

Towards More Case Study Research in Entrepreneurship

Tom Duxbury

“*Discipline is the bridge between goals and accomplishment.*”
Jim Rohn

Entrepreneurship as an emerging discipline has made good strides, but according to some, has fallen short of bringing its theory and literature up to the standards of others in the management sciences. Rich with the descriptive detail needed for insightful theory building in entrepreneurship, scholars have called for more case study research, particularly those incorporating non-retrospective and longitudinal observations. At the same time however, it has become rare to find such research published in A-level journals dedicated to entrepreneurship. A survey presented here of major entrepreneurship journals over the past six years revealed a publication rate of only 3% using the case study method. This presents a major impediment for developing fresh research in this field based upon the study of real cases. The author explores how the case study method has been applied to entrepreneurship research and provides recommendations for improved publication rates.

Introduction

Interest in entrepreneurship has been growing steadily in business schools, doctorate programs, and journal publications, raising the question of how research to advance the field is conducted. Theories on entrepreneurial processes and outcomes are drawn from a cross section of management science disciplines, including strategy, marketing, finance, operations, and organizational behaviour. If one considers entrepreneurship as encompassing vibrant processes of discovery, initiation, survival and growth, it is hard to imagine a research paradigm based predominantly on the hypothetico-deductive method. Case study research (CSR) provides an alternative method and opportunity to help build new theory across disciplines. It also offers an accepted framework for building theory from real-world, immediate observations rather than relying on retrospectives, surveys, or lab tests. Single-case studies, and longitudinal ones in particular, provide educators and practitioners with rich and valuable details from which to draw their own conclusions.

Entrepreneurship scholars such as Bygrave (2007; tinyurl.com/7vwkr49) have pointed to the decline in descriptive research and relevance to practitioners over the past decade, attributing the cause to an increasing

difficulty in getting such studies published. Why is this? This article begins with a review of the CSR method as described by prevalent scholars, including a glossary of frequently encountered terms (Box 1). Using a survey of major journal publications over the past six years, the author explores how the method has been applied to entrepreneurship, and whether concerns over methodological rigour are justified. The author concludes with advice for researchers considering adopting the method.

What is Case Study Research?

CSR is a method whose defining features are: i) empirical study of contemporary situations in a natural setting; ii) a focus on asking “how” and “why” questions; and iii) the treatment of each case as an experiment in which the behaviors cannot be manipulated (Myers, 2009: tinyurl.com/7ts9bxq; Yin, 2009: tinyurl.com/7ywkcpy). Data collection can be accomplished using quantitative or qualitative methods, and it is a common misconception that case studies are based solely on the result of ethnographies or of participant observation (Dooley, 2002: tinyurl.com/7s5atpq; Yin, 2009). Case studies do not necessarily require fieldwork. In fact, they follow a linear, yet iterative process employing a variety of data collection methods to compare within and across cases for research validity.

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CSR has been successfully used for descriptive, exploratory (discovery), and explanatory (test, explain, or compare) theoretical purposes, and it is not limited in time to early stages of enterprises. Yin (2009; tinyurl.com/7ywkcpy) proposes a two-part definition of CSR, beginning with the scope, which helps distinguish between other types of research methods:

1. *A case study is an empirical inquiry that:*

- *investigates a contemporary phenomenon in depth and within its real-life context, especially when*
- *the boundaries between phenomenon and context are not clearly evident*

Implicit in these two points is the lack of control on the part of the researcher: the setting and variables are fixed for observation. In the second part, Yin additionally differentiates the method based on technical detail:

2. *The case study inquiry:*

- *cope with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result*
- *relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result*
- *benefits from the prior development of theoretical propositions to guide data collection and analysis*

Although there are variations in the definition, the methodology surrounding CSR design is reasonably consistent, with variations dependent upon the research paradigm. Research design is not dissimilar to other methodologies; with five components depending upon the epistemological stance (Yin, 2009):

1. *a study's research questions*

2. *its propositions (if positivist) or purpose*

3. *its unit(s) of analysis*

4. *the logic linking the data to the propositions (if positivist)*

5. *the criteria for interpreting the findings (if positivist)*

In designing a case study, the researcher must initially establish that a case study is the best method to answer the research question at hand. The proposed case must be of sufficient interest to justify its production, because "a boring case is really just a waste of everyone's time" (Myers, 2009; tinyurl.com/7ts9bx). Availability of

Box 1. Glossary

Epistemological: The philosophical nature of knowledge; its presuppositions, extent, methods, and validity.

Hypothetico-deductive method: Method of scientific progress whereby a general hypothesis is tested by deducing predictions that may be experimentally tested; when falsified, a new hypothesis is required.

Longitudinal: A type of study that involves repeated observations of the same variables over long periods of time.

Participant observation: A research strategy which aims to gain a close and intimate familiarity with a target study group through direct participation in their natural environment.

Positivist: A philosophical approach to knowledge based upon the deductive scientific method, i.e., development of testable, verifiable hypotheses with the goal of prediction, explanation, and theory development.

secondary data and access to key informants of the case are essential and may limit both the number and selection of cases studied. Consideration of the initial constructs requires careful alignment of the propositions (2), units of analysis (3), and linking of the data (4), and is an essential activity of theory building (Eisenhardt, 1991; tinyurl.com/6wsppa4). The findings are often presented in an objectively narrative form, linking interview data with secondary data.

The selection of cases is chosen primarily to illuminate the research questions, and is generally based on theoretical replication, rather than sampling logic (Eisenhardt, 1991; tinyurl.com/6wsppa4; Yin, 2009; tinyurl.com/7ywkcpy). Multiple case studies are analogous to the replication of scientific experiments in order to determine whether a theory holds true under consistent circumstances (Yin, 2009). Depending upon the emergent theory being developed however, it may be advantageous to select cases based on contrasts or polar opposites, giving rise to "theoretical sampling". Eisenhardt (1989; tinyurl.com/7dfuc3z) suggests that between four and eight cases is optimal, although many examples of groundbreaking studies based on single cases exist.

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Research journal editors have expressed a strong desire for more longitudinal case studies in particular, while acknowledging their ongoing challenges. According to Chandler and Lyon (2001; tinyurl.com/7pfgkwf) only 7% of the 416 empirical entrepreneurship articles published in nine major journals between 1989 and 1999 were longitudinal studies, and as Bygrave (2007; tinyurl.com/7vwkr49) states, "there is still room for more". Longitudinal cases are not only difficult to sustain with the subjects (who may go out of business), but run counter to the pressures of publication and tenure many researchers face. Risk of enterprise failure is a consistent hazard in entrepreneurship research and is one likely explanation for the low production of this type of CSR noted by Chandler and Lyon (2001).

Criteria of Quality in Case Study Research

There are no commonly agreed upon quality standards in CSR, therefore one might ask: who is to be the judge of good quality? If the target audience is the academic community, then it is the inner circle of journal editors and reviewers, and theoretical, factual, or methodological insights are the underlying basis of assessment. If the gap between researchers and practitioners is to be bridged in order to advance the field, then the needs of the practitioner audience for more practical frameworks and suggestions needs to be considered.

Positivist case study scholars (e.g., Yin, 2009: tinyurl.com/7ywkcpy; Eisenhardt, 1989: tinyurl.com/7dfuc3z and 1991: tinyurl.com/6wsppa4) have long endorsed the grafting of natural science measures onto CSR in terms of propositions, construct validity, internal validity, external validity, and reliability. Construct validity refers to identifying correct operational measures for the concepts under study, and is especially challenging in CSR since "subjective" measures may be used to collect data (Yin, 2009). External validity deals with the problem of generalizability and is often a criticism of single-case studies. Reliability refers to the repeatability of a study and is most easily overcome by well-documented data collection. Other common techniques, such as the use of multiple researchers with high inter-rater reliability (IRR) measurements, serve to increase study confidence (Crook et al., 2010; tinyurl.com/7fhuj37).

However, alternative quality criteria should apply to less positivist research (Leitch et al., 2010; tinyurl.com/6qrvz8e). Lincoln and Guba (1985; tinyurl.com/76xmfs) proposed, for example, that internal validity be recast as *credibility*: the degree to which a respondent's views fit with an inquirer's reconstruction; that external

validity be viewed as *transferability*: the generation of sufficient case information so that case-to-case generalizations are possible; and reliability be considered as *dependability*: the degree to which the research process is logical, traceable, and documented. In qualitative research, these concepts, while more subjective, are alternative means of establishing the trustworthiness of the findings.

For case studies, Yin (2009; tinyurl.com/7ywkcpy) insists on strong triangulation of data sources (e.g., interview, observations, documents, archival records), to establish the reliability and validity of the research. Convincing the reader that adequate triangulation to support a finding has been achieved however, is an important yet subjective task left up to the researcher.

Use of the Case Study Research Method

Given that CSR is well suited for applied management fields such as entrepreneurship, it is surprising how little it is used as a method in entrepreneurship publications. Wigren (2007; tinyurl.com/7vwkr49), for example, reviewed the literature published in two top entrepreneurship journals to determine the types of research methods used. In *Entrepreneurship Theory and Practice* (ETP), there were 11 matches in 11 issues using case studies published between 2002 and 2005. In the *Journal of Business Venturing* (JBV), there were 25 matches in 20 volumes published between 1985 and 2005. Chandler and Lyon (2001; tinyurl.com/7pfgkwf) reviewed 415 empirical articles in nine entrepreneurship journals between 1989 and 1999, and they found only 18% employed qualitative techniques of any kind. Those that could be categorized as CSR amounted to 49 studies, or 11% of the total. Longitudinal studies comprised only 7% of the total, almost none of which were in real time (i.e., non-retrospective), a "severe shortcoming" (Bygrave, 2007; tinyurl.com/vwkr49).

Crook and colleagues (2010; tinyurl.com/7fhuj37) revisited Chandler and Lyon's (2001; tinyurl.com/7pfgkwf) benchmark assessment of the state of construct validity in entrepreneurship research during the 10 years since its publication and discovered only minor changes in qualitative research publication overall.

Method Used in this Survey

There are currently two major journals among the *Financial Times* "top 45" (2010; tinyurl.com/88t68ep) that are dedicated to entrepreneurship: ETP and JBV. A review of articles from these two journals for the time period

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January 2005 to March 2011 was conducted to assess how successfully CSR has been applied to recent entrepreneurship research.

Sample selection

In the first stage of sample selection, the Scholar's Portal search engine (<http://scholarsportal.info>) was used to search titles, keywords, abstracts, and text bodies for the terms "case study", "case studies", or "case analysis". In the second stage, each of the previously identified articles was manually scanned to determine whether the article methodology meets the definition of CSR. A breakdown of the number of articles identified by journal is shown in Table 1. Table 2 provides a breakdown of the final number of articles selected by year of publication.

Review of articles and coding

Following selection of the cases, each case was re-examined in depth to determine:

1. how many cases were used in the study
2. the logic of case selection
3. the sources of data triangulation

4. whether the case was longitudinal or not
5. whether theoretical propositions were established
6. the type of interview technique used (e.g., open ended, structured)
7. whether a computer-aided text analysis (CATA) tool was identified (e.g., nVivo: tinyurl.com/5w7ws5)
8. to what extent the author(s) addressed methodological validity concerns

Two further aspects relating more specifically to entrepreneurship were investigated:

1. level of analysis
2. classification within major entrepreneurship themes

Chandler and Lyon's (2001; tinyurl.com/7pfgkwf) survey of entrepreneurship identified appropriate indications of validity (e.g., internal, external, construct) and reliability (e.g., inter-rater reliability, triangulation) that may be applied to CSR.

Table 1. Number of articles identified in the first and second stages of this study, by journal

Journal	Articles Published	CSR Articles (1 st Stage)	CSR Articles (2 nd Stage)	CSR Publication Rate
ETP	349	16	13	4%
JBV	294	6	5	2%
Total	643	22	18	3%

Table 2. Number of articles selected, by journal and year of publication

Journal	2005	2006	2007	2008	2009	2010	2011	Total
ETP	1	3	1	0	3	4	1	13
JBV	2	2	0	0	1	1	0	5

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Survey Results

Case attributes

Table 3 provides a synopsis of the case attributes, coded as previously described. The number of cases used in the studies examined ranged from one to 29, indicating that single-case studies do not appear to be a barrier to publication. The basis for case selection was split evenly between random selection, replication, variance and serendipity; two of the studies did not provide enough information to determine how cases were chosen. Most cases were conducted at a single point in time, and only 17% were conducted longitudinally, in line with Chandler and Lyon (2001; tinyurl.com/7pfgkwf).

The advancement of propositions in a study indicates a positivist application of the method. Half of the studies provided no theoretical propositions, which might be expected in a non-positivist epistemology. All case studies conducted interviews of some kind, and the majority were identified as semi-structured in the methods section. Somewhat surprisingly, 18% did not identify the type of interview, and only 17% used a CATA tool to assist in narrative analysis.

Triangulation of secondary data sources is essential to the CSR method, and 82% of the studies provided information regarding how this was accomplished. If one accepts Yin's (2009; tinyurl.com/7ywkcpy) positivist defini-

Table 3. Case attributes

Attribute	Measurement	Comments
Number of cases studied	Varied from 1 to 29, with a mean of 8.	4 studies (22%) were single-cases
Case selection logic	Split between random, replication, variance, and serendipity	2 studies did not provide enough information to determine the basis for case selection
Time span	Most of the studies (78%) collected data at a single point in time	4 cases (22%) were longitudinal
Theoretical propositions	9 studies (50%) included propositions based on theory	50% of studies made no propositions based on theory
Interview technique used	10 of the studies reported semi-structured; 2 were unstructured; 1 was structured	5 studies (18%) did not specify how interviews were conducted
Use of tools	3 of the studies reported use of computer-aided text analysis (CATA) tools	The majority of cases (83%) appear to have processed qualitative data manually
Triangulation	Most identified secondary sources, such as archival data or news reports; however, details were sparse.	4 studies (18%) provided no information regarding secondary data
Reliability and validity	10 of the studies reported some form of validity confirmation (e.g., inter-rater reliability; construct validity, external validity, declaration of biases)	8 studies (44%) did not address reliability or validity concerns

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tion of case studies outlined earlier, the four studies that did not identify secondary data sources, nor discuss triangulation in the analysis phase, might not even qualify as CSR. Looking back to 2001 however, Chandler and Lyon (2001; tinyurl.com/7pfgkwf) reported that only 5% of entrepreneurship studies combined primary and secondary data, indicating a significant improvement over the past decade.

Finally, most studies (56%) provided some evidence of validity, including: rechecking of interview data with informants, using independent coders, and reporting inter-rater reliability.

Level of analysis

Ten studies (55%) were single-level cases, in contrast to the 89% found by Chandler and Lyon (2001; tinyurl.com/7pfgkwf) in entrepreneurship research overall. Table 4 details the breakdown by level found in entrepreneurship CSR; the counts sum to more than the cases studied due to multiple-level studies.

It appears that the "firm" level receives 50% more attention than the "individual" level of analysis in this study and that this ratio has remained constant over the past decade, regardless of methodology.

Major topic areas of articles

The 18 articles were further coded into categories following entrepreneurship streams of research. Following Shane and Venkataraman's (2000; tinyurl.com/6sj7sk6) typology, the results are shown in Table 5.

Table 4. Entrepreneurship CSR levels of analysis

Level of Analysis	Count	% of Total
Individual	9	50%
Team	–	–
Project/Innovation	1	5%
Firm	15	83%
Industry	3	11%
Country	1	5%

It is apparent that, with nine studies (50%) focused on the "decision to exploit opportunities" stream, the field has been preoccupied with the individual entrepreneur in the recent past.

Discussion

This survey has uncovered significant findings. The CSR publication rate in entrepreneurship of 3% for JBV and ETP reported here is significantly lower than the 11% figure reported 10 years earlier by Chandler and Lyon (2001; tinyurl.com/7pfgkwf). It would appear that the usage of CSR in the entrepreneurship field is declining; neither of these two leading entrepreneurship journals published a single article using CSR in 2008, for example. Is there a lack of quality CSR in entrepreneurship to publish, or do journal editors and reviewers systematically choose other types of research to publish?

It would appear that many of the methodological criticisms of the entrepreneurship field highlighted by certain authors remain valid today. When we observe for example, that 18% of entrepreneurship CSR did not discuss their interview data collection method, or that a further 18% never triangulated their data, or that 44% never addressed methodological quality in any identifiable form, it may be true that we are "not there yet" (Crook et al., 2010; tinyurl.com/7fhuj37).

Regarding the second question, it is likely that CSR falls into the same challenges as other qualitative research methods: building new theory is difficult and requires more novelty, and there is a tension between breaking from existing theory while being attached to extant theory (Pratt, 2008; tinyurl.com/6tthf3f). Validation measures are unconventional and demand more of a trust relationship with the reader; consequently many researchers, reviewers, and editors prefer more positivist quantitative methods (Leitch et al., 2010; tinyurl.com/6qrvz8e). This may also be a reflection of the fact that: i) most major journals are based in North America and follow long traditions of positivist, quantitative research; ii) such research is well understood and requires less methodological reasoning; and iii) the entrepreneurship field comprises a relatively small number of researchers and journals compared to other management sciences. This lack of "critical mass" in the field generally, may limit the types of research we see undertaken and published.

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Table 5. Entrepreneurship CSR streams of research

	Existence of entrepreneurial opportunities	Discovery of entrepreneurial opportunity/ Information corridors/ Cognitive properties	Decision to exploit entrepreneurial opportunities/ Individual differences	Other
Vaghely & Julien, 2010; JBV	✓	✓		
Kelley et al., 2009; JBV		✓		
Lichtenstein, et al., 2006; JBV		✓	✓	
Henderson et al., 2006; JBV				Resource Exchange
Claryssea et al., 2005; JBV			✓	
Marlow & McAdam, 2011; ETP			✓	
Kistruck & Beamish 2010; ETP				Form & Structure
Iacobucci & Rosa, 2010; ETP			✓	
Grimes, 2010; ETP				Sensemaking
Corner & Ho, 2010; ETP	✓			
Lechner & Leyronas, 2009; ETP				Growth Strategy
Tergeson & Elam, 2009; ETP			✓	
Khavul et al., 2009; ETP			✓	
Sin & Amanda, 2009; ETP			✓	
Tracey & Jarvis, 2007; ETP			✓	
Karra et al., 2006; ETP			✓	
Neergaard & Ulhøi, 2006; ETP		✓		
Makela & Maula, 2006; ETP		✓		
Hite, 2005; ETP	✓	✓		

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Recommendations

Yin (2009; tinyurl.com/7ywkcpy) lists a number of objections to the method to overcome: sloppy past procedures resulting in lack of rigour; confusion with cases for teaching (in which facts may be altered); and the notion that case studies provide insufficient basis for scientific generalization. The latter is a specific problem with misinterpretation of the method; cases must be viewed as generalizable to *theoretical* propositions, rather than populations. Case studies are intended for *analytic* generalizations, rather than *statistical* generalizations (Yin, 2009). Authors are particularly cautioned against attempts to generalize a few cases into a "single truth".

Many of these perceptual associations with the method are not reconcilable without continuing to produce ever higher-quality examples with better-qualified researchers (Short et al., 2010: tinyurl.com/6raro9b; Crook et al., 2010: tinyurl.com/7fhuj37; Yin, 2009: tinyurl.com/7ywkcpy). The ongoing question of methodological quality must be laid to rest; based on this study, five actionable recommendations for improvement are:

1. Always include secondary data sources and triangulation in the analysis.
2. Describe coding methodology surrounding interviews.
3. Advance propositions where possible.
4. Describe how CATA tools were used to improve consistency.
5. Always provide the reader with clues about reliability, validity, and trustworthiness.

In the end, CSR (along with all qualitative research methods) must excel at answering the basic reader questions of: "Is it an interesting story?", "Did it help me see organizational life differently?", and "Do I believe it?" (Pratt, 2008; tinyurl.com/6tthf3f). These are essential elements that will help CSR move forward as a research paradigm.

Advice for Researchers

Researchers considering using CSR in the field of entrepreneurship may expect to face many challenges, primarily:

1. Meeting methodological skepticism

2. Gaining access to entrepreneurial companies (some of whom fail, by definition)
3. Engaging in the type of longitudinal, multi-level studies being called for
4. Publishing work in the few A-level journals supporting entrepreneurship
5. Publishing work that is meaningful to the practice of entrepreneurship
6. Gaining tenure-track positions in a non-traditional management science discipline

These are daunting propositions. It is recommended that the research design schema of Eisenhardt (1991; tinyurl.com/6wsppa4) and Yin (2009; tinyurl.com/7ywkcpy) be followed: build from theory, propose constructs that are operationally testable, and design the study from that foundation. This approach is well understood by editors, and a largely descriptive study is not likely to be worth the effort if publication is the end goal. Careful design of constructs and attention to data and theoretical triangulation is essential to meet expectations of rigour.

Many have pointed out that not everyone can perform qualitative research or execute case studies well. It is a craft work that would best be learned from a skilled craftsperson, rather than by texts alone. Simple publication of a case study article does not qualify it as an exemplar. New researchers are well advised to seek the mentorship of those experienced in conducting well-regarded case studies.

Conclusions

This study has confirmed the low publication rate (3%) of articles employing CSR in the two major entrepreneurship journals. It is unclear whether few are produced due to production challenges and low publication rates or whether many are produced and suffer high journal rejection rates. It is likely that the combination of these two factors has led to a circular publication impasse. This survey has found that, although general principles of CSR are followed by entrepreneurship researchers, there remains work to address the validity concerns voiced by editors. If publication is a goal, following well established paths laid out by Eisenhardt (1989; tinyurl.com/7dfuc3z) and Yin (2009; tinyurl.com/7ywkcpy) with substantial triangulation of data is essential.

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To conclude on a positive note, there are encouraging signs from the field. Wiklund and colleagues (2010; tinyurl.com/77hkbqq), in proclaiming entrepreneurship's "golden era", also note that the field has yet to decline into a "preoccupation with increasingly marginal questions and methodological subtleties" that characterizes more mature disciplines. Case study methods in entrepreneurship give the field more of what we need: multi-level richness in detail, intriguing cross disciplinary theory, and actionable advice for entrepreneurs.

About the Author

Tom Duxbury is Entrepreneur in Residence at Wesley Clover Technologies, a private equity incubator. He is currently completing his PhD in Management at the Sprott School of Business at Carleton University in Ottawa, where he teaches courses in entrepreneurship and innovation.

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Recommended Reading

The SAGE Handbook of Qualitative Research

By Norman K. Denzin and Yvonna S. Lincoln
(1994; tinyurl.com/76zo4my)

"Theory Building From Cases: Opportunities and Challenges"

By Kathleen M. Eisenhardt and Melissa E. Graebner
(2007; tinyurl.com/7lkaawe)

Handbook of Qualitative Research Methods in Entrepreneurship

By Helle Neergaard and John P. Ulhøi
(2007; tinyurl.com/7vwkr49)

"The Future of Entrepreneurship Research"

By Johan Wiklund, Per Davidsson, David B. Audretsch, and Charlie Karlsson
(2010; tinyurl.com/77hkbqq)

Case Study Research

By Robert K. Yin
(2009; tinyurl.com/7ywkcpy)