Journal of Business Research 69 (2016) 1775–1779

Contents lists available at ScienceDirect

Journal of Business Research

A bibliometric analysis of international impact of business incubators☆

Gema Albert-Morant *, Domingo Ribeiro-Soriano

Universitat de València, 46022 València, Spain

ARTICLE INFO

Article history:
Received 1 February 2015
Received in revised form 1 July 2015
Accepted 1 September 2015
Available online 21 October 2015

Keywords:
Business incubators
Entrepreneurship
Bibliometric analysis
Web of Science

ABSTRACT

This study seeks to observe trends in literature on business incubators. The article presents a bibliometric analysis of 445 studies on business incubators. These works come from the Web of Science database for the period 1985–2015. The study sorts these articles according to the following bibliographic indicators: eminent authors, year of publication, countries with the highest rate of productivity, journal with most published research, language, type of research, and research area. This analysis provides insight into the nature and trends of research on business incubators. The results of the analysis reveal the lack of articles on business incubators and highlight the fragmented nature of the topics these articles cover.

1. Introduction

Understanding of business incubators as a formal mechanism for business creation is growing in recent years (Bollingtoft & Ulhoi, 2005; McAdam & McAdam, 2008; Schwartz and Hornych, 2010). Incubators are a strong instrument for promoting innovation and entrepreneurship (Aerts et al., 2007). The aim of incubators is to produce successful businesses, which is why incubators help businesses to survive and grow during their initial stages (Aernoudt, 2004). At the same time they stimulate innovation and regional development (Más-Verdú, Ribeiro-Soriano & Roig-Tierno, 2015). Research on business incubators, however, still needs to attain the status of an established discipline within management, business, and economics (Guzmán-Cuevas et al., 2009; Hackett & Dilts, 2004a; Lee et al., 2007; Ribeiro & Urbano, 2010).

Phan et al. (2005) argue that businesses incubation remains in the theory-creation phase and that the literature is disparate, fragmented, and isolated. Albert and Gaynor (2000) group studies of incubators into three classes: Prescriptive, descriptive, and evaluative. Because of the growth in literature on business incubators and the fragmentation of the theories and concepts surrounding this term, this study investigates and shows research on business incubators develops over time. In addition, this study examines the most widely occurring topics in the literature to identify potential weaknesses and gaps in scientific research into business incubators. To achieve these objectives, the research consists in a bibliometric analysis that draws on data from citations of articles, books, and other materials available at the Thomson Reuters' Web of Science database.

This study analyzes 445 pieces of research on business incubators dating from 1985 to 2014, thus observing that the number of publications on business incubators changes over time. The study deals with articles from 1985 onwards because the earliest article on business incubator in the Web of Science dates from this same year.

Following this brief introduction, Section 2 presents a review of the business incubator literature. Section 3 describes the study method. Section 4 discusses results of the bibliometric analysis. Finally, Sections 5 and 6 present the conclusions, limitations, and research opportunities arising from this study.

2. Literature review

Over the last 30 years, interest in business creation is increasing, and this surge in interest leads to changes in policies on entrepreneurial initiatives (Lewis et al., 2011). In this context, most studies find that business incubators are a tool to foster entrepreneurship (Dee et al., 2011; Lewis et al., 2011; McAdam &Marlow, 2007; Smilor &Gill, 1986) because they provide support and aid to start-ups (Roberts, 1991). The services provided by the business incubators are vital for the new companies (Lai & Lin, 2015).

The literature on business incubators contains great detail and a large number of similar definitions (Hackett & Dilts, 2004b). To date, however, scholars have yet to settle on a universal definition for business incubators, although many have attempted to do so. Allen and Rahman (1985) define the small business incubator as a center that helps young companies to grow in their early stages by providing them with a rental space, shared office, and assistance through business consulting services. In a later publication, Allen and Bazan (1990) define

☆ The authors thank Cristina Blasco-Carreras, Universitat de València, for their careful reading and suggestions.

* Corresponding author.
E-mail addresses: gema.albort@uv.es (G. Albert-Morant), domingo.ribeiro@uv.es (D. Ribeiro-Soriano).

http://dx.doi.org/10.1016/j.jbusres.2015.10.054
0148-2963/

incubators as networks or organizations that provide skills, motivation, knowledge, experience in real estate, business services, and shared services. According to Hughes et al. (2007), a business incubator is "a facility that houses young, small firms to help them develop quickly into competitive businesses"(p.155). Finally, the *Entrepreneur's Small Business Encyclopedia* defines the business incubator as "an organization designed to accelerate the growth and success of entrepreneurial companies through an array of business support resources and services that could include physical space, capital, coaching, common services, and networking connections" (Business incubator, 2014). This may be one of the most relevant definitions today.

A notable feature of the literature on business incubation is that scholars mainly address the evolution of the incubator or a specific element of the process (Ascigil &Magner, 2009; Hughes et al., 2007). Scholars also focus on types of business incubators (Autio &Klofsten, 1998), defining different types of incubators, including public incubators, regional incubators, private corporate incubators, and independent incubators (Mian, 1996). In 1986, Smilor and Gill identify ten success factors in business incubation. Other scholars also emphasize the key factors of success and failure of this type of incubated businesses (Honing &Karlsson, 2007).

Another issue that is encountering limitations in recent years is the construction of theories on business incubation (Hackett &Dits, 2008). Scholars apply many theories to different aspects of business incubation. Such theories include transaction cost theory (Williamson, 1975), structural contingency theory (Ketchen et al., 1993), network theory (Hansen et al., 2000), the theory of economic development through entrepreneurship (Brooks 1986), and organizational theory (Bhabra-Remedios &Cornelius, 2003). Many of these theories lack coherence, and with some exceptions, the literature fails to consider the perspectives and characteristics of entrepreneurs whose businesses are incubators (McAdam &Marlow, 2007; Warren et al., 2009). Because of the growth of research on business incubation, no definition of success in terms of quality and efficiency exists, nor consensus regarding which indicators or variables exert the greatest influence on incubated companies' profitability (Dee et al., 2011) or key success factors (Lumpkin & Ireland. 1988).

Most studies on business incubators suffer from two major flaws. First, they fail to define precisely what constitutes success, and second, even when they manage to do so, they are unable to measure the degree of success using factors that determine the outcome of business incubation (Dee et al., 2011). Research also questions the extent to which the incubation of businesses adds value (Bruneel et al., 2012; Lewis et al., 2011;Rouach et al., 2010).

Despite the large number of studies, most research on business incubation remains anecdotal, excludes the incubated company's perspective, and suffers from an informal research design and/or a limited theoretical approach (Theodorakopoulos et al., 2014). Spitzer and Ford (1989) offer an interesting criticism, claiming that most studies take the perspective of the incubator, instead of the tenants' perspective. Therefore, understanding how and why incubated companies grow inside business incubators is still necessary (Smilor and Gill, 1986).

The heterogeneity of business incubators, the inconsistency in definitions, and the range of criteria to evaluate the businesses incubator's effectiveness makes difficult the establishment of how much value business incubators add and what really affects the incubation of successful businesses (Theodorakopoulos, et al., 2014). As this literature review shows (Ribeiro & Castrogiovanni, 2012; Ribeiro & Roig, 2009), research on business incubators is broad in scope, heterogeneous, contradictory, and largely inconclusive.

3. Method

3.1. Bibliometric analysis

Bibliometric analysis examines bibliographical material from an objective, quantitative perspective, which is useful for organizing information in a specific thematic field (Merigó et al., 2015). Bibliometric analysis is also a form of scientific publication analysis that evaluates developments in knowledge of a specific subject and assesses the scientific quality and influence of works and sources (Bouyssou & Marchant, 2011; Daim et al., 2006). To perform the current bibliometric analysis of research on business incubators, this study analysed the most prolific authors, the journals with most publications, the most common topics, the relevance of topics, and countries and languages that publish most research.

This bibliometric analysis followed six steps: 1) define the field under study, 2) choose the database, 3) adjust the search criteria, 4) compile the categories of bibliographic information, 5) codify the material retrieved, and finally, 6) analyze the information.

3.2. Choice of database

The study first identified databases and decided which best met the study's requirements. The study uses the Thomson Reuters Web of Science database, formerly ISI Web of Knowledge, which is an online scientific information assistant. This database gives scholars access to articles from scientific journals, books, and other academic documents in all fields of science. In addition, the journals in the Thomson Reuters Web of Science have impact factors in the *Journal Citation Report* (JCR).

This study analyzes articles from 1985 to 2015 because the first scientific publication on business incubators appeared in 1985.

3.3. Indicators

Cadavid-Higuita et al. (2012) define three types of indicators. The first indicator is quantity, which measures productivity in terms of number of publications. The second indicator is quality, which measures the impact of a publication in relation to the number of citations that publication receives. Finally, the structural indicator measures relationships between publications.

The bibliometric indicators this study used were quantity and quality indicators because the study sought to measure how interest in business incubators has grown in recent years.

3.4. Codification process

The encoding process consists in encoding research building on several variables such as most eminent authors, year of publication, countries with highest productivity, journals publishing articles, language, type of research, and field of research. Using bibliometric analysis allows observing the productivity in the subject under study. To carry out the analysis, this study encoded the retrieved articles from the Web of Science database in May 2015.

Following the encoding process, the study produced a spreadsheet containing data for the later analysis.

4. Results

The scope of this analysis covers all documents, languages, and countries available because the aim of this study is to gain an overall perspective of developments in research on business incubators.

The study examines research dating from 1985 to 2015. Narrowing this time frame any further would render the pool of literature insignificant because of the already small research output in this field. The starting year is1985, the first article on business incubators in the Web of Science dates from that year.

4.1. Number of publications per year

The topic of business incubation appears in academic research between 1985 and 2015. Fig. 1 shows three stages in the publication trend. The first stage corresponds to the period 1985–1997, which is

when research on business incubation begins. From 1998 to 2006, research grows moderately. Finally, during the third stage, which corresponds to 2007 onwards, the number of publications generally increases considerably, albeit with some decreases in research output from 1 year to the next. The increase in publications from 2007 may owe to the role of business incubators as a business creation tool, and by extension, as means of job creation. Finally, the figure for 2015 is low because the figure draws on data representing less than half of the year. The final number of publications in 2015 remains unknown.

4.2. Countries with the highest rate of productivity

Table 1 shows the countries where authors produce the most research on business incubators. This study analyzed the number of articles (TP), the total number of citations (TC), average citations per article (C/P), and finally, the h-index, which measures the quality of research output building on the number of citations received.

United States is first in the ranking with the most quantity of articles, citations, the highest average citations per article, and highest h-index. Between 1985 and 2015, scholars from the US produce 97 articles with 1385 total citations, 14.28 citations per article, and an h-index of 19. Most of these journals are US journals, so authors from the US may enjoy greater access to these journals than authors in other countries do.

The next most productive countries are China and England, with 64 and 30 articles, respectively. Despite having 64 publications, China has a low h-index of 1.08 points, whereas England's h-index is 9.7. The countries with the highest h-index are the US, England, and Scotland.

Note that The Netherlands has one of the best productivity ratings, with 11.40 citations per article. Despite producing fewer articles (14),these articles are of a high quality because they receive more citations (per article) than many publications from other countries.

As Table 1 shows, the countries with the most publications are English-speaking countries. Thus, English is the language most common to publish research on business incubators. Of the 445 research works in this area, 427 are in English. Few studies are in other languages because of the difficulty of publishing non-English language research. Currently, most scientific conferences accept research in English only, although exceptions may exist.

4.3. Most common business incubator research

Table 2 shows that articles are the most common type of research (228 articles). Proceedings are the next most common publications with 203, then news items (7 publications), and reviews(6 publications). Correction additions and meeting abstracts have just one publication each.

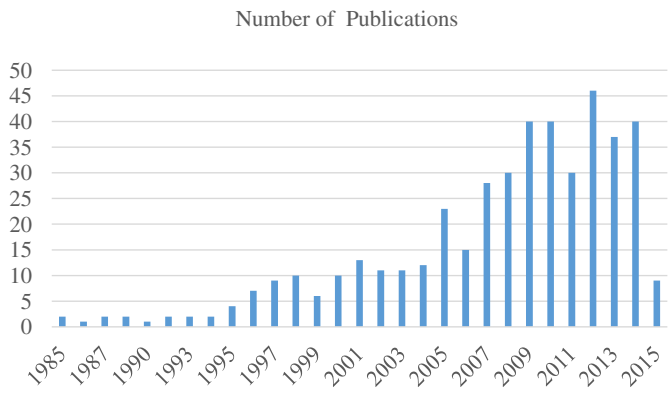

Fig. 1. Number of publications per year.

Table 1
Countries with the highest rate of productivity.

Rank	Country	TP	TC	C/P	h-index
1	USA	97	1385	14.28	19
2	China	64	69	1.08	2
3	England	30	291	9.7	11
4	Netherlands	14	156	11.14	5
5	Canada	14	47	3.36	3
6	Romania	13	5	0.38	2
7	Italy	13	68	5.23	3
8	Spain	12	33	2.75	3
9	Germany	11	65	5.91	4
10	Belgium	11	140	12.73	4
11	Sweden	10	148	14.8	5
12	France	10	6	0.6	1
13	South Africa	9	17	1.89	1
14	South Korea	8	78	9.75	5
15	Scotland	8	180	22.5	7

4.4. Most productive journals

The study identifies 228 journals that publish articles on business incubators. Fig. 2 presents the 20 most productive journals in research on business incubators. Three journals are noteworthy: *Technovation* with 22 articles, *Journal of Technology Transfer* with 14 articles, and *Journal of Business Venturing* and *Nato Advanced Science Institutes series sub series 4 science and technology policy*, with 10 articles each. Fig. 2 shows the big difference between *Technovation* and other journals from the same category.

The areas of research with the most research articles on business incubators are business economics (281 publications), engineering (116 publications), and operations research management science (68 publications). In addition to these most popular areas, many additional fields address business incubators. Such fields include geography, psychology, mathematics, computer science, and chemistry.

4.5. Authors with the greatest productivity

Finally, the study analyses the impact of the most productive authors. Table 3 shows that no author stands out from the rest because all authors have approximately the same number of articles. Authors who publish most on the topic are McAdam and Schwartz with six articles each. However, the author with most citations is Mian, with 234. Despite having more publications, McAdam and Schwartz are not the most productive authors; Mian (58.5 citations per article) and Grimaldi (20.33 citations per article) are more productive. Research on business incubators is male dominated because the majority of authors are men.

5. Conclusions

This study reports the evolution of scientific research on business incubators between 1985 and 2015 in terms of publications available in the Web of Science database. The results provide an overview of all or part of the existing information regarding research on business incubators. This study provides a review of the literature and summarizes research available so far.

First, the study analyzes the trend in academic publications on business incubators, noting three different stages throughout the 30 years of publications in this field. Afterwards, the study analyzes productivity by countries, observing that the country with the largest number of publications is the United States, which may owe to the high proportion of journals in the US. Nevertheless, the fact that a country has more publications does not mean that they are of a higher quality. English is the most common language when publishing research. English is currently

Table 2
Most common business incubator research.

R	Document types	TP
1	Article	228
2	Proceedings paper	203
3	News item	7
4	Review	6
5	Correction addition	1
6	Meeting abstract	1

the universal language and gives authors many more opportunities for publication than any other language does.

Most documents in the Web of Science are articles because this format allows authors to publish concise research accounts in prestigious research journals. The journals with the most articles on business incubators are *Technovation* with 22 articles, *Journal of Technology Transfer* with 14 articles, and *Journal of Business Venturing* with 10 articles. This prominence may be because these journals accept a greater number of articles in this area of research. Although many publications are part of business research, articles on business incubators are part of many research areas.

The authors with the largest number of publications on business incubators are McAdam, Schwartz, and Savecus. However, the authors with the highest h-index—and therefore greatest productivity—are Mian, McAdam, and Grimaldi. This finding may be difficult to grasp due to the assumption that a higher h-index means that the article is more relevant.

The results of the bibliometric analysis show that the number of publications grows moderately. In recent years only 450 pieces of research on business incubators appear. Arguably, this may be because research on business incubators is in its initial stages. Research on business incubation has poor representation in business, management, and economics because few reliable sources exist on the Internet. In addition, the knowledge is fragmented because many research areas mention business incubators and its characteristics.

6. Limitations and research opportunities

The main problem with bibliometric analysis lies in the indicators to measure quantity, quality, and connections between publications. Often the citation index or the number of publications measures quality or quantity, regardless of the actual quality of the article. The mere fact that an author is important or relevant persuades other authors to cite that author without reading the article or developing a critical view of its content. Another limitation of the study is that many more articles

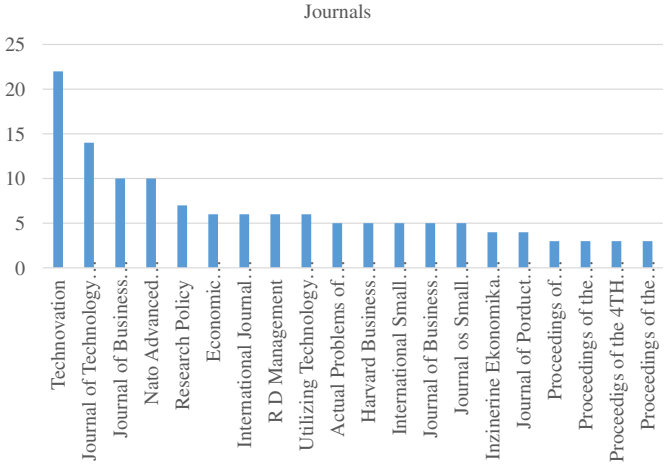

Fig. 2. Most productive journals.

Table 3
Authors with the greatest productivity.

Authors	TP	TC	C/P	h-index
McAdam M	6	64	10.67	4
Schwartz M	6	59	9.83	4
Savecus D	5	5	1	2
Al-Mubaraki HM	4	1	0.25	1
Lin DC	4	2	0.5	1
Lu Q	4	2	0.5	1
McAdam R	4	47	11.75	3
Mian SA	4	234	58.5	3
Wang LM	4	0	0	0
Yang JH	4	0	0	0
Busler M	3	0	0	0
Grimaldi R	3	61	20.33	2
Lindelof P	3	28	9.33	3
Lofsten H	3	28	9.33	3
Marlow S	3	20	6.67	2
MiliusPB	3	3	1	1
Patton D	3	1	0.33	1
Pirker J	3	1	0.33	1

on business incubators exist in non-indexed journals unavailable in the Web of Science database.

For further research, scholars should consider conducting a bibliometric analysis using other databases. Google Scholar, for example, includes not only citations in journals available at the ISI Web of Science but also citations in other academic papers available on the Internet. Future research could also compare the results from other databases with those of this research.

In conclusion, more business incubator publications exist in non-indexed journals than in journals available at the Thomson Reuters Web of Science with impact factors in the *Journal Citation Report* (JCR).

References

Aernoudt, R. (2004). Incubators: Tool for entrepreneurship? *Small Business Economics, 23*(2), 127–135.
Aerts, K., Matthyssens, P., & Vandenbempt, K. (2007). Critical role and screening practices of European business incubators. *Technovation, 27*(5), 254–267.
Albert, P., & Gaynor, L. (2000). *Incubators-growing up, moving out: A review of the literature. ARPENT: Annual review of progress in entrepreneurship, 1.* (pp. 158).
Allen, D., & Bazan, E. (1990). *Value added contribution of Pennsylvania's business incubators to tenant firms and local economies.* Appalachian Regional: Department of Commerce.
Allen, D.N., & Rahman, S. (1985). Small business incubators: A positive environment for entrepreneurship. *Journal of Small Business Management, 23*(3), 12–22.
Ascigil, S.F., & Magner, N.R. (2009). Business incubators: Leveraging skill utilization through social capital. *Journal of Small Business Strategy, 20*(1), 19–32.
Autio, E., & Klofsten, M. (1998). A comparative study of two European business incubators. *Journal of Small Business Management, 36*(1), 30–43.
Bhabra-Remedios, R.K., & Cornelius, B. (2003). *Cracks in the egg: Improving performance measures in business incubator research.*
Bøllingtoft, A., & Ulhøi, J.P. (2005). The networked business incubator—Leveraging entrepreneurial agency? *Journal of Business Venturing, 20*(2), 265–290.
Bouyssou, D., & Marchant, T. (2011). Ranking scientists and departments in a consistent manner. *Journal of the American Society for Information Science and Technology, 62*(9), 1761–1769.
Brooks, O.J. (1986). Economic development through entrepreneurship: Incubators and the incubation process. *Economic Development Review, 4*(2), 4.
Bruneel, J., Ratinho, T., Clarysse, B., & Groen, A. (2012). The evolution of business incubators: Comparing demand and supply of business incubator services across different incubator generations. *Technovation, 32*(2), 110–121.
Business incubator (2014). In Entrepreneur's Small Business Encyclopedia. Available at http://entrepreneur.com/encyclopedia/business-incubator (accessed 24 February 2014)
Cadavid-Higuita, L., Awad, G., & Franco-Cardona, C.J. (2012). A bibliometric analysis of a modeled field for disseminating innovation. *Estudios Gerenciales, 28*, 213–236.
Daim, T.U., Rueda, G., Martin, H., & Gerdsri, P. (2006). Forecasting emerging technologies: Use of bibliometrics and patent analysis. *Technological Forecasting and Social Change, 73*, 981–1012.
Dee, N.J., Livesey, F., Gill, D., & Minshall, T. (2011). *Incubation for growth: A review of the impact of business incubation on new ventures with high growth potential.* London: NESTA Available at http://nesta.org.uk/library/documents/IncubationforGrowthv11.pdf.
Guzmán-Cuevas, J., Cáceres-Carrasco, R., & Soriano, D.R. (2009). Functional dependence and productive dependence of SMEs. *Small Business Economics, 32*(3), 317–330.
Hackett, S.M., & Dilts, D.M. (2004a). A real options-driven theory of business incubation. *The Journal of Technology Transfer, 29*(1), 41–54.

Hackett, S.M., & Dilts, D.M. (2004b). A systematic review of business incubation research. *The Journal of Technology Transfer*, *29*(1), 55–82.
Hackett, S.M., & Dilts, D.M. (2008). Inside the black box of business incubation: Study B—scale assessment, model refinement, and incubation outcomes. *The Journal of Technology Transfer*, *33*(5), 439–471.
Hansen, M.T., Chesbrough, H.W., Nohria, N., & Sull, D.N. (2000). Networked incubators hothouses of the new economy. *Harvard Business Review*, *78*(5), 74–84.
Honing, B., & Karlsson, T. (2007). Social capital and the modern incubator: A comparison of in-group and out-group social networks (Summary). *Frontiers of Entrepreneurship Research*, *27*(15), 5.
Hughes, M., Ireland, R. bD., & Morgan, R. bE. (2007). Stimulating dynamic value: Social capital and business incubation as a path way to competitive success. *Long Range Planning*, *40*(2), 154–177.
Ketchen, D.J., Thomas, J.B., & Snow, C.C. (1993). Organizational configurations and performance: A comparison of theoretical approaches. *Academy of Management Journal*, *36*(6), 1278–1313.
Lai, W.H., & Lin, C.C. (2015). Constructing business incubation service capabilities for tenants at post-entrepreneurial phase. *Journal of Business Research*, *68*(11), 2285–2289.
Lee, S.M., Ribeiro, D., Olson, D.L., & Roig, S. (2007). The importance of the activities of service business in the economy: welcome to the service business. An international journal. *Service Business*, *1*(1), 1–5.
Lewis, D.A., Harper-Anderson, E., & Molnar, L.A. (2011). *Incubating success incubation best practice that lead to successful new ventures. Institute for research on labor employment and the economy*. Ann Arbor, MI: University of Michigan.
Lumpkin, J.R., & Ireland, R.D. (1988). Screening practices of new business incubators: The evaluation of critical success factors. *American Journal of Small Business*, *12*(4), 59–81.
Mas-Verdú, F., Ribeiro-Soriano, D., & Roig-Tierno, N. (2015). Firm survival: The role of incubators and business characteristics. *Journal of Business Research*, *68*(4), 793–796.
McAdam, M., & McAdam, R. (2008). High tech start-ups in university science park incubators: The relationship between the start-up's lifecycle progression and use of the incubator's resources. *Technovation*, *28*(5), 277–290.
McAdam, M., & Marlow, S. (2007). Building futures or stealing secrets? Entrepreneurial cooperation and conflict within business incubators. *International Small Business Journal*, *25*(4), 361–382.
Merigó, J.M., Gil-Lafuente, A.M., & Yager, R.R. (2015). An overview of fuzzy research with bibliometric indicators. *Applied Soft Computing*, *27*, 420–433.
Mian, S.A. (1996). Assessing value-added contributions of university technology business incubators to tenant firms. *Research Policy*, *25*(3), 325–335.
Phan, P., Siegel, S., & Wright, M. (2005). Science parks and incubators: Observations, synthesis and future research. *Journal of Business Venturing*, *20*(2), 165–182.
Ribeiro-Soriano, D., & Urbano, D. (2010). Employee-organization relationship in collective entrepreneurship: An overview. *Journal of Organizational Change Management*, *23*(4), 349–359.
Ribeiro-Soriano, D., & Roig-Dobón, S. (2009). Linking globalization of entrepreneurship in small business organizations. *Small Business Economics*, *32*(3), 233–239.
Ribeiro-Soriano, D., & Castrogiovanni, G.J. (2012). The impact of education, experience and inner circle advisors on SME performance: Insights from a study of public development centers. *Small Business Economics*, *38*(3), 333–349.
Roberts, E.B. (1991). *Entrepreneurs in high technology*. Oxford: Oxford University Press.
Rouach, D., Louzoun, S., & Deneux, F. (2010). *Incubators of the world best practices from top leaders: USA, Israel, France, Switzerland China and Japan*. France: Pearson Education.
Schwartz, M., & Hornych, C. (2010). Cooperation patterns of incubator firms and the impact of incubator specialization: Empirical evidence from Germany. *Technovation*, *30*(9), 485–495.
Smilor, R.W., & Gill, M.D. (1986). *The new business incubator linking talent, technology, capital, and know-how*. Lexington, MA: Lexington Books.
Spitzer, D.M., Jr., & Ford, R.H. (1989). *Business incubators: do we really understand them? Frontiers of Entrepreneurship Research*. Wellesley, MA: Babson College, 436–446.
Theodorakopoulos, N., K., Kakabadse, N., & McGowan, C. (2014). What matters in business incubation? A literature review and a suggestion for situated theorising. *Journal of Small Business and Enterprise Development*, *21*(4), 602–622.
Warren, L., Patton, D., & Bream, D. (2009). Knowledge acquisition processes during the incubation of new high technology firms. *International Entrepreneurship and Management Journal*, *5*(4), 481–495.
Williamson, O.E. (1975). *Markets and hierarchies analysis and antitrust implications*. New York, NY: The Free Press.