



**BRITISH ACADEMY
OF MANAGEMENT**

BAM
CONFERENCE

3RD-5TH SEPTEMBER

ASTON UNIVERSITY BIRMINGHAM UNITED KINGDOM

This paper is from the BAM2019 Conference Proceedings

About BAM

The British Academy of Management (BAM) is the leading authority on the academic field of management in the UK, supporting and representing the community of scholars and engaging with international peers.

<http://www.bam.ac.uk/>

Developmental Paper

for

British Academy of Management Conference 2019

Track: Entrepreneurship

A critical realist perspective of business incubation

<i>Christopher Lipp</i>	<i>Postgraduate Researcher</i>	<i>University of the West of England (UWE) christopher.lipp@uwe.ac.uk</i>
<i>Glenn Parry</i>	<i>Professor of Strategy and Operations Management</i>	<i>University of the West of England (UWE) glenn.parry@uwe.ac.uk</i>
<i>Don Webber</i>	<i>Professor of Economics</i>	<i>Swansea University d.j.webber@swansea.ac.uk</i>
<i>Akin Ojolo</i>	<i>Senior Lecturer</i>	<i>University of the West of England (UWE) akin.ojolo@uwe.ac.uk</i>

Summary

In response to the dominance of positivism in research on entrepreneurship, and addressing the lack of understanding of the role of business incubation in firm growth, the work presented here uses a critical realist approach to analyse the value of business incubation services for firms. Considering the wide spectrum of services proposed in varying incubation contexts, the research aims at addressing how entrepreneurs perceive the value of various incubation services for their growth, and whether these perceptions align with the framework delineated in this work. The research design consists in a set of exploratory interviews with firm founders within incubation centres in the UK, followed by a survey questionnaire to be submitted to a set of approximately 1000 firms within 23 centres across the UK.

Keywords: entrepreneurship, firm growth, critical realism, business incubation, ambitious firms

1754 words excluding summary, tables, references and appendix.

Introduction

The essential role played by SMEs in national economies underlines the importance of investigating and understanding early firm growth and how best to support and enable it. Early firm growth is described as the process of a firm's development from an undiscovered or not yet created opportunity, to a mature, profitable and stable form of business (or to its possible decline). Growth is therefore rooted in the study of entrepreneurship as well as in the theory of the firm. While entrepreneurship scholars discuss the ontology of the entrepreneurial opportunity and how to best educate entrepreneurs (Alvarez and Barney, 2007), scholars in the field of strategic management address the source of a firm's sustainable competitive advantage (Barney, 1991; Grant, 1996; Teece, 2007). There seems to be a gap in the literature explaining the steps between opportunity actualisation (Ramoglou and Tsang, 2016), and sustainable business growth. Existing models of firm development published over the last 40 year that attempt to fill this gap suffer from being "linear, unidirectional, sequenced and deterministic" (Phelps *et al.*, 2007, p.17) and are equated to "misleading roadmaps" (Levie and Lichtenstein, 2010, p.336).

In practice, entrepreneurs and early-stage firms often turn towards business incubation, or similar organisations, to support their growth (Bøllingtoft and Ulhøi, 2005). Some scholars define incubation by focusing on business incubator (BI) service-provision (Aaoben, 2009; Vanderstraeten and Matthyssens, 2012), while others focus on the goal or aim of incubation (Adegbite, 2001; Rubin, Aas and Stread, 2015) (see Appendix 1). BIs are studied together with science parks (see 2005 special issue of the Journal of Business Venturing on Science Parks and Incubators), or innovation centres (Colombo and Delmastro, 2002), and the various denominations appear to be used in practice as a branding tool, adding to the confusion for practitioners and academics alike. The definition of business incubation by Bøllingtoft and Ulhøi (2005, p.268) as "an umbrella term for any organization that provides access to affordable office space and shared administrative services" is used in this work.

While literature has yet to provide a convincing model to explain early firm growth based on solid theoretical foundations (Garnsey, 1998), in practice, some BIs appear to successfully support firm survival (Storey and Strange, 1992), employment growth (Colombo and Delmastro, 2002; Löfsten and Lindelöf, 2002) or sales growth (Löfsten and Lindelöf, 2003). Additional empirical work is needed to explain the superior performance of some BIs over others, and better understand early firm growth. The work presented here responds to the positivist dominance in the study of entrepreneurship and business incubation by proposing a critical realist framework for the analysis of business incubation. The first section describes the theoretical perspective, while the second section describes hypotheses being investigated.

Theoretical framework

The field of entrepreneurship is dominated by positivism, as studies tend to be "assessed through reliability and validity procedures" akin to "a logical positivist approach" (Hlady-Rispal and Jouison-Laffite, 2014, p.595), and dominated in the 20th century by a single method approach of questionnaires and surveys (Aldrich, 1992; Gartner and Birley, 2002). Other approaches are "demonstrably underrepresented in entrepreneurship research" (Hindle, 2004, p. 577), and while calls for alternative approaches are continuously made (Leitch, Hill and

Neergaard, 2010; Morris, Pryor and Schindehutte, 2012) non-positivist work on small business growth and business incubation remains meagre.

In response to the dominance of positivism, this study takes a critical realist perspective, deemed to provide an appropriate foundation to improve our understanding of entrepreneurship (Blundel, 2007). Reality is deeper than its observable surface and can be represented in layers (Bhaskar, 1978). In accordance with systems thinking (Mingers, 2014), what is observable by some individuals may be outside of what is observable by others. Not all boundaries of observability are universal: events that are experienced by individual *A* at a point in space and time are influenced by previous events and mechanisms from different spatial and temporal settings. One of these events having possibly been observed by a different individual *B* may be unknown to and unobservable by *A*. While the philosophical debate on the ontology of reality is outside the scope of this work, this paper is framed by an understanding that the boundary between Bhaskar's (1978) *Actual* and *Real* is the generalisability of the boundary of observability: while *actual* events and mechanisms are subjectively unobserved but knowable, the *Real* is subjectively unobservable and unknowable. Accordingly, as our technical capacities of analysis progress, we increase our ability to observe the *Actual*. While the *Empirical*, which is the realm of individual human perception and knowledge, remains ontologically separate and different from the *Actual* and the *Real* (Blundel, 2007), we can approximate our knowledge of the *Actual* both through interpretation and through objective reasoning and empirical testing (Bhaskar, 1978) – yet the *Real* exists independently and remains unattainable.

Based on the proposed philosophical framework, an ideal role of business incubation can be hypothesised. First, in their criticism of firm growth models, Phelps *et al.* (2007) and Levie and Lichtenstein (2010) propose that firms are in states rather than stages. The preferred term state avoids the connotation of linearity and direction, and implies the element of transformation. Levie and Lichtenstein (2010) posit that firms are at dynamic states at any point in time. They describe dynamic states as “networks of beliefs, relationships, systems, and structures that convert opportunity tension into tangible value for an organisation's customers/clients, generating new resources that maintain that dynamic state” (Levie and Lichtenstein, 2010, p.333). This perspective aligns with Penrose's (1959, p.41) view that “‘expectations’, and not ‘objective facts’, are the immediate determinants of a firm's behaviour”.

Second, “there is no way of measuring an amount of expansion, or even the size of a firm, that is not open to serious conceptual objections” (Penrose, 1959, p.199). Considering the heterogeneity of firms operating in different contexts and at different stages of their development, performance can hardly be compared with one single dependent growth variable (McKelvie and Wiklund, 2010; Achtenhagen, Naldi and Melin, 2010). Growth, therefore, is contextual in nature; it only exists in the eye of the observer.

Thus, following the critical realist perspective and systemic view, each individual has their own interpretation of the dynamic state in which a firm is, and what the future dynamic state of a firm should be. It is the awareness of the *actual* dynamic state and of the obstacles on the path to an aimed and realisable future dynamic state that may lead to sustainable growth. Accordingly, the role of BIs should be to enable a firm's founders to (1) achieve a shared understanding of the current dynamic state of their firm, (2) achieve a shared understanding of

a future dynamic state of their firm, and (3) make use of the resources and knowledge in the local, regional and national ecosystem to enable firms to reach that future dynamic state.

No two incubators are alike. Literature clarifies the heterogeneity of incubators in terms of service types (Adegbite, 2001; Ratinho and Henriques, 2010), profit motives (Allen and McCluskey, 1990; Hannon and Chaplin, 2003), network orientation (Bøllingtoft and Ulhøi, 2005) and internal structure (Autio and Klofsten, 1998; Rubin, Aas and Stread, 2015). In addition, incubator stakeholders may affect a BI's strategy (Bigliardi, Dormio, Nosella and Petroni, 2006). The services bundles provided to tenants vary not only from centre to centre (Adegbite, 2001), but also from tenant to tenant, since the services are equally dependent on the provider entity as on the receiving entity (Rice, 2002). This makes it particularly complex to measure and compare incubation success (Mian, 1997), let alone incubation service quality between tenants. The variety of services offered explains, in part, the difficulties faced by incubation scholars.

Proposed Research

Research on BIs has taken the form of quantitative, qualitative and mixed methods (Eveleens *et al.*, 2017). In light of the analysis above, delineating the current obstacles in the research on firm growth and incubation, the following research design based on a critical realist perspective is suggested.

The research aims at addressing how members of the controlling entities of firms perceive the value of various incubation services for their growth, and whether these perceptions align with the framework delineated in this work. Considering the suggested positive impact of entrepreneurial orientation (EO) (Altinay, *et al.*, 2016; Stenholm, Pukkinen and Heinonen, 2016), and of growth orientation (GO) and growth intentions (GI) on growth (Wiklund, Shepherd and Patzelt, 2009), it is proposed that we can assess the differences among tenant firms based on these constructs. We describe *ambitious firms* as firms with a founder (or founding team members) displaying high levels of EO, GO and GI. The variety of services proposed by BIs can be categorised into functional and growth-driven services (see *Table 1*). Functional services are services that tend to aim to cut overhead costs, while growth-driven services align with the three incubator aims presented above¹. The following hypothesis is therefore formulated:

H1: Ambitious firms in business incubators present a higher perceived value of growth-driven services.

Furthermore, the limited amount of staff working in BIs (Lee and Osteryoung, 2004) and the importance of incubation management for their tenants (Sentana, Gonzales, Gasco and Llopis, 2016) may lead tenant firms to perceive BI staff in different ways depending on the BI staff's strengths and weaknesses. Considering the contextual nature of the value of BI services for tenants, we propose the following second hypothesis:

¹ The extent to which G-labelled services can be divided into subsets, depending on the extent to which they address points (1), (2) and (3) above, is a point deemed, by the authors, worthy of discussion with the assembly.

H2: Ambitious firms perceive different positive characteristics of BI staff than non-ambitious firms.

In a first phase, exploratory semi-structured interviews with 34 firms situated within incubation centres in the UK have aimed to assess whether the perceived value of incubation services correlates with particular patterns of perception, or particular intentions, of the entrepreneurs. The results have provided preliminary support for these hypotheses, as the empirical research suggests varying perceptions of BI services depending on ambition, and perceived loci of control. Since then, access to a sample of 1000 firms in 23 BIs has been granted. A survey questionnaire is being elaborated and will be distributed to this sample, and a further set of interviews will be conducted with some survey respondents to provide more depth to the results.

Service	Authors	Functional (F) or Growth-driven (G) services
Provision of office equipment and janitorial services	Adegbite (2001); Aerts et al. (2007); Ratinho and Henriques (2010)	F
Meeting room/conference facilities	Rice (2002); Aerts et al. (2007)	F
Catering facilities	Rice (2002); Aerts et al. (2007)	F
Provision of telecommunication services (phone, internet)	Rice (2002); Aerts et al. (2007)	F
Administrative services (incl. secretarial services)	Aerts et al. (2007); Ratinho and Henriques (2010)	F
Specialised equipment	Rice (2002); Aerts et al. (2007)	F
Group (medical/dental) insurance	Rice (2002)	F
Networking (business relationships) – with internal and/or external partners	Aerts et al. (2007)	G
Business planning and support in forming a company	Rice (2002); Aerts et al. (2007)	G
Fundraising support (incl. grants, bank loans, seed and venture capital and other financial advice)	Adegbite (2001) ; Rice (2002); Aerts et al. (2007); Ratinho and Henriques (2010)	G
Sales support	Rice (2002); Aerts et al. (2007)	G
Marketing support (incl. online and offline communication, market research)	Adegbite (2001) ; Aerts et al. (2007); Ratinho and Henriques (2010)	G
Support with information and communication technologies	Adegbite (2001) ; Aerts et al. (2007)	G
Mentoring, strategic and managerial support	Adegbite (2001); Rice (2002); Aerts et al. (2007); Ratinho and Henriques (2010)	G
Support in developing new products and services	Aerts et al. (2007)	G
Human resource support (incl. help with recruitment, HRM, team building)	Adegbite (2001); Rice (2002); Aerts et al. (2007)	G
Accounting support	Aerts et al. (2007); Ratinho and Henriques (2010)	G
Legal support (incl. IP and patent law; support with contracts)	Rice (2002); Aerts et al. (2007)	G
Pre-incubation services	Aerts et al. (2007)	G
Support with R&D and product completion	Rice (2002)	G

Table 1: Categorisation of services provided in incubation and similar organisations.

References

- Aaboen, L. (2009). Explaining incubators using firm analogy. *Technovation*, 29(10), pp.657-670.
- Achtenhagen, L., Naldi, L. and Melin, L. (2010). “Business Growth”-Do Practitioners and Scholars Really Talk About the Same Thing?. *Entrepreneurship Theory and Practice*, 34(2), pp.289-316.
- Adegbite, O. (2001). Business Incubators and Small Enterprise Development: The Nigerian Experience. *Small Business Economics*, 17(3), pp.157-166.
- Aerts, K., Matthyssens, P. and Vandenbempt, K. (2007). Critical role and screening practices of European business incubators. *Technovation*, 27(5), pp.254-267.
- Aldrich, H. (1992). Methods in Our Madness? Trends in Entrepreneurship Research. In: D. Sexton and J. Kasarda, ed., *The State of the Art of Entrepreneurship*, pp.191–213. Boston: PWS-Kent Publishing.
- Allen, D.N., and McCluskey R. (1990). Structure, Policy, Services, and Performance in the Business Incubator Industry. *Entrepreneurship Theory and Practice*, 15 (2), pp.61– 77.
- Altinay, L., Madanoglu, M., De Vita, G., Arasli, H. and Ekinici, Y. (2016). The Interface between organizational learning capability, entrepreneurial orientation, and SME growth, *Journal of Small Business Management*, 54 (3), pp.871-891.
- Alvarez, S. and Barney, J. (2007). Discovery and creation: alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1-2), pp.11-26.
- Autio, E., & Klofsten, M. (1998). A comparative study of two European business incubators. *Journal of Small Business Management*, 36(1), pp.30-43.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), pp.99-120.
- Bhaskar, R. (1978). *A realist theory of science*. New York: Harvester Wheatsheaf.
- Bigliardi, B., Dormio, A., Nosella, A. and Petroni, G. (2006). Assessing science parks' performances: directions from selected Italian case studies. *Technovation*, 26(4), pp.489-505.
- Blundel, R. (2007). Critical realism: a suitable vehicle for entrepreneurship research? In: H. Neergard and J. Ulhøi, ed., *Handbook of Qualitative Research Methods in Entrepreneurship* pp. 49– 78. Cheltenham: Edward Elgar.
- Bøllingtoft, A. and Ulhøi, J. (2005). The networked business incubator—leveraging entrepreneurial agency?. *Journal of Business Venturing*, 20(2), pp.265-290.
- Colombo, M. and Delmastro, M. (2002). How effective are technology incubators?. *Research Policy*, 31(7), pp.1103-1122.
- Eveleens, C.P., van Rijnsouwer, F.J. and Niesten, E.M.M.I. (2017). How network-based incubation helps start-up performance: a systematic review against the background of management theories. *Journal of Technology Transfer*, 42 (3), pp. 676–713.
- Garnsey, E. (1998). A Theory of the Early Growth of the Firm. *Industrial and Corporate Change*, 7(3), pp.523-556.

- Gartner, W. and Birley, S. (2002). Introduction to the special issue on qualitative methods in entrepreneurship research. *Journal of Business Venturing*, 17(5), pp.387-395.
- Grant, R. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(S2), pp.109-122.
- Hannon, P. and Chaplin, P. (2003). Are Incubators Good for Business? Understanding Incubation Practice—The Challenges for Policy. *Environment and Planning C: Government and Policy*, 21(6), pp.861-881.
- Hindle, K. (2004). Choosing Qualitative Methods for Entrepreneurial Cognition Research: A Canonical Development Approach. *Entrepreneurship Theory and Practice*, 28(6), pp.575-607.
- Hlady-Rispal, M. and Jouison-Laffitte, E. (2014). Qualitative Research Methods and Epistemological Frameworks: A Review of Publication Trends in Entrepreneurship. *Journal of Small Business Management*, 52(4), pp.594-614.
- Lee, S. S. and Osteryoung, J.S. (2004). A Comparison of Critical Success Factors for Effective Operations of University Business Incubators in the United States and Korea. *Journal of Small Business Management*, 42 (4), pp. 418-426.
- Leitch, C., Hill, F. and Neergaard, H. (2010). Entrepreneurial and Business Growth and the Quest for a “Comprehensive Theory”: Tilting at Windmills?. *Entrepreneurship Theory and Practice*, 34(2), pp.249-260.
- Levie, J. and Lichtenstein, B. (2010). A Terminal Assessment of Stages Theory: Introducing a Dynamic States Approach to Entrepreneurship. *Entrepreneurship Theory and Practice*, 34(2), pp.317-350.
- Löfsten, H. and Lindelöf, P. (2002). Science Parks and the growth of new technology-based firms—academic-industry links, innovation and markets. *Research Policy*, 31, pp.859-876.
- Löfsten, H. and Lindelöf, P. (2003). Science Park Location and New Technology-Based Firms in Sweden – Implications for Strategy and Performance. *Small Business Economics*, 20 (3), pp.245-258.
- McKelvie, A. and Wiklund, J. (2010). Advancing Firm Growth Research: A Focus on Growth Mode Instead of Growth Rate. *Entrepreneurship Theory and Practice*, 34(2), pp.261-288.
- Mian, S. (1997). Assessing and managing the university technology business incubator: An integrative framework. *Journal of Business Venturing*, 12(4), pp.251–285.
- Mingers, J. (2014). *Systems Thinking, Critical Realism and Philosophy*, London: Routledge.
- Morris, M., Pryor, C. and Schindehutte, M. (2012). *Entrepreneurship as experience*. Cheltenham: Edward Elgar Pub.
- Penrose, E. (1959). *The Theory of the Growth of the Firm*, Oxford: Oxford University Press.
- 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, pp.1–30.
- Ramoglou, S. and Tsang, E. (2016). A Realist Perspective of Entrepreneurship: Opportunities As Propensities. *Academy of Management Review*, 41(3), pp.410-434.

- Ratinho, T. and Henriques, E. (2010). The role of science parks and business incubators in converging countries: Evidence from Portugal. *Technovation*, 30(4), pp.278-290.
- Rice, M.P. (2002). Co-production of Business Assistance in Business Incubators: An Exploratory Study. *Journal of Business Venturing* 17, pp.163–187.
- Rubin, T., Aas, T. and Stead, A. (2015). Knowledge flow in Technological Business Incubators: Evidence from Australia and Israel. *Technovation*, 41-42, pp.11-24.
- Sentana, E., González, R., Gascó, J. and Llopis, J. (2016). The social profitability of business incubators: a measurement proposal. *Entrepreneurship & Regional Development*, 29(1-2), pp.116-136.
- Stenholm, P., Pukkinen, T. and Heinonen, J. (2016). Firm Growth in Family Businesses—The Role of Entrepreneurial Orientation and the Entrepreneurial Activity. *Journal of Small Business Management*, 24 (2), pp. 697-713.
- Storey, D. J., and Strange, A. (1992). *Entrepreneurship in Cleveland, 1979-89: A Study of the Effects of the Enterprise Culture*. Sheffield: Employment Department, Research Series No.3.
- Teece, D. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), pp.1319-1350.
- Vanderstraeten, J. and Matthyssens, P. (2012). Service-Based Differentiation Strategies for Business Incubators: Exploring External and Internal Alignment. *Technovation*, 32 (12), pp.656-670.
- Wiklund, J., Patzelt, H. and Shepherd, D. (2009). Building an integrative model of small business growth. *Small Business Economics*, 32(4), pp.351-374.

Appendix

Appendix 1 – Selected definitions of business incubation

Authors	Definition
Aaboen (2009)	“An incubator provides resources like space, goals, marketing, management, structure and financing to knowledge- and technology-intensive new technology-based firms” (p.457)
Adegbite (2001)	A business incubator is “an organisation that facilitates the process of creating successful new small business” (p.157)
Rubin, Aas and Stread (2015)	“It is agreed that a BI's major goal is to stimulate entrepreneurship and help incubatees in their early stages.” “BIs” are a “catalyst tool for economic development which provides entrepreneurs with a range of business resources and services.” (p.12)
Vanderstraeten and Matthyssens (2012)	Incubators "offer office space, a pool of shared support services, professional business support or advice, and internal/external network provision to start-up firms" (p.656) Yet many similar organisations offer overlapping services, and the incubation market is populated by 5 main actors: "business incubators, logistic infrastructure providers, non-profit advice organisations, for-profit advice organisations and finance advisors" (p.656)