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Looking Inside the 'black box' of a Digital Fintech: An Ethnographically Informed Conceptualisation of Firm Scaling

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An Ethnographically Informed Conceptualisation of Firm Scaling

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Abstract

In recent years there has been a subtle shift in the firm growth literature away from its traditional focus on measurement (the "how much" question) towards a much stronger appreciation of the manner in which firms grow (the "how" question). Indeed, there is now growing research interest in trying to understand the processes firms undertake to upscale, especially in growth-oriented digital firms. However, our conceptual and theoretical grasp of scaling remains at best under-developed and largely unsatisfactory. To address this omission this paper offers a novel ethnographically informed conceptualisation of the scaling process based on an empirical study of a London-based digital Fintech scale up. The paper demonstrates that while scaling is fundamentally a firm specific idiosyncratic process, it comprises a common range of endogenous and exogenous processes and activities to achieve economies of scale by intentionally developing growth-enabling strategic activities such as human capital re-positioning, business model configuration, customer acquisition, internationalisation and obtaining external growth capital. Under our model adept innovative and creative entrepreneurial human capital is a central driving force of successful scaling. Our proposed framework reveals that the interconnections, interdependencies and synergies between different scaling activities are crucial for mediating the overall success of the scaling process.

1. Introduction

Dating back to the seminal work of David Birch in the 1970s (Birch, 1979), interest in rapidly growing firms – Birch's infamous 'gazelles' – exploded due to their perceived ability to create jobs, generate wealth, reconfigure markets and drive productivity growth (Henrekson and Johansson, 2010). These entrepreneurial "black swans" (Aldrich and Ruef, 2018, p.458) have subsequently become of growing fascination due to the fact only a "select few.....create jobs, reduce unemployment, make markets more competitive, and enhance economic growth" (Shane, 2009, p. 163). Consequently, these firms have become something akin to the 'holy grail' for policy makers such as the OECD, World Bank and EU (Goswami et al, 2019; Flachenecker et al, 2020; OECD, 2021)[1]. Thus, examining the nature and dynamics of high-growth firms (HGFs) has become a central, and rapidly growing, component of entrepreneurship research (Delmar et al, 2003; Autio and Rannikko, 2016; Brown et al, 2017).

In recent years a new label has been applied to these firms: 'scale ups' (DeSantola and Gulati, 2017; Duruflé et al, 2017; Hart et al, 2021). This is despite growing recognition that interludes of rapid growth are not necessarily synonymous with scaling (Coviello, 2019). While a period of high growth may sometimes be a precursor to scaling, it is not necessarily a prerequisite. Indeed, some firms can scale without ever growing rapidly under the employment/turnover metrics commonly adopted to measure HGFs. Some scholars have noted that "scaling is not just about high growth" (Coviello, 2019, p. 5), yet many policy observers (e.g. the UK's Scale up Report and the OECD) erroneously misconstrue these differences and use the terms interchangeably (see Coutu, 2014; OECD, 2021)[2]. However,

[1] Relatedly, a large number of high growth and scale-up programmes have appeared in various countries in recent years (Brown et al, 2017; Hart et al, 2021).
[2] This misapprehension is not restricted to policy makers (see, for example, Greene and Rosiello, 2020; Mason, 2020).

these labels refer to two very different conceptual phenomena. In essence, high growth is an *ex-post* numerical phenomenon (i.e. denoting outputs such as growth in terms of employment/turnover), whereas scaling is essentially an organisational concept encompassing the processes of organisational change and transition (i.e. the processes which lead to improved organisational outcomes). Scaling is about *intentionally* enacting processes and growth enhancing activities (e.g. business model configuration, international expansion, customer acquisition, raising growth finance).

These definitional ambiguities may also stem in part from conceptual and theoretical misconceptions arising from a sustained empirical focus on 'how much' firms grow (McKelvie and Wiklund, 2010) leading some scholars to hold the view that "the theory of firm growth is in a rather unsatisfactory state" (Hart et al, 2021, p. 11). This has resulted in rather opaque and fuzzy understanding of firm growth and scaling. What decisions are made? How do these link to inputs, resources and past events? What actions are taken? When? What are the implications of these and how are these shaped by endogenous and exogenous pressures? Critically, how do these help us to conceptually differentiate between growth and scaling. This issue is of particular relevance given the fast-moving pace of change in modern day economies, where digitalisation has dramatically re-calibrated the manner in which firms develop, grow and scale at rapid velocity (Nambisan et al, 2019). Yet we still know very little about the scaling process in firms with digital business models (Piaskowska et al, 2021), other than that these firms share a number of commonalities affecting scaling such as the adoption of subscription-based business models, a reliance on equity finance and relative ease of internationalisation as so-called 'born digitals' (Monaghan et al, 2020). Therefore, some have called for new models of firm development and growth, arguing that expanding "the new

reality of the knowledge economy should be an urgent issue on the economic research agenda" (Walker, 2009, p. 29).

This begs a key question: what exactly is scaling? According to Coviello, (2019, p. 5) definitions of scaling are intrinsically "messy". In essence, scaling is considered to be "strategies that prioritize the attainment of economies of scale" (Piaskowska et al, 2021 p. 1) and occurs when a firm "dramatically expands the scale of its business operations" (Hellman and Kavadias, 2016, p.7). Coviello (2019, p.5) defines scaling more specifically as a "stage when a company takes a proven concept and delivers it to a wider audience, often through market penetration and geographic expansion." Some observers define scaling opaquely as "spreading excellence within an organization as it grows" *(*Shepherd and Patzelt, 2020, p.1) in order to "add customers, capacity, and capability fast enough to maximize the market opportunity" (O'Reilly and Binns, 2019, p.58).

This definitional incertitude may originate from the intellectual antecedents of the scaling concept. Ostensibly the term emanated from the consultancy sphere[3] and is sometimes referred to as "blitzscaling" (Sullivan, 2016; Kuratko et al, 2020). While undeniably a hot topic (see Sullivan, 2016; O'Reilly and Binns, 2019), it has yet to receive much in the way of considered theoretical attention (Shepherd and Patzelt, 2020). Scaling activities and processes warrant dedicated theoretical and empirical reflection as they are unique compared to the growth strategies of *de novo* start-ups, small-to-medium sized enterprises (SMEs) and larger corporations (Piaskowska et al, 2021). Therefore, given the vague and normative nature of some of these definitional issues, herein we offer are own definition of

[3] https://www.mckinsey.com/business-functions/people-and-organizational-performance/our-insights/bad-to-great-the-path-to-scaling-up-excellence

scaling as "*undertaking activities to substantively enhance the magnitude of business operations by intentionally enacting processes to achieve economies of scale and developing growth-enabling strategic activities such as human capital re-positioning, business model configuration, customer acquisition, internationalisation and obtaining external growth capital"*. Importantly, we take 'scaling' to pertain to processes, rather than depicting a categorical type of firm. Whilst we recognise that this definition is not exhaustive or all-encompassing, we think it nicely encapsulates the key organisational elements of scalable businesses.

Following others (Shepherd and Patzelt, 2020), this paper seeks to address some of the omissions in the literature on scaling through a conceptualisation illustrated by empirical insights from a novel ethnographic study of a London-based digital Fintech firm. In doing so, we concur with others that scholars should embrace a wider "variety of qualitative methods that enable different forms of analysis and offer the potential for novel theorizing of entrepreneurship processes" (Van Burg et al, 2022, p. 4). Ethnographic methods enable deeper insights than traditional entrepreneurship research methods, and illustrate the differences between the espoused intentions, beliefs, and attitudes of managers and the lived experience of staff (Newth, 2018). They also align to calls within the entrepreneurship field for more innovative qualitative research techniques that are interactive, pro-social, cognitively hot and activity-based to help us better understand the complexities of the entrepreneurial process (Shepherd, 2015; Hlady-Rispal et al, 2021). Thus, rather than being a traditional empirical paper, this is a conceptual paper built on extant theory in conjunction with supporting empirical data (Jaakkola, 2020; Lindgreen et al., 2021) collected ethnographically within a London-based digital Fintech firm. Our key research objective is to *explore the 'black box' of scaling at a firm level to better understand the nature and dynamics*

of organisational scaling and conceptualise how it is are practically enacted within an organisational context.

The spatial location for the study is important as London is one of the strongest ecosystems for Fintech businesses in the world. Being home to around 40% of all Europe's Fintech unicorns it provides an excellent vantage point to investigate the scale up process in this dynamic spatial/institutional context (Spigel, 2022)[4]. This locational backdrop is crucial, as socio-spatial 'context' hugely impacts entrepreneurial activity (Welter, 2011; Welter et al, 2019). The data was collected by a member of the research team over a twelve-month period (2018-2019) acting as an embedded participant-observer in the organisation (henceforth 'Money4Kids')[5]. This allowed for the capture and revelation of meaning-making processes that may have otherwise have been hidden or concealed to outsider observers (Van Maanen, 2011; Yanow et al, 2012). During the time-period examined, key scaling activities such as acquiring significant volumes of new customers, internationalising into new markets and securing additional external sources of funding were undertaken by the firm. The illustrative data presented serves to contextualise and support our conceptualisation and line of argumentation, thereby contributing to further conceptual development and theory building within the scaling research domain (Shepherd and Patzelt, 2020).

This paper makes a number of important contributions. First, it contributes to the firm growth research domain by conceptualising scaling and delineating scaling from growth as a process of 'emergence' (Davidsson, 2003; 2005). Second, it engages in theory building by elaborating on dynamic models of firm growth and triggers to allow for greater explanatory

[4] https://startupsmagazine.co.uk/article-london-fintech-capital-europe#:~:text=Over%2038%25%20of%20European%20fintech,second%20highest%20ranking%20city%2C%20Berlin.

[5] Money4kids is a pseudonym; the real name of the firm has been withheld for confidentiality reasons.

power of scaling activities. Third, it highlights the value of alternative methodological approaches for future conceptual work, with ethnography offering a powerful and insightful tool for looking inside a firm's scaling processes (Shepherd and Patzelt, 2020). The paper is structured as follows. It begins with a critical review of the literature. Following this, we explain the ethnographic study which provided the illustrative data underpinning our conceptualisation. We then detail the temporal evolution of the firm to date. We then consider the microfoundations of scaling and outline a conceptualisation of firm scaling. Conclusions and future research directions are then sketched.

2. Critical Review of the Firm Growth Literature

Our attention now turns to a review of the literature in relation to firm growth. In order to comprehensively examine the nature of the research and methodological approaches utilised a comprehensive review of the high-growth literature over the last decade (2011-2021) was conducted. Given that the previous meta-analysis of the high growth field was done ten years previously by Henrekson and Johansson (2010) we adopted similar search terminology to make some temporal comparisons how the field is evolving. The following databases were used to identify the relevant literature: the American Economic Association's electronic bibliography of economic literature (Econlit), Google Scholar, Journal Storage (JSTOR), Research Papers in Economics (RePEc), and Social Science Research Network (SSRN). Therefore, following Henrekson and Johansson (2010) we searched for ''gazelle'', ''high-growth firm'', ''rapidly growing firm'' and "scaling"[6], and similar words and phrases in titles, abstracts, keywords, and, where possible (Econlit, JSTOR, and RePEc), in the main text.

[6] While Henrekson and Johansson (2010) did not include the term "scaling" in their search criteria we included the term given the prevalence of the term in the recent high growth entrepreneurship literature.

Conceptual, critique and review-type papers were deliberately excluded from this review. In total we identified 115 empirical papers under this search framework (see Section 2.3).

2.1 Theoretical foundations of firm growth

Ever since the seminal work of the economist Edith Penrose in the 1950s (Penrose, 1959), understanding the dynamics of firm growth has been a central research theme facing scholars. The early work by Penrose subsequently dominated thinking and theorising around the nature of firm growth for the next 30-40 years. From a Penrosean viewpoint, "history matters" in that growth is fundamentally perceived as essentially an evolutionary process involving the gradual accumulation of knowledge and "resource bundles" unique to the firm (Garnsey, 1998). According to Penrose there is a cumulative process of interaction between the "market opportunities of the firm and the productive services available from its own resources" (Penrose, I960, p. 14). Implicit in Penrose's resource-based view (RBV) is that resources and knowledge acquisition are inextricably linked to firm size and age (i.e. as firms grow and become bigger/older they accrue additional knowledge and resources to help them grow further). Indeed, she notes that in general "the larger and older firm has certain advantages over the smaller and newer firm which ease its operating problems" (Penrose, 1959, p. 205).

Given the intellectual lineage of the RBV and association with economists such as Penrose it is perhaps unsurprising that many scholars focused on the growth rate rather than the growth process *per se*. Indeed, some of criticisms of Penrose's RBV is the insufficient attention is paid to the entrepreneurial traits, dynamic capabilities and behaviours shaping the growth of firms (Augier and Teece, 2007). From a Penrosean vantage point the role of people and entrepreneurial management are largely overlooked. The strategic management

scholar David Teece has been one of the most ardent critics of the RBV for the lack of focus on aspects such as entrepreneurial management and resource mobilisation (Teece et al, 1997; Teece, 2007). In response to this he forwarded the important concepts of ordinary and dynamic capabilities. According to Teece ordinary capabilities "*are about doing things right*" whereas dynamic capabilities entail "*doing the right things, at the right time*" (Teece, 2016, p. 210). Teece claims effective entrepreneurial leadership is about "sensing and understanding opportunities, getting things started, and finding new and better ways of putting things together" (2007, p. 1346). Indeed, scholars suggest that it is "through the entrepreneurial process of cognition, discovery, understanding market opportunities, and coordinated knowledge that inputs become heterogeneous outputs" (Alvarez and Busenitz, 2001; Barney et al, 2001, p. 628).

2.2 Conceptual Depictions of Firm Growth and Scaling

In tandem with the widespread adoption of the RBV since Penrose's work, firm growth has hitherto often been rather crudely conceptualised via anthropomorphic life-cycle models (Phelps et al, 2007; Sternad and Mödritscher, 2020). Stages of firm growth became the dominant theoretical paradigm adopted towards understanding business growth from the 1960s up until the turn of the 21st Century (Levie and Lichtenstein, 2010). According to Hamilton (2010), life cycle stages models also dominate textbook expositions of small business growth (see Schaper and Vorley, 2007). Like the RBV, implicit it in these life-cycle models is that as firms grow, they accumulate resources and knowledge enabling them to grow further. Knowledge accumulation is central in these frameworks. Whilst intuitively appealing the adoption of a life-cycle schema rests on three unlikely propositions about the

nature of growth. First, distinctly different 'stages' of development can be clearly identified; second, the order in which organisations undergo these recognisable stages are *de facto* pre-determined and thus predictable; and third, organisations undergo the same sequence of developmental changes as they grow, just like human beings (Phelps et al, 2007).

The ontology of stage models -that growth is a linear, sequential and deterministic process- has been seriously questioned by a number of scholars (Hamilton, 2010; Levie and Lichtenstein, 2010; Brown and Mawson, 2013). Such as been the volume of opposition to these models, following a meta-analysis of the literature Levie and Lichtenstein (2010) offer a terminal assessment of life-cycle models of firm growth. In contrast to the biological foundations of stages models they argued that organizations are not like organisms in that they don't have a genetic code controlling their development. Replacing those outmoded biological assumptions with more recent formulations from complexity science, they argue that organizations can anticipate and even co-create their environment, making internal shifts to fit current or projected changes moving firms into new "dynamic states" (Levie and Lichtenstein, 2010). According to the dynamic states approach, entrepreneurs or managers create effective links between the internal value creation system of a firm and external opportunities enabling firms to leverage business opportunities and create value for customers. Critically, these new theories recognise the complexity and specificities of firm development, noting that the "growth processes of firms are nonlinear, follow different development patterns, and are contingent on an interplay of various internal and external forces that together determine a firm's options for exploration and exploitation" (Sternad and Mödritscher, 2020, p, 1-2).

However, how and why these dynamic states arise is not explicitly delineated. In recent years there has been a growing focus on the important concept of "trigger points" as key inflection points shaping the growth in firms. The concept of trigger points recognises that "high growth is episodic rather than a time-invariant trait of firms" (Coad et al, 2021, p. 5) and is fundamentally shaped by a number of different internal (e.g. new product development, management buy-outs etc) and external (e.g. injections of external finance or tiggers or events. In other words, it is how entrepreneurs and managers respond, shape and capitalise on opportunities which ultimately determines their growth trajectory. Indeed, scholars attest that often a series of critical events and activities are dealt with through bricolage (making do with what you've got etc.), bootstrapping and improvisational steps (Baker, 2007; Grichnik et al, 2014). Closely aligned to the trigger point concept is the notion of "entrepreneurial leaps" put forward by Sternad and Mödritscher (2020). They claim entrepreneurial leaps can be triggered by crises (distress) as well as by arising opportunities, which can both influence the growth path of the firm without necessarily following a predetermined sequence. In other words, organizational adaptability and reconfiguration in the face of events is key.

While these newer conceptual insights afford much greater nuance around the discontinuous, punctuated and turbulent manner in which growth takes place than traditional life-cycle approaches, they do little to shed light on the internal processes of how firms capitalise on these trigger points to scale up a business. In recent years an embryonic literature is beginning to emerge which attempts to conceptually unpack elements of scaling (see Shepherd and Patzelt, 2021). For example, some scholars have focused narrowly on certain discrete activities associated with scaling such as business model configuration

(Nielsen and Lund, 2018). Examining the business models in over 90 successful Scandinavian scale ups, they identified 5 traits recurrent across these firms. These included adding new distribution channels, removal of traditional capacity constraints, outsourcing capital investments to partners, getting partners to assume multiple roles in the business model and establishing platform models in which even competitors may become customers.

Obviously, business model configuration is central to successful scaling, but it doesn't operate in a vacuum so without other key elements of scaling being undertaken an organisation will not necessarily succeed. For example, other scholars stress the crucial role of raising external finance to enable the scale up process (Duruflé et al, 2017), especially in digital firms who are often pre-revenue for a number of years. Given the added value and relational connections available to firms funded by venture capitalists such as scouting, upskilling and coaching new ventures (De Clercq and Sapienza, 2006; Meglio et al, 2017), financing activity allows scale up firms to obtain a critical versatile resource, thus promoting a particular growth-enabling activity (Piaskowska et al, 2021). Arguably therefore, scaling cannot be viewed as a singular activity but rather as a holistic process facilitating organizational growth, adaptation and change.

According to Shepherd and Patzelt (2021), the entrepreneurship field would benefit greatly from future studies that explain how knowledge management facilitates scaling; how scaling is influenced by founder replacement; and how current scaling influences the drivers of subsequent scaling. The central theme of their thesis around scaling is the central importance of knowledge and social capital as a fundamental ingredient of scaling. They argue that as organisations grow, greater formalisation of knowledge transfers is required within firms. Therefore, scaling "is enhanced for ventures with higher intra-organizational

social capital (i.e., structural, cognitive, and relational) than ventures with lower social capital" (Shepherd and Patzelt, 2021, p.4). Another key element of the scaling rubric is the role of the original founder. It is well established in the entrepreneurship literature that starting a venture and scaling a venture are two distinctive tasks both requiring different skillsets, relational connections, experience and knowledge (Shepherd and Patzelt, 2021). Therefore, how firms manage the difficult transition from a founder-led organisation to a professionally managed one will be key to the successful scaling.

We can see that the concept of scaling has been sketched out in very broad-brush terms by scholars thus far. Key components of the scaling process have been identified but have, as yet, to be properly examined and unpacked in depth. Furthermore, as others have noted the crucial interconnections between each of these scaling processes have also yet to be properly fleshed out (Shepherd and Patzelt, 2021). It appears that the innate complexities and specificities of the scaling process may require detailed probing much more closely inside firms using the types of intensive research techniques and storytelling mentioned earlier - such as ethnography- often overlooked by firm growth scholars to fully explore the "black box" of scaling (Baker, 2007; Hlady-Rispal et al, 2021). What seems needed is more empirically-informed theoretical development around the full intricacies of the scaling process.

Twenty years ago, prescient scholars such as Vinnell and Hamilton (1999) lamented how most empirical studies of firm growth typically utilised cross-sectional and quantitative methods (often multiple regression analysis) to explain episodes of growth over various intervals. Despite this apprehension, scholarship on firm growth has continued firmly in this vein ever since. Such cross-sectional techniques work best when used to document a state

of relative equilibrium, but are often unable to capture complexities with regard to how firms evolve, grow and scale. Despite these significant limitations, scholars largely continue to rely on theoretical framings (e.g. life-cycle models) that have for many years been recognised as "extremely rudimentary, capable only of portraying hypothetical firms that bear little relation to the complex organizations we see in the world" (Hart, 1989, p.1757).

2.3 A Review and Critique of the Empirical Literature on High Growth

One of the most notable observations to be made about the current literature has been the tremendous upsurge in the volume of research on the topic of rapid firm growth over the last decade. Whereas Henrekson and Johansson (2010) noted approximately 20 papers had been published on this topic between 1990-2010, during the last ten years alone there has been a significant rise in research, totalling 115 papers published between 2011-2021. This demonstrates the significant and sustained interest in this research topic, with high growth entrepreneurship almost resembling a discrete part of the entrepreneurship research field similar in nature to the international entrepreneurship research domain. While papers appear across all the major prestigious entrepreneurship and economics academic journals (e.g. Journal of Business Venturing, American Economic Review, Industrial and Corporate Change, International Small Business Journal), the dominant home for these papers is Small Business Economics, featuring almost a fifth of all papers published during the last decade examined (i.e. 18).

Another key trait of the high growth research domain is the dominance of work by economists[7]. Consequently, the main methodologies adopted in these empirical studies

[7] This corresponds with the early focus by pioneers of the firm growth field like economists David Birch and John Haltiwanger and probably explains the dominance of the journal, Small Business Economics, as an outlet for published papers on this subject matter.

tends to be mainly quantitative regression analysis interrogating major (mostly national) large-scale, firm-level data sets (see Decker et al, 2016; Coad et al, 2017; McKenzie, 2017). These studies have helped the literature gain some causal insights into the broad nature and key characteristics of HGFs. A number of these studies have shown that HGFs are strong generators of employment growth (Anyadike-Danes et al, 2015), innovation (Coad et al, 2016), internationalisation (Brown and Mawson, 2016) and productivity growth (Du and Temouri, 2015). Using structural autoregressions, Coad et al (2017) found that for most UK firms, the growth process starts with employment growth which is then followed by sales growth, then growth of profits and then finally growth of assets.

These quantitative methodological techniques are the dominant approaches used across the vast majority of the literature surveyed during the last decade. Roughly around 80% of all the papers were quantitative in nature adopting these types of data, methods and econometric analysis. In the main the data utilised was cross-sectional in nature rather than longitudinal. Frequently, the majority of the papers utilise the standard OECD measurement criteria for retrospectively defining HGFs[8]. Despite its ubiquity within studies of HGFs, many scholars question the veracity and usefulness of this definition (Brown et al, 2017; Hart et al, 2021). As previously mentioned, to the best of our knowledge, concrete definitions of scale ups or scaling have yet to be clearly delineated within the literature.

While quantitative methods dominate the literature on HGFs there is now a growing body of work examining HGFs using qualitative techniques (see, for example, Mawson and Brown, 2017; Moghaddam et al, 2017)[9]. These studies help to explore the traits of the

[8] The OECD define HGFs as "an enterprise with average annualised growth (in number of employees or turnover) greater than 20% per annum, over a three year period, with a minimum of 10 employees at the beginning of the growth period" (OECD, 2008, p. 61).
[9]Mixed methods approaches have been used but tend to be quite rare (see, for example, Chandler et al, 2017).

entrepreneurs within these rapidly growing SMEs and the types of growth strategies adopted therein. For example, in one such study of HGFs in New Zealand they found that the founders managed the businesses by developing a pro-growth culture among employees and supported this through strong financial control systems and low debt preference (Hinton and Hamilton, 2013). This insight into the characteristics of the entrepreneurs and associated SMEs is vital to improving our grasp of the organisational traits and dynamics within these firms. Qualitative studies can also yield crucial insights for policy makers. Drawing on qualitative research in Scotland, some scholars argue that policy-makers are guilty of looking in the wrong places (e.g., new or R&D intensive) for HGFs (Mason and Brown, 2013). They claim the heterogeneous nature of HGFs in terms of their sectoral origin, age, size make it impractical (if not impossible) to target support on particular sectors, technologies or types of firms.

Overall, what is the most striking aspect of the high growth literature is a general reliance on retrospective backward-looking data, reinforcing a focus on growth rather than the process of scaling (which is obviously impossible to measure from extant databases). Despite calls for more in-depth work exploring the process of firm growth over time (see Vinnell and Hamilton, 1999) and a general consensus that longitudinal studies are of great value and at present very much underrepresented (Chandler and Lyon, 2001; Davidsson et al., 2006; Davidsson and Wiklund, 2006; Delmar and Wiklund, 2008), few recent studies have explored the process of firm growth in granular detail over time, let alone in 'real time'.

In line with the rest of the entrepreneurship research field the use of alternative research techniques to examine the growth process within HGFs is largely absent from the firm growth literature. However, in order to advance theory-building some studies have

adopted intensive research methods such as “matched pairs” of growers and non-growers to see the differences in how firms perform and grow (Hansen and Hamilton, 2011; Mawson, 2018). Such work has found that factors such as opportunistic perceptions of the external environment, controlled growth ambitions of the owner-manager, a business culture of innovation and flexibility and the extensive use of private business networks were all key features evident within rapidly growing firms. However, while informative these approaches often fail to capture the unique processes in which firms organisationally upscale.

Interestingly, none of the studies examined during the last ten years has adopted ethnographic methods to examine firm growth (or scaling). This is despite the fact that ethnographic approaches are an under-utilized, yet highly promising perspective for understanding the nuances of entrepreneurial processes and practices (Fischer et al, 2020; Hlady-Rispal et al, 2021; Van Burg et al, 2022). This may stem from the perception that entrepreneurial activity is essentially a solo activity enacted by individual entrepreneurial actors rather a “social game of processual nature” involving many participants and wider contextual factors (Davidsson, 2017, p. 7). Therefore, to fully comprehend the unique nature of entrepreneurial process scholars have pronounced there may be considerable merit in undertaking new research techniques and methods which are more activity-based, pro-social, cognitively hot and interactive (Shepherd, 2015). One such research technique which potentially fulfils the ability to qualitatively capture these traits is ethnography, especially given its ability to act in tandem with, and experientially learn from, the people actually making and shaping organisational decisions making within growing ventures (Hlady-Rispal, et al, 2021). Therefore, ethnographic methods may be valuable part of the methodological toolkit to look inside the “black box” of firm growth and scaling.

3. Our Approach

As noted earlier, this conceptual paper seeks to better comprehend the nature and dynamics of organisational scaling enacted within an organisational context. A common approach in conceptual papers is to start from a *focal theory* by arguing that a particular concept, theory, or research domain is internally incoherent or incomplete (Jaakkola, 2020). Herein we draw on the dominant domain theory from high growth entrepreneurship, specifically the "dynamic models of growth" currently gaining traction within the field, linked to illustrative empirical data in an iterative process of theorisation (Lindgreen et al., 2021). We can therefore address the observable shortcomings in the existing literature with supplementary value.

Therefore, our theorising and conceptual development thus focuses on "'big picture' patterns, connections, and mechanisms rather than specific causal relationships' (Lindgreen et al., 2021, p. A4). We then identify the dynamics and changes within the scaling phenomenon in order to address shortcomings with extant theory and to help develop an alternative conceptual model of the scaling process (Cornelissen, 2017; Jaakkola, 2020). We do so by storytelling and sensemaking from one specific organisational context. This type of qualitative research is particularly suited to "illuminating the patterns and different types of processes that constitute entrepreneurial endeavours" (Van Burg et al, 2022, p.7). Ever since her seminal study examining the Hercules Power Corporation undertaken by Penrose (1960), single case studies have been shown to provide a rich and compelling insights into the growth processes and strategies deployed in entrepreneurial ventures (Baker, 2007). The illustrative data from our case study presented serves to contextualise and support our narrative as well as our conceptual analysis, theorisation process and resulting conceptual development.

The data was collected over a twelve-month period (2018-2019) as part of a ethnographic study of business scaling in a London-based Fintech organisation.[10] Ethnography is recognised as a very relevant methodology for entrepreneurship research (Fischer et al, 2020; Hlady-Rispal et al, 2021; Van Burg et al, 2022), albeit an underutilized one (Johnstone, 2007), especially given its ability to uncover data that might otherwise hidden or concealed (Van Maanen, 2011; Yanow et al, 2012). Ethnography is a qualitative method claiming to get as close as possible to the social context (for example, everyday life, chats and talks) with the researcher's lengthy immersion with the local population or community (Hammersley, 1997; Hlady-Rispal et al, 2021).

The work essentially deployed autoethnography which is an approach to research and writing that seeks to describe and systematically analyse personal experience in order to understand cultural experience. Autoethnography refers to either an ethnography of one's own group, or to an ethnography that is "highly reflective of the situatedness of oneself in the context of study, and thus is likely to be more transparent about the role of the researcher than other methods" (Van Burg et al, 2020, p. 9). By deeply immersing oneself in a research site for a long period of time, everyday 'normal' and 'regular' aspects of entrepreneurial life can be witnessed, experienced, and captured. One member of the research team undertook the role of a participant-observer embedded in the organisation (Brewer, 2000). This allowed for the collection of a vast volume of 'real-time' empirical data (Brundin, 2007) to best explore the phenomena of growth and scaling (Hamersley and Atkinson, 1990). This provides unique and powerful insights how organisations operate, enact changes and reconfigure themselves. To fully understand the nature of the entrepreneurial process, researchers must take into

[10] At the organisation's request, further sectoral and other identifying information is withheld to ensure anonymity.

account how individuals learn and how different modes of learning influence future opportunity identification and exploitation (Corbett, 2005).

A rough calculation is that the researcher took part in studying the firm for approximately 200 days which translates roughly to around 1500 hours of exposure to the firm and its behavioural activities. During the observation period the researcher collected the information via, *inter alia*, observations and involvement of group and team meetings, structured and unstructured interviews, impromptu conversations, documentary analysis of organisational materials (for both internal and external audiences) and interrogation of commercial and operating data. The participant observer met with the other members of the research team roughly once a month to discuss, to reflect upon and synthesise their experiences in the firm. In doing so, we hoped to catch indications of scaling "as they happen[ed]" (Brundin, 2007, p. 279) to best address what are inherently emergent processes which manifest over a long(er) period of time (Davidsson, 2003; 2005). At the time the study began, the firm was undertaking key scaling activities such as acquiring significant volumes of new customers, implementing new HRM protocols, internationalising into new markets and securing additional external sources of funding.

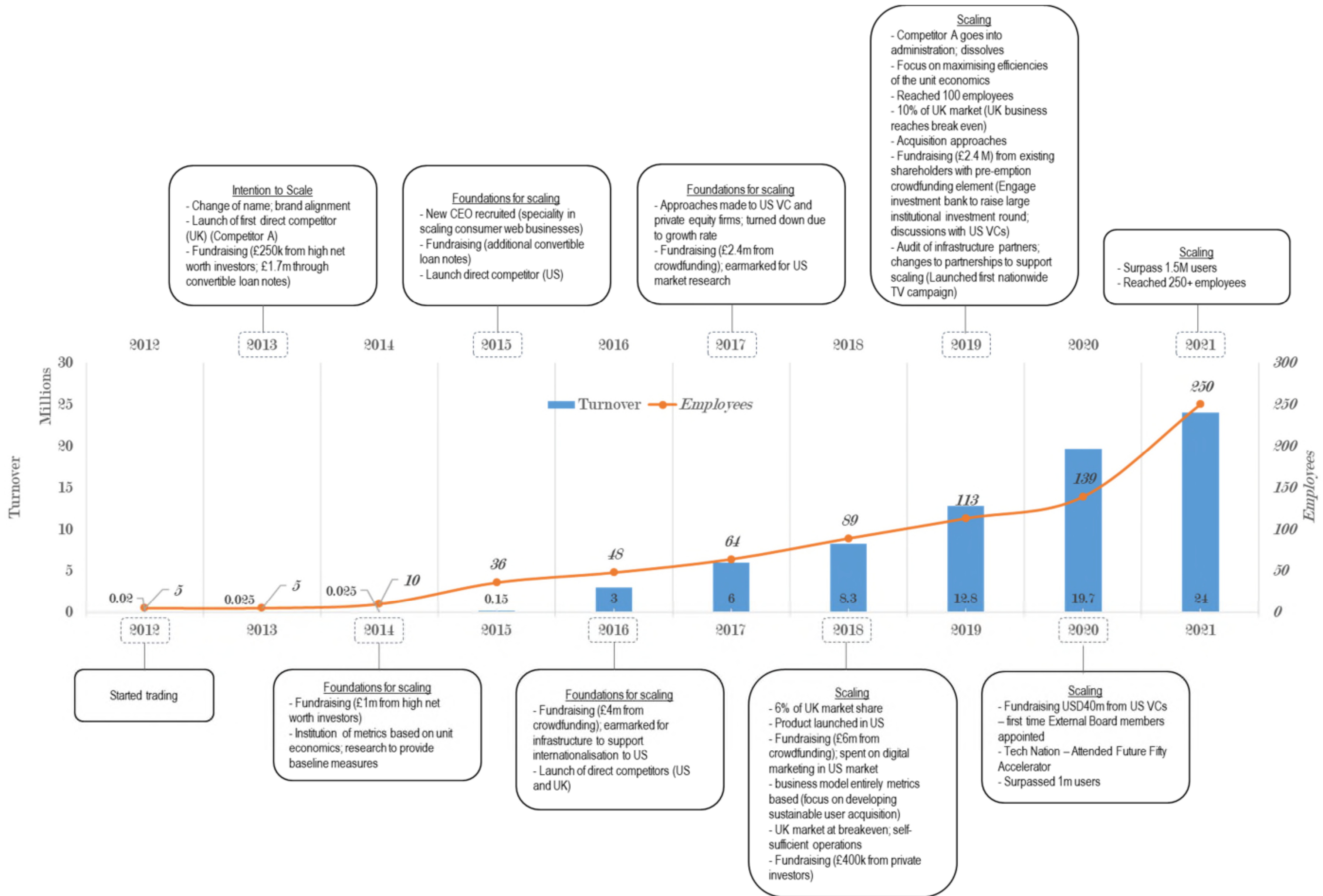
4. The Story so Far

3.1 Intentions to Scale

The context for this longitudinal ethnographic study was "Money4Kids", a London based fintech firm offering a unique pre-paid debit card offering for children aged between six to eighteen. See Figure 1 below which outlines a timeline of the firm's evolutionary journey, temporally depicting key triggers/events. Money4Kids was founded by an English female entrepreneur and began trading in 2012. After several years of background research into

youth banking products and wider consideration of financial literacy issues amongst children and young people, they developed a pre-paid debit card embedded within a subscription-based business model. Early in 2013 the company directors determined a strategic focus on scaling the business with their motto being to "*Scale without Growing Pains*". This corresponded with the launch of their first direct competitor in the UK (Competitor A), reaffirming their thoughts on the market potential of their offering. They raised a small amount of funding (£250k from high-net worth investors £1.7m through convertible loan notes) to support renaming and rebranding the organisation to better align with their product and market messaging and to invest in additional marketing.

Figure 2: Timeline of the Evolution of Money4Kids



3.2 Foundations for Scaling

The following year, in 2014, Money4Kids started to put in place the foundations for intensive scaling. Most critically, they recruited a new CEO with a specific speciality in scaling consumer web businesses (including a number of US-based Unicorns). The CEO developed and began to embed a range of performance metrics based on unit economics to underpin Money4Kids' future scaling, particularly around customer acquisition and retention. To support this process, the company raised £1m from high-net worth investors. By 2015 Money4Kids was seeing traction in the market, as well a wider market development including the launch of their first US-based direct competitor. The company recognised the need for further funding to support developments so in addition to raising funding via a number of convertible loan notes, they started to explore crowdfunding as a source of funding. In 2016 they launched their first crowdfunding campaign on the UK equity crowdfunding platform, Crowdcube, raising £4m which was earmarked for technical infrastructure as well as to support internationalisation into the US market which was seen as having significant profit potential. Additional competitors in the UK and the US started operating, challenging Money4Kids' offering in certain respects (e.g. by offering a free service, rather than requiring a subscription). For example, "Revolut Junior" was established. The company continued to develop as planned, prioritising the fine-tuning of the unit economics and performance metrics rather than seeking to implement product developments or internationalise to new markets faster. As a result, the company saw limited turnover growth, with the firm remaining pre-revenue between 2012-2016. To further finance expansion into the US, in 2017 Money4Kids made a number of approaches to US-based Venture Capital and Private Equity firms, but were consistently declined by VCs due to their modest growth rate and financial performance. These funders remarked that they would expect to see such Fintech firms

growing much more rapidly, and that turnover growth was preferable to scaling-oriented sustainable business model based on unit economics that Money4Kids was prioritising. To compensate for this lack of funding, Money4Kids again turned to crowdfunding to fund their US market research and development, raising £2.4m in Q3 of 2017.

3.3 The Dynamics of Scaling

By 2018, Money4Kids had reached a UK market share of 6% and financial breakeven. Operations were nearly self-sufficient, built on a metrics-based business model focused on sustainable user acquisition. Turnover growth was occurring, corresponding with growth in employees, starting a period of intensive growth in turnover/employment. By 2018 Money4kids were the 8th fastest growing company in the UK according to the Sunday Time tech track (Sunday Times, 2018). This rapid growth provided financial stability which allowed the company to prioritise international development, launching their offering in the Eastern US. In addition, Money4Kids embarked on an ambitious fundraising campaign to support scaling and growth, raising £400k from private investors and £6m from a third round of equity crowdfunding. Additionally, turnover growth increased substantially. In 2019, seeing turnover growth of over 50%, the company reached 100 employees in the UK. With performance metrics in place and performing well, the organisation shifted focus to maximising the efficiency of these unit economics. To manage the sizable (and growing) headcount, a professional HR manager was recruited to develop and implement HR procedures across the organisation. This was a particularly successful year for Money4Kids: they reached 10% share of both UK and US markets, with US revenue matching - and then exceeding - UK revenue and a low monthly churn rate of customers 1.5%.

The company was subject to a number of acquisition approaches from other UK and US based Fintech firms, but opted to continue operations as planned, reopening discussions with US-based VC firms, undergoing an audit of its infrastructure partners to ensure fitness to support further scaling and raising £400k from private investors. Against this backdrop, Money4Kids' first UK competitor (Competitor A) went into administration and dissolved, citing instability of their financial model. Despite the challenging trading conditions for many arising from the Covid-19, Money4Kids saw continued growth and scaling in 2020 due to large uptake in contactless payments which occurred during the pandemic, continuing its trend of c.50% year on year revenue growth. By the end of 2021, the firm had over 2 million users and 188 staff members. After a protracted 18month negotiation due to Covid, they completed a game-changing fundraising round of Series A VC with US VCs of $40m to support operations and growth, achieving a company valuation of £90m. Following this successful raise one of the partners of the VC and another accomplished CEO and marketing expert both joined the Board of Money4Kids.

5. The Microfoundations of Scaling

It is now our intention to advance a conceptualisation of the scaling process. In essence there are core micro-foundations, or activities and processes underpinning firm scaling. These largely stem from key moments of change within the organisation, or 'triggers' (Brown and Mawson, 2013), which can be endogenous (activities or processes which are internally undertaken within the firm itself) or exogenous (activities or processes which are largely driven by external actors acting in tandem with the firm). These triggers may also interact to cause what we label 'secondary triggers'.

A key endogenous scaling process is related to human capital repositioning when the original founder(s) migrate away from the top management team to a less hands on (often a non-executive role) position within the firm. As other scholars have noted, starting a new business venture and scaling a venture are two very different discrete tasks requiring different skillsets, relational connections and experience (Shepherd and Patzelt, 2021). The transition from a founder-led venture to a more professionally managed firm is a crucial part of the scaling process and one fraught with potential pitfalls, especially when founders fail to acknowledge their managerial limitations. We saw during the case study that the replacement of founder with a replacement CEO with prior industry experience of scaling a major consumer businesses was a major or primary trigger point which moved the firm into a different scale up trajectory. It was widely acknowledged within Money4Kids that this elevated the cognitive mindset of the firm firmly towards a much more professionally run and ambitious organisation. In this instance, the new managerial teams were quickly able to impart a discernible culture of scaling within the organisation. This chimes with other work showing how previous management experience increases the capabilities to achieve rapid growth (Stam and Wennberg, 2009: Demir et al, 2017).

As a consequence of the introduction of a more professionally run business operation instigated by the new CEO, a raft of other processes then became embedded into the business which enabled further scaling. During the onset of the new management our participant observer noted that the firm began to "*grow the team beyond the current size of the business*" as one executive described this process. It was noted earlier how growing headcount in the firm led to the appointment of a professional HR manager who was recruited to develop and implement HR procedures across the organisation. When organisations grow rapidly they can often encounter great difficulties of maintaining effective HRM systems which can result in

poor recruitment decision-making (Hambrick and Crozier, 1985). Indeed, a key distinguishing feature of rapid scaling is the abnormal need to recruit new employees in a short time frame, hence the need for good HRM systems to manage this effectively. Therefore, having the ability to upgrade and leverage employees' skills has been shown to depend largely on effective HRM systems and practices in the firm (Barringer et al., 2005; Demir et al, 2017). These types of formalised processes are crucial for maintaining the effective management of human capital within a fast growing operation. They are also vital for overseeing a good culture of positive workplace relations within organisations which are conducive to strong employee involvement and commitment.

Another positive knock-on effect of the new entrepreneurial CEO in terms of process development was the renewed focus on customer acquisition and associated metrics within the firm. As noted above, the new CEO was exceptionally focused on metrics linked to customer acquisition, new subscribers and account retention. This included monitoring things like the speed in which and the number of accounts were activated by customers and the attrition rate in terms of customers closing their accounts with Money4Kids. While maintaining a strong focus on such metrics is necessary to keep a track on operational developments, it is also vital to be able to demonstrate the validity of their business model to future investors who are also often very metric-driven when making investment decisions.

Another impact of the new management team was a closer focus on adapting the firm's business model. The business model provides a pathway by which technological innovation and knowhow combined with the utilisation of tangible and intangible assets are converted into a stream of profits (Teece, 2018). While commonplace in the sphere of digital businesses, subscription-based business models are not often deployed by banks and

payment firms who typically charge fees based on the transactions undertaken. However, the decision by Money4Kids to undertake a subscription model was a novel approach which effectively guaranteed a recurring income stream from their service even when their customers do not utilise the product. According to some, the “path to profitability” and scaling is business model design and should be a fundamental objective when scaling digital firms (Teece and Linden, 2017; Nielsen and Lund, 2018). Indeed, business model configuration is seen as a core element of a firm’s dynamic capabilities and essential for ensuring superior firm performance (Teece, 2018). Another modification of the firm’s organisational business model configuration came when they decided to audit the firm’s payment partners. This then led to them moving to a much larger and more reliable payment partner. This strategic choice of partners chimes with others who have examined successful scalable businesses (Nielsen and Lund, 2018).

We now wish to turn to *exogenous processes* instigating scaling within firms, which are largely driven by external actors acting in tandem with the firm. Coordinating these external actors, be they investors, institutional actors, customers or stakeholders, is vital to the scaling process. A good example of an exogenous scaling process entails putting in place processes to help raise growth capital to finance organisational expansion. A fundamental element when raising finance is the ability of a firm to engage in relational interactions with financiers and other external investors (van Rijnsoever, 2020). A key source of growth capital for innovative scaling firms, especially in the digital realm, is equity finance given the inherently risky nature of these informationally opaque firms which often precludes them seeking debt finance (Kerr and Nanda, 2015; Duruflé et al, 2017). This is often obtained either directly with the investors -such as venture capitalists (VCs) or business angels (BAs) - or via other intermediaries within an entrepreneurial ecosystem such as equity crowdfunding

platforms or business accelerators. Accessing these equity investors with 'deep pockets' to help scale firms is often problematic especially in Europe compared to the US owing to paucity of major VCs in some European countries (Aernoudt, 2017). Therefore, obtaining major growth finance from equity investors (often overseas based VCs) plays a pivotal or primary trigger enabling firms to scale up, as demonstrated by the successful VC raise by Money4kids in 2020.

Connected to the central importance of finance in the scaling apparatus of firms is the ability to interact, connect with and successfully navigate other institutions and entrepreneurial actors within a firm's entrepreneurial ecosystem (EEs). Indeed, there is a sizeable and rapidly growing literature demonstrating the crucial role of relational connections and networks underpinning the nature of different ecosystems (see van Rijnsoever, 2020; Rocha et al, 2021). It is now well accepted that some EEs offer unique resources, such as specialist finance, repositories of knowledge and human capital, which then confer on firms' specialist assets to help them grow and scale. A good example of an EE offering firms these specialist assets is London's Fintech EE (Spigel, 2022). We saw from the case examined herein that being located in London offered the firm a unique array of benefits to help them scale the firm. For example, in terms of obtaining external finance, Money4Kids used other actors in the London EE to raise early-stage growth finance via the London-based crowdfunding equity platform, Crowdcube[11]. According to scholars often a key benefit of this form of investment is the speed of raising this form of equity finance (Brown et al, 2019) which in turn enabled the company to gain resources for scaling at a critical juncture for the firm. Furthermore, they also used other actors, such as a major investment bank in the London

[11] In 2016, the firm raised £4m via the equity crowdfunding platform, Crowdcube.

financial sector to help them undertake a major VC fund raising exercise in 2020. The success of these fundraising episodes was central to the firm's ability to upscale and was undoubtedly facilitated via their strong relational connections in the local Fintech EE.

Another important exogenous component of the scaling process is putting in place measures to enable and facilitate firm internationalisation. While for many firms (especially SMEs) internationalisation can be a random or almost an accidental process (Kiss et al, 2012), even for so-called "born globals" (Hennart, 2014). However, for scaling firms internationalisation is a much more intentional and deliberative activity that is proactively planned and strategically executed. This entails close attention to detail in terms of the selection of overseas markets to enter as well as determining the most appropriate market entry strategy. For example, Money4Kids focused their initial market entry to the US for a variety of strategic reasons. The US represented a significant opportunity given the size of the addressable market and need for financial education of children. Detailed market analysis by the firm demonstrated that the UK model is directly relevant and can be successfully replicated. Comprehensive research by the firm revealed strong similarities between the US and UK in terms of demographics, value proposition appreciation, and growing mobile banking coupled with a history of children receiving pocket money.

The regulatory framework and lack of a language barrier also drove their market selection decision-making. They also selected that market because there were pre-existing competitors operating in this market space for children's payment cards, demonstrating that the concept had already gained traction in the US customers. The success of Money4kids in entering the US market is testament to the fact that many such "born digital firms are readily scalable" (Monaghan et al, 2020, p. 18). In other words, they are able to quickly leverage

economies of scale in their core business processes, thereby allowing for early and rapid international growth. Therefore, instead of evolutionary internationalisation common in many typical firms, the manner in which "born digitals" internationalise is more likely to be time-compressed and with much less of a physical footprint (Monaghan et al, 2020).

Overall, triggers appear key variegated inflection points shaping the scaling process (Brown and Mawson, 2013; Sternad and Mödritscher, 2020). Herein we extend this concept by differentiating between *primary* and *secondary* triggers. In some instances, the endogenous and exogenous scaling processes examined in this paper have a greater order of magnitude than others. In line with Shepherd and Patzelt (2020), we view that the transition from a founder-led venture to one which is a professionally managed enterprise seems to be a vital catalyst enabling a firm to scale effectively. This can be classified as being a primary endogenous trigger, but it can also lead to secondary triggers in terms of the other processes which become implemented as a result of this change in management (e.g. formalised HRM processes, shifting focus to customer metrics etc.).

An example of a primary exogenous trigger would be the successful receipt of a major injection of external growth finance. Often in these types of digital businesses this will come in the form of a major equity investment from a VC which can confer invaluable additional benefits in the form of advice, mentoring and social capital associated with this kind of "smart money" (Huang and Madhavan, 2020; Lerner and Nanda, 2020). Plus, VCs then shape the operation development of the investee firm by driving the replacement of a founder with a professional managerial team (Gerasymenko and Arthurs, 2014), often improving firm performance in doing so (Ewens and Marx, 2018). These knock-on effects caused by primary

triggers powerfully illustrates that scaling involves the accrual of inter-related capabilities and is a cumulative process involving complex interdependencies.

6. Delineating a Conceptual Model of Firm Scaling

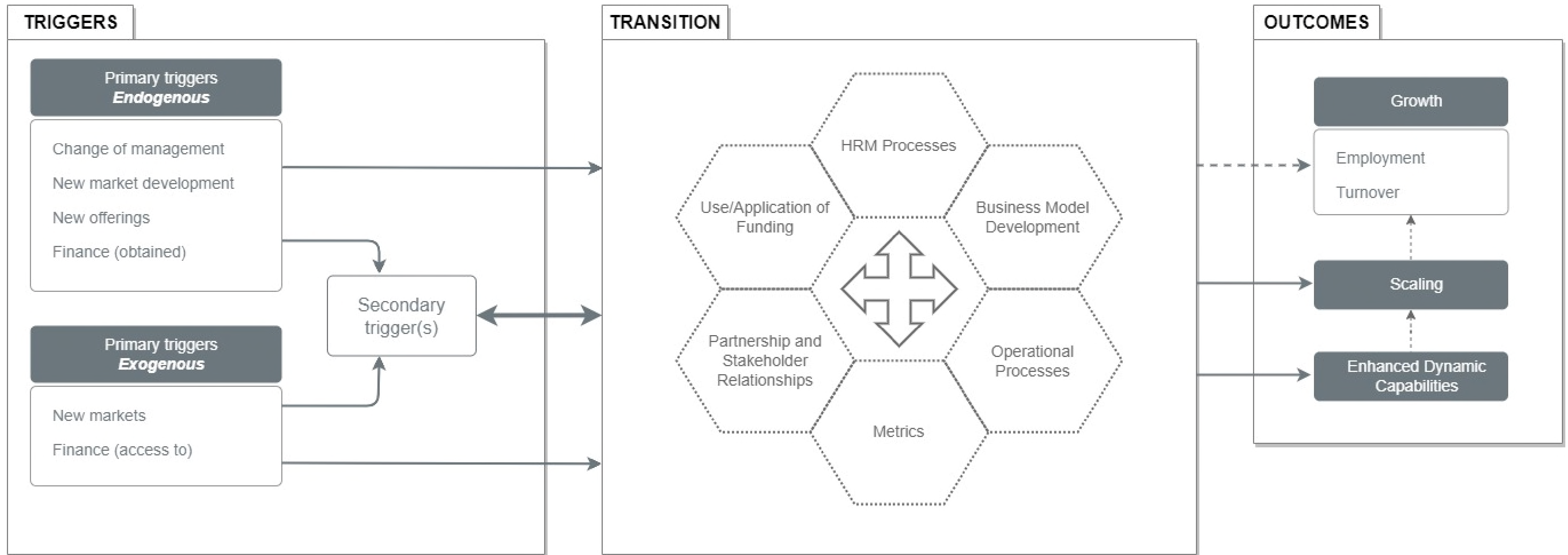
Taken together, the different endogenous and exogenous processes delineated above combine to act as a crucial launch pad to enable firms to scale. We now seek to outline a basic conceptual model to depict the fundamental determinants of the process of scaling within these types of digital organisations. In doing so we develop theoretical propositions that introduce new constructs and/or relationships between constructs which explain why a sequence of events leads to a certain outcome.

However, we offer important caveats. First, we wish to stipulate that scaling is a highly idiosyncratic firm specific process, with no two businesses likely to scale identically. However, in mitigation we stress that some of the principles, processes and dimensions (i.e. the microfoundations of scaling) inherent in scaling a firm are undoubtedly generalisable to a wider population of firms. We seek to emphasise the term "processes" because central to the scaling phenomenon is the processual nature of the how a firm reconfigures itself organisationally, operationally and culturally with the view to becoming a larger and more developed entity. Secondly, the introduction of digital technologies such as Fintech-based firms undoubtedly has broader ramifications for value creation and value capture in these types of firms (Nambisan et al, 2019; Monaghan et al, 2020). Therefore, the model is particularly salient for digital ventures given their recurrent traits.

We now set out our conceptual process model of the factors mediating the accretion of processes associated with scaling within growth-oriented enterprises (see Figure 2 below). At the heart of the model are crucial and multifaceted primary and secondary triggers which

in turn engender various organisational transitions during which the micro-foundations of scaling are developed and deployed. These micro-foundations, eventually, generate scaling (and growth) outcomes. This scaling process enhances a firm's dynamics capabilities, ultimately leading to superior performance in terms of sales and turnover growth within firms. Having examined some of the key drivers in the process of scaling, we were able to identify a number of opportunities for continued theoretical development and deeper empirical insights building on the contributions of other cognate research. In Figure 2, we build on the outline of factors driving the scaling process depicted in Section 5, the so-called micro-foundations of scaling. To that end, the model does not represent a full-fledged theory or framework for the strategic scaling of firms. However, we do at the same time maintain that there is a predictive element in the model whereby the accumulation of certain processes and practices does result in increased operational opportunities to help successfully scale a business. In other words, scaling is a consciously enacted procedure of processes and activities rather than some random accidental consequence of firm growth.

Figure 2: A Conceptual Model of Firm Scaling



Unlike others such as Shepherd and Patzelt (2020) who attribute knowledge to be at the heart of scaling, our model stresses organisational processes and managerial capabilities (managerial/organizational, financial, innovation) enacted by entrepreneurial management. In short, people trump knowledge in terms of scaling[12]. Herein we identified human capital processes as a crucial mechanism inculcating a culture of scaling within the firm. The orchestration of these people-centred capabilities is crucially important and links to prior theoretical concepts such as Teece's dynamic capabilities which stresses the need for adept entrepreneurial management – "doing the right things at the right time"- to drive business performance (Teece, 2016). Therefore, in our model adept innovative and creative entrepreneurial human capital is probably the central element of the successful scaling repertoire. Hence, the framework outlines a set of theoretical factors (i.e., drivers or organisational processes such as HRM, metric development etc). The factors and contingent mechanisms are further grounded in the literature we have incorporated into the model (triggers etc). Given our insights into a firm examined herein undergoing a process of scaling we are able to assert that these drivers cannot be viewed in isolation from one another. These key ccaling processes and activities emerge in response to triggers, but operate based on co-evolutionary dynamics interacting, morphing and developing into an emergent new order and state of being.

[12] Analogous to this is the fact that major VCs almost always back the firms with the most able entrepreneurs and managers rather than the technological or product offering firms presented (MacMillan et al, 1985; Gompers et al, 2020). This is sometime depicted in the literature via the idiom "backing the jockey, not the horse".

7. Conclusions

In this paper we have sought to explicate the nature of firm scaling in fast growing digital entrepreneurial ventures. Our key research objective was to explore the 'black box' of scaling at a firm level to better understand the nature and dynamics of organisational scaling. To address this, we posited a conceptual model to depict the process of scaling based on an immersive and methodologically innovative ethnographic study of a London-based Fintech undergoing the process of scaling. Undoubtedly, the salience of this conceptualisation has strong implications for other digitally oriented firms which arguably have a certain *modus operandi* underpinning the scaling process. The paper also makes an important research contribution by conceptually differentiating scaling and growth. Based on this research study, scaling was discovered to be an intentional, deliberate and calculative process to hone a firm's dynamic capabilities. According to Teece, the theory of the firm "can be less of a caricature if it can embrace the idiosyncratic characteristics of managers and organizational processes" (Teece, 2016, p. 215). Our work and associated model has powerfully demonstrated that scaling is an innately people-centric, process-based iterative phenomenon, involving a multi-dimensional range of interrelated and co-evolutionary activities and dynamics.

Whilst scaling may ultimately have an impact on firm growth, it is a distinctive phenomenon requiring further decoupling from the extant growth literature. In proposing this model, we see this as a starting point to help inform and develop the nascent conceptual literature on firm scaling as we consider this to have greater explanatory power than other crude extant models of firm growth (e.g. lifecycle models). We openly concede that basing our conceptual framing on a single case incurs limitations in terms of generalisability to other

firms and would encourage others to investigate the process of scaling over a wider gamut of entrepreneurial ventures and contexts, drawing on diverse methodological approaches to us better understand what is an inherently a multifaceted and complex phenomenon.

References

Aernoudt, R. (2017). Executive Forum: the scale up gap: and how to address it. *Venture Capital*, *19*(4), 361-372.

Aldrich, H. E., & Ruef, M. (2018). Unicorns, gazelles, and other distractions on the way to understanding real entrepreneurship in the United States. *Academy of Management Perspectives*, *32*(4), 458-472.

Alvarez, S. & Busenitz, L. (2001). The entrepreneurship of resource-based theory. Journal of Management, 6, 755–775.

Anyadike-Danes, M., Hart, M., & Du, J. (2015). Firm dynamics and job creation in the United Kingdom: 1998–2013. *International Small Business Journal*, *33*(1), 12-27.

Augier, M., & Teece, D. J. (2007). Dynamic capabilities and multinational enterprise: Penrosean insights and omissions. *Management International Review*, *47*(2), 175-192.

Autio, E., & Rannikko, H. (2016). Retaining winners: Can policy boost high-growth entrepreneurship?. *Research Policy*, *45*(1), 42-55.

Baker, T. (2007). Resources in play: Bricolage in the Toy Store(y). *Journal of Business Venturing*, *22*(5), 694-711.

Barney, J., Wright, M., & Ketchen Jr, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, *27*(6), 625-641.

Barringer, B. R., Jones, F. F., & Neubaum, D. O. (2005). A quantitative content analysis of the characteristics of rapid-growth firms and their founders. *Journal of Business Venturing*, *20*(5), 663-687.

Birch, D. L. (1979), The Job Generation Process. MIT Program on Neighborhood and Regional Change. Massachusetts Institute of Technology: Cambridge, MA.

Brewer, J. D. (2000) *Ethnography*. Buckingham: Open University Press.

Brown, R., & Mawson, S. (2013). Trigger points and high-growth firms: A conceptualisation and review of public policy implications. *Journal of Small Business and Enterprise Development*, 20(2), 279-295.

Brown, R., & Mawson, S. (2016). The geography of job creation in high growth firms: the implications of 'growing abroad'. *Environment and Planning C: Government and Policy*, *34*(2), 207-227.

Brown, R., Mawson, S., & Mason, C. (2017) Myth-busting and entrepreneurship policy: the case of high growth firms. *Entrepreneurship and Regional Development*, 29(5-6), 414-443.

Brown, R., Mawson, S., & Rowe, A. (2019). Start-ups, entrepreneurial networks and equity crowdfunding: A processual perspective. *Industrial Marketing Management*, *80*, 115-125.

Chandler, G. N., Broberg, J. C., & Allison, T. H. (2014). Customer value propositions in declining industries: Differences between industry representative and high-growth firms. *Strategic Entrepreneurship Journal*, *8*(3), 234-253.

Coad, A., Segarra, A., & Teruel, M. (2016). Innovation and firm growth: does firm age play a role?. *Research Policy*, *45*(2), 387-400.

Coad, A., Cowling, M., & Siepel, J. (2017). Growth processes of high-growth firms as a four-dimensional chicken and egg. *Industrial and Corporate Change*, *26*(4), 537-554.

Coad, A., Domnick, C., Flachenecker, F., Harasztosi, P., Janiri, M. L., Pal, R., & Teruel, M. (2021). Capacity constraints as a trigger for high growth. *Small Business Economics*, 1-31.

Corbett, A. C. (2005). Experiential learning within the process of opportunity identification and exploitation. *Entrepreneurship Theory and Practice*, *29*(4), 473-491.

Cornelissen, J. (2017). Editor's comments: Developing propositions, a process model, or a typology? Addressing the challenges of writing theory without a boilerplate. *Academy of Management Review*, 42(1), 1–9.

Coutu, S. (2014). *The scaleup review on UK economic growth*. ScaleUp Institute. http://www.scaleupinstitute.org.uk/wp-content/uploads/2018/02/scaleup-report_2014.pdf

Coviello, N.E. (2019). *Is a high-growth firm the same as a 'scale up'?* 2019 Lazaridis Report, Lazaridis Institute for the Management of Technology Enterprises, Waterloo.

Cumming, D., Deloof, M., Manigart, S., & Wright, M. (2019). New directions in entrepreneurial finance. Journal of Banking and Finance,100(2019), 252–260.

Daunfeldt, S-O., & Halvarsson, D. (2015). Are high-growth firms one-hit wonders? Evidence from Sweden. *Small Business Economics*, 44, 361-383.

Davidsson, P. (2003). The domain of entrepreneurship research: Some suggestions. *Katz, J.A.* and Shepherd, D.A. (Ed.) Cognitive Approaches to Entrepreneurship Research (Advances in Entrepreneurship, Firm Emergence and Growth, Vol. 6), Emerald Group Publishing Limited, Bingley, pp. 315-372.

Davidsson, P. (2005) Methodological Approaches to Entrepreneurship: Past Research and Suggestions for the Future, Small Enterprise Research, 13:1, 1-21,

Davidsson, P. (2017). Musings on the prospects of entrepreneurial ethnography. In *Proceedings of the Princeton Kauffman Conference 2017* (pp. 1-12). Princeton University.

Decker, R. A., Haltiwanger, J., Jarmin, R. S., & Miranda, J. (2016). Where has all the skewness gone? The decline in high-growth (young) firms in the US. *European Economic Review*, *86*, 4-23.

De Clercq, D., & Sapienza, H. J. (2006). Effects of relational capital and commitment on venture capitalists' perception of portfolio company performance. *Journal of Business Venturing*, *21*(3), 326-347.

Delmar, F., Davidsson, P., & Gartner, W. B. (2003). Arriving at the high-growth firm. Journal of Business Venturing, 18, 189–216.

Demir, R., Wennberg, K. and McKelvie, A. (2017). The strategic management of high-growth firms: A review and theoretical conceptualization. *Long Range Planning*, 50, 431-56.

DeSantola, A., & Gulati, R. (2017). Scaling: Organizing and growth in entrepreneurial ventures. *Academy of Management Annals*, *11*(2), 640-668.

Du, J., & Temouri, Y. (2015). High-growth firms and productivity: evidence from the United Kingdom. *Small Business Economics*, *44*(1), 123-143.

Duruflé, G., Hellmann, T. F., & Wilson, K. E. (2017). From start-up to scale up: examining public policies for the financing of high-growth ventures. Bruegel Working Paper, No. 2017/04.

Ewens, M., & Marx, M. (2018). Founder replacement and startup performance. *The Review of Financial Studies*, *31*(4), 1532-1565.

Flachenecker, F., Gavigan, J., P., Goenaga, X., Pasi, G., Preziosi, N., Stamenov, B., & Testa, G. (2020). High growth enterprises: Demographics, financing & policy measures. JRC Technical Report. Joint Research Centre. Brussels, Belgium. https://ec.europa.eu/jrc/en/publication/highgrowth-enterprises-demographics-fnance-policy-measu res

Fisher, G., Stevenson, R., & Burnell, D. (2020). Permission to hustle: Igniting entrepreneurship in an organization. *Journal of Business Venturing Insights*, *14*, e00173.

Garnsey, E. (1998). A theory of the early growth of the firm. *Industrial and corporate change*, *7*(3), 523-556.

Gerasymenko, V., & Arthurs, J. D. (2014). New insights into venture capitalists' activity: IPO and time-to-exit forecast as antecedents of their post-investment involvement. *Journal of Business Venturing*, *29*(3), 405-420.

Gompers, P. A., Gornall, W., Kaplan, S. N., & Strebulaev, I. A. (2020). How do venture capitalists make decisions?. *Journal of Financial Economics*, *135*(1), 169-190.

Greene, F. J., & Rosiello, A. (2020). <? covid19?> A commentary on the impacts of ‘Great Lockdown’ and its aftermath on scaling firms: What are the implications for entrepreneurial research?. *International Small Business Journal*, *38*(7), 583-592.

Grichnik, D., Brinckmann, J., Singh, L., & Manigart, S. (2014). Beyond environmental scarcity: Human and social capital as driving forces of bootstrapping activities. *Journal Of Business Venturing*, 29(2), 310-326.

Hambrick, D. C., & Crozier, L. M. (1985). Stumblers and stars in the management of rapid growth. *Journal of Business Venturing*, *1*(1), 31-45.

Hansen, B., & Hamilton, R. T. (2011). Factors distinguishing small firm growers and non-growers. *International Small Business Journal*, *29*(3), 278-294.

Hammersley, M. and Atkinson, P. (1991) Ethnography principles in practice. Routledge, London.

Hart, M., Prashar, N., & Ri, A. (2021). From the Cabinet of Curiosities: The misdirection of research and policy debates on small firm growth. *International Small Business Journal*, *39*(1), 3-17.

Hart, O. (1989). An economist's perspective on the theory of the firm. *Columbia Law Review*, 89 (7), 1757–1774.

Hellmann, T. & Kavadias, S. (2016). ScaleUp UK: Growing Businesses, Growing our Economy, Barclays.

Hennart, J. F. (2014). The accidental internationalists: a theory of born globals. *Entrepreneurship Theory and Practice*, *38*(1), 117-135.

Henrekson, M., & Johansson, D. (2010). Gazelles as job creators: a survey and interpretation of the evidence. *Small Business Economics*, *35*(2), 227-244.

Hlady-Rispal, M., Fayolle, A., & Gartner, W. B. (2021). In search of creative qualitative methods to capture current entrepreneurship research challenges. *Journal of Small Business Management*, *59*(5), 887-912.

Huang, P., & Madhavan, R. (2020). Dumb money or smart money? Meta-analytically unpacking corporate venture capital. *Strategic Entrepreneurship Journal*.

Kiss, A. N., Danis, W. M. & Cavusgil, S. T. (2012). International entrepreneurship research in emerging economies: a critical review and research agenda. *Journal of Business Venturing*, 27, 266−290.

Kuratko, D. F., Holt, H., & Neubert, E. (2020). Blitzscaling: The good, the bad, and the ugly. *Business Horizons, 63*(1), 109–119.

Kuratko, D. F., & Audretsch, D. B. (2021). The future of entrepreneurship: the few or the many?. *Small Business Economics*, 1-10.

Jaakkola, E (2020). Designing conceptual articles: four approaches. AMS Rev 10, 18–26.

Johnstone, B. A. (2007). Ethnographic methods in entrepreneurship research. In H., Neergaard and J. P Ulhøi (eds) *Handbook of Qualitative Research Methods in Entrepreneurship.* Cheltenham: Edward Elgar, pp. 97-121.

Hammersley, M. (1997). Qualitative data archiving: Some reflections on its prospects and problems. Sociology, 31(1), 131–142.

Hlady-Rispal, M., Fayolle, A., & Gartner, W. B. (2021). In search of creative qualitative methods to capture current entrepreneurship research challenges. *Journal of Small Business Management*, *59*(5), 887-912.

Henrekson, M., & Johansson, D. (2010). Gazelles as job creators: A survey and interpretation of the evidence. *Small Business Economics, 35*, 227–244.

Lerner, J., & Nanda, R. (2020). Venture capital's role in financing innovation: What we know and how much we still need to learn. *Journal of Economic Perspectives*, *34*(3), 237-61.

Levie, J., and B. Lichtenstein. 2010. “A Terminal Assessment of Stages Theory: Introducing a Dynamic States Approach to Entrepreneurship.” *Entrepreneurship Theory and Practice* 34: 317–350.

Lindgreen, A., Di Benedetto, C.A., Brodie, R. J, and Jaakkola, E. (2021) How to develop great conceptual frameworks for business-to-business marketing, *Industrial Marketing Management*, 94: A2-A10.

Lukka, K. and Vinnari, E. (2014), "Domain theory and method theory in management accounting research", Accounting, Auditing & Accountability Journal, Vol. 27 No. 8, pp. 1308-1338.

MacMillan, I. C., Siegel, R., & Narasimha, P. S. (1985). Criteria used by venture capitalists to evaluate new venture proposals. *Journal of Business Venturing*, *1*(1), 119-128.

Mason, C. (2020). *The coronavirus economic crisis: Its impact on venture capital and high growth enterprises*. Publications Office of the European Union.

Mawson, S. (2018). “Customer perceived value in high growth firms.” *Cuadernos de Economía*, *37*(75), 755-778.

Mawson, S., & Brown, R. (2017). Entrepreneurial acquisitions, open innovation and UK high growth SMEs. *Industry and innovation*, *24*(4), 382-402.

McKelvie, A., and J. Wiklund. (2010). “Advancing Firm Growth Research: A Focus on Growth Mode instead of Growth Rate.” *Entrepreneurship Theory and Practice* 34: 261–288.

McKenzie, D. (2017). Identifying and spurring high-growth entrepreneurship: Experimental evidence from a business plan competition. *American Economic Review*, *107*(8), 2278-2307.

Meglio, O., Destri, A. M. L., & Capasso, A. (2017). Fostering dynamic growth in new ventures through venture capital: Conceptualizing venture capital capabilities. *Long Range Planning*, *50*(4), 518-530.

Moghaddam, K., Aidov, A., DuVal, C., & Azarpanah, S. (2017). High-growth entrepreneurial firm funding: a qualitative study of native-born and immigrant entrepreneurs. *Venture Capital*, *19*(1-2), 75-94.

Monaghan, S., Tippmann, E., & Coviello, N. (2020). Born digitals: Thoughts on their internationalization and a research agenda. *Journal of International Business Studies*, *51*(1), 11-22.

Nambisan, S., Wright, M., & Feldman, M. (2019). The Digital Transformation of Innovation and Entrepreneurship: Progress, Challenges and Key Themes. *Research Policy*, *48*(8), 103773.

Newth, J. (2018). “Hands-on” vs “arm’s length” entrepreneurship research: Using ethnography to contextualize social innovation. *International Journal of Entrepreneurial Behavior & Research*.

Nielsen, C. and Lund, M. (2018). Building scalable business models. *Sloan Management Review*, 59(2), 65-69.

OECD. (2008). *Measuring Entrepreneurship: A Digest of Indicators*. Paris: OECD-Eurostat Entrepreneurship Indicators Program, Organisational for Economic Co-operation and Development (OECD).

OECD. (2021). Understanding Firm Growth: Helping SMEs Scale Up, OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris, https://doi.org/10.1787/fc60b04c-en.

O'Reilly, C., & Binns, A. J. (2019). The three stages of disruptive innovation: idea generation, incubation, and scaling. *California Management Review*, *61*(3), 49-71.

Penrose, E. (1959). The Theory of the Growth of the Firm, Basil Blackford, Oxford.

Penrose, E. T. (1960). The growth of the firm—a case study: the Hercules Powder Company. *Business History Review*, *34*(1), 1-23.

Phelps, R., Adams, R., & Bessant, J. (2007). Life cycles of growing organizations: A review with implications for knowledge and learning. *International Journal of Management Reviews*, *9*(1), 1-30.

Piaskowska, D., Tippmann, E., & Monaghan, S. (2021). Scale up modes: Profiling activity configurations in scaling strategies. *Long Range Planning*, 102101.

Rocha, A., Brown, R., & Mawson, S. (2021). Capturing conversations in entrepreneurial ecosystems. *Research Policy*, *50*(9), 104317.

Schaper, M, & Volery, T (2007) Entrepreneurship and Small Business (Second Pacific rim edition). Milton, Queensland: John Wiley and Sons Australia.

Shane, S. (2009). Why encouraging more people to become entrepreneurs is bad public policy. *Small Business Economics, 33*(2), 141–149.

Shepherd, D. (2015). Party On! A call for entrepreneurship research that is more interactive, activity based, cognitively hot, compassionate, and prosocial. *Journal of Business Venturing*, *30*(4), 489-507.

Shepherd, D. A., & Suddaby, R. (2017). Theory building: A review and integration. *Journal of Management*, *43*(1), 59-86.

Shepherd, D. A., & Patzelt, H. (2020). A call for research on the scaling of organizations and the scaling of social impact. *Entrepreneurship Theory and Practice*, 1042258720950599.

Spigel, B. (2022). Examining the cohesiveness and nestedness entrepreneurial ecosystems: evidence from British FinTechs. *Small Business Economics*, 1-19.

Stam, E., & Wennberg, K. (2009). The roles of R&D in new firm growth. *Small Business Economics*, *33*(1), 77-89.

Sternad, D., & Mödritscher, G. (2020). Entrepreneurial Leaps: Growth Processes in Transition Phases Between Dynamic States. *Entrepreneurship Theory and Practice*, doi:10.1177/1042258720929890

Sullivan, T. (2016). Blitzscaling: The chaotic, sometimes grueling path to high-growth, high-impact entrepreneurship. *Harvard Business Review*, *94*(4), 44-50.

Sunday Times (2018) Tech Track 100, September 9th, 2018. https://www.bdo.co.uk/getmedia/0fb65490-42bc-4fd7-8b13-20ac280fc615/2018_Tech_Track_100_supplement.pdf.aspx

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, *18*(7), 509-533.

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319-1350.

Teece, D. J. (2016). Dynamic capabilities and entrepreneurial management in large organizations: Toward a theory of the (entrepreneurial) firm. *European Economic Review*, *86*, 202-216.

Teece, D. J., & Linden, G. (2017). Business models, value capture, and the digital enterprise. *Journal of Organization Design*, *6*(1), 1-14.

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, *51*(1), 40-49.

Van Burg, E., Cornelissen, J., Stam, W., & Jack, S. (2022). Advancing qualitative entrepreneurship research: Leveraging methodological plurality for achieving scholarly impact. *Entrepreneurship Theory and Practice*, Vol. 46(1) 3–20.

Van Maanen, J. (2011). Tales of the Field: on Writing Ethnography, University of Chicago Press.

van Rijnsoever, F. J. (2020). Meeting, mating, and intermediating: How incubators can overcome weak network problems in entrepreneurial ecosystems. Research Policy, 49(1), 103884.

Vinnell, R., & Hamilton, R. T. (1999). A historical perspective on small firm development. *Entrepreneurship theory and practice*, *23*(4), 5-18.

Walker, P. 2009. The (non)theory of the knowledge firm. *Scottish Journal of Political Economy*, 57 (1): 1–32

Welter, F. (2011). Contextualizing entrepreneurship—conceptual challenges and ways forward. *Entrepreneurship theory and Practice*, *35*(1), 165-184.

Welter, F., Baker, T., & Wirsching, K. (2019). Three waves and counting: the rising tide of contextualization in entrepreneurship research. *Small Business Economics*, *52*(2), 319-330.

Yanow D., Ybema S., Van Hulst M. 2012. Practising Organizational Ethnography. *Qualitative Organizational Research: Core Methods and Current Challenges*; pp. 351–372.

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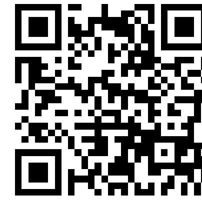

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