

Supporting High-Growth Firms

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Abstract

The existing literature currently provides no holistic explanation for how and why high-growth firms (HGFs) are growing and without a collective understanding of this process, scholars have been unable to identify the role and contribution of support for HGFs. This paper explores the high-growth process from the real-world perspective of the founders of HGFs who are actively participating in a live public-accelerator in Wales. This qualitative research study uses in-depth interviews and participant observations to offer a unique and interesting insight into the growth journeys of 23 HGFs. The research identifies eight dominant high-growth factors and nine action-based processes which collectively contribute to the HGFs' ability to attain and sustain high-growth. It uncovers important interrelationships between factors and processes which are continuously interacting and evolving in response to stakeholder, market, and environmental conditions. The research finds that business support is making an important contribution to the high-growth process although most of the effects are indirect and intangible. In other words, they contribute to growth not through the provision of resources but by positively influencing the founders' and management teams' emotions, beliefs, attitudes, and behaviour which, in turn, drives the high-growth process. The findings are used to develop a model and theory of the high-growth process which seeks to add value to policymakers, support practitioners and help growth firms.

Introduction

The UK's withdrawal from the European Union and the devastating impact of COVID-19 has led to an increasing urgency for domestic business growth in Wales to meet the needs of an already impoverished region of the UK. Scholars are leading the call for an increased focus on business support to not only help firms survive one of the worst global economic periods in recent history but to actively rebuild our economy and society. Extant research shows high-growth firms (HGFs) represent a possible economic and social solution. Since Birch's (1979) seminal research discovered that young rapidly growing firms ('gazelles') were responsible for the creation of a significant proportion of all new jobs, empirical studies have consistently linked HGFs with positive economic and social contributions such as job creation, productivity, inward investment, innovation, knowledge development and distribution, competition and perceived customer value (Mason, 2020; Mawson, 2018; Coad et al., 2017). These economic benefits create a compelling argument for government intervention and scholars such as Brown et al., (2017) have urged policymakers to develop more targeted policies to support HGFs. Unfortunately, attempts to support HGFs have been widely criticised as being 'woefully inadequate' in navigating the unique challenges of rapid and sustained growth (Lee, 2014). Legitimate concerns include the 'tweaking' of generic business support to meet HGFs complex needs (Brown and Mawson, 2016); the development and targeting of interventions based on high-growth stereotypes and myths (Brown et al., 2017); and a lack of robust monitoring and evaluation (Goswami et al., 2019). Furthermore, there are concerns about the theoretical foundations on which policies and programmes are designed and delivered (Brown and Mawson, 2019, 2016). This has led some to question policymakers' ability to design interventions that can further enhance the economic contribution of HGFs, especially given the very small size of the high-growth population, the indistinguishability of high-growth characteristics from the wider business population (Demir et al., 2017; Shane, 2009) and the general fluidity of high-growth within firms (Hart et al., 2020). At the heart of this issue lies a fragmentation in research, policy, and practice and whilst numerous empirical studies have explored specific influences on high-growth, scholars have yet to provide a holistic view or explanation of the high-growth process which aligns with the complexity and challenges experienced by HGFs in the real-world. Thus, there is little clarity on where and how support is contributing to the high-growth process and how it can be improved to enhance its effectiveness.

This paper attempts to answer the call by Coad et al. (2017) and McKelvie and Wiklund (2010) for research into the growth processes of HGFs to explain how and why they grow. It contributes a real-world perspective of the high-growth process by exploring all aspects of growth which the founders identify as contributing to their firm's ability to attain and sustain their high-growth episode, specifically the founder's mindset and behaviour, internal resources and capabilities, action-based processes, stakeholder relationships, market conditions, and interactions with the external environment. Furthermore, the analysis examines the relationship between these aspects of growth and uses this data to develop a model and theory to explain the high-growth process.

The paper begins with a review of the literature which draws attention to current gaps in the knowledge base, identifies the need for further research and establishes the foundations for this study. The research method and data collection design are outlined followed by the main research findings which are summarised and analysed. A conceptual model is presented which identifies the dominant aspects of growth within HGFs and explains how these interact and evolve to facilitate the high-growth process. Finally, the paper discusses the research implications and contributions, before presenting the conclusions.

Literature Review

Business growth has attracted the attention of many different academic disciplines over the last century. Despite this, a recent review of the literature demonstrates that an understanding of the process by which some firms can attain and sustain high-growth remains embryonic (Coad et al., 2017; McKelvie and Wiklund, 2010; Shepherd and Wiklund, 2009; Storey, 1994). This is partly explained by the fact that high-growth is a multi-dimensional and contextual concept and firms can grow in lots of different ways (e.g., sales, profit, productivity, people, knowledge, market share, exports, investment, number of customers, customer value, customer satisfaction etc.). As a result, what may be considered as an extraordinary level of growth in one environment can be viewed as mediocre in another. Reflective of this multiplicity, the literature evidences the use of many different terms, definitions, and metrics of high-growth (Moreno and Coad, 2015). However, in simple terms, HGFs can be understood as firms that

have sustained rapid growth and high-growth is typically defined and measured by a set rate of annual growth (e.g. 20%) which has been sustained over a set time period (e.g. 1 to 3 years) or through a set percentage of the highest performing firms in a particular sample, sector, or region.

Studies in Europe suggest that HGFs represent between 3% and 6% of the total business population and thus can be considered as the small percentage of top-performing firms (Dosi et al., 2019; Daunfeldt et al., 2015; NESTA, 2011, 2010, 2009; Storey, 1994). However, there is no consensus on the reasons why or the process by which HGFs ascend into this growth jet stream and the high-growth process is yet to be defined from a theoretical, research or practice-based perspective. Whilst theoretical perspectives have greatly enhanced our understanding of specific aspects of growth (Brown and Mawson, 2016), their hyper-focus on individual factors has led to the unhelpful view that some aspects of the process are more important than others e.g., resource-based view, knowledge-based view, motivational theory, network theory etc. (Davidsson et al., 2010; Wiklund et al., 2008). In taking this approach, growth theorists have critically failed to acknowledge or explain the presence, interdependence, and contribution of a complex range of factors that are experienced in the real-world. Some scholars have successfully combined different aspects of theories and models to generate a more comprehensive view of business growth although a complete and holistic view of how and why HGFs are growing remains elusive despite evidence that suggests the process is fundamentally different to standard business growth (Coad et al., 2017).

Whilst high-growth studies are focused on individual or small clusters of factors, collectively they demonstrate that a vast array of internal and external factors are influencing the high-growth process. Storey (1994) classified these factors into three main categories of (1) founder and management team factors; (2) firm-level factors and (3) opportunity-related factors. Unfortunately, most high-growth studies have been undertaken in isolation from HGFs in the real-world and are dominated by quantitative, macro-orientated explorations of survey data comprising of manufacturing, high-tech and innovation-based firms. Individual study findings vary considerably by the type of firm and growth being measured, representing significant confusion and ambiguity in the collective knowledge base. For example, whilst multiple studies have found a strong and positive correlation between innovation and high-growth (e.g., Mazzucato and Parris, 2015; Segarra and Teruel, 2014; Vivarelli, 2013), other studies indicate that not all types of innovation can facilitate high-growth (Goswami et al., 2019; Coad et al., 2016; Demir et al., 2017).

What is known is that the high-growth process is not akin to the steady linear escalation portrayed by stage models but occurs in unpredictable episodic bursts which are often difficult to control and lead to organisational instability (Brown and Mawson, 2013; Levie and Lichtenstein, 2010). Whilst high-growth represents an elite level of performance, it is also a difficult and highly volatile position which an escalating percentage of firms are either unable or unwilling to sustain (Dosi et al., 2019; Daunfeldt and Halvarsson, 2015; Nightingale and Coad, 2014; Holzl, 2014). The temporary nature of the high-growth position means the population is constantly evolving which impedes our ability to identify and understand the factors which influence the growth acceleration and deceleration process (Autio and Rannikko, 2016; Mason et al., 2015; Daunfeldt et al., 2014).

Whilst the literature review observes a lack of conceptual propositions and empirical research to provide a holistic view of how and why HGFs are growing (McKelvie and Wiklund, 2010), there is increasing evidence of a movement towards process-focused models where firms experience key points in their development which act as a catalyst for rapid growth (Kidney et al., 2017; Bessant et al., 2005; Vohara et al., 2004). In addition, studies have shown that the firm's strategic actions, responses, and adaptive capabilities determine whether it optimises available growth opportunities (Teece et al., 2016). For example, Deakins and Freel (1998) described high-growth as an unpredictable process that incorporates 'disconnected jumps' that are generated by the firm's reaction to critical events. Brown and Mawson (2013) built on these findings through an examination of the types of events that can 'trigger' a high-growth episode, defining their concept of 'growth triggers' as a "systemic change to the structure and workings of a firm which provides a critical opportunity for altering that firm's growth trajectory". They identified the growth process as 'a temporal order' which features a trigger followed by a period of transition and concluding with a turning point in the firm's growth capability. Furthermore, they stated that this initial trigger is actively initiated by the firms mobilisation of resources and capabilities in response to internal, external and co-determined events. Their endogenous and co-determined 'growth triggers' reflect the proactive application of the firm's knowledge, capabilities and resources to create and capture external growth opportunities (e.g., the introduction of a new product or service, or the

receipt of a major contract). Indeed, their identification of exogenous events is aligned with Vohara et al.'s (2004) and Bessant et al.'s (2005) notion of 'critical junctures' and 'tipping points' which considers the firm's reactive capability as the vehicle by which growth is stimulated (e.g., regulatory and economic factors). A recent Irish study by Kidney et al. (2017) also provides supportive evidence of a high-growth process where the development of capabilities is the key factor in determining whether the firm successfully optimises the opportunity to grow (Kidney et al., 2017). However, it found that whilst the development of 'organisational structures and systems' supported existing growth, it did not trigger new growth (Kidney et al., 2017). Interestingly, this finding conflicts with another study which identifies the introduction of 'skilled and experienced managers' and the development of a 'new business model' as important growth triggers (Lee et al., 2016). Collectively, these empirical findings imply high-growth is facilitated by the firms' proactive and reactive development of capabilities to meet their environmental conditions thus highlighting the complexity and unpredictability of the high-growth process.

The literature also emphasises the firm's transition phase as a critical period that determines the firm's ultimate success in using the triggers to develop and grow (Teece et al., 2016; Brown and Mawson, 2013). High-growth episodes create significant instability and are evidenced as stretching people, disrupting business operations and negatively impacting performance (Lee et al. 2016; Rumelt, 2011). This drives organisational change as firms need to adapt and develop their internal capabilities, structure and systems to support the changing business needs (Kidney et al., 2017; Brown and Mawson, 2013). Therefore, the 'positive and negative' effects created by high-growth episodes explains why the high-growth process is erratic and could be the reason why a high proportion of HGFs stagnate, decline or even cease to exist following a high-growth episode.

One of the leading instruments which policymakers are using to deliver 'targeted' interventions to HGFs is through 'public-accelerators' (Bone et al., 2019, 2017; Wright and Drori, 2018). Public-accelerators are publicly funded programmes usually run by government agencies or universities with the objectives of supporting new businesses with high-growth potential to facilitate economic and social benefits; developing entrepreneurial ecosystems; and encouraging innovation, enterprise and entrepreneurship (Bone et al., 2019, 2017; Goswami et al., 2019; Bliemel et al., 2019; Cohen et al., 2018). Despite the recent explosion in the number of studies exploring the impact of accelerators (e.g., Brown et al., 2019; Cohen et al. 2019; Roberts and Lall, 2019; Drover et al. 2017), very few public accelerators have undergone any empirical evaluation to ascertain their actual contribution to participants, the economy or the entrepreneurial ecosystem (Brown et al., 2019; Goswami et al., 2019; Brown et al., 2017). Four noted exceptions are the Nordic Scalars (Salminen et al., 2019), the Manizales-Mas (Isenberg and Onyemah, 2016), the NIY Program (Autio and Rannikko, 2016) and Start-up Chile (Gonzalez-Uribe and Leatherbee, 2017). These research studies indicate that academics are not only beginning to explore this previous 'black hole', but their findings suggest these public interventions are having a positive impact on the growth and development of HGFs. For example, the Nordic Scalars evaluation found through a combination of 'company-specific, high-quality mentoring', 'strategic planning' and 'peer-based learning' participants reported enhancements in their growth focus, competencies and skills which enabled them to 'get things done' (Salminen et al., 2019). The programme was also found to enhance collaborations between 'Nordic actors', share knowledge and improve regional networks and infrastructure (Salminen et al., 2019). However, the evaluation failed to identify any economic contributions due to the early stage of the programme but did identify further 'room for improvement' especially in the connection between firms, stakeholders and business communities as well as complaints that the 'heterogeneity' of firms undermined 'peer-learning and community building'. Autio and Rannikko's (2016) study into the NIY programme found participants benefitted through enhanced 'resource mobilisation', 'growth orientation', 'self-confidence' and 'perceived ability to grow internationally'; and found 'treated firms' grew at a faster rate (120% in sales revenue over a two-year period) than untreated firms. Furthermore, the programme's unique operating model was found to create a strong return on investment (Autio and Rannikko, 2016). Research undertaken by Isenberg and Onyemah (2016) into the Manizales-Mas Scaleator programme found that participants directly linked participation on the programme with a growth in revenue (55% average uplift); customer growth (1071 new customers); jobs growth (703 new jobs created) and growth in investment (approx. \$3 million of new debt and equity). However, the study found that whilst they 'believed' there to be a causal relationship, it was difficult to ascertain the actual contribution as there were potential 'alternative explanations' for this growth (Isenberg and Onyemah, 2016). This highlights the significant difficulty in measuring and evaluating high-growth within accelerators and reinforces Zhao et al.'s (2019) argument that "firm performance does not prove program performance".

Therefore, whilst the literature review findings are encouraging, they fail to explain the process by which public-funded support and intervention facilitates high-growth. To address this gap in the knowledge base, it is vital that any research starts from a foundation of understanding how and why HGFs are growing. This study will explore the views and experiences of HGFs to identify the factors and processes which facilitate high-growth before examining the role and contribution of public-funded support and interventions. The findings will be used to develop a theory and model of the high-growth process from which the effect of support and intervention maybe understood and future policy and practice can be aligned. As such the following research questions (RQs) were considered:

RQ1 - What factors feature in the high-growth process?

RQ2 - What action-based processes feature in the high-growth process?

RQ3 - How are these factors, actions and events interacting to facilitate rapid and sustained growth?

RQ4 - What contribution is support and intervention making to the high-growth process?

Research Method

This research study explores the high-growth process from a real-world perspective. The literature is dominated by a positivist paradigm that adopts quantitative methods to measure the relationship between individual growth factors and HGFs (Coad et al., 2014; Wiklund et al., 2008; Shane, 2009). Whilst this approach has contributed to our knowledge on the rate, speed and individual role of factors that influence high-growth (Mawson, 2018), it has also led to an unhelpful debate over the hierarchy of factors in the process. Scholars highlight the one-dimensional aspect of many of these perspectives (Hill and McGowan, 1999) and are highly critical of the collective failure to capture a holistic view of the high-growth process which is representative of the complexity experienced by firms in the real-world (McKelvie and Wiklund, 2010; Garnsey et al., 2006). The literature thus highlights a 'black hole' in the understanding of how and why HGFs grow, specifically the combination of factors and processes as well as firm-level actions and behaviours. This research study represents an attempt to provide a real-world view of the high-growth process by mapping all aspects of growth that the founders identify as contributing to their firm's high-growth and critically analysing the relationships between them.

Given the exploratory nature of the research, a qualitative approach featuring semi-structured interviews and observations was identified as the most suitable way to collect the rich and highly detailed data (Charmaz 2014;) needed to develop knowledge and understanding of a real-world phenomenon (Saunders et.al., 2016) and address the research questions. As the paper aims to make a practical contribution to the knowledge base, a philosophical stance allowing for the development of theory from real-world experiences was also selected (Corbin and Strauss, 1990). Accordingly, a constructivist grounded theory method was adopted to facilitate a structured and systematic approach to data collection, analysis, and theoretical development.

Data collection

This paper uses data collected from 23 HGFs participating in a live public-accelerator the Business Wales Accelerated Growth Programme (AGP) between April 2017 to March 2021. The 'universal definition' of HGFs from OECD (2008a, 2008b, 2007) which stipulates that HGFs must have 'ten or more employees at the outset of their growth period', was identified as inappropriate for use in a Welsh economic context as it excludes 95% of the Welsh business population which is dominated by small firms. The HGFs were thus purposively identified using an adapted high-growth definition (see below) which adheres to the minimum annualised growth rate of 20%+ per annum but applies the exclusion criteria of firms with ten or more employees at the end of the measurement period. Furthermore, the adapted definition applies a compound multiplication of three (representative of the OECD's three years) to measure a wider range of growth metrics in firms that had been participants on the accelerator between 1 and 3 years. Therefore, for the purposes of this study, a HGF is defined as:

'a firm which has increased its workforce by 73% (or more), within a three-year period (or less), has a minimum of 10 employees at the end of the measurement period; and has evidenced annualised growth within one or more of the additional growth indicators: sales turnover, profit, productivity, market share, investment, and/or exports'.

The adapted definition was applied to all firms participating in the high-growth public accelerator AGP (513 firms). The criteria identified 52 HGFs which is representative of the top 10% of the fastest-growing firms on the accelerator in terms of annualised employment, export, and investment growth. Participation in the research study was voluntary and firms were then randomly selected until theoretical saturation was achieved at 23 firms.

In-depth qualitative interviews were conducted with founders on a face-to-face basis at their own commercial premises. A set of open questions (Gundry et al., 2014) were used to actively encourage respondents to relay their high-growth journey and experiences using their own words (Bryant and Charmaz, 2010; Richards and Morse, 2007). Prompts and probing questions were also utilised to gently guide respondents to specific areas of interest such as the factors, actions and events leading up to their high-growth episode (Jones et al., 2014) and explore responses to facilitate a more comprehensive and detailed understanding of the context and process by which high-growth was sustained (Rubin and Rubin, 2012). To contextualise and add richness to the founder's experiences (Saunders et al., 2016), participant observations were used to capture non-verbal communications (Schmuck, 1997) such as the respondent's body language, emotions, and willingness to share information at different stages of the interview (Marshall and Rossman, 1995). The majority of interviews exceeded three hours despite arranging a 90-minute interview slot and typically, once the founders started to relive their growth journey, they did not want to stop. Interviews were recorded and transcribed immediately after completion and companies were allocated a unique identifier to ensure anonymity.

Company documentation and growth performance data were used to support the triangulation of data and the development of a theory (Glaser and Strauss, 2017). For example, the public-accelerator AGP maintained detailed records of the growth of each firm using three key performance indicators namely growth in the number of employees, growth in the value of exports, and growth in the value of investment. This data was only accessed at the analysis and theoretical development stages to enable a comparison of the findings with the firm's actual performance and to facilitate the identification of any inconsistencies or incongruence in the data. Additional documentation - such as business plans, annual reports, companies house data, media publications - were also reviewed and considered at this stage to triangulate the data and test new theories.

Data analysis

The research study adopted a rigorous and structured, coding and analysis procedure (Charmaz, 2016), with NVivo 12 software used to provide transparency of this process and organise the data at each stage. The initial coding stage incorporated a line-by-line examination, interpretation and labelling of all interview data into codes that described the phenomenon using the participants own words (Holloway, 2008; Strauss and Corbin, 1998; Glaser, 1992). During the focused coding stage, higher-level categories were created by amalgamating the most frequent, interesting, and significant codes into factors, processes, events, and actions which represented the firm's experience of the high-growth process (Charmaz, 2014). The coding continued until all new data and analysis consistently fitted into the established categories and a detailed explanation of these dimensions were developed thus achieving theoretical saturation (Glaser and Strauss, 2017). From the outset of the data collection and analysis process, emerging codes were identified and combined to form a theory of the high-growth process (Charmaz, 2014). Theories were tested, modified, and continuously refined using a constant comparative method. At the theoretical saturation point, the theory was then compared and evaluated against existent growth theories before being formalised within a conceptual model. Validity and reliability were assured by providing transparency of the rigorous, systematic, and peer-reviewed approach (Yin, 2015), creating an 'audit trail' on which the credibility and trustworthiness of this study's findings can be scrutinised (Creswell and Miller, 2000; Lincoln and Guba, 2013). The participants' own words were used to provide rich and thick descriptions of the high-growth process and identify the codes, themes, and categories on which the research findings are grounded. Observations, company information, and growth performance data were used to both corroborate the interview data and contextualise the findings (Denzin, 2012).

Main findings

The qualitative data gathered during the interviews provide important insights into human emotions and behaviour, dominant factors, action-based processes, and interactions between the internal and external environment within the high-growth process. The following findings explore how these different

aspects of growth contribute to the firm's transformation in ambition, size, structure, and scale; and examine the interrelationships between them, identifying combined effects within an accumulative high-growth process.

Eight Dominant High-Growth Factors

To identify the factors influencing the high-growth process and after allowing founders to narratively tell the story of their high-growth journey, the interview questions focused on the period leading up to and during their high-growth episode. The founders were asked to identify and provide specific examples of the factors which had contributed to their high-growth capability and which had actively triggered their high-growth episode. This data was dominated by eight themes which are presented as the dominant factors influencing the firm's ability to attain and sustain its high-growth namely (1) the founder(s); (2) networks, collaborations and associations; (3) human capital; (4) customer orientation; (5) infrastructure; (6) strategy and planning; (7) innovative approach, and (8) finance and financial management.

A comparison of the research findings with extant literature found the majority of these factors have been researched and individually positively correlated with HGFs. However, the interview data not only found that this unique combination is dominated by the role and contribution of people but discovered an important interrelationship between factors which was found to be a critical aspect of the high-growth process. Whilst the founders collectively communicated their belief that "people are the most important factor influencing the firm's high-growth capability", an analysis of each firm's detailed actions and events which led up to and were undertaken during their rapid growth period revealed that none of the factors had facilitated high-growth in isolation. Without exception, the founders described a series of actions and events which incorporated multiple combinations of interrelated factors which had contributed to different aspects of the firm's growth. Whilst the interview data could be interpreted as individual factors 'triggering' a domino effect that ultimately leads the firm into its high-growth episode - as suggested by the concept of high-growth triggers advocated by Brown et al. (2017) - the findings indicate a much more complex process where multiple factors were found to be simultaneously and collectively contributing to the firm's growth process. More importantly, these were found to be interacting, reacting and evolving in response to not just other growth factors but the firm's action-based processes, operating conditions, and external environment. This identified high-growth as a cumulative process that is occurring as a result of a series of combined causes and effects and infers that it cannot be viewed through the lens of individual factors (such as the resource-based view, the knowledge-based view, motivational theory or network theory) but requires a holistic view and understanding of all factors, their interrelationships, and the environment in which they are developing.

Nine Action-based Growth Processes

Research undertaken into HGFs and non-HGFs demonstrates that the combination of a knowledgeable, motivated and skilled founder with access to sufficient resources and favourable market conditions is still not enough to explain why some firms develop a high-growth capability whilst others do not. Since organisational processes have growth and performance implications (Becker and Zirpoli, 2008; Penrose, 1959), the research explored the 'standard operating procedures' (Leidner, 1993), the 'recurrent interaction patterns' (Feldman and Pentland, 2003), and the 'stored behavioural capacities' (Hodgson and Knudsen, 2004) of high-growth participants. From the interview data and analysis, nine action-based processes were identified which were found to be critical in providing the firm with the knowledge, capability and motivation to adapt and align its proposition, structure, and market position to exploitable growth opportunities and threats within its environment. These action-based processes include (1) developing knowledge and experiential learning; (2) building credibility and trust; (3) developing capability and agility; (4) aligning market position; (5) managing complexity; (6) evolving structure and culture; (7) changing approach to growth; (8) continuously improving; and (9) increasing capacity.

The detailed accounts of the firm's growth and development process directly link these action-based processes with the role and contribution of the high-growth factors discussed in the preceding section, evidencing a web of interrelationships which create, expand and strengthen the pathways through which the firms attain and sustain high-growth. For example, all founders in the sample articulated (without prompting) the deliberate action of building credibility and trust within their internal and external environments and linked their successful enhancements of credibility and trust with "improvements in customer and supplier relationships", "the firm's ability to attract highly skilled and qualified people",

“their expansion of quality networks”, “access to finance” and “improvements in the size and value of customers who would consider using them”. Thus, the action-based process of building credibility and trust is not only positively associated with the development of the firms’ knowledge, resources, and capabilities but this action-based process is intrinsic to the development of a position from which the firm can access and exploit growth opportunities. The extant literature evidences an extensive examination of some of these individual processes which are linked with high-growth (e.g., knowledge development and organisational learning) although the review found an absence of any holistic exploration of the combined factors and processes which feature in the high-growth phenomenon. This is despite scholars’ acknowledgement that organisational processes collectively have a considerable impact on a firm’s development, learning, performance and growth.

The review of previous research in these areas also found no growth theories or models which incorporated the firm’s action-based processes in the context of a holistic explanation of the high-growth process especially in terms of HGF interactions and adaption to their operating environment, the facilitation of high-growth factors, and the attainment of higher levels of operational performance and growth. The findings reveal that action-based processes are not only vital to explaining how and why HGFs grow but that the interrelationship between internal and external factors and processes suggests that high-growth is attained and sustained through a process of alignment.

High-Growth Support

This research study originally set out to examine the specific support and interventions provided within the framework of a public accelerator programme although the majority of the founders openly disclosed that they were accessing support from a wide range of different providers at the same time as participating on the accelerator. This finding is very important because it not only led to the widening of the scope of the study to include an examination of all support accessed by the HGFs during this period but offers an interesting insight into the behaviour of the firms and the importance of the role of different types of support within the high-growth process. In addition, if this finding is replicated then it raises important questions over the reliability of quantitative measures which are being used to assess the contribution of individual interventions and providers in isolation because, as one founder explained, “it is impossible for us to unpick the contribution of one support provider over another when they have all contributed to our growth in some way”.

Whilst the accessing of support from multiple providers could be used to justify questions about the use of public monies to support HGFs, the interviews revealed that the firms had a diverse and growing range of needs, and no single provider was able to meet these requirements. The founders described this fragmentation in provision as “extremely frustrating” because they found it “difficult to identify the right type of support” and “assess the quality before use”. Furthermore, engagement was identified as “extremely resource intensive” and the founders expressed “concerns about the commercial interests of some support providers”. Publicly-funded support was found to be particularly “important” and “valuable”, not simply because it was free at the point of access, but because it was provided by a respected, credible and an impartial source that had no ulterior motive. Furthermore, half of the HGFs described how having government organisations “believe in what you’re doing”, and “supporting your ideas” increased their “morale” “self-belief” and “confidence”.

The HGFs identified multiple benefits to participating on the public-accelerator which, in combination with other types of support, were positively linked with an increase in the speed and trajectory of the firm’s growth. A quarter of the HGFs claimed a direct relationship between the support they received and their rapid and sustained growth, typically describing how a network of interconnected public agencies combined to provide access to grants and investment, commercial premises, skilled staff, and high-profile networks which facilitated the creation of jobs, investment, and enhanced export capability. However, whilst the other HGFs identified positive effects from the support they had received, this was found to be indirect and intangible and the founders typically described their contribution in terms of an accumulative growth process as opposed to observing direct and immediate effects. For example, participation on the public-accelerator demanded a strong commitment to growth with many of the founders describing that the management team had redirected their focus from the day-to-day running of operations to a growth orientation. This featured the redevelopment of the firm’s vision and growth objectives which aided the “speed” and “quality” of their “decision making” and enabled the firms to initiate growth activities at an earlier stage than they otherwise would have. Access to specialist advice and expertise was found to be one of the most effective and valuable forms of support with the

participants describing how advice from “knowledgeable and experienced experts” enhanced their conviction and ambitions by providing them with the “peace of mind” that they were “going the right way to scale” which, in turn, gave them the confidence to commit an even greater amount of resources to increase their capacity and capabilities. The findings demonstrate that for most firms, growth is not solely being facilitated through access to additional resources but through peer assisted learning and support which influences the founders’ and management teams’ emotions, beliefs, attitudes and behaviour.

Despite accessing “targeted” high-growth support, the HGFs described “serious challenges” with the suitability, consistency, and quality of the support they received. All the founders identified multiple opportunities for the refinement of high-growth support which were categorised into six key areas namely (1) tailored high-growth support; (2) relational support and mentorship; (3) centralisation of support services; (4) development of high-growth eco-system; (5) reduction in bureaucracy; and (6) additional areas for support. For example, the majority of founders stated a significant proportion of the support they received in both the public and private sector was not relevant to their specific industry, size, and rate of growth. Several founders also emphasised the need for tailored support services arguing that a “one size fits all” approach to support was not appropriate to their situation. Over half of the firms also expressed their frustration on not being able to access support which “scaled with the firm”, one founder arguing that the “type and level of expertise very quickly becomes meaningless unless it evolves with the firm”. The founders also identified challenges with business support advisors, consultants and coaches who did not have any direct experience of the “speed” or “scale” of growth that the HGFs were going through and stated their “industry experience” was often several years out of date. This combined with a failure to take time to “really understand the business” created a lack of trust between the HGF and the support organisation. These findings support research undertaken by Brown and Mawson (2016) and Brown et al. (2014) and Mason and Brown, (2014, 2013) which found that most high-growth programmes are generic business support models that have simply been ‘tweaked’ and rebranded for the high-growth segment and that programmes have failed to meet the local needs of HGFs, their specific industry, market or environmental context. Interestingly, the interview analysis identified an experiential learning process where founders learnt how to engage with support providers and which consisted of the careful consideration and definition of their needs, an assessment of the quality of support, and a “time vs benefit” analysis. Surprisingly, most of the founders “tolerated” negative experiences, speaking warmly in their recollections and emphasising the positive opportunity it gave them to learn “what they should and shouldn’t be doing”. However, the founders also described becoming “increasingly selective” about the support they received as they gained more experience. This has significant implications because it infers that unless the high-support is of a sufficient quality, firms will decline the opportunity to access support even if this restricts their potential for further growth.

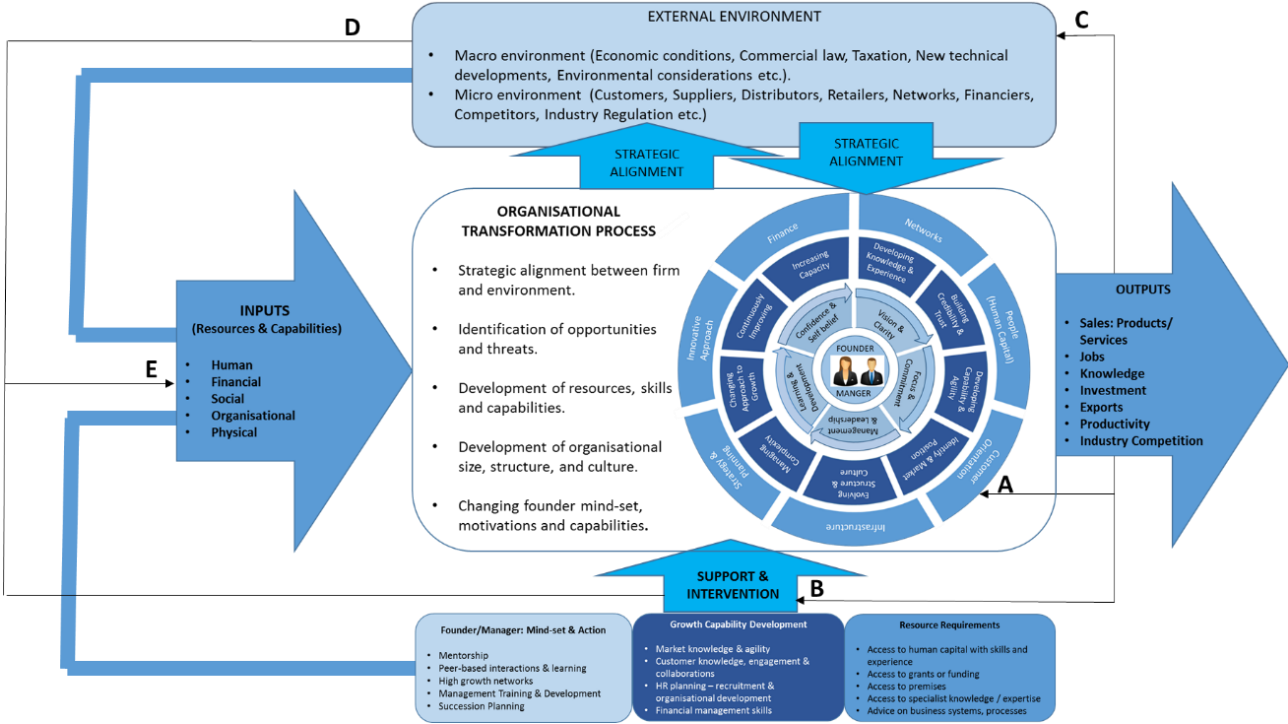
The High Growth Process Model

Penrose (1959) argued that a “comprehensive theory of growth must explain several qualitatively different kinds of growth and must take account not only of the sequence of changes created by a firm’s own activities but also the effect of changes that are external to the firm and lie beyond its control”. The research found that the high-growth process is driven by changes to the firm’s proposition, structure and position which are instigated by people’s knowledge, interactions and reactions to stakeholders and environmental conditions. The model emerging from the research findings thus seeks to present the high-growth process as a strategic alignment process whereby high-growth is attained and sustained through the transformation of the firm to meet market needs. This qualitative perspective incorporates several different types of tangible and intangible growth processes which are taking place simultaneously and feature as part of a chain reaction of events that enables the firm’s “process of development” (Penrose, 1959).

The conceptual model of the high-growth process illustrated in figure 1 is a visual representation of this study’s main research findings. It features the eight dominant factors, nine action-based processes, and the role of support and intervention, and seeks to explain the process by which these elements were found to be interacting, reacting, and evolving within the environment to facilitate high-growth. The high-growth wheel consists of three internal layers which depicts the internal elements that this study has found have the greatest influence on the high-growth process, specifically these are: (1) the founder; (2) the firm’s action-based processes which are referred to as its ‘competency level’; and (3) the high-growth factors which are collectively referred to as its resource and capability level. The model features the firm within the external environment and draws attention to the continuous dialogue and interactions between the firm and the environment which provides an opportunity for strategic alignment. It details

how the firm’s knowledge, interactions and interpretation of stakeholders and market conditions facilitates the identification of growth opportunities, which are used to identify and source the inputs required to ‘transform its bundle’ (Penrose, 1959) into a proposition which meets the market needs. The response from the market which is measured in terms of the firm’s outputs (e.g., sales, number of customers, profitability etc.), and the intangible feedback which incorporates perceptions of the firm’s credibility, perceived customer value and performance (see feedback loops A, B and C), influences its growth intentions, access to future resources and capabilities, and provides essential feedback on how the firm needs to develop and adapt to facilitate further growth.

Figure 1: Conceptual Model of the High-Growth Process



Initial growth acts as a catalyst for the organisational transformation process as the firm, motivated by its performance, actively invests in improving the quality and quantity of their resources and capabilities, which then leads to changes in the firm’s size, structure, culture, proposition, and position. Augmentations in the firm’s quality, operational efficiency and ‘competitiveness’ (Fombrun, 1993) positively impact the firm’s credibility and relationship with stakeholders (e.g., customers, suppliers, distributors, employees and investors) which results in further growth opportunities. Enhancements in capacity also drive the identification and exploitation of market opportunities which prompts a continuous process of growth and development. The model therefore reflects a continuous strategic alignment process where the HGFs are learning, developing and adapting the internal operating environment to align with stakeholder needs and navigate factors in the changing environment (e.g., resource availability, competitor proposition, new technologies, industry regulation).

By its nature, the high-growth environment is dynamic and fluid which then makes strategic alignment extremely difficult for the firm as both internal and external environments are constantly changing to create an ongoing requirement for engagement, understanding and timely adaption to exploit opportunities. The window of opportunity for high-growth is narrow and rapid organisational transformation is a difficult and challenging process as it stretches the firm at the founder, competency, and resource and capability level. The firm therefore uses external support and intervention to help to identify and bridge gaps between the firm’s current position and its desired position. As a result, support and interventions provide reassurance, knowledge and expertise to complement the practical resources and capabilities (inputs) to enhance the firm’s focus and commitment to growth that drives the transformation process.

Therefore, the high-growth process should not be described as a series of incremental steps or development stages as it is a reflection of the fluidity of the firm's proactive and reactive interactions, adjustments and adaptations to its changing environment. The potential risk in presenting the high-growth process as a conceptual model is that it could be interpreted as formulaic when, in fact, there is significant evidence to demonstrate it as an extremely 'complex', 'volatile', and 'unpredictable' process (Mogos et al., 2016).

Discussion

The high-growth process

The research findings reveal significant complexity and interrelationships between factors and action-based processes within the high-growth process with numerous evolving aspects of growth found to contribute to dynamic interactions between the internal layers of the firm and its external environment. This process highlights the importance and growth of multiple intangible factors (e.g. knowledge, confidence, credibility) which enables the adaptation and alignment of the HGF's resources, capabilities, and structure to meet customer, market, and environmental requirements. Whilst it is evident that numerous factors contribute to an accumulative growth process, people (particularly the founder) were found to ultimately determine the rate and speed of the firm's growth not just through their transformation of resources but through their emotional alignment (i.e. their vision, desire, confidence and self-belief), their relationships, and a willingness to personally adapt and develop to meet the needs of the firm.

The high-growth process theory combines a wide range of theoretical perspectives of growth with actual real-world HGFs experiences. The theory embodies the contention that the rate and duration of growth is primarily determined by the firm's ability to strategically align itself with the external environment. Whilst many scholars identify high-growth as a random process (Moreno and Coad, 2015; Coad et al., 2013; Henderson et al., 2012), the high-growth process theory argues that whilst growth is undisputedly influenced by many uncontrollable factors, it is ultimately determined by how the firm resolves tensions between its customer requirements, stakeholder capabilities and environmental conditions; and what the firm is capable and/or is willing to deliver. The high-growth process model features the firm within the external environment and explains how interactions between the firm and its environment facilitate the development of knowledge, the identification of opportunities and the development of stakeholder relationships and channels; through which the firm is able to develop a proposition, structure and position to meet the market needs. Unique insights contributed by the high-growth process model include the composition of the internal environment which features the central position of the founder, the importance of people at a resources and capability level and highlighting those growth processes (competency level) which connects the firm with its environment. The model also uniquely identifies the position and contribution of support and intervention as a temporary extension of the firm, and which has the potential to contribute to the firm's accumulative ability to grow.

High growth and public sector support

Global empirical evidence supports the contention that HGFs are making a disproportionate contribution to the economy and society, and this justifies policymakers' interest in the optimisation of their growth and success. HGFs have become synonymous with economic policy (Goswami et al. 2019; Autio and Rannikko, 2016; Bos and Stam, 2014, Mason and Brown, 2013) and accelerators are identified as the leading method by which governments globally are attempting to encourage the frequency and longevity of HGFs. However, many programmes have not been subjected to any empirical evaluation and there is limited evidence on the contributions which these programmes are making. High-growth support policy has been strongly criticised for its preconceived views of who HGFs are, how they grow and what assistance they need, influencing the design and delivery of interventions (Brown et al., 2017). This research reconciles the gap between the academic research and policy and practice (Frank and Landstrom, 2016) by providing a holistic and firm level view of the high-growth process and the contribution of support and intervention.

The research findings highlight some important considerations for the development of high-growth support policy. Whilst Brown and Mawson (2016) stated that most high-growth accelerators programmes are 'heavily predicated on' the resource-based view (RBV) (Brown et al., 2017; Brown and

Mawson, 2016), the research offers evidence to support the view that growth is not simply about resource access but emphasises the firm's strategic alignment with customer requirements, stakeholder capabilities and market conditions in the external environment. This means that intangible processes such as the development of knowledge, confidence and credibility are as important as well supported factors like innovation and finance. This suggests the RBV is not necessarily an appropriate theoretical foundation on which to design and deliver high-growth support and partly explains the observed disparity between the types of support that HGFs require and the type of support they receive. HGFs are clearly seeking a more person-centric approach that incorporates relational interventions like mentorship and networking with other HGFs. The identification of an accumulative growth process, combined with the central position of the founder and the importance of people within the high growth process, indicate these types of interventions are likely to have a positive impact on high-growth. Indeed, many of the leading publicly-funded, private and corporate accelerators (e.g., Nordic Scaleators Programme, Scale Up Denmark, Start-up Chile, Y Combinator, TechStars) prioritise entrepreneurial schooling, relational support and peer-assisted learning within their programmes. Furthermore, many of the high-growth founders wanted to give something back and offered to mentor the next generation of firms which would not only ensure a steady stream of relevant peer-based advice and support but could offer financial savings on the current delivery model.

The research indicates HGFs have a diverse range of support requirements which intensify and become increasingly specialised during the high-growth process. HGFs are accessing support from multiple providers in the public and private sector to meet these requirements although the fragmentation in provision is problematic as accessing the right type of support is resource intensive and it is difficult for HGFs to assess the appropriateness and quality of provision before use. Whilst this means the burden of the HGFs' support needs is not solely being financed by the public purse, it also raises important questions about the impact of poor-quality provision, the duplication of support, and the use of measurements to ensure they deliver economic and social value. The findings suggest there is an opportunity to incorporate private support provision within a centralised controlled public support programme. This could potentially address many of the issues which the HGFs are experiencing, whilst enabling the public sector to minimise costs and maximise economic and social benefits.

The research findings also indicate that HGFs are growing through an accumulative growth process and the majority of support and interventions appear to be producing indirect and intangible effects. This does not mean that publicly-funded support is not making a positive and important contribution as the research clearly shows the HGFs are benefiting from and value such support. However, it is very difficult to quantify this value and the research suggests the sole use of quantitative measures to capture an immediate or short-term uplift in growth are likely to produce inaccurate and misleading results. A longitudinal approach which incorporates both quantitative and qualitative measures of growth would help policymakers to recognise the contributions which are being made, assess their value, and adapt policies and interventions accordingly. Furthermore, this approach would also facilitate the identification and measurement of different types of growth which could be used to inform future policy and practice.

In summary, the high-growth process theory and model offers an insight into the complexity of factors within the internal and external environment and emphasises the interrelationship between different aspects of growth which are contributing to an accumulative high-growth process. It can be used by policymakers to make more informed decisions regarding the theoretical foundations on which programmes are designed, interventions are focused, and performance is measured. For example, the research findings, theory and model advocate the development of a relational approach which supports the personal development and growth of the founder through interventions like entrepreneurial schooling, mentorship and peer-based learning. It endorses a focus on firm level competencies which will encourage an external orientation and provides practical action-based processes via which the firms can increase its alignment with customers, stakeholders and market conditions. Furthermore, it encourages a people-centric approach to the development of resources and capabilities which focuses on optimising the contribution of people through the development of skills and relationships within the entrepreneurial ecosystem. The research has also uncovered some thought-provoking findings about the founder's experience of the high-growth episode and the impact of their mindset on growth intentions and operational decisions. Given the identified importance of the founder within the high-growth process, further research is advocated to explore the cause and effect of this human dimension. This knowledge could facilitate the identification of appropriate interventions which could be used to further enhance the founder's mind-set, confidence, self-belief and growth motivations. Finally, the high-growth process model can also be used as a practical tool via which support providers and firms may understand the

accumulative growth process, establish their current position and identify methods to enable the firm's transition towards a high-growth position. By increasing awareness of the combination of factors which influence high-growth, support providers and firms can identify the areas they need to adapt, facilitating more targeted and effective support.

Conclusions

Drawing on interviews with the founders of 23 high growth firms, this qualitative based research provides unique insights into the high-growth process and the contribution of support and intervention. In doing so, it contributes new knowledge to the literature base whilst providing practical research-based guidance on how policymakers and support providers can improve their interventions to cater for the specific needs of the HGFs.

This research provides important insights into how HGFs are growing, identifies a positive and important contribution of support and intervention, and provides practical guidance on how support for HGFs can be improved. However, the research also highlights some of the significant challenges which policymakers and business support providers face in utilising the appropriate theoretical assumptions on which to design programmes and the characteristics on which HGFs can be identified and targeted. They also need to design and deliver interventions which not only support the HGFs needs but make a positive economic and social contribution. To ensure HGFs do not become a lost opportunity that is attributed to luck or chance, continued investment in research is advocated to identify the best ways of supporting HGFs.

The key findings of this study includes the discovery that the high-growth process is driven by a firm's interactions and alignment with its external environment. Whilst extant growth theories have explored specific aspects and sides (internal and external environment) of the generic growth process, the research contributes a conceptual model which provides a holistic view of the factors and processes within the high-growth process. The research contributes to the literature by highlighting new and important factors in the process such as the position and impact of the founder as well as the interactions between action-based processes (competencies) and the firm's resource and capability level which guide how the firm develops and adapts.

Evidenced by the significant demand, use and reported positive effects, the research has identified support and intervention as an important contributory factor to the high-growth process. However, the study also observed how high-growth support policy and practice is out of kilter with who HGFs are, how they grow, and the type of interventions they want. In addition, the use of quantitative outputs to measure the individual effectiveness of initiatives are believed to be flawed in the context of the use of multiple support providers and an accumulative high-growth process. Collectively, the findings suggest if policy and practice is to become more effective and justify the support from the public purse, the gap between academic research, high-growth support policy and practice must be bridged. Policymakers and support providers need to recognise high-growth as an accumulative and non-linear process, understand the complexity and interrelationship between factors and processes, and appreciate the importance of HGFs relationship with the external environment. This study represents a move away from the traditional resource-based view of growth, and a step towards an external orientation and people-centric view of growth.

Whilst this research has sought to address many of the gaps in the knowledge base by contributing a new theory and model of the high-growth process, the economic contribution of HGFs, combined with the significant cost of high-growth support, creates a compelling argument for further research in this area. Further studies are required to validate and challenge this study's research findings and place them in context. A wider sample of high-growth participants from different geographical regions, identified using different types of definitions (different types of growth) over a longer period could be used to assess the transferability (external validity) of the high-growth process model. The research promotes a holistic view of the high-growth process and advocates the amalgamation of numerous growth theories (e.g. resource-based view, growth platform model, dynamic capabilities, strategic adaption) to explain and link the practical experiences of HGFs within one model which can be used in practice. The study emphasises the importance of using a holistic view to capture the interactions between the internal and external environment and the accumulative contribution of factors. It is only through this lens can we truly appreciate the complexity of the high-growth process and the amazing achievement of HGFs. A further interesting exploration would be a comparison of HGFs and non-HGFs

to see how the factors and processes differ (i.e. transactional vs relational). The use of quantitative and qualitative research could also be used to examine how founders' views and experiences compare with growth trends. This would enhance the knowledge base in an area which is currently identified as weak, and would bestow practical guidance on the use of interventions. The research also discovered that HGFs were accessing multiple support providers at the same time but described this as being problematic. Further research is thus advocated to explore the reasons why the HGFs are using multiple providers, identify the type of support which is being accessed by type of organisation, and what contributions this process is making to growth. Another interesting avenue would be to test the viability of access to paid support via a public-funded programme in order to address the HGFs issue with the fragmentation of business support.

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