaptive entrepreneurial spirit.

Sustainability and Adaptation

The activities of food processors are significant concern for academicians and policy makers around the world (Schroeder, Aguiar, and Baines, 2012; Ritchie, and Roser, 2023). To explore the adaptive forms of small meat processing enterprises (SMEs) in relation to sustainability, specifically concerning carbon footprint, interviewees were asked two targeted questions: whether they were concerned about the

impact of carbon footprint, and what adaptive strategies they had implemented in response (see Table 4.22 and Table 4.23).

Table 4. 22 Adaptive responses towards ethical and cultural concerns

Cases	Adaptive Strategies
SBE1	No adaptation to change particularly if it affects costs
SBE2	Diversification of product offering; Adjusted ways of communication
SBE3	Product sourcing from RSPCA approved.
SBE4	-
SBE6	Reacted to Halal and non-halal requirements
SBE5	No change in position
SBE7	React to change - product sourcing
SBE8	Product variety: wide range of beef cuts available to suit their demands
SBE9	Adaptation through product variety – from beef to poultry
SBE10	Adjusted communication strategies
SBE11	No Adaptation to cultural shift
SBE12	Reacted to cultural shifts

Source: Field Work

Eleven of the 12 cases, except SBE3, responded that they are aware of carbon footprint. The findings showed emerging themes regarding how the cases adapted to carbon footprint considerations. Notably, most of the cases (SBE3, SBE5, SBE7, SBE8, SBE9, SBE10, SBE11) adopted a local sourcing strategy as a reaction to carbon footprint concerns.

These firms established a clear connection between their smaller size and the adoption of a local sourcing strategy. SBE10 concisely encapsulated the view adopted by most cases, emphasising:

"*Our carbon footprint is incredibly low because we don't travel. We don't bring beef from Argentina or South America, or even from 30 minutes away...we've negotiated a very low carbon footprint by the way we source. We are probably the least carbon-intensive way of eating meat. We are, in some areas, net negative because of the way we buy our products, making it almost a carbon sink...It's very*

local transport, minimal processing. There is no intensive farming, no direct environmental damage to the ground..." (SBE10)

Table 4. 23 Adaptive strategies towards carbon footprint

Concern and Adaptation for Carbon Footprint			
Cases	Yes	No	Adaptive Strategies
SBE1	√		No change in strategy
SBE2	√		No change in strategy
SBE3		√	Local Sourcing
SBE4	√		No change in strategy
SBE5	√		Local Sourcing; recycle
SBE6	√		Use Fridges with low emissions
SBE7	√		Local sourcing
SBE8	√		Local Sourcing; Environmental Suppliers
SBE9	√		Local sourcing; reduce electricity consumption
SBE10	√		local sourcing, minimal processing
SBE11	√		Local sourcing
SBE12	√		Minimal use of resources

Source: Field Work

The findings are consistent with the extant research which suggest that eating and sourcing locally typically reduce carbon emissions (Ritchie, 2020). The researcher observes, however, that the decision to adopt local sourcing as a strategy may be attributed to the resource constraints of small firms, and perhaps not necessarily a deliberate adaptation to address carbon footprint issues.

Conversely, three cases (SBE1, SBE2, SBE4), although recognising their awareness of the carbon footprint, opted for a non-adaptive position towards the issues. SBE1 expressed their perspective, stating:

"*As a rural small firm, we are not affected by carbon footprint … there is very little we can do about carbon footprints as we are too small*." (SBE1)

The analysis of the cases emphasised the vague relationship between carbon footprints, and adaptive forms. It was observed that the cases incorporated diverse adaptive behaviours to address these concerns. These adaptive forms range from low-

carbon sourcing and local operations. The findings highlight a growing awareness of environmental considerations and the willingness of small business owners to adapt their practices to align with sustainability goals.

4.4.6. Summary of Cross-Case Analysis

In summary, the cross-case analysis reveals diverse adaptive forms amongst the twelve cases to address the three research questions. Regarding the experiences of small meat processing firms in adapting in resource-limited contexts, the prevalent non-adaptive response, observed in ten firms, involves resource utilisation and reliance on existing norms and practices. Reactive adaptation is found in nine cases, characterised by prompt responses to environmental changes and resource constraints. Additionally, three cases employ a no-adaptation approach, while one firm (SBE10) stands out with a proactive strategic adaptation, utilising its brand and implementing innovative strategies. Regarding how the firms characterised limited resources, most of the firms discussed how their resources pose challenges, including machinery, skilled workforce, and financial capital constraints. Specific idiosyncrasies such as outdated machinery and technology, limited meat supply, and time constraints added complexity to these adaptation challenges. Also concerning question related to business environment condition, and its relationship to adaptive forms, most of the firm firms characterised the environment as unstable and are largely driven by changing consumer behaviour and high inflation. The condition of the business environment influenced the difficulty in accessing market and skilled workforce. The COVID-19 pandemic presented unexpected challenges that required flexibility and resilience of firms through resource allocation and diversification. In addressing ethics and culture, firms predominantly adjust by diversifying their product offerings. In response to concerns about their carbon footprint, the small firms take a variety of approaches, with their smaller sizes having a greater influence on local sourcing practices.

CHAPTER 5: DISCUSSION

5.1. Introduction

The aim of the thesis was to develop understanding in how small meat processing firms adapted in resource-limited context, using a qualitative multiple case study. The specific objective was to understand the relationship between adaptive forms, and limited resources and dynamic external environment. This thesis explored the experiences of 12 small meat processing firm in adapting to limited resources challenges to address the fact that there is little or no empirical evidence about the adaptive forms, and that there is little documentation of the experiences of small meat processing firms in limited-resource context. Given that small firms are innately constrained with limited resources, and that effective adaptation could be important organisational strategy for survival and growth of businesses, this thesis particularly focused on how adaptive forms were related to the environment constrained with limited resources. This perspective on adaptation in resource-limited contexts was primarily based on resource-based theories, dynamic capability theory, strategic contingency theory, and adaptation theories (Deakin and Bensemann, 2019; Hagen et al., 2017; Simon, Hitt, and Ireland, 2007; Schindehutte and Morris, 2001; Zajac et al., 2000; Teece et al., 1997; Barney, 1991; Chakravarthy, 1982). The evolution of resource-based theories has primarily centred on the adaptation theories, which are typically context-driven. The discussion in this thesis was to provide a alternative proposition to the resource-based theories, contingency theories and adaptation theories, and to find the connecting ideas between the concepts. The thesis focused on characterising limited resources on the one hand and the dynamic external environment on the other, along with the adaptive forms exhibited by the small meat processing firms in the resource-limited context. That is, small meat processing firms continuously adapt their practices, organisational systems and entities in resource-limited context. Through the forms of adaptation, small meat processing firms can limit the effect of resource constraints on their businesses and survive in the dynamic environment. The thesis was designed as a qualitative multiple case study with the aim of capturing the diverse adaptive forms among small meat processing firms, thereby improving the generalisability of the findings. The twelve cases were obtained from the West Midlands in the UK which are noted for intensive meat processing activity. The data were obtained from senior

managers, mostly owner managers of the company through semi-structured interviews, observation, documents, and field notes.

Chapter four presented the results of the themes emerging from the thesis. The cross-case analysis section provided the relationship between the themes emerging from adaptive forms, and the resource-limited context. It is evident that adaptive forms as it is understood in this thesis can be influenced by the scarcity of resources and dynamic business environment. The thesis develops four concepts from the findings and analysis to allow readers to follow the themes, with the concepts presented. The chapter considers the general research question, "how does the firm adapt with limited resources and dynamic business environment?" The chapter addresses how the perspectives are employed in the thesis, that is, the adaptive forms in relation to limited resources and dynamic environments, has provided insights into previous studies on adaptation. The thesis approaches the discussion chapter from the theoretical and empirical perspectives. The theoretical framework was intended to firmly establish the thesis within the established research paradigms of the field and to emphasise the rationale for employing resource-based theories, strategic contingency theories, and organisational adaptation theories as foundational constructs. The focus of the discussion is based on three areas: 1) local environment as the external environment, 2) limited resources as an inherent characteristic of small firms, and 3) adaptive form manifests as an intrinsic response in small firms. The thesis advances the theory of organisational adaptation by introducing the composite form of adaptation, encapsulating the complex nature of limited resources in small meat processing firms. The composite adaptive form emerged from understanding the ambiguous nature of adaptive strategies and their interaction with limited resources and dynamic external environment. The thesis then discusses important empirical findings that help to explain the adaptive strategies of the small meat processing firms, particularly what the findings have revealed about the nature of the adaptive forms in limited-resource context. Throughout the chapter, the thesis makes theoretical links between the key findings and draws conclusions from the study.

The chapter also discusses, in a separate section, the impact of the resource-limited context defined in this thesis as possible constraints in various resources and dynamic environmental factors on the adaptation process. The thesis shows the different adaptive forms mapped against conceptual factors from literature. As discussed in chapter 2, small meat processors are currently facing critical problems due

to resource constraints and dynamic business environment. Lack of critical resources can influence adaptive behaviours and adaptive forms. The extent to which limited resources influences adaptation process cannot be measured. However, the thesis establishes that different adaptive forms occur with all kinds of limited resources. This chapter takes into consideration the explanation of these results, with reference to the broader supporting or conflicting body of literature.

5.2. Theoretical Framework Revisited

Adaptation of small firms is contextually based, and the different adaptive forms are dependent upon the nature of the business environment (Boohene, 2006; Kotey, 2014; Williams, 2014; Sarac, 2019). While previous years have witnessed an expanding body of literature exploring the adaptation of small firms (Schindehutte and Morris, 2001; Jones, 2004; Chryssochoidis, Dousios, and Tzokas, 2016; Herbane, 2019), limited attention has been given to documenting how small meat processing firms explore adaptive forms within resource-limited context. Investigating these adaptive behaviours is crucial to understanding both the adaptive forms and the ways in which small meat processing firm interpret them.

This thesis investigated the adaptive forms employed by small meat processing firms, drawing insights from the experiences of senior managers, predominantly owner-managers. Specifically, it explores the interconnection between adaptive forms and the challenges posed by limited resources and dynamic business environment. The perspective on the adaptation of small meat processors in resource-limited context was primarily based on the dynamic capability, resource-based theories, and strategic contingency-based theories (Barney, 1991; Teece et al., 2001; Kim and Pae, 2007). Also, the specific adaptive form of the firm relied on the diverse theoretical perspectives of adaptation from previous studies (Miles and Snow, 1978; Schindehutte and Morris, 2001; Hagen et al., 2017; Sarac, 2019; Sarta, Durand, and Vergne, 2021). Based on the adaptation theories, adaptive form is generally defined by an observable adjustment or reactive response to the significant portions of business entities in reaction to mitigate the threats or capitalise on dynamic business environments (Schindehutte and Morris, 2001). Small meat processors typically encounter constraints imposed by limited resources and a dynamic business environment. Despite these challenges, the firms leveraged their small size and limited resources as an adaptive capability in responding to the contextual factors. Thus, three forms of adaptations are

discussed, conservative adaptor, pure reactor, and strategic adaptor. Strategic nonadaptation (Sarta, Durand, and Vergne, 2021), conservative (Anwar and Hasnu, 2017), defensive (Miles, Snow, 1978) or unstable state (Chakravarthy, 1982) is one form of adaptation in which the firm adopts a cautious response to restrain from resource constraints and hostility of the environment. On the other hand, pure reactors pursue unstable and inconsistent pattern of adjustment in line with the changes in environment (Chakravarthy, 1982). The third form of adaptation, the strategic form engages in a more proactive and deliberate approach to changes in the environment (Saraç 2021; Anwar and Hasnu, 2017). Examples of strategic forms include diversification into new products and markets, engaging in strategic alliances and business model changes. All the three forms of adaptation are viable adjustments in coping with resource-limited challenges, which was been developed as a theoretical framework for understanding adaptation of small meat processing firms.

The thesis discusses contextual factors influencing adaptive forms of small firms. Drawing upon the concepts of strategic contingency and environmental dynamism, the thesis posits that adaptive behaviours of firms are contingent on internal and external factors (Schindehutte and Morris, 2001). Figure 4.3 above is the framework that emerged from the findings and theoretical review chapters. Figure 4.3 proposes that, under resource-limited contexts, firms adapt with different forms or positions in the market. The condition of the environment context significantly impacts the capacity of the firm to accumulate resources. Previous research showed that small firms in China demonstrated proactive behaviour in a highly dynamic environment (Woo et al., 1990), whereas stable environment does not provide incentive for firms to adapt or acquire resources to adapt (Schindehutte and Morris, 2001), Whilst this perspective is significant, small firms characterised resources and condition in the business environment differently. This finding is not an indicative of a lack of adaptive capacity, since firms demonstrated different forms of adaptation in response to resource constraints. For example, in a hostile environment characterised by limited resources, small firms showed diverse adaptive orientations towards the consequences of the environment (McKenny, et al., 2018).

Previous studies (Kim and Pae, 2007; Hrebiniak and Joyce, 1985) posit an important interdependence between organisational behaviours and the level of hostility in the environment. This relationship plays a fundamental role in modelling the adaptive forms adopted by the small firms. This position is insufficient and offers

adequate exposition of adaptation of small firms. This thesis seems to have shown that this is only partially true in the context of adaptation in resource-limited context, mainly because majority of the firms adopted a more conservative (no adaptation position) with limited resources and in a relatively stable environment. Within a relatively stable environments, evidence from the thesis showed reduced motivation for adaptation (Sarac, 2019). In a hostile environment, small firms showed a more resilient, reactive response to the changes in the environment. With all the firms, except SBE2, affirming their success over the last five years, it implies that these less conventional adaptive forms have proven effective in enabling small firms to thrive in a resource-limited context.

To sum up, the thesis departed from the conventional categorisation of firms into specific group, and rather characterised firms in terms of the patterns of adaptive strategies in coping with existing limited resources and dynamic environment. First, whilst previous authors promoted adaptation of small firms (Herbane, 2019; Anwar and Hasnu, 2017; Chryssochoidis, Dousios, and Tzokas, N. (2016). Jones, 2004; Schindehutte and Morris, 2001), no research has explored the how this is fulfilled by small meat processors in resource-limited contexts. The adaptation framework employed in this thesis provided how small meat processors conceived the different adaptive forms (non-adaptive, reactive, strategic) in an environment defined by limited resources and dynamic environments. Secondly, most previous studies relied upon a specific adaptation theory (Anwar and Hasnu, 2017; Jones, 2004), however, this framework is founded on several adaptation concepts and theories. Finally, previous research mostly discussed adaptation in isolation, but this framework helps to contextualise adaptation, particularly through the concept of limited resources and dynamic environment. This proposition contributes to the exploration of adaptive forms amongst small meat processors, offering novel insights into a firm context seldom explored in the UK. Additionally, it can be relevant for studies in other contexts sharing similar characteristics.

5.3. Major Empirical Findings

The findings of this thesis typically demonstrate specific characteristics of small meat processing firms operating in the West Midlands of UK. The investigation revealed that the sampled data is relatively old with an average age of 42 years. The years of existence reflected in the financial performance indicated by the leaders of the

sampled firms, though these could not be verified with real data. The objectives and success criteria for the small firms were related mostly to minimum profit maximisation for the family and survival of business, sales growth, brand recognition, and customer satisfaction. These results support the view that small firms generally adopt a short-term orientation, focusing primarily on immediate operational goals rather than long-term strategic development.

The findings also reveal that the sampled firms employed minimal processing methods. There was not a remarkable difference in the processing and production of products. The focus on conventional or traditional processing methods suggests reliance on established routines and practices which may be aligned with the nature of resources they control. The use of smoking and preservation as fundamental methods present an interesting observation. However, the limited prevalence of advanced machinery and technologies emphasises resource constraints faced by small firms. This finding may also suggest the adaptation strategies employed to optimise limited resources in the dynamic business environment. The minimal processing employed by the sampled firms also contradicts the growing market demand for ultra processing methods to enhance quality, safety, and shelf life of processed meat products (Kalschne, Corso, and Canan, C., 2020). This inconsistency presents a potential misalignment between operational capabilities of the firms and the increasing need for market expectations. Overall, the finding validates the literature emphasising the critical role pf resource constraints in modelling operational strategies of small firms in the meat processing industry (Greene, Brush, and Brown, 1997).

The findings suggest that the sampled small firms are consistently under-resourced. Most typical resource characteristics that differentiate small meat processing firms from larger ones included lack of skilled workforce, financial capital, advanced machinery, quality suppliers and technology gap. The nature of the limited resources in the small firm would largely determine the adaptive capacity (Schindehutte and Morris, 2001). Considering the form of adaptation in terms of limited resources, most small firms were generally Conservative adaptors. This implies that the firms engaged in a cautious and conservative reaction using existing resources, practices and routines, as well as the utilisation of networks and friendship. This finding seeks to agree with the views of Woo et al. (1990) who argued that internal factors such as resources, processes and routines, are firmly entrenched in the firm and become ‘formative factors’ which can limit the need for adaptation.

The 12 firms were all locally based; that is raw materials were sourced from the local market and sell to the customers in the local market. The interviewees generally characterised the local environment as generally competitive, with the main competitors being large supermarkets. Five out of the twelve firms were in the rural areas, however, there was no difference between resource availability for the small firms in the urban/suburban areas. In addition to the level of competition in the local environment, other significant environmental factors impacting the successes of small firms were changes in consumer behaviour, economic fluctuation, tighter regulations and legislation, and supply issues. In terms of the dynamic environmental factors, the firms typically adopted an instinctive, reactive approach through the expansion of capacity, being flexible in decision-making, informal decisions, and acquiring other resources. In addition, some of the firms exhibited a strategic reaction, which involved diversification of products and services, and change in business model. These findings are in alignment with the perspective of Schindehutte and Morris (2001) that dynamic environment make small firms gravitate towards experimentation of new ideas, including product/market diversification, resource mobilisation, and cooperative strategies.

5.3. Understanding Adaptive Forms of Small Meat Processing Firms

This section investigates important insights derived from the experiences, including reactions, decisions, and emotions of leaders within small meat processing firms. It explores how these firms adapt in resource-limited environments, arguing that interpreting the adaptive strategies necessitate an examination of the various forms of adaptation in response to challenges related to resources and evolving business environments. The findings from the thesis suggest that the firms adopted various forms of adaptation as they encountered limited resources and changes in business environment. The results indicated that small firms tend to embrace adaptation as a standard behaviour in resource-limited context, rather than considering them as exceptional cases. In contrast to large firms, where adaptation is proactive, deliberate, and executed through well-defined strategies, small firms, when dealing with limited resources and dynamic environments, do not participate in planned activities. Within the thesis, three forms of adaptation emerged to characterise how small meat processors adapt in a resource-limited context as shown. Limited resources and dynamism of business environment are the two contextual factors which determine the adaptive

strategies and choices (Figure 5.1). The framework posits that each contextual factor has the capability to impact the other. For example, in an environment characterised by high level of dynamism, there may be competition for critical resources, which can result in availability of resources for small firms (Ghadge et al., 2020; Ramdani, Chevers, and Williams, 2013). In contrast, stable environments or low munificent environments are more likely to offer accessible resources for both large and small businesses. In alignment with previous propositions, firms adapt in accordance with the nature of resources within their control. The propositions from previous literature typically categorise firms into clusters based on their adaptation strategies, reflecting their ongoing posture in response to environmental conditions. However, a fourth adaptive form, known as the composite adaptor, emerges from the thesis as the predominant adaptive strategy among small firms. This form of adaptation involves dynamic evolution of strategies and modifications to business processes in response to resource-limited contexts. This adaptive form characterises the behaviour of small meat processing firms in the local market. The specific adaptive forms are described independently below.

Conservative Adaptor. The Conservative form of adaptation can be described as a position in which the firm makes little significant effort at adapting to either severe resource constraints or the environment. Rather, the firm utilises its tradition of resources, routines, experiences, past experiences and legacies, history, and processes to maintain relative stability amidst challenges. The findings of this thesis showed that small meat processing firms adopts a Conservative approach as one of its key adaptive forms in a resource-limited context. It was clear from the discussions that most of the small meat processing firms (10 out of 12) do not make significant changes or adjustments to its strategies, practices, or resources despite facing severe resource challenges. Fundamentally, the firms stick to its existing methods, routines and practices and at best, reconfigure existing resources, instead of actively seeking new ways or structures to cope with resource or environmental challenges. This form of adaptation aligns with the defender approach developed by Miles and Snow (1986) and strategic consistency approach adopted by 43% of Pakistani firms (Anwar and Hasnu, 2017). The firms then focus on a narrow market or product domain with their existing structure, culture, traditional markets and past experiences. The views from the *Conservative* form identified three critical arguments. First, to maintain product quality,

the small firms use their previous experiences, existing resources, competencies, and practices to provide for the local environments they are embedded so that their products and services are not compromised. Second, the small size does not allow the firms to engage aggressive strategy, so they used existing reputation in the local market to their advantage. Third, the small firms wished to pursue organic growth instead of adapting significantly to changes in the business environment.

Generally, the conservative form adopted allowed the small firms to maintain stability and consistency in their operations, products, and price, particularly when resources are limited. This adaptive form contradicts the propositions of the dynamic capability, strategic contingency and RBV theories. The theories point to a 'reactive adaptation', which involves adaptation of capabilities, resources, and processes for firms to create a strategic fit with the hostile business environment (Teece et al., 1997; Saraç, 2019). Nevertheless, the lack of a positive reaction in the firms occur within the framework of simplicity and adaptability inherent in small businesses. Additionally, the form of adaptation is influenced by the philosophies and beliefs of owner-managers shaping firm behaviour (Luokkane and Rabetino, 2005; Lau and Bruton, 2008). Evidence from small business literature (Anwar and Hasnu, 2017; Baker and Nelson, 2018) align with the Conservative form. Anwar and Hasnu (2017) suggested that firms which adopt a strategic consistency approach do so to avoid creating confusion in the quality of products and services they provide. Baker and Nelson (2018), on the other hand, demonstrated how small firms could survive with the same structural form and limited resources in a relatively stable environment. Previous studies have showed positive correlation between consistency approach and firm performance (Anwar and Hasnu, 2017; Fehre et al., 2016). Yet, continuously employing a passive form of adaptation can expose small firms to hostile market conditions, internal weaknesses, and can also lead to missed opportunities for growth and innovation (Anwar and Hasnu, 2017). It is clear from the interviews that small firms remain passive and consistent with their limited resource when the environment is relatively stable. This is consistent with previous research (Miller and Friesen, 1984; Neirotti, Raguseo and Paolucci, 2018). The implication for small meat processing firm is that when facing challenges with limited resources and hostile business environment, firms can employ a *Conservative* form that satisfies immediate needs and goal of the business.

Reactive Adaptor. Reacting to resource challenges and changes in the business environment is the most common form of adaptation for small meat processing firms. A reactive adaptor is prompt to changes and challenges in the business environment (Kotey, 2016). The findings indicated that all the 12 firms make minimal, reactionary steps and adjustments to cope with changes in the business environment. It emerged from the thesis that small firms reacted when there is monumental challenge from the environment that threaten the survival of the business. Alternatively, the firms remained barely passive and conservative when the environment is stable. The findings are consistent with previous studies indicating that firms (57%) demonstrate greater flexibility and reactivity in challenging business environments (Anwar and Hasnu, 2017). The reactive behaviour of the firm also aligns with the concept of adaptation and dynamic capability theory, which proposes that managers adjust their strategies needed to cope and appropriately placate the challenges and opportunities presented (Saraç, 2019; Teece et al., 1997; Conant et al., 1990). Anwar and Hasnu (2017) also demonstrated in their studies that reactive adaptation could be ideal for small firms, notwithstanding poor performance outcomes. Other studies (Alnoor et al., 2022; Hagen, 2017) emphasised the position that limitation of critical resources and persistent hostility of business environment make firms adopt reactive and unexpected decisions than large firms would. Previous studies have also emphasised that reactive adaptation could be problematic as it does not follow a consistent strategy (Miles et al., 1978; Hagen, 2017; Saraç, 2019) and does not also offer strategic direction to the firm (Alnoor et al., 2022). The findings in this study are consistent with the outcomes of a previous study by Anwar and Hasnu (2017, page 11) that "reactors performed better as small firms". It is not a coincident that all the small firms reacted promptly at one point over business challenges. However, the contexts, methodologies and performance measures of previous studies differed from the performance outcomes of this study. Adducing from prior studies, this thesis proposes that in resource-limited context, small firms are not confined by long-term adaptive strategies but can instead tailor their adaptation to immediate goals.

In responding to challenging environmental conditions, small meat processors highlighted the significance of flexibility, agility, and their firm size, as important sources of the firms' capacity to adapt. This emphasis on adaptability allowed the firm to respond promptly, ensuring immediate survival despite resource constraints, environmental changes, and competitive pressures (Moss, Payne, and Moore, 2014).

For example, the firms leveraged their small size and agility to quickly respond to dynamic environment challenges without the need for formal processes. This advantage allowed the firms to make prompt decisions and adapt to evolving situations. The finding is consistent with the general characteristic of small firms which are focused on achieving short-term performance goals rather than superior performance (Lampadarios, 2016), which is the position and objectives of the small meat processing firms. Evidence from the analysis of business environment condition suggests that exogeneous variables and resource-related factors are more important for their survival than adopting the most effective strategic decision. This finding aligns with previous studies that the firm environment influences their organisational form (Granovetter, 1985; Welter, 2011; Zahra, Wright, and Abdelgawad, 2014).

Strategic Adaptor. Recall that most small firms employed either a passive or reactive form to different resource and environmental challenges. These represent two opposing ends of the adaptation spectrum. The findings show that some of the firms (7 out of 12) demonstrated strategic reaction when faced with a dynamic environment. A strategic reaction actively and deliberately modifies its strategies, structures, and operations to anticipate and respond to changes in the external environment. Strategies such as diversification of products and markets, restructuring of business model, and exploitation of brand positioning employed by the firm are constituent elements of a strategic behaviour. The firms demonstrated creative and innovation postures required for exploiting opportunities despite resource poverty and dynamic business environment. This is consistent with the perspective that strategic adaptation is generally transformational and proactive (Battisti et al., 2019). This also implies that the firm can adapt away from the general adaptive behaviour of most small firms (Siren et al., 2017).

However, the firms did not proactively plan and implement strategic initiatives to maintain or enhance their competitive position. The thesis suggests that these firms deployed their strategies primarily in response to hostile environments. Nonetheless, these strategies incorporated significant strategic elements. Therefore, the appropriate adaptive form can best be described as a Tactical Adaptor. This form of adaptation validates the findings, demonstrating that the firms had the ability to quickly and effectively respond to environmental changes without extensive pre-planning. The specific issues emerging from the strategic adaptive form is that some small firms (1)

explored new product offerings to avoid over-dependence on a single product particularly during the pandemic crisis and lack of access to market, and (2) restructured their business model in response to the limitation of firm resources. With almost all the firms indicating that they have been successful, it does suggest the reactive forms of adaptation positively relates with firm performance. The finding from the thesis resonates with extant research about the criticality of adaptation for firm performance (Borocki et al., 2019; Hagen et al., 2017). The finding also aligns with some aspects of EODs such as proactiveness and innovativeness which is a strategy-making process (Erogul, Quagrainie and Achimota, 2018). Yet, there is no evidence to suggest that firms operating in environments with scarce resources can consistently exhibit EO (Jiang et al, 2018). The thesis discovered that one small meat processor (SBE10), in contrast, exhibited a more proactive and intentional approach by leveraging its brand for a competitive edge in the market, along with the creation of an 'Amazon model.' The thesis did not perceive that this response was consistently developed and always maintained. It is significant to note that two of the firms employing tactical adaptation consistently are managed by individuals with substantial managerial and educational experience, effectively exploiting their limited resources to pursue innovation and creativity. The evidence emphasises the ability of managerial experiences and skills to develop strategic choices which can offset the influences of hostile environmental condition on the firm (Luokkane and Rabetino, 2005). Nevertheless, there was no evidence from the findings to suggest that other firms which did not undertake tactical decisions performed poorly, making the empirical findings ambiguous. In the light of earlier studies, there is no sufficient relationship between tactical adaptation with firm performance outcomes (Battisti et al., 2019). The findings from this thesis suggest that the adaptive forms employed yielded positive result. However, this thesis does not expect positive relationship between tactical adaptation and firm performance, at least in the longer term.

Composite Adaptor. The merits of employing a conservative, reactive or tactical adaptation have been articulated in previous sections and prior research. The nature of adaptation employed by the firms varies due to the condition in the resource-limited context. For example, firms adopting a conservative form generally remain passive with the use of existing internal structures and resources. This form of adaptation is apparent when the environment is generally stable. Reactive or tactical adaptors respond

favourable to changes in the external environment. Previous studies have performance lapse in firms which exhibited pure adaptation, such as defenders or reactors. Apart from the two firms which exhibited conservative approach in reaction to resource constraints and environmental changes, most firms evolved differently to the changes in environmental condition and resource constraints. The evidence from the thesis suggests that the firms constantly exhibited dynamic and composite approach to adaptation, characterised by evolutions of strategies and modifications to business processes in response to a resource-limited context. Thus, the analysis of the results in this thesis indicates that these firms demonstrated a mix of different adaptive forms, integrated various elements of conservatism, reactiveness and tactics to cope with changing and challenging environment. In other words, the firm's positions and strategies change over time due to the prevailing contextual factors. Essentially, there is a dynamic interaction between the firm and contextual factors, leading to the emergence of various adaptive forms. There is a mandate for firms to cope with scarce resources and dynamism of the business environment. The analysis has demonstrated that the firm utilises its small size, flexibility and agility to consistently adapt, suggesting that small firms promptly shift between different forms of adaptation in shorter time frames. This observation aligns with the findings of prior studies (Hrebiniak and Joyce, 1985; Ismail, Poolton, and Sharifi, 2011), and dynamic capability of firms (Jones, 2004). Indeed, Anwar and Hasnu (2017) classified this form of adaptation as hybrid strategy and recommended managers to adopt the strategy to maintain a narrow product focus and enhancement in product quality, whilst at the same time, remaining flexible and innovative with new products for better performance outcomes. The findings from this thesis support the ideas of Anwar and Hasnu, 2017) in a sense that remaining highly agile, and dynamic is a characteristic of small and medium firms. The survivability and viability of the sampled firms over years clearly indicate that employing a composite adaptation strategy could be suitable for small-scale meat processing enterprises. This perspective does not imply that the small firms achieved competitive advantage, or outperformed key competitors as articulated by RBTs. What this means is that composite strategies such as conserving established practices and experiences, exploiting novel ideas, and diversifying products and services, were employed to effectively cope with dynamic resource-limited contexts, and achieve reasonable performance goals.

5.4. Understanding contextual factors on adaptive forms

Chapter two of this project dedicated sections to critically review dynamic business environment and their effects on adaptation. The section critically analysed a few academic sources regarding the business environment in which the firm is embedded. It noted that the factors of business environment and changes in firm positions are intrinsically related. The findings suggested that there were three distinct adaptive forms employed by small firms. There is further evidence that an adaptive form is associated with the nature of the firm context in which they are embedded. This thesis has produced findings that point to the characterisation of resource-limited context. This section discusses the findings by comparing them to those in the literature in order to provide some insights beyond the descriptions. The resource-limited context comprises of the characteristics of limited resource, and the condition of business environment. All the firms described the relationship between limited resources and adaptive forms, and dynamic business environment and adaptive forms.

Limited Resources and adaptive forms. A major finding from the analysis indicates that small meat processors face internal constraints due to limited resources. All the 12 firms characterised resources as consistently lacking and incapable. The findings revealed consistent and recurrent limitation of machinery and equipment, skilled workforce, and financial capital. They also demonstrate resource characteristics in terms of inaccessibility, resource gap, and obsolete. It was clear from the discussion that the limited resources present a wide range of challenges that require complex and diverse adaptive strategies. This is consistent with the SME adaptation framework in Figure 2.1 about the important role of limited resources on firm adaptation. In line with the RBTs and Dynamic Capability theory, a relationship between limited resources, strategies and firm performance was determined. For example, most small meat processing firms disclosed that limited resources have direct effect on performance outcomes, including product quality, increase in customers and growth prospects. The firms showed that limited resources hampered their ability to develop high quality products and services, effectively impacting its competitive position. The thesis also demonstrates how the lack of critical resources can negatively influence growth and adaptive strategies. This is consistent with the resource dependency theory, which recognises that firms depend on critical resources for growth (Pfeffer and Salancik,1978).

Notwithstanding the negative impact of limited resources, the empirical evidence from the thesis suggest that the small meat processors were not excessively concerned about the lack of critical resources. The findings suggest that the primary motivation for most firms is to achieve modest gains, such as survival and profit (or earnings for the family). The relationship between the firm's resources and adaptive forms reflects these motivations, highlighting the significance of smallness, flexibility and agility in quickly adapting to resource constraints. Dynamic capability theory emphasises the capacity of the firm to adjust and readjust existing resources to survive changes in the environment (Teece et al., 1997). This implies that the capability of small firms could be hampered by the presence of limited resources. Yet, the findings from the thesis demonstrate that in most instances, small meat processors adapted with existing resource challenges albeit cautiously and conservatively. Thus, limited resources were mostly related to conservative adaptors.

Dynamic Business Environment Factors influencing adaptive forms. The findings revealed that isolating the condition of the environment is inadequate for understanding adaptive forms employed by the firm. Indeed, the contextual factors and adaptive forms are not mutually exclusive; the constructs influence each other (Hrebiniak and Joyce. 1985). The empirical evidence from the thesis suggests that the level of dynamism of environmental factors can mostly determine both resource availability and adaptive form. The thesis found that most of the firms described the condition of the business environment as unstable, citing factors such as price increases, inflation, fluctuation of economy, and changes in consumer behaviour. The firms mostly discussed that high level of hostility constrained access to critical resources such as finance, skilled workforce, and raw materials. Hypothetically, there could be grounds for such negative impact of hostility on access to resources, and on the adaptive forms. First, a dynamic food industry is known to deprive small firms access to important resources (Ghadge et al., 2020). Secondly, the level of environmental munificence or dynamism determines the direction of adaptation (Tushman and Anderson, 1986; Castrogiovanni, 1991; Ramdani, Chevers, and Williams, 2013). They argued further that when resources are available, firms find opportunities for growth and survival in their environments. For instance, 10 small meat processors characterised the COVID-19 pandemic as both hostile and unprecedented. Uncharacteristically, this level of hostility resulted in an overwhelming demand for meat products, prompting reactive responses to address the

surge in consumer needs. Importantly, the findings align with the concept of SCT and other empirical studies (Forte et al., 2000; Teece at al., 1997). In contrast, most of the firms remained consistent and unresponsive in a relatively stable environment. Previous studies suggest an inverse relationship between adaptive strategies and hostile environments (Neirotti, Raguseo, and Paolucci, 2018; Alemayehu and Van Vuuren, 2017). Other studies further indicate that changes in adaptive behaviour or strategies are expected as long as firms remain embedded in a changing environment (Shin, 1977; Forte et al., 2000; Rizescu and Tileagă, 2016). However, the evidence from this thesis demonstrates that firms exhibited both agility and defensiveness in responding to resource scarcity and environmental hostility.

Similarly, the analysis found that majority of the small firms recognised effects of ethics, culture, sustainability, and carbon footprints on the adaptive forms. Concerning ethical issues, 8 firms responded positively to changing consumer requirements, while 4 remained conservatives. This indicates that, given the typical integration of small firms within their local environment and their connection with the community, there exists an incentive to address the demands of their customers. Moreover, regarding the impact of sustainability and carbon footprints on adaptive form, more than 70% of firms observed that the smallness and local sourcing strategy of the small firm had limited association with sustainability factors. The thesis can infer that sustainability concerns were deemed insignificant among small firms due to their smaller size and the local embeddedness of the firm, which had minimal influence on the choice of adaptive strategies. The finding from the thesis contradicts the notion from prior research (Aragón-Correa et al., 2008) that small firms with their limited resources can proactively or reactively pursue environmental strategies. Following on from the arguments on the traditional resource-based theories, all firms should require resources and capabilities to develop competitive strategies. The findings from the thesis supports the perspective that both large and small firms follow different paths in the choice of strategies based on different sets of firm characteristics (Aragón-Correa et al., 2008). The thesis confirms that the perspectives and motivation for sustainability strategies is different for small firms. Although the environment can serve as a catalyst for adaptation, the notable conclusion from the findings is that there is no positive and significant relationship between proactive or reactive adaptive strategies and sustainability issues for the majority of the sampled small firms.

The impact of institutional factors on adaptation. The thesis uncovered empirical evidence regarding the important role of institutional factors on adaptive forms of small meat processing firms in a developed economy. The analysis of the institutional factors across the participating firms reveals a complex institutional environment, which is underpinned by regulative, normative, and cognitive pressures (Scott, 2008). These institutional elements which can be both formal and informal exert different levels of influence on operational practices and adaptive behaviours within small and medium-sized meat processing enterprises in the UK.

The empirical evidence emphasises the criticality of the research setting (Birmingham) and the meat processing industry on the adaptation strategies of the small firms. The findings section identified regulative pressures, primarily formal in nature, such as government policies, regulations and legislations, emerged as predominantly noticeable across the cases. The firms reported increased regulatory burden, especially following Brexit and enforcement of environmental and food safety standards. Most of the firms expressed that legislation disproportionately affects small businesses, citing their limited capacity to adapt to compliance requirements initially designed for larger operations. This is consistent with previous studies that government policies, regulations and legislation significantly determine the behaviour of firms in the meat processing industry, affecting how the firm adapts. (Sommer, 2017; Graafland and Smid, 2017; Mensah and Julien, 2011). The set of rules and polices enacted for the meat industry during BREXIT and COVID-19 emphasise strong support evidence for the role of formal institutional factors on firm adaptation. Significantly, previous studies emphassise how the meat processing industry is highly regulated to industry standards such as food safety and quality (BPMA, 2024; Raak et al., 2017). This evidence from this thesis is consistent with previous studies that formal institutional factors positively influence entrepreneurial activities of small firms (Balzano, Marzi and Turzo, 2024). Whilst formal institutional factors directly impact the decision-making processes of small firms, the evidence from the thesis suggests these factors have negative effects including lack of support from the government, as well as tighter and complicated industry regulations.

Normative institutional pressures were also strongly represented in the findings, which involves both formal expectations (e.g., industry standards) and informal societal norms. The findings suggests that firms are increasingly responding to shifting consumer values, particularly regarding health consciousness, ethical food sourcing,

and the rise of plant-based diets. These normative expectations have remodelled market demands and have, in turn, influenced processed meat products, marketing strategies, and supply chain relationships. While some firms perceived these changes as existential threats, others saw them as opportunities for differentiation through entrepreneurial quality and customer relationships. This suggests heterogeneity in the adaptive forms of firms (DiMaggio and Powell, 1983).

Cognitive institutional elements were not explicitly acknowledged by the firms. However, they manifest through shared mental models and consumer assumptions about meat safety, origin, and quality. Several interviewees referenced past industry scandals (e.g., BSE, horse meat contamination) to explain the enduring impact of these scandals on consumer trust. These incidents continue to influence buying behaviour and underscore the significance of legitimacy in institutional survival (Struckell et al., 2022; Suchman, 1995). For smaller meat processing firms, the struggle to maintain legitimacy in a market increasingly dominated by supermarket chains highlights the cognitive dimension of institutional complexity.

Furthermore, informal institutional constraints, such as labour market conditions, social perceptions of meat work, local networks, local and community practices, family support systems, processing methods and generational disinterest in the sector, were frequently mentioned. These factors, while not codified, nonetheless contribute to structural vulnerabilities and labour shortages. The key findings from the thesis asserts that the small meat processors continuously thrive because of the close relationships, trust, obligations and expectations among major stakeholders within the local community (De Massis et al., 2018). Moreover, there is much evidence from the literature regarding the role of family support system in resource accessibility and consequently on firm adaptive strategies (Arzubiaga et al., 2018). Additionally, the nature of processing method adopted by small meat processing firms tend to influence the kind of resources acquired and the extent of adaptation adopted (Rahman and Ozuem, 2019). The evidence also emphasises how the key environmental factors constrain the firm's adaptive behaviour, which is a key contribution in understanding how the context is related to the organisational adaptation. The evidence from the thesis confirms that the informal institutional factors provide vital sources of resources and support, helping the firms to thrive under resource-limited contexts.

The discussion above underscores the empirical evidence that addressed the research questions, and the research gaps identified in the thesis. The thesis emphasises

on the important role of institutional factors on the adaptive forms of small meat processing firms in the West Midlands UK. This discussion makes a firm contribution to understanding the relationship between business environment (which includes industry and institutional factors) and adaptive forms of small meat processing firms. This evidence is lacking as there has not been a conscious discussion on the relationship between environmental factors and adaptation of small meat processors.

CHAPTER 6: CONCLUSION AND RECOMMENDATION

6.1. Conclusion

This chapter summarises the key findings, and addresses the research aim and research questions, as well as highlight the theoretical, methodological and practical contributions of the thesis. The empirical evidence from this thesis reflects how the small meat processing firms in resource-limited contexts adapt through various forms of strategic behaviour, and how these are influenced by both resource constraints and dynamic environmental (including exogenous, industrial and institutional) factors.

Research Aim: This thesis set out to explore the adaptive forms employed by small meat processing firms (SMPFs) operating in resource-limited contexts within a developed economy, specifically focusing on the West Midlands of the UK. The findings show that SMPFs do not rely on a single strategy but engage in what can be termed composite adaptation, a dynamic, context-specific integration of non-adaptive, reactive and proactive behaviours. These adaptations are influenced by a combination of internal resource constraints and external environmental and institutional dynamics. The thesis makes a meaningful contribution to understanding the co-evolutionary nature of small firm adaptation in developed yet constrained environments.

Research Question 1: The research question 1 sought to investigate how limited resources and capabilities are viewed, defined, or characterised in a resource-limited context. This thesis finds that limited resources in the context of SMPFs are perceived both as absence and gaps in resource capability. The limited resources are characterised as absence or lack of financial capital and skilled workforce. Other characterisation includes capacity constraints, technological gap, and outdated machinery or lack of modern machinery. SMPFs in the West Midlands define their resource constraints not as static limitations but as dynamic boundaries, which can be reconfigured through informal relationships and networks, strategic partnerships, and practical decision-making. This reconceptualisation reflects a key insight that resource limitation is not simply a lack, but opportunity for creative adaptation.

Research Question 2: Research question 2 of this thesis helps to explore how the nature of the local environment (including institutional factors) relates to adaptive forms of small meat processing firms in a resource-limited context of a developed country. The thesis reveals that local environmental factors, especially regulatory regimes, supply chain dynamics, customer expectations, and localised support

networks, play a key role. They constrain and enable adaptive capacity. Institutional factors such as food safety regulations, environmental health regulations, and government funding schemes create compliance burdens, yet could also push firms toward standardisation and resilience. The evidence from the thesis demonstrates that SMPFs are more reactive with changes in the external environmental changes and institutional demands. These findings emphasise the interplay between structural constraints and firm-level adaptation.

Research Question 3: The third research question seeks to uncover how the firm is positioned to adapt with limited resources and the firm's local institutional (environmental) factors. This thesis identifies that the ability of a small meat processing firm to adapt is deeply embedded in its internal resource configuration and its external embeddedness within local environment. SMPFs position themselves to adapt through strategies or actions such as resource reconfiguration, using existing routines and practices, utilising networks and relationships, product or market diversification, and restructuring its business model. Regarding these findings, the thesis identifies various forms of adaptation employed in mitigating the effects of limitation of resources and dynamic environment. The evidence suggests that while small firms are generally flexible and often prone to reactive adaptation, SMPFs employ multiple forms of adaptation simultaneously (described as a composite form) depending on the specific challenges encounter. The evidence from the thesis also supports the relationship between adaptive forms and the firm context, which is significant contributing to existing literature.

To sum up, the thesis asserts that adaptive forms in small firms is both multi-dimensional and context dependent. The thesis further highlights that adaptation is not an outcome but an ongoing, negotiated process, which is influenced by the constraints and opportunities of the local context.

6.2. Recommendations of the Thesis

This section discusses the key contributions of the theses across three main areas: theoretical, methodological and practical or policy recommendations. Each contribution is discussed individually to demonstrate how the thesis advances understanding of SME adaptation in resource-limited contexts. The chapter highlights how the introduction of the composite adaptation model, the contextual application of established theories, and

insights into the lived experiences of small meat processing firms offer meaningful additions to the literature, practice, and policy.

6.2.1. Theoretical Contributions

This thesis represents the first major study to investigate adaptive forms of small meat processing firms (SMPFs) operating in a resource-limited context within a developed economy. This constitutes a significant theoretical advancement. While previous research has typically explored small firm adaptation in developing and transnational economies, this thesis is distinctive in its focus on the United Kingdom. The examination of the adaptive behaviours of small firms facing resource constraints in a developed context helps the thesis to address a notable gap in the existing literature.

The findings of this research support and extend existing understandings of the critical role of adaptation and adaptability for small firms. Although prior studies have investigated small firm adaptation (e.g., Anwar and Hasnu, 2017; Sen et al., 2017; Hagen et al., 2017; García-Pérez et al., 2014; Schindehutte and Morris, 2001) and firm adaptation more broadly (e.g., Alnoor et al., 2022; Chakravarthy, 1982; Miles and Snow, 1978), none have specifically focused on environments characterised by persistent resource scarcity within a developed economy. Therefore, this thesis offers an important extension of adaptation theory into new empirical area.

Another major contribution of this thesis lies in its nuanced exploration of a range of adaptive forms across different small meat processing firms. Unlike prior studies that often treat small firms as a homogeneous group, this research acknowledges their heterogeneity in organisational structures, resource endowments, capabilities, and decision-making processes. In doing so, the thesis adapts and broadens the application of resource-based theories to account for the diversity of small firms' realities.

The research also provides a substantive expansion of the resource-based view (RBV). While RBV traditionally characterises competitive advantage as a function of access to critical resources, this thesis shows that within small firms, competitive advantage is perceived differently: defined more in terms of achieving internal firm objectives rather than outperforming external competitors. Despite the inability to validate competitive advantage through standardised performance data in this thesis, the findings demonstrate that limited resources played a vital role in survival and

incremental performance. This evidence aligns with Kellermanns et al. (2019), who argue for context-specific applications of RBV, particularly among practicing entrepreneurs.

Further extending organisational adaptation and contingency theories, the thesis reveals that adaptation strategies are influenced not only by environmental hostility, as widely suggested, but also significantly by resource scarcity. The findings demonstrate how firms evolve with limited resources and suggest that adaptive strategy choices are deeply interconnected with both the external environment and internal resource configurations (Ferreira, Li, and Serra, 2008). While supporting the strategic contingency theory (SCT) proposition that environmental turbulence drives adaptation, the thesis nuances this claim by showing that small firms do not necessarily "over-adapt" or react to hostility; in some instances, firms adopted cautious, conservative responses. By uncovering the distinct ways small firms adapt in dynamic and resource-constrained environments. This thesis contributes important insights to ongoing debates in adaptation and contingency theory research, particularly regarding the appropriate forms of adaptation for SMEs operating under persistent uncertainty.

This thesis also enriches the field of entrepreneurship by deepening understanding of organisational adaptation within resource-limited contexts so-called "ordinary places" often neglected in the literature. Initially, the firms were clustered into three categories based on their adaptive forms: conservative adaptors, reactive adaptors, and strategic reactors. However, a fourth, emergent category, *the composite adaptor***,** was revealed through further analysis. The conservative adaptors demonstrated behaviour consistent with defender strategies identified by previous studies (e.g., Alnoor et al., 2022; Gabrielsson, Seppälä, and Gabrielsson, 2016; Miles and Snow, 1978). Importantly, this thesis uniquely shows that conservative adaptation related more strongly to resource limitations than to environmental stability, suggesting that firms remained stable primarily when resources were constrained, not necessarily when the environment was stable. This finding supports the earlier claims by Schindehutte and Morris (2001) regarding limited adaptation in stable environments and aligns with dynamic capability theory (Teece, 2018), which emphasises resource optimisation and the reconfiguration of existing capabilities. The reactive adaptors correspond with reactor clusters discussed in previous research, illustrating that flexibility, informality, and smallness enable prompt responses to environmental change. Strategic reactors, however, emerged as a novel insight: while aligning with strategies such as

product/market diversification and structural change described in prior literature (e.g., Schindehutte and Morris, 2001), the firms in this study employed these strategies reactively rather than proactively, challenging assumptions in classical frameworks like Miles and Snow (1978).

A ground-breaking contribution of this thesis is the identification of *the composite adaptive form* as the typical mode of adaptation for SMPFs. Unlike previous studies that emphasise pure, static strategies, this research reveals that small firms dynamically blend conservative, reactive, and strategic responses over short periods in response to shifting constraints. Among the twelve firms studied, nine exhibited multiple adaptive forms concurrently. Thus, the empirical evidence highlights the emergence of a composite adaptation strategy, which isa flexible, hybrid approach that continuously realigns according to evolving internal and external pressures. This composite form of adaptation offers a significant theoretical advancement. It refines and extends the notion of hybrid strategies proposed by Alnoor et al. (2022) and others (e.g., Borocki et al., 2019; Hagen et al., 2017; Chakravarthy, 1982), but with deeper contextual specificity. Unlike prior conceptualisations, the composite form observed here reflects the real-world agility, flexibility, and responsiveness necessitated by operating within highly resource-constrained and dynamic environments.

This thesis asserts, in conclusion, that for small meat processing firms operating in resource-limited contexts, the ideal adaptive form is composite. By adapting different strategies in combination rather than adhering to a single pure form, small meat processing firms enhance their capacity for survival and continuity. This ground-breaking insight not only advances adaptation theory but also provides actionable knowledge for small businesses navigating resource-scarce and turbulent environments.

6.2.2. Methodological Contribution

The methodology adopted by this thesis is also a significant contribution to knowledge. None of the previous studies on adaptation, including those on strategic postures, firm typologies, and strategies, have collected qualitative data encompassing both the constraints of limited resources and the conditions of the business environment, as well as the emotional factors influencing the decision-making process. The multiple case study design adopted in this study is useful for getting the variety and

richness of information regarding strategy forms of small meat processors and allows for in-depth analysis of how they make sense of entrepreneurial experiences.

This thesis makes an important methodological contribution by adopting a qualitative, multiple case study approach to explore firm adaptation in resource-limited contexts - an approach that remains underutilised in the strategic management literature. While existing studies on strategic postures, firm typologies, and adaptation strategies have predominantly employed quantitative or single-case approaches, they have rarely captured the multi-dimensional complexity of adaptation within small firms, particularly in sectors such as meat processing.

What distinguishes this methodology is its inclusion of multiple layers of data: the thesis does not only capture the constraints imposed by limited financial, human, and technological resources, but also considering the external exogenous, industrial, and institutional environment that influence entrepreneurial adaptive decision-making. This holistic approach offers a richer understanding of how entrepreneurs interpret, respond to, and adapt under constraint, something often overlooked in prior studies.

The multiple case study design, drawing from 12 in-depth interviews, enabled cross-case comparison and thematic saturation, allowing the research to move beyond isolated narratives to identify emergent patterns of adaptive behaviour. This approach also facilitated exploration of contextual and situational factors such as regulatory pressures, market volatility, and personal motivation, that affect adaptive choices over time. The depth and variety of qualitative insights provided by this method thus offer a valuable guidance for future research on SME strategy and adaptation in similarly constrained environments.

6.2.3 Practical Implications

This thesis offers significant insights into how small meat processing firms adapt to resource-limited environments, going beyond conventional frameworks such as the Resource-Based View (RBV), Dynamic Capabilities (DC), and traditional organisational adaptation theories. The findings provide several practical and managerial implications for small meat processors and practitioners in the wider food processing sector.

First, the study identifies several critical resources which include financial, technological, human, and social. These resources are considered fundamental to the survival and competitiveness of small meat processing firms. However, these are often

either insufficient or inaccessible. Managers are therefore encouraged to explore alternative avenues for resource acquisition, including the formation of informal partnerships, collaborative networks, and community-based alliances, to mitigate these deficits.

Second, the research reveals the necessity for firms to clearly characterise their resource contexts when formulating adaptive strategies. In line with Anwar and Hasnu (2017), the thesis demonstrates that immediate managerial reactions are essential in the current dynamic business environment. Adaptation is not optional but a strategic necessity in the face of enduring environmental uncertainties. While resource constraints pose genuine threats, they can also drive creativity and value creation (Halim et al., 2020). Managers must thus seek to leverage their limited resources in innovative and efficient ways.

The study introduces and classifies adaptive responses into conservative, reactive, and strategic reactor forms. Notably, many firms employed multiple forms simultaneously, giving rise to a composite adaptive form. This novel concept reflects the strategic flexibility of small firms to blend different adaptive behaviours in response to varying circumstances. The composite form allows firms to incrementally build capabilities and achieve performance objectives despite significant constraints. This finding supports the position of previous studies such as Alnoor et al. (2022), who argue that adaptation can be internally motivated and not merely a reaction to external pressures. Adopting a composite adaptive strategy is therefore essential for small meat processors aiming for resilience, especially as the industry becomes more complex and competitive.

Lastly, the study posits that small firms are unlikely to undergo radical transformations under conditions of resource scarcity and environmental volatility. Instead, they are more likely to benefit from adopting composite adaptive forms that allow incremental but flexible responses to change.

6.2.4 Policy Implications

The findings also have important implications for public policy, especially concerning institutional and government support for small meat processing firms (SMPFs). These small meat processing firms play a critical role in local and regional

economies but often lack access to the resources needed for sustained development and innovation.

Given their limited capacity and capability in general, SMPFs require institutional environments that support, rather than hinder, their adaptive potential. Government interventions should prioritise the creation of enabling conditions that enhance adaptive capabilities of firms. Specifically, public policy can support the development of collaborative, non-traditional networks such as community-based alliances, local knowledge-sharing platforms, and pooled resource initiatives, which play a critical role in strengthening the adaptive resilience of small firms.

Moreover, the thesis highlights the regulatory and institutional burdens faced by SMPFs. Current compliance frameworks often favour larger enterprises and impose disproportionately high administrative costs on small operators. Policymakers should therefore consider streamlining regulatory procedures and reducing compliance costs for small firms. Doing so would alleviate unnecessary constraints and foster an environment that is more conducive to adaptation, innovation, and sustainable growth.

In addition, regional development strategies should incorporate the concept of sustainability through the lens of adaptive capability. Policies must not only consider the economic contribution of SMPFs but also their potential to support long-term ecological resilience. Policies should also consider should also consider integrating adaptive capacity into broader a regional and national planning frameworks which will ensure that small firms remain viable contributors to sustainable food systems in the future.

6.3. Limitation of the Study and Suggestion for Future Research

Despite the valuable contributions and insights presented in this thesis, several limitations should be acknowledged. First, the cross-sectional design of the study limited the ability to observe changes in adaptive forms over time. As a result, this research could not capture the dynamic and evolutionary nature of firm adaptation under prolonged constraints. Longitudinal data would have offered deeper insights into how small meat processing firms (SMPFs) adjust their adaptive strategies as resource constraints and environmental conditions evolve.

Second, the sample size and geographic focus restrict the generalisability of the findings. The study involved only twelve small meat processing firms located in the

West Midlands region of the UK. While the aim was to gain rich, contextual insights rather than statistical generalisability (Onwuegbuzie and Collins, 2007; Patton, 2002), this narrow focus presents a limitation in applying the findings to broader contexts. Additionally, the environmental and institutional conditions in the West Midlands may differ significantly from those in other regions or countries, further limiting the transferability of results.

Third, the absence of quantifiable performance data constrained the ability to establish firm correlations between adaptive forms and business performance. Many firms did not maintain comprehensive financial records, and performance data relied primarily on the subjective perceptions of interviewees. Objective performance indicators, where available, would have allowed for more robust analysis of the effectiveness of various adaptive forms.

Fourth, the thesis encountered a theoretical limitation. This is because existing frameworks, such as the Resource-Based View (RBV), Dynamic Capabilities, and institutional and adaptation theories proved inadequate in fully explaining the adaptive behaviour of small firms operating under persistent resource constraints. These frameworks tend to assume access to a baseline level of resources and strategic intent, which may not be applicable in contexts characterised by extreme limitation and environmental uncertainty.

Lastly, the role of managerial cognition and leadership was not explored in depth. Attitudes, experiences, and decision-making styles of owner-managers may significantly shape how adaptation occurs, yet these variables were beyond the scope of this thesis.

Building upon these limitations, several directions for future research are proposed. Future studies should consider longitudinal research designs that can track the evolution of adaptive forms over time. Such studies would provide insights into how firms incrementally respond to existing constraints. This offers a deeper understanding of the processes underpinning sustained adaptation and sustainability.

To enhance generalisability, comparative studies across different sectors, regions, or countries should be conducted. This would allow researchers to test the robustness of the composite adaptive form introduced in this thesis and explore its applicability in varied institutional and environmental contexts. Such comparative studies can help refine the theoretical constructs proposed and validate them more broadly.

There is a critical need for theoretical innovation. Future research should aim to develop integrative frameworks that bridge the gaps in existing theories. Scholars may consider blending or extending RBV, institutional theory, and dynamic capabilities to better reflect the realities of small firms operating in high-constraint, low-resource environments. Moreover, established strategy frameworks such as Miles and Snow's (1978) strategic typology and Porter's competitive strategies could be empirically tested and potentially revised for relevance in resource-scarce settings.

Further investigation is needed into the entrepreneurial orientations and leadership characteristics of small firm owner-managers. Examining how managerial values, risk preferences, and experience influence adaptive strategies could yield important insights into the human dimensions of firm adaptation.

In terms of methodological enrichment, quantitative research could complement qualitative insights by measuring the strength of relationships between adaptive forms and firm performance. When objective performance metrics such as revenue growth, profit margins, or market share are incorporated, they would significantly enhance the explanatory power of future studies.

Lastly, future research should more explicitly integrate sustainability considerations. As environmental and social sustainability issues become increasingly central to the food processing sector, understanding how small firms adapt not only for survival but for long-term ecological stewardship will be vital. Future research could explore how sustainability imperatives (e.g., reducing carbon footprints, ethical sourcing, and circular economy practices) influence adaptive strategies and deepen scholarly understanding and inform more inclusive models of organisational adaptation. Whilst this thesis provides a robust foundation, there remains considerable scope for extending and enriching the study of small firm adaptation in resource-constrained contexts, especially considering the emerging global emphasis on sustainability and resilience.

6.4. Final Summary and Conclusion of Thesis

There is increasing misunderstanding regarding how adaptation is conceptualised, particularly for small firms operating in resource-limited contexts. The understanding of adaptation in such firms has been constructed from mutually exclusive theories and concepts (e.g., Resource-Based Theories [RBTs], Dynamic Capabilities Theory [DCT], Social Capital Theory [SCT], Adaptation Theory, Organisational Theory, and

Environmental/Institutional Theory). These theories identify a range of factors that are likely to influence the adaptive behaviour of small firms.

Small firms are characteristically more reliant on their local environment and internal resources than larger firms. Access to critical resources throughout a firm's life cycle is essential for both adaptation and growth. However, the findings of this thesis show that small firms are consistently under-resourced and face disadvantages in accessing key resources for adaptation. Evidence suggests that most firms remain undercapitalised and struggle to acquire the resources most important for their development. Further analysis of the dynamic business environment indicates that constrained access to resources significantly influences the form of adaptation adopted.

In resource-limited contexts, this thesis makes a distinctive contribution to the body of knowledge by exploring various adaptive forms. The findings identify three main adaptive forms: conservative (minimal or no major change), reactive (prompt response to environmental changes), and strategic (proactive, creative, and innovative responses). However, the evidence also reveals that small firms do not consistently employ a single form of adaptation over time. Instead, small meat processing firms (SMPFs) concurrently use different adaptive forms over shorter timeframes, resulting in a distinctive composite form of adaptation associated with operating in dynamic, resource-limited environments.

The study also analysed contextual factors, focusing on limited resources and environmental pressures that affect adaptive behaviour. However, it was found that the specific theories and concepts employed did not fully capture the complexity of adaptive forms in small meat processing firms. This highlights the fragmented nature of adaptation literature and the interdependence between contextual factors and adaptive behaviours. Therefore, the thesis advocates for a more integrated and interdisciplinary approach to explaining adaptive forms in resource-constrained contexts, promoting greater synthesis across theories rather than treating them as separate and competing frameworks.

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APPENDIX A - The FAME Database Search

List export

Product name	Fame
Update number	9582
Software version	357
Data update	23/12/2021 (n° 9582)
Username	BCU-2726
Export date	24/12/2021 6:27:02 PM

Search Strategy

Search Step		Step result	Search result
1. All active companies (not in receivership nor dormant) and companies with unknown situation		6,071,870	6,071,870
2. UK SIC (2007): Primary and secondary codes	101 - Processing and preserving of meat and production of meat products, 1011 - Processing and preserving of meat, 10110 - Processing and preserving of meat, 1012 - Processing and preserving of poultry meat, 10120 - Processing and preserving of poultry meat, 1013 - Production of meat and poultry meat products, 10130 - Production of meat and poultry meat products	4,859	2,145
Boolean search	1 and 2		
TOTAL			2,145

Definition of the Ultimate Owner

The minimum percentage of control in the path from a subject company to its Ultimate Owner must be: 50.01%

A company is considered to be an Ultimate Owner(UO) if it has no identified shareholders or if it's shareholder's percentages are not known.

APPENDIX B – Interview Guide

INTERVIEW GUIDE

Thank you for agreeing to take part in this interview for my PhD research project. With your permission, this interview will be tape recorded, as this will help me to spend little time taking notes and for my data analysis.
There are no right or wrong answers. Please note that your participation is voluntary and that you may withdraw from this study at any point in time (before, during, or after the interview). Your data will be stored securely, will be anonymised, and only used for academic purposes.

You and Your Firm's Background:

Please answer the following questions prior to starting the interview:

1. **Which year did you start or begin your employment in this company?** _____

2. **What is your role in the business?**
   [ ] Owner
   [ ] Owner Manager
   [ ] CEO
   [ ] Manager
   [ ] Head of Unit
   [ ] other, please specify_____

3. **What is your educational background?**
   [ ] level 4
   [ ] diploma
   [ ] bachelor
   [ ] masters
   [ ] doctorate
   [ ] other, please specify___

4. **What is your age group?**
   [ ] 20 - 30
   [ ] 30 - 40
   [ ] 40-50
   [ ] over 50

5. **Under which business type was the business started?**
   [ ] sole proprietorship
   [ ] partnership
   [ ] limited liability company
   [ ] other _____

a. Has it changed since then? Yes / No; If Yes, how has it changed?

[ ] sole proprietorship -> partnership
[ ] sole proprietorship -> limited liability
[ ] partnership -> limited liability
[ ] other, please specify_____

6. **What are the main activities of the company (***what kind of meat products and services does it provide***)?**

   _____

7. **How do you describe the group of processed meat of which the firm belongs?**
   [ ] non-processed (e.g., raw meat)
   [ ] minimally/moderately processed (e.g., processed meat such as frozen, roasted, cooked meat)
   [ ] ultra-processed (highly processed meat such as sausages)

8. **In order that I can get idea of the size of the company, How many people are on the payroll, including yourself and other owners?** _____
   a. *How many are full-time and how many are part-time?* _____
   b. *How many work as volunteers (i.e., without receiving salary)?*_____

9. **Who are your main customers?**
   [ ] micro and small enterprises
   [ ] medium enterprises
   [ ] large firms
   [ ] individual customers

10. **To what extent do you agree that the nature of customers in Q.9 influences how the firm operates in the market?**
    [ ] to a greater extent
    [ ] to a great extent
    [ ] neutral
    [ ] to a less extent
    [ ] to a least extent

11. **Based on your experience, how would you define "business success"? In other words, what is 'business success' for you?**

    _____

12. **How would you characterise your firm's success over the past 5 years?**

    _____

13. **Beyond the impact of COVID-19 and BREXIT, what would you say the main challenge(s) to the success of your firm have been over the past 5 years?** *Please identify the top three (3) challenges.*

Characterisation of Limited Resources:

Next, I would like to understand the nature of your firm's resources required for making reasonable adjustments and improving your position in the market. I am particularly interested in:

- *Critical (important) resources required for meat processing SMEs.*
- *Limited (ordinary) resources, that is, resources required when critical (important) resources are unavailable / inaccessible, and the reasons for which the resources are needed.*

---

14. Do you agree that meat processing business is resource-intensive?

[ ] strongly disagree [ ] disagree [ ] neutral [ ] agree [ ] strongly agree

15. Do you believe that for meat processing SME to achieve optimum products outcomes, they require specialised resources?

[ ] Very untrue of what I believe
[ ] Untrue of what I believe
[ ] Neutral
[ ] True of what I believe
[ ] Very true of what I believe

16. Could you please describe the key resources that you have been using over the past 5 years?

17. To what extent do you agree with the following statements about the nature of resources the firm currently has is true?

Options	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1. The resources the firm currently has are beneficial or helps add value for customers.	[ ]	[ ]	[ ]	[ ]	[ ]
2. The resources the firm currently has is hard to find yet in demand?	[ ]	[ ]	[ ]	[ ]	[ ]
3. The resources the firm currently has is expensive to copy or find equivalent substitutes by competitors.	[ ]	[ ]	[ ]	[ ]	[ ]
4. The firm has resources which are ordinary or less important than what competitor firms have.	[ ]	[ ]	[ ]	[ ]	[ ]
5. The firm's competitors do not have the same resources we have in the market, so it gives us competitive advantage over rivals.	[ ]	[ ]	[ ]	[ ]	[ ]
6. The firm is organised in such a way that it fully uses the resources available.	[ ]	[ ]	[ ]	[ ]	[ ]

18. If you were to replace or improve any of the firm's resources, please provide the reason(s) why you might want to do that?

19. Based on your own experience, what improvements have been made or are necessary to be made to the resources that the firm currently has?

20. Based on your experience, could you please explain the criteria by which you choose your resources?

21. Now, I'd like you to think back of a specific moment in which important resources were neither available nor accessible.

a) Which area(s) in your business had important resources lacking in the past 5 years?
b) Why was it difficult to acquire the important resources needed?
c) Which limited resources has your firm used consistently over the past 5 years?
d) How did you use the top five limited (ordinary) resources and which needs did they help to meet?

22. To what extent would you say that, in general, all the resources your firm currently has help you meet the business goals?

[ ] totally disagree
[ ] disagree
[ ] neutral
[ ] agree
[ ] totally agree

23. Could you please explain why you believe lack of critical resources may affect optimal product outcomes (e.g., food quality and safety, sales, expansion)?

Characterisation of Dynamic Business Environment:

The dynamic business environment is the changing external factors which have influence on how the business operates. Now, I'd like to understand the condition of the business environment and how it influences the nature of the firm's resources and positioning in the market.

---

24. How would you describe the condition of the immediate business environment for the past 5 years?

[ ] very rapid
[ ] rapid
[ ] moderate
[ ] stable
[ ] very stable

25. How would you describe what has been happening in the external business environment in which your firm operates over the past 5 years? `

26. Which factors in the external environment have been promoting accessibility of important resources?

27. Which factors in the external environment have been making it difficult to access important resources?

28. I'd like you to think about the last time your firm evolved, adjusted, or adapted when the market conditions in the business environment were hostile/harsh.

a) How long ago was that and what did the hostile/harsh conditions consist of?
b) How have these impacted your company?
c) In which ways were the firm's critical resources impacted?
d) In which ways did the firm adjust /adapt to the hostile / harsh business / market conditions?
e) What was the frequency of the adjustments?
f) What factors influenced the decision to adapt?
g) To what extent would you say that those adjustments yielded positive results?
[ ] very negative
[ ] negative
[ ] moderate
[ ] positive
[ ] very positive

SME Adaptation in Resource-Limited Context:

In this section, I would like you to focus on how the firm is positioned on the market and how it adjusts itself when resources are limited.

29. Is it possible for your firm to develop actions and strategies in the same way, regardless of which resources are available / accessible? Please explain why / why not?

30. Think about the last time you decided to adjust when resources were limited/unimportant.

a) *How long ago was that and which resources were involved?*
b) *How did the firm adjust with limited resources? Identify top 5 adjustments.*
c) *How often did the firm adjust?*
d) *What factors influenced your decision to adapt?*
e) *To what extent would you say that those adjustments yielded positive results?*
[ ] very negative [ ] negative [ ] moderate [ ] positive [ ] very positive

31. To what extent would you say that your capacity to adapt has an impact on the actual adaptation strategies adopted?

[ ] No impact [ ] Minor impact [ ] Neutral [ ] Moderate impact [ ] Major impact

32. Could you please explain the ways in which the business has adjusted because of cultural concerns toward processed meat products?

33. Could you please explain the ways in which the business has adjusted because of ethical concerns toward processed meat products?

34. Are you aware about the impact of meat processing activities on carbon footprints?

[ ] Not at all aware
[ ] Slightly aware
[ ] Somewhat aware
[ ] Moderately aware
[ ] Extremely aware

36. Are you concerned about the impact of meat processing activities on carbon footprints?

[ ] Not at all concerned
[ ] Not concerned
[ ] Neutral
[ ] Concerned
[ ] Very concerned

37. To what extent would you say that the effect of global warming influences the selection of the firm's resources for production?

[ ] No influence
[ ] Minor influence
[ ] Neutral
[ ] Moderate influence
[ ] Major influence

38. How has your firm done (adjusted itself) to reduce the effects of its meat processing activities on global warming?

39. What is your approach to sustainable processing / manufacturing?

40. In which ways do COVID-19, BREXIT and carbon footprint affect your production strategies?

41. Referring to Q40, why are they affected?

42. In which ways do COVID-19, BREXT and carbon footprint affect access to important resources?

APPENDIX C - Consent Form

BIRMINGHAM CITY UNIVERSITY
Faculty of Business, Law and Social Sciences
Contact: HEL_Ethics@bcu.ac.uk / BLSSEthics@bcu.ac.uk

Date: 20.10.2021
Version: 1.01

Consent Form

Study Title: Entrepreneurship of Ordinary Places: SME Adaptation in Resource-Limited Context

Summary of the project:
This research project aims to investigate how food processing SMEs adapt or evolve in resource-limited context. The resource-limited context, here referred to as lack of important resources in the firm or the business environment, which is likely to affect the position, posture, or actions of the firm in gaining competitive advantage over its rivals. The uniqueness of this research project is to investigate existing limited resources as a whole and how the resource-limited context empowers Meat Processing SMEs in the UK to develop and achieve performance outcomes. Contrary to the views of existing resource-based theories and practitioners of large businesses, the purpose of this study will help gain a better understanding of whether existing limited resources are enablers rather than inhibitors of performance-related activities and stronger strategic postures of SMEs. The study will conduct an in-depth interview to extract qualitative data from owners, owner-managers or heads of units who may have experiences in adopting particular actions or decisions for the firms operating within a resource-limited context.

Statement about voluntary participation
This study intends to collect primary data which is not available anywhere. Participation in this research project is entirely voluntary and that you may withdraw from this study at any point in time (before, during and after the interview). Please note that consent to participate is implied by you completing and signing this consent form. This, you indicate that you have read and understood the information and are aware of the implications of the study provided in the form.

An invitation to participate
This information leaflet is to inform you about the research project and serves as a formal invitation for you to decide whether you want take part in this study. Before deciding on whether to participate in this study or not, it is important to understand the aim of the study and what it entails. It is important that you take time to read through the information below carefully and discuss it with others if you wish or may want to contact the researcher for any details or questions regarding your participation.

Whether participation is voluntary
Your participation in this research project is entirely voluntary. Non-participation is entirely your choice and will not have any adverse effects on your access to services or education at Birmingham City University.

Statements of consent

Thank you for agreeing to take part in the above titled research project, conducted by Eric Osei of Birmingham City University. Please complete this form to indicate your understanding and consent for your participation and to give consent for your responses to be used in the project.

	Delete as appropriate
I have read the information sheet provided and understand what the research project is about.	YES / NO
I have had the opportunity to ask questions about what the research project is about.	YES / NO
I understand that participation in this study is entirely voluntary.	YES / NO
I have agreed to take in the part, which includes being interviewed.	YES / NO
I understand that my right to confidentiality will be maintained, and my responses will be anonymous	YES / NO
I understand I have right to withdraw from the study at any time without giving any reason. If I withdraw my data will be removed from the study and will be destroyed.	YES / NO
I understand that my personal data will be processed for the purposes detailed above, in accordance with the Data Protection Act 1998.	YES / NO
Based upon the above, I agree to take part in this study.	YES / NO

Name, signature, and date:

_____	_____	_____
Name of Participant	**Date**	**Signature**

_____	_____	_____
Name of researcher obtaining consent:	**Date**	**Signature**

APPENDIX D - Code Book

Code Name	Description of Code	Criteria for Inclusion	Exceptions
Business Success	This determines how the participant defines business success. This may likely influence resources and adaptation process.	Performance outcomes measured in the last 5 years.	None provided.
Challenge	Major challenges (internal or external) affecting the performance of firm.	Major challenges, apart from COVID, BREXIT or Russian-Ukraine War, recorded in the last 5 years	Issues for the more than 5 years which affected access to resources and strategies.
Network	Relationship with major stakeholders such as customers, suppliers or investors	Clearly identified relationship as a strategic response in difficult situations.	N/A
Agility	Easily flexible or adaptable response/posture to difficulties	Clearly stated that they are flexible to resource limitation o hostile environments.	N/A
Sklled Resource	The intrinsic knowledge, skilled and dexterity, and people required for meat processing.	Demonstrable ability to reduce errors in meat processing.	N/A
Quality of Meat	Major sources of meat, that is, animals which feed into the value chain to create value.	All animals especially cow, goat, chicken and pigs.	Those not mentioned or classified as pets.
Advanced Equipment	Machinery required for processing meat products in large volumes and speed.	All kinds of machinery, especially automated machinery.	None provided.
Resource Gap	Absence of a critical resource for processing or for strategy development.	Lack of capital, lack of automatic equipment, lack of skilled staff, etc.	This includes the resource gaps encountered in at least 5 years.
Outdated Resource	Resource not meeting the current demands or meeting industry standards.	Use of simple tools, manual processing, limited resources, etc.	This includes outdated resources encountered in at least 5 years.
Capacity Constraints	Lack of capacity to process amount of meat	Size of processing space, smaller number of employees, supply issues.	This includes capacity constraints encountered in at least 5 years.
Substitute resource	Resources used in place of critical resource	Use of part-time workers, manual equipment, borrowed resource, finance from family, etc.	This includes alternative resources used in at least 5 years.

Valuable	Evaluation of resource critical for value creation	Likert Scale, from “strongly agree” to “strongly disagree”	Explanation for how a resource add value to customers.
Rare	Evaluation of a firm’s resource difficult to obtain by the competitor.	Likert Scale, from “strongly agree” to “strongly disagree”	Explanation for how/why a resource is uncommon.
Inimitable	Evaluation of a firm’s resource difficult to copy by the competitor or find equivalent substitute.	Likert Scale, from “strongly agree” to “strongly disagree”	Explanation for how/why a resource is difficult to imitate.
Organised	Evaluation of how the firm is organised to utilise resources available.	Likert Scale, from “strongly agree” to “strongly disagree”	Explanation for organisational resource or compositional advantage.
Competitive Resource	This evaluates the competitiveness of the firm’s resources relative to competitor.	Likert Scale, from “strongly agree” to “strongly disagree”	Explanation for how/why resource is competitive or ordinary.
Limited resource	Generic assets which can easily be traded, copied, or acquired easily by competitors.	Generic resources for past 5 years. This includes outdated assets, inefficient process, etc.	This also includes a mention of generic assets in more than 5 years which had significant impact on business outcomes.
Price Increase	The spate of price increases of the business environment which have impact on availability of resources and position.	Major price increase consistently over the period.	Price increases have occurred in at least the past 5 years
Economy	The changes in the economy which had impact on availability of resources and firm position.	Changes in the economy with significant impact on the firm	Changes in economy have occurred in at least the past 5 years
Regulation and Legislation	The nature of regulation and legislation in influencing availability of resources or firm position.	Nature of regulation or legislation with impact on the firm	Not provided.
Technology	Change in technology influencing resource availability or firm position.	Changes in technology with impact on the firm	Not provided
Customer Requirements	Changes in the needs and preferences of customers over time.	Changes in the needs or requirements of customers	Not provided.
Competition	The level of competition in the food processing industry.	Competition from both large and small businesses.	Not provided.
Supply Issues	The availability of suppliers, and nature of meat suppliers.	Supply issues which affected strategic position of firm.	Not provided.

APPENDIX E – Word Cloud for Resource Type

APPENDIX F - Limited resource characteristics defined by the Cases.

Category	No. of Cases	Examples
Limited Access	11	• *lack of access to finance, limited machinery, and competent staff. (SBE1)* • *Most of the constraints that we have faced are all financially related (SBE2)* • *difficulty in finding a skilled workforce … modern equipment is lacking (SBE3)* • *We got all the carcass meat hanging up. We can't get butchers to break that (SBE4)* • *We appeared to be doing strange things and that made it difficult to get cash (SBE6).* • *I would say time (SBE7)* • *We have encountered a lack of suppliers (SBE8)* • *But the access to capital is a big deal (SBE9)* • *One is financial and the other is human resourcing ... there are very few skilled butchers .. to get access to those raw materials for us, that's the animals … was difficult gaining access to those (SBE10)* • *limited access to markets for the meat products, and also weak rapport and relationship with the suppliers (SBE11)* • *the labour side and lack of skilled staff (SBE12)*
Resource Gap	6	• *Machines and suppliers but not as great as their competitors (SBE1)* • *Low liquidity levels (SBE3)* • *We lacked the right kind of skills, education and training … lack of proper label machine (SBE5)* • *Retail equipment does not efficiently work as much as compared with manufacturing equipment (SBE7)* • *Management's lack of experience during the last five years (SBE9)* • *We've had machinery break and stop working (SBE12)*
Capacity Constraints	4	• *I would want to have a machine that can automatically make thousands of products for me. (SBE1)* • *More chilling space (SBE4)* • *we need sufficient space to go out and process as much as we would like to ... get enhanced capacity (SBE6)* • *What we had wasn't suitable and it didn't have a capacity as we require (SBE7)*
Outdated Resource	2	• *I feel that if you haven't got that technology to pay quickly on a busy day that can hold up the whole process of it and knock-on effect (SBE4).* • *Outdated machinery has been consistently used for the past five years (SBE2)* • *We need good machines in this area … Most of the equipment is relatively few, less durable, less sufficient ... Low-quality farm inputs. (SBE9)*