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**“An exploration of how Black
Swan Trigger Events Impact
High Growth Small Firms?” –
case studies from the North
East of England**

Roy Stanley

DBA

**December
2017**

“An exploration of how Black Swan Trigger Events Impact High Growth Small Firms?” – case studies from the North East of England.

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Abstract

The North East of England is a slow growth region which will benefit from the development of more High Growth Small Firms (HGSFs). This research integrates Black Swan Events (Taleb, 2007) and Trigger Point (Brown and Mawson, 2011) theories into Black Swan Trigger Events (BSTEs). BSTEs are unpredictable occurrences that trigger rapid growth in small firms. By exploring the research question “An exploration of how Black Swan Trigger Events (BSTEs) impact High Growth Small Firms (HGSFs)?” Using case studies based in the North East of England this thesis addresses gaps in HGSF research and increases academic understanding of the process of high growth firms.

Adopting a phenomenological approach, evidence from five HGSF case studies is analysed using an adapted soft systems methodology of rich pictures and causal mapping. As each firm experienced BSTEs, it underwent a process of developing the capabilities to deal with the unpredictable occurrences and the opportunities these BSTEs presented. Recruiting appropriate people, exploring and developing markets, identifying strategic opportunities, putting apposite systems in place, innovating and networking and mentoring were all strongly evidenced. The thesis considers this evidence of actions taken and decisions made in the context of the process of knowledge development or capabilities to manage rapid growth post a BSTE. The actions and decisions post the BSTEs, identified from this evidence, were categorised into six distinguishable absorptive capacity domains (ACDs): 1. People; Recruitment and Development, 2. Market; Customers and Sales, 3. Strategy and Entrepreneurial Orientation, 4. Operations and Formal Systems, 5. Innovation; Product and Process, 6. Networking and Mentoring.

The thesis provides academic and practical insights into the process of growth experienced by HGSFs as well as recommended policy support for HGSFs. It develops the actions that static firms can take to improve their prospects of becoming an HGSF and a develops a propensity framework for identifying nascent HGSFs.

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I would like to thank Fr Michael Conaty, the only entrepreneurial priest I have ever met, who always greatly enjoyed talking about the work I was doing and encouraged my efforts. Finally, thanks to my family, my wife Loretta, my sons Mark and Martin and my daughter Maria for all the support and encouragement they gave me in this, what for me, was an immense undertaking. Without my family’s support and loving foundation, this research would not have happened. I dedicate this thesis to them.

Declaration

I declare that the work contained in this thesis has not been submitted for any other award and that it is all my own work. I also confirm that this work fully acknowledges opinions, ideas and contributions from the work of others. The work was done in collaboration with five high growth firms based in the North East of England.

Any ethical clearance for the research presented in this thesis has been approved. Approval has been sought and granted by the School Ethics Committee on 8th August 2016.

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Date:

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List of Abbreviations

AC	Absorptive Capacity
ACD	Absorptive Capacity Domain
AIM	.....	Alternative Investment Market
BSE	.....	Black Swan Event
BSTE	.....	Black Swan Trigger Event
CEBR	.....	Centre for Economic and Business Research
DE	.....	Discovery Explorer
EE	.....	Entrepreneurial Ecosystem
EF	.....	Entrepreneurs Forum
GDP	.....	Gross Domestic Product
GVA	.....	Gross Value Added
HGF	.....	High Growth Firm
HGSF	.....	High Growth Small Firm
IPA	.....	Interpretive Phenomenological Analysis
LEP	.....	Local Enterprise Partnership
LSE	.....	London Stock Exchange
MES	.....	Minimum Efficient Size Theory
NE	.....	North East of England
NELEP	.....	North East Local Enterprise Partnership
OECD	.....	Organisation for Economic Co-operation and Development
ONS	.....	Office of National Statistics
R&D	.....	Research and Development
RP	.....	Rich Pictures
SE	.....	Strategic Entrepreneurship
SSM	.....	Soft Systems Methodology
ST	.....	Systems Thinking

Chapter outline and summary

	Chapter	Synopsis
1	Introduction	Introduction and aim of the research. The specific theoretical framework and the definitions that are inherent within the research. Issues within the definitions. It provides a context for the area of research and the research question and objectives are outlined. A synopsis of research methods.
2	Literature Review	Review of roots of the literature into HGSFs: Strategic Entrepreneurship and Random Walk. Review of specific HGSF literature: categories of research, theories and concepts. Identification of gaps in the research. Absorptive capacity and growth. Black Swan Theory and unpredictability.
3	Research Philosophy and Methodology. Case Study Identification and Data Gathering.	Consideration of research question and objectives, its philosophy and methods adopted. A consideration of data gathering process and its analysis. Steps in case study identification. Criteria for firm choice. Choice of firms for study. Background of case studies. Reflexivity and Research Ethics
4	Findings and Analysis	Summary on case studies. Analysis of narrative data. Rich Pictures and Causal maps of each case study. Categories of BSTEs and absorptive capacity domains. Analysis of absorptive capacity domains. Other influences on HGSFs.
5	Conclusions and discussion	Addressing the research question and objectives. Academic and practice contributions offered by this research. Recommendations and policy implications of the research. Moving from static to HGSFs. Potential further research. Stakeholders interested in the research. Reflections on the research.

Chapter 1 Introduction: The Aims and Objectives and Rationale for the Research

1.1 Introduction

The aim of the research recognises the importance of High Growth Small Firms (HGSFs) in the context of addressing the regional disparities experienced by a slow growth region such as the North East of England (NE) (NELEP, 2017). By more fully understanding the process of growth of HGSFs, they can be supported through more appropriate policies and through more targeted activities. As a consequence, their numbers can be increased, providing improved commercial and social benefit to the NE and reducing economic disparities experienced by the NE in relation to the wealthier regions of the United Kingdom.

This chapter introduces a thesis which focuses upon the process of growth experienced by High Growth Small Firms (HGSFs). The aim of the research reflects what the intention of the study is whilst the objectives of the research are the specific steps undertaken to achieve the aim. The aim and objectives are formulated in response to identified gaps within extant research (MacKenzie, Chalmers, & Matthews, 2016). Black Swan Trigger Events (BSTEs) are defined, within this research, as unpredictable events that have significant impact on the rapid growth prospects in a small firm. The aim or the “what” of this research is to consider and investigate the role played by Black Swan Trigger Events (BSTEs) in the process of growth in High Growth Small Firms (HGSFs). In considering the research question of “An exploration of how BSTEs impact HGSFs?” the “how” of the research is addressed by three major objectives:

1. To capture of the phenomena of the growth story through the perspective of the entrepreneurs/business owners of defined HGSF case studies.
2. To consider and explore the unpredictable nature of the BSTEs and identify and analyse the relationship between BSTEs and actions and decisions transitioning a firm post BSTEs.
3. To examine, through a broader framework of absorptive capacity, the actions taken by entrepreneurs and entrepreneurial teams during the process of high growth.

A key gap in the extant research is identified regarding the actual process of growth (Coad & Guenther, 2014). The triggers of growth and how firms deal with the issues presented by the

growth triggers represented by BSTEs are considered (Brown & Mawson, 2013). The areas of knowledge and capability that HGSFs need to focus upon in order to deal with their rapid growth are explored (Bessant, Phelps, & Adams, 2007). This research, through its investigation of the subjective narrative stories of a selection of HGSFs, adds to the extant knowledge of rapidly growing small firms. The thesis addresses the identified gap within extant research regarding the “process” of small firm high growth, by investigating the actualities of rapid growth from the perspective of events that trigger high growth and the unpredictability of these events (Coad & Guenther, 2014). The thesis considers the actions and decisions taken post the trigger events that facilitate growth. It is a thesis based upon a qualitative empirical approach, which of itself is a methodology that has been less frequently used than quantitative methods in this study area (Wennberg, 2013).

The thesis is founded on the concept that regional disparities can be partially addressed by developing more HGSFs and therefore it is important to understand the process of growth of these firms (Fritsch & Kublina, 2016). This research falls between the academic discipline of Small and Medium Enterprises (SMEs) Growth and Entrepreneurship. It sits between these two areas by considering the theoretical and the practical aspects across both of these areas of knowledge.

The thesis question considers the unpredictable nature of the events leading to growth and the actions taken and decisions made post these events. A rationale for the thesis, is developed, recognising the gaps in the research particularly empirical qualitative research. The thesis deals with the phenomena of the process of rapid growth of HGSFs (Lee, Brown, & Schlueter, 2016). A qualitative research methodology is used because it was consistent with the aim and objectives of the research. It has been suggested that “qualitative research methods are valuable in providing rich descriptions of complex phenomena; tracking unique or unexpected events; illuminating the experience and interpretation of events by actors” (Sofaer, 1999, p. 1101). A fuller explanation of the rationale for using qualitative research can be found in chapter 3, Section 3.3.1.

As outlined in the literature review (Chapter 2) a number of authors have drawn attention to the simplistic approach to the knowledge about HGSFs (Brannback, Carsrud, & Kiviluoto, 2014). Not a great deal is known about the “internal growth dynamics of HGSFs” (Leitch, Hill, & Neergaard, 2010, p. 3). There has been a tendency to concentrate on the extent to which firms grow, rather than examining their internal processes of growth (Masurel & Van

Montfort, 2006). The idiosyncratic nature of firm growth would suggest that the unpredictability of events could have a significant impact on the prospects of rapid firm growth (Coad, Frankish, Roberts, & Storey, 2013; Vinnell & Hamilton, 1999).

These occurrences are termed Black Swan Trigger Events (BSTEs), unpredictable incidents that trigger rapid growth. The thesis contributes to an exciting area of knowledge which has, as a general topic, captured the imagination and interest of researchers, authors and policymakers from around the world (Anyadike-Danes & Hart, 2016; Dwyer & Kotey, 2016). There are a number of aspects to the contribution to knowledge that this study makes. One contribution involves the process in the way that the empirical data is gathered, particularly the linking of Rich Pictures and causal mapping. Another contribution to knowledge also involves the recognition of unpredictable events as the triggers for rapid growth of small firms and an exploration of what this means in relation to the dynamic of the actions taken and decision made in the context of the process of knowledge development or capabilities (Absorptive Capacity) to manage rapid growth. Out of the evidence of this research, in the final chapter, three practical areas are considered: how HGSFs can prepare for BSTEs, the actions static firms need to take to potentially becoming HGSFs, policy suggestions for supporting HGSFs and a propensity framework identifying existing and nascent HGSFs.

The area of HGSF inquiry has generated wide debate as to the ways in which the growth of firms can have an impact on economies and more particularly the regeneration of underperforming regional economies (Li, Goetz, Partridge, & Fleming, 2016; OECD, 2010b). The high growth topic has matured from a rather simplistic approach of considering the impact of small firms per se into a rigorous debate about the factors influencing HGSFs and the focus and process relating to the impact of HGSFs. The interest in these HGSFs has been generated because of the evidence that HGSFs or Gazelles, as they have been called, have a significantly larger impact within an economy than the increase in the number of static small firms or the growth in larger firms (Anyadike-Danes, Hart, M., & Du, J., 2015; Birch, 1987). The topic has had a major influence on the policies adopted to address economic inequalities in the creation of wealth and employment (Marchese, 2016). These policies have particularly been directed towards addressing regional inequalities (Brown & Mason, 2012; Fritsch & Kublina, 2016; Mason, 2016). The study is set within the context of the North East of England, which is an economically underperforming region of the UK (Adonis, 2013).

The discourse and debate around the extant research into HGSFs is increasingly leading to “debunking” of the theories and findings related to the topic (Gibb, 2000; Kiviluoto, 2013; Miller, Washburn, & Glick, 2013). More recent studies have demythologised the historic approach and the policy conclusions that have been drawn from these approaches (Autio & Heikki, 2016; Brannback et al., 2014; Tomenendal & Raffer, 2017). This thesis is contextualised into the development of HGSFs and the major events triggering their growth (Coad, Frankish, Roberts, & Storey, 2012). As well as outlining the background and the context of the work a consideration is given to the pertinent theoretical framework and the definitions that are inherent within the extant area of knowledge (Clayton, Sadeghi, Spletzer, & Talan, 2013; Coad & Guenther, 2014; Daunfeldt, Johansson, & Halvarsson, 2015). Issues within these definitions (Daunfeldt et al., 2015) are summarily dealt with as is the important issue of why attention should be paid to HGSFs. The North East economic and commercial context and its relationship to the regional policy and HGSFs framework are deliberated. In this chapter, the research question and objectives are outlined; the objectives having been designed to explore the unpredictable nature of BSTEs and the actions and decisions consequent to taking the full opportunities that the BSTEs present.

1.2 The specific Black Swan Trigger Event theory framework of the research

For decades the North East of England (NE) has been classed, economically, as a slow growth region (Adonis, 2013). It has suffered the social and commercial impact of the consequential deprivation that this economic position has led to, particularly relatively high unemployment and low productivity. The growth prospects could, in some part, be addressed by increasing the number of profitable HGSFs (Mason, Bishop, & Robinson, 2009; NELEP, 2017; Octopus, 2015). Increasing the number of HGSFs has been a traditional policy response to addressing regional disparities but the implementation of policy has failed. This is why it is important to more fully understand the process of small firm high growth to more is really necessary for a region that has traditionally slow economic growth. Since the work of Birch (1979) it has been widely recognised that small firms in terms of employment have a greater impact on an economy than large firms (Birch, 1979). More recent studies now suggest that the narrower category of HGSFs can have an even greater economic impact than SMEs (Haltiwanger, Jarmin, & Miranda, 2013; Hart & Anyadike-Danes, 2014; Pesämaa, 2017)

This thesis focuses upon the process of the development of HGSFs. The research question and objectives of the study considers the impact and identification of unpredictable trigger events and the actions taken and decisions made during the transition from these events that create profitable HGSFs. The thesis deliberates that the unpredictable events occur from three perspectives; randomness, serendipity or luck. The incidents are classified as Black Swan Trigger Events (BSTEs). Taleb (2007) described a Black Swan Events as an event that has three properties (Taleb, 2007):

- Rarity: it lies outside the realm of common experience. The event is random, is a surprise and is an “outlier” from normal probability.
- Extreme Impact: when the Black Swan strikes, it has a massive impact.
- Retrospective predictability: the event can be rationalised by hindsight.

These three properties can be evidenced in events such as the New York Twin Towers attack of 9/11 or the Japanese Tsunami of 2011. Although Black Swan Theory has generally been applied to actuarial, financial trading, natural phenomena and cataclysmic world events, it has not until now been applied to firm growth (Mueller & Stewart, 2016). The thesis considers the application of the Black Swan Theory properties to the growth triggers that small firms experience. The research question being addressed is “*An exploration of how BSTEs impact HGSFs?*”

A consideration is given to the post trigger event transition, what decisions and actions are taken and the context in which they operate. It considers how these actions influence the development of profitable HGSFs in the NE? This study is set in the NE by investigating HGSFs based in the region. The research question and objectives being addressed within the thesis are important because evidence suggests that there is a link between regional economic regeneration and the development of HGSFs (Piazza et al., 2016). Early investigations into the topic focused on start-up firms as this was considered as a set of policies that would address the issue of job creation and this in turn would lead to more active regional economies (Van Cauwenberge, Beyne, & Bauwhede, 2016). The policies of encouraging firm formation and start-ups have been adopted on a global basis and has driven political policy ambitions for the past forty years (Anyadike-Danes et al., 2015; Bravo-Biosca & Westlake, 2009). More recent research would suggest that rather than just the formation of small firms per se it is HGSFs that have a much bigger impact on job creation (Haltiwanger et al., 2013; Senderovitz, Klyver, & Steffens, 2016). There has, in tandem with this approach or fixation

on start-ups, been a myopic and somewhat slavish devotion to growth of firms rather than profitable growth of firms (Brannback et al., 2014).

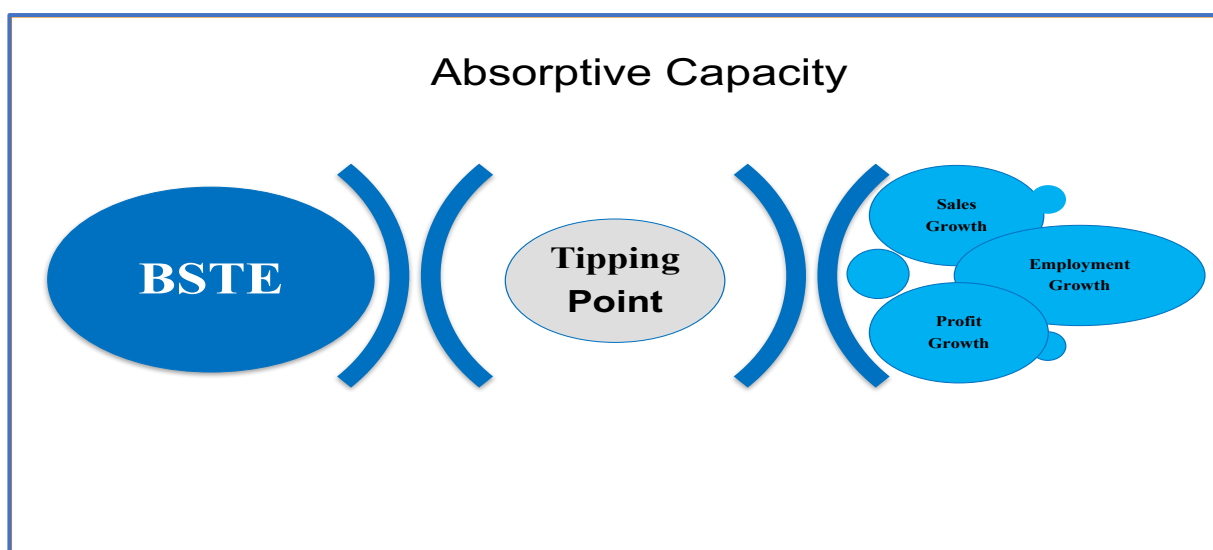
The theory base for this study is derived from the merging of the concepts of “trigger points” (Brown & Mawson, 2013) and Taleb’s Black Swan Theory (2007). The merging of these theories is unique to this research and brings together the notion of unpredictable events that spark or generate growth with the concept of the momentum or process of growth. The implications are that these points or occurrences can dramatically influence the growth prospects of small firms (Bessant et al., 2007). These triggers have been described as “disequilibrium and disruptive events” (Brown & Mawson, 2013, p. 282) and can have a positive or negative influence on the growth prospects of a firm. The integration of the two concepts of Black Swan Events and Trigger Points leads to the framing of the term Black Swan Trigger Events (BSTEs). In the context of the growing firm, a BSTE is a significant unpredictable event that has a major positive impact on the growth dynamics of a small firm. The justification for considering BSTEs in the context of HGSFs is that it is becoming of increasing interest to consider random or unpredictable events as a way of accounting for the growth spurts of firms (Moreno & Coad, 2015). Interest is also increasing in the idiosyncratic nature of the growth of small firms (Bonnet, Le Pape, & Nelson, 2016; Vinnell & Hamilton, 1999).

The notion of a BSTE, resonates with the view that HGSFs experience unpredictable incidents that are fundamental to the positive or negative growth prospects of the small firm (Coad, 2009). Once having experienced a BSTE the firm responds and subsequently experiences a “tipping point” where growth rapidly accelerates (Bessant et al., 2007; Brown & Mawson, 2013; Gladwell, 2000). They point out that “often the critical period determining the ultimate success of the growth opportunity presented is the post-trigger transition period” (Brown & Mawson, 2013, p. 279) The most important factors in the whole concept of BSTEs are recognising the occurrences and what transition actions and decisions are taken post the event. (Brown & Mawson, 2013). The context of these action and decisions in relation to a firm’s learning or absorptive capacity establishes the efficacy or potential scale of opportunity presented by the event (Fritsch & Kublina, 2016; Ryzhkova & Pesamaa, 2015). The significance of these trigger events is that they can cause “trundlers” to become “flyers” (Brown & Mawson, 2013) or “mice” to become “gazelles” (Birch, 1987). There has been no

previous research focus on actions and decisions taken by entrepreneurs or entrepreneurial teams in how they respond to these BSTEs (Greiner, 1972).

The experiences of the entrepreneurial journey have indicated significant random events that have resulted in large shifts in a firm's growth prospects (Moreno & Coad, 2015). There is an interest in the conjunction of BSTEs in the context of the categorisation or typology of general trigger events. It is suggested that once an event occurs then a dynamic momentum begins within the firm. Bessant et al (2007) conceived a framework derived from two dimensions related to the growth of firms; "Tipping points" (Gladwell, 2000) and "Absorptive Capacity" (Cohen & Levinthal, 1990; Fritsch & Kublina, 2016). The tipping point is identified as a critical point that stimulates a structural change in a firm and absorptive capacity is seen as a firm's competence in acquiring and using new knowledge (Bessant et al., 2007). The growth prospects of a firm are related to the resolution of the major challenges presented by BSTEs which in turn are influenced by its absorptive capacity (Cohen & Levinthal, 1990). It is suggested that there is a lack of awareness of the value of diverse interventions allowing growing firms to successfully transition through the tipping points (Bessant et al., 2007). Figure 1 indicates in a simplistic way the relationship between the BSTE, tipping point and growth set within a context of absorptive capacity. It is simplistic because it suggests a linear relationship it gives no indication of the timeframe or the disruptive influence of the event.

Figure 1: Relationship between BSTE and Tipping Points



Source: Derived from (Bessant et al., 2007; Brown & Mawson, 2013; Taleb, 2007)

Having simplistically represented the framework for growth in Figure 1 in considering the research question it is important to establish a clear definition of HGSFs in the context of this framework and more importantly within the context of the thesis.

1.2.1 Definition and meaning of HGSFs

Clarifying what is meant by high growth and how a HGSF is defined is important for this study. The way of defining HGSFs influences both the philosophy and the methodology of this thesis. In a number of studies, there has, to an extent, been a process of post rationalisation when it comes to understanding what is meant by HGSFs this has led to confusion and made comparative analysis difficult (Brannback et al., 2014; Piazza et al., 2016). It could be argued that researchers have given policy makers the definition they desired (Gibb, 2000). Definitions of HGSFs and gazelles vary greatly, enquiries into HGSFs runs the risk of a complexity of descriptions (Kiviluoto, 2013). The definition used in any study or report influences public and private funding decisions relative to the high growth classification (Autio & Heikki, 2016). As the characteristics of HGSFs related to the definition differ this raises concerns about the veracity and impact of funding and policy decisions (Piazza et al., 2016).

The classification of HGSFs has been in terms of growth rates, by their age or by their size (Coad, Segarra, & Teruel, 2016). The OECD (2010) defines “gazelles as a form of HGSFs that are born five years or less before the end of a three-year observation period” (OECD, 2010a). Certain extant research, define gazelles as HGSFs with fewer than 250 employees (Hölzl & Friesenbichler, 2008). Different definitions can influence the assessed number of gazelles, it is estimated that the number can vary between 4% and 10% depending upon the definition (Henrekson, M. & Johansson, D., 2010). Certain definitions use relative growth rates over time, firm population or location (Piazza et al., 2016). Absolute measures are used in some definitions identifying raw growth in sales, employees or productivity over a fixed time period. The criteria differ widely across much of the extant research (Delmar, Davidsson, & Gartner, 2003). The criteria used in defining high growth can influence the bias toward small or large firms, relative criteria favours small firms whilst absolute criteria tend to favour large firms (Wennberg, 2013).

In contemplating the difficulties encountered in some studies of defining and clarifying what growth means it is also important to consider what is meant by high growth. Birch (1979) defined a high growth business as one that starting from a base of \$1 million grows sales by 20% annually for four years (Birch, 1979). The OECD defines gazelles as “All enterprises over 5 years old with average annualised growth greater than 20% per annum, over a three year period” (OECD, 2010a). OECD considers high growth to mean “a firm with 10 or more employees that grows either its number of employees or turnover by an average of more than 20% over three years” (aggregate growth of 72.4% over three years) (OECD, 2010b). The general perception is that it is difficult to explain what is meant by a high growth business as there is no established definition of what constitutes a HGF (Daunfeldt, Elert, & Johansson, 2014). There is increasingly little doubt about their impact, particularly related to employment (Anyadike-Danes, M., Hart, M., & Du, J., 2015; Bornhäll, Daunfeldt, & Rudholm, 2015).

For the purposes of this research, the definition of HGSF is a modified version of the OECD HGF definition. The definition differs from the OECD by embracing firms that have been in existence for three years from the designated time point and are still in existence at the end of the period. The firms have at least 10 employees at the beginning of the period and a turnover between £1 million and £20 million at the base year. The firms have recorded average growth of 20% in employment **and** turnover per annum over the three years. This definition is a modification by including growth in both turnover and employment as well as incorporating profitability as a prerequisite for inclusion into the category of HGSFs. There were several reasons for choosing this definition, the main one being it was a way of identifying those firms that would have the most impact on addressing the regional disparities of the NE; growth in employment, innovation, productivity and consequently a growth in Gross Value Add (GVA). These issues are discussed later in this chapter. Another important reason for deciding on the definition was to identify sustainable HGSFs, sustainability is more likely if a firm is profitable ((Brannback et al., 2014).

Sustainable HGSFs will add considerably more to the economic wellbeing of the NE (Adonis, 2013) The modifications may seem slight but they are of fundamental importance as a way of delineating this research from other studies. They establish the small size of the firms and it incorporates the word profit. It is recognised that there is an issue with this definition; it excludes a large proportion of potentially HGSFs which have less than 10

employees. It has been suggested abandoning the OECD HGSF measures because it does not capture the “episodic nature” of the growth pattern of HGSFs (Anyadike-Danes, M., Bjuggren, C. M., et al., 2015). The decision has been made not to undertake any adjustment to the base number of employees at the start of the timeframe being 10. The justification for this is that the study is focused upon the process of growth rather than categorising HGSFs.

1.2.2 Why pay attention to HGSFs?

In understanding the definition and classifications of HGSFs it is also important to understand the impact that HGSFs can have upon a regional economy. There is a synchronicity and connection between the development of HGSFs and the way the regional disparities can be addressed (Autio & Holzl, 2008). As with all firms HGSFs can only develop within their entrepreneurial ecosystem (Piazza et al., 2016; Shane, 2009a). The more active and dynamic this ecosystem is then the more likely that the HGSF will do well (Acs, Stam, Audretsch, & O'Connor, 2017; Piazza et al., 2016).

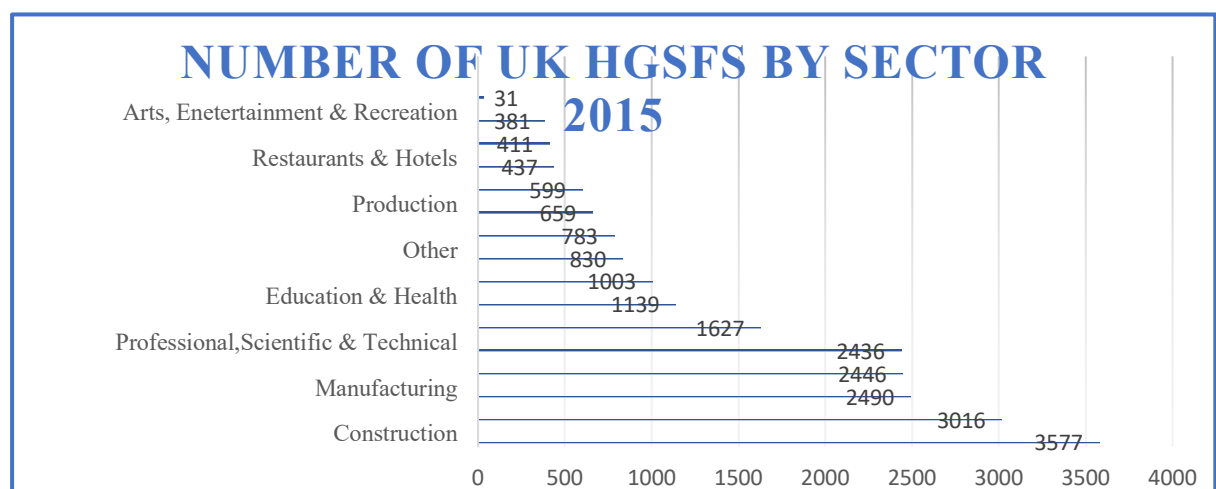
Not only are HGSFs a relatively undersized group in the context of all firms that exist but the group is made up of mainly small firms of which over 75% have fewer than 50 employees. Not much is really known about HGSFs and even less is known about how they are formed (Audretsch, 2012). Acs, Parsons & Tracy (2008) highlighted the need for more research into the specific characteristics of HGSFs (Acs, Parsons, & Tracy, 2008). These firms play an especially important role in the process of generating jobs in comparison to subsidiaries of large firms or micro-firms that tend to be static in their growth (Anyadike-Danes, M., Hart, M., et al., 2015). Very little is known about where they come from or what they were before they became HGSFs. (Audretsch, 2012). It has been suggested that firm growth is a “stochastic process” as it is randomly distributed across firms (Moreno & Coad, 2015). The incidence of HGSFs is said to be correlated to the business cycle and entrepreneurial ecosystem that it operates in. This ecosystem is influenced by a range of stakeholders; policy makers, Universities, financial institutions and advisors. All of these play an important part in influencing the environment for growth of firms (Brown & Mawson, 2013; Shane, 2008).

Within their environment HGSFs are seen as significant contributors to the process of creative destruction, being major drivers of productivity growth and positive economic performance (Audretsch, Memtora, & Menendez, 2016; Schumpeter, 1942). As indicated

earlier within the chapter, the iconic work related to the importance and impact of HGSFs was that of Birch (1979) in the USA. Up to the time of Birch's work the view was that large firms created most jobs in the USA economy. By analysing business growth through several economic cycles Birch (1979) established that in fact it was small firms that created most jobs. This was controversial research at the time but its findings were confirmed by Kirchhoff and Phillips (1987). The result of this work has been that since 1980 an increasing emphasis has been placed on HGSFs studies by policy makers (Krasniqi & Desai, 2016). This thesis is focused upon the process and dynamics of high growth of a selected cohort of NE based small firms.

Research generally follows the money and policy makers have been more than willing to fund HGSF studies and reports in order to understand the role they play in job creation (Brannback et al., 2014). The incidence of HGSFs is very low. It was estimated in 2015 that of the 5.3 million incorporated firms with the UK that about 22,500 fell into the HGSF category, about 0.42% of the incorporated business population (Octopus, 2015). These HGSFs fell across a number of sectors belying the myth that most HGSFs are technology firms (Octopus, 2015; Tomenendal & Raffer, 2017). Figure 2 illustrates the number of HGSFs by sector within the UK. 65% of HGSFs are in the service sector – particularly in administration and support, which together account for 15% of all HGSFs in the UK. Contrary to what many assume, less than one in ten HGSFs is a technology company. HGSFs occur across a variety of sectors.

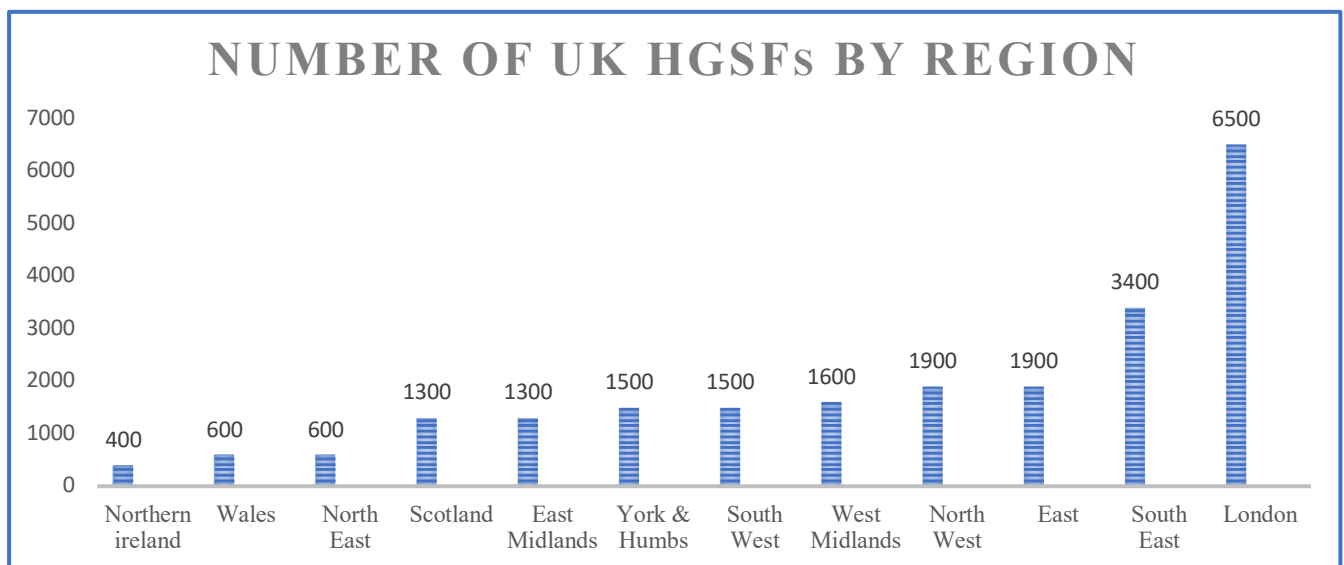
Figure 2: Number of UK HGSFs by Sector.



Source: (Octopus, 2015)

Figure 3 indicates the number of HGSFs by region. As previously outlined, the Octopus (2015) report, using the OECD definition of HGSFs established that out of the 5.3 million companies that existed in the UK in 2014 only 22,470 of them fit the category of HGSFs. On this basis less than 1% of UK companies created one third of new jobs in the UK. The Octopus report identified 600 firms in the whole of the North East of England that met the criteria of being in the high growth category. It is estimated that even with the modest objective of doubling the number of HGSF's within the NE the impact upon the GVA and the number of jobs created would be substantial. The report suggested that doubling the number of HGSFs in the NE would add an additional £0.75 billion to the regional economy and an additional 16,000 jobs (Octopus, 2015). London has ten times more HGSFs than the NE. Figure 3 shows that these firms can be found in every region of the UK. The UK's HGSF's have the power to drive a regional economic revival. It is assessed that a growth of 25% in the number of HGSFs would lead to a growth in Gross Value Added (GVA) of 25%. It has been estimated that the North East LEP area, in 2014, had 420 HGSFs employing 15,500 people with a combined turnover of £1.8 billion. This small group of firms generated approximately 33% of GVA growth during 2014. It has been calculated that if the NELEP area had 100% more HGSFs, it would have created over 11,000 more jobs and added £520 million to the areas GVA (NELEP, 2017; Octopus, 2017). The impact of increasing the number of HGSFs has major implications for the importance of the development of HGSFs in addressing the issue of economic regional disparities.

Figure 3: Number of HGSFs by Region.



Source: (Octopus, 2015)

The NE is representative of the significant regional disparities that exist with the United Kingdom. It is important to consider the link between the regional disparities experienced by the NE and what contribution HGSFs can make to addressing the issues of these disparities.

1.3 The North East of England Context

“The persistent gap in prosperity between the regions of the United Kingdom is socially unjust and economically inefficient. It is unacceptable that someone born in the North East of England is likely to have a shorter life, fewer qualifications and earn less than someone born in the South East. It is also unfortunate that those in the South East suffer poor quality of life due to overcrowding and congestion. In an era of intense global competition, it is simply not viable that large parts of the UK should continue to contribute less to the national economy than others.” (ODPM, 2004)

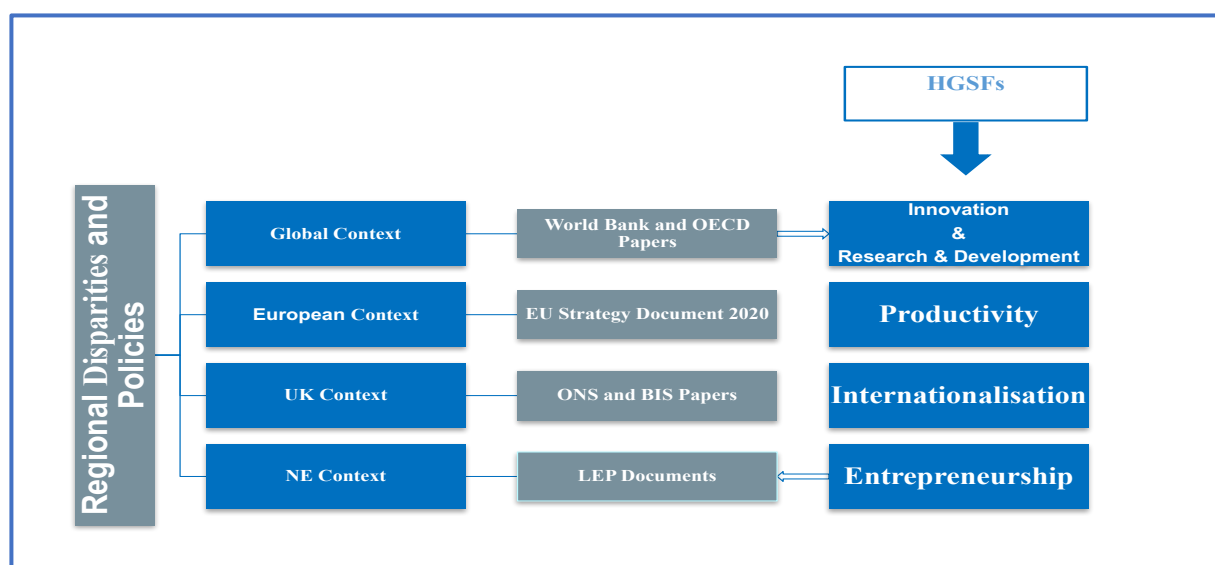
This empirical research is considered in the context of the economic regional disparities of the North East of England within the UK. Policies to address issues of regional economic disparities have been a focus of successive UK Governments for many decades (ODPM, 2004). These economic disparities are not unique to the UK. Various organisations at a global, national and regional level have instigated policies to tackle economic regional disparities. One of the main set of policies has been aimed at increasing the number of start-up firms within the targeted region. Since Birch (1979) increasing the number of small firms has been assumed as the way of increasing the number of jobs. Increasing the number of people in employment in turn has been posited as a way of improving the economic performance of slow growth regions and a way of addressing relative poverty and social deprivation. Extant research has indicated that focusing purely on increasing the number of start-ups has led to erroneous policies that instead should be focused upon the development and support of HGSFs (Brannback et al., 2014; Gibb, 2000; Kiviluoto, 2013; Shane, 2009a).

The policies developed to deal with regional disparities have essentially been structured around a top down framework (Stimson, Stough, & Roberts, 2013). An analysis of policy documents indicates that various methods are used to address regional disparities but they fall under four main categories; Innovation and Research and Development (R&D), Productivity, Internationalisation and Entrepreneurship. Studies indicate that these factors are also important considerations in the development of HGSFs (Doran & Ryan, 2016; Mason et al., 2009; Moreno & Coad, 2015; Sena, Hart, & Bonner, 2013). Figure 4 illustrates the relationship between policies addressing regional disparities and the HGSFs. The general approach to policy connects the notion that because of the commonality of what HGSFs

provide and what underperforming regions need then it makes sense to think about how more HGSFs can be developed.

The policy initiative areas for addressing regional disparities have in common the drivers for HGSFs (Geuvers, 2016). These drivers are the focus of this thesis. Recent studies have indicated a shift in thinking with regards to policies addressing regional disparities a more considered approach has been adopted emphasising the quality of entrepreneurial activity rather than the quantity of this activity. (Stam, 2015). A NESTA report (2009) analysing the impact of HGSFs on regional economies gauged that the regions with a higher percentage of HGSFs generated more employment, increased innovation and improved productivity across the region. These effects were identified as spill over effects from HGSFs. As a concrete example the NESTA report identified that “an increase of 5% in the employment share of HGFs was associated with an increase of 3.5% in private sector employment growth rates” (Mason, G., Bishop, K., & Robinson, C., 2009, p. 16). This ratio has relevant implications for the NE were the imbalance between public and private sector employment is an issue (Adonis, 2013). One of the strategic aims of the North East Local Enterprise Partnership (NELEP) is to address this imbalance, encouraging more private sector employment (NELEP, 2017). As HGSFs are a driver for employment this makes increasing their number an important objective for the NELEP (NELEP, 2017).

Figure 4: The relationship between Regional Policy and HGSFs



Source: Derived from (OECD, 2010b).

The NE characterises the disparities that can exist between economically performing and underperforming regions. The NE exemplifies the real negative differences from more prosperous areas within the UK. The regional economic underperformance of the NE highlights the reason for the development of data driven policies that can address these disparities. In the context of this research it emphasises the benefit of understanding the link between the development of HGSFs and policies to address regional differences. The following subsections deal with regional disparities in a broader context, the economic setting of the NE, the specific disparities it faces as a region and the common aspects of regional policy and connections to HGSFs in a NE context.

1.3.1 The Context of Regional Disparities

In suggesting that HGSFs are important in the way regional disparities can be addressed then the purpose of this work in considering the process of growth of HGSFs can make a significant contribution to knowledge. The focus of research into HGSFs has tended to be in regions with greater economic wealth or in more urban settings such as London and the South East of England, emphasising the positive impact of HGSFs on the economy of these areas (Gupta, Guha, & Krishnaswami, 2013; Hart. & Anyadike-Danes., 2014). The thesis can point the way in developing and understanding the process of growth of HGSFs, how these firms can contribute towards addressing the regional disparities faced by the NE and the support that can be provided to them (Li et al., 2016; Marchese, 2016). In a broader context addressing regional disparities has been a political motivation for generations. It is important in the context of this inquiry to understand what is meant by regional disparities. In order to understand the potential remedies, it is important to consider the root causes of the problem, the nature of its existence, its measurement and the rationale for addressing the issue (Autio & Holzl, 2008).

The OECD (2003) definition of regional disparities indicates a measure, by which the intensity of a certain economical phenomenon distinguishes among regions within an existing national state. It is the differences between “economic performance and welfare between regions” (OECD, 2003). Three types of regional disparities have been identified (Vrtěnová, Sobotka, & Malá, 2009).

1. Economic disparities representing variances in quality and quantity of a nation state and the development of economic potential, demonstrated by regional output (GVA).

2. Social disparities differences in quality and quantity of a nation state and development of human capital, demonstrated by incomes and living standards of population.
3. Territorial disparities are usually connected with geographical and natural conditions, demonstrated by accessibility to markets, education, services etc. (Vrtěnová, Sobotka and Malá; 2009).

Regional economic disparities are prevalent in all developed economies. The extent of regional income variations can be noticeable. This is reflective of the regional economic disparities that exist within these countries. The GINI Index (Acs, Serb, etc , 2017) compares the ratios of Gross Domestic Product (GDP) per head in the least wealthy and wealthiest regions relative to the national average (OECD, 2006). Britain has the widest regional disparities of the top five economies of the world, average GDP per head in central London is more than nine times larger than in parts of the NE. It could be argued that in relative terms there will always be differences between regions (Stimson et al., 2013). The fundamental aspect of regional disparities is if all things were equal would they occur? A great deal of the policy framework has been focused upon creating a more level playing field, addressing issues of market failure in order to create an environment of *ceteris paribus* (Autio & Heikki, 2016). This equality issue can, in part, be addressed by increasing the incidence of HGSFs within the NE. This research provides insight into understanding to how this can be achieved.

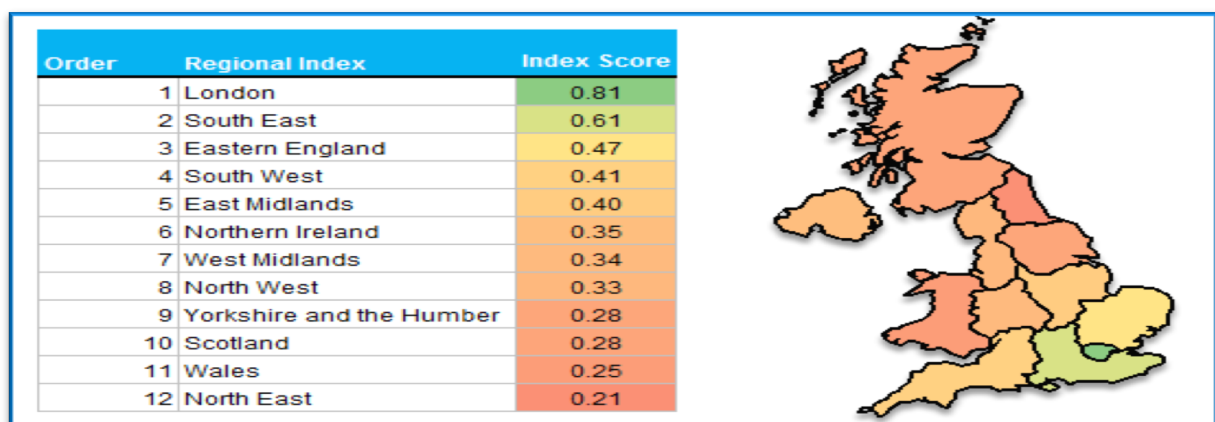
Although the UK has voted to leave the European Union, it is still not known what this will really mean in terms of ongoing regional perspectives, so it is still worth considering policy in the context of the EU. The emphasis of EU policy has been on cohesion and convergence. Cohesion is expressed as the balanced development of a nation and reducing the differences in the economic performance of regions. In several countries, rather than diminishing regional disparities have widened over time (Crescenzi & Giua, 2014). The economic policies of the European Union have been focused essentially on two areas; competitiveness and cohesion. Cohesion policy which is induced by the economic disparities between countries, regions and social groups. The EU's main policy goal is to reduce these disparities (Mohl & Hagen, 2009), nearly one third of the EU budget is spent on cohesion policy. The main purpose of cohesion policy is to promote the "overall harmonious development" of the EU, to "reduce disparities between the levels of development of the various regions and to strengthen its economic, social and territorial cohesion" (Art. 158 TEC p13). Understanding the dynamics of HGSFs, an outcome of this research, could lead to a more cohesive response to the regional disparities of the NE. As previously suggested the NE has for decades

experienced below national average to the United Kingdom economic performance. The evidence for these disparities lies very much in the economic indicators, outlined in Chapter 1, used to measure performance and economic cohesion as these indicators, in turn, can be benchmarked against the development of HGSFs.

1.3.2 The North East and its economic setting

The main indicator of economic cohesion is considered to be GVA per head of population, “it measures the contribution to the economy of each individual producer enabling its comparison between different countries or regions” (ONS, 2016b). Within Northern Europe the UK has nine of the poorest areas and paradoxically the top single richest area. A large area of the NE; Durham and Tees Valley, ranks as the third poorest area in Northern Europe. The NE region has performed worse in relative terms to most other regions within the UK. Figure 5. indicates that on the UK poverty index the NE ranks last in terms of the 12 regions of the UK. The relationship between poverty and growth in UK cities has been explored in a report which identified several paradoxes in how growth impacts poverty in examining how “strategies for economic growth and poverty reduction can be aligned” (Lee et al., 2014, p. 1). The report found that there was no guarantee that economic growth would reduce poverty. It suggested that it is employment growth, on the basis that the jobs created were not low paid, that has the greatest impact on poverty (Lee et al., 2014). The creation of jobs is related to several factors all of which the NE has been relatively weak in. This notion has implications for this research and the emphasis on HGSFs that grow employment, turnover and are profitable, which is a further contribution to the economic regional debate.

Figure 5: UK Poverty Index

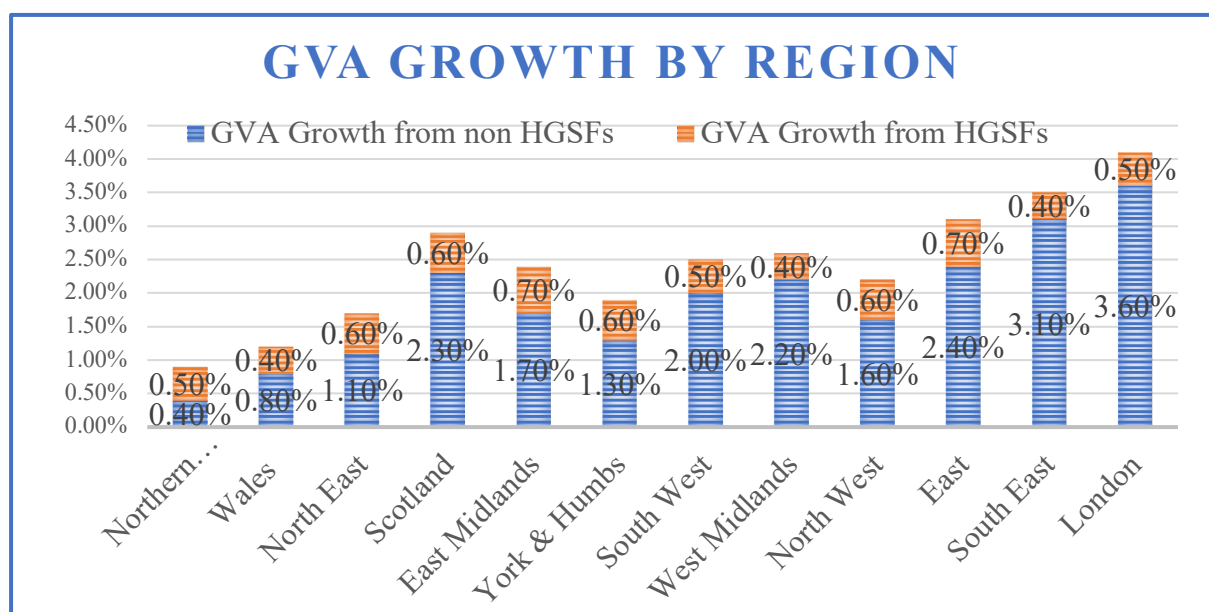


Source: (ONS, 2015)

Figure 6 shows the impact of HGSFs compared to non HGSFs in their contribution to the growth in GVA by region over 2014 and 2015 (Octopus, 2015). Of the growth in GVA within the NE of a total of 1.7% a small number of HGSFs (600) contributed 0.6% about 30% of the total growth (Octopus, 2015). The formation of businesses and private sector jobs and the general lower economic activity levels have all been cited as indicators of weak performance (Adonis, 2013).

There is a significant gap in productivity, employment and output growth compared to many other parts of the UK (Adonis, 2013). It is an important decision for policy makers within an area such as the North East to choose between targeting increased formation of businesses or productivity. There is an evident conflict in the choice, new businesses are not necessarily the most productive (Shane, 2009a). The local policy objective seems to be to prioritise growth in GVA and to encourage start-ups in order to replace firms that cease to operate. The evidence of extant research now suggests that this local policy cannot achieve the improvement in economic wellbeing without a clearer focus on developing HGSFs (Anyadike-Danes et al., 2017). This again points to the importance of empirical based research to understand the process of growth and to ascertain whether HGSFs indigenous to the NE do in fact contribute or have the potential to contribute to the need for improved economic growth of the region.

Figure 6: GVA Growth by Region:



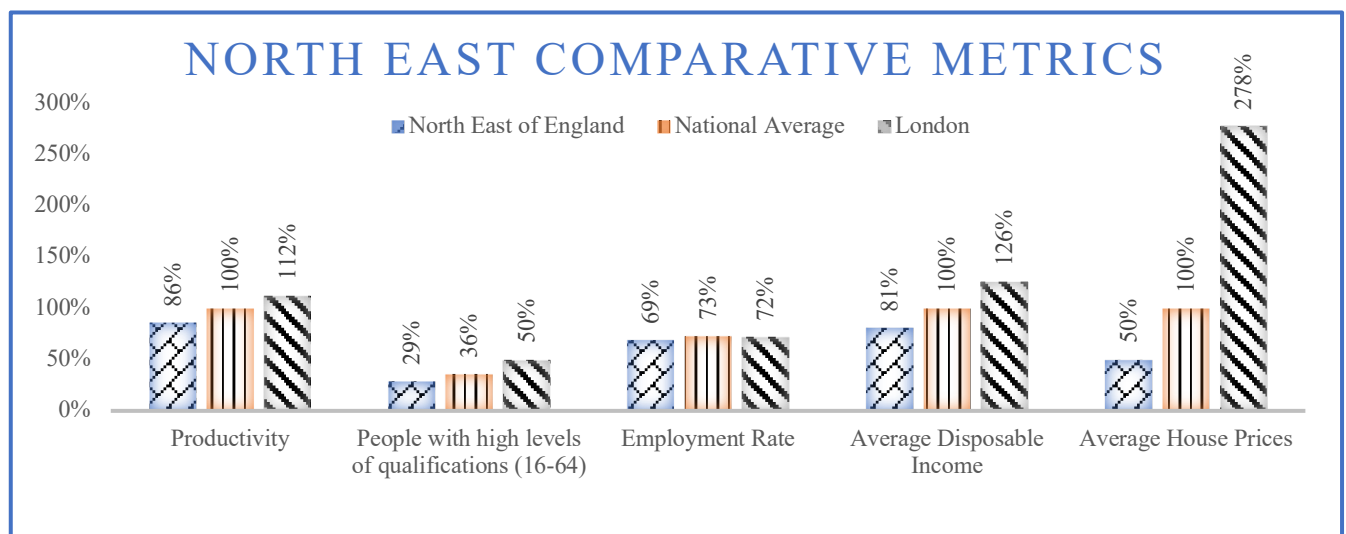
Source: (ONS, 2015)

An ONS report (2015) highlighted the challenge facing the NE specifically related to productivity and several social economic indicators which is discussed in the next section.

1.3.3 The Regional Disparities of the North East

The region is creating less wealth than other places evidenced by the below national average productivity. HGSFs add to the wealth of a region and contribute to the growth in productivity, hence the importance of this research (Hessels, van Gelderen, & Thurik, 2008). It has a significantly lower employment and disposable income rate than the national average. House prices are below the national average in the NE. While this makes homes more affordable, the ONS report suggests that it also a reflection of low average incomes. The median price of a house in the NE is £125,000, lower than in any other city region apart from Sheffield (Figure 7). The consequent impact of this relative poor performance seems to have created a continuing cycle of relatively poor commercial performance and low business growth aspiration (Adonis, 2013). Productivity in the NE is 86% of that of the whole of England. The region has fewer people with high-level qualifications; just 29% of NE residents aged 16 to 64 have a degree or equivalent qualification. The English average is 36% of the population with degrees. In London, it is almost 50%. 10% of NE people have no qualifications at all. The NE has an employment rate of 69.1%, below the England average of 72.9%. Average disposable income in the NE is £14,490 a year; The England average is £17,842 while the number for Greater London is £22,516. Figure 7 provides a graphic illustration of several of the major economic disparities between the NE and the rest of the UK.

Figure 7: Regional Disparity Indicators of the North East



Source: (ONS, 2016b)

It has been assessed that given the size of the NE population and the potential scale of the economic activity that private sector employment could be increased by as much as 70,000 jobs (Adonis, 2013). Martin (2013) highlighted the endemic nature of this equilibrium failure as reflective of the relatively low number of business start-ups and commercial vitality in the region (Martin, 2013). Although static businesses play an important role in all economies, as previously indicated, evidence suggests that high growth businesses have a greater and much larger significant economic impact than static businesses (Anyadike-Danes et al., 2015; Birch, 1987). An increase in the number of HGSFs is dependent upon the number of businesses prevalent within an economy which in turn is dependent upon the number of births and deaths within the business population. In 2015, across the UK, London had the highest business birth rate at 17.7% and the highest business death rate at 10.6%. The NE had a 14.0% business birth rate and a 10.2% business death rate (ONS, 2015).

The gap between current and potential in all these measures remains wider for the NE than many other parts of the UK. In recognising the relatively lower business density of the NE and having considered the relationship of HGSFs and the potential for addressing regional disparities it is also important to consider the specific relationships between the aspects and drivers of HGSFs and policy drivers of regional growth. If we consider Figure 4 again it refers to the aspects of regional policy and the drivers of HGSFs; innovation and R&D, productivity, internationalisation and entrepreneurship. The following sections deal with these aspects in relation to the NE and HGSFs. These are relevant for the context of this thesis.

1.3.4 Innovation and Research and Development and the North East

Although certain emphasis has been given to innovation as a driver of HGSFs and particularly the episodes leading to high growth not a great deal is known about the factors leading to innovation among HGSFs (Sena et al., 2013). Drucker (1998) defined innovation as “the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth” (Drucker, 1998, p. 65). Hindle’s various treatise on innovation have emphasised the relationship between innovation and entrepreneurship, with innovation being equal to invention plus implementation and suggesting that the entrepreneurial process is the implementation side of the equation (Hindle, 2009; Hindle, K. , 2010). Policymakers need to pay more attention to

the implementation of invention which ultimately leads to the economic benefit derived from the innovation (Hindle, 2009).

The Hindle paper encapsulates the notion that innovation takes place when you get a combination of the processes of invention and entrepreneurship and this leads to new knowledge. EU policy has focused on innovation, it is “essentially seen as doing the same thing as entrepreneurship”, in reality, they are not the same (Commission., 2014). While some entrepreneurship may require innovation, most does not (Brannback et al., 2014). Productivity and sales and employment growth are seen to be affected by innovation (Van Leeuwen & Klomp, 2006). A number of studies have shown the importance of innovation for firm performance (Doran & Ryan, 2016). Most studies of innovation highlight the particular importance of R&D for innovation output and developing absorptive capacity (Cohen & Levinthal, 1990). A firm’s absorptive capacity essentially means a firm’s ability to use information for commercial benefit. Cohen and Levinthal (1990) noted that firms which invest in R&D gain “an increased ability to identify, assimilate and exploit knowledge for the generation of new innovations”(Cohen & Levinthal, 1990, p. 2). Hindle (2009) argues that innovation and R&D are not the same but have been confused by policymakers into being the same (Hindle, 2009). Innovation is seen as a factor and a driver of high growth (Sena et al., 2013). The type and ongoing nature of innovation play an important part of the development of HGSEs studied within this thesis and is therefore an important factor to understand in this thesis.

Product innovation, evidently, is positively correlated with growth in employment and innovation success is a driver of firms’ high growth events (Coad & Rao, 2008; Holzl & Janger, 2013; Mason et al., 2009; Mason & Brown, 2011). It is indicated that HGSEs as well as making a large contribution to innovation they continue to invest in innovation through their life cycle (Mason et al., 2009). Slower growing firms are less likely to invest to any great extent in innovation. Current research also suggests that the ability of HGSEs to outperform rivals is based upon some form of innovation along the value chain. Five key challenges have been identified that undermines the NE regions innovative capacity (Pywell, 2013). Generally, firms within the region lack the scale and hence the resources to take full advantage of innovative opportunities. The region lacks the incentives for professional service providers to become aware of or understand the innovative opportunities that exist within the region. The NE has a history of undertaking activities that have a lower added

value and are, as a result, less competitive. The consequent low productivity could well act as a barrier to new growth opportunities (Adonis, 2013). The slow take up and low investment in innovation and R&D increases the threat of external competition. R&D investment in the NE (£541 million) is the equivalent of less than 10% of the investment made in the South East (£6,023 million). The North East region's ability "to improve its standard of living over time depends almost entirely on its ability to raise its output per worker" (Krugman, 1997).

1.3.5 Productivity and the North East

Productivity is generally defined as "a ratio between the output volume and the volume of inputs. Productivity is a key indicator of economic growth and competitiveness, an increase in productivity is viewed as a sign of improving wealth within an economy. Saari (2006), suggested that economic growth is created by two factors, these being "an increase in production input and an increase in productivity" (Saari, 2006, p. 2). The productivity of a region is measured in terms of the GVA per capita of that region. Although there have been improvements in the rate of growth in GVA. In the "period 2009-12, productivity grew by 14% by far the highest rate in the country" (NELEP, 2014, p. 30). Whilst this productivity growth is a good sign and shows the potential for growth in this key indicator, productivity levels remain low in comparison with the national average. It is a significant statistic or measure that the NE ranks second from bottom in the creation of GVA per head of population. GVA per capita in the NE Region was £18,216 in 2015 compared to Greater London at over £42,666 per capita, this is evidence of the clear disparity. In terms of GVA per capita only Wales ranks lower but this area has a higher aggregate GVA (ONS, 2016b).

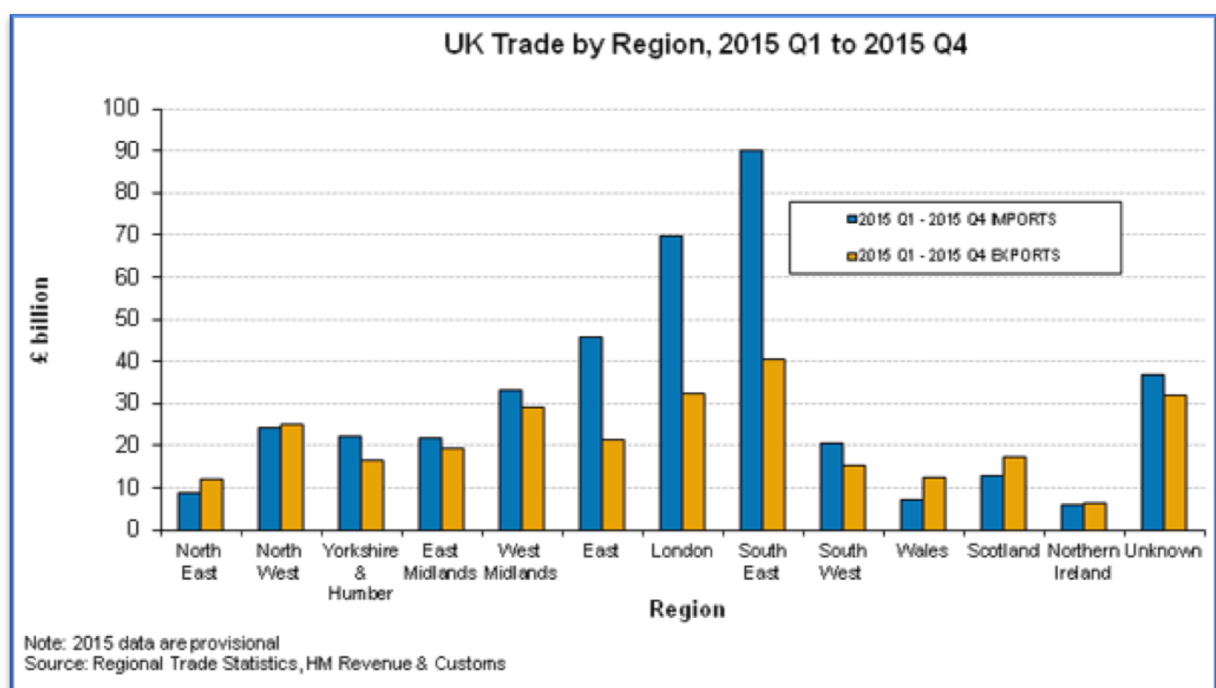
Low productivity affects not just headline GVA numbers but is also associated with lower wages and profits. Lower levels of productivity mean that the region needs not just more jobs but more importantly better jobs. In the case of better jobs, "the key requirement is a skilled workforce, able to work in sectors and occupations characterised by high levels of productivity" (NELEP, 2017, p. 19). The NE has some good firms in important growth sectors such as in the automotive sector but many more indigenous businesses need to improve their productivity levels. One way of improving productivity is through internationalisation thus gaining higher returns for products in foreign markets. HGSFs seem to have a higher incidence of exporting than non HGSFs (Hagen & Zucchella, 2014) it is

therefore important to consider the evidence provided by this thesis of the internationalization of HGSFs.

1.3.6 Internationalisation and the North East

The NE is one of the few regions within the UK to achieve a trade surplus. Figure 8 shows the regional differences in UK trade. Exports in the NE in 2015 were estimated to be £12.1 billion against imports of £8.7 billion resulting in a trade surplus of £3.4 billion. This, although seemingly impressive, masks the facts that the NE has one of the lowest aggregate exports of any region and that the figures were skewed by two major industries car (£6.5 billion) and chemical (£3.8 billion) manufacturing which represented 86% of all exports from the region (ONS, 2016a). This would indicate a vulnerability related to the reliance on two major companies within the region which could be further exacerbated post Brexit. Also, goods exports account for a larger proportion of GVA in the North East than any other UK region. It represented about 30% of total GVA in 2015. It is gauged that based on the type of firms in the region the export sector has the potential to add £0.8-1bn to GVA. The opportunity exists to further develop key value chains through the development of HGSFs and the synchronicity to indigenous businesses (Kresl, 2015).

Figure 8: The North East Trade Position



Source: (ONS, 2016b)

The creation of indigenous businesses that have high growth potential is dependent upon the incidence of entrepreneurship and the aspirations for growth of these indigenous firms (MacKenzie et al., 2016). As outlined in Figure 4 entrepreneurship is a key aspect of HGSFs and the relationship to policies addressing regional disparities.

1.3.7 Entrepreneurship and the North East

This thesis is predicated on understanding the role of the founder entrepreneurs of HGSFs within the NE. The impact of entrepreneurship is a contextually based notion (Hindle, K, 2010). Hindle's (2010) defined entrepreneurship as a "the process of evaluating, committing to and achieving, under contextual constraints, the creation of new value from new knowledge for the benefit of defined stakeholders" (Hindle, K, 2010, p. 99). This implies that entrepreneurial opportunities arise in a social (regional) context (Hindle, K, 2010). The incidence of entrepreneurship and the impact of the entrepreneurial process is dependent on constraints and the receptivity that exists within the NE region (Hindle, Yencken, & O'Connor, 2011). Entrepreneurship policy has been defined as "a public program designing to influence the level of entrepreneurial vitality in the society" (Lundstrom & Stevenson, 2001, p. 19). Policy focused on entrepreneurship involves different varieties of public programs (Hart. & Anyadike-Danes., 2014). Some confusion has arisen in the literature regarding entrepreneurship policy and other initiatives such as innovation policy (Hinton & Hamilton, 2013).

The evidence related to HGSFs is consistent. As indicated previously relatively small number of firms account for a relatively large contribution to job creation and the stimulated economic growth that comes from regional entrepreneurship. These gazelles (Birch, 1979) more than make up for the lack of job and GVA growth of the typical static start-up (Henrekson & Johansson, 2010). In the past, the policy makers within the region have been fixated on increasing the number of new start-up firms. Studies indicate that this bias is unlikely to increase the employment or GVA growth needed to fulfil the economic growth aspirations of the region (Gibb, 2000; Shane, 2009a). While a number HGSFs may well be newly created firms, only a relatively small proportion of new firms succeed in achieving high growth status (Mason et al., 2009). There have been several myths created around the whole impact and efficacy of increasing the number of start-ups; that it will transform underperforming economic regions, cause increased innovation, create more jobs and more

importantly generate more knowledge-based jobs and lead to an overall improvement in productivity. The value of the emphasis on start-ups has been called into question, it has been termed the “start-up myth” and indicated that the focus should change to HGSFs development as emphasised within this research (Shane, 2009a).

There is a seeming paradox of economic growth in that the wealthier a region becomes then the number of start-ups diminishes (Blanchflower, 2004). As a region gets wealthier, real wages rise, the opportunity cost of owning a business goes up because returns for working for someone else increases. Higher wages incentivise people to get jobs as opposed to set up in business (Noorderhaven, Thurik, Wennekers, & van Stel, 2004). Encouragement to start a business may be focused upon providing incentives for failure (Ouimet & Zarutskie, 2014). It has been suggested that policies attracting unemployed people to start businesses is essentially “attracting the worst entrepreneurs” (Shane, 2009b, p. 7). This is because their entry opportunity cost is lower therefore the motivation to succeed is lower. Most jobs are created by companies that are over ten years old (Delmar, Davidsson, & Gartner, 2001). The ratio of start-ups to sustainable jobs is quite telling, studies in the USA indicates that, on average, the ratio of start-ups to sustainable jobs after ten years is 5 to 1. So approximately fifty start-ups create 10 sustainable jobs (Shane, 2009a). HGSFs, as previously indicated have a much greater impact on job creation so this study is relevant to addressing this issue within the NE.

Certain authors would suggest that having a focus on establishing typical start-ups is not the way to improve economic growth and generate more jobs (Bornhäll et al., 2015; Shane, 2008). Only a limited number of entrepreneurs will create the businesses that will generate economic growth and create meaningful jobs through innovation and productivity improvements (Shane, 2008). Policy approaches between start-up generation, productivity and the creation of more highly skilled jobs need not be mutually exclusive. Self-employment and new businesses in new sectors are both key elements of a dynamic regional economy but it is important for the NE region to focus on those factors that will increase GVA such as profitability and productivity (Kiviluoto, 2013). Policy support for HGSFs could achieve a step change in employment and productivity. Assisting the growth of existing businesses will probably provide better results than an unimaginative focus on closing the gap in business density (Shane, 2009a).

There has been and continues to be a significant level of grant funding and quasi venture capital investment put into the NE business sector (Kelly & Gray, 2013). The investment or grant awarding process has focused upon identifying businesses based on their growth potential. The appraisal of the potential for growth is generally based upon the self-presentation of the investee businesses. This commercial tautology has led to large sums being invested on a generally unscientific basis (Diambeidou & Niemvo, 2011). The justification for this funding has been based upon the rather weak evidence of accretive value creation, focused more specifically on job creation rather than the creation of profitable HGSFs. Profitable being the operative word as profitability leads to higher levels of investment and ongoing sustainability. Regional venture funds and support agencies have, for the past 15 years, invested hundreds of millions of pounds in supporting the formation and growth of NE businesses (NELEP, 2017). In recent years, the NE based venture funds have, by and large, focused their attention on technology-based businesses. There is no evidence that technology firms per se have a greater chance of achieving high growth than firms in other sectors (Brannback et al., 2014; Thompson-Elliott, 2016). Evidence also indicates that mature firms, on average 10 years old (Coad, Daunfeldt, & Halvarsson, 2017), constitute a large proportion of HGSFs (Coad, Daunfeldt, et al., 2017; Mason et al., 2009).

The merits of this thesis is to contribute to practice and policy in facilitating a greater return for the region on this large investment, by leading, to a fuller understanding of how, through its outcomes, a greater number of profitable HGSFs could potentially be created and supported in an economically disadvantaged and poorer region (Adonis, 2013; Mason & Brown, 2013). While supporting start-ups continues to be important the focus seems to be shifting to supporting entrepreneurial ecosystems. An entrepreneurial ecosystem has been defined as “a set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organisations (e.g. firms, venture capitalists, business angels, banks), institutions (universities, public sector agencies, financial bodies) and entrepreneurial processes which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment” (Mason & Brown, 2014, p. 5). Whilst business start-up and enterprise formation are undoubtedly important for local and regional economies, there has been a shift in thinking around how entrepreneurship should be supported, leading to a greater appreciation, without much evidence, of the entrepreneurship ecosystem as a whole (Isenberg, 2014; Stam, 2015). HGSF can have a positive impact upon

neighbouring firms, local employment can be boosted thanks to the presence of HGSFs (Mason et al., 2009).

Having considered the link between regional disparities and HGSFs the research objectives are designed to explore in an empirical way through a case study approach the unpredictable nature of events that trigger high growth in small firms. This is undertaken by a case study approach.

1.4 Research Methods

This study follows a phenomenological case study interpretivist approach, this is explained more fully in Chapter 3, using qualitative empirical methods through a process of Rich Picture (RP) interviews and Cognitive Mapping (Bandyopadhyay, 2015; Bell & Morse, 2013). This approach reflects the notion of the different perceptions and realities of the reasons behind the development of sustainable HGSFs whilst maintaining the sense of factual driven research. It is a process designed to capture the living experience of the entrepreneurs and the entrepreneurial teams involved in the growth process of an identified cohort of case study HGSFs. The approach reflects an understanding of theories, background knowledge and values, as well as the researchers' influence in what is observed (Conklin, 2014). It also reflects the researchers' pragmatism and professional experience and recognises the idea that all claims about the world are equally valid (Groff, 2004). This thesis presents a series of case studies based on capturing the phenomenological experience of firms undergoing high growth with critical reflection being an important element (Abebrese, 2014). The case study approach as Yin (2014) suggests allows a "contemporary analysis of complex phenomena" an exploration of what is going on and why (Yin, 2014, p. 23).

The methodology is a creative and intuitive approach allowing a better appreciation and understanding of what is happening in reality in relationship to HGSFs (Yin, 2014). It is understood that there will be an element of reflexivity and thus a recognition of the consequent bias and subjectivity. However, the necessary reflection is an effort to consciously and systematically examine the experience and actions in order to learn from them (Krogstie, 2010). Out of this learning this study will provide a better understanding of the process of high growth. The literature review indicates that a gap in the area of knowledge exists in relation to identifying and understanding the process of high growth

through the BSTEs that impact on rapid growth (Bessant et al., 2007). Another key theme is the relationships between growth events and the actions taken and the area of decisions required through transitions post BSTEs (Brown & Mawson, 2013). The thesis considers these actions through the perspective of absorptive capacity of the case study firms. The view of nonlinear or erratic growth is consistent with the focus on BSTEs and their impact and influence on HGSFs (Vinnell & Hamilton, 1999).

This study's question and objectives spring from the recognition that facilitating the development of more HGSFs in the NE will go some way to addressing the regional economic disparities it faces. The opportunity is greater for increasing the number of HGSFs in the NE if there is more understanding of the growth process, the nature of the events that trigger growth and the actions and decision taken post these events. There is a consideration of these events and how in trying to create a profitable HGSF, what the incidence is of BSTEs and what actions an entrepreneur or an entrepreneurial team take in transitioning the business from the incidence of a BSTE (Colombelli, 2015; Iacobucci & Rosa, 2010). In this context, the research question is:

“An exploration of how BSTEs impact HGSFs?”

The study addresses three major objectives:

1. To capture of the phenomena of the growth story through the perspective of the entrepreneurs/business owners of defined HGSF case studies.
2. To consider and explore the unpredictable nature of the BSTEs and identify and analyse the relationship between BSTEs and actions and decisions transitioning a firm post BSTEs.
3. To examine, through a broader framework of absorptive capacity, the actions taken by entrepreneurs and entrepreneurial teams during the process of high growth.

These objectives are addressed by taking a case study approach that captures the narrative of the growth story of a selection of HGSFs. The causal links between the BSTEs that triggered the growth of these firms and the actions taken and decisions made are considered through a soft systems methodology, which is outlined more fully in chapter 3. The objectives set the scene for the contribution to knowledge that the thesis makes, which is described in more detail in the final chapter.

1.5. Conclusion

The aim of this research is to consider and investigate the role played by Black Swan Trigger Events in the process of growth in High Growth Small Firms. The aim recognises the importance of HGSFs in the context of addressing the regional disparities experienced by slow growth regions such as the North East of England. This research is focused upon the BSTEs that stimulate high growth in a small firm. Recognising the importance of these firms in their ability to address issues of regional disparity. The literature related to this area of knowledge is maturing but as previously suggested there is a lack of qualitative empirical enquiry (Coad, Daunfeldt, Holzl, Johansson, & Nightingale, 2014). Considering the literature in this area of study, the way HGSFs are categorised, defined, the barriers to growth, their spatial incidence and the policies to encourage their existence gives credence to the research. Understanding what small firms experience in their high growth journey and studying their story provides insight that could have major policy implications for the NE and other underperforming regions. As outlined the impact and importance of HGSFs far outweighs the historic efforts placed upon encouraging start-ups and new firm formation (Shane, 2009a). That is why the region needs a vision for developing rapidly growing businesses and new ideas that create sustainable productive jobs.

Chapter 2 Literature Review

“If the literature shows us anything, it is that there is no such thing as a ‘typical’ high growth firm. These businesses are of varying age and size, operate across a range of sectors, exhibit a variety of business models, management styles and ownership structures, and achieve growth through a number of mechanisms and channels.”

(Brown, Mason, & Mawson, 2014, p. 8).

2.1. Introduction

The topic area of HGSFs has become a subject of great interest for researchers and policy makers. The literature review is fairly wide ranging, leading to a fuller understanding of the impact of HGSFs and their importance to regional economies. There is a significant crossover within the extant literature of a number theoretical domains. These domains have their antecedents in subject areas such as economics, strategic management, entrepreneurship and more specifically HGFs. The literature specifically related to HGSFs has been gathering momentum for the past four decades. As a consequence of this interest there are a number of areas to consider within the literature review. It has gained significant focus because of the political desire to address inequalities within regional economies and the creation of jobs. The introductory chapter dealt with certain aspects of the literature that linked the way of addressing regional disparities and the impact of HGSFs. It dealt, more specifically, with the common elements of productivity, entrepreneurship, innovation and internationalisation.

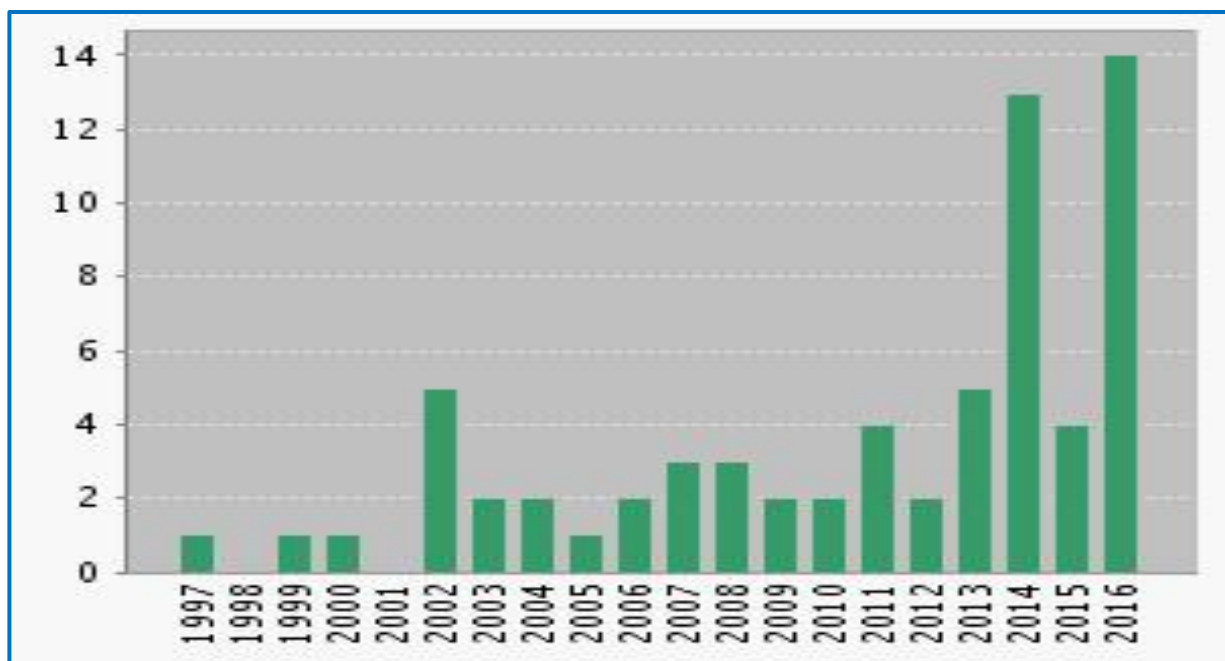
This chapter considers the literature that has most influenced HGSF knowledge. The general debate within the literature is reviewed. There is a summary of extant research from the perspective of the different sides of the HGSFs debate. This includes the factors influencing growth and the characteristics of HGSFs. Most importantly it considers the debate around the job creation aspects of HGSFs, as this is the main emphasis of the importance of this area of knowledge and probably the *raison d’être* for the whole study area of high growth firms. The extant research into HGSFs is placed within the context of the general theory of firm size with specific reference to the random theory versus strategic entrepreneurial aspects of growth. The concept of growth is analysed, what it means and how it is defined. The relationship between profit and growth is explored. Chapter 2 then deals with the links and relationship between HGSFs and the entrepreneur. There is then a consideration of the contrarian debate and a consideration of the rationale for this particular research, its basis and

its approach by deliberating the triggers for growth in terms of their predictability and the random nature of the process of growth.

2.2. Research Interest in HGSFs

There has over the past 40 years been a significant growth of studies and interest in HGSFs. Figure 9 plots the growth in publications related to the topic between 1970 and 2015. This was drawn by using key word search parameters of HGF studies categorised within the Web of Science database, these studies were drawn from entrepreneurship, economics, public policy, etc. Politicians in many countries have identified that their power ambitions are aligned with the promise of improved economic circumstances (Adonis, 2013; Krasniqi & Desai, 2016). Since Birch (1979) and because of developing knowledge HGSFs are seen as one of the ways of delivering on these political promises.

Figure 9: High Growth Firms Published Items Each Year for last 20 years



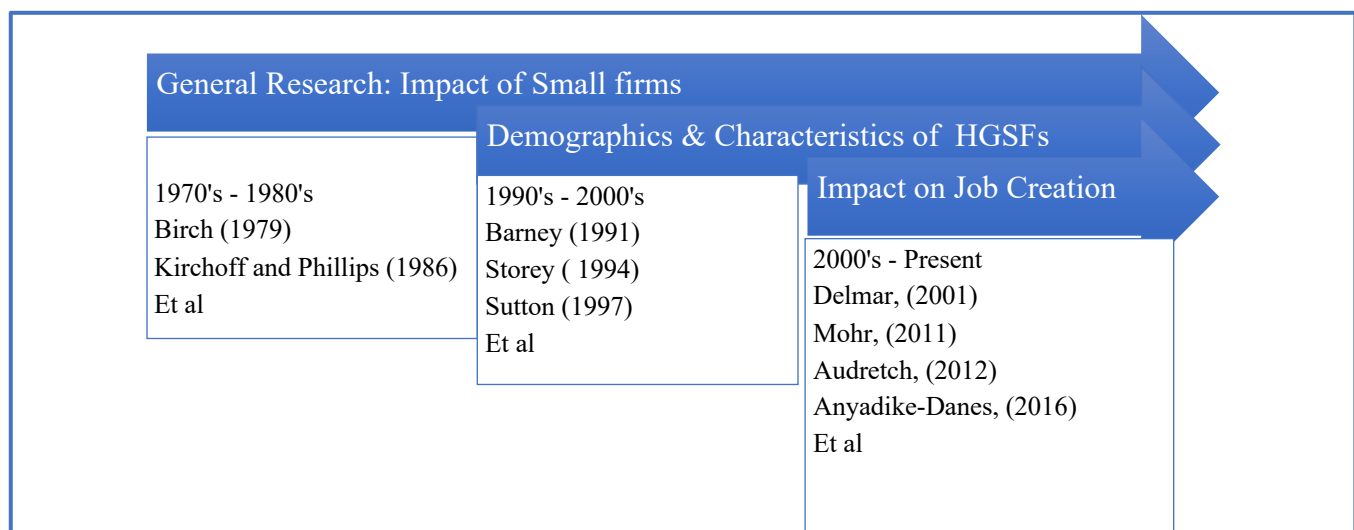
Source: (Web of Science, 2017)

As indicated in the previous chapter it is increasingly accepted that HGSFs are responsible for most new jobs created within an economy (Anyadike-Danes., Hart., & Bonner., 2012; Haltiwanger, Jarmin, Kulick, & Miranda, 2016; Henrekson & Johansson, 2010; Octopus, 2015). This view of job creation is supported by empirical evidence but little work has been undertaken to understand why HGSFs create more jobs than other firms (Anyadike-Danes et al., 2017). The acceptance of this has developed through the view that small firms in general

created more jobs (Birch, 1979; Kirchoff, 1987). The general research on small firm job creation has developed through the notion that a certain cohort of firms identified as high growth firms create a higher percentage of all jobs (Shane, 2009a). It is suggested that even within this cohort of gazelles (Birch, 1987) that there is a more dynamic cadre of super-gazelles that are responsible for an even greater number of jobs (Brown & Mason, 2010; Henrekson & Johansson, 2010). Researchers and economists have for decades been interested in firm growth from a general economic theory perspective and more recently from a specific ontological perspective. The academic interest seems to have developed over time from the generalities of the impact and formation of small firms to internal aspects of HGSFs through to the impact on job creation of HGSFs. Obviously this a very simplistic view of the literature related to the topic. Within these generalisations there are nuances of knowledge reflecting a lack of research into the process of the growth of HGSFs which is the main emphasis of this thesis (Dwyer & Kotey, 2016).

Figure 10 outlines, using a timeline, the sequential consequences of specific HGSF research. This puts into context how the research area has developed from a consideration of the impact of small firm growth on an economy and more specifically their important impact on job creation to the more specific aspects of HGSFs. The early work was generally based upon quantitative analysis and very much driven by the data that was available and the form it was available in. It was for the most part focused upon demographics and characteristics of HGSFs. In the past decade research has tended to focus upon the importance of HGSFs, the policy implications required to develop HGSFs and the causes of growth.

Figure 10: Sequential Research Interests on HGSFs



Source: Literature Review

2.3. The HGSFs literature debate

Many papers and studies have covered extensively the literature dealing with the growth of firms. It is now the case that a certain element of repetition, in the context of the various literature reviews is evident. The various aspects of HGSFs literature is considered in more depth throughout this chapter but in summary the general views are that HGSFs:

- are evident in many sectors: they can occur in many industries and are not necessarily based in high technology sectors (Brannback et al., 2014).
- tend to be older in age, view on average age varies some as high as 25 years old. (Audretsch, 2012). Younger firms can be HGSFs but they have distinct characteristics (Demir, Wennberg, & McKelvie, 2017).
- are innovative and continue to be innovative particularly in the area of product development.(Hindle, 2009) There is also an innovative spill out effect into other firms in the locality (Mason et al., 2009).
- have idiosyncratic growth spurts which are difficult to predict (Diambeidou, 2011; Littunen & Niittykangas, 2010).
- are more likely to have an international perspective in their business model. (Bamiatzi & Kirchmaier, 2014)
- are led by entrepreneurial teams or by entrepreneurs who quickly establish a competent team (Iacobucci & Rosa, 2010; Schjoedt & Cooney, 2009)
- leadership tends to be masculine. (Arroyo, 2016)
- size does not influence growth (McKelvie & Wiklund, 2010).

Various studies have also identified the internal and external factors that influence and impact upon the growth of firms. Table 1 represents these internal and external factors. These various characteristics of HGSFs and the factors impacting their growth have been debated continuously and there have been contrarian views that polarize these various factors.

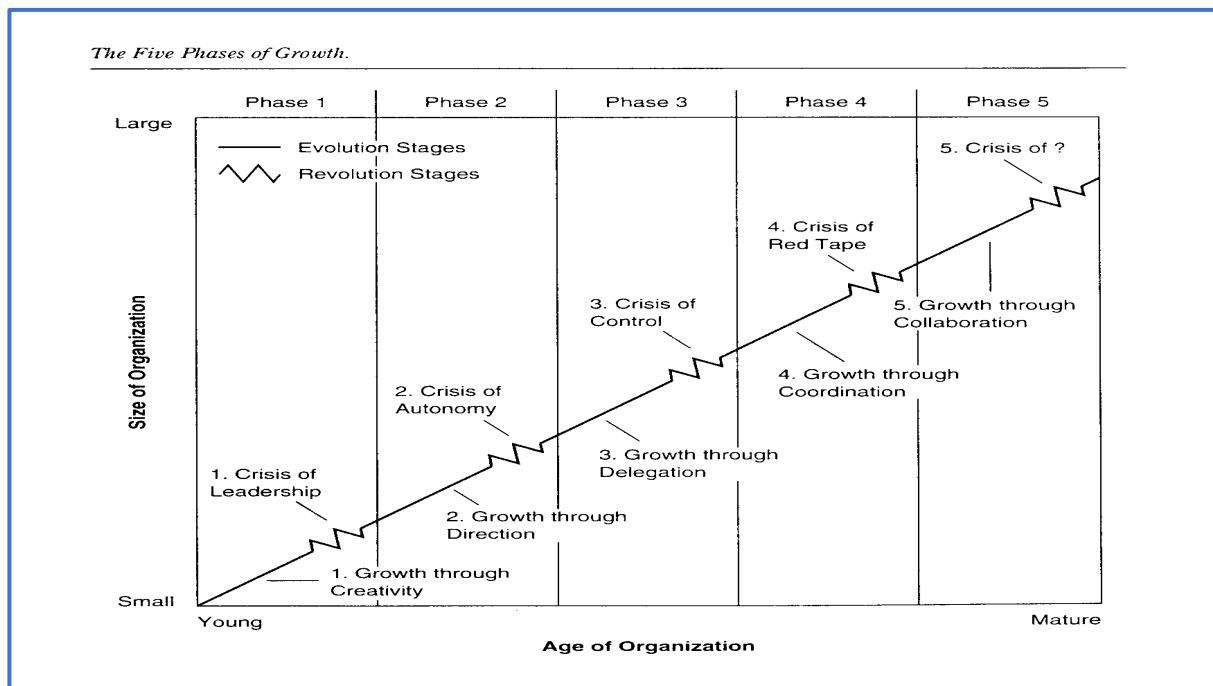
Table 1: Studies of Factors influencing growth

Factors	Topic	Authors
Internal		
	Access to Finance	D Audretsch, 2012; C. Mason & Brown, 2013.
	Management Capability	A. Bryson & Forth, 2016
	Separation between owner and manager	Mohr & Garnsey, 2011
	Resource Availability	Barney, 1991; Nason & Wiklund, 2015
	Vision, Motivation and Incentives for Growth	Delmar & Wiklund, 2008; Desai, 2017.
External		
	Economic Environment	Coad, Frankish, Roberts, & Storey, 2016.
	Regulatory Framework	Dollar, Hallward-Driemeier, & Mengistae, 2005; Kitching, Hart, & Wilson, 2015
	Tax and Incentives	Davidsson & Henrekson, 2002; Gampfer, Mitchell, Stamenov, Zifciakova, & Jonkers, 2016.
	Competition	Mazzucato & Parris, 2013.

The main debating points and analysis of previous research has been about what is the role of HGSFs in job creation (Birch, 1979; Shane, 2009). The debate revolves around the part innovation plays in the development of HGSFs (Hindle, 2009), a consideration of whether the growth is random or planned (Coad, Frankish, Roberts, & Storey, 2016; Henderson, Raynor, & Ahmed, 2014; Shepherd & Wiklund, 2009) and the influence of size, age and demographics on rapid growth (Anyadike-Danes, M., Bjuggren, C. M., et al., 2015).

Pre-Birch (1979) Greinier (1972) developed a model of growth for firms which reflects the concept of linear growth. Figure 11 outlines the Greinier model it details a “series of developmental phases through which growing companies tend to pass (Greinier, 1972, Pg 1). Other dimensions to the debate involve whether the growth stages of firms are idiosyncratic, predictable or unpredictable. (Littunen, 2010).

Figure 11: Five Phases of Growth



Source: Greinier (1972)

Literature has considered what policies influence growth if any do at all (Brown & Mawson, 2015). The literature has also considered whether involvement in certain industries influence rapid growth (Anyadike-Danes, Hart, Bonner, & Mason, 2009). There has been consideration of the incidence of barriers to growth and their influence on HGSFs (Lee, 2011). There is extant literature regarding the role that location or clustering play in the development of HGSFs (Audretsch, 2012). The role of internationalization in the development of HGSFs has been investigated (Falk & Hagsten, 2015). Although the debates around the various aspects of HGSFs have been seemingly rigorously studied there is a general view that still little is known about HGSFs (Audretsch, 2012). The whole framework of specific literature into HGSFs sits in the context of the general theories related to the size of the firm. This provides an historical and fundamental framework context for this research into HGSFs. Figure 12 considers the main debated and explored issues. The implication of these questions for this research is the indication of a gap in the extant research related to the process of high growth.

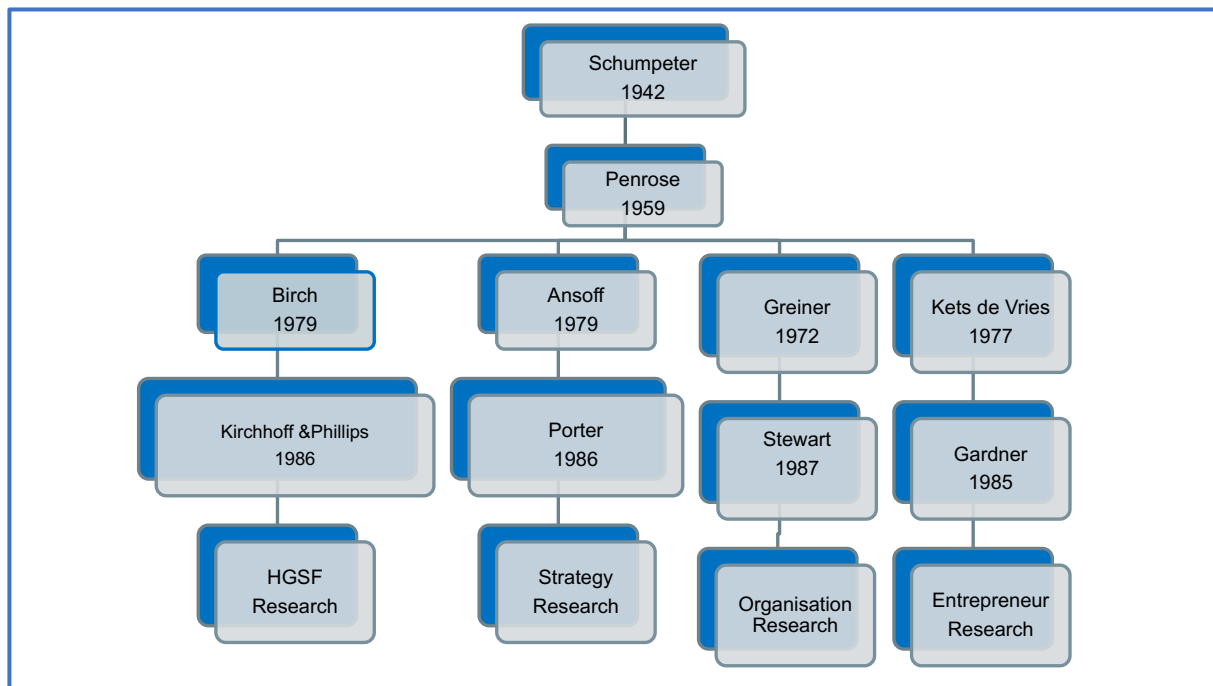
Figure 12: The main extant research questions and responses into HGSFs.

What is the role of small firms in creating jobs?	<ul style="list-style-type: none"> • Birch 1987: • Shane 2009 	<ul style="list-style-type: none"> • small firms create more jobs than large firms but HGSFs have even greater impact (Birch, 1987. Focus should be on scale-ups rather than start ups (Shane, 2009).
Does innovation play a large part in the development of HGSFs?	<ul style="list-style-type: none"> • Hindle 2009 • Mawson and Brown 2016 	<ul style="list-style-type: none"> • HGSFs are innovative and continue to be innovative particularly in the area of product development.(Hindle, 2009) There is also an innovative spill out effect into other firms in the locality (Mason et al., 2009a).
Is the growth random or planned?	<ul style="list-style-type: none"> • Coad, et al 2016 • Henderson, Raynor & Ahmed 2014 	<ul style="list-style-type: none"> • HGSFS are evident in many sectors: they can occur in many industries and are not necessarily based in high technology sectors (Brannback et al., 2014). HGSFs tend to be older in age,. (Audretsch, 2012).
What part do size, age and demographics play in growth?	<ul style="list-style-type: none"> • Anayadike-Danes 2015 	<ul style="list-style-type: none"> • Younger firms can be HGSFs but they have distinct characteristics (Demir, Wennberg, & McKelvie, 2016). Size does not influence growth (McKelvie & Wiklund, 2010).
Are the growth stages linear, idiosyncratic, predictable or unpredictable?	<ul style="list-style-type: none"> • Littunen 2010 	<ul style="list-style-type: none"> • HGSFs have idiosyncratic growth spurts which are difficult to predict (Diambeidou, 2011; Littunen & Niittykangas, 2010).
What policies, if any, influence growth?	<ul style="list-style-type: none"> • Brown & Mawson 2015 	<ul style="list-style-type: none"> • barriers to growth can be categorised by leadership, self-efficacy, knowledge and resource restraints (Sarasvathy, 2008; Lee, 2011).
Do certain Industries encourage growth?	<ul style="list-style-type: none"> • Anyadike-Danes, et al 2009 	<ul style="list-style-type: none"> • HGSFs can occur in any location (Audretsch, 2012)
What are the barriers to growth and what is their influence?	<ul style="list-style-type: none"> • Sarasvathy, 2007 • Lee 2011 	<ul style="list-style-type: none"> • HGSFs are more likely to have an international perspective in their business model. (Bamiatzi & Kirchmaier, 2014).
Does location or clustering play a part in the development of HGSFs	<ul style="list-style-type: none"> • Audretsch 2012 	
Do HGSFs have a higher incidence of Internationalisation?	<ul style="list-style-type: none"> • Falk & Hagsten 2015 	

2.4 General Theory of size of firms related to HGSFs

Several studies incorporate the general theory base related to the size of firms (Penrose & Pitelis, 2009). These general theories can be traced back to the work of Schumpeter (1942) and further back to the whole identification of the importance of the role of the Entrepreneur (Brannback et al., 2014; Schumpeter, 1942). Figure 13 indicates the antecedents of HGSF research.

Figure 13: Theory Base of HGSF Research



Source: (Derived from Literature Review)

The general theories related to firm growth have focused upon concepts related to the size of the firm rather than the more dynamic aspect of the actual growth of the firm (Derbyshire, Garnsey, & Heywood, 2013). Each generation of researchers developed theories relevant either to management of firm growth from a strategic perspective or the impact of growth from a dynamic job creation perspective. Schumpeter (1947) highlighted the disruptive role of the entrepreneur and that a firm's focus and stress should be on innovation, growth and profit, his work gave special importance to the role of the entrepreneur (Schumpeter, 1942). This emphasis on the entrepreneur was contextualized by Penrose in her work on the firm. The work of Penrose (1959) gives a perspective into the sustainability of business growth and suggests that the resources available to a firm will impact its size and that entrepreneurs and their teams transform a firm's resources into capabilities (Dillen, Laveren, Martins, Vocht, & Imschoot, 2014). This led to the ideas of the resourced-based theory of the firm (Barney, 1991). Timmons, et al (2016) suggest that "sustainability includes the concept of economic viability. Revenues and earnings must sustain ongoing business success" (Timmons & Spinelli, 2016, p. 97).

This Resource Based Theory of the firm sits alongside the theories of The Life Cycle Theory of the firm, a sequential narrative of firm growth (Littunen, 2010). The Minimum Efficient Size Theory, the long-term existence of firms is determined by their ability to reach a minimum efficient scale or minimum efficient size (MES). The MES has been defined as a “certain threshold that newly founded businesses should reach if they want to survive in their sector” (Almus, 2002, p. 3). The survival and sustainability of firms is reflected within the Sustained Competitive Advantage Theory (Barney, 1991; Penrose & Pitelis, 2009). This theory with the resource-based view can provide some reasons as to the endurance or lack of endurance of HGSFs. A competitive advantage occurs when a firms’ competitors cannot duplicate the customer benefits of another firm (Barney, 1991). These general firm size theories provide a broad but not specific analysis framework. They are a way of modelling and understanding the basis on ways in which firms achieve, in economic terms, their optimum size and it points toward a linear continuum of growth. This view of linear growth is countered by Gibrat’s Law which suggests that firms that experience high growth in one year will not, necessarily, have the same experience in later years (Sutton, 1997). However, it has been suggested that there is a serial correlation between firms that grow in one time phase and their growth in subsequent periods (Sutton, 1997).

In understanding firm growth there is an evident ignorance of the actuality of how firms grow (Kiviluoto, 2013). This probably results from researchers being unwilling to take the risk of moving or being seen to move too far from conventional theories. There is suggested in many theories that there are controlling influences that govern firm growth (Hamilton, 2010). This view is, seemingly, at odds with the notion that firms grow stochastically (Sutton, 1997). What this means is that a firm’s growth is as a consequence of a set of circumstances that are random or fall outside predictability and that the size of a firm evolves randomly over time (Rodriguez, Molina, Perez, & Hernandez, 2003). The main failure, in these rather static theoretical approaches, has been their inability to explain in any detail how firms actually grow (Levy, Lee, & Peate, 2011). In a broader context there has been consideration of whether firm growth is random as opposed to planned (Coad, Frankish, Roberts, & Storey, 2015; Henderson et al., 2014). This has led to a discourse related to the role of strategic management and its influence on HGSFs (Demir et al., 2017).

It seems that a great deal of effort has been put into trying to make strategic management theories fit the HGSF theories (Demir et al., 2017). It is as though by suggesting that

randomness, luck or serendipity play a part in firm growth that somehow this adversely impacts upon the role of strategic management theories (Thien, 2016). HGSF theory and strategic management theories can be reconciled by recognising the temporal and dynamic aspects of high growth. It is evident within this thesis that as firms grow, as they develop absorptive capacity over time, then there is a move along a continuum from intuitive entrepreneurial orientation towards a more formalised strategic management approach (Lechner & Gudmundsson, 2014). More particularly the literature specific to HGSFs has attempted to deal with the static and linear nature of the more general theories related to firm growth as opposed to the real dynamics and process of firm growth (Levie & Lichtenstein, 2010).

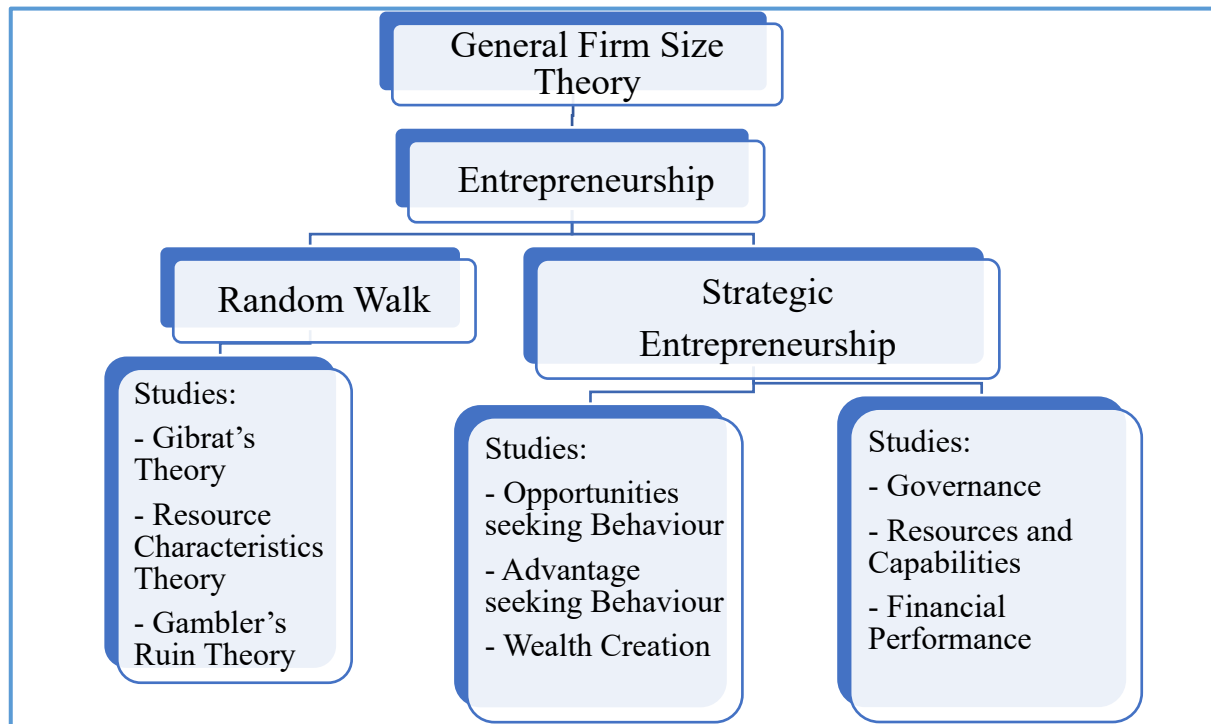
2.4.1 Theories of Random Walk and Strategic Entrepreneurship

The dissatisfaction with static theories has led to a greater desire to understand the more dynamic aspects and the actuality of firm growth. The focus has moved from size to growth as the main unit of measure (Henderson et al., 2014). In fact, it is suggested that there is no correlation between the size and the growth of the firm (Coad et al., 2012). This contention has been questioned by a number of studies that have identified that there are connections between growth rate and size of the firm (Delmar et al., 2003; Sutton, 1997). This would then lay open the idea that the growth of the firm is not random (Henderson et al., 2014). Moving from a static analysis of the firm to a more dynamic one has led to a more multi-dimensional analysis of firm growth.

The drive and desire to understand firm growth has, over time, focused upon the role of the entrepreneur. This focus has generated a vast amount of research (Brannback et al., 2014) related to the role of the mythical super hero, the entrepreneur, who creates and causes wealth creation. Hindle (2009) suggested that the role of the entrepreneur was to commercialise invention. Without getting into definitions of entrepreneurship or an understanding of studies into entrepreneurship, it is enough at this stage to recognize the debate around the success of the entrepreneur and the link to a firm's growth. Is the process of this success one of strategic planning, which is covered by research into strategic entrepreneurship? Is it a random process as defined by theories related into the "Random Walk"? These theories are discussed more fully in the following paragraphs. Figure 14 indicates two areas that have been investigated in

relation to entrepreneurship and highlights several specific areas that have been considered under the two general branches.

Figure 14: General Firm Growth Theory and Entrepreneurship



Source: (Derived from Literature Review)

The Random Walk theories suggests that a firm's growth is a consequence of a random set of circumstances and would happen irrespective of the resources or competencies of the firm or the entrepreneur. Coad, et al (2013) explained randomness in the firms' growth rate based on Gambler's ruin theory where "firm growth is best seen as a random walk undertaken by optimistic entrepreneurs." (Coad et al., 2013, p. 6). Derbyshire, et al (2013) have debated the outcome of Coad's work questioning the precepts on which the research was undertaken. An important point is established in their paper that if a firm's growth is predominantly random then the entrepreneur cannot influence the outcomes, particularly the case for start-up firms. This then means that the policy for encouraging growth becomes redundant and questions the value of scholarly literature (Derbyshire et al., 2013). Derbyshire, et al (2013) also distinguish between "ontological randomness" and "epistemological randomness". The former being an inherent feature of the universe and the latter recognizing the view that randomness reflects the "infeasibility of identifying and measuring causes but does not imply that causes do not exist or the absence of agency" (Derbyshire et al., 2013, p. 4). The paper gives rise to several important notions in the context of this particular study. Particularly the

various connections between unpredictability, agency and the context of strategic entrepreneurship.

Strategic Entrepreneurship (SE) has been seen as a necessary merging of strategic management and the role of the entrepreneur in the activity of creating wealth (Ketchen, Ireland, & Snow, 2007). According to Ketchen (2007) Strategic Entrepreneurship “refers to a firms pursuit of superior performance via simultaneous opportunity-seeking and advantage-seeking activities” (Ketchen et al., 2007, p. 1). Figure 15 is a representation of the way that the aspects of strategic entrepreneurship are interrelated and involve a coordinated approach to opportunity seeking.

Figure 15: Aspects of Strategic Entrepreneurship



Source: (Herbert, 1998)

Klein, et al (2012) suggest that current research into SE is based around a set of assumptions to do with decision making (Klein, Barney, & Foss, 2012). This view is particularly focused upon predictable and unpredictable risks and the consequent decision-making process leading from these types of risk. This connection between decision making and risk is a relevant concept for this research. It is suggested that SE can then be conceived as the study of individuals building economic institutions to create wealth under conditions of Knightian uncertainty (a risk which is immeasurable), where traditional profit maximizing decision

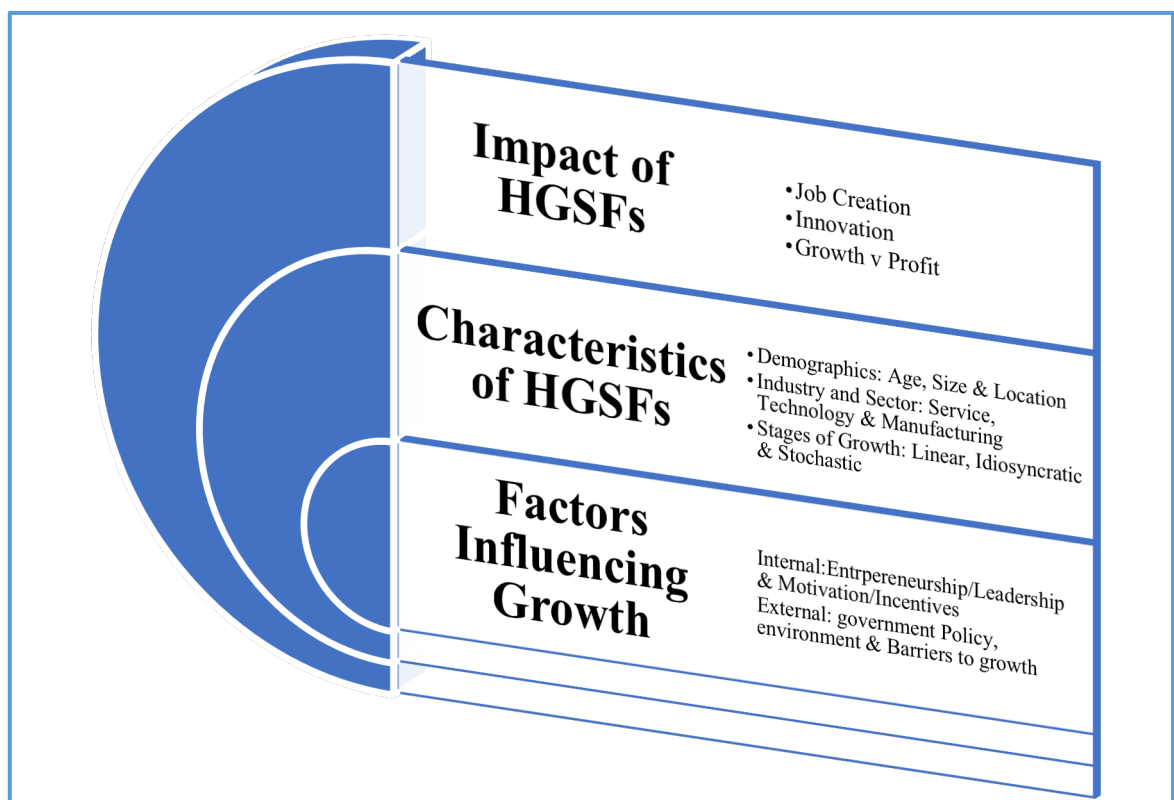
making criteria may be replaced with other kinds of decision rules, such as preserving jobs or investing in people through training and development. Each of these is an example of activities that would reduce profit. The SE approach emphasises the way that resources are assembled and allocated to create wealth (Klein et al., 2012). It could be argued that all profit seeking firms are established with one of the main purposes being that of creating wealth for the individuals who are involved.

The relationship between the theories of Random Walk and SE is an interesting one. The two theories seem to be in conflict in relation to the process of firms' rapid growth, random as opposed to planned high growth (Timmons & Spinelli, 2016). It may well be that the sequential nature of opportunity and then the action to take advantage of that opportunity fits well with the process of the way HGSFs develop, another key aspect for consideration in this research, "entrepreneurs consistently focus on the market-based opportunity rather than the money, resources, contacts, and appearances. The entrepreneur's credo is to think opportunity first and cash last." (Timmons & Spinelli, 2016, p. 33). Several studies have considered the different strands and streams of exploration related to tension between the almost random anarchic entrepreneurial approach and the orderly strategic management perspective. The work of Demir, et al (2016) reviewed the empirical literature concerning HGFs with a focus on the strategic aspects contributing to growth. The work identified five drivers of high growth: "human capital, strategy, human resource management, innovation, and capabilities" (Demir, 2016, p. 2). Distinctions have been drawn between randomness as "characteristic of a sequence" and randomness as "characteristic of the process or event that produced the sequence" (Henderson et al., 2014, p. 4). One of the conclusions of the paper was that random and resource views are not competing but are in fact complementary if an "epistemological approach to randomness is adopted and if agency is attributed to the entrepreneur, who systematically turns the unexpected event to their advantage" (Henderson et al., 2014, p. 10). Random Walk theory applies to the event and strategic entrepreneurship theory applies post the event. Each of these theories provides a momentum perspective for the growth of a firm but they do not explain the dynamics of the growth that really is left to an understanding of the various categories of research into HGSFs.

2.5 General Categories of HGSFs literature and the gaps in the literature

Although general theories of firm size and the more general theories of growth give an indication as to the importance of resource allocation, strategic orientation, the role of the entrepreneur and the variations in the decision-making process of the dynamics of growth they do not deal with the characteristics or specifics of the process of high or rapid growth (Dwyer & Kotey, 2015; MacKenzie et al., 2016; Mthimkhulu & Aziakpono, 2016). Figure 16 indicates the three general categories of research into HGSFs: the impact of HGSFs, their characteristics and the factors influencing their growth.

Figure 16: General categories of research into HGSFs



Source: Literature Review

Research has generally, focused on the demographics of growth; business age, industrial and initial size (McKelvie & Wiklund, 2010). Certain studies indicate that size and age are correlated (Huhler & Kuhl, 2016; Perényi & Yukhanaev, 2016), a number of empirical studies suggest that it is, in fact, young start-ups that have higher growth rates rather than small firms per se (Haltiwanger et al., 2013). Certain studies have also, in large part, concentrated upon barriers which can constrain growth or centred upon aspects such as

access to finance, difficulties in exporting, etc. (McKelvie & Wiklund, 2010). Researchers have generally emphasized the sequential growth of firms (Littunen & Niittykangas, 2010). This sequential narrative has stipulated stages of progression which are suggested as being common to all HGSFs. The assumption of linear growth has led to the more general assumption that the rapid growth of a firm will automatically lead to success and sustainability. The faster the growth the better rather than sustainable growth (Kiviluoto, 2011). Few studies have been undertaken related to the high growth path followed by firms in different contexts (Gupta et al., 2013). There have been studies related to the general growth path of firms (Greiner, 1972; Kao, 1991; Timmons & Spinelli, 2016).

A number of papers have highlighted the simplistic approach to the knowledge about HGSFs: the lack of longitudinal studies (Delmas & Wiklund, 2008) and the focus on the life-cycle of HGSFs have been identified as a weakness in the knowledge about HGSFs (Levie & Lichtenstein, 2010). There has been little evidence gathered on the negative factors that influence growth in HGSFs in comparison to those of static firms (Levy et al., 2011). Not a great deal is known about the “internal growth dynamics of HGSFs” (Leitch et al., 2010, p. 3). There has been a tendency to concentrate on the extent to which firms grow, rather than examining their internal processes of growth. Certain empirical evidence has demonstrated “that firm growth is in fact a fundamentally idiosyncratic and unstable process” (Vinnell & Hamilton, 1999, p. 5). The theory base behind alternative growth paths like “jumps and skips” stages (Masurel & Van Montfort, 2006) and different ways of defining growth stages of firms seemingly has not been fully explored. As indicated in the introduction section of this chapter more recent research has identified trigger points (Brown & Mawson, 2013) or tipping points (Bessant et al., 2007) as important in the overall growth surges of firms. The events although significant and important are in the context of the actions taken post the event. The effects of the way that these transitions are dealt with can be negative as well as positive.

The seeming idiosyncratic nature of firm growth would suggest that the randomness of events could have a significant impact on the prospects of the firm (Coad et al., 2013; Vinnell & Hamilton, 1999). The implications of this for entrepreneurial teams could have a profound effect on how they deal with their resource availability and allocation. A great deal of enquiry to date has generally by-passed the notion of creating profitable or sustainable firms it has, as previously indicated, focused on growth (Brannback et al., 2014). It may well be that in

following the money in a narrow way, based upon policy makers' objectives, researchers have in fact done a disservice to those that would have benefited from a more robust approach to an understanding of what profitable HGSFs need. This relates in particular to the formation of policy and support that would be beneficial to HGSFs. This in turn is based upon an understanding of what triggers growth, how do firms manage rapid growth and an understanding of the area of action and decisions required. This thesis addresses and contributes to these issues.

2.6 The concept of growth and HGSFs

Most literature by the very nature of the topic is focused upon aspects of growth. There has been an attempt to understand the impact and incidence of HGSFs through an understanding of the various aspects of growth: how do they grow? (Mohr & Garnsey, 2011), where do they grow? (Anyadike-Danes & Hart, 2016), what causes the growth? (Daunfeldt, Elert, & Johansson, 2016), who causes the growth? (Coad, Nielsen, & Timmermans, 2017) and how can the growth be influenced (Alessi, Barigozzi, & Capasso, 2013). It needs to be recognized a weak correlation between different indicators of growth (sales, employment or assets) has been highlighted and between different formulae for computing growth (absolute, relative, and regression line) (Lopez-Garcia & Puente, 2012). The type of indicator and formula used for measuring growth has an impact on the nature of the relationship between a number of independent variables and firm growth (Weinzimmer, Nystrom, & Freeman, 1998). There has been a reflection upon the appropriateness of comparing various methodological choices in relation to growth and questions whether like is being compared to like (Shepherd, 2009).

There have been questions about the consequent usefulness of studies that use different comparators and the "appropriateness of the knowledge accumulation" resulting from this research (Shepherd, 2009, p. 105). In establishing the definition, description or classification of HGSFs the extant literature has established that it is important to understand what is meant by the concept of growth. It has been suggested that there are a number of practical and concrete selections to be made; related to time period of measuring firm growth, using relative or absolute measures of growth and the choice of growth factor (Senderovitz et al., 2016). The choice of growth measurement influences the definition and categorisation of HGSFs. This choice of measurement can lead to issues of identification of HGSFs which

impacts on the efficacy of policies related to supporting firm growth. In this context, it is important to consider what is understood by growth and how it is measured.

2.6.1 Firm growth and its measurement

Compared to factors influencing growth and the characteristics of HGFs there has been less consideration of the modes of growth and how the growth of HGSFs can be maintained (Moreno & Coad, 2015). An area that has been under researched has been the topic of the process of high growth. McKelvie and Wiklund (2010) identify three conceptually distinct streams of research related to the growth of small firms. The first area considered was “growth as an outcome/output” (McKelvie & Wiklund, 2010, p. 2). This seems to be the largest area of research to date, where growth is the dependent variable and the aim of the literature has been to explain the varying rates of growth. Certain factors have been identified that effect the veracity and the isolation of the measure of growth that indicates what has a consistent effect upon the growth of a firm. It is difficult to arrive at a reliable “predictor of growth” (McKelvie & Wiklund, 2010, p. 11). This is a consequence of the variability and differences in the units of analysis, modes of growth and importantly the willingness to grow (Desai, 2017; Lee et al., 2016).

The second area considered was growth as input: In these studies, growth is an independent variable and the consequences of growth are examined. Studies in this area tend to use life cycle or stage models, based upon a biological analogy, in describing a firm’s lifespan (Littunen & Niittykangas, 2010). The criticisms of this tend to suggest that it is deterministic and that growth is inevitable (Berghlund, 2015). In general terms these studies do not allow for different patterns of growth nor do they allow for other growth modes, organic growth or growth by acquisition (Lee et al., 2016).

The third area was “growth as a process”. These studies focus upon how firms grow. They tend to be influenced and informed by Penrose’s theory of growth (1959). McKelvie and Wiklund (2010) consider that modes of growth; organic, acquisitive and what they term as hybrid growth can provide better insights in causal mechanisms behind growth (Mawson & Brown, 2016; McKelvie & Wiklund, 2010). Needs more

It has been suggested that research is often started from the premise that growth for its own sake is good and desirable (Brannback et al., 2014). Growth has been linked with positive performance and consequently is perceived as an indicator of success (Kiviluoto, 2013). There is a convoluted cycle of unclear terminology with terms interchanging, growth, performance, success and profitability. These terms are related to a firm in many contexts but in an unclear and at times misleading way. Kiviluoto's (2014) study points to the fact that in wanting to predict performance many published articles used performance as the dependent variable. Implied in this comment is the question of what was meant by performance? This study also highlights the variety of performance measures used. A large element of the published research has used a significant assortment of performance measures (Richard, Devinney, Yip, & Johnson, 2009). Richard's et al (2009) established that 207 performance measures had been used in 213 articles.

The multidimensional nature of growth is evidenced by the differing conceptualised aspects of performance (Denicolai, Ramusino, & Sotti, 2015). In using performance as the dependent variable different terms have been transposed for the term performance: profit growth, sales growth, R&D spending growth, employment growth. There are obviously problems in measuring growth and the consistency of findings is questionable if the common definitions are lacking. How do you measure different types of growth, is it measured in relative or absolute terms? It is not the place of this research to get into the esoteric debate around measurement consistency or the validity of the measurement criteria or the measurement processes used. It is however important to consider these issues in the light of establishing valid indicators of growth.

Growth is a process leading from an event, in most cases it is erratic (Vinnell & Hamilton, 1999) and it happens over time (Penrose & Pitelis, 2009). Typically, this time frame has been between one to five years (Shepherd & Wiklund, 2009). The predominant method of linear analysis of firm growth can mean that fluctuations or the skips and jumps of growth (Levie & Lichtenstein, 2010) can be missed. Most data used in the analysis of firm growth is based upon annual reports and therefore is only providing a snap shot of a firm's growth. By aggregating and averaging over time there is a potential failure to recognise the surges of growth and the events or processes that have led to the growth. The exploration of simple correlations is complicated by the difficulty of comparing like with like? (Brannback et al., 2014). There seems to have been developed an established convention of using certain

performance measures but very little has been said about the reasons for choosing these performance measures (Achtenhagen, Melander, Rosengren, & Standoft, 2014). It makes sense that the growth measures used must be representative and relevant to the people using the research, this research uses absolute growth figures over a three-year period, this allows a consistency for comparison in identifying potential case studies.

It has been suggested that there has been inconsistency in the way that “the concept of performance was applied” (Miller et al., 2013, p. 2). The criticism was levelled that authors used different general concept definitions for the theoretical aspects and then more specific criteria for empirical work (Daunfeldt et al., 2015; Piazza et al., 2016). These inconsistencies, it was argued leads to “a situation that creates substantial difficulty in effectively interpreting research” (Miller et al., 2013, p. 2). More damningly it was argued that luck had played a role in getting the study outcomes. The pressure to publish and the researchers making easy choices is leading to oversimplification of published research (Miller et al., 2013). Given the importance of understanding performance and the relationships to various methods of measuring performance an appreciation of the dynamic between profit and growth is crucial. It is accepted that the entrepreneur sees profit or wealth creation ultimately derived from the profitability of the firm as a key driver for enterprise and a key performance indicator (Kiviluoto, 2013). Although there has been much focus upon growth, little has been explored into the relationship between profit and growth (Bornhäll et al., 2015; Mundt, Alfarano, & Milakovic, 2016).

2.6.2 Firm Growth and Firm Profits

Profit is an absolute term whereas profitability is a relative term (Tulsian, 2014). Profit is static in the sense that it is a descriptor of firm performance whereas profitability is a good measure of a firms operational efficiency (Brannback et al., 2009; Tulsian, 2014) Profitability provides a benchmark and validation of the business model for entrepreneurs. It also provides cash flow and consequently the ability to command resources to grow the firm. (Delmar, McKelvie, & Wennbergd, 2013). A study of 500 US firms, controlling for age, industry and ranking, found that high growth is not necessarily combined with profitability, the research indicated that “growth in sales and number of employees is unrelated to profitability” (Markman & Gartner, 2002, p. 72). In a five year study of high growth firms and firms that did not experience high growth it was found that the profitable high growth

firms success in achieving profitable growth was related to their value innovation (Chan Kim & Mauborgne, 2004).

The lack of quality of data related to new firms and HGSFs has impaired the ability to fully explore the relationship between growth and profitability leading to a gap between the more “theoretical” ideas of growth per se and the empirical findings related to rapid growth (McKelvie & Wiklund, 2010). It is suggested that profitability is a form of feedback relating to the efficacy and effectiveness of the firm in its market and that it “limits the risk related to acquiring and relying on external resources” (Delmar et al., 2013, p. 279). This thesis deals with the empirical aspects of high growth using a narrative form of data gathering that builds a bridge between the theory and the actuality of rapid growth. The inclusion of profit within this researches definition ensures the sustainability of the HGSFs studied.

The extant research reveals that the relationship between firm growth and profitability is complex (Senderovitz et al., 2016). Empirical evidence is extremely mixed; studies show contradictory outcomes (Davidsson, Delmar, & Wiklund, 2006). Few studies have empirically investigated the growth/profitability relationship for samples of high-growth firms (Kiviluoto, 2011). Recognizing the growth/profitability relationship and the strategic orientation that influences this relationship: the ability of a firm to grow profitably should, to some extent, depend on the strategy it pursues (Davidsson et al., 2006). Growth is a dynamic process and often involves change in organisational structures and investment. The risk reward matrix is a reflection often of the speed of willingness to change, the way that change is introduced and the level of investment prepared to be entered (Davidsson, Achtenhagen, & Naldi, 2010). Profitability leads to firms having resources to invest and the ability to self-finance growth (Coad, 2009).

Although “gazelle” growth seems to be fragile, particular strategies have a significant impact on growth and profitability (Senderovitz et al., 2016). The importance and imperative link between growth and profitability has been drawn by Brannback, et al (2014) and Kiviluoto, (2011). The research found no concern by reviewed authors with the growth and profitability relationship, it was found that only four studies out of 118 reviewed for the book were concerned in some degree with the growth and profitability of privately held firms. It was further indicated that entrepreneurship scholarship is currently not paying attention to these aspects of sustainability and profitable growth. The link is drawn by connecting the purpose

of the entrepreneurial activity. The authors, either explicitly or implicitly define entrepreneurship as “the purposeful activity (including an integrative sequence of decisions) of an individual or group of associated individuals, undertaken to initiate, maintain and grow a profit oriented firm” (Brannback et al., 2014; Kiviluoto, 2011, p. 18). On the basis that this definition captured three fundamental aspects of entrepreneurship. It was suggested that entrepreneurial activity is about start-ups, it is about the profitable sustainability of firms and more fundamentally it is about profitable growth (Brannback et al., 2014). This link between the entrepreneur and growth is pivotal to the whole concept of HGSFs, you do not get one without the other.

2.7 The Link between HGSFs and Entrepreneurial Leadership

Recently it has been advocated that “growth may be less determined by firm level characteristics and more down to what happens within the firm itself” (Schofield, McNeill, Baines, & Antcliff.V., 2015, p. 6). This is related to the micro aspects of HGSFs, which is relevant to this thesis in that it is focused upon the process of growth, what triggers growth and what actions and decision are made to facilitate growth. At the heart of this is the entrepreneurial founder of HGSFs. A new focus is being generated by concentrating upon the entrepreneurial leadership responsible for business growth (Schofield et al., 2015). Gartner (1989) concluded, “that entrepreneurs are a mixed group and that entrepreneurship is something one does, and not who one is” (Gartner, 1989, p. 19). The entrepreneurial leader provides one of the key drivers for firm growth which is the motivation for growth, the desire to grow (Delmar & Wiklund, 2008). This has been termed a “growth mindset” (MacKenzie et al., 2016). A consideration of the link between growth motivation and growth supports the notion of a positive relationship between growth motivation and actual growth (Davidsson et al., 2006). Not all business owners want to grow their business, can they be deemed to be entrepreneurs or just self-employed? (Shane, 2008). Entrepreneurs bring leadership and capabilities to the task of rapidly growing a firm (Koryak et al., 2015). How decisions are made, emphasised by entrepreneurial cognition and the intentions of entrepreneurs reflecting motivation for growth are areas of increasing interest (Busenitz & Barney, 1997). Figure 17 outlines the aspects of a growth mindset that seem to be elemental to its presence (Schofield et al., 2015).

Figure 17: Elements of a Growth Mindset



Source: (Schofield et al., 2015)

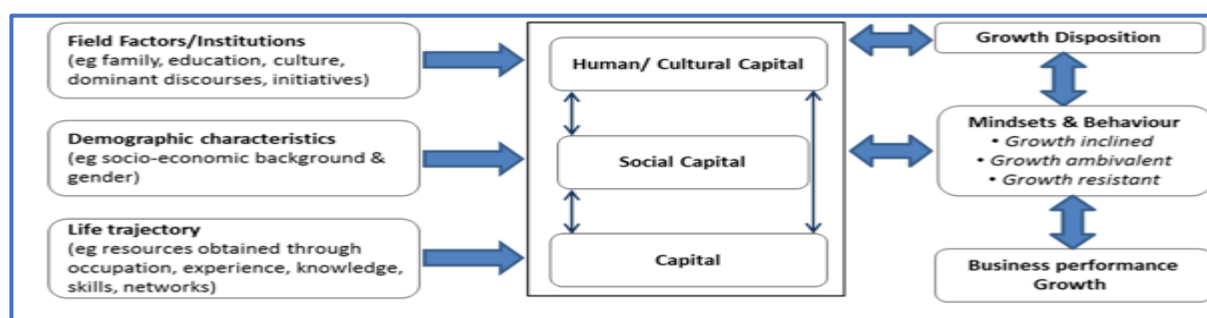
The idea of successful entrepreneurial capabilities and competence depends on accepting that learning is central to successful entrepreneurship (Cope, 2011). While extant research has found that experience is important for learning, an important question is how this happens in practice (Gibb, 2000). Reflection and reflective thinking are an important aspect of the experiential learning that create entrepreneurial success and are fundamental to HGSEs (Cope & Watts, 2000), “experiential learning theory says that taking time to reflect is key” (Schofield et al., 2015, p. 25). A growth mindset can change over time. It might well be that ambition and aspiration grows as the firm grows (Hessels et al., 2008). The above ideas are important in the context of this thesis in understanding the development of learning consequent to a BST.

Entrepreneurial leaders perform two key tasks: first, identifying opportunities and second commanding the resources to exploit the opportunities (Gupta et al., 2013; Gupta, MacMillan, & Surie, 2004). Prior knowledge of the domain (i.e. industry) has a positive influence on the number of market opportunities identified (Shane, 2000). Thus, entrepreneurial leadership is critical for bringing capabilities to bear on exploiting opportunities. These capabilities develop over time with an emphasis on heuristic learning, experimentation and creative improvisation (Gibb, 2000; McMullen & Shepherd, 2006). The entrepreneur is responsible for implementing a culture of growth and the systems and routines that a growing firm needs to maintain the momentum of rapid growth (Barclays, 2015, 2016). The consequential increase in absorptive capacity and the developing

knowledge acquisition and the subsequent dynamic transformation is a prerequisite for an expanding firm (Ryzhkova & Pesamaa, 2015). Early founders of a business as an entrepreneurial team can have a profound influence upon the growth prospects of a firm (Iacobucci & Rosa, 2010). In many small and medium size enterprises (SMEs), “leadership is a collective activity, and so the values and cognitive profile of the leadership team have a powerful influence on firm strategies and outcomes” (Leitch C, McMullan, & Harrison, 2013). There is an indication that a spread of knowledge within the team, although at times potentially divisive and diverse, can contribute to organisational learning thus enhancing the absorptive capacity of the firm (Naldi & Davidsson, 2014). This increases the chances for successful growth through the acquisition of resources needed for the rapid growth of HGSFs (Barney, 1991).

Entrepreneurial intent embraces the motivational factors that influence behaviour (Koryak, 2015). This can be an indication of how hard people are willing to work, the effort they are willing to put into achieving profitable growth. Entrepreneurial wealth creation success is akin to Edison’s definition of genius; 99% perspiration and 1% inspiration. Entrepreneurs differ in terms of their orientation and intentions towards growth (Hessels et al., 2008). A study in the UK suggested that looking at intangible factors (aspiration, attitude and past experience) as opposed to just tangible factors (finance and skills) could give an insight into the growth performance of small firms (Theodorakopoulos et al., 2015). Figure 18 as a framework of growth inclination, illustrates the three categories of business owners that were identified: the growth-inclined, the growth-ambivalent and the growth-resistant. It also indicates the inputs influencing the overall strength of entrepreneurial potential of the business owner. Growth inclined businesses have demonstrated openness to engaging in internationalisation and innovation, while growth-ambivalent and growth-resistant business owners have typically avoided this activity. Business owners disposed to growth are also more likely to think and act strategically (Lechner & Gudmundsson, 2014). In relation to the objectives of this research the framework is indicative of the influence of past experience and the self-efficacy of the entrepreneur founders of HGSFs and their growth mindset which is fundamental to achieving high growth (MacKenzie et al., 2016).

Figure 18: Framework of Growth Inclination



Source: (BIS Research Paper Number 238, 2015)

Coupled with a growth or “entrepreneurial” mindset Timmons and Spinelli (2016) built upon the work of Sexton and Seale, 1997, to identify “key practices” that fast growth firms undertake; Table 2 provides a list of these practices:

Table 2: Leading Practices of Fast-Growth Firms.

Leading marketing practices of fast-growth firms
Deliver products and services that are perceived as highest quality to expanding segments.
Cultivate pacesetter new products and services that stand out in the market as best of the breed.
Deliver product and service benefits that demand average or higher market pricing. Generate revenue flows from existing products and services that typically sustain approximately 90% of the present revenue base, while achieving flows from new products and services
Generate revenue flows from existing customers that typically sustain approximately 80% of the ongoing revenue base, while achieving flows from new customers that typically expand revenue flows by about 30% annually.
Create high-impact, new product and service improvements with development expenditures that typically account for no more than approximately 6% of revenues.
Utilize a high-yield sales force that typically accounts for approximately 60% of marketing expenditures.
Rapidly develop broad product and service platforms with complementary channels to help expand a firm’s geographic marketing area.
Leading financial practices of fast-growth firms
Anticipate multiple rounds of financing (on average every 2.5 years).
Secure funding sources capable of significantly expanding their participation amounts.
Utilize financing vehicles that retain the entrepreneur’s voting control.
Maintain control of the firm by selectively granting employee stock ownership.
Link the entrepreneur’s long-term objectives to a defined exit strategy in the business plan.
Leading management practices of fast-growth firms
Use a collaborative decision-making style with the top management team.
Accelerate organizational development by assembling a balanced top management team with or without prior experience of working together.
Develop a top management team of three to six individuals with the capacity to become the entrepreneur’s entrepreneurs.
Align the number of management levels with the number of individuals in top management.
Establish entrepreneurial competency first in the functional areas of finance, marketing, and operations.
Assemble a balanced board of directors composed of both internal and external directors.
Repeatedly calibrate strategies with regular board of directors meetings.
Involve the board of directors heavily at strategic inflection points.
Leading planning practices of fast-growth firms
Prepare detailed written monthly plans for each of the next 12 to 24 months and annual plans for three or more years.
Establish functional planning and control systems that tie planned achievements to actual performance and adjust management compensation accordingly.
Periodically share with employees the planned versus actual performance data directly linked to the business plan.
Link job performance standards that have been jointly set by management and employees to the business plan.
Prospectively model the firm based on benchmarks that exceed industry norms, competitors, and the industry leader.

Source: (Sexton & Seale, 1997; Timmons & Spinelli, 2016).

The information presented in table 2 provides a useful overview of the marketing, financial, management and planning practices of fast-growth firms. However, these practices, although useful to consider, do not address the issue of the triggers to the process of rapid growth or the areas of knowledge development or absorptive capacity related to the actions taken and decisions made by rapidly growing small firms. Therefore, there is a need for the kind of research conducted in the current thesis that considers the actions taken and decisions made by HGSFs in more detail and provides empirical evidence of specific actions and decision within categorised absorptive capacity domains, and the development of a much broader and more dynamic framework.

The extent to which an entrepreneur or the entrepreneurial team want to succeed depends on what they perceive is in it for them and the belief that the undertaking has a good chance of success. Perceived feasibility is frequently measured by entrepreneurial self-efficacy, that is, the strength of a person's belief that they are capable of successfully performing the various roles and tasks of entrepreneurship (Iacobucci & Rosa, 2010). Self-efficacy enhances focus, direction, persistence and intensity of action (Henley, 2007). Entrepreneurs with high levels of self-belief consider that they have all the resources available to them to accomplish their task goals – “intending entrepreneurs may be identified as predisposed to growth (or not) on the basis of their attitudes and entrepreneurial self-efficacy” (Douglas, 2013, p. 634), as well as, both the short-term and long-term growth of new ventures (Baum & Bird, 2010). If self-belief is a strong predictor of growth, it is interesting to note the role that gender plays in a firm's growth story.

It has been observed that gender has a strong influence on growth aspirations. Women, generally have lower levels of expectation for high growth. Some studies have suggested that high growth aspiration is substantially influenced by gender (Arroyo, Fuentes, & Jiménez, 2016). This gender impact may well be a result of lower level of self-efficacy or self-belief in women compared to men (Hart, Martiarena, Levie, & Anyadike-Danes, 2014). Achtenhagen et al (2010) found in their interviews of high growth firm entrepreneurs that the growth aspirations had changed over time. Having achieved growth confidence and experience developed to grow the business more. It is further highlighted the importance of aspiration plays for growth as a major driver for growth (Achtenhagen, Naldi, & Melin, 2010). A growth mindset is of significant importance to the actual success of HGSFs (MacKenzie et al., 2016). The growth mindset of an entrepreneurial leader needs to be reflected in the

entrepreneurial team. It is important that a growing business is cohesively led and that the desire for growth is echoed throughout the firm. This is very much culturally driven by the strategic and operational team.

Very little research has linked the concepts of firm high growth, growth intent and the expansion of absorptive capacity in relation to the entrepreneurial team (Brown & Mawson, 2013; Schjoedt & Cooney, 2009). As firms grow so the distribution of entrepreneurial intent and the decision making necessary to achieve rapid growth becomes increasingly important (Iacobucci & Rosa, 2010). The creation of broader absorptive capacity and the capabilities to exploit opportunities becomes more of a team effort (Koryak et al., 2015). The makeup, background, experience and attitudes of the team can influence performance of the firm (Delmar & Shane, 2006). Coad and Timmermans (2014) argued that “even though two teams have a similar demographic and human capital composition, the structure of the team, that is, the distinction regarding which individual has which type of characteristic, will have a moderating effect on the team’s performance” (Coad & Timmermans, 2014, p. 118). This means that the knowledge and capabilities of the whole team impact upon the rapid growth prospects of the firm.

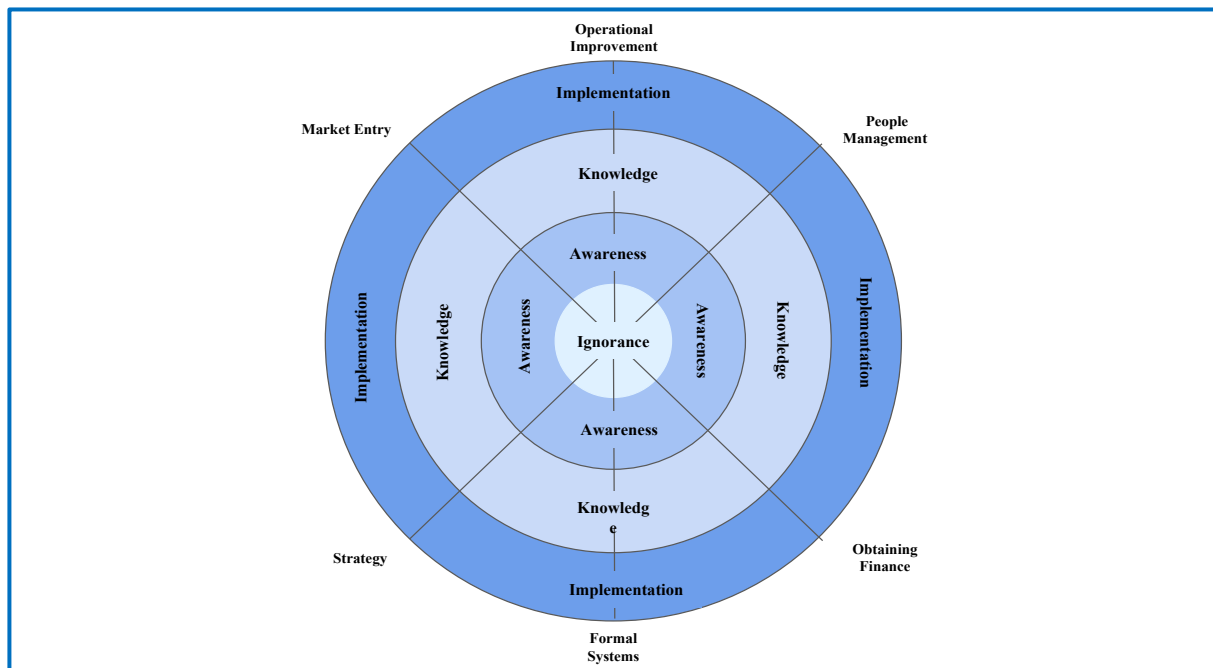
There is an indication that many HGSF entrepreneurial teams have an average size of between two and three members. It goes without saying that it is important that these teams have the skills that are necessary to run a successful business (Coad & Timmermans, 2014). Coad and Timmerman’s paper further considered “Dyads” teams of two, which proved to be very evident in this research’s case studies. It recognised that these “entrepreneurial teams, due to their small size, are characterised as having a flat organizational structure with no formalized hierarchy. However, this does not mean that hierarchical structure is not present” (Coad & Timmermans, 2014, p. 119). At the core of a HGSF is the growth intent of the founder, the ability to adapt and learn in a way that responds to the opportunities that are presented this is reflected within the absorptive capacity of the firm.

2.8 Link between Absorptive Capacity and Growth

The three core objectives of this research (section 1.1), consider the phenomena of growth, the relationship between the BSTEs and actions and decision transitioning the firm into high growth set within a framework of absorptive capacity, so it is therefore important to deal

specifically with the concept of absorptive capacity and the potential for high growth. As previously explained it has been suggested that there is a strong link between absorptive capacity and ability to take commercial advantage of the events that trigger growth (Bessant et al., 2007). The paper of Bessant, et al (2007) “discards the notion of stages and suggests that, as firms grow, they encounter a series of problems which, at some critical or threshold level that we call ‘tipping points’, must be successfully addressed if growth is to continue” (Bessant et al., 2007, p. 13). Figure 19 represents a framework that was developed by Bessant, et al (2007). It has its roots in the concept that firms move through a transition process from ignorance, through awareness to knowledge and finally to implementation. This transition is in response to trigger events that occur within certain identified categories. These categories encompass market entry, operational improvement, People management, obtaining finance, developing formal systems and having a strategy for the business. For the new knowledge gained by the firm to be effective it must be embraced by the entrepreneurial team. It is suggested that “firms are differentially able to acquire, assimilate, transform and apply knowledge to navigate tipping points” (Bessant et al., 2007, p. 13). There is no specific timeframe built into the model, absorptive capacity is developed in a necessary timeframe to accommodate the opportunity the event presents. This research investigates the areas of action and decision-making dealing with this knowledge development of HGSFs. The absorptive capacity model indicates the domains within which knowledge and capabilities are developed. There is movement along a continuum from ignorance, through awareness, through knowledge finally to implementation. These domains are broadened and developed further later in the thesis (section 4.5).

Figure 19: The absorptive capacity framework for growth firm states.



Source: (Bessant et al., 2007)

Growing a business involves developing a number of levels of capabilities to deal with the growth issues. Koryak, et al (2015) identified two categories of growth capabilities: the first category being substantive capabilities “these enable a firm to compete in its market on a day-to-day basis”. The second category being “dynamic capabilities” , “these modify or create new substantive capabilities” (Koryak et al., 2015, p. 89). These capabilities are routinized over time further developing the absorptive capacity of the firm (Ryzhkova & Pesamaa, 2015). The development of the absorptive capacity of the firm is linked to the employment growth within the firm, recruiting or developing people with the necessary skills and capabilities to deal with the issues of rapid growth. The recurring conundrum within any growing business is which comes first, recruitment or order/sales growth. Is capacity for growth built first or does the capacity building follow the growth in sales which is consequent to a trigger event? This question of capacity building is considered in the context of the process of rapid growth experienced by the case study HGSFs and is further addressed later in the thesis (chapter 4).

2.9 Link between Sales Growth and Employee Growth

Employing more people can lead to growth in sales or more sales can lead to employment growth. As Coad (2017) points out “there are arguments for both causal directions” (Coad, Nielsen, et al., 2017, p. 5). The size of the firm is probably a contributing factor to the growth order, larger firms respond to sales growth by recruiting whilst HGSF’s tend to recruit ahead of the sales growth (Geuvers, 2016). Establishing a business model for growth is dependent upon inherent skills within the business which is dependent upon the recruitment of people with management capability (Lee, 2014) or some distinctive capability that the entrepreneur leader values (Leung, 2003). It has been suggested that the aspect of recruitment in terms of emotional support is an important one; “entrepreneurs appear to benefit from recruiting employees in terms of both new venture performance and well-being” (Coad, Nielsen, et al., 2017, p. 6). As a firm grows, recruitment seems to become an increasingly important issue (Lee, 2014). However, the very nature of entrepreneurship as a problem solving process means that the smart firms find a way around this issue of recruitment and skills shortages (Gibb, 2000). Although HGSFs generally address their own issues related to rapid growth there is a significantly funded policy agenda related to addressing regional inequalities through support for entrepreneurs, start-ups and increasingly misplaced support for HGSFs in dealing with rapid growth issues (Autio & Heikki, 2016).

2.10 Policy and HGSFs

“If public policy is to become more effective in supporting rapid firm growth, a new theoretical lens needs to be adopted within policy frameworks. This should aim to develop the dynamic capabilities within growing firms which emphasises risk orientation, end-user engagement, innovative business models, etc. Greater emphasis on shorter term help to improve the managerial competency of firms, increasing their external orientation and cultivating a culture of peer-based support seem important to help achieve this goal.”

(Brown & Mawson, 2015, p. 15)

The interest in HGSFs and the recognition of their impact has been well known in the academic community for decades but it is only in recent times that this has been reflected in UK national and regional policy (Birch, 1987; Marchese, 2016). The policy debate is increasing within the academic community (Autio & Heikki, 2016). The policy debate revolves around the how, the what, the where and the when of support, proposals regarding this debate are made in the final chapter of the thesis.

The UK policy narrative has been very much focused upon attempting to address regional disparities, particularly the disparities connected to employment. National and regional policies have been focused very much on increasing the rate of entrepreneurial start-ups. The view has been that encouraging great levels of entrepreneurship and the level of start-ups would increase the level of employment in the underperforming regions. The prevailing view was that as the stock of new firms increases so the number of these firms surviving would increase (Shane, 2008) The major policy initiative in the regions has been the misguided one of turning the unemployed into entrepreneurs (Shane, 2009b).

This approach has modified over the past 10 years, It has been commented that “regional policies for entrepreneurship are currently going through a transition from increasing the quantity of entrepreneurship to the quality of entrepreneurship” (Stam, 2015, p. 3). Steering support to HGSFs is seen as riskier because of the difficulty in identifying these firms, than working with start-ups but the economic impact is now seen to be greater (Tomenendal & Raffer, 2017). There is a debate around the issue on whether support should be given to HGSFs rather than start-up support (Shane, 2009b). Some suggest that you can have both support for start-ups and high growth firms but that support should be weighted more to HGSFs (Mason & Brown, 2013). Policies related to small firms and entrepreneurship have developed over the past 30 years, although there is still a question over the efficacy of these policies (Marchese, 2016)

Across the European union and within the UK there has been a growing experience of developing policy frameworks aimed at HGSFs (Autio & Heikki, 2016). The issue is that a great deal of these policy frameworks is not evidenced based. A great deal of the support being offered to HGSFs seem to be repackaged policies from those offered to support start-ups and entrepreneurship (Brown et al., 2014). Specific support packages have been implemented in recent times, the largest support package launched in 2011 is Business Growth Fund which is a £2.5 billion pot to invest in firms between £2m and £10m turnover. These programs, although well meaning, are based upon erroneous presuppositions related to HGFs. Some authors have called them the “myths of high growth” (Brown et al., 2014; Gibb, 2000). It has been suggested that “one major consequence of the perpetration of these myths is that the types of help offered to these firms is often misdirected and fails to provide relevant support to appropriate types of businesses” (Brown et al., 2014, p. 4). One of the fundamental issues is that there is little evidence that generic support has the same impact

over all regions. For example, the evidence in Scotland suggests that HGSFs in Scotland do not respond in the same way as HGSFs in the rest of the UK (Brown & Mason, 2012). This is an indication that further research is required into the unique aspects of regional HGFs. It is also a reason for the focus on indigenous firms in NE and their high growth stories. This thesis, in the concluding chapter, details a number of suggestions that are evidenced based and would be effective in supporting HGSFs.

It is suggested that current policies or support packages are wrongly focused and are based upon erroneous premises, for example there is a great deal of emphasis placed upon technology firms. (Brannback et al., 2014). There is also a dearth of evidence suggesting that existing policies work and do actually support HGSFs in appropriate and cost effective ways (Autio & Heikki, 2016). The biggest debate is around the one of which firms do policy makers support? The debate that Autio, et al (2016) termed as that of “picking winners”. It has been indicated that the challenge is finding and supporting firms with the potential for high growth (Brown & Mawson, 2015). The heterogeneity of HGSFs means that there is no one size fits all policy, various reports have highlighted the misplaced basis upon which policies are formulated (Fazio, Guzman, Murray, & Stern, 2016; Marchese, 2016). Autio, et al (2016) called the basis for support “buffering and bridging”; these passive policies essentially seek to deal with the barriers to growth: access to finance, regulation, etc. What has been called for is “active, hands-on policy initiatives that develop the organisational capacity for growth” (Autio & Heikki, 2016, p. 51). Some have “challenged the appropriateness of the theoretical assumptions embodied in these state-backed support instruments” (Brown & Mawson, 2015, p. 1).

Policy related to supporting HGSFs is influenced very much by the definition of HGSFs and the view that policy makers have of characteristics HGSFs possess and the myths that surround HGSFs (Gibb, 2000). As Brown and Mason (2014) argued “a weak understanding of HGFs has manifested itself in the poor policy frameworks which have been devised to support these firms” (Brown et al., 2014, p. 2). A great deal of support has been focused on younger technology based firms when the evidence would indicate that within the UK 60% of HGSFs are from the service sector and that average age of HGSFs is anywhere between 9 years to 20 to 25 years, depending upon the sector (Acs et al., 2008; Dwyer & Kotey, 2016). As suggested “this pervasive disequilibrium means that using a firm’s age or size as criteria for policy targeting is now increasingly discredited” (Brown & Mawson, 2015, p. 5). The

dynamics of the growth cycle has also influenced policy, the biological life cycle model and its inherent seeming predictability about stages of growth have created staged policies that mirror this theory. More recent studies into the stochastic nature of growth is putting in doubt these policies and more importantly the necessary timing of these interventions. The unpredictability and seeming randomness of growth spurts also make it difficult to assess when a firm may need support (Coad et al., 2014). This empirical research highlights the type and temporal perspectives of potential support for HGSFs.

Questions have been posed about the resource-based view as the theoretical underpinning for support to HGSFs. This approach emphasises what the paper termed the “deficiencies in terms of a number of critical resources including, inter alia, innovation activities, funding, managerial know-how” (Brown & Mawson, 2015, p. 4). There has also been a questioning of the focus on the support alleviating the market mechanisms at play regarding the barriers to growth (Autio & Heikki, 2016). As discussed earlier in the chapter, this is at odds with the idiosyncratic nature of the growth process experienced by HGSFs (Brown & Mawson, 2015). They argued for a support framework based upon “dynamic capabilities”. This is very much reflected in the emphasis on absorptive capacity as a key element in understanding the growth process of HGSFs.

Regardless of having an increasing amount of research related to HGSFs there is still a lack of understanding of the process of how HGSFs grow. As a consequence, it is difficult to align a cohesive policy framework that could effectively support HGSFs. Brown and Mawson (2014) concluded “that there is a misalignment between the current structure of policies towards HGFs and the specificities of how these firms grow and operate” (Brown et al., 2014, p. 20). Table 3 reflects the way that the nature of this policy incongruence is perceived. There is an inherent mismatch between the formulated policy and how HGSFs address the issues. The value of this thesis, consistent with its aim and objectives detailed in the introduction in chapter 1, in understanding the process of growth, expressly leads to an understanding of the potential support policies that could be adopted to support HGSFs. The thesis deals with these incongruities when considering the policy suggestions resulting from the empirical research.

Table 3: Misalignment between public policy and the nature of HGFs

Public policy to support HGFs	The nature of HGFs
A major thrust of policy is aimed at increasing R&D within firms.	HGFs often source and use a variety of 'open' sources of innovation, such as links to customers and end-users.
There is a strong emphasis on developing sources of entrepreneurial finance.	Most HGFs prefer to retain full ownership and the majority use (and prefer) traditional sources of debt funding.
There is a strong focus on exporting and export development.	HGFs often internationalise through a wide variety of international market entry modes, such as joint ventures, overseas FDI, overseas acquisitions, and partnering.
Public policy concentrates support towards high-tech firms and sectors.	The overwhelming majority of HGFs emanate from traditional sectors of the economy, with high-tech firms comprising a very small minority of the overall population of HGFs.
High growth policy strongly focuses on assistance for new 'de novo' start-ups.	The majority of HGFs emerge from the existing population of SMEs (of all ages) within the economy. They are often firms who have undergone important growth 'triggers' such as MBOs, MBIs or acquisitions.
Business support is strongly oriented towards support for businesses to grow organically.	Forms of non-organic growth are very important for firms undertaking rapid growth, even within smaller firms who often see acquisition as a key element to achieve rapid growth.
The main policy 'tools' used to support HGFs take the form of 'transactional' instruments such as grants, subsidies, tax incentives, etc	HGFs tend to value 'relational' forms of support above direct financial assistance. Assistance with strategic guidance and organisational development are perceived to be particularly beneficial
The vast majority of business support is provided directly by the public sector or through private sector intermediaries.	The preference of many HGFs is to obtain advice and guidance from their peers within industry, rather than directly from the public sector or intermediaries.

Source: (Brown et al., 2014)

As experience in policy making is developing so the focus in support is subtly changing from direct support to the notion of developing regional “entrepreneurial ecosystems” (EE) (Isenberg & Onyemah, 2016). The danger again is that this approach is not evidenced based and there is no clear understanding of the regional implication and how this approach could distort the limited finite resources (Brown & Mason, 2012; Stam, 2015). The EE approach recognises the different classifications of the entrepreneur, in the context of their growth mindset and suggests “in practice ambitious entrepreneurs are more likely to achieve substantial firm growth, innovation or internationalization than the ‘average’ entrepreneur” (Stam, 2015, p. 1). This shift from entrepreneurship policy to an entrepreneurial regional ecosystem is about creating a system environment “in which productive entrepreneurship can flourish” (Stam, 2015, p. 7). The opportunity for growth created by events means that a combination of strategic and tactical issues has to be addressed, it is the nature of the process. The nature of the event in terms of its unpredictability means that firms are faced with these issues more quickly and more dramatically than they anticipated (Stanley & McLeay, 2016). This thesis with its phenomenological perspective and soft systems methods considers the dynamic of the issues faced, their incidence and the context within which they are faced by active, going for growth firms.

2.11 Black Swan Theory, HGSF's and the three unpredictabilities of: randomness, serendipity and luck

At the core of this research is the question of “An exploration of how BSTEs impact HGSFs?” The nature of these BSTEs is that they are unpredictable so it useful to explore this further. The first recorded sighting of black swan birds was in Australia in 1697 up to that time all indications were that all swans were white. The identifying term of “a Black Swan” was used as a label for something that no one believed existed. Taleb (2007) defined a Black Swan as an event rather than a philosophy – “Taleb does not say explicitly what he means by an event ...it is the notion of an instantiation or occurrence: something that happens” (Runde, 2009, p. 493). For an event to be identified as a Black Swan it is by its nature observer dependent. The first criteria suggested for such an event is that it is unexpected - “for an event to be a Black Swan, it does not have to be rare, or just wild; it has to be unexpected, has to lie outside our tunnel of possibilities” (Taleb, 2007, p. 213). It is an outlier from normal probability. The second criteria for a Black Swan is the large scale of its impact, again this is a relative term. It depends on the experience of the people involved in the event. In terms of the third criteria the event can be “post rationalized”. In suggesting that Black Swans “lie outside our tunnel of possibilities” (Taleb, 2007, p. 213), this personifies the scope of peoples’ imagination, experience and knowledge. It has been argued that whether or not an event is significant enough in its impact to qualify as a Black Swan is “a subjective matter that depends on the positions, interests, and evaluative attitudes of those making the judgment” (Runde, 2009, p. 502).

The concept of Black Swan Theory formulated by Taleb (2007|) has not been considered in the context of firm growth. It has been recognised as a theory in a transactional sense for the major, commercial and cultural shifts that have been experienced in society over the past 150 years (Stanley & McLeay, 2016). The theory has been related to trading in stocks and shares and the shocks that the investment markets experience (Lindaas & Pettersen, 2016). The literature related to Black Swan theory falls very much into the domain of risk management related to catastrophe planning (Nafday, 2009). By their very nature “Black Swan events are not foreseeable by the usual statistics of correlation, regression, standard deviation or return periods. Expert opinions are also of minimal use since their experiences are tainted by biases and constrained by finite human life span”(Nafday, 2009, p. 191). There are a number of events that have caused major shifts, the internet, the laser and the personal computer, all of

which were unpredictable – “Not only were these inventions unpredicted, they were almost certainly unpredictable—i.e., there was no way that even a very knowledgeable observer could have guessed that they would be invented, much less the uses to which they would be put and the ways they would change our lives” (Jervis, 2009, p. 477). They were outliers to the normal distribution pattern. What is seen as an invention or innovation to one firm or industry is a BSTE in another. It has been suggested that the more “unexpected the success of a venture, the smaller the number of competitors, the more successful the entrepreneur who implements the idea” (Taleb, 2007, p. 5).

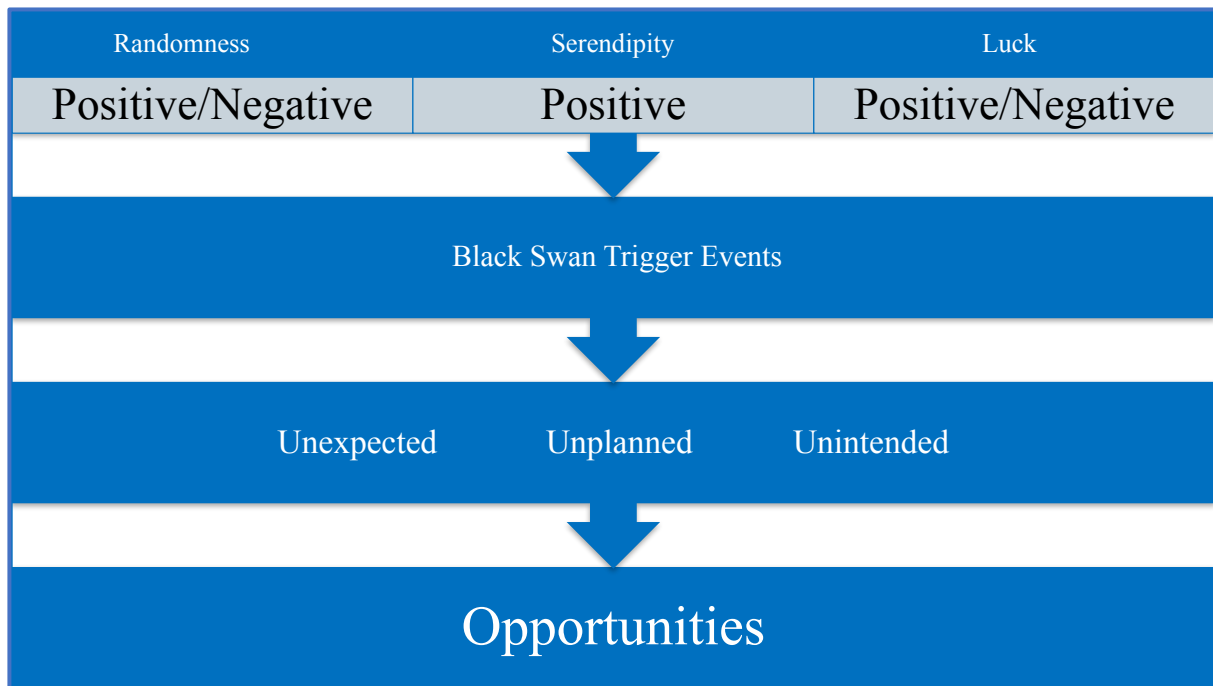
Entrepreneurs involved in HGSFs are by their very nature seeking to find the innovation that will be disruptive to a particular market or industry (Schumpeter, 1942). On the basis of using a conventional return on investment model it is difficult for firms to justify using resources to develop products or services that seem insignificant or do not yet exist (Bower & Christensen, 1995). As a consequence of this common approach, many firms are trapped into a minimum risk cycle which is the basis for most static firms (Baiyere, 2014; Bower & Christensen, 1995). Once BSTEs emerge, businesses need to be very clear as to the likely impact on their particular business (Blyth, 2009; Green, 2011). As outlined within the objectives, this thesis considers the actions and decisions undertaken by a HGSF post a positive BSTE through the narrative growth of story. It provides a framework for developing absorptive capacity in order to deal with the issues of rapid growth.

The literature related to Black Swan Theory deals specifically with the risk management response to natural disasters or health and safety issues (Mueller & Stewart, 2016; Murphy, 2014; Stojanovic, 2011). It is possible to imply similar ideas to the specifics of dealing with BSTEs in the context of HGSFs. It is not just about having processes in place as firms can be constrained by their own processes and their inability to vision the events that could dramatically change their destiny. A firm should have a culture of responsiveness, flexible thinking (Bartram, 2015) and survivor psychology (Green, 2011). It has been argued that instead of trying to predict BSTEs firms need to build robustness against negative events that occur and be able to exploit positive ones (Taleb, 2007). Having an appreciation of survivor psychology provides an understanding into how some firms fail and others survive and even thrive when a BSTE occurs (Sherwood, 2009). Recognizing the fine distinctions that result in impact from a BSTE, dealing with the shock factor and rendering the incoming information into appropriate actions are important (Sherwood, 2009). The public relations issues

surrounding a BSTE can be massive. Leadership transparency and empathetic responses to the BSTE are critical (Bartram, 2015). Dealing with the immediate aftermath of the event and how it is dealt with, can provide signals to all stakeholders that the situation is under control (Green, 2011).

Although a consideration of the nature of unpredictability is important for this research, the study is not about the epistemological, ontological or philosophical aspects of randomness, serendipity or luck. This study is not questioning the existence of unpredictability or the ways in which it manifests itself. This research is predicated on the existence of these phenomena it does not question or analyse their esoteric aspects. The stimulating opportunity for success or growth must occur, as previously considered is it through planning (Achtenhagen et al., 2014) or is there a set of more complex elements at play? (Henderson et al., 2014). What the thesis considers to be the three “unpredictabilities” that lead to BSTEs that in turn stimulate rapid growth in firms. Within the context of the entrepreneurs’ journey what part do the three “unpredictabilities” of randomness, serendipity and luck play? Randomness is defined as “the quality or state of lacking a pattern or principle of organization” (OED, 2016). Serendipity is defined as “the occurrence and development of events by chance in a satisfactory or beneficial way” (OED, 2016). Serendipity has an important characteristic of having an ability to see connections, to join the dots. The opportunity is an event, serendipity a capacity. Luck is defined as “success or failure apparently brought by chance rather than through one's own actions” (OED, 2016). Figure 20 shows the relationship between these three factors emphasizing the common elements of unpredictability. This unpredictability is evidenced by the opportunity or event being unexpected, unplanned or unintended. Various research has indicated their influence but it is generally an area that has seen little enquiry (Coad et al., 2012; Derbyshire, James, & Garnsey, 2015; Lawley & Tompkins, 2008; Mirvahedi, 2014; Thien, 2016).

Figure 20: Relationship between Randomness, Serendipity, Luck and Opportunity



Derived from the studies of (Coad et al., 2012; Derbyshire et al., 2015; Mirvahedi, 2014; Thien, 2016).

The objectives of the research are met through a case study approach, which is justified in a later section, capturing the narrative of the growth story of a selection of HGSFs. The causal links between the BSTEs that triggered the growth of these firms and the actions taken and decisions made are considered through a soft systems methodology. This methodology is considered later in the chapter. The impact of this thesis is focused upon how by developing more HGSFs the NE Region can go some way to address the regional economic and commercial disparities it experiences. This has been covered in detail in chapter one, by establishing the link between the characteristics of HGSFs and the characteristics of regional disparities. In considering the growth story of HGSFs this research follows a phenomenological case study approach. This case study approach and the philosophy will be discussed in more detail in subsequent sections.

Figure 21 represents a categorisation of types of serendipity. Roberts (1989) outlined two types of serendipity, distinguishing “pseudoserendipity; accidental discoveries of ways to achieve an end sought for, in contrast to the meaning of “classical serendipity”, which describes accidental discoveries of things not sought for” (Roberts, 1989). Taleb (2007) suggested that the “classical model of discovery is you search for what you know and find

something you did not know was there: almost everything of the moment is the product of serendipity” (Taleb, 2007, p. 166). Taleb (2007) suggested an “Apelles-style strategy; seeking gains by collecting positive accidents from maximising exposure to ‘good Black Swans’” (Taleb, 2007, p. 306). It really does not matter for this research what the type of serendipity occurred at the time of the BSTE it is enough to say that it was instrumental in the event occurring. For the BSTE to be recognised then the entrepreneur needs a prepared mind, a willingness to be open to the possibility, a desire for something to happen, it is akin to Entrepreneurial Orientation (Mirvahedi, 2014)

Figure 21: Categories of Serendipity

Classic Serendipity	<ul style="list-style-type: none"> • Find Y unexpectedly • Look for X and find Y unexpectedly
Pseudoserindipity	<ul style="list-style-type: none"> • Look for X and find X by unexpected means • Find an unexpected use for X or Y

Source: (Lawley & Tompkins, 2008)

Over commitment to a particular event or “rigidity in personality” may prevent the HGSH from learning or increasing its absorptive capacity, “we can treat ideas like possessions and it is hard to part with them” (Taleb, 2007, p. 144). It has been suggested that “serendipity is a precursor to fast growth and occurs generally at the start of a growth process” (Mirvahedi, 2014, p. ix). The debate between Coad, et al (2015) and Derbyshire, et al (2013) is an interesting contextual one from the perspective of gauging the random nature of firm high growth “it is an acceptable heuristic to consider that growth paths occur in approximately random fashion.” (Coad et al., 2015, p. 623). Derbyshire, et al (2013) suggested that “the interplay between epistemological randomness and agency is advocated as a more promising avenue for future research than the gambling analogy” (Derbyshire et al., 2013, p. 3).

Ma (2002) intimated that “luck remains an elusive theoretical concept in the business literature yet a fascinating practical phenomenon in business reality” (Ma, 2002, p. 525). As considered previously there can be a perspective of firm growth that is recognised as stochastic (Mundt et al., 2016; Sutton, 1997). There is also “seemingly the inexplicable term known as luck” (Ma, 2002, p. 525). Dew (2009) defines pure luck as “some kind of

favourable contingency or chance happening (i.e. an event completely beyond the entrepreneur's control) that impacts the entrepreneur in a positive way" (Dew, 2009, p. 743). There are a number of factors that create competitive advantages for rapidly growing firms, luck seems to be one of those recognised factors (Liechti, Loderer, & Peyer, 2014). It has been pointed out that "luck, by definition, discriminates against some players and benefits others" (Ma, 2002, p. 525). Ma (2002) also considered a matrix of luck: Pure luck "this defies human intention". Prepared luck, which is akin to serendipity. These two types of luck can then be matched to exogenous, effected from outside the firm and endogenous, effected from within the firm. It has been suggested that "a more consistent issue is that the presence of luck in entrepreneurship success is more a matter of intensity or degree, not whether there is luck or not" (Thien, 2016, p. 82). It could be argued that any event that has driven the rapid growth of a small firm could be considered lucky (Liechti et al., 2014).

The definition of a lucky event contains the same elements as a BSTE, which are considered with the thesis as the precursors to rapid growth and are evident within the narrative stories of the case studies. The lucky event is independent of actions of the entrepreneurs, secondly has potentially significant impact or consequence and thirdly is unpredictability (Collins and Hansen, 2011). It is also important to recognise the element of hindsight in that, the "concept of luck may be more evidently seen as an aftermath of an event, that is, in hindsight that whether the consequences was due to luck, or not, or to what degree that luck had influenced the outcome of the event" (Thien, 2016, p. 84). It has been further suggested that more empirical research into the relationship between luck and the success of the firm would benefit entrepreneurial insight. As luck, good or bad, can seem to influence the success of a business it is how the firm reacts to the unexpected that differentiates it (Thien, 2016).

2.12 Conclusion

The conclusion that can be drawn from the literature review is that a key gap in the extant research is identified regarding the actual process of growth (Miozzo & DiVito, 2016). The thesis addresses the identified gap within extant research regarding the "process" of small firm high growth, investigates the actualities of rapid growth from the perspective of events that trigger high growth and the unpredictability of these events (Coad & Guenther, 2014). A rationale for the thesis, recognising the gaps in the research particularly empirical qualitative research dealing with the phenomena of the process of rapid growth of HGSFs is provided

(Lee et al., 2016). The literature review indicates that a gap in the area of knowledge exists in relation to identifying and understanding the process of high growth through the trigger events that impact on rapid growth (Bessant et al., 2007). Another key theme is the relationships between growth events and the actions taken and the area of decisions required through transitions post BSTEs (Brown & Mawson, 2013).

The lack of quality of data related to new firms and HGSFs has impaired the ability to fully explore the relationship between growth and profitability leading to a gap between the more “theoretical” ideas of growth per se and the empirical findings related to rapid growth (McKelvie & Wiklund, 2010). The approach of RPs and the consequent narrative from selected case studies allows the process of rapid growth to be investigated from the personal perspectives of the entrepreneurial founders of these selected case studies.

The aim of the research has been distilled from the literature review in identifying the impact and relationship of HGSFs in addressing regional disparities and therefore the importance of understanding the process of their rapid growth (Mason, C., 2016). It has been argued that because of the complex and idiosyncratic growth paths within firms, understanding what happens before firms experience growth is important because it in turn leads to an understanding of how firms grow and evolve (Brown & Mawson, 2013). What has happened that has triggered the growth spurt? “Bursts of rapid growth often occur after firms encounter important events termed growth trigger points” (Brown & Mawson, 2013, p. 280). The aim of this research is to consider and investigate the role played by BSTEs in the process of growth in HGSFs. The review of the literature related to HGSFs and the understanding of the aspects of the theory base related to the growth of firms have indicated the importance of understanding the lived experience of HGSFs. The aim of the research recognises the importance of HGSFs in the context of addressing the regional disparities experienced by slow growth regions such as the North East of England.

The literature review indicates that a gap in research exists in relation to the process of high growth and in identifying and understanding the BSTEs that impact on growth (Bessant et al., 2007). There is an increasing debate about how these events occur (Brown & Mawson, 2013; Coad et al., 2012; Coad et al., 2015; Derbyshire et al., 2015; Handelberg, 1999) are they the result of BSTEs that demand an entrepreneurial response? Another key theme is the relationships between growth events and the actions taken and decisions made through

transitions post the events and the process of becoming a profitable HGSFs. (Brown & Mawson, 2013). The view of nonlinear or erratic growth is consistent with the focus on the unpredictable nature of growth events and their impact and influence on HGSFs (Vinnell & Hamilton, 1999). There is a consideration of these events and how in trying to create a profitable HGSF what is the story of growth, the role of BSTEs and what actions an entrepreneur or an entrepreneurial team take in transitioning the business from these events (Gladwell, 2000; Handelberg, 1999; Vyakarnam, Jacobs, & Handelberg, 1999).

In considering the research question of “An exploration of how BSTEs impact HGSFs?” the “how” of the research is addressed by three major objectives. To capture of the phenomena of the growth story through the perspective of the entrepreneurs/business owners of defined HGSF case studies, considering and exploring the unpredictable nature of the BSTEs. This is to better understand the actualities of the rapid growth story and the events that triggered the rapid growth. The second objective was to identify and analysis of the relationship between BSTEs and decisions and actions transitioning a firm post BSTEs. Each of the case studies translated the BSTEs into opportunities. In order to facilitate a response to these opportunities the case studies had to make a range of decisions and take a number of actions. This research considers how these decisions and actions translated and fell into identifiable common domains. Examining these common domains led to the third objective of examining through a broader framework of absorptive capacity, the actions and decisions taken by entrepreneurs and entrepreneurial teams during the process of high growth. The objectives of the research address the core aspects of the rapid growth phenomena, the actions taken post the trigger events and the analysis of these actions in the context of the firms’ absorptive capacity.

The impact of these trigger points can be significant in the consequential growth dynamics of the firm. These can comprehensively reconfigure a company. The trigger points provide the stimulus for “rapid, transformative growth” (Brown & Mawson, 2013). It is further suggested that “the manner in which these events unfold is complex and difficult to track and assess” (Brown & Mawson, 2013, p. 280). It is also suggested that this complexity explains why there is little research in this area.

The work of Bessant, et al (2007) cites the idea of “tipping points” as a way of further understanding those pivotal events that can have a major impact upon the firm (Bessant et al.,

2007). Most importantly, it is a firm's response to the tipping points that determines its growth success, rather than the tipping points themselves (Bessant et al., 2007). The work of Brown and Mawson (2013) and Bessant, et al (2007) suggests that it is important to understand what happens before, during and after the trigger event. How well a firm manages during this transitional period seems to rest heavily on their absorptive capacity. Brown and Mawson (2013) make the point several times that there is a lack of research dealing with the longitudinal impact, conclusions on the theoretical underpinning and the policy implications. They indicate the need for further empirical research into the examination of the events that trigger rapid growth and the impact on the "dynamics and consequences of these trigger points" (Brown & Mawson, 2013, p. 291).

The philosophy and methodology of this thesis addresses the criticism that too much emphasis has been put on to the quantitative nature of the methods and that there have been too few qualitative studies. (MacKenzie et al., 2016). Achtenhagen (2014) pointed out, as have a number of studies, that more qualitative research is required to better understand aspects of growth from a practitioners' perspective. During the study it was found that "the multidimensionality and complexity of the growth process could be grasped through the entrepreneurs' statements regarding growth" (Achtenhagen et al., 2014, p. 22). It was advocated that "more qualitative studies allow spending enough time interviewing or observing entrepreneurs (or, employing alternative methods) leads to a more comprehensive picture of the phenomenon of interest" (Achtenhagen et al., 2014, p. 22).

The thesis considers the fundamental aspects of the occurrence of the unpredictable events that trigger growth and the transitional decisions and effectuations post the event, as reflected within the objectives of the study. As indicated previously a Black Swan Event has three properties that make it so; rarity, extreme impact and retrospective predictability. This thesis views the world of a selection of HGSEs through the perspective of the unpredictable. It avoids the illusion that we can actually see things coming (Mueller & Stewart, 2016). The study avoids narrative fallacy, which is "humans construct stories to explain events and see patterns in data when none exist, due to illusion of understanding" (Nafday, 2009, p. 2). In order to make a valuable contribution to the area of HGSE knowledge the thesis explores the eco-environment that BGTE reveal within the HGSE case studies recognising that they do not inhabit an environment where pure strategic behaviour operates not being governed by what

is known and what is perceived as being knowable the research explores “the dark matter” of HGSFs.

The evidence is gathered through appropriate methods consistent with a phenomenological philosophy in that it is important to understand the lived stories of actual HGSFs. The evidence gathered is analysed and used to devise ways of recognising and supporting HGSFs.

Chapter 3 Research Philosophy and Methodology

3.1 Introduction

The philosophy and methodology of this research reflect the aim, objectives and rationale set out in the introduction chapter, (section 1.1) and recognises that as identified within the literature review there have been a relatively small number of qualitative studies (Harrison, 2015). In understanding the process of firm growth there is a need to capture the phenomenological story of HGSFs. In capturing the story as an experiential journey, as reflected in the aim of the research, there is an aspiration to more fully understand the process of growth from a practical and empirical perspective (Ling & Evan, 2012). Not an anodyne quantitative data driven perspective but the lived experience of the entrepreneur and the entrepreneurial team, a phenomenological perspective (Berglund, 2013; Christensen & Brumfield, 2010). In capturing the narrative of the growth story this thesis explores a fuller understanding of the process of growth of HGSFs in the context of its lived experience (Berglund, 2007).

It could be argued that the growth story of every firm is unique (Audretsch, 2012). This is probably true in the context of the actors participating in the story but is there a commonality that lies inherently and implicitly within every firm's growth? The approach of the thesis has been engineered to capture the phenomenology of the process of growth. Capturing the narrative of the growth story and analysing the commonalities of the type of growth events and actions and decisions taken consequent to those events, in relation to the development of each firm's absorptive capacity, leads to a greater understanding of the process of high growth and the incidence and importance of BSTEs. The chosen methods of soft systems methods incorporating Rich Picture narratives and causal mapping, being consistent with the aim and objectives of the study, provide an in-depth view of what HGSFs really deal with and lead to suggested actions for aspiring HGSFs and policy support suggestions.

Chapter three considers the philosophy in the context of the research question; What role do BSTEs play in driving HGSFs? and the objectives related to this question. It sets the philosophical perspective in relation to the extant knowledge of firm growth and more importantly the attitude, ideology and thinking inherent within the study. This chapter then considers the methodology and methods in relation to the research philosophy, the objectives

and most importantly the research question that is being addressed (Creswell, 2014). There is then a consideration of the philosophical paradigms and provides a qualitative perspective for this thesis (Healy & Perry, 2000). The approach taken in gathering and analysing the data from the selected HGSFs case studies is dealt with as are the specifics of methods and analysis choices. The criteria and process used for choosing the case studies are considered (Perren, Lew, Ram, & Monder, 2004). The identification of the HGSF case studies is outlined, with some details of each case study firm. The chapter then covers the sequence of the data gathering, the way that the data is gathered and then analysed (Bell & Morse, 2013; Eden, Ackerman, & Cropper, 2004; Pietkiewicz & Smith, 2012). It provides a view on the reflexivity involved in the study and the ethical framework for the study.

3.2 Research Philosophy

Phenomenology is defined as “the study of the structures of consciousness, as experienced from the first-person point of view” (Smith, 2013b, p. 1). Phenomenology is about the study of experience (Braun & Clarke, 2013) – “phenomenology privileges people’s life-worlds or lived experiences – i.e. the immediate experiences of phenomena or situations as they are lived through and coped with in everyday life” (Berglund, 2013, p. 478). Edmund Husserl and Martin Heidegger, in the early 20th Century, are credited with developing Phenomenology. Phenomenology is based on the hypothesis that “reality consists of objects and events” (phenomena) as they are “perceived or understood in the human consciousness” (Smith, 2013a, p. 9). It has been further suggested that phenomenology differs from other philosophies in that “it tends to be more descriptive than prescriptive”(Smith, 2013a, p. 10).

This idea of an illustrative and expressive philosophical approach is consistent with what is trying to be achieved in the aim and objectives of the research, adding to the knowledge of how far BSTEs drive small firm to high growth. Capturing the informative and expressive narrative of growth is consistent with the way that Phenomenology considers experienced events from a subjective perspective. The entrepreneurial intentionality, what occurred, can be interpreted as the way an experience is directed toward a certain growth occurrence (Berglund, 2015). Experience, in phenomenology includes those experiences that are consciously lived or performed (Conklin, 2014).

A number of analytical philosophers have criticised phenomenology because of its, seeming, first person approach (Dennett, 1981). In the context of this research it is this first-person approach which is the very essence of the growth story. It is also the case, that in context, it may well be that what is believed or perceived to be experienced is as important as to what is actually experienced as both precepts are valid and add richness to the story (Searle, 2008). Phenomenologists generally discard the idea of objectivity, it is about the experience of the participants and the understanding of actions and behaviour in relation to the phenomena being researched (Christensen & Brumfield, 2010). Phenomenology is biased towards discovery therefore, generally uses, research methods that are far less restrictive, more free form, than other methods (Song, 2017). Being an experiential philosophy it focuses less on the capture of traditional data but more on the perceived and real experience of the actors within the narrative (Smith, 2013a).

The essential philosophy governing this research is Existential Phenomenology, this has been chosen because it is said that it “describes subjective human experience as it reflects people's values, purposes, ideals, intentions, emotions, and relationships. Existential phenomenology concerns itself with the experiences and actions of the individual” (Thorpe & Holt, 2008, p. 43). In the development of Phenomenology, during the 1930's, there was a move from transcendentalism and consciousness to a more reflective view of life experiences (Von Manen, 2016). Merleau-Ponty's (1962) interpretation of Husserl's work framed phenomenology as existential, that is, oriented to lived experience (Merleau-Ponty, 1962). Recognising that Existential Phenomenology is the key philosophical stance within the study it is important to link this to the methodology of the research, this is dealt with later in the chapter when considering the methodology of Interpretive Phenomenological Analysis (IPA). This is consistent with the focus upon the growth stories of HGSEs and the impact of BSTEs in their growth story.

The phenomenological method is based on the description and exploration of phenomena. Phenomena are defined as “ facts or situations that are observed to exist or happen, especially ones whose causes or explanations are in question” (OED, 2016). Phenomenology creates an environment for the study of subjective events. It considers whole experiences and their properties and structures (Smith, 2013b). Phenomenology is agnostic in considering perceived memories as well as actual experiences. This notion adds substance to the growth story of the case study participants. “Evidence” is a concept that is meant to signify the

"subjective achievement of truth."(Smith, 2013b). Within the study this means that the story of growth becomes the evidence and therefore has a truth. This research, in its phenomenological sense requires a consideration on the subjectivity of the participants, as well as an intersubjectivity, that is an objective, engagement with them. The challenge, within the discussion/narrative process is remaining empathetic whilst maintaining an objectivity to the revelations.

Providing a multi layered approach to the methods by getting either individual entrepreneurial team members story or the whole team story adds layers of nuance and perspective to the capture of the process involved in the events and actions driving HGSFs (Pietkiewicz & Smith, 2012). In the context of the research each member of the entrepreneurial team has lived the same experience so their participation in a nuanced way has authenticity. The entrepreneurial teams are experientially set within a “Lifeworld”, this is the world each person lives in, it is the “background” or "horizon" of all experience. It distinguishes the experience as being different for each participant but with the collective meaning it holds for those sharing the experience. These concepts are pertinent in the sharing of the whole entrepreneurial team’s narrative story and their experience as a collective as opposed to the individual’s perceived story.

The philosophical perspective of the research provides a background for the methodology adopted. In recognising the fact that when analysing respondent based data there is the phenomenological problem of the double hermeneutic (McCarthy, 2015). Apart from adding another layer of complexity to the process it also means the expression of the narrative itself is not enough. There is also a need to investigate the cause and consequence of events. This puts an emphasis upon an appropriate research design and methodology, which is described in the following section (Wynn & Williams, 2012).

3.3 Research Design and Methodology

3.3.1 Rational for Qualitative Research and Case Study Methodology

Reflecting the phenomenological philosophical approach is an adoption of the more recently developed methodology of Interpretive Phenomenological Analysis (IPA). It is an approach that merges Phenomenology and Hermeneutics. It combines the reflective experience of

events or life situations with an interpretation of these experiences. This approach first came to prominence in the 1990's (Smith, Flowers, & Larkin, 2009). IPA is a "qualitative research approach that allows an examination of how people make sense of their life experiences in their own terms" (Smith & Osborn, 2008, p. 56). It is a reflective process it recognizes that the researcher is "involved in a double hermeneutic, that is trying to make sense of what the participant is trying to make sense of" (Smith & Osborn, 2008, p. 53). Data collection is usually through a process of transcripts pointing to events which are turned into narrative accounts. The purpose of IPA is to reveal what Husserl called the essence or "eidos" of an experience.

The categorization of BSTEs together with the actions taken and decisions made consequential to the unpredictable events leads them to be appropriate units of analysis. This study is underpinned by a relativist ontology (Braun & Clarke, 2013) and takes a post-positivist critical realist perspective that is consistent with an interpretive phenomenological analysis (Trochim, 2014). The critical realist reflects the notion of the different perceptions and realities of the reasons behind the development of sustainable HGSEs. This thesis assumes an epistemological position signalling the view that it is possible to gain insight through a rigorous process. It also recognises that the researcher brings their own attitudes, life experience and knowledge to the study (Braun & Clarke, 2013).

Reflexivity, the process of critical reflection applied to the content of the research, is an important element of good qualitative research and is explored more fully later in the chapter (Cunliffe, 2009). On the basis that most research in this area of HGSEs has been quantitative as opposed to qualitative (Brown & Mawson, 2013) in order to capture a "richer" perspective the design of the research takes the form of a qualitative approach (Creswell, 2014). This approach also recognizes that qualitative research emphasises that things are seen from a perspective. Although a quantitative element is used to identify a cohort of case studies that clearly fall within the defined categories of the research, the study lacks the integration of qualitative and quantitative data to be considered a truly mixed methods approach (Cresswell, 2014).

Qualitative research methodology is useful for exploring complex issues, such as understanding the growth process of HGSEs (Cope, 2005). The narrative of growth and its multi-varied perspectives, nuances and elements need to be displayed in the method adopted

to understand the process of high growth. Capturing the phenomena of the high growth story encountered by the entrepreneurial founders participating in the process provides an appropriate perspective for understanding how small firms experience high growth. Qualitative research is an inquiry from the perspective of the individuals experiencing their social and economic environment (Leppäaho, Plakoyiannaki, & Dimitratos, 2015).

A number of approaches were considered in terms of the methodology for the study; ethnographies, grounded theory, phenomenological studies and case studies (Creswell, 2014). It was decided that a case study approach was the best way of capturing the phenomenon of the growth narrative of HGSFs. In listing the four common methods, mentioned above, for qualitative research, Creswell (2015) suggested that “when conducting case study research, understanding a single entity or phenomenon is the main goal of the researcher” (Cresswell, 2015, p. 30). Consistent with the general philosophical approach of the study is a phenomenological case study approach using soft systems methods for data gathering and analysis. A case study methodology has been defined as “an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between the phenomenon and context is not clearly evident” (Yin, 2014, p. 23). A case study approach is also being adopted to offset the criticism of “samples of convenience” being used in much of research related to HGSFs (Brannback et al., 2014). The case study approach “allows a contemporary in depth analysis of complex phenomena” questioning what is going on and why?” (Yin, 2014, p. 23). The approach “allows investigation of complex change processes” (Curran & Blackburn, 2001, p. 6). These change processes are inherently fundamental to growth stories and lead to an understanding of the ways in which individuals and teams create, modify and interpret the world (Grant & Perren, 2002). The design structure allows a more creative and intuitive process leading to a better appreciation of what's happening in the reality of the HGSFs.

A case study approach has been defined as “a research strategy which focuses on understanding the dynamics present within single settings” (Eisenhardt, 1989, p. 534). It has been suggested that case studies are appropriate when “the domain of the research is likely to cover contemporary events” (Yin, 2014). The idea of using multiple case studies is designed to understand replicable elements within the stories of firm growth, described as “replication logic” (Yin, 2014). The findings from multiple case studies can be generalized as a rule or a tendency that can be substantiated in other situations (Easton, 2010b). In establishing a

theoretical perspective of high growth across multiple cases then these cases must have clearly recognised common criteria. They must be similar in critical aspects, the common factor for this study was the fact that the firms met the HGSF definition and other criteria outlined later in this chapter (section 3.7.1). A multiple case study approach is the appropriate method for this study as it allows an investigation and analysis of causal connections between the growth concepts across a group of small firms that have experienced high growth (Stake, 2013).

It has been claimed that “social science has not succeeded in producing general, context-independent theory and thus has in the final instance nothing else to offer than concrete, context-dependent knowledge, and the case study is especially well suited to produce this knowledge” (Flyvbjerg, 2006, p. 223). There are established criteria to deal with criticisms regarding the quality issues levelled at the case studies approach: avoiding unnecessary bias and warranting clarity through appropriate data gathering and analytical techniques, ensuring that derived general theories can be applied to other situations and that results can be replicated in other studies (Healy & Perry, 2000). The methods adopted within the research address these issues, although bias will always be evident by the very nature of the method of using a narrative or story process.

In establishing the unit of analysis, it is important to identify the way that the research falls into a paradigmatic classification. Figure 22 represents four paradigm classifications (Perren et al., 2004). It outlines the definitions of each paradigm. There are several case study paradigm models. In their review of papers, Perren, et al (2004) suggest that two key dimensions are prevalent in case studies related to entrepreneurs and small firms. The first dimension relates to the way that the social world is shown objectively or subjectively. It is described as “the dichotomy between objective perspectives and subjective perspectives”(Perren et al., 2004, p. 84). The second dimension is suggested to be “whether the boundary is placed around some form of milieu of social actors or the individual entrepreneur/owner-managers” (Perren et al., 2004, p. 85). Deciding, in relation to the paradigm criteria, on where the case studies sit in a model such as this impacts on the very nature of the research and the methods derived to address the objectives.

Figure 22: Definition of four case study paradigms.

"Objective" Milieu Case Explanation	<ul style="list-style-type: none"> • Represents case studies focused in the main on the organisation as the primary 'unit of analysis' and boundary setting is often focused further through a specific theme.
Multiple Stories Milieu Explorations	<ul style="list-style-type: none"> • Represents case studies that tend to accept that there may be many social actors involved within a situation and they will have different interpretations of the social world.
"Objective" Entrepreneurial Narrative Explanations	<ul style="list-style-type: none"> • Represents case studies focused on the entrepreneur as the primary 'unit of analysis' and boundary setting is often focused further through a theme linked to some form of success or failure.
Entrepreneurial Personal Story Exploration	<ul style="list-style-type: none"> • Represents case studies focused on the entrepreneurs interpretation of events, while sometime recognizing that this only one subjective account amongst many different accounts from social actors sharing the world.

Source: (Perren et al., 2004)

This research falls between 'Objective' Milieu Case Explanations and Multiple Story Milieu Exploration. The unit of analysis is the organisation but this is set within the milieu of the entrepreneurs and the entrepreneurial teams' multiple story narratives. Objective milieu cases are "generally focused on the organization as the primary unit of analysis and boundary setting is often focused further through a specific theme" (Perren et al., 2004, p. 85). There are advantages and disadvantages inherent within each of the case study paradigms integral to the research (Perren et al., 2004). The objective/subjective tension inherent within the study creates issues for the study methods and interpretations.

3.4 Research Methods

Consistent with the phenomenological perspective and an interpretivist case study method a Soft Systems Methodology (SSM) has been adopted. Patching (1990) suggests that SSM is not a technique and as such does not require a set of defined procedures but it is rather a set of guidelines (Patching, 1990). This is consistent with an IPA methodology. The main proponent of SSM, developed at Lancaster University, Checkland had one main idea, that

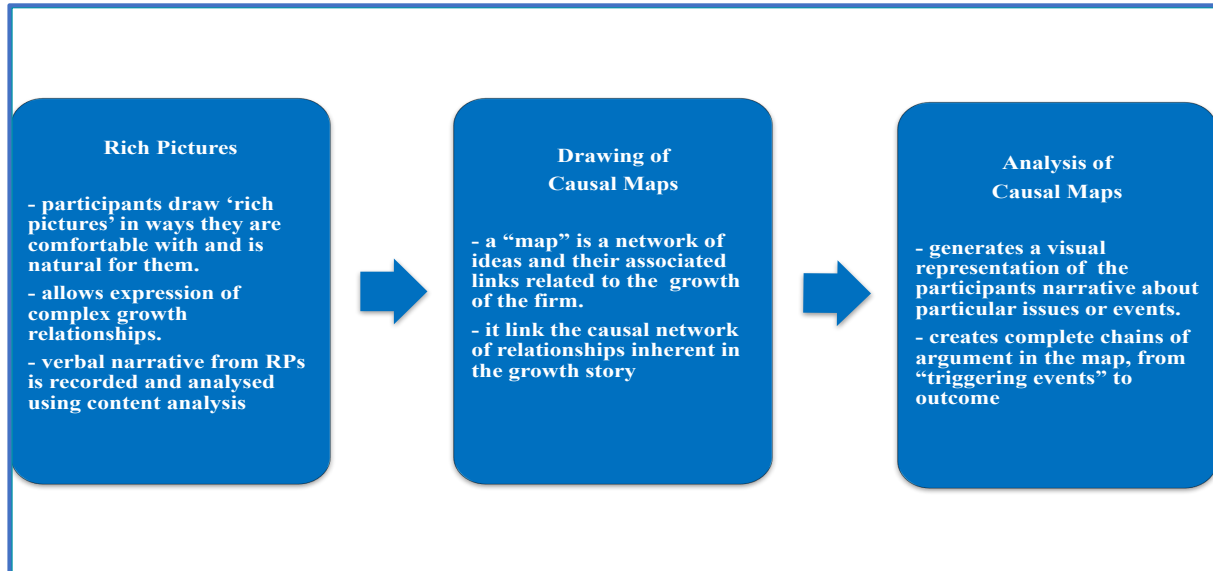
situations were better understood in terms of their subjectivity and by way of human interpretation (Checkland & Scholes, 1998).

The SSM approach as applied is a way of capturing the story of the firms' growth in a phenomenological way. SSM is usually applied to problem solving or strategic thinking within an organisation (Graham, 2016). The application of SSM in the context of this research is to adapt the methodology by asking participants to use the processes of SSM in reliving the story of the firms' growth, it is essentially being used as a reflective process (De La Hoz Freyle, Florez, & Rincon, 2013). It is a holistic approach and consequently is a fuller and richer **more personal** methodology capturing both the explicit and implicit elements of the growth story and consequently the growth process of HGSFs. This is done by, as previously indicated, a reflective process of applying, retrospectively, systems thinking (ST) (Checkland, 2011). This is effectively unpicking the strategic and tactical thinking and decision making that went on after the BSTE occurred. ST can be used "to understand the situation systemically" (Williams & Hummelbrunner, 2010, p. 18). The process of ST helps to see the connections between the components of a situation. In terms of this research connections between the trigger events and decisions and actions post these events are evidenced, achieving an understanding of the whole story of high growth. A definition developed by Open University academics suggests that a system is simply; "a collection of entities that are seen by someone as interacting together to do something" (Morris, 2009, p. 9).

SSM is used in a systematic way by adopting the sequential staged approach derived from the work of Checkland (1999). The approach and the process are illustrated in Figure 23. Rich pictures are used to allow the case study participants to draw the story of growth. This personal story is then verbally related capturing the nature of the events or opportunities that stimulated high growth. These trigger events are identified in terms of predictability or unpredictability. From the data derived from the Rich Picture a causal map is drawn, using Decision Explorer software (details provided in Appendix C) to understand the links between the BSTEs and the actions taken and decisions made post the incidence of the BSTE. The causal map is then analysed using Decision Explorer software with a view to understanding the causal links of BSTE to action of each case study and the commonality of actions taken across case studies thus allowing a consideration of the phenomena of high growth. From this data, a common causal map will be produced by consolidating the individual causal maps

from each case study. The actions and decisions identified or categorised within the causal maps are classified into a modified absorptive capacity framework (section 4.4.1).

Figure 23: Methods Framework for this Research.



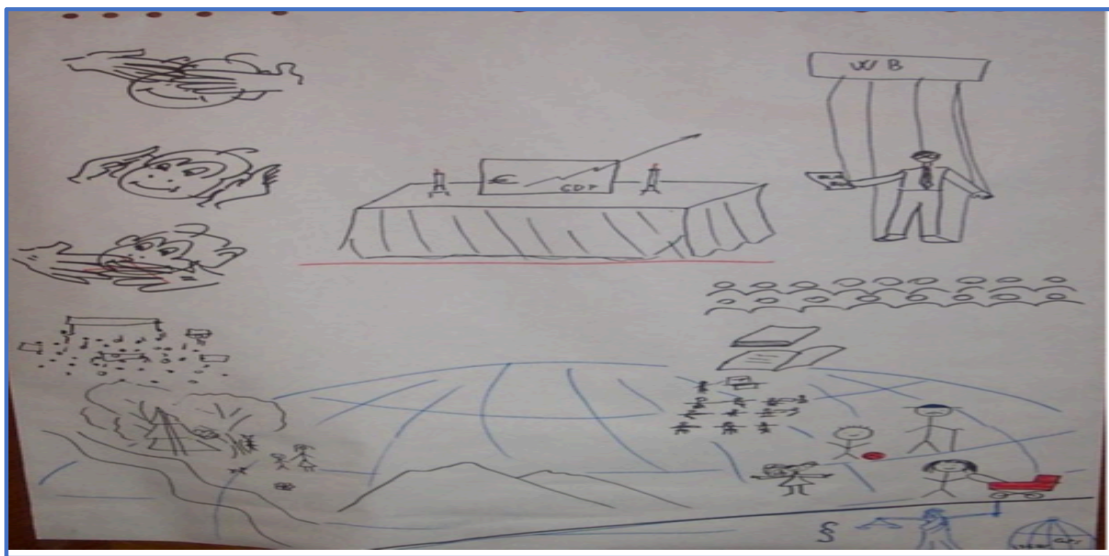
3.5 Data Gathering - Rich Pictures

Several methods of gathering data were considered, such as structured interviews, surveys, etc, finally deciding upon using Rich Pictures as the best process for capturing the story of growth and data attached to HGSFs. A Rich Picture (RP) process was chosen because it “assists the exploration of different world view by drawing images that merge texts and visuals to show complex stories or situations” (Bell, Berg, & Morse, 2015; Berg & Pooley, 2013, p. 2). Rich Pictures is a term used to describe a physical picture used as a means of communicating, expressing and discussing complex ideas through images. (Bell et al., 2015).

Rich Pictures have been recognised as a powerful tool in a “participatory process” and is used to encourage individuals, teams or groups to identify elements within complex system (Berg, 2013). There has been little researched or formally written about the use of RPs, although there is a recognised set of guidelines for their use (Oakden, 2014). Although it is in its infancy, the use of Rich Pictures has been frequently adopted in more social cultural studies (Cristancho et al., 2015; Walker, Steinfors, & Maqsood, 2014). Rich Pictures allow a conceptualisation of the BSTEs or events that led to the growth of a HGSF. The RP is the outcome of a reflective process – either by the individual entrepreneur or by the entrepreneurial team (Bell & Morse, 2013). It allows the participants to capture all that is

relevant to the growth story that was experienced by the firm. They communicate a great deal about the experiences, the dynamics, actions and mindset of those composing the RP. Figure 24 shows an example of an RP drawn by a group of sustainability professionals in Slovakia. In this RP “a visual metaphor (the three ‘wise monkeys’, the marionette, globe and conference) combine to help the members of a group speak about things which they find difficult or even impossible. We particularly like the image of the marionette, the unidentified person being controlled by the World Bank?” (Bell et al., 2015, p. 2).

Figure 24: Rich Picture illustration



Source: (Bell et al., 2015, p. 2)

In considering the RP from an informative perspective there are two dimensions. The distinct parts of the RP provide formal information whilst the whole picture “gives a more comprehensive view which can highlight the more subtle, soft or tacit messages or nuances” (Bronte-Stewart, 1999, p. 84). Asking each participant case study to develop an RP creates an opportunity to capture a fuller subjective narrative of the growth story including perceptions, experiences and the myths and legends associated with the growth. This is consistent with the phenomenological perspective of the research. By the nature of the process there is an element of content analyses of the RPs. This helps to identify patterns and allow insights within each individual case study. It also provides an additional layer of rich information flowing between the cohort of case studies. It allows comparison and appraisal between the experiences and narratives of the different case studies. This means that there is scope to analyse the analyses (Bell et al., 2015). It allows an exploration of the ways in which the

analyses can be integrated or differentiated. The RP can be interpreted not only by the drawer but also by the viewer who can interpret what is seen in “many different ways and can derive a number of meanings” (Berg, Bell, & Morse, 2015). In this research the interpretation of the RPs is undertaken by the drawer and not by the researcher. The interpretive process of the entrepreneurs’ narratives consequent to RPs is important and demands a more systemic approach involving an understanding of the causal links between opportunity, type of event, response, action and consequence. The requirement for understanding the connections and links between these five aspects was the main reason for the use of Causal (Cognitive) Mapping of the narrative from the RP.

3.6 Data Analysis: Causal/Cognitive Mapping

“Cognitive mapping in the style of Kelly built on three key assertions of the theory; Firstly, man makes sense of his world through contrast and similarity, that is meaning in the context of action derives from relativism. Secondly, man seeks to explain his world--why it is as it is, what made it so. And thirdly, man seeks to understand the significance of his world by organising concepts hierarchically so that some constructs are super- ordinate to others.” (Ackermann, Eden, & Cropper, 1992, p. 1)

The purpose of cognitive or causal mapping of the narrative of the growth story is to capture the causal elements of the story related to the events that led to the growth trigger. The maps analyse these events and how the entrepreneurial team effected growth change from the opportunities presented. In capturing the causal process of growth, it is possible to understand what is common in the process, the causes be and the appropriate support intervention that could be designed to facilitate those elements of the growth process. Cognitive or Causal mapping was developed by Eden and his team. (Eden, 1988).

In cognitive mapping the most regularly used form of link characterises a causal (may lead to) relationship. Causal maps are a “device for exploring meaning-through illustrating not just what the facts/issues are but how they fit together” (Ackermann, F. & Eden, C., 2011, p. 48) . Causal mapping offers a way in a structured format of the “merging of perspectives” (Ackermann, F. & Eden, C., 2011). A suggested benefit of causal maps is that they allow an insight into the tacit experience and knowledge of entrepreneurs and managers (Billsberry, Talbot, & Ambrosini, 2011). The use of causal mapping allows the capture of the thoughts of key players in the way of describing the events leading to growth and the actions and decisions that were made subsequent to these events (Narayanan & Armstrong, 2005).

Analysing the data from the RP narratives involves a process of establishing the cause and effect relationship between the events, actions and decisions within a framework of the absorptive capacity of the case study. Capturing the rich data of the narrative consequential to the RPs. In establishing the linkages and defining the actions and reactions of the responses of entrepreneurs and the entrepreneurial teams gives an understanding of the responses to BSTEs giving more understanding to the process of their growth (Cope, 2011).

Causal mapping, understanding the connections, allows the linking of decisions and actions, providing a fuller view of the growth story (Bryson, Ackermann, Eden, & Finn, 2004). This method assists the “investigation of the fast growth phenomenon” (Mirvahedi, 2014, p. 23) and to more fully understand “the underlying process and layers of fast growth” (Mirvahedi, 2014, p. 23). This is done by putting into text form the narrative experiential growth story emanating from the RPs. This demonstrates the events that took place during the growth phase of each firm and the actions taken resulting from these events. The nature of these events in terms of their unpredictable nature is analysed. The process also allows a causal categorization of actions to estimate how common these actions are between the case studies.

The transcribed texts from the narratives of the RPs are mapped and analysed according to the three main objectives of the research using the Decision Explorer software package. Decision Explorer is a software package used for analysing causal maps (Ackermann et al., 1992). Important aspects of the mapping dialogue are the Domain and Central analyses: Domain analysis refers to finding busy concepts with many internal and external links (Bryson et al., 2004). By identifying the main concepts and clusters the commonality of factors driving growth are identified as well as their significance and importance to the individual and cross-case studies.

3.7 Research Sequencing and Identification of case studies

Figure 25: Phasing of Data Gathering, Sourcing and Analysis

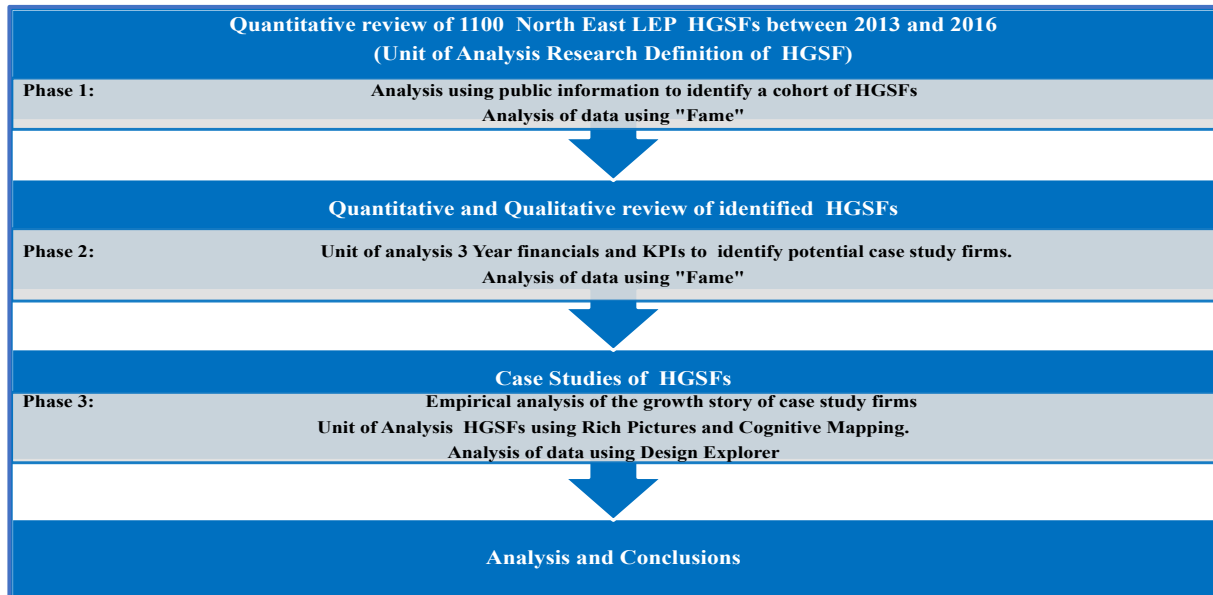
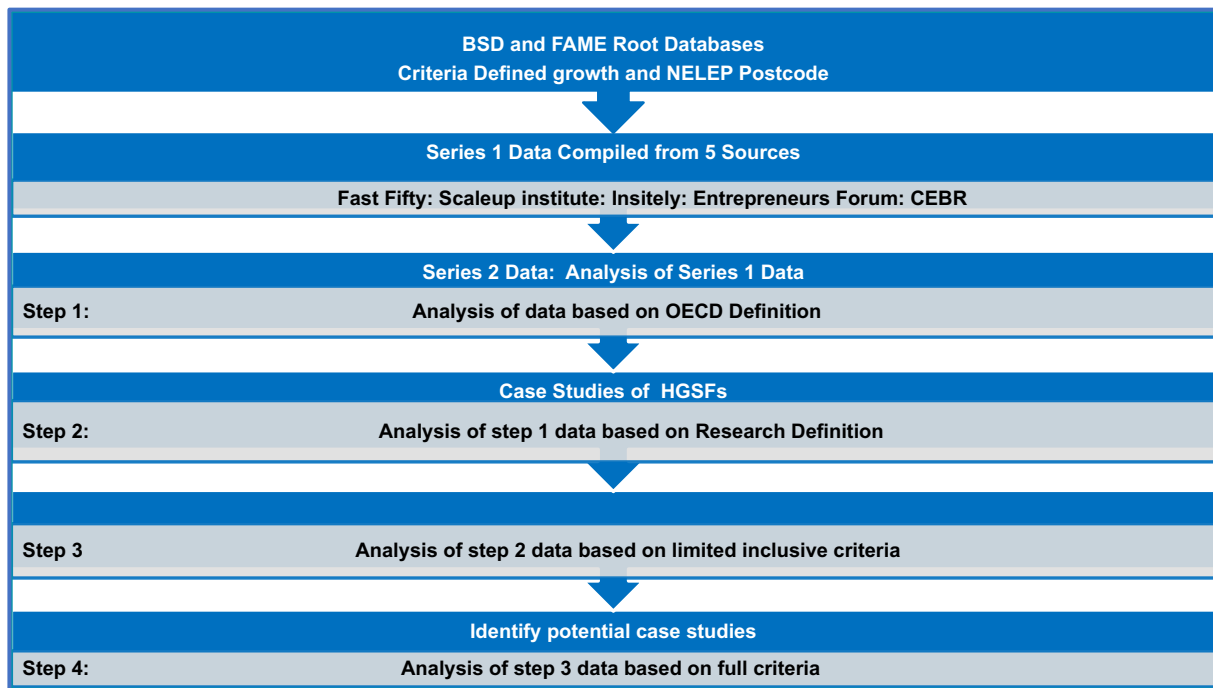


Figure 25 represents the three phases of the data gathering. In phase one, 1100 rapid growth small firms were identified using the OECD definition of HGSFs that resided within the NELEP area. These were then further analysed in phase two using the research definition and the criteria. From this identified cohort five firms were selected as the research case study firms (see Appendix B)

On the basis that most exploration of HGSFs has been quantitative as opposed to qualitative (Brown & Mawson, 2013) the research takes the form of an essentially qualitative structure. The main reason for this approach is because of the desire to capture data relevant to the process of growth and actions and decisions through the story and experience of the team involved and advantages provided by data gathered by using qualitative SSM. The approach allows the process of rapid growth, a gap in the extant research, to be investigated from the personal perspectives of the entrepreneurial founders of the selected case studies. As outlined previously the RP data provides an opportunity to look deeper at the growth stories of the case studies (Bell et al., 2015). The initial identification of the case study firms is based upon a financial analysis of companies that fall within the definition of HGSFs being used for the study. This is typified by a preliminary phase of quantitative data collection and study

followed by a second stage of qualitative data collection and analysis as indicated by Figure 26.

Figure 26: Step by step process of data analysis to identify cohort of case studies



3.7.1 Phase One Data Gathering

The HGSF definition used within the research was developed to capture a more dynamic type of small firm, a “Cheetah” what the researcher would consider a super HGSF, as opposed to a Gazelle, which could be any size (Birch, 1987). The OECD definition uses the either-or growth metric for turnover or employment. This has been criticized and considered in the introduction chapter, incorporating profit as a key element to the definition makes it a much more rigorous definition and is more indicative of the sustainability of the firm and is a reflection of how HGSFs fund their rapid growth through cash flow (Brannback et al., 2014; Kiviluoto, 2011).

To state again the definition of HGSFs, (adapted from the OECD definition) used in this research:

Employment base in year t meets the following conditions:

- . Its number of employees has grown by 72.8% cumulatively in the preceding three years (an annual average growth rate of 20%).
- . Had 10 or more employees at the initial year ($t - 3$).

- . It was alive in the business demography population at every year between $(t - 3)$ and t .
- . Was not subjected to any merger or split of their ownership structure during the preceding three years.

Turnover base in year t meets the following conditions:

- . Its turnover at year $t-3$ is between £1 million and £20 million.
- . Its annual turnover has grown by 72.8% between $t-3$ and t (an annual average growth rate of 20%).

Profit base in year t meets the following condition:

- . It has achieved net profits from $t-3$ to t

The initial data, using the publicly available information, was gathered and analysed. The data was derived from two “root” sources: Fame Database and Business Structure Database) These root sources were delineated into five datasets: North East Fast Fifty 2016, the Scaleup Institute, the Entrepreneurs Forum, Insite and CEBR (Octopus 2016), more detail on the root sources and the data sets is provided in Appendix C. As outlined, previously in chapter two, there is a debate about the use and the veracity of absolute or relative measures (Piazza et al., 2016). For this research, absolute growth figures were used in terms of turnover and employment changes. The additional criteria for choosing potential case studies was:

Criteria for choice:

- Private Business: Incorporated as an equity/share based business. Limited company status
- Entrepreneurially led Business: founder/founders still involved in the business.
- Management and beneficial ownership are congruent: the strategic management of the business was still in the hands of the founder. Although the operational management may involve a professional team of people (Colombelli, 2015).
- Indigenous to and based in the North East Local Enterprise Partnership Area: the geographical area of the NELEP is extensive. It covers County Durham, Gateshead, Newcastle, North Tyneside, Northumberland, South Tyneside and Sunderland.
- Meets definition of HGSF as detailed in research.
- The public story: the local and national media coverage represents the growth story of each case study and the aspiration for growth.

3.7.2 Phase Two Data Gathering

Having identified potential case studies for further analysis to arrive at the cohort of core case studies. The process of investigation of these potential firms used the Fame database. This is a database of companies in the UK and Ireland covering a broad set of company information. It allowed an assessment of the various company financial strength. Their growth profile against the financial criteria as well the ability to match against the research profile criteria. It also allowed an analysis of each firm against its peers and a comparison of each case study firm against the cohort of case studies. It also provided links through to information on directors of the company concerned, with further information on other directorships they hold, as well as additional records for managers of the company concerned. Highly detailed information was given on shareholders, including information on ownership percentages and indication of which parties hold a controlling interest. Among other things, this helps to identify beneficial owners. Using Fame and other public sources of information, news bulletins, websites, social media local professional knowledge it was possible to compile a detailed picture of each case study firm. This overview includes background information, financial history plus relevant news, M&A deals and publicly available stories about the firms. Having analysed the financial and soft data around the potential HGSEs firms the final case studies were chosen based on a broadened set of criteria with the addition of:

Criteria for choice:

- Ambition for further growth (growth mindset)
- Willingness to participate.
- No conflict with researchers' business interests.

3.8 Identifying the Case Studies

The final criteria that was applied to the cohort of remaining firms, in order to establish consistency, the firms needed to be present in two data sets. This probably was not a negative for firms not being present in two or more data sets but gave some comfort to the researcher. Within the above figures, after Step 4, six of the firms identified from the Insitely dataset also fell within the Fast Fifty Dataset. One firm was identified in both Fast Fifty and CEBR Datasets and one firm was identified in both the Insitely and CEBR datasets. This analysis meant that there were eight companies that were identified as potential participants of the 5-

case study cohort against all the research criteria. However, as the selection progressed one of the firms was taken over and consequently fell out of the criteria. One of the firms declared that the management was dealing with some confidential internal issues and although willing to participate felt it was not wise to do so. The six remaining firms were approached and five agreed to participate.

3.8.1 Firms Identified as Case Studies.

The five firms identified are a group of exciting, rapidly growing HGSEs. They are entrepreneurially led by strong capable shareholder managers. They are indigenous to the NELEP area. They maintain the head office in the area and have experienced rapid growth in both turnover and headcount whilst being profitable. Table 4 details the five case study firms and the criteria for inclusion that was met by each of them.

Table 4: Criteria for case study inclusion

No	Source	Activity	Head Office: NELEP Area	% Turnover Growth (72.5% over 3 years)	% Employee Growth (72.5% over years)	Indigenous to NELEP	Shareholder/ Managers	Profitable for 3 years	Credit worthy
A	Fast Fifty Insitely	Technology Solutions (Hosted Services)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B	Entrepreneurs Forum Insitely	Supply Chain Management	Yes	Yes	Yes	Yes	Yes	Yes	Yes
C	Fast Fifty Insitely	Craft Materials	Yes	Yes	Yes	Yes	Yes	Yes	Yes
D	Fast Fifty Insitely	Wrought Iron and Handrail Components	Yes	Yes	Yes	Yes	Yes	Yes	Yes
E	Fast Fifty Insitely	Heating and Plumbing Spares	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3.8.2 Brief Background to Case Studies:

The five case studies operate in five different industrial sectors and use several varying market and sales distribution models.

Case Study A: IT, technology, telephony and data storage through bespoke consultancy sales and support desk operation.

Case Study B: consumable supply chain solutions through onsite installations of consignment stock using bespoke software recognition programs.

Case Study C: hobby craft materials and retail through online, TV and retail outlet sales operation.

Case Study D: iron and metalwork components through online and catalogue sales operations.

Case Study E: plumbing and heating spares through depot sales operations

The case studies had a combined turnover of £61 million (2016), they had grown over the three-year period by an average of 450%. The total number of employees for all the firms was 277 this had grown by over 250% over the three years. Table 4 outlines legal information and financial data relevant of each of the case studies.

Table 4: Summary financials of Case Study Firms

No	Date of incorporation	SIC	Turnover th GBP Last avail. yr	Turnover th GBP Year - 3	Turnover Difference t-3t	% Growth t-t3	PBT Yr t	Liquidity Ratio (x) Last avail. yr	Number of Employees Last avail. yr
A	18/12/2006	62020	£14,800	£2,961	£11,839	400%	£479	1.60	130
B	25/06/1951	70100	£15,000	£2,600	£12,400	477%	£250	1.10	40
C	08/03/2006	47910	£15,262	£5,000	£10,262	205%	£856	1.18	130
D	27/02/2001	25110	£2,072	£700	£1,372	196%	£518	2.22	20
E	15/03/2011	46740	£14,000	£1,200	£11,600	967%	£700	1.02	40

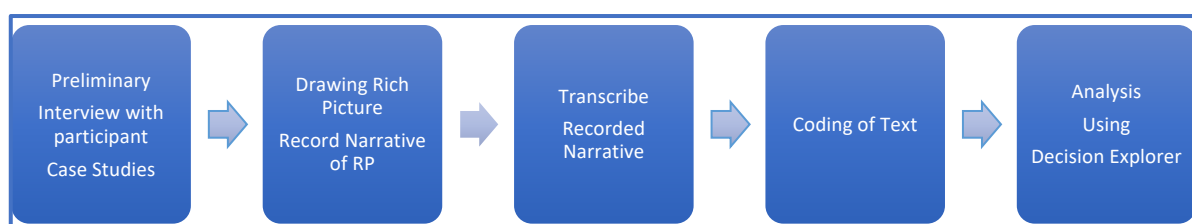
The process for further study of these HGSEs then involved an analysis using the process of capturing the growth narrative stimulated by RPs This was effectively an unstructured session with founder entrepreneurs using RPs as a way of capturing the collective narrative of the growth story, investigating performance and the categorization of experienced trigger events and more specifically BSTEs. A creation of a typology of transition actions common to HGSEs within the cohort of businesses. A classification or grouping within each business against the typology. The multiple case studies are used to identify relationships and facilitate

the formation of a framework for the identification of BSTEs and the transitions that require specific actions within the context of the absorptive capacity of the firm. One element of the categorisation of the BSTEs used a modified version of the categories identified by Brown and Mawson (2013); endogenous (unpredicted internal), exogenous (unpredicted external) and co-determined (planned) for the identification of growth stimulants and processes.

3.9 Phase Three Data Gathering (Empirical Research).

The empirical research adopted, as outlined in the previous chapter, a modified soft systems approach (Checkland, 2011). Figure 27 outlines the steps and elements of the empirical research. It provides a description of the process from the preliminary interview to the rich picture drawing and recorded narrative to transcription, coding and analysis. Following accepted guideline for the RP process, the participants were asked to draw a picture representing the growth (Berg, 2015). The different and various elements of the methodological approach have been separately tried and tested but they have not, to the authors knowledge, been used as a combination in another study in this knowledge area. The justification for their use is covered in the previous chapter. The prime justification was the desire to capture the unique and shared phenomena of the growth story of the participant case studies (Cristancho, 2015).

Figure 27: Sequence from Data Gathering to Data Analysis



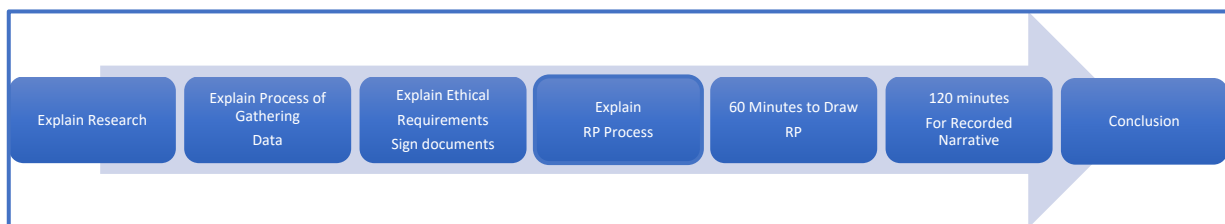
3.9.1 Pilot of Rich Picture/Narrative Process

To consider and understand the effectiveness of this phase of the data gathering process it was decided to hold a pilot (Mohd Noor, 2009). This pilot was conducted with a growing company that met most of the criteria in terms of its growth profile but just fell outside the range of the turnover definition in that its start turnover was less than £1 million at year $t-3$. The pilot proved very useful in that it led to refinements in the approach to the process of eliciting the RP narrative (Wynn & Williams, 2012). It meant that more thought needed to be

put into the approach to be taken to ensure that the process was as effective as possible and that the quality of the data gathered was robust and reflective of the actual growth experiences of the case study entrepreneurs.

The main systemic issue that the pilot highlighted was the need for a preliminary meeting with the participants. This was because of the practical considerations gleaned from the pilot. In the trial, it was found that a rapport with the participants needed to be established. There was an interest in the motivation for the study and an interest in the researcher's background and experiences, this had the potential to become a distraction. It evidenced the need for a rehearsed short statement dealing with the reasons for the research from the personal perspective of the interviewer and more importantly the regional context. The trial also indicated that the process was too complicated and too long to attempt in one session. Figure 28 outlines the process adopted for the trial.

Figure 28: The Pilot Process



The pilot indicated that the attention span of the participants was an important consideration. It proved to be a drawn-out process that demanded a high level of concentration over a relatively long period of time, about two hours. Typically, the attention span of certain entrepreneurs was relatively low (Colombelli, 2015). It was also evident that asking the entrepreneurs to immediately recall the growth story was an issue. They needed some time to reflect on the events that were important and significant in the growth story. It was decided that a preliminary meeting was required. This preliminary session proved to be vital as it formed a reality check and allowed the participants opportunities for self-reflection prior to the second session (Walker et al., 2014). The practical issues thrown up in the pilot highlighted that there was a nervousness about having to draw a picture, people needed to be put at ease. Providing instructions for RP's without being too prescriptive was evident (Bell, Berg, & Morse, 2016). Assuring participants that there was no right or wrong RP and that every drawing was valid regardless of its artistic quality (Berg, 2015). The kind of equipment

people felt comfortable with, pens, type of paper was identified. Having everything to hand was important. The ethical considerations were an important aspect of the pilot, assurances that there would be confidentiality and a respect for commercially sensitive information and an explanation of the need to sign ethical participant agreements.

The pilot highlighted the need to consider the role of the interviewer in facilitating the RP process to ensure that any influence on the process was minimised. It has been pointed out that the way an RP is facilitated can influence structure (Berg, 2015). The drawing of RPs, although not widely researched has been a recognised social science tool since the 1990's (Bronte-Stewart, 1999). It has been suggested that there are three basic rules in facilitating the RP process which were adopted by the interviewer (Armson, 2011):

- Avoid structuring the RP in any way.
- Use a few words to describe what is needed
- Make it clear that all aspects of the experience are OK; emotion, culture, etc.

This approach reduced the influence of the researcher in guiding and influencing the approach to and the outcome of the RP's (Scholz, Dewulf, & Pahl-Wostl, 2014).

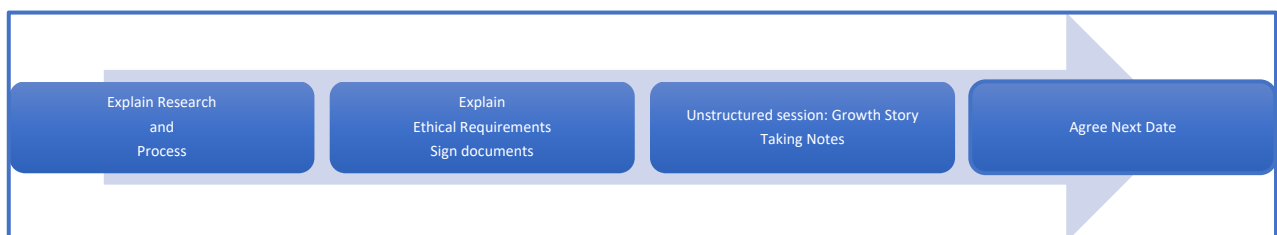
3.10 Revised Process

Resulting from the pilot a revision of the process of gathering the empirical data became evident. The findings from the pilot were used to revise the process. With a preliminary session and a second session. The data gathering on average took between 5 to 6 hours per case study.

3.10.1 Preliminary Session

Figure 29 outlines the structure of what was termed the preliminary session.

Figure 29: Structure of Preliminary Session



The preliminary session took on average three hours. The introductory aspect of the session proved to be critical, explaining expectations of the sessions, areas to be covered and explored needed to be established. It became clear that this aspect of the session could not be taken for granted. Stimulus questions were required; What did the business do? How did it start? What about people involved? How did the business develop? Were there any outside influences? The dilemma for the interviewer was how much to interrogate the participant in the first session. There was a recognition of the potential bias of the facilitator, having a background in rapidly growing businesses. There was a danger of pre-empting the elements of the story. It was a fine balance between influencing responses and triggering remembered events. The experience and background of the facilitator was important in managing this (Berg, 2015). The view was taken for the researcher to be as unintrusive as possible and to reduce questioning to a minimum.

It became evident that the very nature of the initial narrative caused a chronological perspective, it was recognised that this was unavoidable. The request to participants was to simply recount the growth story. This generated a chronological way of reflecting. It became evident that this chronological perspective was taken through to the RP process and the subsequent RP narrative. Some practitioners of the RP process would be critical of the chronological perspective of the RPs because of the rather restrictive and possibly constraining aspects of the freedom of thought and perspective (Walker & Steinfors, 2013). The actual experience of the process was different with different case studies. Some would argue that the RP is an 'output' but it has been proposed that "a deep dive into the RP that could tell us a lot about the dynamics and mindset of those composing the RP" (Bell et al., 2015, p. 5).

Because of its importance careful thought needed to be given to how the research topic and process were communicated. It needed to be relevant, interesting, engaging and capture the imagination of the participant. It was found that there was a balance between this communication and the danger of influencing the responses of the participants. The very entrepreneurial nature of the participants needed to be engaged, what was in it for them? The reflective process involved both excited and interested the participants. They wanted to tell their story and tell it well. This was consistent with the critical realist approach in attempting to establish the concept dependency of the narrative (Easton, 2010a). The ethical requirements were explained guided by the Universities Code of Ethics. The emphasis was

very much on confidentiality and anonymity of the information. The ethical paperwork was signed and copies left with the participants. A great deal of the general story of the participants is in the public domain but the detail of growth and the BSTEs behind the growth resides very much within the myths and legends of the firms themselves. It was important to ensure the recognition of the sensitivities of the stories. The participants were trusting the interviewer with very sensitive information.

The facilitator adopted a standard approach to the preliminary session. For the avoidance of leading or guiding the participants there was a simple request for some background to the participant and an outline of the business and its history. This narrative exercise led to several benefits. It developed rapport and empathy between participants and the researcher, listening to and empathising with the participants created an openness from the entrepreneurs, particularly in the follow up session. The first session established the credibility of the study and the facilitator. It was recognised that the interviewer had had a great deal of experience in growing businesses by asking a few pertinent questions and particularly by the nature of these questions. Sharing “war stories” created a level of reciprocity and mutual respect, although this sharing was kept relevant and to the minimum. It meant that the second session was very productive as all the preliminaries had been dealt with in the first session. The emphasis was on the general experience of growth, it was not focused on the BSTEs per se but it was evident that in each firm certain significant unpredictable events had triggered growth. During this first session notes were taken. This provided background to each case study and it was recognised as a “matter of fact” session. It was assumed that the participant entrepreneur was totally immersed in the business and had experienced the growth in a very personal way. As has been suggested “this sets the boundaries within which the interviewee and interviewer can “play” and test various versions of “reality” as perceived by the interviewee” (Walker et al., 2014, p. 355).

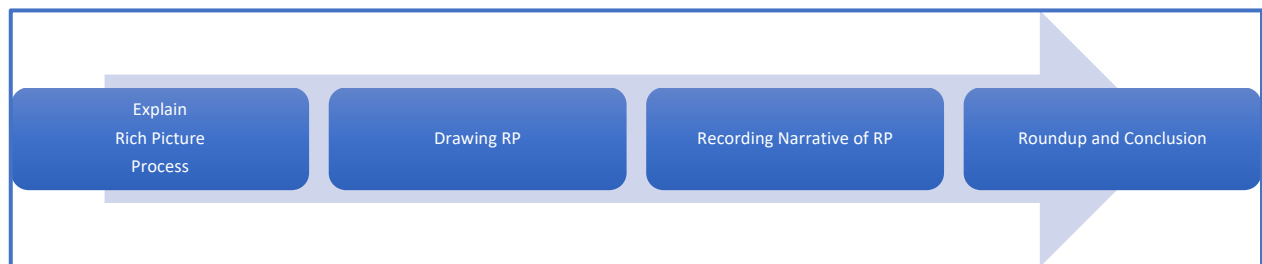
The facilitation needed to be empathetic and non-judgmental to the story, ignoring their own experiences and maintaining a neutral stance and perspective. This at times was found to be difficult. There was a temptation to interrogate quite rigorously but the temptation was avoided. This preliminary session led to the second session being very open and the level of disclosure was high. In line with following a phenomenological approach the issues around selective memory and bias regarding recollection was recognised but it was evident by the

outcomes of the second session that the level of integrity of the participants could not be doubted. They recounted their growth stories “warts and all”.

3.10.2 Second Session

Figure 30 outlines the structure of the second session.

Figure 30: The structure of the second session



In the second session, which on average took between 3 and 4 hours, the RP process was explained as per outcome of the preliminary session. Each participant was provided with the necessary equipment and asked to draw a picture of their growth story, a time limit of 30 minutes was set, although it was emphasised that this was only a suggestion but if they wanted more time they could have it. Because of having the preliminary session all the participant got into the exercise very quickly. On average the RP process took about 60 minutes. As you would expect all the pictures took a different form but there was an evident chronological bias in several of the RP’s. During the process of the RP drawing there was no communication between researcher and participant. The RP’s “iteratively validated” post the process and to some extent during the narrative recording. The narrative recording, which was the entrepreneur telling the growth story reflected in the RP took between 2 to 2.5 hours. Telling the growth story reflected in the RP took over although the questioning of the narrative was kept to a minimum to ensure the integrity of the story (Bell et al., 2016). What is meant by this is that there was minimum influence from the facilitator but it needs to be recognised that the very presence of the researcher will have had an influence (Berg, 2015).

All the participants commented on the benefit of the RP process and how it made sense of their business. The participants stated how they had enjoyed the process and saw its value. The actual RPs will be dealt with in much more detail within the results and findings section but as a precursor to this it worth making the following points. The importance of the RP

being the interviewee's perception of the situation cannot be understated. It was an expression and interpretation of the phenomena of their growth story, very personal to them and each case a reflection of their identity and personality. During the recorded narrative sessions, some of the participants were asked a few questions about the interaction of aspects of the RP. This was to understand certain elements of the RP and the importance of that particular point to the growth of the firm. The participants made great efforts to explain fully the meaning of their RPs. As has been emphasised "credibility of the output is achieved when it is accepted as representative of the situation, realistic and useful" (Walker et al., 2014, p. 356).

The pilot exercise proved valuable in understanding some of the issues related to recording the narrative from the RPs. Some of which were obviously practical such as the location of the recording to reduce external noise. The positioning of the recorder, to ensure that recording took place two recorders were used. The articulation of the speaker, speed of speech, dialect etc. Recording the narrative was very readily adapted to by the participants this again showed the benefit of the preliminary session. The narratives will be more fully explored in the results and findings section, it is worth making the following general points. The narratives flowed well, the relationship with the RPs was evident and had a beneficial impact on the quality of the recorded narrative. Any interventions or questions were for clarification of the RP. The RPs performed their major function which was to create a reflective framework for the entrepreneurs and the entrepreneurial teams. The RPs focused the participants on the task of articulating the phenomena of their growth story. What came across strongly was the enthusiasm of the participants for their business. There was a great understanding of the events that had triggered the growth of the firm and issues that needed to be addressed to take full advantage of the opportunities presented by these events.

The subsequent transcripts proved to be very fertile ground in relation to the outcomes and findings. Participant bias is inevitable, but this was a critical element to this research. That bias was looked for, it meant that the stories were really lived (Berglund, 2015) There is nothing wrong with bias so long as it is recognised (Nightingale & Coad, 2016). Each narrative was an intensely personal perspective, it almost exhibited the tradition of Norse narratives, it was heroic, it was brave and it was larger than life, it was entrepreneurial. The business background recounted in the preliminary session was matter of fact. Each participant

was the main actor within their own story. In the second session it was about events, it was about people involved, the main character was the firm not the entrepreneur. The narratives from the RPs had an emotional context, it was meaningful experience being relived. The observation of the body language and the eyes told as much of the story of growth as the narrative did, there was passion, pain, joy, exhilaration, hope, despair and triumph. With all this in mind the researcher took care to reflect their views. The narratives exposed the “voices” of the case studies (Walker et al., 2014). The narratives were transcribed and these transcripts were coded in line with the use of the chosen software, Decision Explorer. The purpose of the analysis was to investigate the type and nature of the events highlighted within the transcripts. The data was reported on rather than observed (Easton, 2010a). Events have causal implications this is what critical realists investigate.

3.11 Analysis of the Data and Coding

The analysis of the narrative gleaned from the RP process was undertaken using content analysis with deductive coding being used in analysing the narrative data connecting the BSTE to actions and decisions post the BSTE. Deductive coding involves the coding of qualitative data in which the analysis starts with codes already in mind. These codes can be based on an existing theoretical framework (Gilgun, 2011). The codes were adopted from the theoretical framework absorptive capacity model of Bessant et al (2007) discussed in Chapter 2: Operational Improvement, People Management, Market Entry, Obtaining Finance, Formal Systems and Strategy. Decision Explorer (DE) software was then used to develop and analyse the causal maps. The decision to use DE was based upon the requirements of the research and is consistent with the objectives. Decision Explorer (DE) is “an ideas and causal mapping software tool” - it deals with qualitative data and ideas expressed through text and narrative (Brightman, 2003). It assists in structuring the relationships between the expressed ideas. The software is used to generate a visual representation of the narrative resulting from the RPs from the perspective of capturing and structuring the experience of HGSFs.

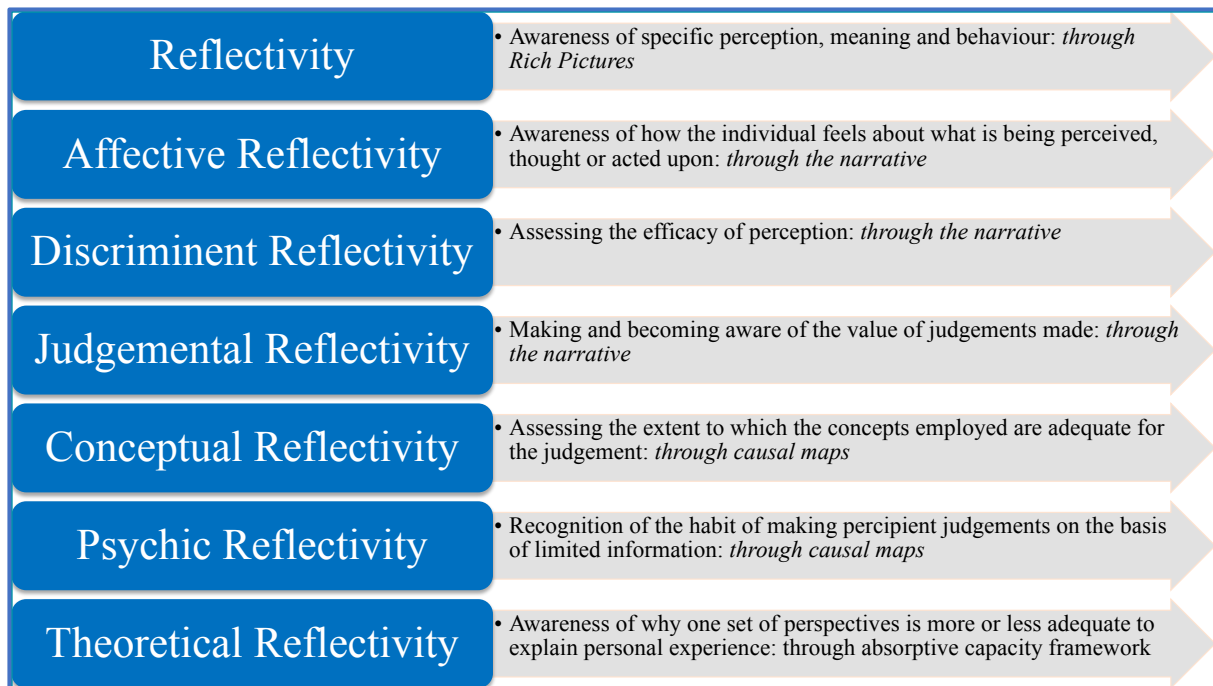
3.12 Reflexivity and the Research

There was an awareness that the personal experience of the research in developing sustainable HGFs, could lead to an element of bias. There was an inclination and a determination to use business experience in a positive way and to maintain an open mind. The background and understanding of the researchers strongly supported the study,

particularly in establishing credibility with and access to the identified case studies. Part of the rationale for the methodology and process used was to allow this to happen and there was consequently a strong element of reflexivity or reflectivity within the research (section 5.9). The terms reflectivity and reflexivity are used interchangeably to mean the same thing. The purpose of reflexivity is to improve research (Alvesson & Skoldberg, 2009). Allowing the production of research that is more useful to its readers than it would be without reflexivity (Alvesson, Hardy, & Harley, 2008). Reflexivity means thinking through those social environmental perspectives that have the potential to have an influence on the study and its outcomes. This constant reflexivity is present in the process of the research as well as in the analysis of content. Reflexivity can lead to a more creative approach and output by facilitating new perspectives – “it may also inspire creativity through opening up for new perspectives” (Alvesson et al., 2008, p. 497).

Recognising the double hermeneutics inherent within the process of data gathering and analysis, the process involves “an interpretation of an interpretation”, bias and subjectivity are potentially present (Pietkiewicz & Smith, 2012). Qualitative research is fundamentally a “reflective and recursive process” (Ely, Anzul, Freidman, Garner, & McCormack-Steinmetz, 1991, p. 179). Being reflexive in the process is “part of being honest and ethically mature” (Hughes, 2014, p. 5). Reflectivity as a process it is not a static event, it involves making sense of the experiences and narratives, it is an active and dynamic process and has a number of levels and depths. Figure 31 details a useful range of the different levels of reflection (Cunliffe, 2009). It has been suggested that “critical reflection involves a critique of the presuppositions on which our beliefs have been built” (Mezirow, 1990, p. 4). Mezirow (1990) defined learning as “the process of making a new or revised interpretation of the meaning of an experience, which guides subsequent understanding, appreciation and action” (Mezirow, 1990, p. 1). In the context of this research being a narrative phenomenological interpretative process the understanding of the meaning of an experience is an important reflection on the process of growth within each and across the case studies (Rittenhofer, 2015).

Figure 31: Mezirow's Seven Levels of Reflection and the case studies



Source: (Cunliffe, 2009)

3.13 Ethics and the case studies

The research follows Northumbria University's Ethical Guidelines. Ethical approval for the research has been granted. All data collected has been anonymized and stored securely on a password protected system and will be destroyed after the DBA has been completed. Respondents were required to sign ethical agreement forms before being interviewed (Appendix D). Figure 32 outlines a set of ethical principles governing the research.

Figure 32: Ethical Principles of the Research

Voluntary Participation: willingness to take part
Informed Consent: Signed document
Anonymity: conditional requirement
Confidentiality: conditional requirement
No Risk of Harm: not applicable
Access to Research: updates and access to the thesis

Source: (University of Northumbria)

3.14 Conclusion

Careful thought has been given to the epistemological and ontological perspectives of the research. The phenomena of the process of growth is at the core of this thesis as outlined within the chapter. The methodology of data gathering is systematic and geared to gathering the necessary narratives capturing the experiences of the participating firms. Recognising the potential bias inherent in the double hermeneutic of the Rich Picture process necessitates a careful reflective demeanour relevant to the interpretation of the information gathered (Pietkiewicz & Smith, 2012). The next chapter deals with the process of identifying the case studies and the data gathering process using the methodologies outlined.

The identification of the potential NE based case study HGSEs raised a number of anomalies within the data sets that would indicate the need for further research into how the UK could capture information related to firm growth. Considering that it is such an important policy area the paucity and quality of data is a reflection on where the emphasis is in policy terms. The experience of collecting the narrative stories was a very positive one for the interviewer. The responsiveness and enthusiasm of the participants reflected their desire to grow their businesses.

Chapter 4: Findings and Analysis

4.1. Introduction

The analysis of the gathered data is set within the context of the research aim, the research question and objectives. The aim of this research is to consider and investigate the role played by BSTEs in the process of growth in HGSFs. The aim recognises the importance of HGSFs in the context of addressing the regional disparities experienced by slow growth regions such as the North East of England. The data gathered through the appropriate methodology and the analysis of the data were designed to address the research question through the stated objectives (section 1.1). The first objective to capture the phenomena of the growth story of representative defined HGSFs considering and exploring the unpredictable nature of the BSTEs, used a Rich Picture process capturing the growth narrative of the entrepreneurs of identified HGSFs. The second objective being to identify and analyse the relationship between the BSTEs and the actions and decisions that transitioned the HGSFs firm post BSTEs was undertaken by analysing the narratives from the HGSFs using causal mapping and content analysis. From this the third objective, by analysing the data from the causal maps was to examine and categorise, through an absorptive capacity framework the actions taken by entrepreneurs and entrepreneurial teams during the process of high growth.

Through the story and experience of the entrepreneurs involved, the process provided advantages in the data (Berg, 2015). The RP data provided “depth and detail”, it was deeper, by “considering attitudes, feelings and behaviours” (Walker & Steinfors, 2013). It encouraged people “to expand on their responses and open up new topic areas not initially considered” (Bell et al., 2015, p. 5). It provided detail by building up a comprehensive picture about why people had acted in certain ways, their feelings about these actions and the consequences and outcomes resulting from these actions. The data gathered from the RP sessions and the consequent narrative and transcripts were analysed. The summary empirical data is considered in the context of the extant literature. The activities of each business are outlined. The background and efficacy of each founder is detailed as is the importance of the growth mindset of the entrepreneur. The outcome of the narratives interpretations is analysed, in the context of absorptive capacity, the causal relationships between BSTEs and actions taken to facilitate the growth of the business are considered.

4.2 Summary Information on Case Study Firms.

Each of the 5 case studies was unique and culturally reflected the character of the entrepreneur founder responsible for their existence. The roots and motivation for their existence varied, opportunities were seen and seized within different industries and sectors. There was a high level of self-efficacy coupled with previous experience. There was also a high level of energy and commitment to the cause of growth and this echoed the high expectation of performance from the people involved. The case study firms are in the process of becoming rather than being, they are in a dynamic state constantly adapting, changing and responding to the dynamics of the markets and the economy within which they operate. Innovation was at the core of the growth story both in product and process terms. Only in one case had internationalisation been embraced (Case Study C) but the potential for exporting the business models was definitely there and two of the firms were investigating international markets (Case studies A and B), it was just too early in the growth process to be acted upon.

Table 5 outlines legal information and financial data relevant to the criteria of the research of each of the case studies. It can be seen from this data that the firms had rapid growth in both turnover and employment and they had all been profitable over the three years of the data set. The turnover growth between year t and year t-3 ranged between 196% to 967% with average growth across the HGSEs being 449%. The employment growth for the equivalent timeframe was a range of 200% to 333% with average percentage growth across the HGSEs being 268%. The firms operated in a number of sectors; computer consultancy, manufacture of special purpose machinery, retail sale via internet, manufacture of metal structures and hardware heating and plumbing. The number of years in business varied from 66 years to 6 years. The profit of the firms ranged from £250,000 to £856,000, the percentage net profit ranged from 1.72% to 25%. All the firms had a positive liquidity ratio, generally speaking a liquidity ratio higher than 1 is acceptable.

Table 5: Summary information of Case Study Firms

Case Study	Date of incorporation	Years in Business	Number of Directors	Turnover th GBP Last avail. Yr (£000)	% Growth t-(t-3) Turnover	PBT Yr t (£000)	Profit Margin % Last avail. yr	Liquidity Ratio (x) Last avail. yr	Number of Employees Last avail. yr	% Growth t-(t-3) Employment
A	18/12/2006	11	3	£14,800	400%	£479	3.24%	1.60	135	238%
B	25/06/1951	66	2	£14,500	458%	£250	1.72%	1.10	42	250%
C	08/03/2006	11	6	£15,262	205%	£856	5.61%	1.18	130	211%
D	27/02/2001	16	3	£2,072	196%	£518	25.02%	2.22	23	120%
E	15/03/2011	6	2	£14,000	967%	£700	5.00%	1.02	43	188%

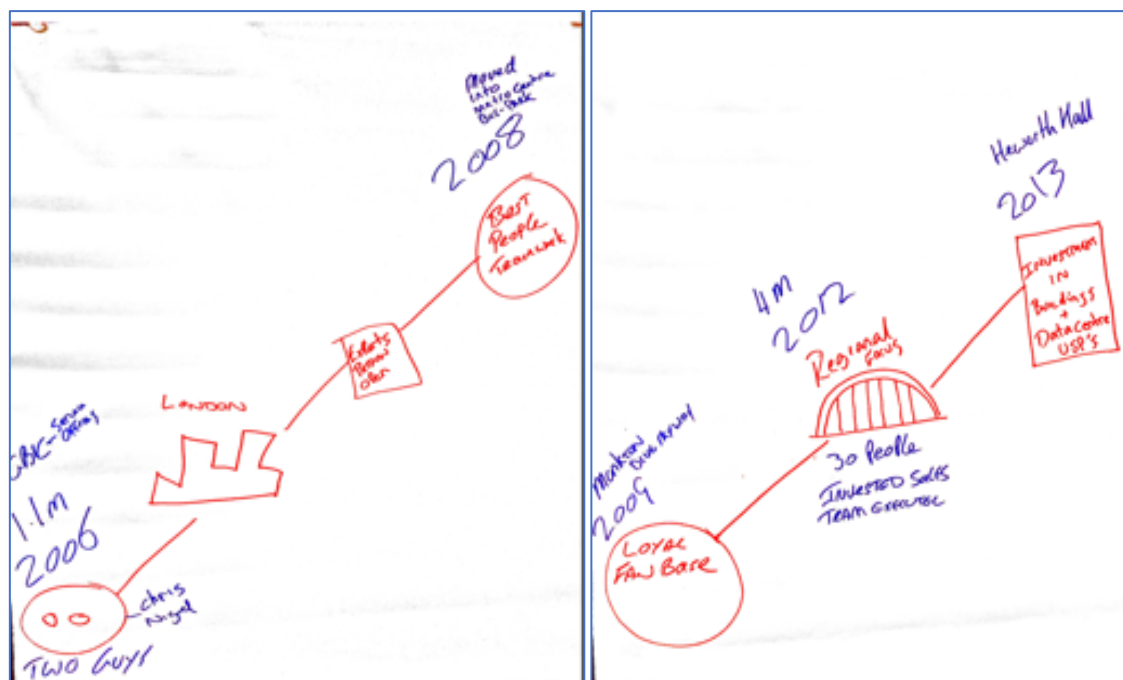
4.3 The impact of BSTEs on the case study HGSFs

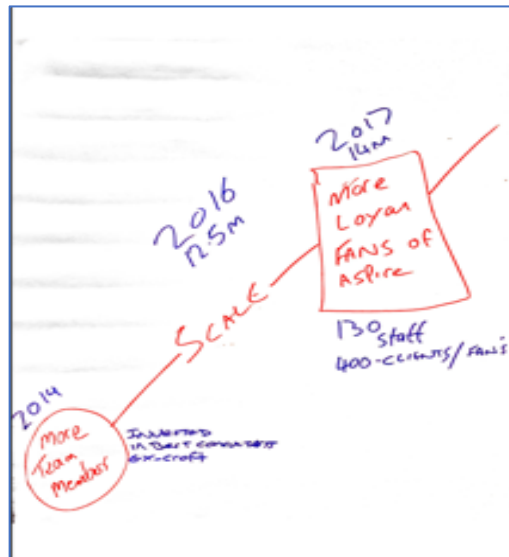
The narrative data findings highlight that each of the case studies reacted in different ways to BSTEs as they occurred but they all reacted through a set of intuitive insights, bringing their experience and extant knowledge to the situation. The case studies realised that their existing knowledge only got them so far, they needed to develop further capabilities in order to take greater advantage of the opportunities presented by the BSTEs. What was consistent across the narratives, as established by the casual mapping, was that the actions taken and decisions made post the BSTE did fall into identifiable domains and could be categorised into these domains. The following provides a business background and elements of the growth story evidenced from the RP of each case study. Each case study RP is included. It also summarises the background of the entrepreneurs, important because it establishes the relevance of the background and experience to the process of growth of HGSFs (MacKenzie et al., 2016). It also puts in context the experienced BSTEs and the growth consequences arising from the BSTEs. The timeline of the BSTEs and their categorisation for each individual case study can be seen in Appendix B. Each firms' causal map is included in this section. The causal maps were derived and compiled from the deductive coded scripted narrative of the case study.

Case Study A: is an IT managed services company specialising in hosted services, data centre solutions, communications and IT support. Established in 2006, the firm has been in business for 11 years offices in the North East and London.

The entrepreneur founder was educated at a local Comprehensive School. He decided not to go to University. His first job in IT was with a NE Engineering Company. He discovered that he had a real interest in IT and computers (**BSTE**). Over the following years he had a number of global IT jobs. In 2000, he decided he wanted to work for himself and established a consultancy based in London. Having started his own IT consultancy in 2000, based in London. The founder subcontracted work to firms within the NE and as a consequence, coincidentally, worked with the Technical Director (**BSTE**) who was an employee of one of these firms.

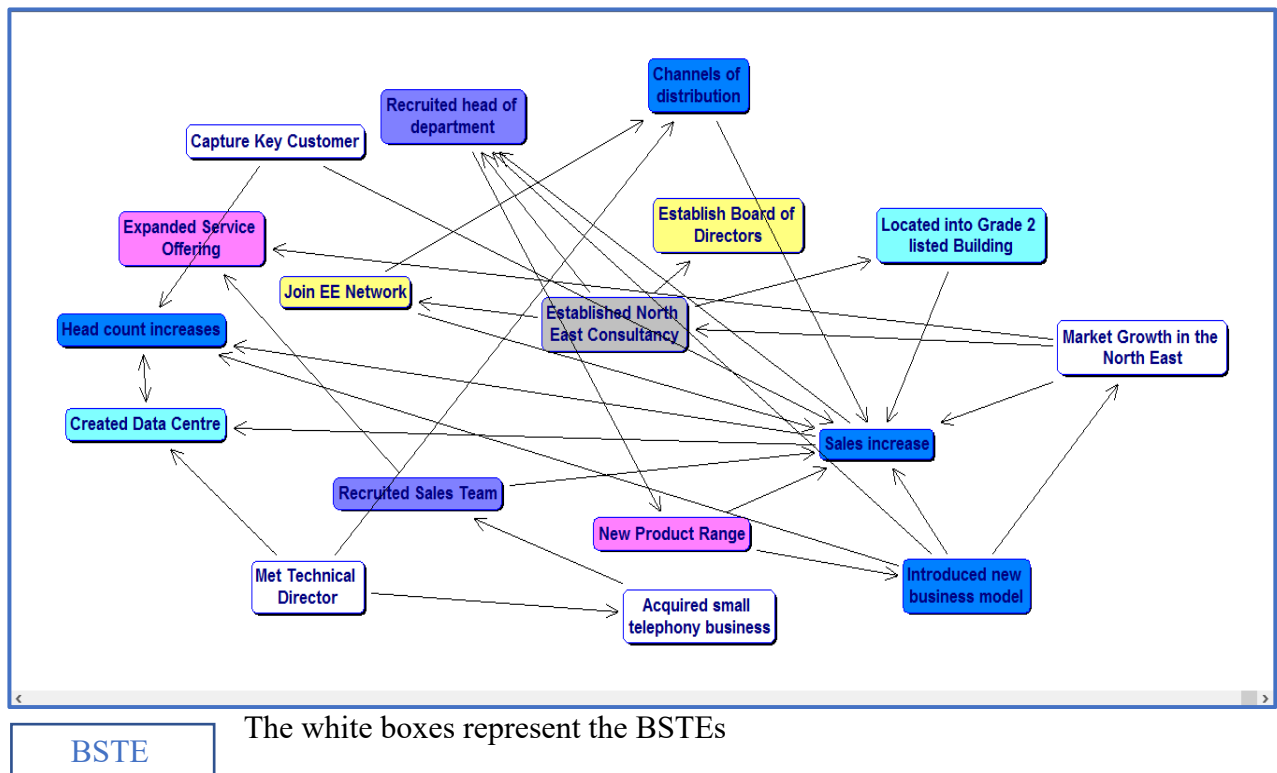
Case Study A: Rich Picture narrative background





The business had established a good client base, using NE IT skills, were generally, the work was done quicker and cheaper. In 2005 the entrepreneur moved back to NE to establish a consultancy business. This was a result of seeing the opportunities presented in the NE but he still maintained London Client base. In 2006, he decided to launch a firm with the Technical Director. The firm was based upon the business model concept of to “never *lose* a client”. The firm quickly grew its local client base, this was largely due to market growth in the NE (**BSTE**). First year turnover was £1.1 million. The firm captured key customers, there was an upsurge in a number of mid-size firms in the region (**BSTE**). The firm moved premises several times to accommodate growth in people and business. In 2012 the firm moved to a derelict listed building which was renovated to create a prestigious HQ and incorporate a Data Centre, which was a growing customer requirement. This building created a kudos for both customers and employees. Sales had grown to £4 million. In 2013 the firm acquired a small telephony company (**BSTE**). As a result of acquisition hired sales team (**BSTE**), which added an additional £2 million in sales, so by 2013 turnover had reached £6 million and 30 people were employed by the business. 2014 the team was increased to 40 and sales hit £8.5 million. By 2017 135 people were employed and sales had risen to £14 million with over 400 customers. Figure 33 details the causal map and the actions and decisions consequent to the BSTEs

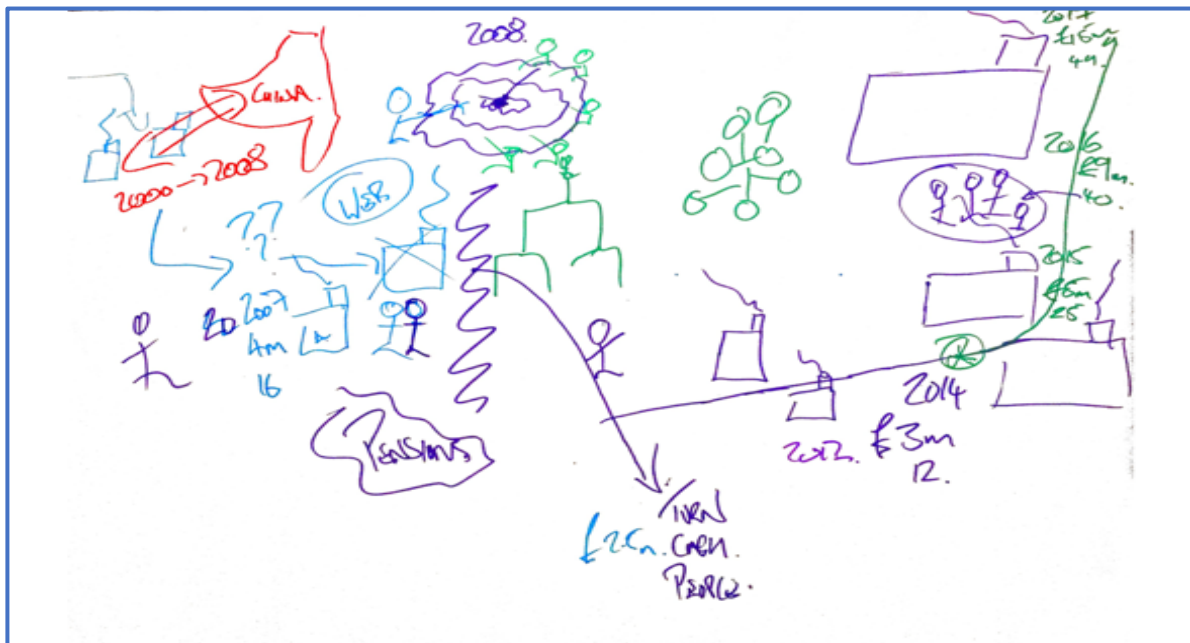
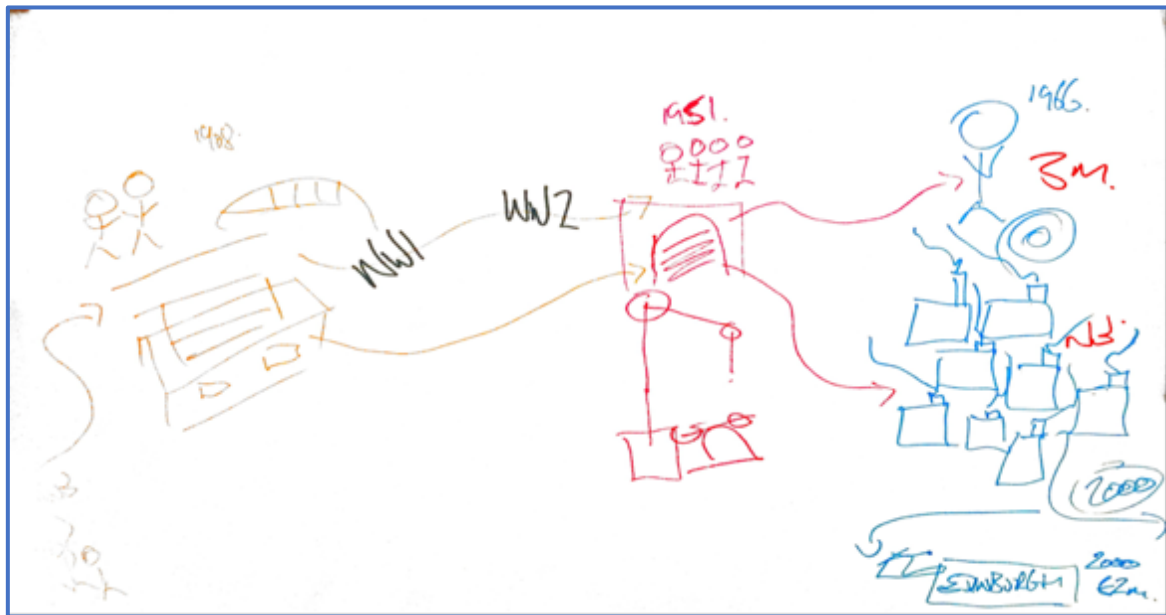
Figure 33: Case Study A Causal Map



Case Study B: Is a supplier of industrial and commercial consumables.

The entrepreneur formally joined the family business in 1999 with a degree and background in marketing. Until he became CEO he filled various roles within the firm. The firm was started in 1908 by two brothers who migrated from Holland to the NE. They set up a business supplying electrical spare parts for the tram industry.

Case Study B: Rich Picture narrative background

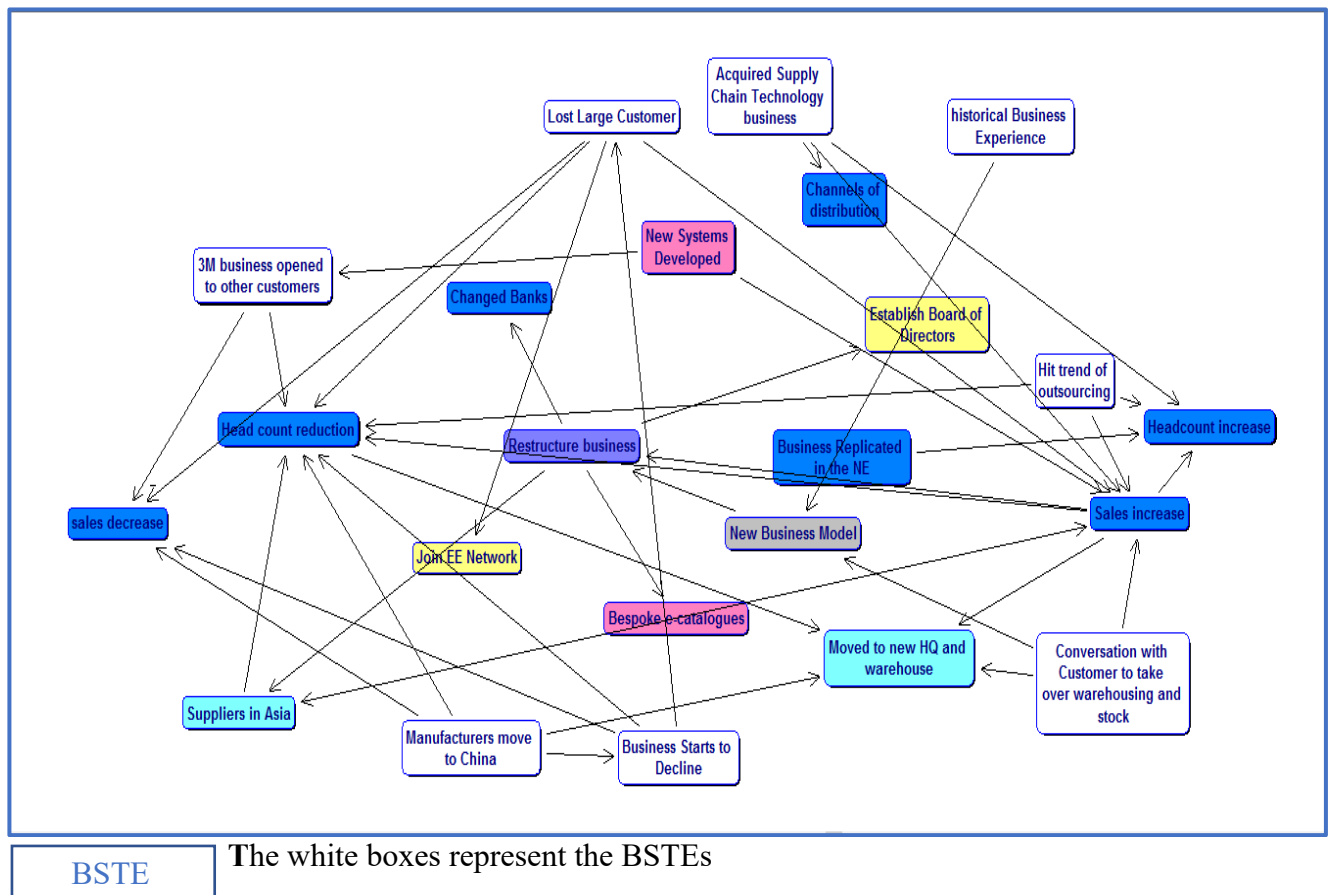


Business started to decline in 1940's/50's (**BSTE**). Then the daughter of one of the founders with her 3 daughters took over business in 1950's. They incorporated the business in 1951. The company moved into supplying and maintaining telephone systems into the mining industry. This declined in the 1960's (**BSTE**). In 1966 firm was approached to distribute parcel sticky tape (invention from 3M) (**BSTE**). This business grew to be a supplier of adhesive sticky tape to various customers and industries. The business had the geographical

area of the NE for its distribution territory. This business grew to turnover of about £4 million. From 2003 business started to decline because of the move of manufacturing to China and 3M opening their product range to more people (**BSTE**). This BSTE was a major shock to the business and the response was slow. In 2008 the current CEO was appointed (Son of major shareholder) to head up the firm. The business continued to downsize in line with declining sales but as a result of a conversation with a major customer the business changed direction (**BSTE**). A turnaround plan was put in place, taking over stock and warehousing of all consumable supplies to this customer. It was decided this could be replicated in the NE because no such business existed. (**BSTE**). By 2010 sales had declined to a level of £2.6 million. Since 2011 it has been a supplier of industrial and commercial consumables using onsite “vending” machine technology to service its customers.

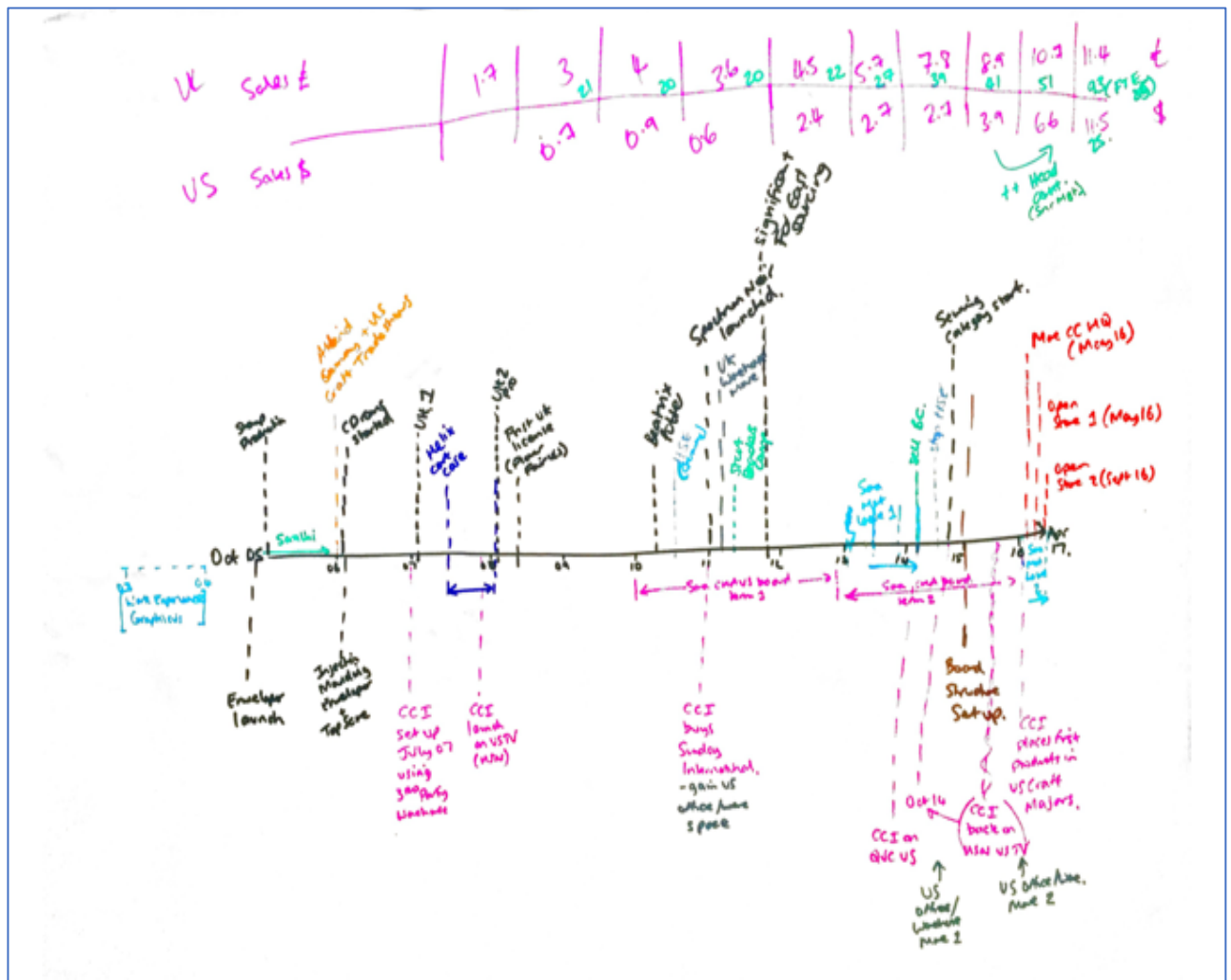
The firm had hit a trend for outsourcing (**BSTE**). Over 2011 the business went through a rapid learning curve: range of products, order frequency, running business. It established more customers and restructured the business in line with the new venture concept. In 2012, it moved to and developed premises (warehouse). In 2014 an approach was made to a supply chain technology business (P) to acquire them which was turned down (**BSTE**). (P), soon after, went into administration and reformed as (E) (**BSTE**). The case study, paradoxically, started to supply (E). The CEO had a fortuitous conversation with Investor/Director of (E) and agreed to buy them (**BSTE**). The case study kept the key people: Business Development, Technical team and Incorporated Software Business. It had acquired a highly innovative supply chain software solution which allowed the management and supply of inventory through highly innovative technologies and software systems. It provides a number of systems including radio frequency identification technology (RFID) and industrial vending machines to control stock throughout any facility. Sales that year hit £3m. During 2015 the business was developed further: (E) team recognised by large manufacturer which became customer (**BSTE**), sales hit £5 million. In 2016 Business Organisation structure put in place, Finance Director appointed, Board of Directors established, Sales hit £9 million. In 2017 turnover reached £15 million. In 2017: Sales £15 million number of employees 42.

Figure 34: Case Study B Causal Map



Case Study C: Started by entrepreneur whilst still a student at university, Case Study C has been in existence for 11 years and has grown to become a major supplier of crafting materials and products in the UK and abroad. As well as its NE Head Quarters, it also has a facility in California from where the US side of the business is conducted. The entrepreneur founder was born into a family with their own retail business. She did a management degree at University.

Case Study C: Rich Picture narrative background

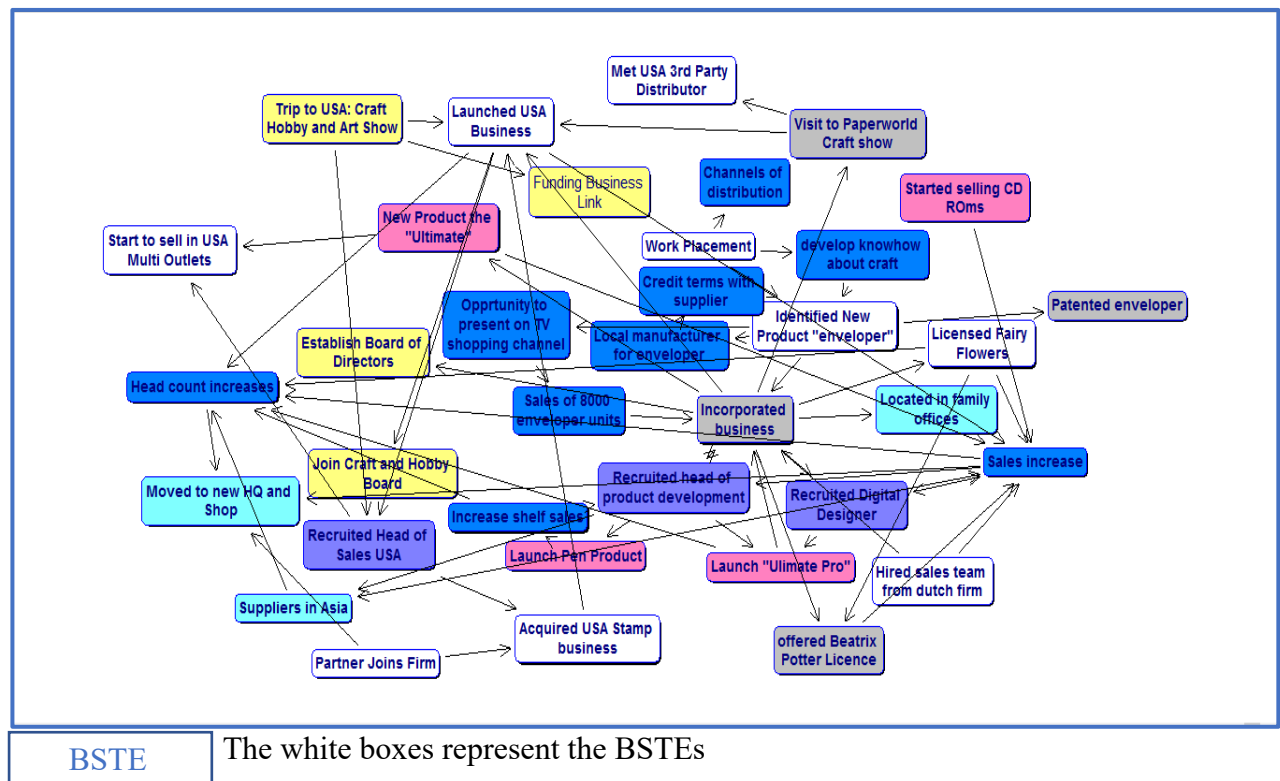


In 2004, whilst a student at University the founder organised a 3rd year placement with a company located close to home. This happened to be a small craft company (**BSTE**). During her time with this firm she was exposed to full channel distribution of a small firm: Craft TV, Online, wholesale and retail. The owner of the business had no aspiration for growth, it was a lifestyle business. During her time in the business she identified an opportunity to develop a new product. The placement firm had no interest in taking this new product to market. In 2005 the founder started business from her bedroom at University. Local supplier manufactured MDF version of the new product (**BSTE**). The funding came from: credit terms with supplier. It was patented using grant funding from Business Link. The product was presented on TV sales channel (**BSTE**) with an initial order of 8000 it actually sold 16000 within 24 hours. The business focused on that product for first year, sales achieved £500,000.

In 2006 the founder left university: incorporated the business and located the firm in a block of flats, which were converted to offices, owned by her family **(BSTE)**. In addition to the “Envelope”, from an idea suggested by web designer, the firm started selling CD-ROMs with stock images to the craft market, this proved to be very popular **(BSTE)**. Second year sales reached £0.9 million (65% on TV, 35% B2B). In 2007 the founder visited Paperworld Show in USA, largest paper craft show in the world. This was supported by UKTI and involved a market research trip to USA. The founder also joined a Networking event at the Craft Hobby and Art show in California **(BSTE)**. The founder decided to launch the business in the USA: through friends met 3rd party logistics company based in Florida **(BSTE)**. The USA business was set up as replica to UK business. Later that year, the founder’s Partner (husband), a qualified accountant, decided to join the business **(BSTE)**. Also, that year the firm faced a patent battle with a potentially large competitor **(BSTE)**. During 2007 the firm developed second innovative product, this was from an idea put forward by a product designer **(BSTE)**. By the end of 2007 sales had reached £1.7 million. In 2008 the competitor settled the patent dispute in favour of the HGSF and partner joins the firm. During that same year the founder recruited head of Sales and Marketing in USA. They had met originally at first show (Paperworld event) **(BSTE)**. The firm was offered licence to “Flower Fairies” **(BSTE)**, further enhanced CD-ROMs sales. In 2010, because of success of “Flower Fairies” the firm was offered Beatrix Potter license by Penguin **(BSTE)**. Sales had reached £3 million. In 2011 ended 3rd party distribution in USA to set up own store and distribution based in Anaheim, California, USA. Recruit Digital Designer, to head up online design **(BSTE)**. Recruited Product developer with Craft background, from focus group, to head up product development **(BSTE)**.

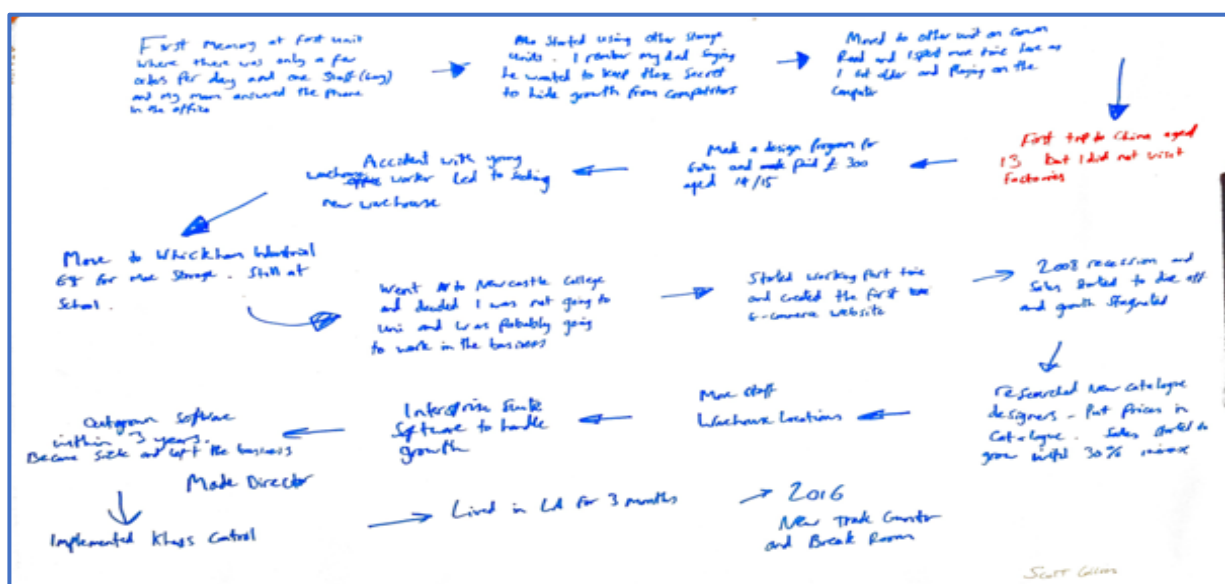
The firm launched a new pen range, this was the first shelf product **(BSTE)**. In 2012 the firm acquired a business in USA: a stamp manufacturer **(BSTE)**. From this the firm gained premises and gained staff. In 2012 sales reached £6.9 million. In 2013 the firm started to sell to shops across USA. A UK based sales team was hired that had worked for Dutch based craft business which had gone out of business **(BSTE)**. This added £2 million to UK sales. By 2014 turnover had reached £9.9 million. In 2015, it started to sell to large multiple outlets in USA: sales to Michael’s 1200 stores and sales to Joanne’s 900 stores. During that year a Board of Directors was put in place. Sales had reached £12.4 million. In 2016: The firm moved into new offices and showroom, opened 2 stores, introduced new website and EPOS system, recruited additional 40 staff, increased USA business. It began to put in place a senior

management team. Sales had reached £16.8 million. By 2017 the firm had established 6 suppliers in Asia with a spend of \$6 million. Sales have reached over £20 million and 130 people are employed.



The entrepreneur founder came from a single parent family, left school at 15 and served an apprenticeship in the metal industry. He spent 15 years working for a metal fabrication business. The founder left this business in 1985 and started a self-employed business as a sole trader (not a limited company) as a plastic hand rail installer.

Case Study D: Rich Picture narrative background



During that year he met a German hand rail product supplier (**BSTE**). He convinced the supplier to appoint him as their sole installer of their hand rail product. At that time, there were very few installers in the UK. The first contract for the product was with North East Shipbuilders who had the build contract for replacement North Shields Ferries the contract was equivalent to a year's work (**BSTE**). Over a 15-year period the business built up a large customer base throughout the UK. It was a good lifestyle business with one employee. The founder started to think about what the customer base could be used for: what other products or services could be provided to the customer base? In 1999 on a visit to major wrought iron

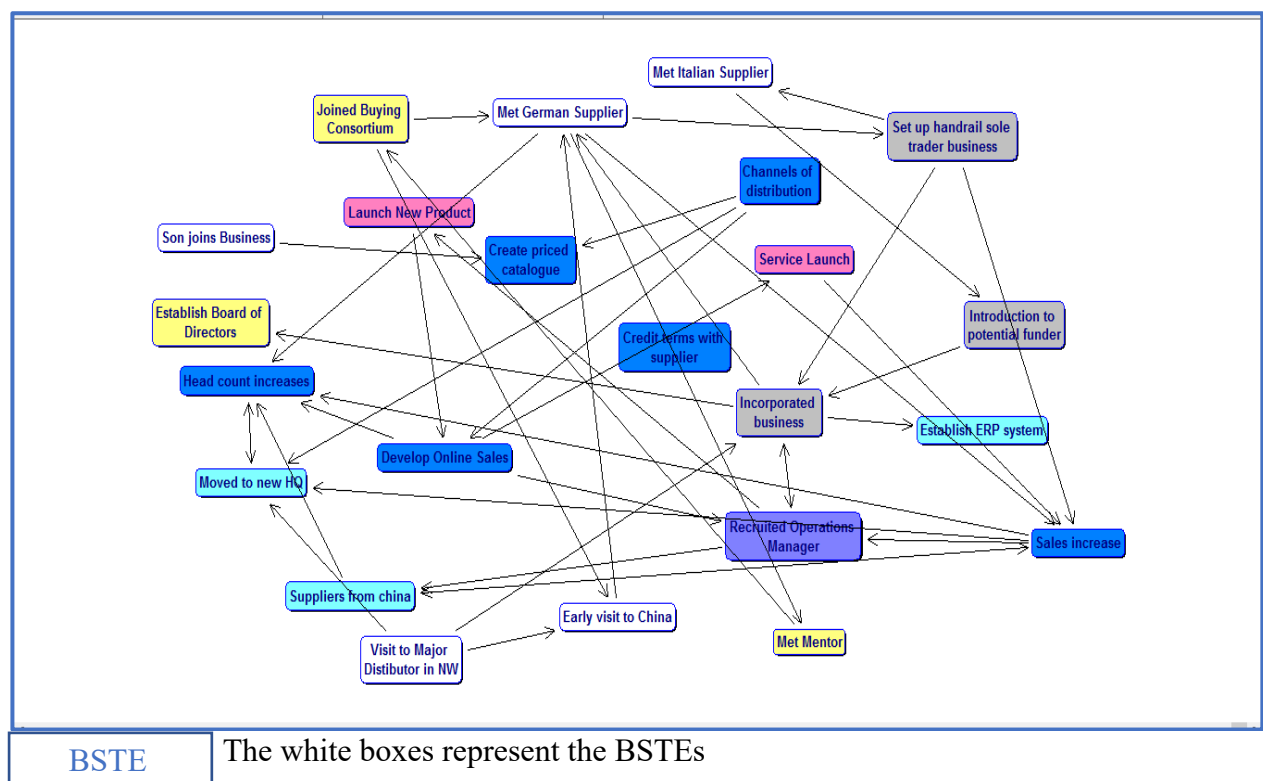
distribution company based in North West he decided that this could be replicated in the NE, no such business existed in the NE **(BSTE)**. In 2000, the founder met Italian Supplier of metal products **(BSTE)**. At this stage, the founder had no funding to establish the business. The Italian supplier introduced the founder to a potential funder **(BSTE)**. Negotiation were undertaken which culminated in agreed terms to establish a new firm with the founder working as a partner but not major shareholder. The deal was one week from sign off when the founder decided not to go ahead because he felt that he would not have control, he would need to get permission to do things.

At that time, the founder had no personal or business debt and was making a very good salary from his existing business. In 2001, he incorporated the new business. The Italians agreed to supply and he negotiated a £50,000 loan from a Bank using his house as security. In 2001 rented first premises (warehouse) 1000 square feet and very soon, because of business growth rented another 3 warehouse units. The business started as an over the counter/ direct delivery business with the first stock level at circa £20k. The business was initially on proforma invoice terms: as reputation established these credit terms moved to 30 days then 60 days. In 2002 sales had reached £250,000 the business had hit a trend and fashion for wrought iron products **(BSTE)**. The business originally involved founder, his wife and one employee. They rapidly went through a learning curve: range of products, order frequency, running business. In 2003 the Operations Manager joined the business **(BSTE)**. This gave the founder more time to explore products and suppliers. In 2003 the founder was encouraged and accompanied to go to China by a Mentor **(BSTE)**. He was one of the first to go to China and gained great advantage in establishing low cost supply chains. In 2003/4 established new premises 40,000 square feet: way more than needed **(BSTE)**. As part of the deal for the building an option to buy was negotiated, which happened in 2010.

The original business was mainly over the counter or catalogue with local and national customers. In 2006 founder's son joins business: with responsibility for systems. He happened to be very gifted in this skillset **(BSTE)**. He decided to adopt Screwfix as a model and established Internet/Online business. In 2009, the son, advocated a major change to the catalogue to include prices **(BSTE)**. Previous catalogues had no prices. Consequently, prices were indicated and negotiated over the phone which was very time consuming and not customer focused. New catalogue led to 30% growth in sales within one year. This meant a subsequent increase in stocking levels. A "warehouse location system" was introduced this

reduced stock movement, reduced reliance on one person knowing where stock was located and culminated in more efficient dispatch of products to customers. In 2011 the son was responsible for introducing “Enterprise system” ERP system this took two years to establish. It facilitated stock management, it integrated sales invoices. By 2013 sales had reached £1.0 million. In 2015 the brave decision was taken to replace this system with a much more sophisticated integrated system. By the end of 2015 sales had reached £2.4 million. During 2016 a range of new products were introduced as a result of a small acquisition that the firm made. As at 2017 the firm carries £2 millions of inventory, sales had reached £3 million and it employs 22 people.

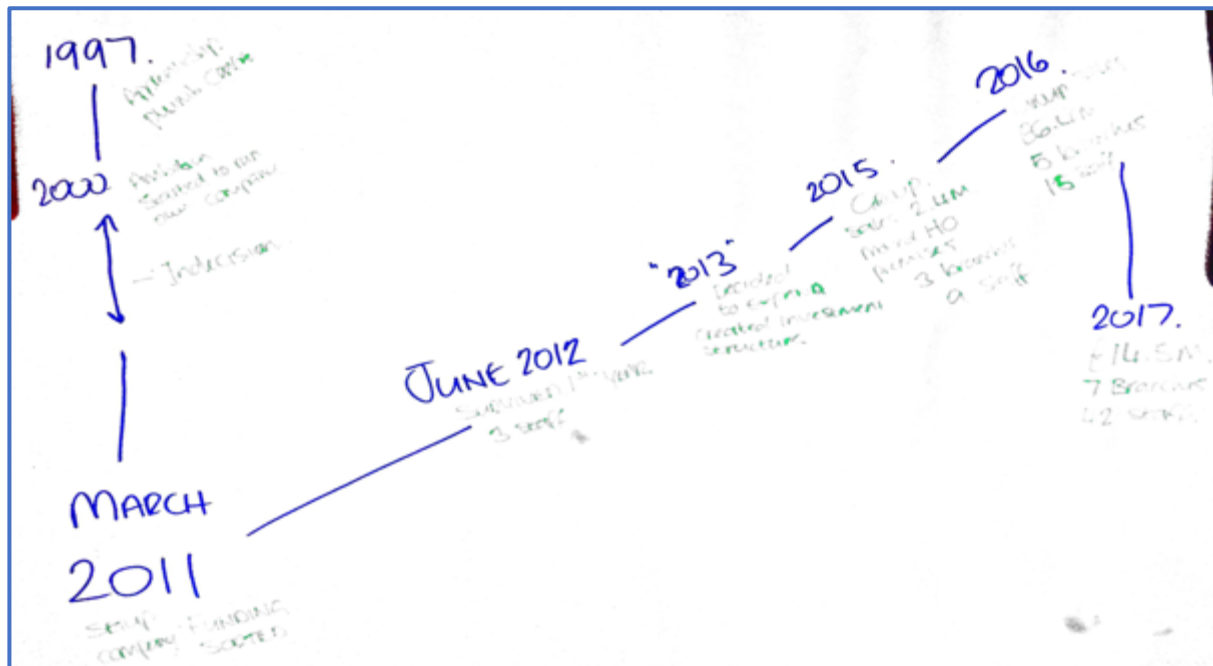
Figure 36: Case Study D Causal Map



Case Study E: Supplier of heating and plumbing spares.

The entrepreneur founder had wanted to own and run his own business for a long time but was unsure as to which business area to focus. He was not sure whether the activity he was employed in had enough scope for a business venture. By 2010 he was employed in a senior position within a plumbing and heating national business. He had, over 14 years, worked for a number of plumbing and heating firms and had a wealth of experience within the industry.

Case Study E: Rich Picture narrative background

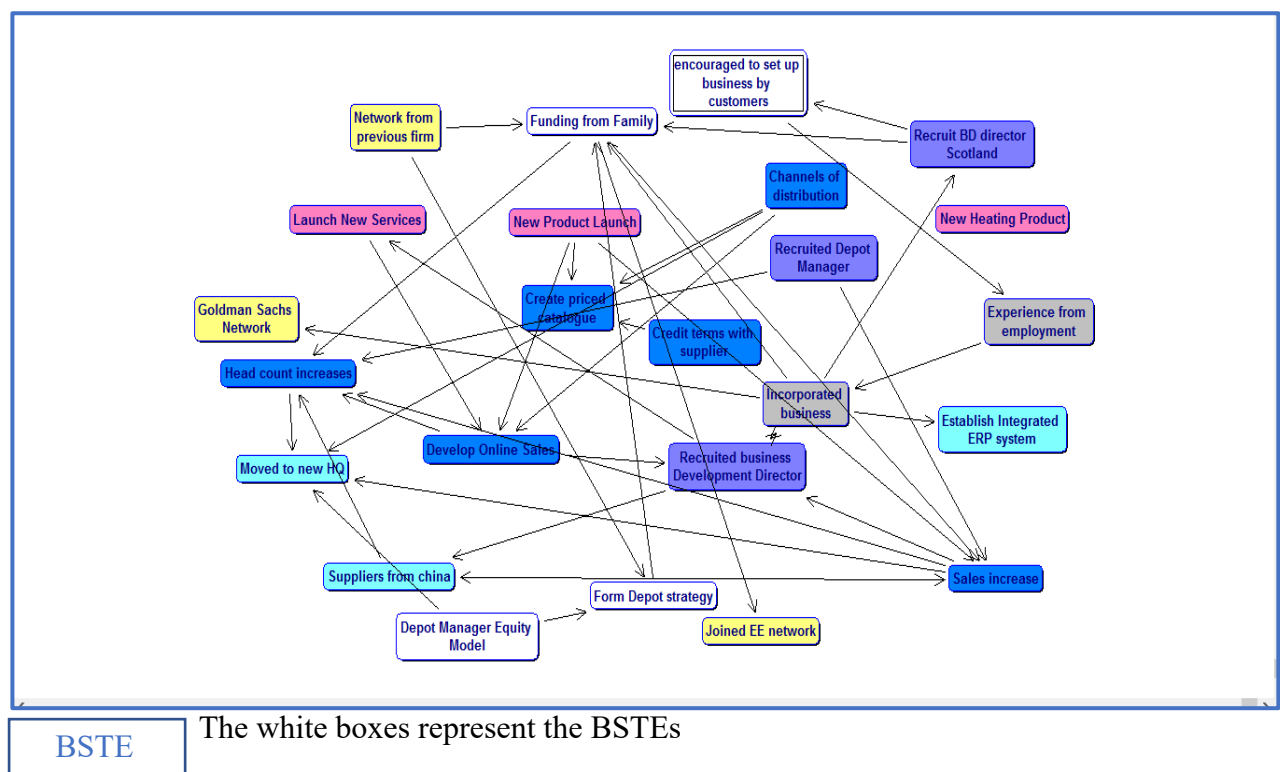


During 2010 he was encouraged to start his own business by five different customers who offered financial backing (**BSTE**). In 2011, he started the business with funding from his wife's family (**BSTE**). The business was established in its first depot, rental premises of 1500 square feet unit. He recruited a Business Development Director (first Hire) (**BSTE**). First year sales surpassed expectations and reached £500,000. To manage the systems effectively the "Spruce" ERP system adopted. Started over the counter business with initial stock level £20k. In the beginning the stock was purchased on proforma invoice terms: as reputation established 30 days then 60 days. In 2012 Durham Depot was opened (**BSTE**), location was initially not idea but then a large number of businesses opened in the immediate vicinity. The Durham Depot Manager was recruited (**BSTE**), a person known to the founder from previous employer.

To encourage depot managers to join the firm the founder devised a business model of shared depot ownership (**BSTE**). Sales in this year were over £1 million. In 2013, another depot was opened using same shared ownership model recruited a Depot Manager. In this year sales had achieved over £2 million. In 2014 a larger HQ/Depot premises of 8500 square feet was established in a more central industrial location. During this year two further depots were opened. By the end of 2014 sales had reached £2.4 million. In 2015 strong supplier

relationships were established, credit terms were improved and the product range extended. By the end of 2015 sales had reached £6.4 million. During 2016 the total number of depots had reached seven. Over the past 5 years customer response time has been improved. The business has built up a large customer base and introduced some new and innovative products. Sales by the end of 2016 had reached £14 million and 42 people were employed. During 2017 terms have been agreed on an additional 4 depots, recruited Business Development Manager in Scotland (**BSTE**) and won a major contract with a large energy supplier (**BSTE**). The business focuses upon price and availability of stock, it now carries over £2 million worth of inventory.

Figure 37: Case Study E Causal Map



4.4 Analysis of the Narrative Data

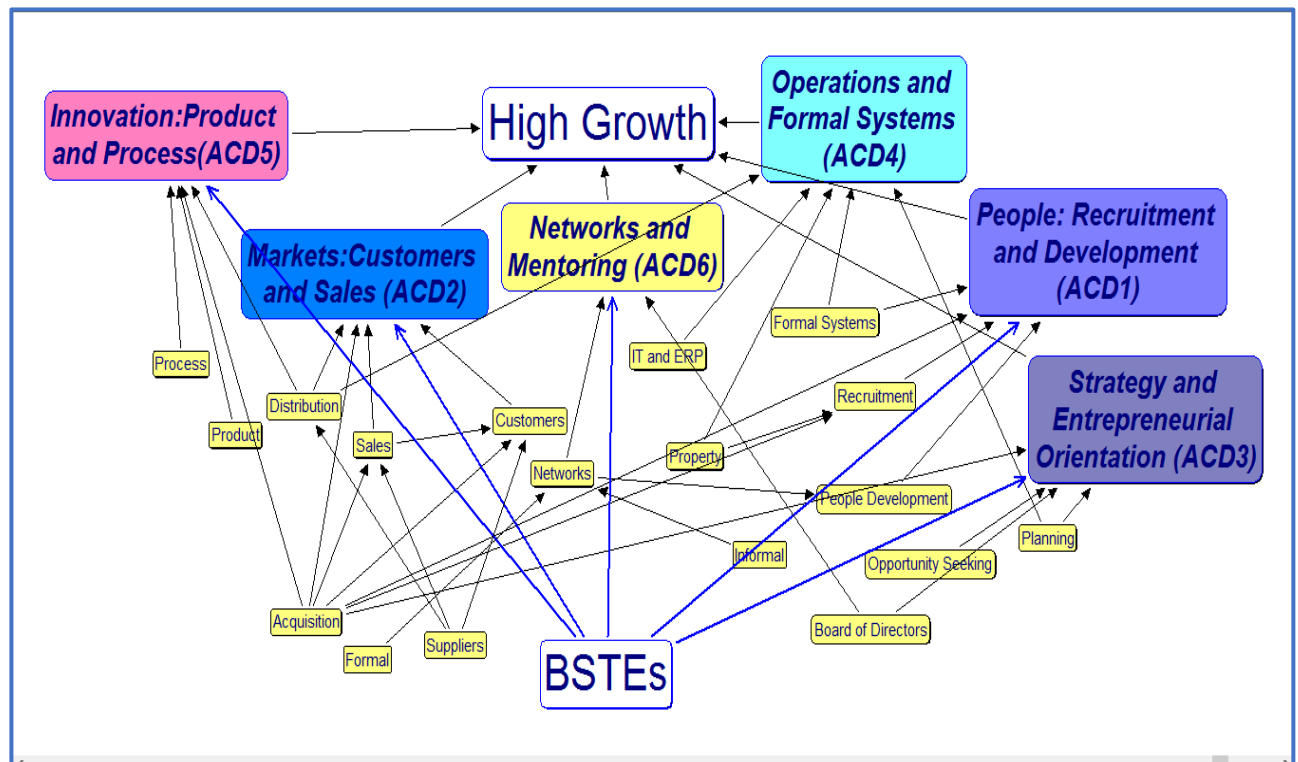
Using the transcripts generated from the RP process it was possible to identify BSTEs and analyse the trajectory and process of each firms' growth resulting from these BSTEs. As outlined in Chapter 3 using a soft systems methodology incorporating causal mapping allowed an extraction of relevant information. Qualitative research emphasises interpretation of the data, the interpretation is dependent upon the identification of the terms and unit of analysis relevant to the research question (Yin, 2014). Patterns identified within the text


narrative recognising “the empirical variation of phenomena described by the data” (Gläser & Laudel, 2013, p. 6). This process goes towards building and modifying theory. The RP narrative analysis, using causal mapping led to the development of a modified framework of Absorptive Capacity (Bessant et al., 2007; Cohen & Levinthal, 1990; Zahra & George, 2002). From the methodological process outlined in Chapter 3, the findings and conclusion of the research were established.

4.4.1 The Analysis of Causal Mapping

The research focus was on the concepts and themes that emerged from the individual and collective narratives of the case studies. This was in line with the first objective of the research question, the capture of the phenomena of the growth story of representative defined HGSFs and considering and exploring the unpredictable nature of the BSTEs. There was a focus on identifying the trigger events that stimulated the rapid growth of the firms and considering whether these events met the criteria of the research definition of BSTEs. The BSTEs were identified through the notes and narratives resulting from the preliminary session and the growth narrative from the second session. The mapping process took each BSTE and undertook a causal analysis of actions and decisions. The causal maps for each individual case study can be reviewed above. It was important to reduce the complexity of the narrative and bring the data into a structure that allowed pattern recognition. Consistent with the objectives, the narrative data was used to identify BSTEs and then establish links with strategic and tactical actions and decisions resulting from these BSTEs. Figure 38 is the consolidated outcome of the causal mapping process. It represents a consolidated view of the concepts which lead into the major absorptive capacity domains (ACDs).

Figure 38: Consolidated Case Studies Causal Map



 (The yellow boxes represent concepts related to actions and decision)

Each of the BSTEs led to a series of decisions and actions that could be categorised into one or more of the ACDs. The consolidated causal map was derived from combining each individual case study causal map (section 4.3). The causal mapping involved an establishment of the causal connections between the BSTEs and the actions and decision taken by the firms. Deductive coding was used in analysing the narrative data connecting the BSTE to actions and decisions post the BSTE. The analysis was an iterative process. The codes that were initially used were adopted from the theoretical framework absorptive capacity model of Bessant et al (2007) discussed in Chapter 2: Operational Improvement, People Management, Market Entry, Obtaining Finance, Formal Systems and Strategy. The individual HGSFs causal maps showed that there was a range of actions and decision made in relation to people, markets, processes, systems, customers, distribution, etc. There was virtually no mention of obtaining finance as an action/decision domain, so the actions and decisions related to certain domains did not fall readily into these categories. This led to the codes being modified in order to validate and categorise the complex actions /decisions being made into six domains.

The capabilities, action and decision domains were identified from the data as; People; Recruitment and Development (ACD1), Market; Customers and Sales (ACD2), Strategy and Entrepreneurial Orientation (ACD3), Operations and Formal Systems (ACD4), Innovation; Product and Process (ACD5), Networking and Mentoring (ACD6). These revised domains were used to modify Bessant's model (2007) to form a new model as represented in Figure 40. The domains were not prioritised nor given any weighting criteria. Although interesting, prioritising and weighting of the absorptive capacity domains was not the focus of this research. The relative importance and weighting of the domains needs further research which would be important for understanding the necessary increased and specific focus of resources for HGSFs.

Importantly domains or areas of actions and decisions were identified. The analysis of the narrative interviews and the RPs linked cause and effect by identifying patterns within individual case studies and across case studies. The raw data was linked to the research question by initially identifying BSTEs. The process followed recommendation by developing for each case study "a "thin description of sequences of events within each case, which can then be compared between cases with the aim of detecting repeating patterns or important differences that can be linked to variations in conditions" (Gläser & Laudel, 2013, p. 11). Although within each case study patterns were sought it was recognised that within cases variations could be important as well as across case variations.

The causal maps linked cause and effect relationships (Eden, Ackerman, & Cropper, 1992). This process met the second objective of the identification and analysis of the relationship between BSTEs and actions transitioning a firm post BSTEs. The causal mapping allowed the identification of decision making in terms of cause and effect. Domains were identified using the notion of "busy" concepts, these being concepts with many links. The results of these causal maps were consolidated into a single map that manifests the commonality of the causal relationship between BSTEs and the actions and consequences resulting from these BSTEs. To emphasise the link between a BSTE and actions and decisions Table 6 represents examples of experienced BSTEs and actions and decision that resulted from the occurrence. The table deals with a BSTE from each case study that falls within the absorptive capacity designation of People Domain (ACD1) and shows, in a summary way, the decision, the action and the outcome.

Table 6: An example of BSTE and the link between decisions, actions and outcomes

Case Study	BSTE	Nature of Unpredictability	Positive or Negative	Typography	Absorptive Capacity Designation	Decision	Action	Outcome
A	Met Technical Director	Random	Positive	Exogenous	People	Form business	Future Business Partner	Increased Business Credibility
B	Recruited technical and sales team from acquired business	Serendipity	Positive	Exogenous	People/Operations	Enter New Market	Intergrate Team	Increased Technical Capability and Sales
C	Recruit Product Developer	Serendipity	Positive	Exogenous	People/Innovation	Develop New Products	Imports from China	Increase in shelf products
D	Operations Manager joined business	Serendipity	Positive	Endogenous	People	Delegate Responsibility	Operations improved	Customer Satisfaction Increased
E	Recruited Business Development Director	Serendipity	Positive	Endogenous	People	Delegate Responsibility for Business Development	Intergrate Sales through the Depots	Increase in Sales

As each firm experienced a BSTE it was evident, as shown earlier in this chapter, that they went through a process of developing the necessary capabilities to deal with the event. The process and actions post the BSTEs were very much set within the context of the absorptive capacity of each firm. The actions did not come naturally but were a process resulting from learning, developing capabilities and knowledge within each firm. What was evident from the mapping process was that the major domains identified as the action and decision areas post the BSTE fell readily into a modified model of absorptive capacity originally developed by Bessant, et al (2007). The content analysis indicated that there was a relatively high level of incidence of BSTEs each of which resulted randomly, as a consequence of luck or as serendipitous process. As there is no equivalent research to compare and contrast these factors of BSTE incidence against means that the thesis is adding to a significant gap in this knowledge area.

Identifying the BSTEs and in developing an understanding of the unpredictable nature of the events that led to high growth was done through a simple content analysis of the narratives from the HGSFs. It has been suggested that the preliminary narrative analysis to identify the BSTEs does not necessarily require coding into themes because such coding has the potential to undermine the narrative sequence of events in participants interview RP transcripts (St. Pierre & Jackson, 2014). The justification for not coding at this stage was based upon several factors. These factors were that the process was a simple identification of events which became obvious within the narratives. It also followed the sensible guiding principle of

“Analysis (meaning making) occurs throughout the research process rather than being only a separate activity carried out after data collection” (Etherington, 2011, p. 8). There was a dynamic between the facilitator and participant that created an openness related to the reality of the events and the unpredictability of these events. Words such as luck, random and serendipity were commonly used within the preliminary session and the subsequent RP process narrative. Phrases such as “right place right time” and “stars aligning” were used to emphasise the unpredictable nature of the events and meant a straightforward category of BSTEs could be identified. The categorisation of BSTE is important as this influences the actions and decisions taken post the BSTE and consequently the domain that these actions and decisions fall into.

4.4.2 Categorising the BSTEs and the actions and decisions post the BSTEs

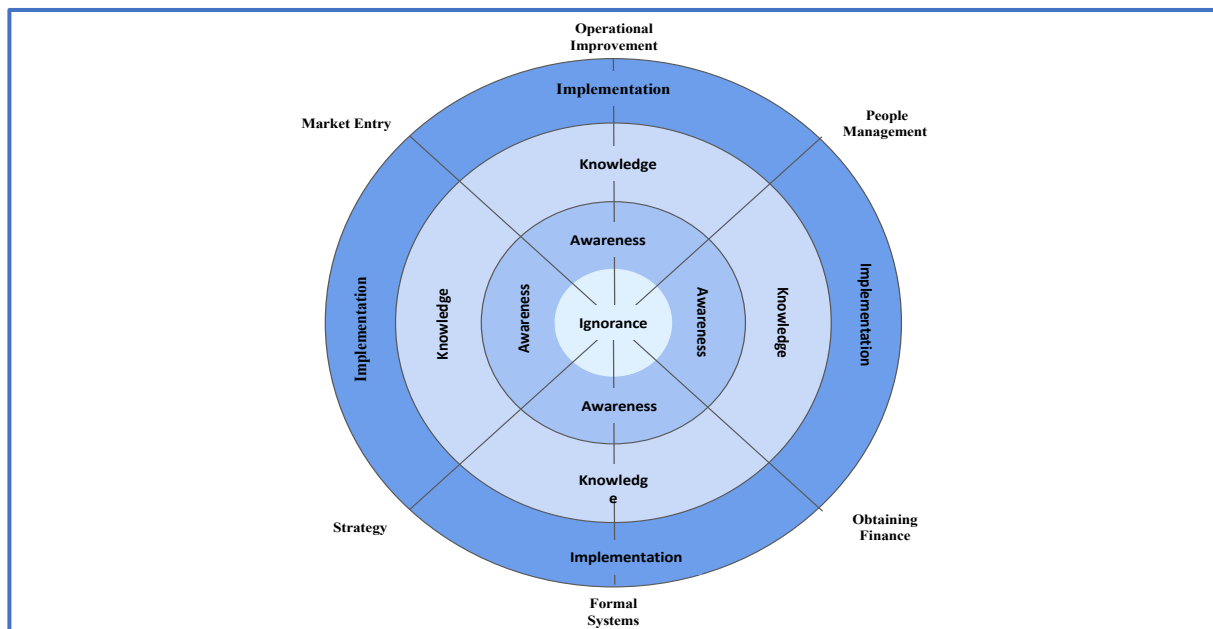
Analysing the data from the RP process it was evident that each HGSF experienced a significant number of BSTEs that were fundamental to their rapid growth. A table was constructed identifying the major BSTEs experienced by each HGSF, these tables can be viewed in Appendix B. The tables highlight the timing of the BSTE in relation to formation of the firm, the nature of the unpredictability and the domain within which the BSTEs falls in relation to their absorptive capacity. The tabular analysis of the BSTEs adds a further dimension by using an adapted version of the categories used by Brown and Mawson (2013) in their study regarding “trigger points”. They recognised that these events “can manifest themselves in a wide variety of different forms” (Brown & Mawson, 2013, p. 284). This analysis of the empirical data classified the BSTEs based upon a modified typography developed by Brown and Mawson.

The research identified three types of BSTE:

1. Endogenous; A BSTE occurring as an unpredictable event within the firm or having its foundation within the firm.
2. Exogenous; A BSTE occurring as an unpredictable event outside the firm or having its foundation outside the firm
3. Co-determined; A BSTE occurring as an unpredictable event resulting from factors within and outside the firm

The third categorisation developed to meet the third objective of the research, an examination, through a broader framework of the actions and decisions, was based upon the absorptive capacity framework from the work of Bessant, et al (2007). The research ties the concept of BSTEs to the concept of the knowledge a firm needs to develop in order to take advantage of the opportunity or challenges presented to the firm by these BSTEs. The empirical data gathered by the research was considered against a modified version of the absorptive capacity model (outlined in section 2.8). Figure 39 represents the modified model, it puts the BSTE at the centre of the dynamic and represents the various elements of growth or development in absorptive capacity that each case study experienced. It is recognised that there is a symbiotic relationship between the elements but the analysis puts no weight on the different elements of the absorptive capacity. The Absorptive Capacity model suggested the categories of learning required for firms to deal with BSTEs that influence their growth (Bessant et al., 2007). The Absorptive Capacity model was modified as a result of the causal analysis undertaken from the RP narratives. It was recognised that there were consistent themes evident within the narratives that, although not identical had similarities to the original model.

Figure 39: Original Model of Absorptive Capacity

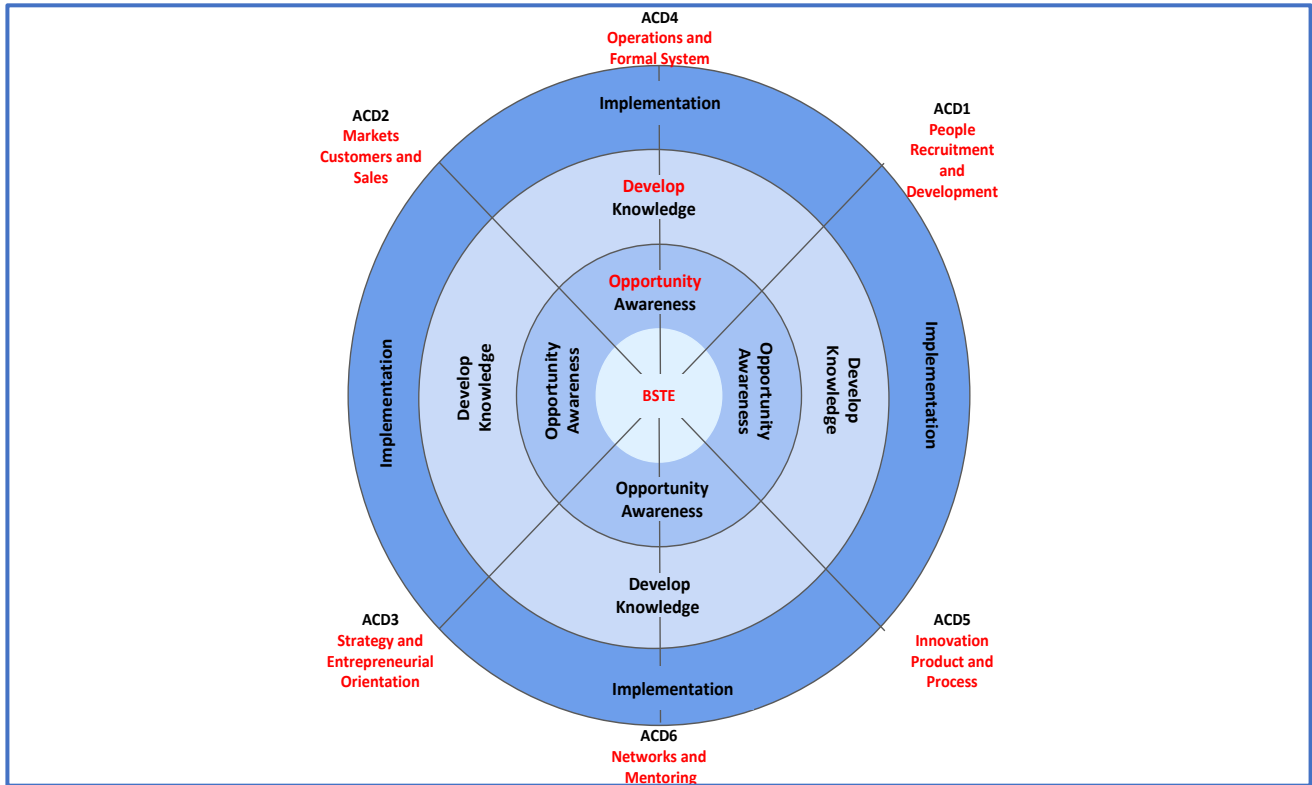


Source: Bessant, et al (2007)

The adaptations to the original model was identifying BSTEs as the core stimulant (placed at the centre of the model). From this stimulus arose opportunity awareness, then the development of knowledge required to take advantage of the opportunity then the

implementation of actions and decisions consequent to the knowledge development in the absorptive capacity domain. Put simply a BSTE occurs, capability is developed in required ACD and the actions implemented. This is represented by Figure 40.

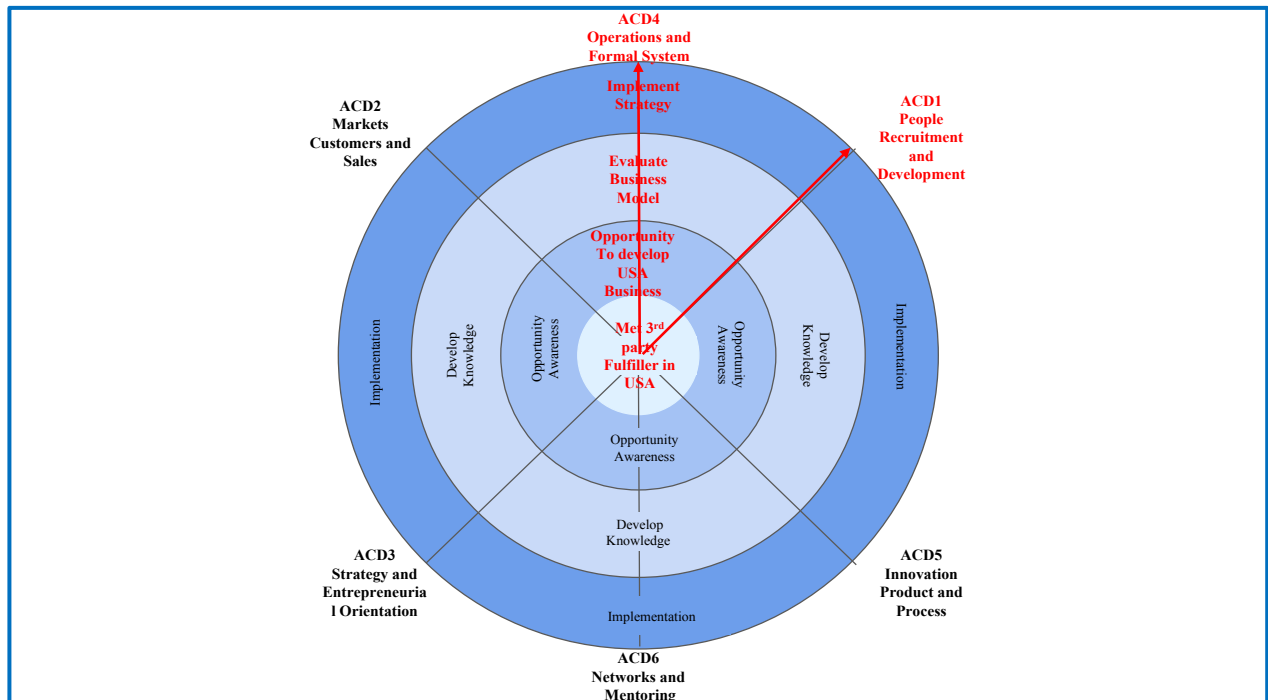
Figure 40: Modified Absorptive Capacity Model



Derived from: (Bessant, et al, 2007) and empirical research

The adapted model allows the process from BSTE to absorptive capacity domain to be mapped upon the model. Figure 41 represents an example of a BSTE from Case Study C. This, indicative exercise is one that would allow firms to identify the AC domains in which they need to concentrate and may be even seek support.

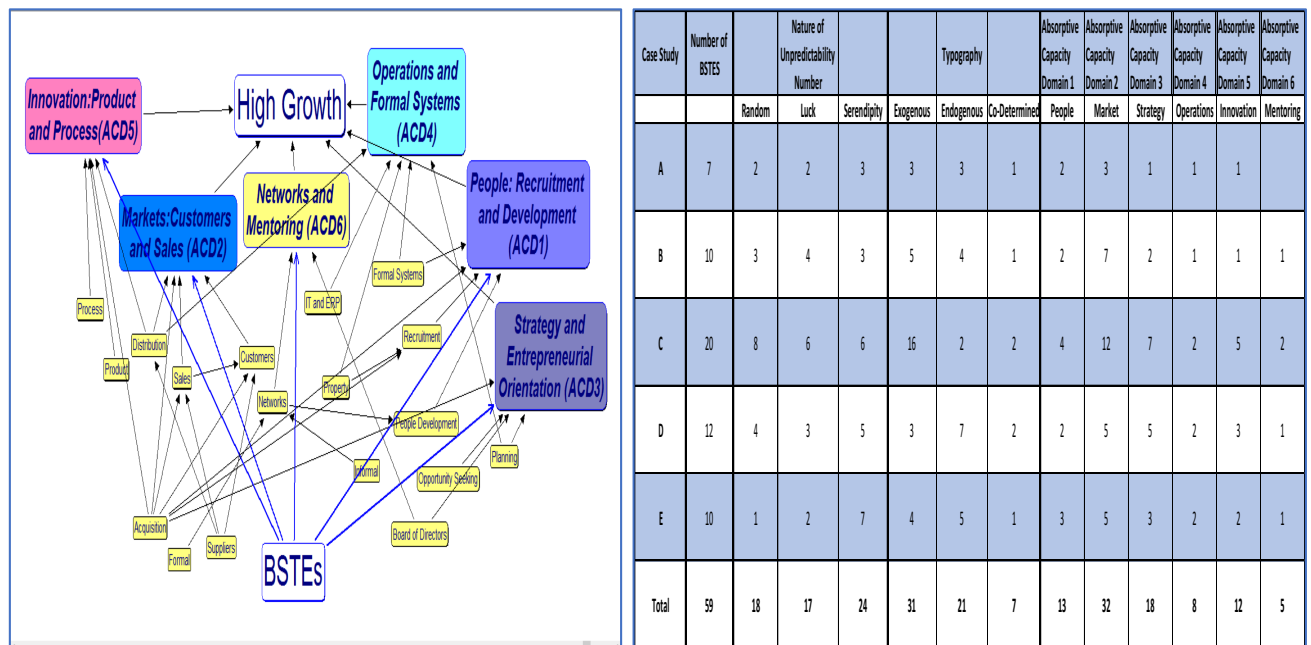
Figure 41: An example of a map from BSTE to Absorptive Capacity Domain (Case Study C)



4.4.3 Categorisation of BSTE and Actions and Decisions post BSTEs

Figure 42 represents the consolidated causal map and the categorisation of the BSTEs and the actions and decisions post BSTEs. The categorisation of the BSTEs and the actions and decisions post the BSTE fell into three areas. The first category was the nature of the unpredictability defined through whether it was random, as a consequence of luck or of serendipity. The second category was an identification of where the root of the BSTE derived from; exogenous, endogenous or co-determined. The third category was within one of the six domains of the actions or decisions resulting from the absorptive capacity model; Operations and Formal Systems, People; Recruitment and Development, Market; Customers and Sales, Strategy and Entrepreneurial Orientation, Networking and Mentoring, Innovation; Product and Process. These domains were identified as previously explained, from the RP narratives of the HGSF case studies.

Figure 42: Consolidated Causal Map and BSTE Category Framework



8

There was no in-depth numerical analysis of these findings, because the research was not focused upon the type of unpredictability but rather that the BSTE was unpredictable. The research assumes equal impact regardless of the nature of the unpredictability. Each BSTE was categorised, from the narratives into its type of unpredictability; random, serendipity or luck. However, a simple ranking exercise showed that in terms of unpredictability, serendipity ranked first by a relatively large margin. Serendipity involves a predisposition to seeking opportunities it may well be that this openness by its very nature increases the number of serendipitous occurrences. Serendipity by its very nature reflects a prepared mind with an awareness for opportunity (Dew, 2009). In terms of typography, that exogenous BSTEs ranked first by a large margin was indicative of the unpredictable events occurring from external sources. This dynamic was reflective of a focus on a growth in sales which in turn was indicative of why in terms of the growth and learning represented by the absorptive capacity it was the Market domain that ranked first by a significant margin. It would be useful to consider the relationships between these three categories at some future date with further in-depth research.

What the data showed was that it was evident that each of the HGSFs experienced BSTE as stimulants to growth and where these stimulants had their foundations. The foundational root of the BSTE was not a strict issue of interest to this research but it plays to the conclusion and

discussion related to the thesis. One issue was the categorisation and identification of the absorptive capacity domain as this was a fundamental aspect of the growth process. It may well be that a correlation analysis between the three categories would be a useful aspect of future research. It was evident that understanding the nature of the unpredictability, the foundation of the BSTE and the categorisation of the absorptive capacity domain are important considerations when it comes to understanding the policy implications and how HGSFs and potential HGSFs can be supported.

4.5 Analysis of Absorptive Capacity Domains

When experiencing high growth, the 5 case studies dealt with the major issues arising from the opportunities presented post the BSTEs. The analysis of the empirical data showed that the actions and decisions reflected the issues that the founders dealt with in rapidly growing the business and the passion they each felt about their businesses.

On passion and growth:

“It tended to be your typical start-up where you have one or two golden customers who give you the confidence to go through and do it. We took the opinion that we had enough work for a year – let’s give it a crack and see how we do.” (Case Study A)

“So that gave me a bit of a buzz as to where I was going, what I wanted to do and we were still having one or two conversations with people but then there was a customer who was buying (Case Study B)”

“it was fun to go on TV and sell an envelope maker and then it was just this little website on the side that my friend’s mum was going to help me run and it was all going to be very small scale but actually it took off way bigger than we ever imagined. So actually, what I found I had on my hands a couple of months later, is a business that had over £100,000 turnover that had just come out of nowhere” (Case Study C)

These actions and decisions clearly fell into absorptive capacity domains. The founders recognised that a growing business needed an infrastructure to support expansion. They understood that the appropriate level of cash flow funding needed to be in place. They identified that a management team needed to be put in place that could deliver growth.

On the need for senior teams:

“And then as the branch network grew, and I think it was the back end of 2015 going into 2016 when we knew we had a real good growth year, I’ve then started building

kind of the middle – or senior management team, so I brought SL in as commercial director across to Gateshead.” Case Study E)

“ “E” were an owner-managed business, the people who worked there liked that culture and to go and work for a global telecoms business was just – it wasn’t for them, so Chris and I were brave enough to approach their directors and just say have you thought about – instead of working for this global company who’s bought you, how about, we put our hands in our pockets and we build a sales team and – they took a bit of convincing, a lot of these guys had only worked at “E” - they saw what a great place “A” was, you know, no debt, which was a big factor in them joining so nobody can just come along and shut the doors.” (Case Study A)

“But that changed in 2013 when we actually hired a team to go and sell into the shops, seeing that that was a big – and that’s still the biggest area of the business now, so we have to develop product for them that will sell off the shelf. So, it’s just changed the mind-set in the way our product development team worked.” (Case Study C)

I need a financial controller in place looking after the finances, you know, someone more professional, academical capability, a more structured senior management team that offers more support to the branches, centralising a lot of the functions for the branches so they can even sell.” (Case Study E)

As well as a great deal of positive emphasis being put upon appropriate recruitment. Robust procedures and processes were developed and invested in to accommodate growth.

On procedures and systems:

“the problem with that was we had one person who knew where everything was and the amount of stock we had, it was such a backlog and I could just see that mistakes were going to happen and if we had to employ new people they just couldn’t learn it, they’d have to constantly ask him where’s this or where’s that? That was when I put in a system of putting warehouse locations in.” (Case Study D)

“I mean, I’m losing track of my staff that I’m employing but, ??? because I’m building the infrastructure – in place, we’ve managed to cope with what we had but recognising that, you know, we need stock controllers, we need” – (Case Study E)

“back then it was probably 500 active and then it jumped to maybe 1,000, then to 2,000 and now we’re probably – to wholesale – we probably have about 4/5,000 items that we have active. Obviously, the difference now is on the website within the two stores we have about 12,000 items but we don’t wholesale them, so we don’t have them at the warehouse.” (Case Study C)

The HGSFs operated initially in local geographical markets but spread rapidly into national markets and in one instance grew rapidly internationally. Careful consideration was given to

entering new markets and the potential competition. Exploration of the market was undertaken and knowledge was developed to de-risk the process.

On exploring the market and understanding the competition:

“you know, one of our competitors will become Amazon – Amazon is becoming a competitor, it will play in our market and who would’ve guessed that ten years ago? It will suddenly start to play in our market but I don’t think they’ve got people – customer-facing people, that’s our key difference. So, whilst we automate everything, our real single difference is people.” (Case Study B)

There is a changing market out there, possibly, possibly, it’s very hard to predict but you’ve just got to keep your wits about you and your ears to the ground and watch buying patterns and that’s a good thing, like the software system we’ve got in place now it’s like – Scott plays about with it to find lots of data” (Case Study D)

“Once we find the – what we’re trying to do at the moment with stores one and two and then store three opens in July is find the model that works and is replicable. We’ve got store four in the budget for later this year, we might not do it, because of cash reasons or if we find stores two and three become really – start trading really well in the next six months we may have to accelerate the growth and go to the market,” (Case Study C)

The firms constantly strived for new products and services, there was a strong emphasis on innovation and creativity in the context of the market and product development approach. Each of the firms had at some stage developed a mentoring relationship. This was done either on a formal basis, through the instigation of a Board of Directors with Non-Executive Directors, through more formal network mentoring programmes or on a more informal basis through ad hoc networking events or personal contacts.

On networking and personal contacts

“That’s right, yeah. So, I’ve always – I’m kind of a people’s person, I like keeping in touch with guys and, like, networking and things so these are people that I’ve crossed paths with over my career and then kind of kept in touch with, along the way, you know, so that’s worked.” (Case Study E)

“So we decided we’d put a board structure in place to help facilitate that next step that we took so we put a non-exec Chairman in and just formalised the business a little bit more, and that’s when we sat down and said ‘right, so where’s the opportunity, what’s the model going to be to grow?’” (Case Study C)

But me and George became stronger then, he was like an advisor, like a father figure to me, although there was only four or five years between us. Like a mentor? Yes,

yeah, and he had been in the wrought iron industry all his life and he knew all the big boys in the game but his knowledge of the industry was immense.” (Case Study A)

The process of high growth is reflected within the specifics of the ACDs and the “voices” of the entrepreneurial narratives. This exposes the reality of growth, the lived experiences of the growth story and the entrepreneurs involved in the HGSFs. The following sections deal with the specific ACDs, which had been categorised and analysed from the narratives across the case studies. It takes each domain that falls within the context of the necessary developed absorptive capacity and indicates the primary evidence to support the analysis.

4.5.1 People; Recruitment and Development (ACD1)

A great deal of thought and effort went into recruiting people, particularly the first hires. This represented a major shift in thinking for the founders and to some extent a letting go of aspects of their business. The appointment of people to the “management team” was a crucial and pivotal point in the growth story of each case study (Xu, 2015). Each of the case study firms was on a different point of this spectrum of people change and development (Bessant et al., 2007). What was evident was that the first hire was extremely important – “the challenge for solo entrepreneurs to add their first employee is arguably the single biggest growth event facing any growing firm” (Coad, Nielsen, et al., 2017, p. 1). The first hire resulted from the owner managers feeling that they had “too much on their plate”, it involved a large mindset change from the entrepreneur and the decision to recruit was not taken lightly – “the first hire brings about many challenges relating to work organization (Coad, Nielsen, et al., 2017, p. 6).

On recruiting the Depot Manager:

“It was not easy getting them to jump from stable jobs, Not at all!... but I could see it from his perspective; we were just such a new entity then, we’d only been trading at just a year and a half I think at the time when I was starting the negotiations to get him on board. So, he was very reluctant to leave that security...But I got him, I got him in the end, and like I say it’s turned out to be one of our best branches as well. “ (Case Study E)

On recruiting the Operation Manager:

“Paul, used to pop in for a cup of tea on a Friday, he was someone I could trust, after a while I realised that he would be good to have in the business, so I asked him if he wanted a job and he after a bit of haggling he agreed” (Case Study D)

On recruiting the sales team:

“So, it was an opportunity that we seized – they that we were very good at what we did but not very good at selling, we just lived off referrals really. And that was the change that delivered I suppose £10 million more of business.” (Case Study A)

On recruiting the Dutch Firms sales team:

“about a year later then took two Dutch people on who worked in that business who are our two agents in Holland, so they’re not on staff but they’re exclusive agents and they’re purely commission based and they’ve grown our Dutch business from nothing to where it is now, about 6/700,000 euros in the last two or three years and that’s supplying little independents in Holland.” (Case Study C)

There was a strong recognition of the need for personal change to cope with the demands of rapid growth (Desai, 2017). The transition from being owner operated and owner managed this is the move from doing everything within the business to delegating the operational and tactical decisions, for some entrepreneurs this can be traumatic and effectively curtail the growth of the firm if not effectively achieved (Franco, 2017).

On recruiting the Product Development Director:

“I’d started running a few focus groups of crafters locally –one of the people that started coming ...was a girl called Lianne and she was just – she was exactly our type of profile customer, ... I just really liked her as a person and I got it into my head that I wanted to employ her and I wanted to employ her to run my product development because she was – I was not a crafter, she was...she could actually help me with understanding what the consumer wanted” (Case Study C)

On recruiting a Finance Director:

“I needed more support in running the business, particularly with the bank and putting systems in place.” (Case Study B)

On partnering with the Technical Director

“He was a guy I had worked with and he was very good at what he did, we got on well together he was good technically and I was good with the business side of things. He put together the technical team” (Case Study A)

Each of the businesses was focused upon sales growth and the organisations were configured in such a way as to facilitate business development.

On focus on growth:

“Could we do more – could we double our sales – double our turnover year on year? So that’s – I love a big target, so that’s what I set out to do, so I, sort of, kind of built a – over the course of three months – a plan, a three to five-year plan to double our sales, double our turnover year on year to £30 million, £60 million then the absolute juggernaut which will be the £120 million, but we’ll see, we’ll see.” (Case Study E)

“And that was the change that delivered I suppose £10 million more of business and I think everything else has been managing scaling, so we focus very much on people development, six-month reviews, setting objectives, life objectives, helping people achieve the car they want, the house they want, so they buy in to everything we’re doing.” (Case Study A)

“Yeah we’ve done an awful lot of work last year laying the foundations. Which should allow us – looking at the numbers – what we’re forecasting, I mean we’re budgeting 16 in the UK this year so from 11.4 to 16 is huge growth. It’s a 50% growth again. Yeah, and as I said we don’t know what the US could do. So, as a group, we could grow 30/40% this year and the group as a whole, when you add the US in, has gone from £10m to £20m sales in the last two years – in pounds.” (Case Study C)

This was reflected in the culture of each organisation. The entrepreneurial teams, were small with little formal hierarchy and a flat organisational structure (Colombelli, 2015). The structures, being flat, were very responsive to the needs of the customer. The growth mindset of the entrepreneurial leader of each firm reflected in the entrepreneurial team. All the case study firms followed Coad and Timmerman’s model of “dyads” that is teams of two as key strategic entrepreneurial decision makers (Coad, Nielsen, et al., 2017). Each of the teams had the skills necessary to run a successful business. It was the case in each of the HGSFs that recruitment or involvement of the key people in the business was a BSTE.

There was an element of luck or serendipity in the finding of the right people with, fortuitously, the appropriate skill set. The development of the capabilities to exploit opportunities, over time, involved more of a team effort (Eisenhardt & Martin, 2000). The makeup, background, experience and attitudes of the team very much influenced the growth performance of the firm (Delmar & Shane, 2006). Each of the entrepreneurs had made a conscious decision and had made a great effort to recruit people who had appropriate experience and the backgrounds relevant to the needs of the business. They gave recruitment very careful consideration and consistently looked for the “cultural fit” of the individual.

On recruiting people:

“New staff on board, to cope with what was happening at the time - with all this, this progression here, what happened – certain things were keeping these people happy, taking staff – we’ve never looked – we’ve always handpicked” (Case Study D)

On the focus on people:

“we focus very much on people development, six-month reviews, setting objectives, life objectives, helping people achieve the car they want, the house they want, so they buy in to everything we’re doing.” (Case Study A)

Each of the HGSFs was launched in the NE, started by local people and employed local people. This is evidence of the importance for employment creation by the HGSFs in the NE.

On locating in the NE:

“I went to a distributor in the North West and realised that there was nothing like this in North East” (Case Study D)

On being in the North East.

“There are a couple of national outfits that do what we do but there was no one really focused on the North East” (Case Study E)

This AC domain is significant in relation to the impact that these firms and firms like these, can have on addressing the regional disparities of the North East – “High-growth firms are important contributors to job and wealth creation. A small set of high-growth enterprises drives a disproportionately large amount of employment creation.” (OECD, 2016, p. 98). The category also indicates the importance of the profile of hiring which changed with the different idiosyncratic stages of growth of each case study. Coad, et al (2014) posed the issues facing HGSFs – “Do HGFs benefit from recruiting individuals with a high human capital base, allowing them to tap into their employees’ prior business and industry experiences to further the growth of the firm? Or conversely, do HGFs benefit more from recruiting low-educated but perhaps more committed employees, which they train in-house” (Coad, Daunfeldt, Johansson, & Wennberg, 2014, p. 294).

Evidence within the empirical research suggests that there is a “profile” of capability recruitment, meaning that as the firm grows then the people recruited have greater specialist capabilities.

On recruiting people with greater skills:

“I mean if I touch on 2017, the growth we’re going to finish off £14.5 million but my staff’s gone to 42 staff, I mean from 2016-2017, I mean, I’m losing track of my staff that I’m employing but, ??? because I’m building the infrastructure – in place, we’ve managed to cope with what we had but recognising that, you know, we need stock controllers, we need – I need a financial controller in place looking after the finances, a more structured senior management team that offers more support to the branches, centralising a lot of the functions for the branches so they can even sell.” (Case Study E)

“And that was the change that delivered I suppose £10 million more of business and I think everything else has been managing scaling, so we focus very much on people development, six-month reviews, setting objectives, life objectives, helping people achieve the car they want, the house they want, so they buy in to everything we’re doing.” (Case Study A)

“I brought in a Chair, a Chair just to give me time to sit and ‘right, have you done, have you done, have you done?’ and have that – I think we talked about it last time – having those dark days where you get out and don’t worry about the shit that’s going on.” (Case Study B)

The first hire tended to be a “gap filler” a person who complemented the founder, in some instances it was an administrative skill set in others it was business development, sales or operations.

On first the recruit:

“I found a company who could do that for me, which was actually just a one-man-band in a back bedroom set-up, but looked like a company - James – and he did a lot of that work for us and became our outsource for a lot of our digital work that we did – any DVDs we wanted to do, any high-level marketing promotion, he would do that for me and in the end he was the first member of staff that we actually took on who had a skill set that I didn’t have. So that really marked a turning point for us, it was someone on a high salary but it was someone who could fill a gap that I didn’t have and we decided that – we knew that that was how we needed to grow and go down that route.” (Case Study C)

“He was, he was – Gary was with me in 2011, he was kind of – he was there from the start really and then Gary came on board as a - sales director role. I felt I needed someone in that role to fill the gap.” (Case Study E)

“Paul joined the business, he never used to get flustered about things, do you know what I mean? You know, that can be a hard situation as well in an early start-up of a potentially massive business and somewhere down the line was one of his reasons as well for me coming in because you know, I’ve seen him blow his stack. I’ve spoken to him and said ‘you know ???’ and just sort of calm the situation what was going

through his head, you know, he's one of these blokes, he wants to be there before he gets there. I provided support.” (Case Study D)

The people category also indicated the change within the firm from being entrepreneurially owner managed to being more “professionally managed” with management systems and processes in place (Timmons & Spinelli, 2016).

4.5.2 Market; Customer and Sales: Markets (ACD2)

Markets represented increasing existing business and moving into new geographical markets and into new product offerings (Ansoff). It also signifies the recognition of the importance of being close and responsive to the customer in terms of their requirements (Gupta et al., 2013). By increasing the scale of their business by its very nature involved the HGSFs in a careful consideration of increasing target markets through selling different products, through different locations and in one instance expanding internationally. Also, selling using the internet and online shopping was a key element within the market factors impacting on sales. There was also evidence within the case studies of an element of “trail blazing”, firms who were first to China to source products (Case Studies C and D, firms who had developed and increased added value in their products with innovative software solutions (Case Studies A and B). The operations of distribution channels, ways of getting the product to the customer had been carefully considered. Finding appropriate distribution had in some instances been the result of BSTEs but once identified, the development of the knowledge to exploit these distribution channels (absorptive capacity) was done speedily and professionally (Case Study E and C).

Each firm showed a strong sensitivity to the market that the firm operated in. They had made great efforts to understand the market forces relevant to their firm. They had strong market knowledge and simple operational terms.

On identifying market opportunity:

“The market was growing very rapidly, so it was already quite a developed market in the USA, but it just started to develop – so you would see hundreds of little hobbyist shops open up all over the country every year” (Case Study C)

“Customers would jump around from one provider to another because of price. We decided to start a business where we would never lose a customer because of our outstanding service.” (Case Study A)

“Our business is based on the idea that we will always have what the customer wants, this means carrying a lot of stock, if I have not got it I will go and buy it from another outfit and then send it to the customer even if it means losing money, because they will always come back” (Case Study D)

The case study firms had active strategies for capturing customers and increasing sales, as evidenced by their dynamic approach to the market resulting in their high growth. They were active as opposed to passive market participants, seeking cooperation with customers, suppliers and in some cases the competition. They adopted various strategies to address the market. (Yannopoulos, 2017). The HGSFs adopted one or more strategies in growing their market presence. Identifying a niche where the competition was weaker, a strongly differentiated product offering, serving uncontested markets, taking on much larger competitors and gaining legitimacy in the market by their strong presence.

On opening shops within Garden Centres in the UK:

“Yeah, just because there’s not the distribution model in place to – so our growth, if we were only doing B to B, our growth would be how much shelf space we could get in Hobby Craft and there’s still only 84 stores but we’ll have a whole shop full of stuff, not how many bays would Hobby Craft give us.” (Case Study C)

On working with the competition:

“What I’ve always tried to do is that a) what I learned in here, talking to people was, try never to have a competitor, do you know what I mean? Try to find a way of working with them perhaps and ultimately then – Co-opetition rather than competition.” (Case Study B)

The HGSFs understood the dynamics of the market and the buying behaviour of their customers. Most importantly they worked hard to make the buying process relatively easy. They had developed an “expertise and enjoyment in selling products and services combined with the ability to effectively negotiate and exploit the market” (Schofield et al., 2015, p. 4). Each of the entrepreneurs had developed a clear vision for their business. They knew what they wanted from their businesses performance. This was derived from a belief in their own ability, their self-efficacy (Dhir, 2017).

4.5.3 Strategy and Entrepreneurial Orientation: Strategy (ACD3)

This domain is indicative of strategic entrepreneurship. It has been noted that “while there is no single agreed definition of Entrepreneurial Orientation (EO), it is commonly regarded as firm-level entrepreneurship focused on opportunity recognition and exploitation” (Lechner & Gudmundsson, 2014, p. 38). Within the study it was suggested that EO “is understood as the strategy-making processes, structures and behaviours of firms characterised by innovativeness, proactiveness, risk-taking, competitive aggressiveness and autonomy, facilitating the pursuit of opportunities” (Lechner & Gudmundsson, 2014, p. 36). The extent of entrepreneurial orientation is measured in the strength of the propensity for risk taking, this was evidenced in the participants’ willingness to risk resources and to act on their vision. The entrepreneurs had developed a strong antennae for identifying and recognising opportunities, particularly those that had arisen from the social context of the NE (Fritsch & Kublina, 2016).

On opportunities in the North East:

And that was basically set up when I started, and it was just a matter of progressing those leads that Davey had and looking at new ones, seeing who else was buying x, y, z in the fabrication industry within the North East. (Case Study D)

We found the level of retention was really quite low in the North East so people tended to go to one provider, stick with them for two or three years and then go to the next one, go to the next one. We figured if we introduced a business model that we never lost a client we’d continue to grow and the customers would remain sticky as long as we did what we said we were going to do. (Case Study A)

So yeah by – 2016; £6.4 million, five branch in a row, all in the North East 15-ish is staff so but even then, you know, we still had this hunger that we wanted to do more, wanting to achieve more. It’s – it was nice – it’s nice to have that growth but it’s still not fulfilling enough I would say, so. (Case Study E)

These opportunities stemmed from the BSTEs. They had seen the immediate opportunities for their business ideas and the skills available.

Each of the entrepreneurs had developed an “alertness” to opportunity identification presented by the BSTEs. An integral element of their growth mindset is an ability to identify opportunities related to growing their business. Each of the owners performed the two key

tasks of identifying opportunities resulting from BSTEs and being prepared to risk resources to take advantage of the opportunities. Their prior knowledge of the market had a positive impact on the number and scale of the opportunities identified (Shane, 2000). The entrepreneurs critically applied their developed capabilities to exploiting the opportunities resulting from the BSTEs. These capabilities seemed to develop over time and emphasised heuristic learning, experimentation and creative improvisation (Gibb, 2000; McMullen & Shepherd, 2006). The consequential increase in absorptive capacity and the developing knowledge acquisition and the subsequent dynamic transformation was necessary for the rapidly growing firms (Ryzhkova & Pesamaa, 2015). There was a process of entrepreneurial serendipity as another distinctive pattern in the growth of each HGSF, whereby entrepreneurs looked for any opportunity to grow the business and explored any appropriate opportunity that came along (Dew, 2009).

On seeing a business opportunity:

“I had just been exposed to an industry that went through a massive period of growth around about the early 2000s – a massive period of growth and I saw the opportunity.” (Case Study C)

“I started to do supply chain management which is what I was talking about the other day is that we were saying look, you’ve done the sticky tape for us, do these other product ranges and we got into managing that for them, you know, so more about taking cash off the shelf and just in time and all that stuff we’ve talked about.” (Case Study B)

“Back in 2006 a lot of London-based consultancies were charging high expenses, travelling time – we just quoted ‘Fixed price to deliver the project’, flew our resources down to London, did the project, came back up here, worked a bit more, went back, delivered the project to the client, the final project.” (Case Study A)

The exploitation of opportunities, particularly resulting from the BSTEs was another indicator of entrepreneurial orientation. This dimension was coupled with a willingness to make decisions autonomously, the entrepreneurs did not seek nor need permission for their actions. EO was also reflected in the approach to the market, there was an intense desire to be better than the competition.

On the competitive environment:

“We started developing product that was all demonstrable. So, different to our competitors, who were developing products to sell off a shelf, we were developing product that worked successfully on TV and in the same way that the stuff that’s developed for TV doesn’t sell great off the shelf, the stuff that’s developed for the shelf never sold well on TV.” (Case study C)

“Back in 2006 a lot of London-based consultancies were charging high expenses, travelling time – we just quoted ‘Fixed price to deliver the project’, flew our resources down to London, did the project, came back up here, worked a bit more, went back, delivered the project to the client, the final project. So it worked really well, we kept doing that and continuing to grow and we got to about £4 million by around 2012.” (Case Study A)

“Yeah because all of our competitors are big corporates, it’s Mr Global and I don’t want to look like that – I want somebody - and that’s why it was interesting when we were talking about that model before; I want somebody to be able to pick up the phone to Paul who runs E and know he’s the MD at that point in time. I really want that because we deal with a lot of people and that’s an opportunity for us.” (Case Study B)

The strategic intent of each case study was to grow in their identified markets. They had developed cultures and value systems that had made this possible. In some instances, the firms were way ahead of the competition in terms of their impact on the market resulting from the emphasis they placed upon their strategic response to the customer and their supply chain. The relevance of this means that “the roles which intuition and judgement play in strategy development within the organisation cannot be understated” (Ennis, 1999, p. 149). This phenomenon was evident in each of the case studies although each entrepreneur undertook an element of investigation within their market their response to each individual BSTE was intuitive and judgement led based upon their view of the world, the opportunity presented and the risks involved.

On learning about the customer:

“So, what we did learn, and I think what we did that a lot of other companies don’t do, going to the US, is we did a lot of due diligence ...we went over on an exploratory trip to the first few trade shows.... but the whole way products are distributed in the US is fundamentally very different to how they were distributed here and a lot of UK companies in our industry have tried to go to the US and failed.” (Case Study C)

“So, AVs are over here and we’ve had that conversation, yeah, but I’m also having it with another client who actually took us to about £1 million worth of turnover within about 12 to 18 months.” (Case Study B)

It was evident that in the early stages of the growth of each HGSF the behaviours of the founders were very entrepreneurial. In general, terms the growth experiences exemplified several strong perspectives and these were evident in the narratives; the desire to maintain the entrepreneurial character of the businesses and the recognition by the entrepreneurs of the need to manage the periods of transition of the phases of rapid growth post the trigger event. The most evident aspect of this entrepreneurial behaviour was the ability to spot opportunities presented by the BSTEs and the ability to implement against those opportunities. The owner managers strongly evidenced their opportunity alertness. Tang, et al, (2012) defined alertness “as consisting of three distinct elements: scanning and searching for information, connecting previously-disparate information, and making evaluations on the existence of profitable business opportunities”. The recognition of the opportunity was the first step the second most important step was the development of the capabilities to maximize the benefit presented by the opportunity (Tang, Kacmar, & Busenitz, 2012).

On changing firm direction using core capabilities:

“I went in and just sat down with the guy and said, ‘this is the problem we’ve got, this is where we’re at, we want to make this a business survive’ and he said, ‘look we buy the sticky tape but it’s not the sticky tape we buy – we just love the service, ‘what about all these other products’ that’s what I got into.” (Case Study B)

Each case study entrepreneur is an “active” decision maker. They do not procrastinate or overly think through what needs to be done. They have a propensity for action rather than a consideration of opportunities from a theoretical perspective (Gibb, 2000).

On acting decisively and quickly:

“I’m going to go into China now and I’m going to do it myself, I’m not going to be involved with them, I don’t feel I need them and after what’s happened with what he’s done I just want to be independent.” (Case Study D)

“So, once I knew I had a bit of money I set away in March 2011, that’s when I decided I was going to set up my own business and I got a unit in the Team Valley. So, it went from there.” (Case Study E)

“So, we knew exactly what we needed, then we were able to talk round and - what were the options for how we could do that. Whereas I know other companies would just go ‘Here’s what we think we want to do, let’s look for a way – ’ - we worked out how we were going to supply the market and then what was the requirement to facilitate us to do that.” (Case Study C)

They seemed to have an appetite for change and struggled with complacency. They were rational and responsive in their decision making. Weighing up the benefits and costs of opportunities. They went through the conventional decision-making process but just did it quicker. They enjoyed following through on new ideas and were prepared to back their judgement by putting substantial resources behind the decision or action (Jenkins & Johnson, 1997). Each owner had a strong drive to strategically grow the business to its full potential. It was evident that they enjoyed the process of growing their businesses. They worked hard, long hours but importantly they worked smart. Most importantly that a clear strategy for growth was in place. Strategies for growth tended to emerge rather than were formed and were influenced by the BSTE, “a strategy can emerge in response to a situation, in comparison to it being brought about deliberately” (Ennis, 1999, p. 49).

On developing the strategy:

“like the major player in the industry we’re involved in, they have several depots around the UK – apart from the North East ??? but you know, I don’t really see that much advantage, to have – it just seems to be more headaches to me like, because I don’t see the purpose of having multiway depots, you’ve got multiway overheads and it’s like any business; it’s governed by – you’ve got to – profit makes it.” (Case Study D)

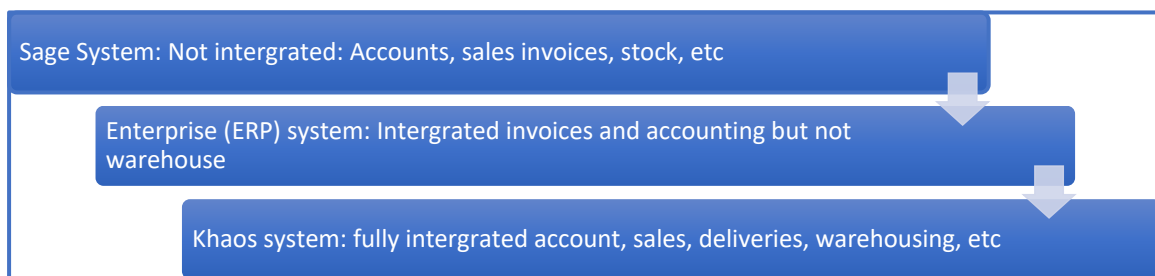
“So, it went really well, we focused on the – stealing the kind of Hammerite motto of ‘It does what it says on the tin’ – North East IT consultants at a fixed price.” (Case Study A)

“So Ideal World was selling craft on their channel and my perception was they sold a lot of kits for card making, so I just rang the buyer and said ‘Look, whenever you’re doing a show for card making, maybe we could sell my envelope maker because everyone who makes cards would need to make envelopes and it’s a very demonstrable item.” (Case Study C)

4.5.4 Operations and Formal Systems (ACD4)

Operations and formal systems reflect process capabilities and putting into practice those business activities and systems that create efficiencies within the organisations this was indicative of the “realised” absorptive capacity - “realised absorptive capacity describes the application of the new knowledge by its transformation, in the context of existing knowledge within the firm, and exploitation through incorporation into the firm’s operations” (Bessant et al., 2007, p. 11). Each of the case studies went through a process of increased formalisation of processes and systems. This, in some instances, involved introducing Enterprise Resource Planning systems (ERP) or financial systems, ordering and distribution systems. For example, Figure 43 represents the process that Case D went through over a period of five years. It moved from an unintegrated system of using separate systems for accounting, managing deliveries, stock and invoicing customers. To a semi- integrated system with accounts and sales invoices being managed separately to warehousing and deliveries. Finally moving to a fully integrated system that managed the whole operation from receipt of customer order to delivery and full accounting and inventory control. The full cost of this process was a significant investment for a relatively small firm but was seen as essential to its growth plans.

Figure 43: Case D development of formal systems.



These perspectives may in fact conflict with the recognition that structures and systems needed to be developed to support the rapid growth of the firm. The entrepreneurs recognised the need to delegate responsibility for managing the operational aspects of the firm (Busenitz & Barney, 1997).

On delegation and structures:

“and I think it, like, looking back, at it now I know how important systems are and how important it is to have stuff set up correctly... we got online and it was an

exciting thing to have a few orders coming in per day and people were finding us online.” (Case Study D)

“she now heads up all of our creative teams, she goes out and does all of the China sourcing, she’s very commercially driven, to understand the needs of the business and how to develop product or how to find product that we can then tweak and develop or finds capabilities within suppliers and then we can work on what we need.” (Case Study C)

It can be seen from each of the 5 case studies that increased necessary sharing of information and decision making necessitating “a more formal and systematic approach” (Ennis, 1999). This was a key element in the transition requirements of rapid growth. Great emphasis was placed upon having “product available”, the firms had a “Mohamad to the mountain” mentality. They felt that it was important to have product available to meet customer demand. The consequence of this was that over the growth years they had built up relatively large inventory in relation to their sales.

On having product available in stock:

“you’ve got to make life easy for people, make the buying of it easy for people. You know, we keep ramming down people’s throats ‘when you get it tomorrow? Oh, you can have it tomorrow, we’ll send’ – people don’t – you know, that’s like a service that there’s so many people fall down on.” (Case Study D)

“Yes, we had a level of stock, I think there was about – God, what was it when we initially started – about £20,000, so a decent – for being independent, in the game that we were in with boiler spares which we specialised originally was all about having the stock on the ground and building confidence with our customers and contractors that we’ve got stock there and we’re not the cheapest but competitive in price. “ (Case Study E)

The capabilities were related to the skills, experience and knowledge of the founders. As previously highlighted, as time went on, the behaviours and systems development became increasingly delegated. All the case studies had established and developed more formal systems from the time of their inception. Each was on a journey of increasing formalisation of systems and were at different stages within the process. In the beginning, new processes or systems were developed from the consequence of improvisations to deal with growth issues (Achtenhagen et al., 2014).

On building infrastructure and delegation of duties:

“So certainly - even my process or things I do has changed considerably for the past few months, you know, I’ve got things like a PA now just to channel - the amount of emails I’ve got alone is torture, I’m trying to relinquish quite a few of the jobs I don’t need to do.” (Case Study E)

The growth in stock and distribution of product issues were good examples of this. All the HGSFs had substantially increased stock resulting from an increase in demand for their product. This had knock-on effects on property, funding, supply chain management and distribution. The HGSFs were very pragmatic in their solutions and had developed successful processes which over time were adopted as routine methods and contributed to growth dynamic capabilities (Delmar & Shane, 2006). It has been indicated that “dynamic capabilities are a set of specific and identifiable processes such as product development, strategic decision making, and alliancing. Although dynamic capabilities are idiosyncratic in their details and path dependent in their emergence, they have significant commonalities across firms” (Eisenhardt & Martin, 2000, p. 1105).

Case D: On introducing an ERP (Enterprise Resource Planning) system

“I knew there was a problem but at the time I didn’t have a solution so it was like, I spent a full year looking at potential new software to put in and it was that point where we had to invest loads in IT and a new server and new computers and then this software Enterprise suite and that was like the biggest project that I’d ever done.” (Case Study D)

4.5.5 Innovation; Product and Process (ACD5)

It was evident to the interviewer that although it was not expressed there was an implied return on investment model in operation. They were prepared to put time into aspects of the business where there was a higher likelihood of a good return. They were constantly looking for new angles through innovation to improve and develop their business. The work of Demir, et al (2016) reviewed the empirical literature concerning HGFs with a focus on the strategic aspects contributing to growth, one of the five drivers of growth identified was innovation (Demir et al., 2017). It was evident within the growth of each of the entrepreneurs that they were not only keen on innovation but they saw it as essential to the growth of their businesses.

On the innovative unique selling point offering to the market:

“It’s around the technology of – so yeah, there’s – other people have technology but what people don’t have is all of our technology. It’s not as integrated and not put together and then what you may find is somebody might have the technology but they don’t have the supply chain management capability – we’ve got both.” (Case Study B)

“even though we had a tiny product portfolio we had something unique and innovative and different, but our challenge was always that it was a very demonstrable item – whether it was the CD or whether it was the tools, they were very demonstrable, so a small independent store that thought this was the best thing since sliced bread.” (Case Study C)

“Because I was new eyes into the business, it was always tradition where you don’t put prices in the catalogues because 1) it was expensive to change and everything and competitors can see what you’re doing but - I don’t know where it came from but I think I was looking at the likes of companies like Screwfix and Ironmonger Direct where – I mean they weren’t, like, competing with us but I could see their growth history and a lot of their growth was built around the catalogue and their catalogues all had prices in and it was that decision where it was – it made it easier for the customers to buy; they didn’t have to ring up and find out what the prices were.” (Case Study D)

Innovation reflects the incidence and propensity for the introduction of new products and processes that were commercially beneficial to the case studies. It indicated the propensity for risk taking inherent within each HGSF - “Innovation is risky and often expensive. The value of new ideas and intellectual property is only as great as the firm’s ability to exploit them” (NESTA 2015 p13). Combining the factors of an aspiration for growth, ability to respond to opportunities, being owner managed and developing control systems was a set of ingredients that facilitated innovation (Roper & Hewitt-Dundas, 2015). The entrepreneurs invested in new technology, ICT systems and process technologies that commercially benefited the HGSFs. There was evidence of a number of product and service innovations within the data springing from BSTEs. This striving for innovation was evident in the way that new products and services were developed.

On finding a new product idea:

“it was a range of pens at the start which was Spectrum Noir which we launched in 2011. And that’s one of them ones – you say about serendipity and coming from an opportunity – so I’d just started going out to Germany and I perceived that the German craft market is way behind the UK craft market and they were very big into peel-offs which are metallic stickers, which were big in the UK four or five years

earlier, and there was a guy out there who'd found some special pens that would – that were alcohol based instead of water based that you could colour onto this metallic finish with.” (Case Study C)

The successful profitable high growth of each of the case studies firms was related to their “value innovation” (Douglas, 2013). They were constantly seeking ways to provide process and product innovations to their respective markets. As stated in chapter one emphasis has been given to innovation as a driver of HGSFs and particularly the episodes leading to high growth. The case study owners evidenced the Drucker (1998) definition of innovation “the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth” (Drucker, 1998, p. 65). The participants were not necessarily inventive, although one case study used an invention as a springboard to their rapid growth. However, they were all relatively innovative.

On bringing a new product to market:

“it was a bit of drinking money whilst I was at university, it was a bit of fun to go on TV and sell an envelope maker and then it was just this little website on the side that my friend’s mum was going to help me run and it was all going to be very small scale but actually it took off way bigger than we ever imagined, you know, once we went on TV and showed people this envelope maker we sold 8,000 in the first couple of hours and then the company that were making them in MDF just couldn’t make them fast enough to keep up.” (Case Study C)

What is meant in terms of “relative” is that within their market and competitive context they were innovative. There was an ability to “join the dots” to take what seemed to be disparate bits of information join them together and make a cohesive whole (Wright, Roper, Hart, & Carter, 2015). They often developed innovative simple solutions to market issues, new distribution models, ownership models, sales models, etc.

On creating a shared depot ownership model:

“I wanted to expand and kind of started thinking about the investment structure, but it wasn’t more investment structure, it was just the thinking of, like, how can I attract good people to join the company – people that are experienced and knowledgeable within the industry and the only thing I could think of at that time was to give maybe some shares away in the branch that they own and operate. So, I set the branch up independently and giving the guys who come on board a stake within that branch that they own and operate.” (Case Study E)

As Hindle (2009) suggested the entrepreneur is the link between innovation being equal to invention plus implementation with the entrepreneur being the implementer (Hindle, 2009). Innovation was evidently taking place by combining processes of invention and entrepreneurship and this led to “new knowledge” within each of the firms (Demir, 2016). Studies of innovation highlight the particular importance innovative output for developing absorptive capacity (Ryzhkova & Pesamaa, 2015). Each of the HGSFs developed a relatively strong absorptive capacity essentially “to use information for commercial benefit” (Cohen & Levinthal, 1990, p. 128). The ongoing nature of innovation plays an important part of the development of case study firms. The positive correlation between innovation and growth in employment was clearly seen (Sena et al., 2013). It is suggested that the ability of HGSFs to outperform rivals is based upon some form of innovation along the value chain. The participants were very conscious of this as a way of establishing competitive advantage and thus increasing sales.

On developing competitive advantage:

“We figured if we introduced a business model that we never lost a client we’d continue to grow and the customers would remain sticky as long as we did what we said we were going to do.” (Case Study A)

“so, 2016 has been a great year for us, as a whole, and we’ve invested in good things like the app, the Flame app - that’s got a lot of capabilities on there, which social housing love.” (Case Study E)

“And that’s how it kind of came about, so this is what I mean about seeing a product in a different capacity but can we tweak it? Can we tweak it to work for what we want it to do? ...that’s what led to the launch of Spectrum Noir alcohol pens.” (Case Study C)

“so now, all local people around here, it’s just common knowledge that you can call in here, pick up whatever they want, job’s done. Whereas years ago, they used to have to ring down there, they used to have to be relying on them people having the stock, you used to then have to rely on that delivery being made to them. So, you know, you don’t want all that hassle and that’s what – you’ve got to make life easy for people, make the buying of it easy for people.” (Case Study D)

“we’ve talked about before, some great technology and that’s what I was looking for – we were doing everything in a bit of a manual way, old-fashioned, a bit fuddy-duddy, but a 108-year-old family business ??? but in here, we started a bit more tech and then those clients have grown naturally and we’ve got one or two big new clients who are doing a lot with us.” (Case Study B)

There was obviously a strong emphasis on sales. There was a strong perception that the future growth of the firm depended upon future sales growth. There was a great weight put on generating new business. As well as managing existing growth there was a high level of aspiration to exponentially increase future sales. Sales growth was considered to be a way of validating the business model and created a feeling of wellbeing in terms of ongoing success. The profitability derived from the sales also allowed for further growth, each of the case studies, beyond the initial investment in establishing the business, was self-funded from positive cash flow generated by profitable sales.

4.5.6 Mentoring and Networking (ACD6):

The mentoring and networks category is related to the use of informal and formal network and mentoring programs and opportunities. Each of the case studies, in the development of the learning and knowledge required to deal with the BSTEs extensively used people they respected to support them in their growth process. These entrepreneurial guides were found either by investigation or by a serendipitous process. Several of the firms had over recent times formalised a Board of Directors.

Each of the case studies put a great emphasis upon using mentoring and networks. This was seen as a way of gaining experience as well as raising the profile of the business. This was a paradox inherent with each of the founders of the HGSFs in that although the level of self-confidence was relatively high and their self-efficacy was strongly evident there was an element of humility in seeking experienced mentors – what the researcher has termed entrepreneurial guides. These were people that the participants felt had “done the journey”, so could help and offer advice and guidance about growth issues.

On the mentoring and networking:

“a special friend who’s got the knowledge of – is endless. That was George, it’s a good picture of him isn’t it, and he – you could ring him in the middle of the night – yes he’s got me at work who can see things on a daily basis but he’s got him to speak

to on a different scale, so people are paramount in business progression I think.” (Case Study D)

“if I learned anything, what happened for me was is that.... I was outside of the business more and not only in my current network or in our clients but actually just going to talk to other people, say somebody like yourself or whatever and just going and having a chat about their business and I think what I learned from that was - that there were other ways of doing things.” (Case Study B)

Networks also provide opportunities to recognise opportunities a number of BSTEs experienced by the HGSFS resulted from meeting people at events or trade shows – “personal networks, especially in the early stages of establishing a business, are significant sources of serendipity” (Mirvahedi, 2014, p. 126). Networking is an important element of the entrepreneurial activity – “creating and expanding networks is one of the main activities of entrepreneurs conducting business. Developing public relationships, attending networking programs, setting up professional groups helped entrepreneurs to be in touch with players in the market” (Mirvahedi, 2014, p. 130).

On sitting on a trade body:

“so, the Craft and Hobby Association and it’s all – it’s made up of a board of 18 volunteers but that are appointed, not self-elected and they’re pretty much the CEOs of all the big companies..... but they also try to be basically be the voice of authority in the industry and I was invited to come and be the international representative –it has had a really big impact on my personal development.” (Case Study C)

On attending a business growth program:

“That was the Goldman Sachs ten thousand, yeah, so, best thing I’ve ever done, so I’ll be a – what do you call it? One of those advocates of the course.” (Case Study E)

4.6 Other aspects influencing the process of growth of HGSFs

A number of other areas did not directly translate into absorptive capacity domains but were important aspects of the high growth story.

4.6.1 Growth Mindset and Self-Efficacy

The evidence of a growth mindset and a strong predilection towards growth was evident within each case study (Ennis, 1999, p. 149; MacKenzie et al., 2016; Schofield et al., 2015). The general perspectives of their growth mindset fell very much in line with extant HGSF

literature (Pesämaa, 2017). The four perspectives identified by Schofield, et al (2015) were evident there was a strong growth intention, a predilection to action, a willingness to learn and a desire and ability to innovate (Schofield et al., 2015). Jenkins and Johnson (1997) suggested that “an entrepreneurial venture can be considered from two opposing theoretical perspectives: deterministic or voluntaristic” (Jenkins 1997 p 896). Whilst the “deterministic” perspective is one of a relationship between the firm and its environment the voluntaristic perspective is about entrepreneurial intent. The voluntaristic perspective relates to the positive growth mindset of the entrepreneur and the “capabilities and motivation of the individual deliver entrepreneurial outcomes” (Jenkins & Johnson, 1997).

On growing the business:

“Could we do more – could we double our sales – double our turnover year on year? So that’s – I love a big target, so that’s what I set out to do, so I, sort of, kind of built a – over the course of three months – a plan, a three to five-year plan to double our sales, double our turnover year on year to £30 million, £60 million then the absolute juggernaut which will be the £120 million, but we’ll see, we’ll see.” (Case Study E)

“And that was the change that delivered I suppose £10 million more of business and I think everything else has been managing scaling, so we focus very much on people development, six-month reviews, setting objectives, life objectives, helping people achieve the car they want, the house they want, so they buy in to everything we’re doing.” (Case Study A)

“Yeah we’ve done an awful lot of work last year laying the foundations. Which should allow us – looking at the numbers – what we’re forecasting, I mean we’re budgeting 16 in the UK this year so from 11.4 to 16 is huge growth. It’s a 50% growth again. Yeah, and as I said we don’t know what the US could do. So, as a group, we could grow 30/40% this year and the group as a whole, when you add the US in, has gone from £10m to £20m sales in the last two years – in pounds.” (Case Study C)

“I decided to form our own business, so we could control the resources because then – nobody can say ‘no’ to me, so if I promise a customer I’m going to do something, I can make sure I can follow through. We had a business plan to do half a million and did £1.1 million.” (Case Study A)

As previously discussed there is a correlation between self-efficacy and a growth mindset. Self-efficacy enhances focus, direction, persistence and intensity of action (Henley, 2007).

As stated previously, entrepreneurs with high levels of self-belief consider that they have all the resources available to them to accomplish their task goals.

On ambition to start business and self-efficacy:

“that hunger started; I wanted more. That’s right, the first year we proved that we could do it and it kind of – you get that kind of feel, you know, ??? where you think well I’ve survived my first year, that’s – Self-confidence, yeah, it just to ups the anti again, it just ups that anti a little bit further. So, when it got to sort of – when I got sort of seven/eight months into my second financial year, ??? into sort of 2013, that’s when I knew I wanted to expand.” (Case Study E)

Entrepreneurial self-efficacy has been found to be a strong predictor of growth orientation (Douglas, 2013). The thinking about the business was clear with regards to abilities to deliver against targets. That it is important to have the right people in place doing the right things.

4.6.2 Funding and financing

Although funding and finance did not figure significantly within the narratives and therefore did not show strongly in the causal mapping process. It was evident that each of the HGSFs used a different approach to fund the start of the business and their growth but these funding streams were all essentially derived from business debt sources, banks, supplier credit and factoring and invoice discounting. It has been recognised “that firms that use debt in their initial capital structure—in particular, firms that use business debt—are significantly more likely to survive their first three years of operations. If they survive, they also have significantly higher revenues three years after the firm’s formation”. (Cole & Sokolyk, 2015, p. 29).

On funding growth:

“I put my house up as security and borrowed fifty thousand pounds from the bank. I had never done anything like that before. It was a nervous time for my wife but she trusted in what I was trying to do.” (Case Study D)

“at one point, we were selling over 100,000 CDs a year at really good margins and they were what gave us a lot of the cash in the business to be able to fund all of the other activity that we were doing.” (Case Study C0)

“it was literally the day before I was going – I was seeing this contractor, who had said he would put up the money, my wife’s Dad said, ‘look John, don’t do it, let’s keep the business as such within the family, the money – and I’ll invest the cash.” (Case Study E)

4.6.3 Knowledge and experience of the market

The way that the entrepreneurs made decisions about the BSTEs related to their cognitive style each had developed different mental models in the way that they made assessments of the growth opportunities. The common factor across the case studies was that they made judgements and evaluations based upon their knowledge and experience (Koryak et al., 2015). Baron and Ensley (2006) pointed out that prior experience, particularly entrepreneurial experience, meant that a greater number of opportunities were identified. All the participants had identified key opportunities, resulting from a BSTE, prior to entering certain markets (Baron & Ensley, 2006).

On experience of the market:

“I left the job where I’d served my time. The predominant reason for doing that was to make some decent money. But it wasn’t what I would call making real money and that’s what I wanted.... and long term, I knew this game would allow me to do that because it’s, like, if you get into the right thing at the right time and then expand it you can do it.” (Case Study D)

“that’s when I was on the road and I was getting approached, you know, I was seeing some of the customers and large contractors and out of loose conversations they were kind of saying have you ever thought of going alone, independent and that kind of planted the seed, that guys, already business owners, were willing to kind of put money up.” (Case Study E)

4.6.4 Acquisitions

At different stages of their growth four of the HGSE had made very small acquisitions that had been transformative within their growth story. The idea that high growth is solely a consequence of organic growth within small firms is prevalent (Burghardt & Helm, 2015). Each of the four HGSEs had been presented with a BSTE of an acquisition that had several effects; it more firmly established them within their market, it gave them access to new products and processes and importantly it facilitated the build of their absorptive capacity by giving access to people with the capabilities and skills that helped grow their businesses. Four out of the five case studies made relatively small acquisitions that had significant impact upon their growth prospects.

On an acquisition:

“so they said to Gary ‘do you think this new company that you work for would be

interested in taking us on, we're not really bothered about having much money for the business but at least the staff will have continuous employment and everything we've done over the years won't go to waste,' so we picked the business up very very cheaply." (Case Study C)

"we were getting into managing supply chains for one or two others but this company was buying this little bit of sticky tape, one of their interested parties said 'look, I want out' so we acquired them in 2014 which was E and they had a footing in - technology so we'd gone down and we presented to a couple of smaller customers but they had two decent-sized customers" (Case Study B)

"one of the biggest in the country and they – they just went downhill, for whatever reason, I don't know, they got bought out by a big garden supplier company who didn't have a clue about wrought iron, they're selling stuff at ridiculous prices because they didn't have a clue about margins in the wrought iron game and the business has just faded away and four or five months ago he rang us up and he went 'this is blah, blah, blah, have you heard of' – 'oh aye I know who you are' 'we've got a load of stock for sale if you're interested'... but we also bought his database and - his telephone line" (Case Study D)

4.7 The personal impact of high growth

Although each of the owners experienced great satisfaction in rapidly growing their businesses and enjoyed the experience of growth they also expressed the personal negative cost of that rapid growth. In experience the brisk growth of their businesses each of the entrepreneurs experienced major emotional pressure. Rapidly growing a business is not for the faint hearted. It puts strain on relationships, causes great stress and can lead to immense personal pressure. At certain points of the narratives each of the entrepreneurs expressed strong emotions about the experiences that they had gone through particularly about the impact on themselves and their families. This was evident not only in the narrative but also in their body language and their facial expressions

On the personal impact of rapidly growing the business:

"Yes, he was a crucial part of the business, he saw all that at first hand, he saw me with me illness sitting on my settee in my underpants shaking like a nutcase, you know what I mean, it's like, things that will stick with him for all his life, but, you know, how much he understood about why it was happening I don't know, ??? since it happened I gave him my explanation once everything had settled down and I told him my feelings of why that happened - which is very difficult to do, it's like – I've got no fears about talking about it, it was an actual crucial part of my life when that happened because it could've went the other way and I could've went over the top basically. It also taught me to control how much I can take myself, it taught me how to control stress and – everybody suffers from stress, I don't care how laid back you

are, you get stressed out at various things but it sort of taught me I'm never ever going to that horrible place again, I'm not going to let it affect me like that. So these things which he sometimes took as massive downers, you know, things that could be so detrimental, they weren't" (Case Study D)

"So certainly - even my process or things I do has changed considerably for the past few months, you know, I've got things like a PA now just to channel - the amount of emails I've got alone is torture! But myself, I come in, I mean I'm still quite hands-on, I'm trying to relinquish quite a few of the jobs I don't need to do, so an example of that is the cash flow, so I come in like six o'clock in the morning every day and six till nine is just generally sorting cash flow out and debtors and creditors and that kind of stuff." (Case Study E)

"so I was away doing a lot of consumer shows, so I'd be away Thursday to Sunday for example, at least a week a month and plus I was working really long hours – we were just trying to get the US company set up so S was helping with the US set-up on a night. So if we were both in the same country, he'd get in from work five or six o'clock and do a few hours on the US company, I'd get in from work nine/ten o'clock, so we wouldn't really see each other and all of his holidays he was having to take from work to come to trade shows with me because I didn't really have staff who could run trade show stands, I just had doers not thinkers, so we were just ships that passed in the – we never saw each other, you know, we didn't have any quality of life like that, we just lived to work, both of us. So, I think that was also – you could tell something was brewing and there was going to have to be a big change in our life" (Case Study C)

"I carried all of this, I was the only one carrying this on their shoulders because that's the way that we were structured. Never again Roy, do you know what I mean? And so as we came through this period, as we got ourselves out and recognised that, actually, I think we can move here, as I said, a bit of serendipity, a chap turns up – actually it was due to a government programme or something on training and they said 'well you've got to take somebody for three days' and I went 'OK' and actually what it gave – I said 'Ok well come in and by my Chairman, I brought in a Chair, a Chair just to give me time to sit and 'right, have you done, have you done, have you done?' and have that – I think we talked about it last time – having those dark days where you get out and don't worry about the shit that's going on in there because there's nothing – and you probably, I don't know, it's certainly happened for me and it may well have happened for you but that time when you're sitting in the general office and you can hear the shit's all over the fan with a client or whatever – it's not your job to worry about that, that's their job to worry about that." (Case Study B)

4.8 Conclusion

The chapter covers the objective of identifying and analysing the actions and decisions taken post the growth events and analysing these through an appropriately developed framework (section 4.4). Attride-Stirling (2001) suggested "if qualitative research is to yield meaningful and useful results, it is imperative that the material under scrutiny is analysed in a methodical

manner” (Attride-Stirling, 2001, p. 386). Early commentators regarding qualitative research were eager to establish the credibility of the methodology (Gläser & Laudel, 2013). It has been argued that there is a need for greater disclosure when using a qualitative approach (Attride-Stirling, 2001). There has been more recent criticism of the defensiveness of practitioners of qualitative methods need to code text in order to establish its “scientific” credibility (St. Pierre & Jackson, 2014). There is a temptation to use all data generated as opposed to looking for the quality of the data. The approach adopted also avoided theme fallacy, “if you think you have to find a theme, you probably will” (St. Pierre & Jackson, 2014, p. 716).

Within each of the growth narratives there was a clear recognition of unpredictable nature of the growth event triggers. These events could be categorised as BSTEs because they met the criteria as set down within the research; rarity, had relatively massive consequences, could be post-rationalised and triggered rapid growth. The entrepreneurs recognised that the major trigger events leading to the growth of their business were largely unpredictable and as such were BSTEs. They recognised the role that luck, randomness and serendipity played in their growth story as evidenced within the growth narratives. This did not take away their belief in their own capabilities but established a sense of the reality of their growth story. Phrases such as “right place right time” (Case Study D), “it was fortuitous” (Case Study B), “I was lucky” (Case Study E) “I did not see it coming” (Case Study A) all play to the unpredictability of the events.

The scale of the events was evident in how many of them fell firmly into the category of BSTEs using Taleb’s sense of the momentous nature and impact of the Black Swan Trigger Event (Taleb, 2007). In terms of the three elements of the unpredictable event the participants all recognised “the business fact and believed that they needed to have an element of luck, chance, or fortune to be successful” (Mirvahedi, 2014, p. 110). In the context of the definitions of the three elements of an unpredictable event outlined within the research the various BSTEs were random, some were because of luck and some because of serendipity. Several of the BSTEs were random, as in the meeting potential partners or suppliers or customers. Some of the BSTEs were as a consequence of luck; being offered a major intellectual property license or recognizing the opportunity to acquire a synergistic technology business. Refer to Appendix A for timeline and detail of BSTEs for each case.

The most important aspects of these HGSF stories was the desire that the founders had for starting their own business coupled with a growth mindset and self-belief in their own capabilities to grow a business (MacKenzie et al., 2016; Schofield et al., 2015). The combined different motives for starting the businesses may have been different but the main one of them “wanting to be in control of their own destiny” was the most important. Each founder brought the optimism, self-confidence, self-efficacy, experience, energy, enthusiasm and charisms to their businesses. Once they had set out on the path of starting their businesses and the consequence of the BSTEs kicked in, having validated their business model, they became more aspirational in their growth ambitions. The evidence from the various stages of analysis of the narrative growth stories showed that the BSTEs brought opportunities to the HGSFs and they had a major influence on their rapid growth. The mapping indicated the range and complexity of actions and consequences faced by the entrepreneurs resulting from the BSTEs, these actions and consequences falling within the scope of the developing absorptive capacity of each of the HGSFs. All the firms continued to plan, they continued to adopt a strategic entrepreneurial approach to their business (Klein et al., 2012).

The evidence from these five case study firms is that it was the BSTEs that stimulated rapid growth. Rapid growth is not random per se but is a consequence of BSTEs which are by their nature unpredictable events. BSTEs are occurrences that cannot be prepared for, although it is possible to have a culture of preparedness, expecting the unexpected (Bartram, 2015; Lindaas & Pettersen, 2016). This is a divergence from certain extant literature that debates the nascent nature of growth being, stochastic, random or planned (Coad et al., 2013; Coad et al., 2015; Derbyshire et al., 2015; Henderson et al., 2014). The debate around high growth firms views growth in its holistic anodyne sense it does not deal with it in its “lived” sense (Brannback et al., 2014; Gibb, 2000). The extant literature does not account for the “minutiae” of the actuality of growth (Kiviluoto, 2013; Stam, 2010). Although the BSTE is identified as important in the growth dynamic it may be that the ability of the entrepreneur to take appropriate actions post the BSTE is more important (Mirvahedi, 2014; Wolff, Pett, & Ring, 2015). In the view of the researchers this is like asking “which came first the chicken or the egg?” The whole point is that the learning framework for taking advantage of the opportunity presented by the BSTE develops over time (Frankish, Roberts, Coad, Spears, & Storey, 2013; Zahra & George, 2002).

The BSTEs were most evident at the start of the growth process. BSTEs create opportunities that entrepreneurs act on. These BSTEs are not an “excuse” or a rationale for growth, an entrepreneur cannot bypass endeavour, perseverance or hard work. The rules of engagement for the survival of any business still apply, remembering that the vast majority of small firms within the UK are “static” businesses. They will never experience rapid growth but may still experience steady growth (Gupta et al., 2013). This idea is based upon the evidence of the vast majority of surviving firms within the UK. What these static firms will not do is add substantially to the economic dynamism required to address the regional disparities of the North East of England (NELEP, 2017). The categorisation of BSTEs within an effective matrix provides an interesting multi-dimensional perspective on the nature of BSTEs and the potential policy framework for supporting HGSF. It uses the interconnected network of categorising, by the nature of the unpredictability, by the root foundation of the BSTE, Endogenous, Exogenous or Co-determined all within a framework of absorptive capacity.

Chapter 5 Conclusions and Recommendations

“Dramatic, large-scale events are [always] far less frequent than small ones. In systems characterized by power-law behaviour, however, they can occur at any time and for no particular reason. Sometimes, a very small event can have profound consequences, and occasionally a big shock can be contained and be of little import. It is not the power law itself which gives rise to these unexpected features of causality; rather it is the fact that we observe a power law in a system which tells us that causality within it behaves in this way. The conventional way of thinking, which postulates a link between the size of an event and its consequences, is broken.” (Ormerod, 2005, p. 170).

5.1 Introduction

This final chapter deals with conclusions and discussions related to this research. The chapter considers how the research question was addressed and how the objectives of the research were met. The contribution to knowledge that emerged from the empirical research is considered from academic and practice perspectives. The groups interested in the outcomes of the study are outlined and the reasons why they would be interested in the findings of this research explored. Further research recommendations are made. Taking the evidence into the process of growth of HGSFs on a micro level the chapter deals with how small firms can prepare for BSTEs and how “static” firms could become HGSFs. The chapter also indicates a propensity framework that could be used to identify existing and nascent HGSFs. A policy framework is discussed and policy suggestions are made. Finally, there is a section on reflections regarding the research and conclusions.

5.2 Meeting the research objectives

The analysis of the narrative recorded and transcribed from the RP process investigated the unpredictable nature of the events – whether they fell into the category of a BSTE. The causal relationship between the events and the actions resulting from the events were considered in the context of a developed absorptive capacity framework. More details as to the method of this analysis and the software used in the process has been covered in a previous chapter (section 3.7). Events cause things to happen, which reflects the growth narratives and the unpredictability of the events - (Johansson, 2012). The thesis considers, in the context of the aim of the research, what does the event lead to and what were its growth consequences (Gladwell, 2000). The aim of this research is to consider and investigate the role played by Black Swan Trigger Events in the process of growth in High Growth Small Firms. The aim recognises the importance of HGSFs in the context of addressing the regional disparities

experienced by slow growth regions such as the North East of England. Being consistent with the ontological and epistemological perspectives, “events or outcomes are what critical realists investigate” (Easton, 2010a). The phenomenological perspectives from the case study narratives have been considered. The methodology was designed to produce causal explanations which were evident in the case studies experiential growth stories (Bessant et al., 2007). Having collected the data, the issue of its interpretation and analyses was consistent with the described methodology.

The RPs and subsequent narratives from the RPs were considered in the context of the research question and the objectives. These being:

“An exploration of how BSTEs impact HGSFs?”

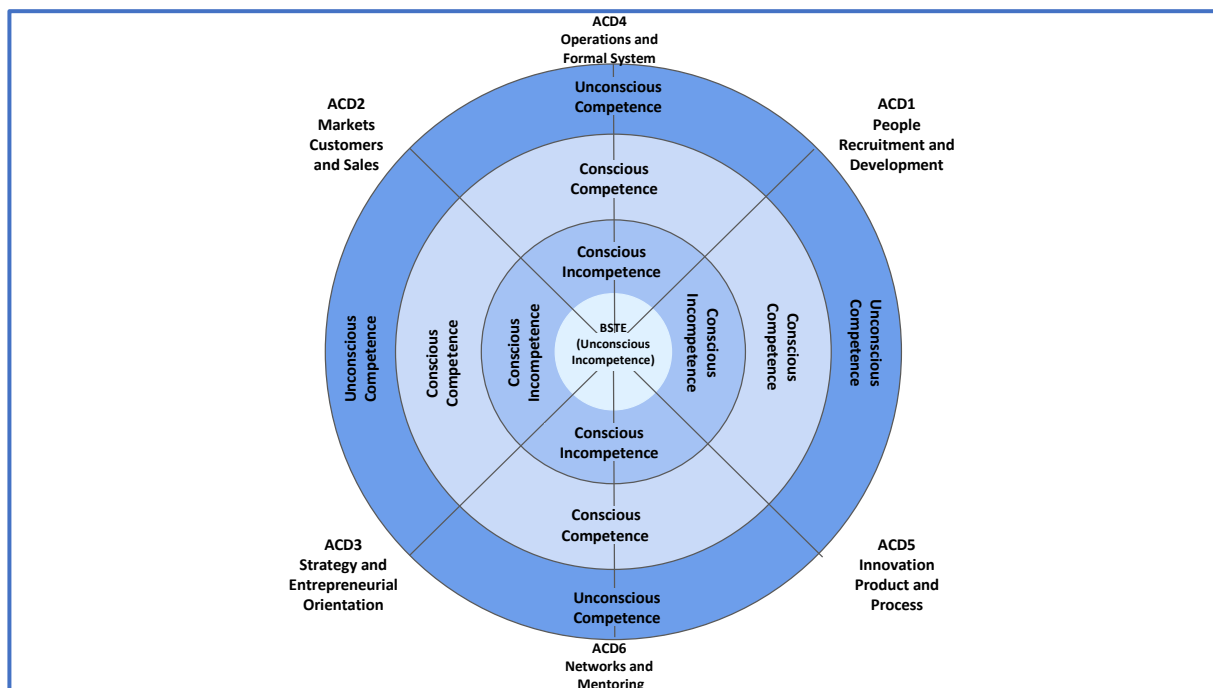
The research addresses three major objectives:

1. To capture of the phenomena of the growth story through the perspective of the entrepreneurs/business owners of defined HGSF case studies. Using Rich Pictures to capture the rapid growth story through the recorded narrative of the entrepreneurs of 5 case studies based in the NE the process of high growth stimulated by unpredictable events are explored. This exploration is detailed in its disclosure of the issues, actions and decisions addressed by the case studies in their rapid growth.
2. To consider and explore the unpredictable nature of the BSTEs and identify and analyse the relationship between BSTEs and actions and decisions transitioning a firm post BSTEs. Through an in-depth analysis of the evidence from the growth story narratives using a causal mapping process a theoretical framework was developed. This framework was an adaptation of the absorptive capacity model (Bessant, et al, 2007). The modifications to the model framed more detailed perspectives of the capacity, capability and knowledge development of the firms
3. To examine, through a broader framework of absorptive capacity, the actions taken by entrepreneurs and entrepreneurial teams during the process of high growth. By analysing the data through the modified absorptive capacity framework, the actions and decisions post the BSTEs were categorised and analysed. The words of the entrepreneurs are used to illustrate

the dynamic and the intensity of these actions and decisions. More importantly the impact they had upon the rapid growth of the firm.

Each of the case study findings was analysed and then an exploration provided across the case studies. The benefit of this being that each case study emphasises the heterogeneity of the HGSFs (Nightingale & Coad, 2016). Collectively the findings establish a theoretical framework, which is reflected in Figure 44, for the recognition of the impact and importance of BSTEs in the growth story of the case study HGSFs and although all different, the case studies experienced a similar post BSTE learning process. There is a recognition of the complexity of the growth process and the evidence claims its legitimacy from the disclosure and openness evident in the narratives. The narrative data indicates in each of the HGSFs that they went through a cycle of the conscious competence. Figure 44 details the conscious competence model. In key capabilities and knowledge (ACDs) domains each firm went from unconscious incompetence, they did not know what they did not know, through the cycle, to unconscious competence, it became a natural part of the process of managing growth (Reynolds, 1965).

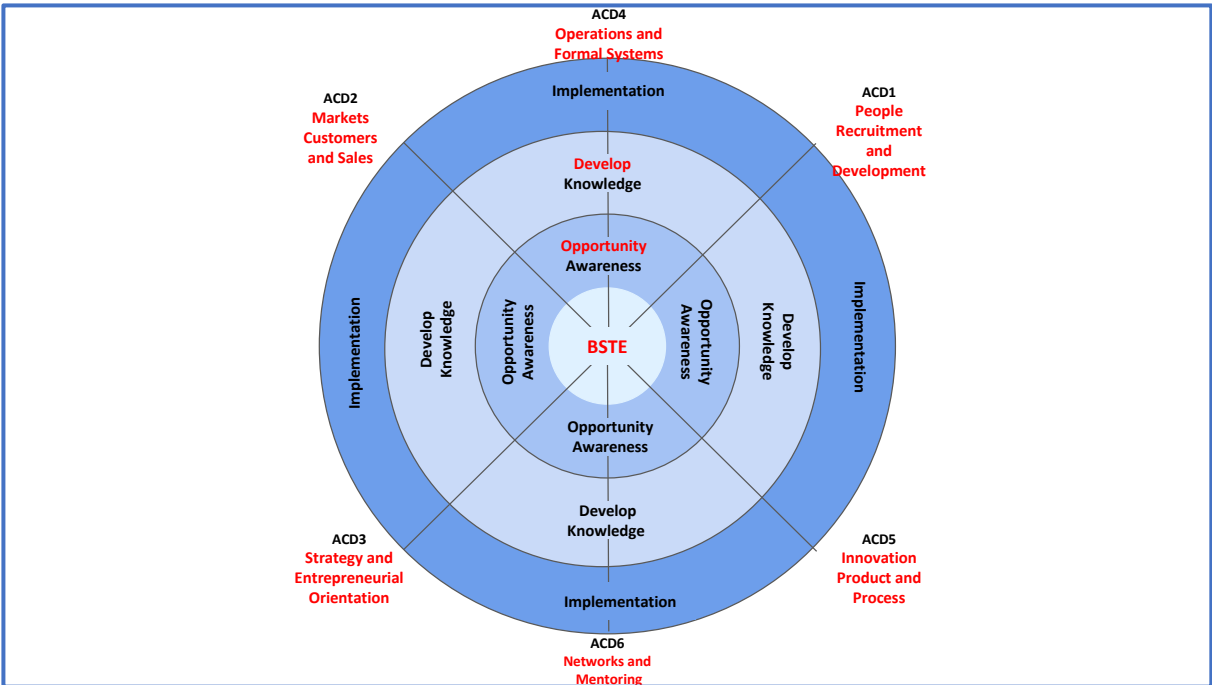
Figure 44: The Modified Conscious Competence Model



Derived from: (Bessant et al., 2007; Brown & Mawson, 2013; Reynolds, 1965)

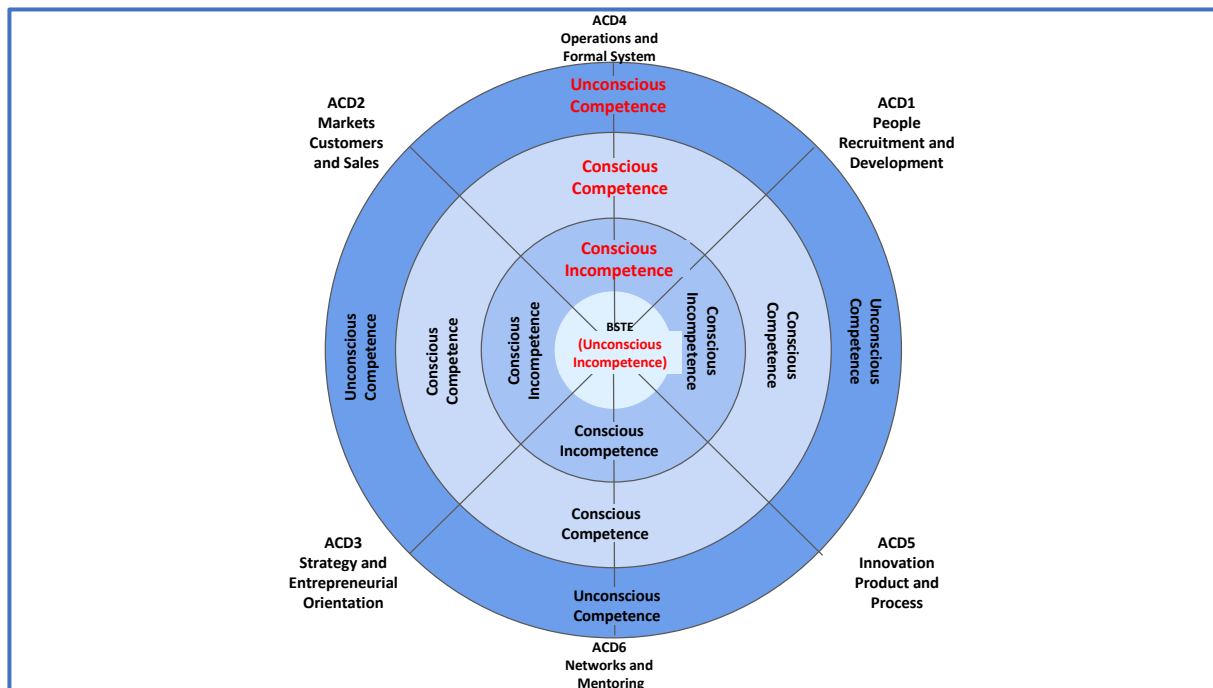
What this conscious competence model indicates is the learning cycle and the increase in knowledge maturity that each of the HGSFs experienced. Each BSTE experienced by the HGSFs offered an opportunity to stimulate their rapid growth process. Figure 45 represents the development of the models starting with the original Bessant model of absorptive capacity. This was modified to encapsulate the impact of the BSTE and the expanded ACD definitions (section 4.4.1): People; Recruitment and Development (ACD1), Market; Customers and Sales (ACD2), Strategy and Entrepreneurial Orientation (ACD3), Operations and Formal Systems (ACD4), Innovation; Product and Process (ACD5), Networking and Mentoring (ACD6).

Figure 45: Modified Absorptive Capacity Model



This model was then further modified as in Figure 46 to reflect the conscious competence model (Reynolds, 1965). This conscious competence model reflects the four stages of learning from ignorance through to an unconscious capability, being able to do a task without really thinking about it. These stages are reflected in the way that the case studies dealt with BSTEs and the stages each went through to take the opportunity that was presented and to develop the capabilities necessary to manage the rapid growth of the firm.

Figure 46: From Modified ACM to ACM Conscious Competence Model



The modified models emerged from the empirical evidence of the RP narratives as outlined in chapter 4. They reflect the processes consequent to the BSTEs experienced by the case studies. The models are a way of understanding the domains of actions and decisions that each case study went through in order to take advantage of the rapid growth opportunity presented by the BSTE.

5.3 Gaps in the extant research related to process of high growth

This thesis was driven by gaps in the research related to HGSFs and understanding the process of rapid growth: what triggers the growth and what actions and decisions are required post these trigger events (Deligianni, Voudouris, & Lioukas, 2015; Tomenendal & Raffer, 2017). This thesis goes some way to addressing the gaps identified in extant research. As outlined in chapter two growth literature is extensive and has grown substantially over the past two decades. There has been “a lack of research focusing on how firms grow rapidly, why they grow according to different patterns, how the decisions about growing or not growing are made” (Wright & Stigliani, 2012, p. 3). There is a need to understand the processes that underlie firm growth so that the gap between the meanings attached to growth by practitioners and those involved in academic research can be reconciled (Achtenhagen et al., 2010). A greater understanding of processes of high growth contributes to the

development of more appropriate policies to support growth. It has been argued “that the time has come for a reconfiguration of the large and complex growth literature, by integrating it with more process-oriented perspectives and a wider array of methodological and conceptual approaches” (Wright & Stigliani, 2012, p. 16).

The whole agenda of “scale ups” is of increasing interest to academics and professionals. This thesis goes some way to filling a gap in the extant research about the process of high growth and the triggers that stimulate rapid growth. This thesis contributes to an understanding of the process of growth and the role that BSTEs and the development of absorptive capacity play in the process. The study contributes to a change of emphasis away from growth per se to profitable growth (Kiviluoto, 2011), the implied impact of HGSFs on addressing regional disparities (Adonis, 2013) and the role of BSTEs in the growth of HGSFs. It is also contributing by considering the complexities of managing growth that results from unpredictable events that impact on a small firm.

5.4 Contribution of the research

It may well be that small firms that experience high growth are just “lucky” firms (Henderson et al., 2014). Being “lucky” does not mean that they cannot develop a planned approach to the growth opportunities as and when they arise (Thien, 2016). The evidence of this research establishes that BSTEs occur and that once recognised that they are acted upon to facilitate rapid growth opportunities. It is highlighted through the development of an absorptive capacity framework the identification of domains for action. The thesis provides an additional dimension to existing knowledge by considering the actual unpredictability of growth triggers. It is to provide a real life entrepreneurial experience. It is an entrepreneur becoming researcher as opposed to the researcher becoming an entrepreneur (Brannback et al., 2014). This is evidenced through the methodology, the outcomes and the consequent suggestions for policies and support. In conclusion, the thesis contributes to literature and practice in a number of different areas. Firstly, the main contribution is in the role of BSTEs and their unpredictability in exploring new opportunities and growth of firms. It is suggested that an entrepreneur with a growth mindset “needs to be alert to their environment, then use their means to exploit any emerging opportunity” (Mirvahedi, 2014, p. 227).

There are a number of perspectives to the contribution to knowledge, made by this thesis. The research integrates, in a creative way, the work of Taleb's Black Swan Events and the work of Brown and Mawson's trigger points (Brown & Mawson, 2013; Taleb, 2007). The thesis applies the concept of Black Swan Theory outside of the area of risk analysis and opens up the prospect of thinking differently about where HGSFs come from and their antecedents (Autio & Heikki, 2016). It has set this combined concept of BSTEs into a framework of absorptive capacity and recognised the domain links and commonalities between the decisions and actions taken post the BSTEs (Bessant et al., 2007). The thesis makes a number of contributions to the area of study and the academic and practitioner literature. It adds to the recognition of the link between addressing regional disparities and HGSFs. Apart from the process of the research being unique, using soft systems methods combining that of rich pictures and causal analysis it has also uniquely established that BSTEs are a major impetus for the rapid growth of HGSFs. The following sections deal with the specific academic and practice contribution.

5.4.1 Academic Contribution

The major academic contribution of this thesis is the development of a refined domains of absorptive capacity model that highlights the opportunities for maximising growth in HGSFs. The empirical data provided evidence of the recognition that unpredictable events are the triggers for rapid growth of small firms and what this means in relation to the dynamic of the actions taken and decision made in the context of the process of knowledge development or capabilities (Absorptive Capacity) to manage rapid growth. As outlined in section 5.2 the Bessant model has been modified to incorporate more detailed definition of absorptive capacity domains and a recognition of the dynamic of responding to a BSTE within certain domains of actions and decisions. The conscious competence modified model shows how the firms became aware of what needed to be done and how indicates the integration of the learning and knowledge to achieve unconscious competence. An additional contribution involves the unique process of using Rich Pictures as a way of capturing the reflective narrative of the high growth story (Cristancho et al., 2015).

The causal mapping used to draw the concepts and domains of actions and decisions related to the rapid growth process post the BSTEs. An important contribution is the recognition of the refined domains of absorptive capacity that need to be developed within HGSFs for

opportunities for growth to be maximized. The data gathering and empirical data provided evidence of the recognition that unpredictable events are the triggers for rapid growth of small firms and what this means in relation to the dynamic of the actions taken and decision made in the context of the process of knowledge development or capabilities (Absorptive Capacity) to manage rapid growth. Table 7 details more specifically the theoretical contribution that is made by the thesis. Because the research has at its foundation in the regional perspective the contribution is relevant in terms of its focus on the lived experiences of the HGSF founders and how this can translate into supporting other aspiring HGSFs. The real relevance of the thesis is to academics and policy makers who are trying to grasp with the ever-increasing regional disparities and the disastrous impact this is having on some of the most deprived areas in the NE and the UK.

Table 7: Academic Contribution

Academic Contribution of the research
The research integrates the theories of Black Swan Events (Taleb, 2007) and trigger points (Brown & Mawson, 2013) to form a category of events called Black Swan Trigger Events - BSTEs. BSTEs being unpredictable events that are precursors to rapid growth of small firms.
The thesis applies the concept of Black Swan Theory outside of the area of risk analysis and opens up the prospect of thinking differently about where HGSFs come from and their antecedents.
The research links the notion of unpredictable events (BSTEs) as precursors for rapid growth if managed through the perspective of absorptive capacity. Using a unique framework the research categorises the actions and decision post the BSTEs. It identifies these categories as absorptive capacity domains.
The methodology is a unique element of the research to this study area: the process of empirical data gathering through the case study identification. The use of Rich Pictures capture the story narrative of rapid growth and identify BSTEs. The use of causal mapping to link BSTEs to actions and decisions consequent to these BSTEs.

The evidence indicates that all the case studies experienced BSTEs and that these occurrences were a consequence of randomness, serendipity or luck. The preponderance of the BSTEs were mostly experienced in the early stages of the firms' growth. The evidence also indicates that recognising the opportunities presented by the BSTEs was not a process of strategic entrepreneurship but rather one of entrepreneurial orientation. An analysis of the causal maps indicates that networks play an important part in BSTEs. Through the narrative analysis it was empirically established that BSTEs are precursors to rapid growth. The HGSFs had a

“just enough” approach to starting and growing their businesses, they made the most of the resources available to them.

5.4.2 Contribution to practice

The research also makes a practical or practitioner contribution to the knowledge area. Out of the evidence three practical areas are considered; for moving static firms to potentially becoming HGSFs, identifying nascent HGSFs and supporting rapidly growing small firms. The thesis set out to establish whether BSTEs existed in the growth stories of HGSFs it has succeeded in that objective. The empirical evidence from the case studies is that BSTEs are pivotal in the high growth story. The very nature of BSTEs is that they are unpredictable therefore they cannot be specifically prepared for. What can be prepared for is that firms recognise that when they experience rapid growth consequent to the BSTEs the developmental effort should be on the absorptive capacity of the firm and more specifically where the focus of that development should be. Table 8 outlines the contribution to practice that this research makes.

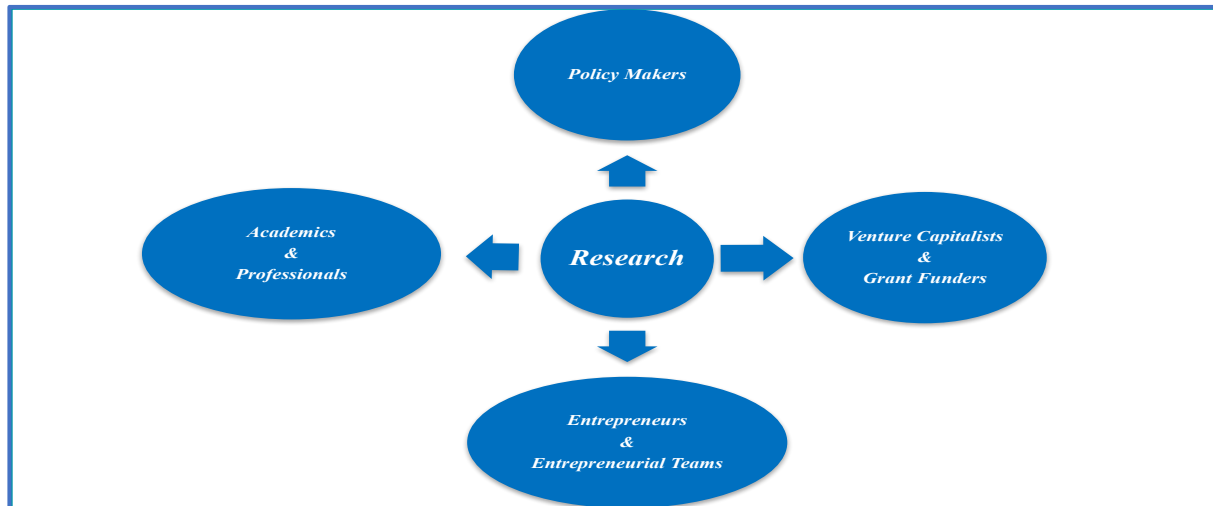
Table 8: Contribution to practice

Practice Contribution of the Research
The thesis links regional disparities with HGSFs and establishes the importance for the focus on HGSFs as opposed to startups. It identifies the common policy threads of regional disparities with HGSFs - the factors that need to be addressed in a slow growth region are the benefits on offer from HGSFs. (Section 1.3)
The research identifies and establishes the story of HGSFs that are sustainable and creating value in the NE. It establishes the notion that unpredictable events trigger growth. (Chapter 4)
The work provides absorptive capacity domain concepts that entrepreneurs can work on in the rapid growth process. (Chapter 4)
The thesis provides evidence for practical policy suggestions that are data driven and experienced and research based that the NELEP can adopt. (Section 5.7)
The research provides ideas around identifying nascent HGSFs using propensity questionnaires that could facilitate a support structure. (Section 5.8)
The work provides a practical list of actions driven from the Absorptive Capacity Domains that static firms can take to move to becoming a HGSF. (Section 5.5.1)

5.4.3 Interest in the research

There are a number of groups that have an interest in the thesis. Figure 47 represents the main classification of groups with an interest in the research.

Figure 47: Groups interested in the research



The interest of policy makers lies very much in understanding the reality and perspectives of HGSFs. Job creation is a major driver of policymaker manifestos (Crescenzi & Giua, 2014). The research provides through its case studies practical, real life insights into HGSFs and how they do what they do. Developing strategies for regional economic balancing through the decentralisation agenda is gaining traction in the UK. It is increasingly being recognised that regional economic disparities can have major social and economic implications for future wellbeing within the UK (Brown & Mawson, 2015; Kutscherauer, 2010). It establishes the theoretical link and importance of HGSFs in addressing economic imbalances between regions. As part of regional growth strategy the policy of increasing political regional autonomy necessitates considered thought in relation to business growth and the impact upon any growth strategy (Isenberg & Onyemah, 2016). Evidence is provided for more practical data-based policy and support programs particularly in line with the regional goals of the Local Enterprise Partnership. It provides an understanding of the need to shift the policy emphasis and what support policies could work and be accepted by entrepreneurs.

Venture Capitalists (VCs) and Grant Funders are interested in de-risking investments, ensuring success in any investment strategy is the “holy grail” for a venture funder. Understanding more clearly the growth dynamics of a firm will allow these bodies to cost the

risk more carefully (Mason, 2016). Evidence is provided that planning growth and experiencing growth are two different things. Growth is stimulated by a BSTE then planning kicks in and attention needs to be paid on the capabilities of the entrepreneur in developing absorptive capacity within the firm. VCs are looking for greater potential return on investment (RoI) by having a “blue print” for action for growth. RoI is the measurement for any financier of the efficacy of an investment (Mason, 2016). The priority for investment should be on capacity building not on opportunity or event seeking. VCs will get a higher RoI on firms focused on developing absorptive capacity.

The contribution to entrepreneurs and entrepreneurial management teams: is by de-risking the process of growth, this is probably a step too far for any entrepreneurs, as real entrepreneurs thrive on “calculated” risk. Accelerating the potential profitable growth is a driver for a real entrepreneur (Shane, 2008). Evidence is provided that through the absorptive capacity framework firms can consider more carefully where to focus effort. An entrepreneur is involved in the creation of wealth: it is the return on the investment of their time which is fundamental to the entrepreneurial activity. It is an important measure for real entrepreneurs that there is significant added value in the process of starting or running a business (Block, Sandner, & Spiegel, 2015). The evidence establishes that wealth can be created through innovation and customer service and letting go of some control. The thesis encourages the entrepreneur to formally recognise the role that BSTEs play in the growth of their firm and to inspire them to actively seeking these opportunities for growth. Evidence is provided that entrepreneurs should be receptive to BSTEs and that growth can be managed. The decision making and action areas required to facilitate growth post the BSTE are highlighted for entrepreneurs. Evidence is provided for the focus of the decision making and actions areas that facilitate rapid growth.

5.4.4 Recommendations for further research

Although the findings broaden the literature there is an opportunity for more quantitative and qualitative research into the scale of response to or impact of BSTEs. Further in-depth consideration is required on using the visual methods of RPs and causal maps and the links of the actions and decisions made post the BSTEs. Ideally research into the most effective ways for small firms to develop their absorptive capacity would be beneficial. A number of area of potential further study that could make a significant contribution to the HGSF knowledge,

theory and practice have been suggested. Table 9 indicates more specific recommendations for further research.

Table 9: Recommendations for Further Research

Theme	Research recommendations
Small Firm Data	The quality and timing of data related to small firm growth is very ideosyncratic. Research into ways of gathering more appropriate data is required. This could be directed to the LEPs
Use of Rich Pictures	There is a lack of research into the efficacy of Rich Pictures. Although the process is recognised as a legitimate one in terms of gathering data, research into the methods, facilitation and interpretation is required to firmly embed the process into the category of "visual" research.
Absorptive Capacity Domains	The development of absorptive capacity is fundamental to both the growth and survival of small firms. Research into prioritising and an understanding of AC in the context of small firms and the methods of effectively developing AC.
Networking and mentoring	Research into effective networking and mentoring and their structures. An understanding of why it works and how it works best.
Sales and Selling	There has been little research undertaken into sales and the selling processes of small firms. The link between growth and selling efficacy and the development of an effective sales process
Selling and Higher Education	Research into effective degree and postgrad courses related to selling. Why do we not have any high level courses focused upon sales and selling?
Cash Flow Management	Much financial research is focused upon funding but little is focused on cash flow management and its impact on small firms.
Link between data and policy	Research is required into how policymaker decide on policy? What evidence is used and how policy effectiveness is measured?
Internationalising small firms	Research into how small firms can be supported in internationalising their business. What micr activities would facilitate firms going into foreign markets?
International Distribution networks	Research into the efficacy of "piggy" backing small frims into local large firm distribution networks
Innovation	Research into facilitating innovation networks between small and large firms. Support and incentives that could be given to facilitate the process

5.5 HGSFs and preparation for BSTEs

In the milieu of the qualitative approach it is interesting to consider the role of serendipity or “chance” in the study itself. It has been suggested that there is consistently an element of “good fortune” in the discovery of knowledge. It was further suggested that “qualitative research inevitably contains such good fortune,” (Fine & Deegan, 1996, p. 3). How the knowledge accumulated is transformed into substantive discovery can be a serendipitous process. In the phenomenological sense to transform good fortune into substantive discovery there is a need to consider positively the unpredictable component of research (Fine & Deegan, 1996).

What was highlighted by the case study participants was their openness to positive BSTEs. The HGSFs, in the study, experienced BSTEs as radical events and as such they demand radical and swift responses irrespective of the cause or randomness of the event it is evident that the actions taken post the event are important in capturing the benefits of the opportunity. The findings build upon the work of Brown and Mawson (2011) and Bessant, et al (2007)

combining the ideas of Taleb's of Black Swan Events, and Brown and Mawson's (2011) Trigger Events. The common actions post the BSTE fell within the theoretical domain concepts developed in the derived absorptive capacity model.

There were a number of elements that came out of the empirical data. These were recognised by the serendipitous process of combining the experience and knowledge of the researcher and the participants in the case study process. One of the outcomes was the notion of a positive approach to growth and to expect the unexpected. Two of the cases had experienced BSTEs that were negative, particularly in case study B, which as a consequence of these occurrences had radically changed its business model (Bartram, 2015). Although this thesis focuses upon positive BSTEs, as it was deemed that they triggered rapid growth, it is worth considering how firms could be more prepared and what needs to be considered when a negative BSTE is experienced (Ashta, 2016). Although a great deal of thought has been given to dealing specifically with the risk management response to natural disasters it is possible to imply similar ideas to the specifics of dealing with negative BSTEs (Lindaas & Pettersen, 2016). It is not just about having processes in place as firms can be constrained by their own processes and their inability to envision the events that could dramatically change their destiny. A firm should have a culture of responsiveness, flexible thinking (Bartram, 2015) and a survivor psychology (Green, 2011). It has been argued that instead of trying to predict BSTEs firms need to "build robustness against negative events that occur and be able to exploit positive ones" (Taleb, 2009). Further exploration into the impact of negative BSTEs would be useful in understanding the idiosyncratic nature of stages of growth and the rapid decline of some firms.

The flow of actions and decisions consequent to the BSTE proved to be consistent across each of the HGSFs. Figure 48 details this flow. Although it is not a temporal model it indicates the domains which emerged from the research within which the decisions and action needed to take place.

Figure 48: Decision Making and Action Framework for HGSFs

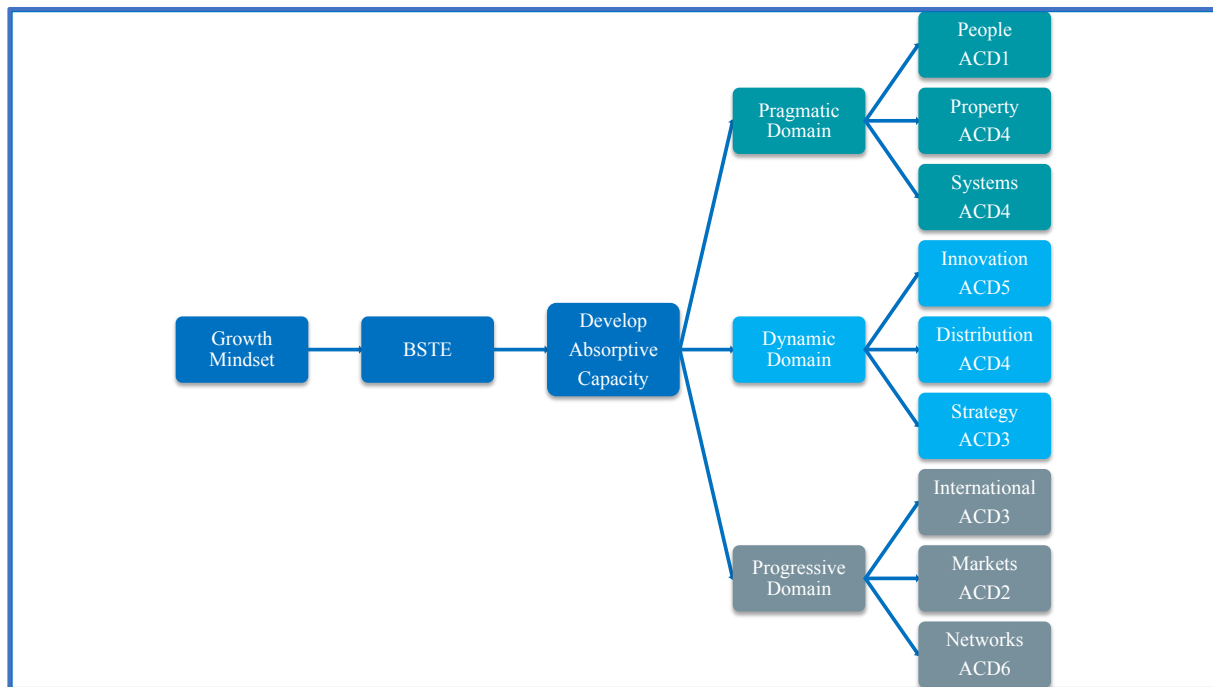


Figure 48 indicates a representation of the areas within which HGSFs made decisions and took actions post the BSTE. The model developed from categorising the ACDs into three specific meta-domain types. This is a more systemic representation of the absorptive capacity model explained in Chapter 4 in that it indicates the areas where policy support could be offered to HGSFs and potential HGSFs. The people decisions are about recruitment and development, property is about location and scale, systems about processes. These three areas are termed as “pragmatic domain” areas - these are the basic action and decision areas for running a business. The second category are what are termed as the “dynamic domain” areas - these are innovation, distribution and strategy. The third category is the “progressive domain” area - these being internationalisation, entering new markets, market expansion, increasing the offering into existing and new markets and networking. These action domain areas, if dealt with appropriately and creatively, ultimately lead to value creation and rapid growth for the business and the entrepreneurs.

Cognizance of these domains are important for the entrepreneurs leading HGSFs. They can be dealt with intuitively but the prospects for maximising the commercial benefits from a BSTE arise when entrepreneurs are conscious of the areas that actions need to be taken and decision made. There are lessons for “static” firms within this model but the whole idea of

growing rapidly is predicated on a “Growth Mindset”. The empirical evidence from the case narratives indicates that this is the biggest single factor in HGSFs (section 4.6.1) . If “static firms” changed the mindset by which they operate then there is a good chance that the dynamics of growth will change positively for the firm. This seems a very simplistic view but it is consistent with extant findings (Block et al., 2015; Desai, 2017; MacKenzie et al., 2016).

5.5.1 Moving from being a “static firm” to a HGSF

The evidence from the case studies provides an insight into what static firms can do to increase their propensity towards high growth. Analysing the empirical evidence from the high growth stories indicate a set of actions that if undertaken could move a “static” firm into a more rapid growth profile. The following is an action list, that stands as a practice contribution of this research. This set of actions would create more of an opportunity for a “static” firm to become a HGSF. The list would create an environment for BSTEs to be recognized and acted upon, through luck, randomness or more than likely serendipity:

1. Develop a Growth Mindset; A Commitment to growth (this is a fundamental prerequisite for high growth).
 - **Action 1:** commit to ambitious growth targets.
2. Develop Absorptive Capacity (Build Broad Management Capabilities) (**ACD1**).
 - **Action 1:** expand the decision-making team (replacing people not fit for purpose) with skills and capabilities to grow the firm.
 - **Action 2:** formulate a people development plan synchronised to growth opportunities.
 - **Action 3:** establish Board of Directors with Non-executives with necessary experience and connections.
3. Identify and Communicate what the firm is good at and why it is better at than its competitors. (**ACD2**)
 - **Action 1:** develop a way of communicating the firms unique selling points (competitive strengths) to customers. Align this to systems and processes and absorptive capacity
 - **Action 2:** get buy-in from people within the firm for these competitive strengths and ensure vision alignment.
4. Identify what the business does and what it delivers to customers (core competence).

(ACD3)

- **Action 1:** identify and communicate to stakeholders “what business you are in” and “stick to the knitting”.
- **Action 2:** create a clear strategy for growth. Knowing “what business you are in” is a fundamental aspect of enabling the firm to develop a clear strategy that people can buy into.

5. Internationalise the business. (ACD3).

- **Action 1:** explore and investigate potential foreign markets. Understanding the selling and buying processes within these markets
- **Action 2:** visit the market through trade shows or contacts and establish informal networks
- **Action 3:** develop and implement a plan for international growth.

6. Establish formal processes and systems and Information Technology Strategy (ACD4).

- **Action 1:** identify processes to be standardised and invest in support technology including IT and train personnel accordingly. Company growth will mean constant monitoring and co-ordination of formal systems and processes
- **Action 2:** put formal systems in place, delegate responsibility and accountability for monitoring and refinement.

7. Identify innovation opportunities (ACD5).

- **Action 1:** Review existing products and processes for potential innovations
- **Action 2:** Create internal (external if necessary) innovation team

8. Create or join Networks and build customer and supplier collaborations (ACD6).

- **Action 1:** seek out networks, talk to peers about networks. Go to events. Don't be bashful.
- **Action 2:** create strategic responsibility for customer and supplier collaborations
-

5.6 Policy Framework suggested by the research.

“The North East needs to maximize the potential of fast-growing businesses that deliver higher levels of growth and employment and secure stronger trade and investment flows. It's estimated that if the North East had 25% more high growth small businesses in 2014, this would have created 2,786 additional jobs and £130 million in additional GVA” (NELEP, 2017, p. 32).

The policy framework suggestions tie in with the aim and objectives of the research (section 1.1). It is the case that “policymakers and researchers still remain uncritically impressed by successful firms and entrepreneurs” (Nightingale & Coad, 2014). The formulated policies tend to be intuitive as opposed to being data driven. What this thesis does is provide empirical evidence that BSTEs create opportunities for high growth but in terms of policy initiatives the focus should be upon the critical areas of actions required post the BSTE. The evidence suggests that there is very little specifically offered in policy terms to support HGSFs to achieve the target implied within the NELEP statement quoted above - “dedicated initiatives with an explicit focus on high growth entrepreneurship remain surprisingly rare” (Autio, Bosma, Jones, & Levie, 2007, p. 74). The main reason offered for this is that HGSFs are difficult to identify. This is because the growth patterns tend to be idiosyncratic. Also the public data on firms lacks the detail to allow pinpointing of HGSFs or potential HGSFs (Dwyer & Kotey, 2015). It has been argued “that the lack of empirical evidence on the characteristics of HGFs has led to inappropriately targeted forms of policy intervention” (Mason & Brown, 2013, p. 217).

Most of the current policies that have been adopted are clones of the “start-up” policies implemented by many national and regional agencies. They tend to address what has been termed “six main problems perceived by rapidly growing firms: recruitment, skills shortages, obtaining finance, cash flow, management skills and finding suitable premises” (Lee, 2014, p. 183). These policies fall, very much, into the “pragmatic domain” areas. As Lee (2014) points out most HGSFs have solved these problems for themselves. This was very much the evidence in this thesis. The view of the researchers is that policies should be focused upon the areas of absorptive capacity generally and more specifically on the “dynamic domain” and “growth domain” areas.

Policies that assist in the development of the entrepreneur founder could have a major effect on the HGSF. It has been indicated that “the more knowledge this individual has about the areas of his or her firm, the greater the likelihood that better, more informed decisions will be made in those areas” (Street, Gallupe, & Baker, 2017, p. 575). However, as has been pointed out, “as a result, high-performance firms, by any metric, may indicate structural features of the economy rather than exceptional ability” (Coad et al., 2014, p. 5). The debate around appropriate policies their timing and their focus goes on (Stam, 2015). The policies adopted to address regional disparities and their link to HGSFs have been discussed in Chapter 1. The

general debate around the appropriate nature of support policies have been highlighted in Chapter 2. The key issue being the mismatch between the requirements of the HGSFs and the policies offered (section 2.10).

A fundamental question to ask is whether there should be any policy intervention at all? Most HGSFs do without any public support, only one of the case studies used publicly available support for innovation and internationalization. Four out of five of the case study founders did not know what, if any, support was available and the areas it was available in. They went out and solved their own growth issues – “the view of support as a paternalistic notion relating to SMEs being disadvantaged or somehow inferior was also challenged” (Gibb, 2000, p. 19). On the basis that a focus on one policy area means that another area is neglected then the allocation of public resources to support an area of business needs to be carefully thought through. Most policy is motivated from two perspectives: political perception, politicians need to be seen to be doing something and market failure which impacts on the firms’ ability to command the appropriate resources for growth (Autio & Heikki, 2016). As pointed out in chapter 2, if a firm’s growth is random then the entrepreneur cannot influence the outcomes, particularly the case for start-up firms. This then means that the policy for encouraging growth becomes redundant and that a great deal of the “scholarly literature is of limited value” (Derbyshire et al., 2013). This is a rather pessimistic perception and is not borne out by this research (Dennis, 2011).

The HGSFs would relish the prospect of being able to grow even quicker than they have and would be more than willing to accept support if even more rapid growth was the result. Most had created their own support network either through customers, suppliers or become involved in formal networks. The issue related to policy effectiveness is recognising and engaging with the appropriate firms. A common “complaint” from NELEP is that they struggle to engage with HGSFs or potential HGSFs. This is likely to result from the fact that entrepreneurs only really value interventions or support from their peers (Gibb, 2000) Their learning process is by doing and acting and when necessary they go and seek support from people they “trust” (Gibb, 2000).

5.7 Policy Suggestions

The aim of the research establishes the importance of HGSFs in the context of addressing the regional disparities experienced by slow growth regions such as the North East of England.” In this context it is important to recognize the important role that policymakers have and the contribution they can make in the development of HGSFs. The policies to support HGSFS should be data and evidence driven (Van Cauwenberge et al., 2016). The overall approach to policymaking that is evident within this research is that it should be focused upon developing the absorptive capacity of the HGSFs (Brown & Mawson, 2015) (section 4.4.1). The traditional support and policy approach has been very much focused upon the “pragmatic domain”, as previously pointed out, entrepreneurs tend to solve these issues for themselves. The following support and policy suggestions are stimulated by the experience of the HGSF case studies. They cover two key domains identified within figure of the dynamic and progressive domains, these domains incorporate the actions and decisions that are most focused upon growth. Each of the policy suggestions falls within one or more absorptive capacity domains.

1.Account Management (ACD1): It has been suggested that “effective ongoing communication with the SME is the key to gaining insight into the enterprise itself, yet communicating with SMEs on an on-going interactive basis is still something that seems to be done badly” (Gibb, 2000, p. 26). As the databases providing firm information and their accessibility develop and improve in tandem with this there is a need to develop and improve the quality of the conversation and dialogue with HGSFs. The “policies” offered to support and facilitate growth need to be more targeted, responsive and provide a greater return on time and financial investment to gain credibility with HGSFs. A practical suggestion that springs from the study and the literature is the provision of a regional infrastructure of well-trained credible people who can liaise with and get to know the cohort of HGSFs and nascent HGSFs (Brown & Mawson, 2015). The primary goal of this infrastructure would be to stay in touch with the HGSFs. What came across strongly within this research was the desire for the entrepreneurs’ to be recognised for the contribution that they were making to the region; they wanted to be loved! (section 4.5.3).

2. Sales, Marketing and Customer Engagement (ACD2): very little in the way of support is offered to facilitate the development of sales and marketing capabilities applicable to

HGSFs, particularly sales techniques (Terho, Eggert, Haas, & Ulaga, 2015). There was evidence that finding people with appropriate sales skills was a particular issue. As a country and as a region there is not a tradition of developing people with sales skills, we let it occur as a process of happenstance. There is an embarrassment with the sales process, we do not like to sell and we do not like to be sold to. As a “technology” it is a very under resourced area. Local colleges and universities should be offering high level courses in “selling” both at executive and degree level. As a region, we could develop world class technologies related to sales growth, which is at the very strategic heart of HGSFs. These programs should be company specific and regionally “economy wide” (Mason & Brown, 2013). It was highlighted by each case study that a strong emphasis was placed on sales and marketing (section 4.5.2). There is a distinct lack of support in this area, there are no policy supports dealing directly with sales in the region (NELEP, 2017). To maintain growth in a HGSF, which extant research suggests ultimately falls back to the industry average, the sales capacity of firms is extremely important because “high growth firms are sales-oriented rather than innovation oriented” (O’Regan, Ghobadian, & Galleary, 2006, p. 39).

3. Internationallisation (ACD3): One of the HGSFs in the study had established a very strong international presence (Case Study C), three others declared aspirations to “go international”. They were following the “Uppsala Model” – an incremental approach to entering their identified international markets all in the first instance the creation of influential informal networks – “insidership in relevant networks becomes necessary for successful internationalization” (Dominguez & Mayrhofer, 2017, p. 2). The one HGSF established internationally had benefited from very small support grants to do market investigation and to travel to two trade shows, provided by UKTI. This allowed them to develop informal networks before they formally entered the foreign market. This approach was transformative for the firm, that market now accounts for nearly 50% of their sales. Because of the increase in confidence by their success it has encouraged them to enter a second foreign market, in which sales are now significantly growing. This has been seen as a way of spreading the trading risk. They now package their product in four languages in anticipation of further international growth. Mason and Brown (2013) supported this “small assistance” approach – “Relatively small amounts of assistance in these areas often enabled firms to make a quantum leap forward” (Mason & Brown, 2013, p. 219). UKTI supports trade missions but little is known about the other investigative services that they offer,

although it can be relatively expensive. One practical aspect that could be developed is what the researcher calls “piggy back” distribution. Local agencies could identify international distribution networks already established by larger firms within the region and smaller firms could use these market pipelines to distribute synergistic products.

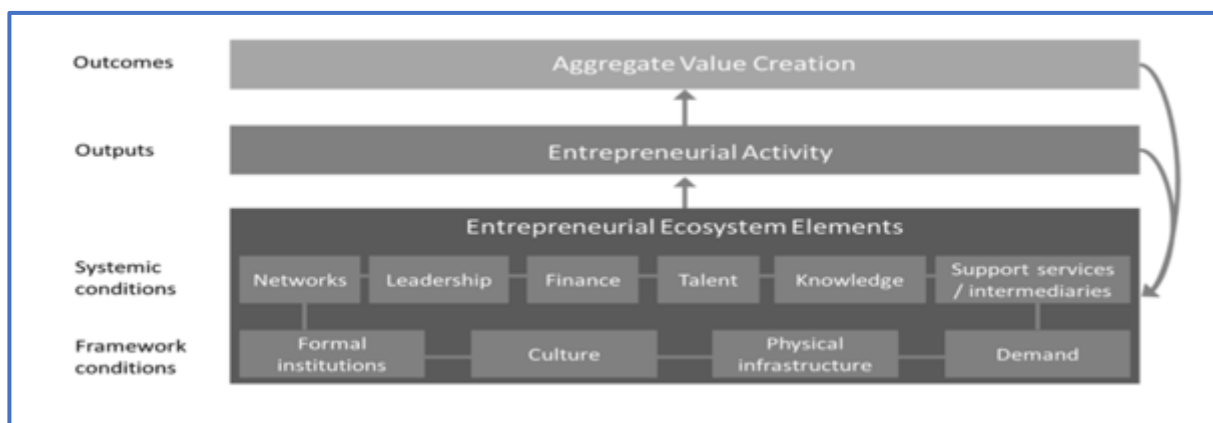
4. Leadership development (ACD1 and 3): Policy and support geared towards leadership development can be supported by but should not be academically nor consultancy led. It should be “peer led” this approach has much more credibility. Leadership capability was very strong in the HGSFs studied. Each of the founders had a clear vision for their business and an ability to implement against that vision. The entrepreneurs behaved differently to typical managers (Andersson & Tell, 2009). They were opportunity seekers, as evidenced through their reaction to the BSTEs that affected their growth horizons. Each participant saw the need to develop their leadership skills. They tended to do this through networking and mentoring peer to peer as opposed to formal courses or programs. It proved very difficult for the entrepreneurs to justify the “time out” to attend “courses”. One of the entrepreneurs was participating in the Goldman Sachs 10,000 program, a series of events involving HGFs with the aim of bringing businesses that are experiencing issues related to rapid growth. The experience has been very positive. It is effectively a series of peer to peer network events. Although there is little data to support its success it has had very positive feedback (Goldman, 2014). It would be worth developing this program at a regional level – “the importance of peer support suggests that much greater consideration should be given to network-based forms of assistance whereby entrepreneurs can utilise the experience of successful entrepreneurs to be informed, motivated educated, inspired and supported” (Mason & Brown, 2013, p. 219).

Forming a Board of Directors has been deemed to be a good way of developing absorptive capacity, particularly for younger firms (Zahra & George, 2002). Four of the case studies (A, B, C and E) had recently or were in the process of forming Boards of Directors, they perceived this to be a way of involving experienced people who could provide strategic challenge and advice and guidance. This formation of a Board was seen as an effective way of gaining credible peer support (Mason & Brown, 2013). It also has the added benefit of being perceived positively by prospective external investors (YouGov, 2015). Involving serial entrepreneurs as mentors and Directors is supported by evidence (Bryan, Tilcsik, & Zhu, 2017). In the context of supporting HGSFs – “serial entrepreneurs are able to bring

knowledge and resources (notably personal finance) to their new business, and their track record and associated credibility enable them to more easily attract external funding, customers and other resources” (Mason & Brown, 2013, p. 220).

5. Develop a modified Entrepreneurial Ecosystem (EE) (ACD2,3,5 and 6): The current debate around addressing regional disparities focuses upon the concept of the creation of a localised Entrepreneurial Ecosystems, discusses and defined in Chapter 2, section 2.10. The idea of an EE is to create the local conditions for entrepreneurship to thrive and that it is a “bottom-up process” for creating these conditions (Isenberg, 2014). There has, rightly, been criticism of the approach - “Seductive though the entrepreneurial ecosystem concept is, there is much about it that is problematic, and the rush to employ the entrepreneurial ecosystem approach has run ahead of answering many fundamental conceptual, theoretical and empirical questions” (Stam, 2015, p. 4). Evidence from the case studies suggests that a modified approach to EE creation could be beneficial to the region (section 4.5.6). Figure 49 represents a model developed outlining the important systemic conditions of an EE. There are elements within the model that could be adopted from a policy framework perspective: networks of entrepreneurs, leadership, finance, talent, knowledge, and support services. These elements capture what has been discussed above but puts it into a framework. The leadership of entrepreneurs in the process is important – “This involves a set of 'visible' entrepreneurial leaders who are committed to the region.” (Stam, 2015, p. 9).

Figure 49: Key elements, outputs and outcomes of the Entrepreneurial Ecosystem



Source: (Stam, 2015)

Importantly what is considered critical within the EE debate is the notion of shifting policy “from quantity to the quality of entrepreneurship” (Stam, 2015), recognising that only a few entrepreneurs create most of the economic value, jobs and wealth within a region. It has been suggested that “in regions with a poor entrepreneurial ecosystem, policy makers may foster regional performance by re-directing resources to promote entrepreneurship high in innovativeness” (Szerb, Lafuente, Horváth, & Páger, 2017, p. 23).

6. Capital Funding and Cash Flow (ACD3 and 4): What the research evidence established was that capital funding at the outset of the business formation was not a major issue for the HGSFs (section 4.6.2). It was anticipated that it would become a bigger issue in the future as these firms move from being HGSFs to being high growth large firms. An area that proved to be unexplored was the idea of a stock market listings. The Alternative Investment Market (AIM) is a stock market vehicle run by the London Stock Exchange (LSE) for firms that want to raise multi-millions in capital and investment. In the North East, there are currently 16 firms listed on AIM. This represents less than 0.4% of the total companies on AIM (3500) compared to over 2% of the national stock of total registered limited companies. This is an indication of the low aspiration of the regions entrepreneurs and a lack of tradition in taking companies to capital markets. AIM has established an “Elite” program. The 18-month program brings together management teams from regional businesses that are considered just under the size typically associated with a flotation and works with them to develop strategies for an Initial Public Offering (Floatation).

The LSE has also launched a market called the High Growth Segment – this caters for the next high-tech stars. What was evident within the research was that little was known about capital markets and the opportunities they presented to raise significant amounts of investment. The regional policymakers need to liaise more effectively with large capital markets based in London and New York. Policy-makers “need to promote the Stock Market listings as a logical step for at least the top performing HGFs.” (Mason & Brown, 2013, p. 221). Although capital funding initially was not an issue for the HGSFs cash flow was critical issue. Each of the case studies was aware of the “Death Valley” nature of growth. Each of the case studies was exceptionally carefully managed in relation to cash flow as this was the main source of growth funding (section 4.6.2). Local support initiatives focused on cash flow

and involving peer lending, banks and support agencies could have a major positive impact in this area.

7. Innovation (ACD5): The findings established that HGSFs tend to be innovative both in product and process (section 4.5.5). The HGSF case studies had an appetite for differentiation and working closely with their customers. This appetite could lead to the creation of market pull innovation. The idea of offering cash support to HGSFs to work in collaboration with larger customers to develop innovative products and processes. This is currently, to a degree, on offer in the service sector but not in the manufacturing sector. Increasingly sponsored opportunities are being offered to small technology firms by larger firms to create “disruptive” software and online products. This is particularly prevalent in the Fintech sector. This could be further facilitated by “innovation networks”. Productivity improvement is a key driver for innovation and an opportunity exists for the creation of an innovation ecosystem - “Innovation policy is not just about funding R&D but creating systems which allow new knowledge to diffuse across an economy and create transformative change, including increases in productivity” (Mazzucato, 2017, p. 17). Although a number of innovation programs exist such as KTP, Sparktask, and Innovate UK there is little in the way of “down and dirty” support focused directly on working with HGSFs using “lean” processes. A practical support initiative would be the creation of “Innovation Surgeries” allowing universities, expert panels, students, etc. to come together with firms to establish, design and prototype innovative ideas for their products. These surgeries need to be quick and practical. More work needs to be done in communicating what is available around knowledge transfers, tax incentives and patenting, these activities could be supported by the “local advisory network (Account Managers).

5.7.1 General Comment on policy

It has been argued that given the economic importance of HGSFs that policy should be adjusted to focus on them away from support for start-ups (Shane, 2009a). The counter argument is that there is a need to maintain a “pipeline” of firms in order to ensure that HGSFs come into existence and that competition between new firms strengthens the prospects of nascent HGSFs (Derbyshire, 2012). So it is argued that the shift in support from start-ups to HGSFs would be “self-defeating” (Derbyshire, 2012). What this research indicates is that there is a need for re-balancing of policy and support in favour of HGSFs.

There is also a need for policymakers to become more aware of data particularly around the bias of support related to certain sectors, age and size of firms (Brick, Chen, Hsieh, & Lee, 2016; Coad, Daunfeldt, et al., 2017; Gulati & DeSantola, 2017). Another important consideration in this research, in establishing the link between BSTEs and rapid growth, indicates that because a BSTE can occur at any time in the firms history then support should be responsive to these “temporal episodes” (Brown & Mawson, 2015). It is difficult to identify firms going through rapid growth or nascent HGSFs. The evidence from this research points the way to how this could be done.

5.8 Identification of existing and potential HGSFs

It is commonly recognised that little is known about where HGSFs come from or what they were before they became HGSFs (Audretsch, 2012). This does not mean that some effort should not be made to identify existing or prospective HGSFs. The empirical evidence from this research indicates that it is possible to establish the existence of a HGSF or probably more importantly in support terms, the propensity a firm has for becoming a HGSF. These benchmark matrices may not necessarily allow the “picking of winners” but it should allow the “weeding out of losers” (Derbyshire, 2012). Where there is the biggest “bang for bucks” in addressing regional disparities?

Based on this study’s evidence the following propensity benchmarks could be used:

- The firm’s innovation capacity. (All five case studies: section 4.5.5))
- Personal characteristics of the founder. (All five case studies: section 4.6.1)
- Access to financial Resources: Business Debt. (Case studies D and E: section 4.6.2)
- Decision Making: Adapting quickly to changing situations. (Case studies B and C: section 4.5.4)
- Growth Mindset and Motivation. (All five case studies; section 4.6.1)
- Closeness to customers. (All five case studies: section 4.5.2)
- Structure, systems and values. (Case studies, B, C, D and E: section 4.5.4)
- Experience of the market. (All five case studies: section 4.5.2)
- International focus. (Case study C: section 4.5.2)
- Delegation or willing to delegate. (All five case studies: section 4.5.1)
 - Flat Organisational Structure.
 - Distribution of decisional power.

- Responsibility delegated to lower levels of hierarchy.
- Involvement in Networks or Mentoring: (Case studies, B, C, D and E: section 4.5.6)

Formulated questionnaires based upon the above propensities could be used to test for HGSFs. Allowing respondents to score against the benchmarks. This could then be followed up using the idea of local Account Managers to liaise with respondents and “support” firms in their quest for managing rapid growth. Recognising the resistance to anything other than peer mentoring the approach would take time and resource to build credibility. A great deal could be debated about the suggested benchmarks. This concept is an area that needs further research to test the efficacy of the approach. These benchmarks could also be used as “training” topics for Account Managers, a potential support initiative.

5.9 Limitations and Reflections on this research

Alvesson, et al (2008) considered a classification of reflexivities rather than reflexivity. The work suggested that these reflexivities were about practices, thus emphasising the process nature of reflexivity. Four types of reflexivities were identified as outlined in Figure 50, the researcher used these exercises as a way of reflecting upon the study and the research process. Although this figure does not do justice to the detail of each type of reflexivity it gives a flavour of each element and the potential impact on the findings and the analysis.

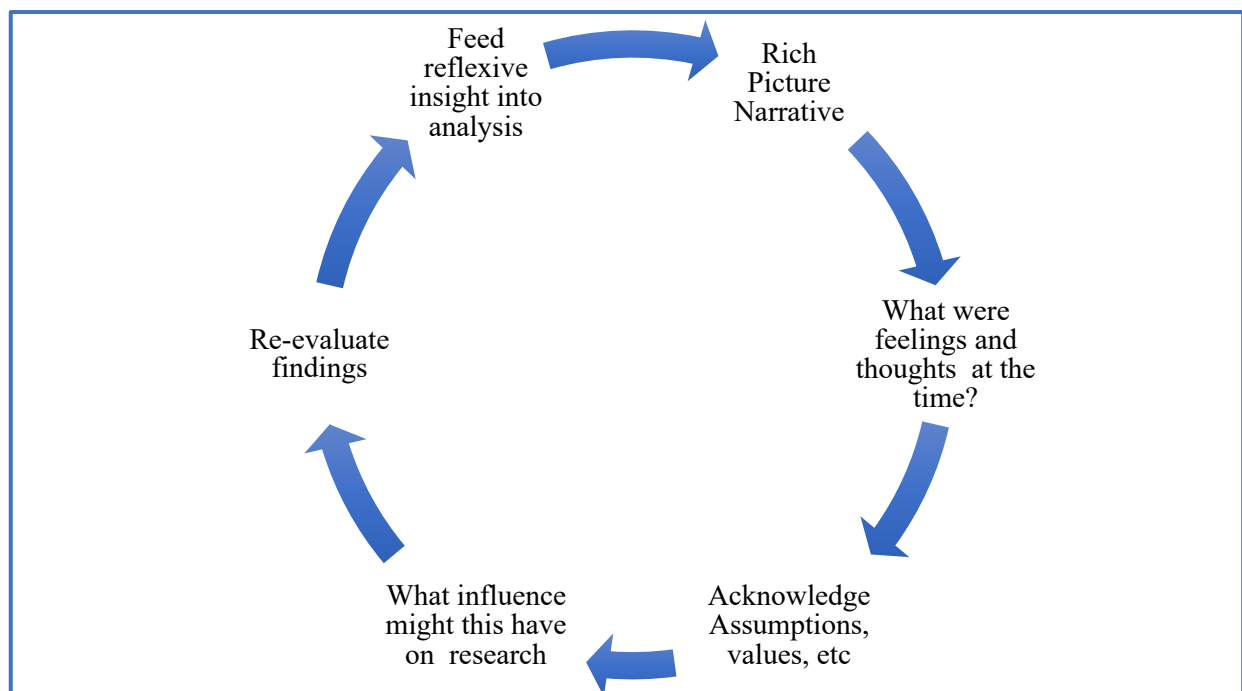
Figure 50: Four exercises in Reflexivity

Reflexivity as Multi-Perspective Practices	<ul style="list-style-type: none"> • researcher used a set of practices and perspectives to gain insight and to draw attention to the limitations of the research process.
Reflexivity as Multi-Voices Practices	<ul style="list-style-type: none"> • the researcher asked questions about the relationship between the author and the subject and to consider whether the research was authentic and how this could be reflected within the thesis.
Reflexivity as a Positioning Practices	<ul style="list-style-type: none"> • the researcher explored the broader social landscape within which research was positioned and how interpretations were being formed.
Reflexivity as Destabilising Practices	<ul style="list-style-type: none"> • as a thoughtful response the researcher is willing to be disruptive, willing to unsettle the status quo.

Source: (Alvesson & Skoldberg, 2009)

Through the process of analysis, it was found that there was a commonality of and approach to the consequent actions. The single frame of reference was how BSTEs stimulate HGSFs. These MP practices helped in reflecting on the different ways that a “phenomenon can be understood and how they produce additional or different knowledge” (Alvesson et al., 2008, p. 483). Reflexivity is considered here to be “inherently connected to action and as a part of the sense-making process in which both participants and the researcher are engaged” (Colombo, 2003, p. 1). The authenticity of the research was reflected in the open and honest relationship between the interviewer and the interviewees. This was helped by the experience and reputation of the interviewer. The common element of the process of gathering the data was the entrepreneurial connection evident between interviewer and interviewee. Reflexivity is considered to be an attitude (Cohen & Crabtree, 2006). This idea of attitude emphasises the dynamic nature of reflexivity, as shown by Figure 51 which represents the ongoing reflective nature of the researcher. There was a constant awareness of the thoughts and actions inherent within the process of data gathering and analysis. There was also an acute awareness of the consequent bias and subjectivity brought to the process (Roller, 2016). The concept of what was personally brought to the study was not necessarily negative but rather brought a rich perspective to understanding complex phenomena.

Figure 51: Reflexive Attitude Wheel



Derived From: (Wilkie, 2016)

There were a number of possible limitations within the research. There is a lack of research dedicated to the process of growth this could be because researchers are frightened by the topic as it would involve some experience of running a business. The methods used to collect the data were by their nature “messy”. They depended upon memory to capture the narratives and it counted on the veracity of those participating. There was always going to be an element of bias through selective memory, exaggeration and attribution. Fortunately for the interviewer access to participants was not an issue and the process of data gathering was done in a very empathetic way creating an atmosphere of honest disclosure.

It has been suggested that in any research “serendipity is the interactive outcome of unique and contingent mixes of insight coupled with chance. The unexpected similarity or dissimilarity may provoke an *ah-ha!* response” (Fine & Deegan, 1996, p. 8). This was the experience in analysing the growth narratives discovering the similarity of the decision making and actions within the context of absorptive capacity. Also, the ease with which the BSTEs were disclosed and were obvious in their force. Another category was that “the researcher may discover a dramatic metaphor or narrative strategy that permits him or her to conceptualize and present the problem in a novel light.” (Fine & Deegan, 1996, p. 8). This was the case in developing the models used for analysis of the data and the way that the growth narratives identified the action domains. During the analysis process there was an awareness, because of previous entrepreneurial experience, of the potential for “confirmation bias” (Taleb, 2007).

5.10 Conclusion

This study, in the context of the research aims and objectives (section 1.1) considers the triggers that induce rapid growth in small firms. The research has established the part that BSTEs play in the growth process of HGSFs. The research indicates that BSTEs are the stimulants and when combined with the development of elements of absorptive capacity lead to rapid growth for small firms. The research explored the BSTEs by encapsulating the narrative growth stories of five identified representative HGSFs. This growth narrative was captured using rich pictures and then analysed using content analysis and causal mapping. Although BSTEs are the stimulants for growth when they were combined with the entrepreneurs’ growth mindset, innovation and opportunism they had the most effective impact on rapid growth.

The introductory chapter identified the various aspects of the economic and commercial regional disparities experienced in the North East of England. It also considered the connection between addressing those disparities and HGSFs, indicating that the fundamental ways of addressing regional disparities through, productivity, innovation enterprise and entrepreneurship were strongly evident in the HGSFs. The thesis points the way for supporting HGSFs by recognising that BSTEs occur and their incidence results in the development of knowledge and learning within the firm to accommodate the opportunities presented. Does the incidence of BSTEs mean that rapid growth is random? The research evidence indicates that this is likely to be the case, particularly in small firms. What is not suggested by the study is that growth, per se, is solely random. As indicated in the literature review, the definitions of growth can influence perceptions of success and positive performance in the context of high growth. The firms studied operated in dynamic environments where unpredictable opportunities were increasingly prevalent and numerous. Decisions were made as to which opportunities to exploit and what resources to allocate to those opportunities.

There has been developed a “new pattern of serendipity” termed Entrepreneurial Serendipity. This “occurs where explored opportunity is unspecified and entrepreneur's knowledge (about that opportunity) is high or low, and search could be either haphazard or orderly” (Mirvahedi, 2014, p. ix). BSTEs as a consequence of luck, randomness or serendipity although pivotal to rapid growth are not enough of themselves to ensure successful profitable growth. There is the need for the entrepreneurs to have the skills and abilities to take advantage of the BSTEs. The entrepreneurs applied distinctive effectuation reasoning (Read, Sarasvathy, Dew, & Wiltbank, 2016). This was their way of thinking in relation to the process of identifying opportunities and making decisions; “to effectuate is to engage in a specific type of entrepreneurial action. It has special importance for situations where the future is truly unknowable or human agency is of primary importance (Sarasvathy, 2009, p. 21). The initial stages of rapid growth involved a high level of effectuation as opposed to causative responses but firms in developing; formal systems, delegation, operational practices and “procedurising” become more causative over time (Sarasvathy, 2009). The key is to maintain the balance between the entrepreneurial response and the organisational procedures in order to sustain rapid growth.

The research evidence indicates that without the incidence of the BSTEs would not have been as successful in their rapid growth. It is more than possible that these firms would probably have done well without the impact of BSTEs but their growth paths would in no way be as rapid. The timing of the incidence of the BSTEs was interesting. It seems that the case studies experienced most of these events in their formation or early years. What cannot be underestimated is the whole energy that firms experience in their early years, the energy and excitement coupled with a strong sense of optimism, failure is not an option at this stage. What this leads to is an openness to BSTEs, whilst this openness lasts then the foundations for increasing growth occurs. The entrepreneurs are not thinking about exits they are not thinking about preservation of what has already been created. This momentum needs to be encouraged by policymakers. All too often in the NE firms are bought out or taken over or sold at the very point where there growth could potentially exponential.

The impact on the region of the HGSFs within the research is evidence of how profitable HGSFs can have a large impact on the economy of the North East. The growth of any firm is a collaborative process (Adonis, 2011) and needs the cooperation and support of its regional commercial community. The firm needs to be flexible to emerging opportunities, it needs to encourage innovation and most importantly be imaginative in its approach and responses (Bartram, 2015; Gibb, 2000). As suggested earlier in the chapter, there is a need to further study and understand how firm growth and their determinants can be supported (Gupta et al., 2013). More specifically, the study of BSTEs and their impact on small firms will be the first step in helping HGSFs and potential HGSFs navigate the transition post these BSTEs. There is a distinct lack of entrepreneurial businesses that exhibit potential for achieving profitable HGSF status, based in the NE (Martin, 2013). HGSFs are capable of creating private sector jobs and increasing economic activity levels (Adonis, 2013; Mason & Brown, 2013). Understanding their process of growth of HGSFs and the actions required to take advantage of the opportunities presented is an important step in increasing the number of HGSFs. The growth prospects of the region could, potentially, be addressed by increasing the number of HGSFs (Mason, G. et al., 2009; Octopus, 2015).

*Taleb says: "We are quick to forget that just being alive is an extraordinary piece of good luck,
a remote event, a chance occurrence of monstrous proportions.
Remember that you are a Black Swan."*

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Appendices

Appendix A

Timeline and analysis of Case Study BSTEs

Case Study Firm A: Summary Business Growth Story:

2000: Consultancy based in London had worked with Technical Director (Unpredictable event)

- Good client base
- Using North East IT skills. Work quicker and cheaper

2005: Moved back to North East to establish consultancy business.

- Saw opportunity
- Still London Client base

2006: Launched firm.

- Introduced a business model to “never lose a client”.
- Quickly grew local client base.
- Market growth in the North East (Unpredictable event)

2006: First premises Gateshead:

- First year turnover: £1.1 million
- Capture key customers (Unpredictable event)

2008: Moved to South Shields: eventually outgrew this.

- Continued to growth
- Small acquisition (C)
- Sales 80% North East; 20% National.

2012: Renovated and moved to listed building. (Unpredictable event)

- Created Data Centre.
- Sales £4 million

2013: Investments in Buildings and Data Centre

- Acquisition of small telephony company. (Unpredictable event)
- As a result of acquisition hired sales team (Unpredictable event)
- Sales £6 million
- 30 people

2014: Increased team

- Sales hit £8.5 million

2016: Building Data Centre

- Sales £12.5

-
- 2017: 130 People
- 400 customers
- Sales £14 million

Case Study A: Analysis of BSTEs.

Within the narrative of Aspire seven unpredictable events were identified that were important to the rapid growth profile of the business. These fell into a number of categories

Date	BSTE	Nature of Unpredictability	Positive or Negative	Typography	Absorptive Capacity Designation	Column1
2002	Met Technical Director	Random	Positive	Exogenous	People	Future Business Partner
2006	Formed Firm	Serendipity	Positive	Endogenous	Strategy	Growth Firm
2006	Increase in IT interest in North East	Luck	Positive	Exogenous	Market	Potential Growth into Expanding Market
2006	Capture Key Customer	Luck	Positive	Endogenous	Market	Established Credibility
2012	Identified Heworth Hall	Serendipity	Positive	Co-Determined	Property/ Resources	Growth Mindset
2013	Acquisition of E	Random	Positive	Exogenous	Strategy/ Operational	Growth into new product area
2013	Acquire Sales Team	Serendipity	Positive	Endogenous	People/ Market	Sales growth
2014	Develop New Product Range	Serendipity	Positive	Co-Determined	Innovation	Sales growth

The causal map of each case study is given showing within the time context with a temporal table of BSTEs, the typography of the BSTEs, the relevant connections to the adapted absorptive capacity model and the consequence of actions and decisions.

Case Study Firm B: Summary Business Growth Story

2003: business started to decline from £4 million.

- Manufacturers move to China (Unpredictable Event)
 - 3M open business to other customers (Unpredictable Event)
- 2008: Son takes over management of the business (Unpredictable Event)
- downsizes business
 - Move into whole supply model.
 - Conversation with buyer at a large tape customer led to taking over stock and warehousing of all consumable supplies (Unpredictable event)
 - Decided this could be replicated in the North East. No such business in the NE. (Unpredictable event)
 - Change of Banks
- 2010: Lost £1m of business by large customer going into administration (Unpredictable Event).
- Sales hit £2.6m
 - Downsize business further to 18 employees
- 2011: Business moves into full procurement supplier of consumables
- Hit a trend for outsourcing (Unpredictable Event)
 - Went through learning curve: range of products, order frequency, running business.
 - Establishes more customers
 - Restructure business in line with new venture
- 2012: Developed Premises (warehouse)
- 2013: Continue to grow looking for ways to establish USB
- 2014: Approached supply chain technology business (P) to acquire them turned down. (Unpredictable Event)
- (P) went into administration reformed as (E). (Unpredictable Event)
 - Started to supply (E)
 - Conversation with Investor/Director: agreed to buy them. (Unpredictable Event).
 - Took in key people: Business Development, Technical team, etc
- 2014: Incorporated Software Business
- the management and supply of inventory through highly innovative technologies and software systems.
 - provides a number of systems including radio frequency identification technology (RFID) and industrial vending machines to control stock throughout any facility.
 - The benefits for customers include greater control of strategic parts, removal of NVA activities and on-going cost down delivery.
 - offers bespoke e-catalogues and software systems to simplify direct MRO/OEM purchasing through bespoke software.
 - Sales hit £3m
- 2015: Developed business further: (E) team recognised by large manufacturer which became customer (Unpredictable Event)
- Mentors sort
 - Sales £5 million
- 2016: Business Organisation structure put in place
- Finance Director appointed
 - Board of Directors established

- Sales £9 million

2017: Sales £15 million

General:

- Sales last three years: £5m, £9m, £15m
- Employees last three years: 25,40,50
- 600 customers
- Other things mentioned:
 - People growth between 2014-2017: 12 to 50
 - Take great care in recruitment to ensure cultural fit.
 - Role of mentors
 - Creation of Board of Directors

USB:

- price plus availability of product
- Now value of stock?

Case Study B: Analysis of BSTEs

Date	BSTE	Nature of Unpredictability	Positive or Negative	Typography	Absorptive Capacity Designation	Consequence
2003	Manufacturing move to China	Random	Negative	Exogenous	Market	Business rapid Decline
2003	Major supplier exclusivity lost	Random	Negative	Exogenous	Market	Business rapid Decline
2008	New MD installes	Luck	Positive	Endogenous	People	Strategic Change
2008	Customer conversation consumable supply	Luck	Positive	Endogenous	Strategy/Market	New Direction for Growth
2008	Move into whole supply model	Serendipity	Positive	Co-Determined	Strategy/Market	Validates business model
2010	Large Customer lost	Random	Negative	Endogenous	Market	Sales decline
2011	Hit trend for outsourcing	Luck	Positive	Endogenous	Market	Sales growth
2014	Acquired supply chain technology business	Serendipity	Positive	Exogenous	Innovation/Process	Systems/Process Technology
2015	New Team recognised by large customer	Luck	Positive	Exogenous	Market	Sales Growth
2016	Network and Board of Directors	Serendipity	Positive	Exogenous	People/Networks	Sales Growth

Case Study Firm C: Summary Business Growth Story

2004: Founder organised a 3rd year placement with a local company located close to home.

- Happened to be a small craft company (**Unpredictable event**).
- She was exposed to full channel distribution of small firm: Craft TV, Online, wholesale and retail.
- No aspiration for growth from owner, wanted founder to “tidy up” systems.
- Identified an opportunity to develop “enveloper”: a new product.

2005: Started business in bedroom at University.

- Local supplier manufactured MDF version of “Enveloper”. (**Unpredictable event**)
- Working Capital:
 - credit terms with supplier
 - Patented: “Enveloper”: help from Business Link
 - Business Link helped with funding for: Patents and website.
- Opportunity to present on TV sales channel (**Unpredictable event**):
 - initial order 8000 cut to 1500, fear of being left with 6500.

- Sold 8000 within 24 hours.
- Focused on that product for first year.

2006: Left university:

- Incorporated business
- Located business in block of flats owned by family (Unpredictable event)
- As well as Enveloper Started selling CD Roms with stock images, proved to be very popular. (Unpredictable event)
- Start selling through TV channels
- First year sales: £500k (80% on TV, 20% B2B)
- Second year: £0.9 million Sales (65% on TV, 35% B2B)

2007:

- January: visited Paperworld Show in USA: Supported by UKTI (Unpredictable event)
- July: trip to USA Networking event: CHA: Craft Hobby and Art show; California
 - Decided to launch in USA: through friends met 3rd party logistics company based in Florida (Unpredictable event)
 - Set up USA business as replica to UK business.
 - US Incorporation: CC International LLC
- December: Partner, qualified accountant decides to join the business.

2007:

- A large stationary company brought out a version of the “Enveloper”: patent battle, (Unpredictable Event))
- Developed “Ultimate” (Unpredictable event)
- Launched “Ultimate”

2008:

- Stationary company settles and agrees to stop selling product in the USA
- Partner joins the business. (Unpredictable event)
- Recruited head of Sales and Marketing in USA. Coincidentally met at first show (Paperworld event) (Unpredictable Event)
- Launched “Ultimate Pro”
- Licenced “Flower Fairies” (Unpredictable event)
- Raised funds through sales of “Enveloper” and CD Roms

2010: Offered Beatrix Potter licence by Penguin (Unpredictable event)

2011:

- Ended 3rd party distribution in USA to set up own store and distribution based in Anaheim, California, USA
- Recruit Digital Designer (Unpredictable event)
- Recruited Product developer with Craft background (Unpredictable event)
- Launched new product – Pen Range – shelf product (Unpredictable event)
- Opened warehouse unit to accommodate increase in stock.

2012: Acquired business in USA: stamp manufacturer (Unpredictable event)

- Gained Premises
- Gained staff
- Moved stock from Florida: drop shipper

- To premises in California

2013: Start to sell to shops

- Hired sales team that had worked for Dutch based craft business (Unpredictable event)
- UK Sales grew by £2 million

2014: Recruited 2 Dutch agents.

- Product packaging in four languages
- QVC TV Channel decided to get back into “Craft”. Leveraged this to get better deal with HSN TV Channel

2015: Start to sell to large multiple outlets in USA

- Sell to Michael’s 1200 stores
- Sell to Joanne’s 900 stores
- Board of Directors put in place

2016:

- Moved into New offices and showroom.
- Opened 2 stores,
- introduced new EPOS system,
- New website,
- Recruited additional 40 staff,
- Increased USA business.
- Recruited head of Creative.

General:

- 6 suppliers in Asia.
- \$6 million spend per year in Asia: China, Taiwan and Korea
- 1 Agent, 1 person on retainer: quality; in China
- Rapid growth in Sales in USA, much bigger market.

2017: Sales £20 million: 25% USA/75% UK and Europe

2017: Staff: USA 25, UK 92.

- 80% of business in Papercraft:
- Developing into Art & colouring and Sewing: big markets
- Not “me to” products: focus on Innovation

Case Study C: Analysis of BSTEs

Date	BSTE	Nature of Unpredictability	Positive or Negative	Typography	Absorptive Capacity Designation	Consequence
2004	Founder work placement in local Craft Business	Random	Positive	Exogenous	Strategy/Market	Opportunity/ Business Start
2005	Developed new product	Random	Positive	Endogenous	innovation	Business Model Developed
2005	Opportunity to present product on TV	Luck	Positive	Exogenous	Innovation/Market	Opportunistic
2006	Located business in family owned premises	Luck	Positive	Exogenous	Strategy/Market	Business Growth
2006	Started selling CD Roms	Serendipity	Positive	Co-Determined	Market	Cash Generation/ Sales Growth
2007	Idea from Designer: new product launched	Luck	Positive	Exogenous	innovation	Sales Growth
2007	Large "competitor" launch similar product	Random	Negative	Exogenous	Market	Patent infringement case
2007	Started USA operation	Serendipity	Positive	Exogenous	Strategy/Network	Business Growth/ International
2007	Met 3rd party logistics firm	Random	Positive	Exogenous	Process/Market	Distribution Efficiency
2008	"Competitor" settles claim	Luck	Positive	Exogenous	Market	Market Credibility/Sales growth
2008	Simon joins business skill set in Accountancy	Luck	Positive	Exogenous	People/Process	improved operations and support
2008	Offered Character Licence	Random	Positive	Exogenous	Strategy/Market	Sales Growth/ Cash Generation
2010	Offered Beatrix Potter Licence	Luck	Positive	Exogenous	Strategy/Market	Sales Growth/ Business Credibility
2011	Recruit digital Designer	Serendipity	Positive	Co-Determined	People	Online Sales Increase
2011	Recruit Product Developer	Serendipity	Positive	Exogenous	People/ Innovation	Imports from China
2011	Launched "Pen" Range	Serendipity	Positive	Endogenous	innovation	Shop Sales Increase
2012	Acquired USA stamp business	Random	Positive	Exogenous	Strategy/Market	Business Development in USA
2013	Hired UK sales team (Dutch Firm)	Random	Positive	Exogenous	Market/People	Shop Sales Increase
2014	QVC TV Channel decide to get back into "Craft	Random	Positive	Exogenous	Market	Sales Increase
2015	Formed Board of Directors	Serendipity	Positive	Exogenous	Network/Strategy	Growth

Case Study Firm D: Summary Business Growth Story

Started self Employed Business 1985 (not a limited company): Sole Trader

- Plastic Hand Rail Installer
 - Undertook a Northumbria University Course on Starting up a business
- 1985: Met German Product Supplier (Unpredictable Event)
- Used product from German Supplier
 - Very few installers in the UK
- 1985: First Contract: North East Shipbuilders: North Shields Ferry Contracts. Equivalent to a year's work. (Unpredictable event)
- Improved installation time with experience.
 - Travelled all over UK installing handrails as subcontractor to builders and main contractors
 - Built up a large customer base over the next 15 years
 - A lifestyle business: could work time to suit lifestyle
 - 1 employee
 - Started to think about what customer base could be used for: what other products or services could be provided?
- 1999: Visit to major distribution company based in North West.
- Decided this could be replicated in the North East. No such business in the NE. (Unpredictable event)
- 2000: Met Italian Supplier year 2000. (Unpredictable event)
- Had no funding
- 2000: Italian introduced DC to potential funder. (Unpredictable Event)
- Negotiation undergone to establish firm
 - Work as partner (operation) but not major shareholder.
 - Agreed terms: 1 week from sign off.
 - Decided not to go ahead with the deal because felt evidence of not being in control: Had to get permission to do things.
 - At the time: No debt making salary of circa £50k per year, good lifestyle business.
- 2001: Incorporated DC Iron.
- Italians agreed to supply
 - Agreed O/D (Debt) with bank of £50k.
 - Put up house as security
- 2001: First Premises (warehouse) 1000 square feet rented, rented 3 other small units.
- Started over the counter/ direct delivery business.
 - First order/stock level circa £20k.
 - Initially on proforma invoice terms: as reputation established 30 days then 60 days
 - Certain items moved very quickly.
- 2002: Hit a trend and fashion for wrought iron products (Unpredictable event)
- Went through learning curve: range of products, order frequency, running business.
 - Initially DC and wife plus 1 employee.
- 2003: Then Operations Manager joined the business (Unpredictable event)
- 2003: Early to China:
- Importance of Mentor with experience in industry? (Unpredictable event)
 - set up supply chain.
 - Tried buying consortium but did not work: trust issues.
 - Initially 90% of business within North East. What now??
- 2003/4; New premises 40,000 square feet: way more than needed (Unpredictable event):
- option to buy. Ultimately purchased 2010

- Original business was mainly over the counter or catalogue with local and national customers

2006: Son joins business:

- responsible for systems. Happens to be gifted in this skillset (Unpredictable event)
- Had an aptitude for IT, software and systems
- Took Screwfix as a model
- Internet/Online business established

2009: Advocated: Catalogue with prices.

- previous catalogues had no prices. Consequently, prices indicated/negotiated over the phone; time consuming.
- New catalogue led to 30% growth in sales within one year.
- This meant a subsequent increase in stocking levels
- Introduced “warehouse location system”:
 - Reduced stock movement
 - Reduced reliance on one person knowing where stock was located.
 - More efficient dispatch
- From inception business used Sage accounting system

2011: Introduced “Enterprise system” ERP system: took two years to establish

- Facilitates stock management
- Integrates sales invoices
- Met resistance from other people. Once introduced people recognised the benefits.

2015: Introduced “Khaos” Enterprise System

Inventory, Multi-channel, Ecommerce, Mobile, Accounting, CRM, Orders, Purchasing, EPOS, Shipping, Suppliers, Payment Processing

2016: New product Introduction

- Sales: £3 million

General:

- Sales last three years: £1.2 million, £2.1 million and this year £3.0 million
- Employees last three years: 10, 14, now 22
- Deliver within 50-mile radius, outsource greater distance
- Other Things mentioned:
- People turnover very low
- Take great care in recruitment to ensure cultural fit.
- Role of George as Mentor to Dave Collins
-

USB:

- price plus availability of product
- Now carry £2 million of stock.

Case Study D: Analysis of BSTEs

Date	BSTE	Nature of Unpredictability	Positive or Negative	Typography	Absorptive Capacity Designation	Consequence
1999	Visit Major distributor in North West	Random	Positive	Exogenous	Strategy/Market	Opportunity/Business Start
2000	Met Italian Supplier	Random	Positive	Exogenous	Strategy	Business Model Developed
2000	Introduced to potential Funder	Random	Positive	Exogenous	Strategy	Backing for Business
2000	Decide not to do deal with Funder	Luck	Positive	Endogenous	Strategy	Opportunistic
2002	Hit trend for wrought Iron Products	Luck	Positive	Co-Determined	Market	Sales Growth
2003	Paul joined business	Serendipity	Positive	Endogenous	People	Operations improved
2003	Went Early to China: encouraged by Mentor	Serendipity	Positive	Endogenous	Market/Network	Low Cost Supply Chain Established
2004	Found and Opened new HQ	Serendipity	Positive	Endogenous	Strategy/Market	Market Credibility/Sales growth
2006	Scott joins business skill set in IT	Luck	Positive	Endogenous	Process	Distribution and Sales efficiency
2009	Online Sales model developed	Serendipity	Positive	Endogenous	Market/People/Innovation	Sales Growth
2011	ERP System Introduced	Serendipity	Positive	Endogenous	Process/Innovation	Distribution Efficiency
2016	New Product Introduction	Random	Positive	Co-Determined	innovation	Sales Increase

Case Study Firm E: Summary Business Growth Story

2010: Encouraged to start own business by 5 customers offered backing (**Unpredictable event**)

offered financial backing by 4 customers (**Unpredictable event**)

2011: Started Business:

- Funding from Family (**Unpredictable event**)
- Premises 1500 square feet unit
- Recruited Business Development Director (first Hire) (**Unpredictable Event**)
- Sales: £500K
- Spruce ERP system adopted.
- Started over the counter business
- Initial stock level £20k
- Initially on proforma invoice terms: as reputation established 30 days then 60 days

2012: Durham Depot Opened. (**Unpredictable event**)

- Recruited Depot Manager. (**Unpredictable event**)
- Business Model of shared depot ownership developed. (**Unpredictable event**)

- Identified premises
- Sales:
- 2013: South shields Depot opened
 - Recruit Depot Manager.
 - Shared ownership model
 - Sales: £1 million
- 2014: Larger HQ/Depot
 - Premises 8500 square feet
 - Two depots opened
 - Sales: £2.4 million
- 2015: Supplier relationships established
 - Improved credit terms
 - Product range extended
 - Sales: £6.4 million
- 2016: More depots planned
 - Improved response time with experience.
 - Built up a large custom base over the last 4 years. (Unpredictable event)
 - Extended product range.
 - Introduced Flu gas analyser rental model: rolled out by Plumb Base.
 - Put systems and processes in place
 - Sales: £14.0 million
- 2017: Now 7 Depots.
 - Agreed terms on 4 additional depots.
 - Recruited Business Development Manager Scotland
 - Npower national contract opportunity (Unpredictable event)
 - Sales: £20 million
- General:
 - Sales last three years: £2.4 million, £6.4 million and this year £14.0 million
 - Employees last three years: 10, 14, now 20
 - Other Things mentioned:
 - People turnover very low
 - Take great care in recruitment to ensure cultural fit.
- USB:
 - price plus availability of product
 - Now carry £2 million of stock

Case Study E: Analysis of BSTEs

Date	BSTE	Nature of Unpredictability	Positive or Negative	Typography	Absorptive Capacity Designation	Consequence
2010	Encouraged to Start own business	Random	Positive	Exogenous	Strategy/Market	Opportunity/ Business Start
2011	Funding from Family	Luck	Positive	Exogenous	Strategy	Finance in place
2011	Recruited Business Development Director	Serendipity	Positive	Endogenous	People	Background in Sales
2012	Opened 2nd Depot	Serendipity	Positive	Endogenous	Market	Expansion
2012	Recruited Depot Manager	Serendipity	Positive	Co-Determined	People/Innovation	Validates business model
2013	Opened 3rd Depot with Depot Manager	Serendipity	Positive	Endogenous	Market/Process	Sales decline
2014	Opened HQ	Luck	Positive	Endogenous	Market	Sales growth
2014	New Product Introduction	Serendipity	Positive	Endogenous	Innovation/Process	Product Expansion
2016	Recruited BD Scotland	Serendipity	Positive	Exogenous	Market/People	Sales Growth
2017	GoldmanSachs 10,000	Serendipity	Positive	Exogenous	Strategy/Network	Growth

Appendix B

Process and outcomes of Identifying Potential Case Study Firms

At each step of the process a refined definition and a broadened set of criteria was applied to the data set. This resulted in a decreasing number of firms that met the set boundaries. This process was very detailed and time consuming. It was important to establish that each firm being analysed was being tested by consistent criteria this was to ensure the concurrent validity of the data. It was also considered important that the data being used was based upon the most up to date information. A time criterion was established that the financial information for year t had to be within the previous twelve months and that the accountancy criteria for reporting had been adhered to.

Analysis based upon application of OECD definition

The analysis of the 5 data sources indicates that although over 1157 firms were experiencing quite rapid growth in terms of employment or turnover they had not experienced average growth of 20% per annum over a three-year period from the base year used. The firms had found their way into the 4 sources because these organisations are more interested in growing firms rather than the rate of growth of these firms. Table 4 shows that there were 1157 firms identified by the source data sets, of these 188 met the OECD definition of HGSFs. This represented 16% of the total. The data source with the highest percentage hit rate for the OECD was the fast fifty data set with 46% of its cohort meeting the definition. The analysis through up a number of issues which could cause policy makers to reflect as to the efficacy of using data sources to develop policies to support HGSFs and confirmed the literature review findings about the inconsistency of definition applied to HGSFs (Marchese, 2016; Piazza et al., 2016). Because of loose and various definitions being applied to the firm population it is difficult to identify real HGSFs (Tomenendal & Raffer, 2017).

Table: Number of firms meeting OECD definition

Source of Data	Initial number of firms	No of Firms post OECD definition applied	% Firms within OECD Definition Base Year t
Fast Fifty	50	23	46%
ScaleUp Institute	208	56	27%
Insitely	254	27	11%
Entrepreneurs Forum	222	15	7%
CEBR	424	67	16%
Total	1157	188	16%

Step 2 Criteria: Research Definition of HGSFs

The research definition of HGSFs was applied at this stage. This definition of HGSFs as previously considered, was to establish a clear set of parameters that could be used to benchmark growth companies within the region. As previously explained not all growth small firms are HGSFs. Also within the various definitions used within other extant research a HGSF can grow employment but not sales or it can grow sales but not employment and it can grow both sales and employment but not be profitable. The reasons for this stricter criteria than the OECD criteria was to establish the sustainability of the firm and the positive impact to GVA, employment and productivity to the NELEP region (Daunfeldt et al., 2015). Ongoing profitability is an indicator of sustainability (Brannback et al., 2014). The growth in turnover is an indicator of additionality to GVA (Adonis, 2013; Denicolai et al., 2015) and the growth in employment and productivity are strategic targets for the policy makers both nationally and the region (NELEP, 2017). The definition established the following criteria.

Employment base in year t (2016) meets the following conditions:

- Its number of employees has grown by 72.8% cumulatively in the preceding three years (an annual average growth rate of 20%).
- Had 10 or more employees at the initial year ($t - 3$).

- It was active in the business demography population at every year between $(t - 3)$ and t .
- It was not subjected to any merger or split of their ownership structure during the preceding three years.

Turnover base in year t (2016) meets the following conditions:

- Its turnover at year $t-3$ is between £1 million and £20 million
- Its annual turnover has grown by 72.8% between $t-3$ and t (an annual average growth rate of 20%)

Profit base in year t (2016) meets the following condition:

- It has achieved net profits between $t-3$ to t

Outcomes of Phase 2 Data Analysis

Having identified 188 firms that met the OECD criteria a further analysis was undertaken using the more rigorous research definition outlined in the previous section. This analysis reduced the number of firms from 188 to 27. These firms represented the potential cohort for identifying the case study firms. They represented those firms that could have the most impact on the economy of the North East, they were termed as “Cheetahs”. They were quick and aggressive in their growth and their capture of market share and had good levels of retained profit and positive cash flow. Table 5 shows the analysis outcome of this step.4.

Step 2: Analysis of Step 1 data using research definition.

Table: Outcome post research definition

Source of Data	Number of Firms post OECD Definition	Number of Firms post Research Definition	% Firms within Research Definition in Base year t
Fast Fifty	23	9	39%
ScaleUp Institute	56	0	0%
Insitely	27	14	52%
Entrepreneurs Forum	15	2	13%
CEBR	67	2	3%
Total	188	27	14%

Criteria for choice of potential 5 Case studies

In the context of the research and the link between HGSFs and addressing the regional disparities experienced in the North East compared to the rest of the UK, as explored in the introductory chapter, it was important to identify firms that were indigenous to the North East. Although any HGSFs meeting the refined definition could have been considered it was felt that indigenous firms that had experience high growth were more likely to have dealt with start-up issues faced by firms and were therefore more likely to be representative of the NE firms. The criteria also offered rigour and consistency to the case studies chosen. The experience of the local conditions for growth were a consideration in this approach. Local firms offered proximity and access and the potential for follow up.

Step 3 Expanded Criteria for inclusion into case study cohort

The criteria for inclusion into the cohort was expanded by the inclusion of legal, organisational and geographical elements, this was to ensure that the growth of the case studies was not going to be distorted by public funding and that they had experienced the specific NE economic environment. By meeting the criteria, it ensured that the case studies were valid for further study.

- Meets definition of HGSF
- Private Business: Limited Company
- Entrepreneurially led Business: founder involved in management of the business.
- Management and beneficial ownership are congruent.
- Indigenous to and based in the North East Local Enterprise Partnership Area

Outcome of Step 3 Analysis

The outcome of the Step 3 process was to reduce the number of firms falling within the required criteria from 27 to 19. The firms that were excluded at this step failed to meet the management and beneficial ownership congruency test. The firms were either subsidiaries of a larger organisation or were part of an organisation where the decision making was outside the defined NELEP area. Table 6 shows the results for this part of the process.

Table: Outcome of Step 3 process

Source of Data	Number of Firms post Research Definition	Number of Firms post step 3 Research Definition	% Firms within Research Definition in Base year t
Fast Fifty	9	8	89%
ScaleUp Institute	0	0	0%
Insitely	14	8	57%
Entrepreneurs Forum	2	2	100%
CEBR	2	1	50%
Total	27	19	70%

Criteria for Step 4

The criteria were further expanded for step 4. The purpose of these criteria was to show the growth mindset of each of the potential firms. This was indicated in a review of press articles, inclusion into business awards, etc. One of the criteria was related to confidentiality and the ethics of the research. The interviewer has an extensive background and involvement in local businesses. It was important to ensure that there was no conflict of interest between the interviewer and the potential case studies.

- The public story reflects aspiration for growth.
- Ambitious for further growth.
- Credit worthy.
- Willing to participate.
- Not in conflict with researcher's business interests.

Outcome of Step 4 Analysis

The outcome of the step 4 process was to reduce the number of firms eligible for inclusion into the case study cohort from 19 firms to 17 firms. The two that were excluded failed because of the confidentiality criteria. Table 7 details the results from the Step 4 analysis.

Table: Outcome of Step 4 Analysis

Source of Data	Number of Firms post step 3 Research Definition	Number of Firms post step 4 Research Definition	% Firms within Research Definition In Base year t
Fast Fifty	8	7	87.5%
Scaleup Institute	0	0	0%
Insitely	8	7	87.5%
Entrepreneurs Forum	2	2	100%
CEBR	1	1	100%
Total	19	17	89%

Appendix C

The root databases: FAME and Business Structure Database

Business Structure Database (BSD) is a central dataset that covers virtually all business organisations in the UK. The annual BSD dataset is a snapshot of the Inter-Departmental Business Register (IDBR), which is a live register of data collected by HM Revenue and Customs via VAT and Pay As You Earn (PAYE) records. An enterprise is the overall business organisation. A local unit is a ‘plant’, such as a factory, shop, branch, etc. The data is available to registered researchers. CEBR Dataset is comprised from this root database. The strength of the BSD is “its near universal coverage of all firms in the UK, however it only provides information on a limited range of firm characteristics (employment, turnover, location, structure and industry sector)” (Anyadike-Danes, 2014, p. 1).

The strengths and weaknesses of FAME are complementary to those of the BSD, its data is considerably more limited, especially related to smaller firms. It consolidates information and reports on a very wide range of characteristics mainly generated from the firms’ annual accounts. The main benefit of FAME is the generation of a company report. This standard report includes a balance sheet, profit and loss account, turnover, employees and industry codes. The data can include details related to ownership and subsidiaries. The data lists the direct and indirect shareholders and subsidiaries of a company with the percentage ownership. The data allows the location of the firm to be established. The weakness of using FAME data is that it is essentially generated from company reports to Companies House which can be up to two years old. It also means that data related to smaller companies that have certain reporting exemption, can be limited. To offset this issue in gathering phase 2 data it was decided that the published accounts of the firms had to be up to date and within a one-year time frame.

Background to Data sources

The following outlines the background to the data sources used within the Phase 1 analysis:

Fast Fifty: This is an annual list of companies that reside within the whole of the North East of England. It includes the area of Teesside, Wearside, Tyneside, Durham and Northumberland. The list is sponsored by a local law firm and a local newspaper. The firms can be indigenous, subsidiaries, branches or foreign owned. The data gathering for the fast

fifty is undertaken by a team of academics based at St Chad's a Durham University College. The average turnover growth was assessed on a percentage increase based on the difference between turnover figures filed for the previous three years. To qualify, companies had to be trading entities and have turnover more than £1,000,000 in the last three years of filed accounts, which are up to date as at 31 July 2016. Companies must also have made profits in each of the past three years' accounts and must have filed new accounts since last year's Fastest 50 (2015). Private limited companies which were subsidiaries of listed companies did not qualify. Subsidiaries of foreign-controlled companies were accepted if they had headquarters or a decision-making function in the NE region.

The Scaleup Institute: The organisation is a private sector, not for profit company, focused on making the UK the best place in the world to scale up a business. The organisation was founded as a response to the independent Scale Up Report on UK Economic Growth authored by Sherry Coutu (Coutu, 2014), now the Chair of the Scale Up Institute. The list contained information from companies that volunteered to be part of a program for visits and speaker engagements by entrepreneurs to schools. The data has not been verified by the Scaleup Institute. The growth figures represent any percentage growth over a period of one year. The list also contains companies limited by guarantee, these are not for profit or charity organisations. It also contained educational establishments.

Insitely: Insitely is a private database management company. This list was commissioned by the North East Local Enterprise Partnership (NELEP). It was generated using key search criteria to identify HGSFs within the NELEP area. The definition of HGSFs was based on the OECD definition of high growth companies with more than 10 employees. Included in the data set companies with year on year growth of over 20% in their submissions to Companies House between 2013, 2014 and 2015. Due to gaps in the data for the number of businesses that submit full accounts a growth proxy was taken as balance sheet profitability. Only companies with a positive balance sheet are included - all companies with negative balance sheets were removed. Only businesses with a primary trading address in the region were included. All types of business were left on the list (including charities and holding companies for example). Growth Rate and Actual Growth figures in the dataset were calculated from 2013 to 2015.

Entrepreneurs Forum (EF): The Entrepreneurs' Forum is an organisation that supports entrepreneurs based in the whole of the North East of England, helping them to develop, create new opportunities and grow their business. The organisation is a cross-sector peer group of business owners and managers based in the North East of England. The data was gathered over 2016. The list included quasi-public venture capital firms. The firms were obviously self-selected as members of EF. The data is gathered on an annual basis by contacting the firms and asking for a reply to a survey which includes turnover changes and number of employee changes. There was no verification process undertaken by EF to test the veracity of the data.

CEBR (Octopus): The data was gathered for the Octopus 2015 report on High Growth Small Firms (Octopus, 2015) . This report highlighted the role HGSFs play in driving national and regional growth, addressing the North-South divide and rebalancing UK economy. It indicated that about three of every five HGSFs are located outside London and the South East. These firms have a disproportionate impact on weaker performing local economies. For the purpose of a report on the impact of HGSFs within the UK (Octopus, 2015), the Centre for Economic and Business Research (CEBR) identified 600 firms within the North East that fell into their category definition of HGSFs (Octopus, 2015). Of these 600, about 450 were located within the NELEP area. To estimate the sales growth of firms below £10 million turnover a sector average net margin percentage was applied to the difference in the Balance Sheet Profit and Loss Account from one year to the next. This data was gathered between 2014 and 2015.

Decision Explorer Software

Decision Explorer (DE) is “an ideas and causal mapping software tool” (Brightman, 2003). It can be described as “a qualitative data management and analysis tool” in that it deals with qualitative data and ideas expressed through text and narrative. It assists in structuring the relationships between the expressed ideas. The software is used to generate a visual representation of the narrative resulting from the RPs from the perspective of capturing and structuring the experience of HGSFs. Strategic management remains the most widely written about area of application of DE. In this research, it is used to capture the reflective strategic decision-making process consequent to opportunistic growth events

What “Discovery Explorer Software” provides.

The Software Provides:	- the capture of ideas “as short phrases of text and links them appropriately to express their relationship to one another”
	- a number of functions that offer a variety of user defined causal link types to express visually several forms of relationship.
	- it is, a “neutral” tool, allowing the researcher to convey research subject’s understanding of a situation.
	- the building up of a database of relationships from the narrative and then through a process explores the model that has been built, “elaborating it and developing thinking about the topic or issue under consideration” .
	- analysis facilities to help identify concepts that have particular significance, such as, Cluster Analysis which is used to identify groups of concepts that are tightly linked together. These clusters “typically cover a particular area of the issue being mapped”
	- each cluster can be displayed individually and the software allows the production of “reports of complete chains of argument in the map, from triggering event to outcome”.

Source: (Banxia Software Ltd)

Appendix D



Faculty of Business and Law Informed Consent Form for research participants

Title of Study:	Black Swan Trigger Events – triggers for high growth in small firms?
Person(s) conducting the research:	Roy Stanley
Programme of study:	DBA Program
Address of the researcher for correspondence:	Groundsix, Spaceworks, Benton Park Road, Newcastle upon Tyne
Telephone:	
E-mail:	roy@groundsix.com
Description of the broad nature of the research:	What is process for small firms to achieve profitable high growth?
Description of the involvement expected of participants including the broad nature of questions to be answered or events to be observed or activities to be undertaken, and the expected time commitment:	Engage in a process involving “Rich Pictures” and Cognitive Mapping. This to trace the growth of the firm and the trigger events and transition actions causing the growth. It is expected that this will involve two one hour sessions.
Description of how the data you provide will be securely stored and/or destroyed upon completion of the project.	The data will be stored on password protected and secure servers. All data will be destroyed on completion of the research.

Information obtained in this study, including this consent form, will be kept strictly confidential (i.e. will not be passed to others) and anonymous (i.e. individuals and organisations will not be identified *unless this is expressly excluded in the details given above*).

Data obtained through this research may be reproduced and published in a variety of forms and for a variety of audiences related to the broad nature of the research detailed above. It will not be used for purposes other than those outlined above without your permission.

Participation is entirely voluntary and participants may withdraw at any time.

By signing this consent form, you are indicating that you fully understand the above information and agree to participate in this study on the basis of the above information.

Participant’s signature :

Date :

Student’s signature :

Date :

RESEARCH ORGANISATION INFORMED CONSENT FORM

Faculty of Business and Law
University of Northumbria

Researcher's Name: Roy Stanley

Student ID No. (if applicable): _____

Researchers Statement:

The North East of England is a slow growth Region that's economy would benefit from the development of more High Growth Small Firms. The research considers Black Swan Trigger Events (BSTe), significant random events, that structurally change the growth dynamics of small firms. It considers the actions firms adopt in transitioning post the BSTe with a view to creating a route map that could benefit firms going through the process of rapid growth. The research involves a case study approach. Five case study firms have been identified against specific criteria. The case studies will involve unstructured interviews with individual entrepreneurial founders and team members using a process of soft systems methodology by way of rich pictures and cognitive mapping. All published firm information will be confidential and firms will be anonymized within the research if this is requested. The results of the research will be published and disseminated to interested parties and stakeholders.

Any organisation manager or representative who is empowered to give consent may do so here:

Name: _____

Position/Title: _____

Organisation Name: _____

Location: _____

Signature: _____ Date: _____

This form can be signed via email if the accompanying email is attached with the signer's personal email address included. The form cannot be completed by phone, rather should be handled via post.