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# New England Journal of Entrepreneurship

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Sacred Heart  
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JACK WELCH COLLEGE OF BUSINESS

# New England Journal of Entrepreneurship

SPRING/FALL 2016

VOLUME 19

NUMBER 1

## EDITORIAL NOTE

### Classics in Entrepreneurship Research: Enduring Insights, Future Promises

Vishal K. Gupta, University of Mississippi; Dev K. Dutta, University of New Hampshire; Grace Chun Guo, Sacred Heart University; Golshan Javadian, Morgan State University; Crystal Jiang, Bryant University; Arturo E. Osorio, Rutgers University; and Banu Ozkazanc-Pan, University of Massachusetts Boston

## REFEREED ARTICLES

### The Glass Cage: The Gender Pay Gap and Self-Employment in the United States

Leanna Lawter, Tuvana Rua, and Jeanine Andreassi, Sacred Heart University

### An Examination of Job Opportunities, Candidates and Salaries in the Field of Entrepreneurship

Todd A. Finkle, Gonzaga University

### An Integrated Model of Employee Adoption

Nelson Pizarro, California State Polytechnic University

## INVITED ARTICLE

### Entrepreneurship Research in Management and Organization Studies: A Contribution-Based Assessment of the Literature

Vishal K. Gupta, University of Mississippi; Sajna Ibrahim, University of Illinois at Chicago; Grace Chun Guo, Sacred Heart University; Erik Markin, University of Mississippi



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# New England Journal of Entrepreneurship

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# New England Journal of Entrepreneurship

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## Call for Articles and Reviewers

The *New England Journal of Entrepreneurship* (NEJE) is a double-blind peer-reviewed journal that aims to foster dialogue and innovation in studies of entrepreneurship and small and family-owned business management. The Journal welcomes original work across a broad spectrum of issues and topics related to the study and practice of entrepreneurship. The Journal encourages submission of a wide range of perspectives and is particularly interested in those that challenge conventional wisdom concerning all aspects of entrepreneurship and small and family-owned businesses and their role in society. In doing so, the Journal promotes an ethos that is explicitly theory-driven and supported, global in scope and vision, open, reflective and reflexive, imaginative and critical, interdisciplinary and multidisciplinary, and that facilitates exchange among academic scholars, as well as between academic scholars and practitioners.

Academics and practitioners alike are welcome to submit original articles that advance research in the field of entrepreneurship as well as research notes, book reviews, and original case studies concerning entrepreneurial or small and family-owned business management. Article topics include, but are not limited to:

- Venture creation and entrepreneurial processes in national and international contexts
- Small business management
- Family-owned businesses management
- Corporate and nonprofit entrepreneurship
- Women entrepreneurship
- Urban entrepreneurship
- Social entrepreneurship
- Gender and minority Issues in entrepreneurship and small and family-owned businesses
- Entrepreneurship education
- Entrepreneurship skills

The NEJE is published twice annually by the John F. Welch College of Business at Sacred Heart University, Fairfield, Connecticut. The acceptance rate is about 20%.

## Formatting Requirements

Manuscripts submitted to NEJE should be written in Microsoft Word or saved in RTF (rich text format). Note: Do not use tabs, extra spaces, hard returns except for paragraph breaks, or any other formatting within the Word file. Likewise, references should be set with returns only between entries with no extra returns, tabs, or other for-matting. Use italics to indicate emphasis, non-English terms, or titles of publications.

Accompanying each manuscript, as separate files, should be (a) an abstract of the article (200 words maximum) and six keywords; (b) a biographical sketch of the author(s); and (c) a title page with manuscript title and the order of authors as well as the primary author's name, mailing address, preferred email, phone and fax numbers. Maps, photos, and similar graphics are welcome, but authors are responsible for providing separate camera-ready files, either as tiffs, jpegs, or PDFs. Sizes of images, tables, and figures must conform to the physical dimensions of the Journal page. Width is 45p (7.5") and depth is 57p (9.5"). In addition:

- The full manuscript must not be longer than 10,000 words including all references and figures.
- The entire submission (including references) must be double-spaced in 12-point or larger font with margins of one inch or more.
- The abstract must be 200 words or less and should precede keywords (maximum six).
- The submission contains few and only necessary footnotes (not endnotes).
- There is nothing in your file that identifies the authors.
- Any hypotheses are explicitly identified as such.
- Constructs and variables are identified in words, not abbreviations.
- Any prior publication of the data featured in the manuscript is explicitly acknowledged either in the manuscript or in the transmittal letter to the editor. Any forthcoming or "in press" articles that use the data should be forwarded to the editor.
- To ensure author anonymity, manuscript "properties" (under FILE in Microsoft Word) should be erased prior to submission.
- Use uniform lettering and sizing of your original artwork.
- Number illustrations according to their sequence in the text.
- Tables and figures should be placed at the end of the manuscript, with placement instructions between paragraphs within the body text to indicate where these items would go (e.g., "Insert Table 1 Here").
- Please consult APA style guidelines for all formatting details.

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All articles will be double-blind refereed. Authors will normally receive reviewers' comments and the editors' publishing decision in approximately 90 days of submission.

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From: 

# Classics in Entrepreneurship Research: Enduring Insights, Future Promises

Vishal K. Gupta  
Dev K. Dutta  
Grace Guo  
Golshan Javadian  
Crystal Jiang  
Arturo E. Osorio  
Banu Ozkazanc-Pan

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**A**cademic inquiry into entrepreneurial phenomena has had a rich history over several decades and continues to evolve. This editorial draws attention to the classics: seminal articles that make profound contributions to the development of an academic field in entrepreneurship studies. We focus on the formative years of entrepreneurship research, specifically the 1970s and 1980s, to identify classics using a key informant approach that surveys members of the journal editorial board. Each nominated classic is introduced and discussed by an editorial board member, with particular focus on research opportunities that may be pursued going forward. Analyzing classics allows for the recognition of substantive advances in entrepreneurship research and provides an opportunity to delve into the academic progress achieved in understanding entrepreneurial phenomena.

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**Keywords:** classics; foundation; entrepreneurship; historical perspective

Entrepreneurship is a young academic field (Low, 2001; Chiles, Bluedorn, & Gupta, 2007), with the first academic book on entrepreneurship appearing in the 1930s and the first academic presentation in the 1950s (Jennings & Brush, 2013). Starting from humble beginnings, entrepreneurship research gradually gained momentum as the field increasingly acquired more legitimacy. Prominent business schools, including Harvard and Wharton, commenced entrepreneurship courses, endowed chairs in entrepreneurship got funded, conferences and journals dedicated to entrepreneurship came into operation and rapidly acquired traction, and the Academy of Management transitioned entrepreneurship from a special interest group to division status (Bygrave, 2007). As a result of these developments, entrepreneurship became a popular field of serious academic inquiry, with a growing community of researchers across a broad spectrum of scholarly disciplines.

Given the increasing popularity of the academic field of entrepreneurship, the editors of *New England Journal of Entrepreneurship* thought it was time to identify articles that may be considered classics within the discipline. We defined a classic as a foundational article that was first published before 1980, addressed ideas that are still relevant to the field, and subsequently spawned follow-up research that still resonates in the field. The editors were motivated in part by Bygrave's (2007: 23) admonition to the field to look back at the articles published in the early days for the "profound" effect they had on subsequent research on entrepreneurial phenomena. Another motivation stemmed from the realization that other social science fields, including disciplines such as psychology, sociology, and economics, readily recognize and appreciate original classics, which have played a critical role in advancement of the respective fields. Entrepreneurship researchers, however, have not yet identified the classics in the field, an issue that the editors at this journal sought to redress.

There are many ways to identify classics in a field of research. We decided to adopt a simple, yet elegant procedure to come up with a list of articles that may be considered classics in entrepreneurship research. More specifically, we asked each member of the journal's editorial team to nominate a research article they believed made a foundational contribution to entrepreneurship research within their field of expertise. In other words, we tasked the editorial team with the identification of classic articles in entrepreneurship studies based on their knowledge of the field and the advice of their close colleagues and collaborators. We required that the nominated articles be from the 1970s or 1980s. There were three major reasons for focusing on this particular time period. First, the 1970s and 1980s was a time when early works on entrepreneurship appeared, so that by the 1990s

entrepreneurship had gained considerable legitimacy within the academy (Landström, 2015). The prestigious Babson Entrepreneurship Research Conference began during this period, and the *Journal of Business Venturing* and *Small Business Economics* were also founded in this time (Bygrave, 2007). Second, focusing on this time period eliminated the chance that editors may nominate their own work as classic. Finally, the distance in time allowed us to test the relevance of these works based on the endurance of their ideas over time. Despite some initial concerns about the constraints imposed by this time period, it was well embraced by the editorial team. The selection of the studies and the criteria by which they were considered to be classics were entirely at the discretion of each of the editors, and the expertise within their network of collaborators.

There are seven individuals associated with the journal in an editorial capacity, so we had a total of seven articles nominated as classics. The nominations proved to be interesting and revealing. Not one editor could claim to have had previously read all the seven nominated articles, reflecting the diversity of research interests in the journal editorial team, and the need for a work of this nature to exist as a point of reference for future scholarship within the field of entrepreneurship. Table 1 presents a list of the nominated articles along with the number of citations it has received on Google Scholar as well as Web of Science. Google Scholar reflects the popular and global impact of each work; Web of Science reflects a more purist understanding of scholarship work, framed by Western privilege that comes from the necessary munificence of institutional resources required to maintain this access.

**Table 1. Classic Entrepreneurship Papers** (published during 1970s and 80s)

S. No.	Nominating Editor	Author and Year	Journal	Article Title	GS Citation	WoS Citation 2016
1	Guo	Ket De Vries, 1977	JMS	The entrepreneurial personality: A person at the crossroads	748	N/A
2	Osorio	Pennings, 1982	AMJ	The urban quality of life and entrepreneurship	99	25
3	Jiang	Miller, 1983	MS	The correlates for entrepreneurship in three types of firms	3511	N/A
4	Dutta	Gartner, 1985	AMR	A conceptual framework for describing the phenomenon of new venture creation	2744	521
5	Ozkazanc-Pan	Bowen & Hisrich, 1986	AMR	The female entrepreneur: A career development perspective	442	104
6	Javadian	Bird, 1988	AMR	Implementing entrepreneurial ideas: The case of intentions	1756	308
7	Gupta	Covin & Slevin, 1989	SMJ	Strategic Management of small firms in hostile and benign environments	3732	884

GS Citation: Google Citation; WoS Citation 2016: Web of Science total citations by April 2016

We also asked each editorial member to provide a brief write-up of a scholarly reflection about the article they nominated. Our guideline asked each editor to include in their respective summary, the reasons why they considered their particular article a classic, as well as what could be considered the future research expectations emanating from, and informed by their nominated article. We also agreed, collectively, to keep our individual write-ups short, yet with enough details for help other scholars to become acquainted with the relevance of the article. In addition, we agreed to discuss new ideas on what kind of novel research can sprout from the selected classics. The write-up about each classic article constitutes the remainder of this article. We discuss below the classics in a chronological order. It is worth reiterating that each article was selected because it was considered foundational on its own merits in a distinct area of entrepreneurship. We conclude with a discussion of the limitations and implications of our efforts to identify classics in entrepreneurship research.

### **A Brief Journey into the Nominated Classics**

#### ***Ket De Vries (1977), *Entrepreneur as a Person at the Crossroads****

The role of individuals in the entrepreneurship process as well as the impact of the budding business venture and environment on entrepreneurial activities have been extensively studied in the field of entrepreneurship. Early entrepreneurship studies focused on developing a psychological profile of the entrepreneur and entrepreneurs were perceived to be significantly different from nonentrepreneurs in terms of their backgrounds and personality traits (Gartner, 1985). Later studies, acknowledging the importance of the context in which entrepreneurial activities occur, focused on how entrepreneurs respond to their environments.

Researchers (e.g., Low & MacMillan, 1988) argue that entrepreneurship is a multifaceted phenomenon and hence a synthesized view should be adopted. For example, Gartner (1985) provided an integrated framework for describing new venture creation that included entrepreneurial individuals, process, environment, and organization. Shane and Venkataraman (2000) in their theorization of opportunity-based entrepreneurship defined the study of entrepreneurship as the scholarly examination of how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited" (p. 218). Such definition and theorization focus on how

entrepreneurial individuals interact with their environments on various entrepreneurial activities as they create new business ventures.

Indeed, a synthesized view was presented in Ket De Vries's (1977) article, with the entrepreneur being described as a person at the crossroads. In this article, the author examined social, economic, and psychodynamic forces that can influence entrepreneurship. At the individual level, Ket De Vries (1977) proposed three functions an entrepreneur fulfills: innovation, management–coordinating, and risk-taking. He also discussed personality traits common among entrepreneurs including the desire to take personal responsibility for decisions, preference for moderate degree of risk, and a high need for achievement. In addition, Ket De Vries (1977) pointed out that entrepreneurs are not a homogenous group and therefore different types of entrepreneurs—such as craftsman entrepreneurs and opportunistic entrepreneurs—exist. This article was a forerunner in that it discussed the emergence of a new type of entrepreneurs—internal entrepreneurs and the existence of "internal entrepreneurship" in large bureaucratic organizations that involves creation of new product ventures and new technology divisions in existing companies (p. 43). The author identified social and economic factors that can give rise to entrepreneurship: ones' social status (e.g., ethnic minority or immigrants), family background (e.g., having a father who is self-employed), and change in institutional patterns and environment (e.g., industry) turbulence. Moreover, Ket De Vries (1977) emphasized family dynamics and one's childhood and upbringing in his theoretical analysis. Lastly, he highlighted the importance of entrepreneurial organization not only as a tangible reality of personal success but also a business entity that is of emotional significance to entrepreneurs.

Ket De Vries's (1977) review was a pioneer at a time when research on entrepreneurship was in its infancy. His integrated view of entrepreneurship with attention to the individual, organization, and environment was further extended in later studies such as Gartner (1985) and Shane and Venkataraman (2000). Ket De Vries (1977) was among the first to direct the attention to internal entrepreneurship, an important research topic in later studies called corporate entrepreneurship (e.g., Sharma and Chrisman, 1999). He also proposed a novel analysis of the role of

family dynamics and one's childhood experience in the emergence of entrepreneurship and demonstrated the entrepreneur's family of origin (Dyer & Handler, 1994).

As we continue to explore the myths and the phenomena of entrepreneurship, it would be wise for us to bear in mind this classic writing and theorization by Ket De Vries (1977). The interest in studying the interactions among individual, family, organization, and environment is evident in more recent research on, for example, the role of human capital in technological entrepreneurship (e.g., Wright, Hmieleski, Siegel, & Ensley, 2007), the research on venture creation and entrepreneurial intent (e.g., Shook, Priem, & McGee, 2003), and the research on work-conflict and psychological well-being of entrepreneurs (e.g., Parasuraman & Simmers, 2001). From this perspective, future research should carry Ket De Vries's (1977) insights forward in explicating the nexus of these important components of entrepreneurship.

### **Pennings (1982), The Urban Quality of Life and Entrepreneurship**

According to a report from the World Health Organization, as of 2010 already more than half of the global population live in urban areas understood as geographical spaces of higher population density and vast human features in comparison with the surrounding areas (Global Health Observatory, 2010). The same report suggests that this percentage will surpass 70 percent by 2050 as the process of urbanization builds. This estimate presents urban spaces as locations with above average contiguous concentrations of human populations often with access to basic services. Yet this understanding of urban does not speak of the quality of life in that space. Pennings (1982) can be considered as the first scholar to make the link between entrepreneurial outcomes and the different types of urban environments, thus recognizing that not all urban spaces have the same allure for entrepreneurship. In doing so, he opened the conversation to later works such as Porter's (1995) work on the competitive advantage of the inner city, Markusen's (1996; 2005) ideas of urban development and businesses, and on the arguments of the creative class by Richard Florida (2002).

Penning's work has served, directly or indirectly, to frame ideas such as the integration and collaboration of business and communities (Birla, 2006; Blowfield, 2007; Dearlove, 2002; Ellis, 2001; Karnani, 2008), cities as the organizational extension of business (e.g., Forman &

Goldfarb, 2008; Hillman & Keim, 2001), urban places as an organizationally manageable space (e.g., Buschmann & Coletta, 2009), and the organization of the community as a single economic unit to achieve socioeconomic sustainability (e.g., Peredo & Chrisman, 2006). This work on urban entrepreneurship also set precedents on methodology that identify different types of local munificence as sources of local entrepreneurship (Boyd & Vozikis, 1994; Specht, 1993). Linking munificence and entrepreneurship, Penning opens a conversation on principles of venture creation (e.g., Amezcua, Grimes, Bradley, & Wiklund, 2013; Gartner, 1985) as well as entrepreneurial ecosystems (e.g., Aldrich, 1990; Marin-Aguilar & Vila-López, 2014).

Findings in this article can become pivotal for future research in entrepreneurship as the number of urban dwellers increases and environmental issues take the forefront in communities. Original findings suggest a negative relationship between entrepreneurship and environmental issues where pristine environments may deter entrepreneurship under certain conditions. Likewise findings at the industry level hint at the need for further research on the impact of zoning, lobbying, and advocacy at the industry level. Furthermore, the original analysis on urban spaces looks at ventures as externalities to their environment thus environmental factors are only considered as resources to the venture rather than elements encouraging the actions of the entrepreneur. Complementing this resource-based perspective, new research may consider resources and ventures not as externalities to the venture but as part of the venture itself or a network (Osorio, Ozkazanc-Pan, & Donnelly, 2015). Likewise, future work can consider that environmental elements are also part and parcel of the venture itself (Calás, Smircich, & Bourne, 2009). Finally, using this work and its original findings, new venues of research can be developed to explore how societal trends impact entrepreneurial spaces as we move into a society where pristine environments are now the ideal space for lifestyle entrepreneurs and technology entrepreneurship may focus on preserving these spaces rather than avoiding them, as originally done.

## Miller (1983), The Correlates for Entrepreneurship in Three Types of Firms

Entrepreneurial Orientation (EO) has been an interesting topic for entrepreneurship scholars in past decades because under the rubric of corporate entrepreneurship, EO explores origination and implementation of firm strategic behavior. EO literature has been explored over the past three decades and the conversation of EO now exceeds the broader topic of corporate entrepreneurship.

Most scholars agree that three foundational and pioneering works on EO are Mintzberg (1973), Khandwalla (1977) and Miller (1983) (see Basso, Fayolle, & Bouchard, 2009 for a review). Mintzberg (1973) first proposed 'entrepreneurial mode' of firms' strategic decision-making and discussed how top managers commit organizations to 'bold courses of action'. Later, Khandwalla (1977) reinforced the importance of the top managers in pursuing and constructing strategic decisions.

Miller (1983) is a critical piece in the history of entrepreneurship because it introduced the conceptualization of entrepreneurial firms, encompassing three EO dimensions—innovativeness, risk-taking, and proactiveness—which allow researchers to measure the degree of entrepreneurial behavior and examine the EO–performance relationship. The concept of EO advanced the field in understanding what it means, in a practical or behavioral sense, for a firm to be entrepreneurial (Miller, 2011). A behavioral model of entrepreneurship promotes discussion on how behaviors rather than attributes constitute the entrepreneurial process (Covin & Slevin, 1991). Miller (1983) suggested that firm-level entrepreneurship should exhibit all three behaviors with some degree of simultaneity (Anderson & Covin, 2014). Since then, a significant number of researchers have used this construct to measure the EO–performance relationship.

Miller (1983) also acknowledged a different approach in understanding what makes a firm entrepreneurial. Specifically, he examined how senior managers' decision-making may influence firm strategy and such an influence could be contingent upon the nature of the organization and its environment. In particular, Miller emphasized that "what is most important is not who is the critical actor, but the *process* of entrepreneurship itself and the organizational factors which foster or impede it" (Miller, 1983: 770; emphasis in original). Miller's approach linked

senior manager's predisposition toward entrepreneurial decision-making with firm strategy and the dynamic environment.

Later on, Covin and Slevin (1989) and Lumpkin and Dess (1996) advanced our understanding of EO; in particular, Lumpkin and Dess (1996) proposed multidimensional views of EO with autonomy and competitive aggressiveness recognized as additional important dimensions of the construct, therefore shedding more light on the original Miller (1983) work of unidimensional or composite construct.

Miller's (1983) work therefore advances the field with the notion that firms can "be entrepreneurial" because they engage in innovative, proactive, and risk-taking strategic behaviors. The unique linkage of individual characteristics (senior managers), firm strategy and performance, and environmental dynamism makes Miller (1983) a ground-breaking piece.

## Gartner (1985), A Conceptual Framework for Describing New Venture Creation

In 1985, Bill Gartner published a paper in the *Academy of Management Review* that attempted to offer a holistic framework for examining the new venture. In subsequent years, this paper has helped progress research and understanding of entrepreneurship as a distinct domain of inquiry.

Gartner's paper began with the observation that most of the then prevailing research on entrepreneurship was premised on two broad assumptions: (1) that entrepreneurs are different from nonentrepreneurs and (2) that entrepreneurial firms are different from nonentrepreneurial firms. Such a classification, he reasoned, is simplistic: in practice, the difference among entrepreneurial firms tends to be far greater than either differences between entrepreneurs and nonentrepreneurs or entrepreneurial versus nonentrepreneurial firms. As such, Gartner proposed that it would be valuable to recognize the diversity among entrepreneurs and their ventures by examining a wider set of parameters and then classifying entrepreneurial ventures into groups or clusters based on these parameters. Adopting Miller's (1981) idea of the new venture as a gestalt, Gartner (1985) proposed a novel framework that would distinguish new ventures along four dimensions: individual(s), process,

environment, and organization. Additionally, based on findings of previous research, he identified within each dimension a series of specific characteristics that could be utilized to differentiate among clusters of new ventures. He suggested that such an approach would allow new ventures to be viewed as “a kaleidoscope... [enabling researchers] to identify specific variables that describe how each new venture was created, in order that meaningful contrasts and comparisons among new ventures can be made” (p. 701). In turn, he opined such an approach would help arrive at a more informed understanding of underlying factors that explicate the diversity among entrepreneurial firms, explain conflicting empirical results, as well as lead to development and adoption of robust methodologies to conduct research in this arena and report study findings.

Insights laid out in Gartner (1985) turned out to be immensely valuable in providing a roadmap for follow-up entrepreneurship research, thus helping the field emerge from the shadows of sister disciplines such as management and strategy. Subsequent researchers took up all four dimensions identified by Gartner (1985) and examined them to lay a strong foundation for the field. For example, in their paper defining the promise of entrepreneurship as a field of research, Shane and Venkataraman (2000) highlighted the importance of Gartner's (1985) work, especially the processual aspects that serve as important elements to distinguish among entrepreneurial firms. Bruyat and Julien (2001) took the insight from Gartner's (1985) framework specifically to suggest the interaction between an enterprising individual (or the entrepreneur) and the environment as a process that evolves and helps build what the authors classified as “new value creation,” and with the individual and the new object being created acting as dialogic elements of such a process. Similarly, Bhawe (1994) utilized thoughts from Gartner (1985) to focus on the entrepreneurial process *per se*. In his work, he developed a comprehensive model of how such a process evolves over the nascent stages of the new venture, going from opportunity identification through technology setup and organization creation to market exchange and customer interaction.

With regard to the individual dimension of Gartner's (1985) framework, follow-up research has branched off into several streams, of which at least two are most significant: psychological aspects of entrepreneurship (e.g., Hisrich, Langan-Fox & Grant, 2007; Rauch & Frese,

2000; Shaver & Scott, 1991) and entrepreneurial intention and cognition (Bird, 1988; Gregoire, Corbett & McMullen, 2010). Similarly, on the organizational dimension, an expanding stream of research has emerged with regard to identification of firm-level characteristics that distinguish between entrepreneurial and nonentrepreneurial firms and among entrepreneurial firms themselves. A large part of the research elaborating the impact of Gartner's (1985) organizational dimension has been classified under the burgeoning research on entrepreneurial orientation as a construct of significance, which examines the impact of firm-level behavioral characteristics such as risk-taking, proactiveness, innovativeness, autonomy, and competitive aggressiveness on firm performance, survival, and growth (Covin & Slevin, 1989; Lumpkin & Dess, 1996; Rauch, Wiklund, Lumpkin & Frese, 2009). Lastly, some research emerging has begun to consider the fourth dimension of Gartner's (1985) framework: the role and impact of the environment on entrepreneurship (Edelman & Yli-Renko, 2010; Zahra & Covin, 1995; Zahra & Garvis, 2000).

To summarize, it can be said that Gartner's (1985) seminal paper on the one hand served to identify the relative weaknesses of prior approaches to examining new venture research and on the other hand helped lay out a robust framework to facilitate research on entrepreneurial firms along four critical dimensions to explain variation and diversity among them. In subsequent years, the framework was enthusiastically embraced by entrepreneurship scholars to guide their own research, though with varying degrees of adoption. Considering research that followed publication of Gartner's (1985) paper, it may be said that the framework had the most significant influence on subsequent research with regard to insights relating to the individual and organizational dimensions. In comparison, the impact of insights offered through the process and environment dimensions have been relatively less spectacular. In conclusion, therefore, it may be said that the process and environment dimensions are areas of the Gartner framework that hold the highest potential for further exploration through incorporation into a range of research questions, designs, and methodologies in the future.

## **Bowen and Hisrich (1986), The Female Entrepreneur: A Career Development Perspective**

At the time of its publication three decades ago, Bowen and Hisrich's (1986) article was one of the first to address and examine the notion of women's entrepreneurship and focus attention exclusively on female entrepreneurs. Their work was seminal for bringing together, through a career development perspective, what had previously been disjunctive studies and approaches to the study of women entrepreneurs. Their work offered a comprehensive framework for understanding the entrepreneurial behavior of women through a careful outline of impacts and influences on women's ability and choices in pursuing entrepreneurship. In doing so, they offered the entrepreneurship field a first glance at why and how women become engaged in entrepreneurship.

In more recent times, the focus on women's entrepreneurship has blossomed but compared to the majority of entrepreneurship work this still represents a small fraction of the field. To this end, a number of influential studies have emerged in recent decades including those focusing on specific challenges women face in entrepreneurship ranging from psychological barriers such as gender stereotypes to structural barriers such as access to capital (De Bruin et al., 2007; Brush & Edelman, 2000; Carter et al., 2003; Gupta et al., 2008; Sullivan & Meek, 2012; Sweida & Reichard, 2013; Thebaud, 2010). In addition to these approaches, some work has adopted a critical perspective to highlight and question gendered assumptions guiding entrepreneurship research (Ahl, 2004, 2006; Ahl & Marlow, 2012; Bird & Brush, 2002; Bourne, 2010; Brush, de Bruin, & Welter 2009; Calás et al., 2009; Muntean & Ozkazanc-Pan, 2015; Mirchandani, 1999; Robb & Watson, 2012). Thus, the field of women's entrepreneurship is becoming richer through the various different perspectives adopted by scholars ranging from micro-level psychological dimensions, to meso-level organizational issues, and macro-level structural and societal elements.

Future research in this area can extend these lines of inquiry. However, rather than doing so in a piecemeal fashion, the emphasis should be on understanding the interdependencies across these levels and how they might create challenges unique for women entrepreneurs across differences of race, ethnicity, education, and so forth. Furthermore, future work can also examine how

different ecosystems foster women's entrepreneurship through multilevel analyses of all stakeholders including entrepreneurs, support organizations, and policy makers (see Watkins et al., 2015). Doing so will allow for a deeper understanding of entrepreneurship and allow for actionable policies to redress inequities facing women engaged in business.

## **Bird (1988), Implementing Entrepreneurial Ideas: The Case for Intentions**

Since the 1980s, the subject of entrepreneurial intentions has been among the most researched topics in the field of entrepreneurship, and has provided scholars with a powerful theoretical framework (Liñán & Fayolle, 2015). Shapero and Sokol (1982) and Shapero (1984) initiated the discussion of entrepreneurial intentions by highlighting the influence of social, political, and economic variables on entrepreneurial intentions. Subsequently, Katz and Gartner (1988) investigated the role of the entrepreneur's intentions (as well as other stakeholders' intentions) on new and existing ventures. However, Bird's (1988) seminal publication was the first to examine the topic of entrepreneurial intentions through cognitive perspectives, and offered a psychological model to explain how entrepreneurial intentions are formed. Bird's work is considered a classic for several reasons. For one, it is the first study on entrepreneurial intentions that attempts to go beyond descriptive studies to offer a systematic approach to differentiate entrepreneurship from strategic management (Bird, 1988). Second, it is among the earliest studies to bring cognitive perspectives into the analysis of entrepreneurship. Cognitive research is specifically important to entrepreneurship because it provides crucial insights into key aspects of the entrepreneurial process (Baron, 2004). Finally, Bird makes a clear distinction between entrepreneurial intentions and similar concepts, such as goal setting and the manager's intentions in established firms. By means of these distinctions, she helped establish entrepreneurial intention as a separate field of research with its own theoretical framework.

In her model, Bird explains how entrepreneurial intentions are formed based on certain factors, including the entrepreneurs' needs, values, wants, habits, and beliefs. These factors result in the entrepreneur creating and maintaining a temporal tension, sustaining strategic focus, and developing a strategic posture. Bird also explains how intentionality is a result of both rational

and intuitive thinking, which are influenced by contextual and personal factors. Since Bird's publication, an increasing number of studies have been published based on her model of entrepreneurial intention. Some of these studies focus on improving Bird's model by adding other cognitive components and perspectives into the model (e.g. Boyd & Vozikis, 1994; Krueger, 2007, 2009). Other research has been focused on the factors that influence entrepreneurial intentions. Improvisation (Hmieleski & Corbett, 2006), entrepreneurial education (Souitaris, Zerbini, & Al-Laham, 2007; Pittaway & Cope, 2007; Wilson, Kickul, & Marlino, 2007), risk perception (Segal, Borgia, & Schoenfeld 2005), prior family exposure to entrepreneurship (Carr & Sequeira, 2007), and gender stereotypes (Gupta et al., 2008) are all among the identified factors that influence entrepreneurial intentions.

Although the subject of entrepreneurial intentions has grown rapidly as a field of study, there is still room for additional research. A very important component of Bird's argument is the impact of intentionality on entrepreneurial action in terms of both venture creation and venture growth. Although several studies (e.g., Kolvereid & Isaken, 2006; Kautonen, Van Gelderen, & Tornikoski 2013) have examined the relationship between venture creation intention and the actual creation of venture, very few studies (with the exception of Kolvereid & Bullvag, 1996) have examined the process through which an entrepreneur's growth intentions influence the growth of the venture. In addition, with the rise of social entrepreneurship research, scholars may benefit from Bird's model to gain a better understanding of both social entrepreneurship intentions and sustainable entrepreneurship intentions, two areas that have yet to be researched in greater depth (Liñán & Fayoll, 2015).

### **Covin and Slevin (1989), Strategic Management of Small Firms in Hostile and Benign Environment**

A quick glance through the entrepreneurship articles published in top-tier peer-reviewed journals reveals a lively discussion developing around the topic of entrepreneurial orientation, generally referred to as EO. Common definitions of EO conceive it as a firm-level construct capturing the managerial tendencies and decision-making philosophies that are entrepreneurial in nature (Covin & Lumpkin, 2011). Basso, Fayolle, and Bouchard (2009: 313) observe that EO "seems to be one of the few examples of stabilized concepts in management science." While the origins of EO scholarship can be rightly traced back

to the works of Khandwalla (1976) and Miller (1983), it is not commonly realized that research in this area truly began in earnest with the publication of Covin and Slevin (1989). Given the proliferation of EO-related research in entrepreneurship, management, and other disciplines such as marketing and tourism studies (Gupta & Gupta, 2015), it seems justified to nominate Covin and Slevin (1989) as an original classic in entrepreneurship studies. To give credit where it is due, our nomination follows Wales, Gupta, and Mousa (2013) who used SSCI citations as a basis for considering Covin and Slevin (1989) an entrepreneurship classic.

Several excellent reviews of EO scholarship have been published in recent years (Gupta & Gupta, 2015; Wales, Gupta, & Mousa, 2013; Wales, 2016). A common theme across these reviews, and others (e.g., George, 2011; Lumpkin & Dess, 2005) is that EO remains a fertile topic of inquiry. The popular appeal of EO seems to stem from its ability to speak to one of the most critical managerial questions: Why do some firms perform better than others? EO purports to explain superior firm performance as stemming from a firm's decision-making policies, managerial practices, and behavioral activities that are entrepreneurial in nature. To capture EO, Covin and Slevin (1989) emphasized the three dimensions of risk-taking, proactiveness, and innovativeness, developing a nine-item scale to assess a firm's strategic commitment to entrepreneurship. Since then, the EO-performance link has emerged as the most studied relationship in the EO literature (Rauch, Wiklund, Lumpkin, & Frese, 2009), with new contributions continuing to illuminate the performance consequences of EO from novel perspectives. In addition to the main effect of EO on firm performance, scores of studies have examined internal and external contingencies that may impinge on this relationship. Notably, support for predictions about EO effects has been found outside the United States as well, with Sweden and China among prominent examples of countries where EO research has been done. So prolific has been the research on EO over the years that the number of manuscripts now published on the topic of EO exceed that of articles examining the broader topic of corporate entrepreneurship (Wales, 2016).

Despite years of research, the EO literature continues to generate excitement about several promising research questions worthy of future research. We mention three research endeavors here that we believe engender

directly from Covin and Slevin (1989). One crucial area within EO research that has received little attention so far is the mechanisms through which EO translates into firm performance—in other words, mediators linking EO with firm performance. Another critical issue in the EO literature pertains to elaborating the theoretical foundations for the EO-performance relation. Currently, the positive EO-performance relation is accepted either on faith or on the basis of empirical evidence, but little conceptual rationale is offered to justify it. Finally, there is an emerging debate within the literature as to whether the dimensions of EO are additive in nature as has generally been assumed (Kuratko, 2007) or may actually be multiplicative (Slevin & Terjesen, 2011) or even geometric (Gupta, 2015). These are all exciting questions that scholars need to grapple with going forward, but they are only the proverbial tip of the iceberg as the EO literature is replete with new and engaging possibilities for further research (e.g., Wiklund & Shepherd, 2011).

## Discussion

Entrepreneurship is a vibrant academic field with a rich history. With the goal of recognizing some of the key articles that advanced research in the early years of inquiry on entrepreneurial phenomena, we set out to identify and discuss classics that helped lay the foundation for future scholarship in the field. Classics are considered the “gold bullion of science” (Smith, 2007) and they help provide a historical perspective on the scientific advancements in a field. Using a focused key informant approach, we identified seven classics in entrepreneurship research, published over the two decades of the 1970s and 1980s. To the best of our knowledge, this is the first systematic effort to reveal the classical articles in entrepreneurship research and their impact on subsequent scholarship.

Our approach to the identification of classics is substantially influenced by two decisions we made: (1) time period of 1970s and 1980s, and (2) asking journal editors for nomination. The imposition of these two conditions substantially influenced our identification of classic articles. For example, publications from this period represent the moment in time when we started to reflect on our current views on entrepreneurship as the 1970s and 1980s were cultural and societal tipping points. Thus extending the time period under investigation to include the 1990s and 2000s, for example, may have introduced other articles to our list, but publications during this

period can hardly be considered classics as they may still be too young to assess their true impact in the field, thus not addressed in the scope of this review. Likewise, moving beyond the subjective opinions of key informants like journal editors to more objective indicators (such as citations) or tapping into the “wisdom of the crowds” by polling members of the entrepreneurship division may also have introduced other articles to our list. Future investigations may benefit from pursuing alternative paths not taken in the study reported here.

The classics nominated here may be influenced by the academic training and affiliations of the editors at North American doctoral programs. It is possible that scholars from other parts of the world may have selected different articles as classics in entrepreneurship research. Our concerns about ethnocentrism in the nominating process are somewhat alleviated by the realization that entrepreneurship research has been, and continues to be, dominated by North American scholarship. Nevertheless, it would be interesting to probe the views held by researchers from different parts of the world with regard to the classic articles in entrepreneurship studies.

We hope this pioneering effort to identify classics in entrepreneurship research, as well as the recent publication of other articles with similar historical flavor (Carlsson et al., 2013; Landström, Harichi, & Astrom, 2012), will spur discussions about the formative years of the field of entrepreneurship studies and its future. As entrepreneurship research becomes broader and more fragmented, we believe it is worthwhile to pause and reflect on the enduring value of key articles that opened new vistas for entrepreneurship scholars to explore. Perusal of original articles from the early days of entrepreneurship research educate and inspire further research from established incumbents as well as new entrants to the field.

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## REFERENCES

- Ahl, H.J. 2004. *The Scientific Reproduction of Gender Inequality: A Discourse Analysis of Research Texts on Women's Entrepreneurship*. Stockholm: Liber AB.
- Ahl, H.J. 2006. Why research on women entrepreneurs needs new directions. *Entrepreneurship Theory and Practice*, 30(5), 595–621.
- Ahl, H.J., & Marlow, S. 2012. Exploring the dynamics of gender, feminism and entrepreneurship: advancing debate to escape a dead end? *Organization* 19(5), 544–562.
- Aldrich, H. E. (1990). Using an ecological perspective to study organizational founding rates. *Entrepreneurship: Theory & Practice*, 14(3), 7–24.
- Amezcuca, A. S., Grimes, M. G., Bradley, S. W., & Wiklund, J. (2013). Organizational sponsorship and founding environments: A contingency view on the survival of business-incubated firms, 1994-2007. *Academy of Management Journal*, 56(6), 1628–1654.
- Anderson, B.S. & Covin, J.G. 2014. Entrepreneurial orientation: disposition and behavior. In Fayolle, A. (Eds.), *Handbook of Research on Entrepreneurship. What We Know and What We Need to Know*. 215–237. Cheltenham, UK: Edward Elgar Publishing.
- Baron, R. A. (2004). The cognitive perspective: a valuable tool for answering entrepreneurship's basic "why" questions. *Journal of Business Venturing*, 19(2), 221–239.
- Basso, O, Fayolle, A., & Bouchard, V. 2009. Entrepreneurial orientation: the making of a concept. *Entrepreneurship and Innovation*, 10, 313–321.
- Bhave, M.P. (1994). A process model of entrepreneurial venture creation. *Journal of Business Venturing*, 9 (3), 223–242.
- Bird, B., & Brush, C.G. 2002. A gendered perspective on organizational creation. *Entrepreneurship Theory and Practice*, 26(3), 41–65.
- Bird, B. (1988). Implementing entrepreneurial ideas: the case for intention. *Academy of Management Review*, 13(3), 442–453.
- Birla, R. (2006). Delivering responsibility. *Business Strategy Review*, 17(2), 34–37.
- Blowfield, M. (2007). Globalization and poverty. *Business Strategy Review*, 18(4), 35–38.
- Bourne, K.A. 2010. The paradox of gender equality: an entrepreneurial case study from Sweden. *International Journal of Gender and Entrepreneurship* (2), 10–26.
- Bowen, D. D., & Hisrich, R. D. (1986). The female entrepreneur: a career development perspective. *Academy of Management Review*, 11(2), 393–407.
- Boyd, N. G., & Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship Theory & Practice*, 18(4), 63–77.
- Brush C.G. & Edelman L.F. 2000. Women entrepreneurs: opportunities for database research. *Databases for the Study of Entrepreneurship* 4, 445–484.
- Brush C.G., de Bruin, A. & Welter F. 2009. A gender-aware framework for women's entrepreneurship. *International Journal of Gender and Entrepreneurship* 1(1), 8–24.
- Bruyat, C. & Julien, P.A. (2001). Defining the field of research in entrepreneurship. *Journal of Business Venturing*, 16 (2), 165–180.
- Buschmann, K., & Coletta, C. (2009). The call of the city: using design methods to attract families. *Journal of Business Strategy*, 30(2/3), 21–27.

- Bygrave, W. D. (2007). The entrepreneurship paradigm (I) revisited. *Handbook of Qualitative Research Methods in Entrepreneurship*, 17–48.
- Calás M.B., Smircich, L., & Bourne, K.A. 2009. Extending the boundaries: reframing 'entrepreneurship as social change' through feminist perspectives. *Academy of Management Review*, 34(3), 552–569.
- Carlsson, B., Braunerhjelm, P., McKelvey, M., Olofsson, C., Persson, L., & Ylinenpää, H. (2013). The evolving domain of entrepreneurship research. *Small Business Economics*, 41(4), 913–930.
- Carr, J. C., & Sequeira, J. M. (2007). Prior family business exposure as intergenerational influence and entrepreneurial intent: a theory of planned behavior approach. *Journal of Business Research*, 60(10), 1090–1098.
- Carter, N., Brush, C., Greene, P., Gatewood, E., & Hart, M. 2003. Women entrepreneurs who break through to equity financing: the influence of human, social and financial capital. *Venture Capital*, 5(1), 1–28.
- Chiles, T. H., Bluedorn, A. C., & Gupta, V. K. (2007). Beyond creative destruction and entrepreneurial discovery: a radical Austrian approach to entrepreneurship. *Organization Studies*, 28(4), 467–493.
- Covin, J. G., & Lumpkin, G. T. (2011). Entrepreneurial orientation theory and research: reflections on a needed construct. *Entrepreneurship Theory and Practice*, 35(5), 855–872.
- Covin, J.G. & Slevin, D.P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75–87.
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7–24.
- Dearlove, D. (2002). Liam Black: private profit, public good. *Business Strategy Review*, 13(4), 1–2.
- De Bruin, A., Brush, C. G., & Welter, F. (2007). Advancing a framework for coherent research on women's entrepreneurship. *Entrepreneurship Theory and Practice*, 31(3), 323–339.
- Dyer, W. G. & Handler, W. (1994). Entrepreneurship and family business: exploring the connections. *Entrepreneurship Theory & Practice*, 19, 71–83.
- Edelman, L. & Yli-Renko, H. (2010). The impact of environment and entrepreneurial perceptions on venture-creation efforts: bridging the discovery and creation views of entrepreneurship. *Entrepreneurship Theory and Practice*, 34 (5), 833–856.
- Ellis, V. (2001). Can global business be a force for good? *Business Strategy Review*, 12(2), 15–21.
- Florida, R. (2002). *The rise of the creative class* (2004 Paperback ed.). New York: Basic Books.
- Forman, C., & Goldfarb, A. (2008). Understanding the inputs into innovation: do cities substitute for internal firm resources? *Journal of Economics & Management Strategy*, 17(2), 295–316.
- Gartner, W. B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review*, 10(4), 696–706.
- George, B. A. (2011). Entrepreneurial orientation: a theoretical and empirical examination of the consequences of differing construct representations. *Journal of Management Studies*, 48(6), 1291–1313.
- Global Health Observatory. (2010). Urbanization and health. Retrieved from [http://www.who.int/gho/urban\\_health/situation\\_trends/urban\\_population\\_growth\\_text/en/](http://www.who.int/gho/urban_health/situation_trends/urban_population_growth_text/en/)
- Gregoire, D.A., Corbett, A.C. & McMullen, J.S. (2010). The cognitive perspective in entrepreneurship: an agenda for future research. *Journal of Management Studies*, 48 (6), 1443–1477.

- Gupta, V. K., & Gupta, A. (2015). The concept of entrepreneurial orientation. *Foundations and Trends in Entrepreneurship*, 11(2), 55–137.
- Gupta, V. K. (2015). Construction of entrepreneurial orientation: dispute, demand, and dare. *New England Journal of Entrepreneurship*, 18(1), 87–89.
- Gupta, V. K., Turban, D. B., & Bhawe, N. M. (2008). The effect of gender stereotype activation on entrepreneurial intentions. *Journal of Applied Psychology*, 93(5), 1053.
- Hillman, A. J., & Keim, G. D. (2001). Shareholder value, stakeholder management, and social issues: what's the bottom line? *Strategic Management Journal*, 22(2), 125–139.
- Hisrich, R., Langan-Fox, J. and Grant, S. (2007). Entrepreneurship research and practice: a call to action for psychology. *American Psychologist*, September, 575–589.
- Hmieleski, K. M., & Corbett, A. C. (2006). Proclivity for improvisation as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 44(1), 45–63.
- Jennings, J. E., & Brush, C. G. (2013). Research on women entrepreneurs: challenges to (and from) the broader entrepreneurship literature. *Academy of Management Annals*, 7(1), 663–715.
- Karnani, A. (2008). Help, don't romanticize, the poor. *Business Strategy Review*, 19(2), 48–53.
- Katz, J., & Gartner, W. B. (1988). Properties of emerging organizations. *Academy of Management Review*, 13(3), 429–441.
- Kautonen, T., Van Gelderen, M., & Tornikoski, E. T. (2013). Predicting entrepreneurial behaviour: a test of the theory of planned behaviour. *Applied Economics*, 45(6), 697–707.
- Ket De Vries, M. F. R. (1977). The entrepreneurial personality: a person at the crossroads. *Journal of Management Studies*, 14, 34–57.
- Khandwalla, P.N. (1976). Some top management styles, their context and performance. *Organization and Administrative Sciences*, 7, 21–51.
- Khandwalla, P. N. (1977). *The Design of Organizations*. San Diego, CA: Harcourt Brace Jovanovich.
- Kolvereid, L., & Bullvag, E. (1996). Growth intentions and actual growth: the impact of entrepreneurial choice. *Journal of Enterprising Culture*, 4(01), 1–17.
- Kolvereid, L., & Isaksen, E. (2006). New business start-up and subsequent entry into self-employment. *Journal of Business Venturing*, 21(6), 866–885.
- Krueger, N. F. (2007). What lies beneath? The experiential essence of entrepreneurial thinking. *Entrepreneurship Theory and Practice*, 31(1), 123–138.
- Krueger, N. F. (2009). The micro-foundations of entrepreneurial learning and... education: the experiential essence of entrepreneurial cognition. *Handbook of university-wide entrepreneurship education*, 35–59.
- Kuratko, D. F. (2007). Entrepreneurial leadership in the 21st century. *Journal of Leadership & Organizational Studies*, 13(4), 1–15.
- Landström, H. (2015) What makes scholarly works “interesting” in entrepreneurship research? In Fayolle, A., & Riot, P. (Eds.), *Rethinking entrepreneurship: debating research orientations*, 147–170. New York: Routledge.
- Landström, H., Harirchi, G., & Åström, F. (2012). *Entrepreneurship: exploring the knowledge base. Research Policy*, 41(7), 1154–1181.

- Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal*, 11(4), 907–933.
- Low, M. B. (2001). The adolescence of entrepreneurship research: specification of purpose. *Entrepreneurship Theory and practice*, 25(4), 17–26.
- Low, M.B. & MacMillan, I. C. (1988). Entrepreneurship: past research and future challenges. *Journal of Management*, 14, 139–161.
- Lumpkin, G.T. & Dess, G.G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21 (1), 135–172.
- Lumpkin, G. T., & Dess, G. G. (2005). Entrepreneurial orientation. *Wiley Encyclopedia of Management*.
- Marin-Aguilar, J. T., & Vila-López, N. (2014). How can mega events and ecological orientation improve city brand attitudes? *International Journal of Contemporary Hospitality Management*, 26(4), 629–652
- Markusen, A. (1996). Sticky places in slippery space: a typology of industrial districts. *Economic Geography*, 72(3), 293–313.
- Markusen, A. (2005). Urban development and the politics of a creative class: evidence from a study of artists. *Environment and Planning*, 38(10), 1921–1940.
- Miller, D. (1981). Toward a new contingency approach: the search for organizational gestalts. *Journal of Management Studies*, 18(1), 1–26.
- Miller, D. 1983. The correlates of entrepreneurship in three types of firms. *Management Science*, 29, 770–791.
- Miller, D. (2011). Miller (1983) revisited: a reflection on EO research and some suggestions for the future. *Entrepreneurship Theory and Practice*, 35(5), 873–894.
- Mintzberg, H.1973. Strategy-making in three modes. *California Management Review*, 16, 44–53.
- Mirchandani, K. 1999. Feminist insight on gendered work: new directions in research on women and entrepreneurship. *Gender, Work & Organization* 6(4), 224–235.
- Muntean, S. C. & Ozkazanc-Pan, B. 2015. A gender integrative conceptualization of entrepreneurship. *New England Journal of Entrepreneurship*, 18(1), 27–40.
- Osorio, A. E., Ozkazanc-Pan, B., & Donnelly, P. F. (2015). An entrepreneurial context for the theory of the firm: Exploring assumptions and consequences. *New England Journal of Entrepreneurship*, 18(1), 71–85.
- Parasuraman, S, & Simmers, C. A. (2001). Type of employment, work-family conflict and well-being: a comparative study. *Journal of Organizational Behavior*, 22, 551–568.
- Pennings, J. M. (1982). The urban quality of life and entrepreneurship. *Academy of Management Journal*, 25(1), 63–79.
- Peredo, A. M., & Chrisman, J. (2006). Toward a theory of community-based enterprise. *Academy of Management Review*, 31(2), 309–328.
- Pittaway, L., & Cope, J. (2007). Entrepreneurship education: a systematic review of the evidence. *International Small Business Journal*, 25(5), 479–510.
- Porter, M. E. (1995). The competitive advantage of the inner city. *Harvard Business Review*(May/June), 55+.
- Rauch, A. & Frese, M. (2000). Psychological approaches to entrepreneurial success: a general model and an overview of findings. In Cooper, C.L. and Robertson, I.T. (Eds.), *International Review of Industrial and Organizational Psychology* (pp. 101–142). Chichester: Wiley.

- Rauch, A., Wiklund, J., Lumpkin, G.T. & Frese, M. (2009). Entrepreneurial orientation and business performance: an assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33 (3), 761–787.
- Robb, A.M., & Watson, J. 2012. Gender differences in firm performance: evidence from new ventures in the United States. *Journal of Business Venturing*, 27(5), 544–558.
- Segal, G., Borgia, D., & Schoenfeld, J. (2005). The motivation to become an entrepreneur. *International journal of Entrepreneurial Behavior & Research*, 11(1), 42–57.
- Shane, S. & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25 (1), 217–226.
- Shapero, A. (1984). The entrepreneurial event, in Kent C.A. (Ed.): *The Environment for Entrepreneurship*, Lexington, MA: DC Heath, pp.21–40.
- Shapero, A., & Sokol, L. (1982). The social dimensions of entrepreneurship. *Encyclopedia of Entrepreneurship*, 72-90.
- Sharma, P. & Chrisman, J. J. (1999). Toward a reconciliation of the definitional issues in the field of corporate entrepreneurship. *Entrepreneurship: Theory & Practice*, 23, 11–27.
- Shaver, K.G. & Scott, L.R. (1991). Person, process, choice: the psychology of new venture creation. *Entrepreneurship Theory and Practice*, 16 (2), 23–45.
- Shook, C. L., Priem, R. L., & McGee, J. E. (2003). Venture creation and the enterprising individual: a review and synthesis. *Journal of Management*, 29, 379–399.
- Slevin, D. P., & Terjesen, S. A. (2011). Entrepreneurial orientation: reviewing three papers and implications for further theoretical and methodological development. *Entrepreneurship Theory and Practice*, 35(5), 973–987.
- Smith, D. R. (2007). Ten citation classics from the New Zealand medical journal. *The New Zealand Medical Journal (Online)*, 120(1267). Retrieved from URL: <http://www.nzma.org.nz/journal/120-1267/2871/>
- Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4), 566–591.
- Specht, P. H. (1993). Munificence and carrying capacity of the environment and organization formation. *Entrepreneurship Theory & Practice*, 17(2), 77–86.
- Sullivan, D.M., & Meek, W.R. 2012. Gender and entrepreneurship: a review and process model. *Journal of Managerial Psychology* 27(5-6), 428–458.
- Sweida, G.L., & Reichard, R.J. 2013. Gender stereotype effects on entrepreneurial self-efficacy and high-growth entrepreneurial intention. *Journal of Small Business and Enterprise Development* 20(2), 296–313.
- Thebaud, S. 2010. *Institutions, Cultural Beliefs and the Maintenance of Gender Inequality in Entrepreneurship Across Industrialized Nations*. Cornell University, Ithaca, NY.
- Wales, W. J. (2016). Entrepreneurial orientation: a review and synthesis of promising research directions. *International Small Business Journal*, 34(1), 3–15.
- Wales, W. J., Gupta, V. K., & Mousa, F. T. (2013). Empirical research on entrepreneurial orientation: an assessment and suggestions for future research. *International Small Business Journal*, 31(4), 357–383.
- Watkins, K. K., Ozkazanc-Pan, B., Clark Muntean, S., & Motoyama, Y. Support organizations and remediating the gender gap in entrepreneurial ecosystems: a case study of St. Louis (November 2, 2015). Available at SSRN: <http://ssrn.com/abstract=2685116>

- Wiklund, J., & Shepherd, D. A. (2011). Where to from here? EO-as-experimentation, failure, and distribution of outcomes. *Entrepreneurship Theory and Practice*, 35(5), 925–946.
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, 31(3), 387–406.
- Wright, M., Hmieleski, K. M., Siegel, D. S., & Ensely, M. D. (2007). The role of human capital in technological entrepreneurship. *Entrepreneurship Theory & Practice*, 31, 791–806.
- Zahra, S.A. & Covin, J.G. (1995). Entrepreneurship-performance relationship: a longitudinal analysis. *Journal of Business Venturing*, 10, 43–58.
- Zahra, S.A. & Garvis, D.M. (2000). International corporate entrepreneurship and firm performance: the moderating effect of international environmental hostility. *Journal of Business Venturing*, 15, 469–492.

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# The Glass Cage: The Gender Pay Gap and Self-Employment in the United States

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**S**elf-employment is often viewed as a more desirable work arrangement than working as an employee for a firm. Women are pushed into self-employment due to organizational factors, such as a shrinking workforce or limited job opportunities, while being attracted to self-employment by the many psychological and social benefits (e.g., independence, flexibility, work-life balance, job satisfaction). Despite more women moving into self-employment, this type of employment still has different financial consequences for men and women. This article investigates whether a pay gap exists for self-employed women after controlling for industry, occupation, and hours worked and seeks to quantify the gender wage gap for the self-employed. A sample of 467 self-employed independent contractors in the United States was examined from the 2008 National Study of the Changing Workforce. The results indicate a large financial disparity between self-employed women and men. On average men earned \$54,959 as compared to women who earned on average \$28,554. Regardless of the parity in education, work experience, number of hours worked, or occupations, women earn less than men in self-employment. Findings suggest the existence of the glass cage—a phenomenon whereby self-employed women earn significantly less than self-employed men with limited abilities to narrow the economic inequality.

**Keywords:** self-employment; gender pay gap; female entrepreneurs; gender discrimination

Self-employment has been positioned as the career panacea for women. Women are pulled and pushed into self-employment as a career solution in an effort to fill the traditional role of wife and mother while earning an income. For those seeking to balance work and family, self-employment has been lauded in the media as the solution to continuing a career and caring for children. In a thought-provoking piece in the *Atlantic*, Anne-Marie Slaughter (2012) asserted that workplaces are not friendly toward working families, and that “the women who have managed to be both mothers and top professionals are superhuman, rich, or self-employed.” Slaughter positions

self-employment as an avenue that allows women to thrive combining work and family. Along the same line, in a recent *New York Times* article, Judith Warner (2013) describes the difficulties of women who have “opted out” to stay at home and raise families getting back into the workforce. One successful solution portrayed in the article is self-employment, where a women can work “without dropping any of her maternal duties.”

For many women, there are limited job opportunities based on their lack of education, lack of experience, and demands from children and families. These women typically pursue nonprofessional jobs such as babysitting, housekeeping, dog-walking, and the proverbial Avon lady. They are pushed into these jobs by the need to work counter-balanced with demands of children and family and the lack of ability to get higher paying jobs elsewhere that offer flexibility (Budig, 2006). On the other side, professional women are increasingly opting out of careers in larger organizations into self-employment as they are confronted with a number of career challenges. Organizational downsizing and restructuring have pushed women out of careers or forced them to work as contract employees (Cox, 2013; Kotkin, 2012). Lack of promotion opportunities or career advancement (McKie, Biese, & Jyrkinen, 2013) and frustration over balancing work and family (Hughes, 2003) have increased job dissatisfaction and lured women into self-employment. In particular for professional women, self-employment is positioned as the best of all worlds: being your own boss, pursuing your passion, having flexibility, all while earning high levels of income (Annik & den Dulk, 2012; Prottas & Thompson, 2006; Lombard, 2001). An underlying assumption is that self-employment will lead to increased income, a positive career trajectory, and increased flexibility (Hughes, 2003).

However, self-employment is not a career panacea for either professional or nonprofessional women, particularly with regard to financial outcomes. The current research posits that for self-employed women, the gender pay gap is a manifestation of the underlying gender inequality and

creates a glass cage of economic inequality from which there is no escape. We hypothesize that self-employment does not close the pay gap for women as compared to men even though women work as many hours as their self-employed male counterparts. Furthermore, professional women who are using self-employment as a surrogate for part-time employment experience a punitive impact on their income such that, regardless of their occupation, they are unable to close the pay gap and end up being trapped in the glass cage.

This article seeks to extend past research on the differences in earnings for men and women in self-employment with respect to industry, occupation, and hours worked to investigate the extent to which women earn less than men in self-employment. Much of the research supports that women are still faring worse than men are in terms of earnings within self-employment. However, this disparity has been attributed primarily to the difference in the number of hours worked by women as compared to men (Becker, 1986; Hersch & Stratton, 1994; Hymowitz, 2012), choice of industry (Hundley, 2001; Borden, 1999), and occupation (Hipple, 2010; Georgellis & Wall, 2005). We challenge this explanation based on a number of studies that have shown the pay gap is an embedded structural component of our labor system whereby the income inequality begins with the first job (Smith, 2012; Weinberger, 2011). We posit that the pay gap is not due solely to differences in choice of industry, occupation, or the number of hours worked, but instead is deeply rooted in a system where women are paid less at every level of employment. We seek to quantify the pay gap and provide further insight into some of the possible reasons behind the disparity in wages among self-employed women. The current research contributes to the existing literature by being the first study to quantify the financial disparity between self-employed men and women in the United States while controlling for previously identified factors that impact pay disparity. Additionally, the current study uses a large nationally sourced database, increasing the generalizability of the findings and bringing to light the existence of the glass cage.

### Definition of Self-Employment

Self-employment is defined as engaging in a profession or trade to generate income but not receiving wages directly from an employer (Cox, 2013). With the increased interest in "entrepreneurship" in both economic and

academic circles, there is an additional distinction among self-employed workers. Entrepreneurs by definition are typically focused on acquisition of capital and business expansion (Kao, 1993; Carland, Carland, Hoy, & Boulton, 1998). Additionally, entrepreneurs typically have one or more employees (Blanchflower & Oswald, 1998) and are usually legally incorporated (Hundley, 2001). Alternatively, self-employed workers are typically working as independent contractors with no employees (Blanchflower & Oswald, 1998) or contingent workers with alternative work arrangements and no employees (Kotkin, 2012). One in three women are self-employed and an increasing number of women are opting for self-employment over employment for others (Roche, 2014; Mattis, 2004). Although more men than women are self-employed, self-employed women are twice as likely to be independent contractors with no employees, particularly when using self-employment as a substitute for part-time work. The current study's focus is solely on self-employed individuals who do not have any employees working for them as this represents approximately two-thirds of self-employed women (Roche, 2014).

### Push and Pull Factors as Reasons for Self-employment

A number of factors, identified as push or pull factors, attract women to self-employment. Pull factors refer to elements that make self-employment more attractive over working as a waged employee for an organization (Hughes, 2003). In studies of professional women, pull factors have been related to the positive work aspect employees perceive to be actualized by self-employment. In a qualitative study in Canada, which investigated whether professional women are "pushed or pulled" into self-employment, the most important pull factors were wanting to be challenged, desiring independence, and having a positive work environment (Hughes, 2003). Flexible work schedules and the ability to balance work and family responsibilities are also commonly cited as pull justifications to self-employment (Prottas & Thompson, 2006; Lombard, 2001). Independence and the ability to control work are also highly cited as reasons why professional women choose self-employment over working for others (McKie, Biese, & Jyrkinen, 2013; Hughes, 2003; Lombard, 2001). Lastly, there is the expectation of higher earnings particularly for women who are more educated and have professional backgrounds (Taniguchi, 2002; Lombard, 2001; Borden, 1999).

On the other hand, push factors are those tendencies that pressure women to self-select into self-employment instead of staying in an organization as a waged employee (Hughes, 2003). Self-employment has been increasingly used as a substitute for part-time work, particularly among women who are college educated with families, due to the lack of part-time positions in large organizations (Hipple, 2010; Georgellis & Wall, 2005). Work and organizations have been characterized as gendered male, whereby the organization processes, work, culture, and jobs themselves are inherently in favor of men and discriminate against women (Acker, 1990). By definition work delineates “domestic life and social production” (Acker, 1990, p. 149), and assumes that women will occupy lower paying, less skilled jobs with slower mobility tracks. When women do breach what has traditionally been male-occupied positions, they are expected to function like men (Acker 2006). In these male-dominated positions, long hours, lack of flexibility and work-life balance, and the expectation of presenteeism contribute to women feeling they are being pushed out of the organization (Stone, 2007). Women often feel a sense of being “pushed” into self-employment, due to factors that include limited career opportunities and downsizing, job stress, job insecurity, high workload, and having a bad boss (Hughes, 2003). Similarly, for women managers with more experience, overall dissatisfaction with the organization (Mallon & Cohen, 2001) and the inability to progress in earnings and level (McKie, Biese, & Jyrkinen, 2013) are factors that force women out of organizations.

Many women have limited choices for employment due to family and personal demands. Women are still expected to act as the primary caretaker for children and bear the primary responsibility for housework (Parker & Wang, 2013). On average, women spend 20 to 30 hours a week performing housework while their male partners spend 10 hours a week (Parker & Wang, 2013; Hersch & Stratton, 1994). When children are present in the household, the amount of time a woman spends on housework increases on average by 14 hours per week while her husband’s time increases on average by 7 hours per week (Parker & Wang, 2013). Child care is viewed increasingly as a predominantly female task, and the number of hours women spend with their family has increased, putting more pressure on mothers to have “quality time” with their children (Bianchi, 2000). Parenting has also taken on a new meaning with

“intensive parenting”, where a parent “cultivates, informs, and monitors” (Bernstein & Triger, 2010, p. 1221) a child to ensure the child reaches its full potential, becoming the social norm among educated white females (Bernstein & Triger, 2010). Women are torn between being the “ideal mother” and the “ideal worker” in a no-win situation (Stone, 2007). This, in turn, negatively impacts their earnings and the decisions regarding how to allocate time between work and other domestic activities (Becker, 1986; Stone, 2007). In an effort to balance work and family, many women are pushed into nonprofessional self-employed positions, which require less skills and less education but enable them to meet the demands of childcare and housework (Budig, 2006).

### The Gender Pay Gap and Self-employment

The potential of increased earnings has been identified as a perceived benefit of becoming self-employed (McKie, Biese, & Jyrkinen, 2013; Hughes, 2003; Taniguchi, 2002; Lombard, 2001; Borden, 1999). Despite the lure of better earnings, women earn less than men in self-employment. In a longitudinal study, Borden (1999) found that choice of industry and occupation accounted for a large portion of the pay disparity and that self-employed women earned significantly less (32 cents on the dollar) than self-employed men. Hundley (2000, 2001) found that women are also more likely to shoulder more of the housework and child rearing, particularly when self-employed, negatively impacting their earnings (Hundley, 2000, 2001). Both Borden (1999) and Hundley (2000, 2001) attributed the pay disparity to traditional factors of choice of industry and occupation, as well as other factors, such as having children. While choice of occupation, industry, and having children do explain some of the pay differential, a number of studies have demonstrated that the difference in wages between men and women is relatively equal at all points in times across a career (Smith, 2012; Weinberger, 2011). From the start of their careers, women’s wages are below their male counterparts with equal experience and equal education (Weinberger, 2011). Women do not fall behind as they progress in their careers so much as start from behind and remain at a deficit throughout their career (Weinberger, 2011).

Therefore, we predict that even controlling for industry, occupation, hours worked, age, and education

**Hypothesis 1a:** Self-employed women earn less than self-employed men.

**Hypothesis 1b:** Self-employed women working full time earn less than self-employed men working full time.

**Hypothesis 1c:** Self-employed women working part time earn less than self-employed men working part time.

One key reason attributed to the self-employed pay gap is the number of hours women work. In two different studies, Hundley (2000, 2001) found that women perform significantly more hours of housework and childcare, which negatively impacted their earnings. The conclusion was that the self-employed women allocated less hours to work than self-employed men in favor of performing these household duties. A number of sources are often cited that support the claim that the difference in gender income is directly attributable to number of hours worked (Becker, 1986; Hersch & Stratton, 1994; Hymowitz, 2012). However, self-employment is often used as a substitute for part-time work, with women choosing to work less hours in order to balance work and family. In the aggregate, self-employed women work less hours than self-employed men as more women use self-employment as a part-time work arrangement (Georgellis & Wall, 2005). In an alternative perspective, in 2007 the U.S. Bureau of Labor's "American Time Use Report" found that when reclassified by employment status (part time vs. full time), only slight differences emerged between the number of hours worked by men and women. Among full-time workers, men worked 8.2 hours a day while women worked 7.8 hours a day. Among part-time workers, men worked 5.2 hours a day while women worked 5.4 hours a day. Once reclassified as part-time and full-time workers, there was no longer a significant difference between women and men in terms of hours worked. Thus, differentiating between hours worked as part-time and full-time employment, we predict

**Hypothesis 2a:** The number of hours worked by self-employed women who work full time will not be significantly different from the number of hours worked by self-employed men who work full time.

**Hypothesis 2b:** The number of hours worked by self-employed women who work part time will not be significantly different from the number of hours worked by self-employed men who work part time.

Choice of industries is often cited as a reason for the pay gap between women and men, even in self-employment. Traditionally, more self-employed women have worked in lower paying industries, such as personal services, retail, and clerical positions, which require lower skill levels and less education than other higher paying industries, such as technology and finance (Hundley, 2001; Borden, 1999). Women are often pushed into these lower paying jobs as a means of balancing work and family while still trying to earn a living (Budig, 2006). Despite the trend for more women to work in professional and business-related industries (18.4% of self-employed unincorporated women), the differences in earnings still exist (Roche, 2014). This persistent inequality in wages points to a more systemic gender bias in our labor markets. We put forth that regardless of industry, self-employed women will earn less than self-employed men overall. Therefore we predict that

**Hypothesis 3:** Self-employed women earn less than self-employed men across all industries.

Occupation is also a factor in the earning power of self-employed women. Despite their educational backgrounds, historically self-employed women will often select an occupation that requires lower skill levels and also has less earning potential (Georgellis & Wall, 2005). Women will also transition from a managerial position in an organization to a nonmanagerial position, losing human capital in the transition, which negatively impacts their earnings (Hundley, 2001). However, more recently, women with more education and work experience are selecting self-employment and choosing to remain in managerial and professional positions (Roche, 2014; Bosse & Taylor, 2012). Yet, the pay gap still persists overall (Roche, 2014; Hipple, 2010). We predict that due to inherent gender biases in all occupations, self-employed women will make less than their male counterparts. Furthermore, we expect to see a pay gap for both nonprofessional and professional occupations if there is a systemic gender bias across all occupations. Hence, we posit

**Hypothesis 4a:** Self-employed women make less than self-employed men across all occupations.

**Hypothesis 4b:** Self-employed professional women make less than self-employed professional men.

**Hypothesis 4c:** Self-employed nonprofessional women make less than self-employed nonprofessional men.

## Methodology

### Sample

The sample consisted of 467 self-employed independent contractors from the 2008 National Study of the Changing Workforce (NSCW). The NSCW, which is administered every five to six years by the Families and Work Institute, employs a nationally representative sample of 3,502 U.S. households. The overall response rate for the 2008 NSCW was 54.6 percent. Surveying was conducted by telephone. Of the 467 self-employed independent contractors, 42 percent were females, the average of age across genders

was 48.9 years, and the average level of education across genders was some college with 23.6 percent having a college degree. The demographics by gender are displayed in Table 1a. The distribution of participant across industries and occupations is displayed in Tables 1b and 1c, respectively. As expected, females have higher representation in traditionally female-dominated industries, such as retail and personal services. Similarly, females also have a higher representation in traditionally female-dominated occupations, such as service and administrative support.

**Table 1a. Descriptive Statistics by Gender**

Demographics	MALE (N=268)		FEMALE (N=198)		t
	Mean	SD	Mean	SD	
Usual Hours Worked	40.73	17.91	33.09	16.86	4.25**
Age	47.38	12.97	50.40	13.79	2.19*
Education in Years	13.20	2.03	13.36	1.78	0.81

\* $<.05$ , \*\* $<.001$

**Table 1b. Industry by Gender**

Industry	MALE	FEMALE
	%	%
Agriculture/Forestry/Fishing/Mining	14.6	6.2
Construction	19.0	5.0
Manufacturing	3.1	2.5
Transportation/Utilities	6.6	2.5
Wholesale Trade	4.0	1.9
Retail Trade	8.0	18.0
Finance/Insurance/Real Estate	10.6	7.5
Business/Repair Services	10.2	10.6
Personal Services	4.0	12.4
Entertainment/Recreation	1.3	1.9
Medical Services	2.7	3.1
Education Services	2.7	3.7
Other Professional Services	11.5	23.0
Public Administration	1.8	1.9

$\chi^2=50.8$ , 13, .000

**Table 1c. Occupation by Gender**

<b>Occupation</b>	<b>MALE</b>	<b>FEMALE</b>
	%	%
Executives/Administrators/Managers	13.5	10.6
Professionals	15.7	18.8
Technical	2.2	1.3
Sales	17.9	15.0
Administrative Support	4.9	12.5
Service	5.8	30.0
Production/Operation/Repair	39.9	11.9

$\chi^2=68.8, 6, 0.000$

### Measures

Respondents were identified as self-employed with no employees based on self-reported employment status in the survey. The following sections describe the measures used as variables in the study.

### Dependent Variable

Annual income of the respondent measured in dollars was used as the dependent variable for hypothesis testing. This was a self-reported number collected in the survey.

### Independent Variables

Designation of part time and full time, calculated using the number of hours worked in a week, were based on the U.S. Bureau of Labor Statistics's definition of part time as being anyone who works less than 35 hours a week. Number of hours worked was collected by asking respondents the usual number of hours worked in a week. Gender was self-identified. Industry codes and occupation codes were assigned by the research company based on job and employer information collected in the survey. The 14 major industry codes from the 1990 census were used to code industry. These were wholesale trade, agriculture/forestry/fishing/mining, construction, manufacturing, retail trade, transportation/communications/utilities, business/representative services, personal services, entertainment/recreational services, medical services, education services, other professional services, and public administration. The 7 major occupation codes from the 1990 census were used to code occupation of position. These included executive/administrative/managers, professionals, technical, sales, administrative support, service, and

production/operator/repair. Designation of professional and nonprofessional was based on nonprofessional being anyone whose occupation was service or production/operator/repair and professional being anyone whose occupation was executive/administrative/managers, professionals, technical, sales, and administrative support.

### Control Variables

Education was measured as the highest level of schooling completed in years. Age was also measured in years. Education, number of hours worked, and age were used as control variables in all analyses. Industry and occupation were also used as control variables in the analyses where neither were hypothesized effects.

### Analysis Strategy

Hypotheses were tested using a multivariate analysis of variance (GLM in SPSS). This allowed categorical variables to be entered into the analysis as factors with discrete levels as opposed to creating a number of dummy variables. Control variables were entered into all models. Main effects where hypothesized were tested for significance and effect sizes (partial eta squared) were calculated. Additional analyses were conducted after hypotheses testing to provide further insights into the effects by gender. To shed further light on the underlying effects seen in the hypothesis testing, the means were calculated for measures that the authors felt would provide further information on what was actually going on in the data. Earned salary was calculated for males and females for each of the hypothesized subgroups, such as full time versus part time and professional

versus nonprofessional, as well as for each industry and occupational category. Additionally, means for education, age, and dollars per hour (calculated by dividing earned salary by 52 weeks and then by hours worked a week) were calculated and tested for significant differences across gender groups.

## Results

Hypothesis 1a predicted that self-employed women earn less than self-employed men. This hypothesis was supported. The annual earnings of self-employed men was \$54,958 and the annual earnings of self-employed women was \$28,554. When controlling for education, age, hours worked, industry, and occupation, there was a significant difference between the annual earnings of self-employed women and self-employed men ( $\eta^2 = 0.07$ ,  $F = 24.588$ ,  $p = 0.000$ ). Significant control variables in the model were hours worked, education, and occupation. Hypothesis 1b predicted that self-employed women who worked full time earn less than self-employed men who work full time. This hypothesis was supported. Women who were

self-employed and worked full time earned significantly less (\$39,373 annually; \$15.94 per hour) than men who were self-employed and worked full time (\$62,118 annually; \$23.94 per hour). In the multivariate model controlling for education, age, hours worked, industry and occupation, self-employed women who worked full time earned less than self-employed men who worked full time ( $\eta^2 = 0.02$ ,  $F = 6.898$ ,  $p = 0.009$ ). Education was also significant in the model. Hypothesis 1c predicted that self-employed women who worked part time earn less than men who work part time. This hypothesis was also supported. Women who were self-employed and worked part time earned \$18,840 annually (\$17.63 per hour), while men who were self-employed and worked part time earned \$40,179 annually (\$36.57 per hour). Testing the hypothesis in a multivariate model with control variables, self-employed women who worked part time earned less than self-employed men who worked part time ( $\eta^2 = 0.05$ ,  $F = 13.289$ ,  $p = 0.000$ ). None of the control variables were significant in the model. Means and hypothesized results for annual earnings are presented in Tables 2a and 2b.

**Table 2a. Annual Earnings  
Means by Gender for Full-Time and Part-Time Employees**

FULL TIME				
	Salary*	\$/Hour*	Education*	Age
<b>Males</b>	\$62,18	\$23.94	13.0	45.78
<b>Female</b>	\$39,373	\$15.94	13.5	50.33
PART TIME				
	Salary*	\$/Hour*	Education	Age
<b>Males</b>	\$40,179	\$36.57	13.55	49.88
<b>Females</b>	\$18,840	\$17.63	13.23	50.46

\* < .05

**NOTE:** The t-tests do not control for number of hours worked, education, age, occupation, or industry and should be viewed as ad hoc analyses.

**Table 2b. Multivariate GLM Analysis of Earnings by Gender**

	Hypothesis 1a: All Respondents		Hypothesis 1b: Full Time		Hypothesis 1c: Part Time	
	$\eta^2$	F	$\eta^2$	F	$\eta^2$	F
<b>Gender</b>	0.07	24.59**	0.03	6.90*	0.05	13.29**
<b>Hours Worked</b>	0.05	19.22**	0.01	2.61	0.01	1.15
<b>Education</b>	0.02	6.38*	0.05	8.89*	0.00	0.01
<b>Age</b>	0.00	1.30	0.00	0.62	0.01	1.46
<b>Occupation</b>	0.01	4.74*	0.01	2.13	0.02	2.82
<b>Industry</b>	0.00	0.13	0.00	0.31	0.00	0.47
	R <sup>2</sup> =0.162		R <sup>2</sup> =0.138		R <sup>2</sup> =0.151	

\* $<.05$ ; \*\* $<.001$ **NOTE:** The t-tests do not control for number of hours worked, education, age, occupation, or industry and should be viewed as ad hoc analyses.

Hypothesis 2a theorized that no significant difference existed between the number of hours worked by self-employed women who worked full time and the number of hours worked by self-employed men who work full time. This hypothesis was supported. Men worked an average of 49.9 hours, while women worked an average of 47.5 hours. Using a multivariate model with age, education, industry, and occupation as controls, there was no significant difference in the number of hours worked between self-employed women who worked full time and self-employed men who worked full time ( $\eta^2 = 0.01$ ,  $F = 1.390$ ,  $p = 0.240$ ). Hypothesis 2b posited that women who were self-employed and worked part time worked the same number of hours as self-employed men who worked

part time. This hypothesis was also supported. Women worked on average 20.5 hours a week, while men worked on average 21.1 hours a week. When tested with a multivariate model including education, age, industry, and occupation as control variables, there was no significant difference in the number of hours worked between self-employed women who worked part time and self-employed men who worked part time ( $\eta^2 = 0.00$ ,  $F = 0.189$ ,  $p = 0.665$ ). It should be noted that almost twice as many self-employed men ( $n=132$ ) worked full time as their female counterparts ( $n=74$ ). As expected, more self-employed women worked part time ( $n=84$ ) as compared to self-employed men ( $n=61$ ). See means and hypothesized results for hours worked in Tables 3a and 3b.

**Table 3a. Means by Gender for Full-Time and Part-Time Employees**

	FULL-TIME HOURS	PART-TIME HOURS
<b>Males</b>	49.9	21.1
<b>Females</b>	47.5	20.5

All comparisons are non-significant.

**NOTE:** The t-tests do not control for number of hours worked, education, age, occupation, or industry and should be viewed as ad hoc analyses.

**Table 3a. Means by Gender for Full-Time and Part-Time Employees**

	<b>Hypothesis 2a: Full Time (36+ hrs)</b>		<b>Hypothesis 2b: Part Time (&lt;36 hrs)</b>	
	$\eta^2$	<i>F</i>	$\eta^2$	<i>F</i>
<b>Gender</b>	0.01	1.39	0.00	0.19
<b>Education</b>	0.00	0.03	0.00	0.70
<b>Age</b>	0.05	1.04	0.00	0.25
<b>Occupation</b>	0.00	0.86	0.01	2.39
<b>Industry</b>	0.00	0.58	0.01	1.23
		R2=0.035		

All effects are non-significant

Hypothesis 3 predicted that across industries self-employed women would earn less than self-employed men. This hypothesis was not supported. The main effect of gender was significant ( $\eta^2 = 0.18$ ,  $F = 5.569$ ,  $p = 0.027$ ), however, the interactive effect reached significance

( $\eta^2 = 0.10$ ,  $F = 2.683$ ,  $p = 0.001$ ). This indicates that within all industries, women were not paid less than men, but overall gender still does account for a large pay difference in many industries. Table 4a displays the hypothesized results for the gender by industry and occupation.

**Table 4a. GLM Analysis of Earning Differences by Gender and Industry**

	<b>Hypothesis 3: Industry</b>	
	$\eta^2$	<i>F</i>
<b>Gender</b>	0.18	5.57*
<b>Gender X Industry</b>	0.10	2.68**
<b>Industry</b>	0.49	0.98
<b>Occupation</b>	0.01	2.85
<b>Hours Worked</b>	0.07	22.84**
<b>Education</b>	0.04	12.30**
<b>Age</b>	0.00	0.30
		R2=0.324

\* < .05; \*\* < .001

Women earned less than men in all but four industries—agriculture/forestry/fishing/mining, wholesale trade, entertainment/recreation, and medical services. In four industries—manufacturing, transportation/utilities,

personal services, and public administration—men out-earned women by more than double. Table 4b displays the annual earnings by industry.

**Table 4b. Mean Earnings by Gender and Industry**

Industry	MALE	FEMALE
<b>Agriculture/Forestry/Fishing/Mining</b>	\$32,553	\$46,451
<b>Construction</b>	\$49,932	\$40,474
<b>Manufacturing</b>	\$87,407	\$21,518
<b>Transportation/Utilities</b>	\$81,993	\$41,042
<b>Wholesale Trade</b>	\$40,164	\$79,179
<b>Retail Trade</b>	\$66,795	\$34,055
<b>Finance/Insurance/Real Estate</b>	\$65,842	\$24,874
<b>Business/Repair Services</b>	\$37,241	\$19,048
<b>Personal Services</b>	\$91,256	\$32,994
<b>Entertainment/Recreation</b>	\$23,189	\$62,339
<b>Medical Services</b>	\$20,291	\$32,564
<b>Education Services</b>	\$32,076	\$22,570
<b>Other Professional Services</b>	\$39,436	\$26,162
<b>Public Administration</b>	\$98,347	\$45,941

Hypothesis 4a predicted that across occupations self-employed women would earn less than self-employed men. This hypothesis was supported as the main effect for gender was significant ( $\eta^2 = 0.37$ ,  $F = 6.365$ ,  $p = 0.028$ ), and the interactive effect of gender and occupation was not significant ( $\eta^2 = 0.03$ ,  $F = 2.069$ ,  $p = 0.056$ ). (See Table 5a for

results.) Across all occupations except one—production/operation/repair—women made less than men. In four occupations—professionals, technical, sales, and service—men earned more than double what women earned in the same occupation. Earnings by occupation and gender are displayed in Table 5b.

**Table 5a. GLM Analysis of Earning Differences by Gender and Occupation**

	Hypothesis 4a: All Respondents		Hypothesis 4b: Professional		Hypothesis 4c: Nonprofessional	
	$\eta^2$	$F$	$\eta^2$	$F$	$\eta^2$	$F$
<b>Gender</b>	0.37	6.37*	0.05	9.98*	0.01	0.76
<b>Occupation</b>	0.04	1.21	0.01	1.19	0.05	8.33*
<b>Gender X Occupation</b>	0.00	2.07				
<b>Hours Worked</b>	0.52	16.99**	0.14	28.7**	0.03	5.20*
<b>Education</b>	0.05	3.80	0.01	0.96	0.05	8.82*
<b>Age</b>	0.01	0.32	0.01	0.94	0.03	4.39*
<b>Industry</b>	0.00	0.10	0.00	0.00	0.02	3.88
	R2=0.217		R2=0.259		R2=0.200	

\* < .05; \*\* < .001

**Table 5b. GLM Analysis of Earning Differences by Gender and Occupation**

Occupation	MALE	FEMALE
<b>Executives/Administrators/Managers</b>	\$58,962	\$31,900
<b>Professionals</b>	\$81,825	\$36,383
<b>Technical</b>	\$46,550	\$20,803
<b>Sales</b>	\$73,993	\$35,678
<b>Administrative Support</b>	\$28,928	\$19,363
<b>Service</b>	\$51,023	\$25,024
<b>Production/Operation/Repair</b>	\$42,380	\$50,252

Hypothesis 4b predicted that among professionals, women would earn less than men. This hypothesis was supported, with males having a mean salary of \$69,114 compared to females having a salary of \$33,538. Earning per hour was also significant in the ad hoc analysis (men: \$36.69 vs. females: \$22.92). When tested with a multivariate model including control variables, there was a significant difference in the annual earnings of professional self-employed men and professional self-employed women ( $\eta^2 = 0.05$ ,  $F = 9.98$ ,  $p = 0.004$ ). Hypothesis 4c predicted that among self-employed nonprofessionals, women would earn less than

men. This hypothesis was not supported. Four of the five control variables were significant in the model—occupation, hours worked, education, and age—accounting for the differences in earnings. While the mean average earnings for women in the study was less than for men, it was not significant. Table 5a displays the results for the hypothesis testing for the gender difference in annual earnings by occupation as well as professional and nonprofessional. Table 5c displays the means for earnings and the ad hoc analysis of dollars per hour, education, and age.

**Table 5c. Annual Earnings  
Means by Gender for Full-Time and Part-Time Employees**

PROFESSIONAL				
	Salary*	\$/Hour*	Education	Age
<b>Males</b>	\$69,114	\$36.69	13.99	48.84
<b>Females</b>	\$33,538	\$22.92	13.73	51.18
NONPROFESSIONAL				
	Salary*	\$/Hour	Education	Age
<b>Males</b>	\$40,061	\$21.23	12.35	45.89
<b>Females</b>	\$32,098	\$16.40	12.88	49.05

\* $<.05$

**NOTE:** The t-tests do not control for number of hours worked, education, age, occupation, or industry and should be viewed as ad hoc analyses

## Discussion

A recent study by the American Association of University Women (2015) estimates that the overall gender pay gap for women employed as waged employees is approximately 78 percent. For self-employed women, the pay disparity is actually much worse. The estimated pay gap for self-employed women compared to their male counterparts in the current study was startling: overall self-employed women earn 52 percent of what self-employed men earn; self-employed women who work full time earn 63 percent of what self-employed men earn who work full time; and self-employed women who work part time earn 47 percent of what self-employed men who work part time earn. While other studies have investigated the gender pay gap among self-employed workers, their results pointed to choice of industry (Hundley,

2001; Borden, 1999), choice of occupation (Hipple, 2010; Georgellis & Wall, 2005), and number of hours worked (Becker, 1986; Hersch & Stratton, 1994; Hymowitz, 2012) as the primary reasons for the pay disparity. The findings of the current study demonstrate that the pay gap for self-employed women exists regardless of these factors. The current study puts forth the existence of the glass cage where regardless of education, hours worked, or choice of occupation, there is a systematic gender bias in pay from which it is difficult to escape. Women begin their careers at a pay disparity from which they never recover (Weinberger, 2011). When controlling for factors that have been previously identified as the reasons for the pay disparity, there still exists a significant difference in earnings by gender for self-employed women.

Most surprising about our results was the disparity among professional workers. As the number of professional women entering self-employment increases, one would expect the pay inequity to close as well. Some studies have found that women who are more educated and have more experience are more likely to enter into self-employment (Taniguchi, 2002; Devine, 1994), particularly women who are in the later stages of their careers and who are looking for a bridge career to retirement (Roche, 2014). After being often overlooked for senior positions due to lack of recognition, lack of informal networks and mentors, lack of career path (Mattis, 2004), and blatant discrimination due to organizational norms (Hill, 2013), many professional women are turning to self-employment as both an escape from these push factors as well as the potential pull opportunities of being the boss and earning more (Annik & den Dulk, 2012). However, in self-employment, the negative impact on a woman's career can potentially be more significant.

Our study found that, with no significant difference between education and age, a professional woman made 62 percent of what her male professional counterpart did on an hourly basis. One possible reason for the inequity could be that women typically have less social capital and more condensed networks, limiting their ability to generate new business and their ability to access capital needed to grow their business (Gatewood et al., 2009; Coleman, 2000). Additionally, the same gender stereotypes and biases that inhibited career advancement in corporations are also firmly rooted in the very organizations and networks that women need to access and successfully pitch (Bosse & Taylor, 2012). Self-employed women encounter the same attitudes and biases when seeking funding for their businesses despite experience and educational levels (Bosse and Taylor, 2012). Another factor could be the very behaviors that make one successful in business. A meta-analysis on gender differences on negotiation outcomes (Stuhlmacher & Walters, 1999) suggests that the pay disparity observed in organizations can be partially attributed to gender-based differences in terms of negotiated outcomes as these initial differences become more pronounced in the long run due to increases based on percentage of pay. Therefore, it is possible that even though women leave corporate jobs, among many other factors, due to the lower pay rates they receive from their employers, they keep on asking for less from clients or expect to be paid less than men for the same job.

Another finding from our results is the high incidence of women using self-employment as a surrogate for part-time work. Women are almost twice as likely to use self-employment as part-time work (57.7%) as men (39.2%). And yet women still earn significantly less in part-time self-employment than men. Our analyses found gender to be the only significant factor that explained the difference in earnings for part-time self-employed workers. This points to the lack of meaningful part-time work in organizations whereby women can be both worker and mother.

The current study examined the most commonly cited reasons for pay disparity. In line with the Bureau of Labor Statistics report (2007), women did not work significantly fewer hours than men when classified as part time and full time. Part of the reason for the previous finding that women work fewer hours than men is that prior studies do not take into account that a large portion of women who use self-employment as a substitute for part-time work; so by choice they are working fewer hours. We chose to break the sample into part time and full time to minimize this self-selection to work less hours. The current study also found that although in some industries (wholesale trade, entertainment, medical services, and other professional services) women did make more than men, for the most part, women were at a pay disparity to men in the same industry and in the same occupation. More importantly, controlling for these industry and occupation pay disparities did not account for the difference in earnings among women and men.

The current study does have some limitations. First, the data used for this analysis was from 2008, prior to the recession. As a means of determining if this trend has continued, we examined the most recent Bureau of Labor Statistics report on earnings and self-employment and found in 2012 full-time self-employed males earned \$49,521 annually compared to self-employed females who earned \$32,806 annually while part-time self-employed males earned \$29,310 and part-time self-employed females earn \$17,322 annually (Roche, 2014). The pay gap still persisted for self-employed females in 2012. Second, the National Study of the Changing Workforce has limited information about the actual jobs individuals perform in self-employment, particularly whether individuals were working as independent contractors or actually running a stand-alone enterprise. We recognize that the collected data was self-reported via survey and as such is subject to response error.

Additionally, we had no information about the process by which these individuals chose to become self-employed and on other financial factors (such as net worth) that may impact the ability to fund a new enterprise.

Despite these shortcomings, the results of this study point to the need for further research on a number of fronts. First, our results suggest an underlying gender bias that is more pronounced in self-employment. Future research needs to identify factors that contribute to the pay disparity between self-employed men and women outside of age, education, hours worked, and occupation. Instead of accounting for gender pay disparity, this line of research needs to investigate the reasons for the underlying gender bias in the pay gap. Second, our study

found that in some industries women are outearning men. Further study is needed to understand the positive factors helping women achieve earning parity in these industries. Lastly, more research is needed with regard to women who work part time. Based on the results of our study, women disproportionately use self-employment as part-time work. The factors pushing and pulling women into part-time self-employment need to be examined in more depth. Additionally, professional women working part time experience an even wider pay gap despite the same age, education, and occupation as men. Research should address the underlying factors behind the gap and the later consequences when women try to reenter full-time employment.

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## REFERENCES

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- Acker, J. (1990). Hierarchies, jobs, bodies: A theory of gendered organizations. *Gender and Society*, Vol. 4, No. 2, 139–158.
- Acker, J. (2006). Inequality regimes gender, class, and race in organizations. *Gender and Society*, Vol. 20, No. 4, 441–464.
- American Association of University Women (2015). The simple truth about the gender pay gap. Spring.
- Annik, A., and den Dulk, L. (2012). Autonomy: The panacea for self-employed women's work-life balance? *Community, Work and Family*, Vol. 15, 383–402.
- Becker, G. S. (1986). Human capital, effort, and the sexual division of labor. *Journal of Labor Economics*, Vol. 3, No. 1, 33–58.
- Bernstein, G. and Triger, Z. H. (2010), Over-Parenting. *UC Davis Law Review*, Vol. 44, No. 4, 1221–1279.
- Bianchi, S. M. (2000). Maternal employment and time with children: Dramatic change or surprising continuity? *Demography*, Vol. 37, No. 4, 401–414.
- Blanchflower, D. G., & Oswald, A. J. (1998). What makes an entrepreneur? *Journal of Labor Economics*, Vol. 16, No. 1, 26–60.
- Borden, J. (1999). Gender inequality in wage earnings and female self-employment selection. *Journal of Socio-Economics*, Vol. 28, No. 3, 351–365.
- Bosse, D. A., & Taylor III, P. L. (2012). The second glass ceiling impedes women entrepreneurs. *The Journal of Applied Management and Entrepreneurship*, Vol. 17, No. 1, 52–68.
- Budig, M. (2006). Gender, self-employment, and earnings: The interlocking structures of family and professional status. *Gender and Society*, Vol. 20, No. 6, 725–753.
- Carland, J. W., Carland, J. A., Hoy, F. & Boulton, W. R. (1998). Distinctions between entrepreneurial and small business ventures. *International Journal of Management*, Vol. 5, No. 1, 98–103.
- Coleman, S. (2000). Access to capital and terms of credit: A comparison of men and women-owned small businesses. *Journal of Small Business Management*, Vol. 38, No. 3, 37–52.
- Cox, W. (2013). Toward a self-employed nation? [www.newgeography.com](http://www.newgeography.com).

- Devine, T. (1994). Changes in wage-and-salary returns to skill and the recent rise in female self-employment. *American Economic Review*, Vol. 2. No. 84, 108–113.
- Gatewood, E. J., Brush, C. G., Carter, N. M., Greene, P. G., & Harte, M. M. (2009). Diana: A symbol of women entrepreneurs' hunt for knowledge, money, and the rewards of entrepreneurship. *Small Business Economics*, Vol. 32, No. 2, 129–144.
- Georgellis, Y. & Wall, H. J. (2005). Gender differences in self-employment. *International Review of Applied Economics*, Vol. 19, No. 3, 321–342.
- Hersch, J. & Stratton, L. S. (1994). Housework, wages, and the division of housework time for employed spouses. *The American Economic Review*, Vol. 84, No. 2, 120-125.
- Hill, K. L. (2013). We've come a long way, baby, or have we? *Journal of Organizational Culture, Communications and Conflict*, Vol. 17, No. 2, 29–36.
- Hipple, S. F. (2010). Self-employment in the United States. Monthly Labor Review, September. <http://www.bls.gov/opub/mlr/2010>.
- Hughes, K. D. (2003). Pushed or pulled? Women's entry into self-employment and small business ownership. *Gender, Work, and Organization*, Vol. 10, No. 4, 433–454.
- Hundley, G. (2000). Male/female earnings differences in self-employment: The effects of marriage, children, and the household division of labor. *Industrial and Labor Relations Review*, Vol. 54, No. 1, 95–114.
- Hundley, G. (2001). Why women earn less than men in self-employment. *Journal of Labor Research*, Vol. 22, No. 4, 817–829.
- Hymowitz, K. (2012). Why women make less than men. *Wall Street Journal*, April 26.
- Kao, R. W.Y. (1993). Defining entrepreneurship: Past, present and? *Creativity and Innovation Management*, Vol. 2, 69–70.
- Kotkin, J. (2012). The rise of the 1099 economy: More Americans are becoming their own bosses. *Forbes*, July 25.
- Lombard, K. V. (2001). Female self-employment and demand for flexible, nonstandard work schedules. *Economic Inquiry*, Vol. 39, No. 2, 214–237.
- Mallon, M. & Cohen, L. (2001). Time for a change? Women's accounts of the move from organizational careers to self-employment. *British Journal of Management*, Vol. 12, 217–230.
- Mattis, M. C. (2004). Women entrepreneurs: Out from under the glass ceiling. *Women in Management Review*, Vol. 19, No. 2, 154–163.
- McKie, L. Biese, I., & Jyrkinen, M. (2013). "The best time is now!" The temporal and spatial dynamics of women opting into self-employment. *Gender, Work and Organization*, Vol. 20, No. 2, 1–14.
- Parker, K. & W. Wang (2013). Modern parenthood: Roles of moms and dads converge as they balance work and family. Pew Research Center. Social and Demographic Trends.
- Prottas, D. A. & Thompson, C. J. (2006). Stress, satisfaction, and the work-family interface: A comparison of self-employed business owners, independents, and organizational employees. *Journal of Occupational Health Psychology*, Vol. 11, No. 4, 366–378.
- Roche, K. (2014). Female self-employment in the United States: An update to 2012. *Monthly Labor Review*, October. <http://www.bls.gov/opub/mlr/2014>
- Slaughter, A. (2012). Why women still can't have it all. *The Atlantic*, June 13.

- Smith, R. A. (2012). Money, benefits, and power: A test of the glass ceiling and glass escalator hypotheses. *The Annals of the American Academy of Political and Social Science*, Vol. 639, 149–172.
- Stone, P. (2007). *Opting out: Why women really quit careers and head home*. University of California Press.
- Stuhlmacher, A. F., & Walters, A. E. (1999). Gender differences in negotiation outcome: A meta-analysis. *Personnel Psychology*, Vol. 52, No. 3, 653–677.
- Taniguchi, H. (2002). Determinants of women's entry into self-employment. *Social Science Quarterly*, Vol. 83, No. 3, 875–893.
- Warner, J. (2013). The opt-out generation wants back in. *New York Times*, August 7.
- Weinberger, C. J. (2011). In search of the glass ceiling: Gender and earnings growth among U.S. college graduates in the 1990s. *Industrial and Labor Relations Review*, Vol. 64, No. 5, 949–980.
- U.S. Bureau of Labor Statistics, [www.bls.gov/CPS](http://www.bls.gov/CPS).
- U.S. Bureau of Labor Statistics, U.S. Department of Labor (2007). American Time Use Report. *The Economics Daily*.

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# An Examination of Job Opportunities, Candidates, and Salaries in the Field of Entrepreneurship

Todd A. Finkle

**T**his article examines whether the field of entrepreneurship is becoming increasingly institutionalized by examining market trends, AACSB jobs, and salaries. The findings indicate that the field is becoming increasingly institutionalized through market trends. During 2014/15, there were 471 advertised positions and 163 candidates in Schools of Business and Management. The number of tenure track positions (261) was significantly higher than the number of tenure track candidates (161) for a ratio of 1.62. This is the highest ratio of tenure track positions to candidates since 2005/06 (2.1). Out of the 261 tenure track positions, 174 were at AACSB institutions. The ratio of tenure track positions at AACSB schools per tenure track candidate was 1.08. The study also looked at average salaries at AACSB schools and found them to be competitive with other mainstream areas. Average salaries were: full professors (\$162,000), associate professor (\$131,400), assistant professor (\$113,600), instructor (\$85,800), and new doctorates (\$97,800).

**Keywords:** entrepreneurship; faculty; salaries; job opportunities; higher education; AACSB

Entrepreneurship education continues to be a popular area of study within Schools of Business in higher education. Despite this, virtually little research has been done on salaries within the field. If the field can understand the trends occurring with salaries and how they compare with other more established fields (e.g., finance, accounting, marketing, etc.), it can determine whether it is becoming institutionalized within Schools of Business in higher education. The purpose of this study is to determine if the field of entrepreneurship is becoming increasingly institutionalized by examining salaries. The study also examines the current market trends (jobs and candidates) and Association to Advance Collegiate Schools of Business (AACSB) jobs in the field of entrepreneurship.

Institutional theory (Meyer and Rowan, 1977; Lounsbury, 2002; Bruton, Ahlstrom, and Li, 2010) posits that organizations operating in institutionalized environments are acting in a legitimate manner by adopting the structures and activities perceived to be legitimate by their critical external resource providers (Finkle and Deeds, 2001). In essence, by adopting

appropriate structures the organization increases its legitimacy and is able to use this legitimacy to increase its support and ensure its survival (Dowling and Pfeffer, 1975; Meyer and Rowan, 1977). In other words, are entrepreneurship faculty earning competitive salaries? The importance of understanding whether the field of entrepreneurship is becoming institutionalized is critical to the legitimacy, growth, and sustainability of the field.

The study answers the following research questions: (1) What are the market trends for entrepreneurship faculty? (2) What are the market trends for faculty in higher education for tenure track positions in entrepreneurship (including tenure track AACSB positions)? and (3) Are the average salaries of entrepreneurship faculty at AACSB schools competitive with other more established fields such as finance, accounting, management, and marketing?

The results of this study provide updated information in regards to jobs, candidates, and tenure track positions. But more importantly, it investigates the trends that are currently occurring to salaries within the field. Sparse research exists in this area. The findings of this study can make a significant impact on how the field compares to other disciplines. Furthermore, the findings will provide faculty, doctoral students, and administrators with information to be proactive with their strategies in the workplace.

## Previous Research

Several studies have examined market trends and AACSB jobs in the field of entrepreneurship. Finkle and Deeds (2001; 2002) pioneered the first study on the growth in the field of entrepreneurship in regards to job opportunities and candidates. Their findings concluded that the field was becoming increasingly institutionalized, but came up short in a number of areas (e.g., most of the positions were not tenure track, there was no mandate for entrepreneurship education, entrepreneurship was primarily an elective, and departments were rare). They concluded that the field had a long way to go to become institutionalized.

Other researchers investigated the growth of entrepreneurship centers (see Finkle, 2007a; 2007b; 2008; Finkle and Kuratko, 2004; 2006; Finkle, Kuratko and Goldsby, 2006a; 2006b; Finkle, Menzies, Kuratko

and Goldsby, 2010; 2012; 2013). Based on their findings, the field of entrepreneurship has become increasingly institutionalized due to the growing number of entrepreneurship centers. Entrepreneurship centers measure an institution's commitment to entrepreneurship. They must dedicate resources to hire a director and almost all centers have a curriculum. These centers also bring legitimacy to a school's entrepreneurship program.

Another area that has been investigated is tenure. If entrepreneurship faculty is getting tenure, this would certainly be a measure that the field is increasingly becoming institutionalized. Finkle, Stetz and Deeds (2004) and Finkle, Stetz and Mallin (2007) looked at differences in tenure applications for entrepreneurship faculty at research versus teaching schools. They found that 87 percent of the successful tenure candidates of entrepreneurship faculty at research schools had at least one top A-level journal publication. The remaining 13 percent that earned tenure attributed their success to a number of other tangible skills they brought to their respective institutions (e.g., administrator of an entrepreneurship center, fundraising, continuing education, etc.). At teaching schools, they found that it was possible to earn tenure without publishing in top management journals or any other leading journals. Entrepreneurship was also valued higher at teaching schools.

They concluded that most of the candidates earned tenure, however research was the cause for the ones that did not earn tenure. Of the tenure candidates, 95 percent that did not earn tenure was due to research. Therefore, they recommended that at both research and teaching schools, candidates target at least one A-level publication (as ranked by their institution). Even if the respective teaching school does not require that level of publication, it allows faculty much more flexibility and ability to advance in their careers.

Finkle's (2010) study found that entrepreneurship was increasingly institutionalized on a global basis. The study saw international jobs grow from 0 in 1989 to 76 in 2007/08 with the growth of international positions more than doubling from 2006/07. Finkle's (2012a; 2012b) studies indicate a maturity in the rate of tenure track positions—203. This may have been caused by the Great Recession as the number of tenure track positions peaked right before it at 292 and then decreased. Since 2007/08 when there were 288 tenure track positions, the numbers have decreased. Finkle (2013a, 2013b) looked at the characteristics of the job market from 1989–2013

and concluded that the field had a strong demand for candidates with a primary interest in entrepreneurship and senior faculty. There was a very high demand for senior faculty with 87 percent of the job opportunities targeted at this level. This was evidence on a different level that schools were increasingly institutionalizing entrepreneurship into their structures.

## AACSB

This study builds on previous research by examining not only market trends but also changes in the number of AACSB job opportunities, and salaries in the field. An increase in the number of tenure track AACSB positions should signal that the field is becoming increasingly institutionalized.

AACSB schools have to pass a voluntary, nongovernmental review of educational institutions and programs. According to AACSB (2015), its accreditation depicts the highest measure of achievement for schools of business worldwide. Schools that earn AACSB accreditation are committed to quality and continuous improvement.

The only study in the field of entrepreneurship that has examined market trends and AACSB positions was Finkle (2007a). He examined the trends in jobs and candidates from 1989 to 2005 and found 122 tenure track AACSB positions and 102 tenure track candidates or 1.2 tenure track AACSB positions per tenure track candidate. Additionally, only 33 (32%) of the tenure track candidates had a primary interest in entrepreneurship.

## Salaries

The field of entrepreneurship has performed sparse research on the topic of salaries. Finkle (2016) examined entrepreneurship faculty salaries and faculty demand. Katz (2004) focused on compensation for endowed chairs. He looked at stipends, travel, salaries, research funding, and course loads and found that the average annual salary for an endowed chair was \$162,018 (Median = \$148,500).

More recently, Finkle et al. (2010; 2012; 2013) examined entrepreneurship center directors' salaries. Their first study in 2012 found that the average annual salary of a U.S. center director was \$145,948. In 2013, they found that the average annual salary was \$136,989 versus \$131,250 for an international center director.

This study looks at entrepreneurship faculty salaries and how they compare to other mainstream fields of business. Specifically, it examines the average salary and rank for entrepreneurship faculty.

## Methodology

The data for this study was collected over a 26-year period. In the late 1980s and early 1990s, data was collected from small booklets (*Academy of Management Placement*) sent out to Academy of Management members. These numbers were supplemented by searching hard copies and microfiche of all of the advertisements in the newspaper edition of the *Chronicle of Higher Education*. By the mid-1990s, the booklets turned into a larger newspaper format. Both candidates and jobs were listed along with a short advertisement.

In the 1990s, advertisements started appearing on the Internet. Initially, there was no central place for jobs; however, over time, the *Academy of Management Placement* was transformed as a major place to advertise for candidates and schools. Several other sites also listed job opportunities. Table 1 lists sites used to collect data for this study. Job data was also collected through e-mails on a variety of networks and directly from universities.

A database was created to collect and analyze information. Data were collected from July 1 through June 30 for each academic year.

The data for salaries were based on an annual survey of 325 American AACSB schools within the United States from 2004–2015. Salaries of faculty included nine-month contracts and did not include summer pay, stipends, or other benefits.

## Results and Discussion

Five tables were created to answer the three research questions. The first three focused on market trends. Table 2 examines the number of candidates and positions from 1989 through 2015. It breaks down the data into interest level (e.g., primary, secondary, or tertiary). International candidates and jobs were also evaluated. Table 3 evaluates the number and percentage of tenure track positions and candidates. Tenure track positions were broken down by rank (e.g., assistant, associate, full, endowed, or open). Table 3 looks at the advertisements of the positions and candidates. For example, Cornell University is seeking a candidate with a primary area in entrepreneurship, but it also seeks a person with a secondary area in business policy and a tertiary area in technology and innovation management. Table 4 evaluates the percentage of candidates and candidates that have advertisements in different areas.

Table 5 examines the trends of salaries over the past nine years for entrepreneurship faculty at AACSB schools in the United States. Table 6 examines the average entrepreneurship faculty salaries by rank compared to other business disciplines with a primary focus on accounting, finance, management and marketing during 2014–2015.

Table 2 shows the total number of jobs (tenure track and non-tenure track) over the past 26 years. The total number of jobs was the highest ever this past academic year, 2014/15, at 471. During 1989 to 2015, the lowest number of job advertisements was 18 in 1991/92. By 2014/15, the number of jobs had increased by 2,517 or an average of 97 percent a year.

**Table 1. List of Web Sites Used to Collect Data on Schools**

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Academic 360 ( <a href="http://www.academic360.com/general/UK.cfm">http://www.academic360.com/general/UK.cfm</a> )
Academic Careers Online ( <a href="http://www.academiccareers.com/">http://www.academiccareers.com/</a> )
Academic Employment Network ( <a href="http://www.academploy.com">http://www.academploy.com</a> )
Academic Jobs EU ( <a href="http://www.academicjobseu.com/">http://www.academicjobseu.com/</a> )
Academic Keys for Business Education ( <a href="http://business.academickeys.com/seeker_job.php">http://business.academickeys.com/seeker_job.php</a> )
HigherEdJobs.com ( <a href="http://www.higheredjobs.com/">http://www.higheredjobs.com/</a> )
Indeed.com ( <a href="http://www.indeed.com/">http://www.indeed.com/</a> )
Jobs.ac.uk ( <a href="http://www.jobs.ac.uk">http://www.jobs.ac.uk</a> )
Mid Atlantic Higher Education Consortium ( <a href="http://www.midatlanticherc.org/home/">http://www.midatlanticherc.org/home/</a> )
United States Association for Small Business and Entrepreneurship (USASBE) ( <a href="http://usasbe.org/">http://usasbe.org/</a> )
University 500 ( <a href="http://www.university500.com/">http://www.university500.com/</a> )
University Affairs ( <a href="http://oraweb.aucc.ca/pls/ua/english_search">http://oraweb.aucc.ca/pls/ua/english_search</a> )

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**Table 2. Number and Level of Interest in Entrepreneurship for Candidates and Positions 1989–June 2015**

Academic Yr.	Candidates w/Primary Interest	Positions w/Primary Assignment	Candidates w/2 <sup>nd</sup> Interest	Positions w/2 <sup>nd</sup> Assignment	Candidates w/Tertiary Interest	Positions w/Tertiary Assignment	Int'l Candidates	Int'l Positions	Total Candidates	Total Positions
1989–90	5	5	15	12	15	9	3	0	35	26
1990–91	3	9	23	6	20	12	2	2	46	27
1991–92	7	12	20	3	13	3	1	2	40	18
1992–93	6	16	23	3	27	9	2	3	56	28
1993–94	10	18	32	6	25	3	3	1	67	27
1994–95	15	20	45	4	29	6	3	5	89	30
1995–96	24	20	50	9	35	9	9	7	109	38
1996–97	19	36	35	18	31	6	4	12	85	60
1997–98	20	50	25	26	23	16	6	13	68	92
1998–99	16	58	10	45	28	46	9	22	54	149
1999–2000	17	92	17	67	27	69	10	21	61	228
2000–01	15	82	25	56	27	59	5	26	67	197
2001–02	24	54	28	65	24	56	12	16	74	175
2002–03	31	83	19	50	29	57	6	19	79	190
2003–04	35	74	33	67	30	44	22	20	98	185
2004–05	33	94	40	65	33	53	15	17	106	212
2005–06	33	141	59	104	49	82	25	36	141	316
2006–07	62	111	63	82	57	64	44	34	184	263
2007–08	90	165	87	90	54	111	62	76	231	366
2008–09	57	128	106	63	107	74	61	66	270	265
2009–10	42	153	48	68	91	85	48	75	181	306
2010–11	45	149	47	41	121	93	58	60	213	283
2011–12	51	202	54	66	139	51	82	104	245	319
2012–13	82	302	87	78	50	61	65	118	219	441
2013–14	63	168	49	53	35	37	44	81	147	258
2014–15	67	329	57	84	39	58	45	132	163	471

The lowest number of candidates (35) during the study occurred in the first year (1989/90). By 2014/15, the number of candidates was 163, an increase of 366 or 14 percent a year.

In 2014/15, there were 2.9 jobs per candidate. In general, this is a very strong number for the field.

However, this number includes adjunct, visiting, and instructor positions along with tenure track jobs.

**International.** An interesting finding in the study is the explosive growth in the number of international jobs. In 2014/15, international positions peaked at 132 or 12% higher than the previous peak in 2012/13. During 2014/15

**Table 3. Rank of Tenure Track Candidates and Positions, 1989–June 2015**

Academic Year	CANDIDATES							POSITIONS						
	Assistant	Associate	Full	Endowed	Open	Total	%	Assistant	Associate	Full	Endowed	Open	Total	%
1989/90	24	4	2	0	5	35	100	19	0	0	3	4	26	100
1990/91	34	4	1	0	3	42	91	19	0	0	3	3	25	93
1991/92	29	5	1	0	5	40	100	10	1	0	3	1	15	83
1992/93	29	4	2	0	7	42	75	15	0	0	4	4	23	82
1993/94	30	4	1	0	5	40	60	18	0	1	3	1	23	85
1994/95	46	2	0	0	5	53	60	14	2	0	2	5	23	77
1995/96	51	1	0	0	3	55	50	22	2	1	5	4	34	89
1996/97	48	1	0	0	5	49	58	23	6	0	8	14	51	85
1997/98	63	0	0	0	4	67	99	41	4	3	5	7	60	65
1998/99	37	3	0	0	9	49	91	58	17	5	10	51	141	95
1999/00	47	1	1	1	5	58	95	88	21	3	23	81	216	95
2000/01	49	1	0	0	12	62	84	52	16	4	18	97	187	95
2001/02	60	4	1	0	9	74	100	81	34	4	3	38	160	91
2002/03	56	12	4	0	5	77	97	81	33	14	12	41	181	95
2003/04	66	11	6	2	11	96	98	63	40	8	13	47	171	92
2004/05	75	8	4	0	15	102	96	64	59	9	17	35	184	87
2005/06	87	24	0	2	24	137	97	71	110	14	24	73	292	92
2006–07	98	52	3	1	29	183	99	71	55	8	13	36	183	69
2007–08	185	20	6	4	7	222	96	84	107	12	17	68	288	79
2008–09	209	34	10	5	2	260	96	69	46	12	22	16	165	66
2009–10	144	18	6	0	1	169	93	75	47	14	17	34	187	60
2010–11	181	17	3	0	0	201	94	66	59	18	16	23	182	65
2011–12	195	19	9	2	6	231	94	54	67	23	20	39	203	64
2012–13	198	9	2	0	1	210	96	119	46	27	23	30	245	56
2013–14	122	11	3	0	2	138	94	72	29	10	16	23	150	58
2014–15	141	9	7	1	3	161	99	135	50	23	23	30	261	56

the number of international candidates was only 45. This puts the ratio of the total number of international positions per international candidate during 2014/15 at 2.93 jobs per candidate. These are very similar numbers to the overall number of positions and candidates in the table.

The increase in the number of candidates and jobs for both U.S. and international schools shows how the field has become increasingly institutionalized within Schools of Business and Management since 1991. Entrepreneurship has become a very popular subject and schools have accepted the field.

**Table 4. Percentage of Applicants and Positions Cross-Listed by Field, 1989–June 2015**

Academic Year	CANDIDATES					POSITIONS				
	Entrepreneurship Only	Strategy	International	OB/HR	TIM	Entrepreneurship Only	Strategy	International	OB/HR	TIM
1989/90	0%	63%	14%	23%	3%	15%	69%	38%	7%	0%
1990/91	0%	80%	17%	15%	2%	28%	40%	12%	12%	0%
1991/92	0%	68%	33%	30%	3%	67%	40%	0%	0%	0%
1992/93	0%	73%	25%	21%	13%	65%	30%	26%	13%	0%
1993/94	0%	73%	30%	16%	10%	61%	22%	13%	4%	4%
1994/95	0%	71%	35%	19%	7%	74%	17%	9%	26%	0%
1995/96	3%	65%	32%	28%	8%	35%	21%	15%	18%	3%
1996/97	1%	73%	33%	26%	6%	37%	41%	22%	33%	8%
1997/98	1%	79%	40%	43%	9%	48%	65%	27%	27%	8%
1998/99	0%	74%	35%	15%	11%	47%	56%	27%	33%	15%
1999/2000	1%	60%	30%	21%	16%	24%	37%	15%	18%	14%
2000/01	0%	76%	33%	19%	25%	26%	38%	18%	19%	16%
2001/02	3%	80%	28%	16%	20%	18%	50%	21%	19%	12%
2002/03	0%	72%	33%	25%	15%	25%	48%	16%	17%	9%
2003/04	2%	72%	30%	14%	25%	25%	51%	19%	9%	10%
2004/05	0%	68%	32%	16%	17%	22%	51%	18%	15%	11%
2005/06	0%	66%	26%	22%	32%	22%	46%	16%	17%	8%
2006/07	1%	73%	30%	18%	33%	23%	44%	29%	18%	9%
2007/08	2%	71%	31%	21%	23%	22%	45%	18%	22%	14%
2008/09	2%	70%	30%	17%	25%	20%	46%	20%	20%	16%
2009/10	5%	89%	49%	41%	48%	33%	37%	19%	21%	17%
2010/11	3%	77%	45%	41%	40%	46%	30%	15%	13%	9%
2011/12	3%	72%	41%	48%	38%	45%	33%	16%	20%	19%
2012/13	5%	64%	22%	22%	24%	52%	30%	14%	9%	7%
2013/14	5%	62%	20%	24%	23%	51%	25%	10%	10%	5%
2014/15	5%	68%	29%	23%	22%	58%	22%	6%	9%	5%

**Interest Level.** Sixty-seven (41%) of the total number of candidates in 2014/15 advertised entrepreneurship as their primary area of expertise. The number of candidates that listed entrepreneurship as their second area of expertise was 57 (35%) and third area 39 (24%). The number and percentage of job opportunities seeking people with

entrepreneurship as their primary field of expertise in 2014/15 was 329 (70%); secondary and tertiary numbers were 84 (18%) and 58 (12%), respectively.

Overall, in 2014/15, there were 4.9 primary jobs for each primary candidate. These numbers indicate a plethora of opportunities for candidates specializing

in entrepreneurship as their primary area of expertise. For whatever reason, candidates are not advertising entrepreneurship as their primary area of interest.

Perhaps the market feels the field is not legitimized and candidates believe they have to specialize in a more traditional area to earn a position. Entrepreneurship is still a relatively young field. For instance, strategic management is required in almost all curricula. By specializing in this area, candidates may be seeking a more secure route to a higher number of positions. Candidates may be hedging their risk by placing entrepreneurship second or even third. Candidates who are truly passionate about the field of entrepreneurship should list it as their primary interest when marketing themselves. The opportunities are there and it will signal to the market the candidate's strong intentions to become a scholar within the field.

Table 3 evaluates tenure track positions and candidates and their respective ranks. Once the numbers of tenure track positions were documented, they were cross-listed with the AACSB web site to determine the final number of AACSB positions.

In the most recent academic year there were 261 tenure track positions, the third largest number of tenure track positions since the study began. The number of tenure track positions increased by 74% from last year. However, it is smaller than the largest number of tenure track positions, 292, which occurred in 2005/06 right before the financial crisis.

In the most recent year, only 56% of the academic jobs were full-time tenure track positions. This is in tune with the drop in the overall percentage of tenure track positions. Only 174 (37%) of all advertised jobs were tenure track positions at AACSB-accredited institutions.

In 2014/15, tenure track position advertisements by rank were 135 (52%) assistant, 50 (19%) associate, 23 (9%) full, 23 (9%) endowed chair, and 30 (11%) open positions. More than 48 percent of the positions were seeking senior-level faculty. As the field continues to grow, many schools seek experienced veterans to build programs and enhance legitimacy. There are many job opportunities for senior-level faculty at other schools.

The number of candidates seeking tenure track positions in 2014/15 was 161. While this number is 17% higher than the previous year, the number of candidates has been decreasing since 2006/07. It could be that fewer people have decided to enter academia.

In 2014/15, the rank of advertised candidates was 141 (88%) assistant, 9 (6%) associate, 7 (4%) full, 1 (6%) endowed chair, and 3 (2%) open. In 2014/15, the ratio of tenure track positions (261) per tenure track candidates (161) was 1.62. The ratio of tenure track positions at AACSB schools per candidate was 1.08. Of course, this does not include some faculty who choose not to advertise themselves but are seeking opportunities discreetly. Thus, we can assume that there are more faculty seeking AACSB tenure track positions

**Table 5. Average Entrepreneurship Faculty Salaries at AACSB Schools 2004–2015 (9-month salary)**

Academic Year	Full Professor	Associate Professor	Assistant Professor	Instructor	New Doctorate
2004–2005	\$115,500	\$94,900	\$87,100	\$58,200	\$85,800
2005–2006	\$123,900	\$96,200	\$90,900	\$70,100	\$92,500
2006–2007	\$131,400	\$101,800	\$94,800	\$73,500	\$96,900
2007–2008	\$140,200	\$104,500	\$97,800	\$80,000	\$104,300
2008–2009	\$148,100	\$110,200	\$100,600	\$78,500	\$99,900
2009–2010	\$154,600	\$111,600	\$103,100	\$76,400	\$123,300
2010–2011	\$153,300	\$113,700	\$106,400	\$78,900	\$117,700
2011–2012	\$156,800	\$119,300	\$109,600	\$81,500	\$112,200
2012–2013	\$164,000	\$123,900	\$111,000	\$79,400	\$111,400
2013–2014	\$165,800	\$125,000	\$113,700	\$79,400	\$119,600
2014–2015	\$162,000	\$131,400	\$113,600	\$85,800	\$97,800

**Source:** The data are based on a controlled group of 325 U.S. schools that completed an AACSB Salary Survey in each of the benchmarking years.

than are available. As a result, candidates need to be prepared to possibly postpone taking a position at a school that is not accredited by the AACSB.

Table 4 documents the different areas that both candidates and schools advertise in their profiles. For instance, if Ted Baker was advertising for an entrepreneurship-only position, he would only place entrepreneurship on his profile. If Brown University was seeking a primary candidate in entrepreneurship with secondary and tertiary areas in international management and technology and innovation management, it would list these in its profile.

This area is important to the field of entrepreneurship because it allows us to examine the trends that are occurring in the marketplace. If candidates can see the needs of the marketplace, they can be more proactive in their pursuit of specializations.

The table is broken down into five categories: entrepreneurship only, strategy, international, Organizational Behavior/Human Resources Management (OB/HR), and Technology and Innovation Management (TIM). The respective areas each have a percentage. The percentages for the positions in 2014/15 were entrepreneurship only (58%), strategy (22%), international management (6%), OB/HR (9%), and TIM (5%). The percentages for candidates in 2014/15 were entrepreneurship only (5%), strategy (68%), international management (29%), OB/HR (23%), and TIM (22%).

In addition to the five areas noted above, the following were also advertised by schools: management, marketing, organizational theory, business ethics/business society, operations, finance, research methods, management history, and organizational development. The percentage of jobs advertised in these areas was management (10%), marketing (6%), organizational theory (2%), business ethics/business society (1%), operations (1%), and finance (1%). The percentage of candidates that advertised in some of these areas was organizational theory (25%), business ethics/business society (8%), research methods (4%), organizational development (2%), management history (2%), and operations (1%).

Table 5 examines the average salaries of entrepreneurship faculty at AACSB schools in the United States from 2004–2015. In 2014/15, the average salaries for entrepreneurship faculty at AACSB schools were: full professor (\$162,000), associate professor (\$131,400), assistant professor (\$113,600), instructor (\$85,800), and new doctorates (\$97,800).

Salaries went down for professors (2.3%), assistant professors (.1%) and new doctorates (18.2%) since 2013–2014. Associate professor and instructor salaries both went up by \$6,400 or 5.1 percent and 8.1 percent, respectively. During 2014–2015, the difference in salary between an assistant professor and an associate professor was \$17,800 (15.7%). The average difference in salary between an associate professor and a full professor was \$30,600 (23.3%). From 2004–2005 to 2014–2015, the salary trends for each rank shows the following increases: full professor (\$46,500: 40%), associate professor (\$36,500: 38%), assistant professor (\$26,500: 30%), instructor (\$27,600: 47%), and new doctorates (\$12,000: 14%).

Table 6 shows the average salaries at AACSB institutions in the United States for 27 different areas during 2014/15. In comparing entrepreneurship faculty salaries to some of the major areas in business, we see that salaries are strong. At the full professor level, the average salary for entrepreneurship was \$162,000 compared to accounting (\$162,200), finance (\$189,000), management (\$145,800), and marketing (\$166,500).

At the associate professor level, the average salary for entrepreneurship was \$131,400 compared to accounting (\$138,900), finance (\$147,500), management (\$117,700), and marketing (\$127,500).

At the assistant professor level, the average salary for entrepreneurship was \$113,600 compared to accounting (\$144,900), finance (\$154,000), management (\$109,100), and marketing (\$123,400).

## Conclusion

The purpose of this study was to investigate whether the field of entrepreneurship has become increasingly institutionalized within three areas: market trends, AACSB jobs, and salaries. To accomplish this, three research questions were formulated: (1) What are the market trends for entrepreneurship faculty? (2) What are the market trends for faculty in higher education for tenure track positions in entrepreneurship (including tenure track AACSB positions)? and (3) Are the average salaries of entrepreneurship faculty at AACSB schools in the United States competitive with other more established fields such as finance, accounting, management, and marketing?

The first research question asked: What are the market trends for entrepreneurship faculty? Table 2 shows that the field is becoming increasingly institutionalized. In 2014/15, the field saw the highest number of jobs advertisements

**Table 6. Average Faculty Salary by Discipline and Rank in 2014–2015** (000s) (9-month salary)

Discipline	Professor	Associate Professor	Assistant Professor	Instructor
Accounting	162.2	138.9	144.9	78.9
Behavioral Science/ Org Behavior	193.5	140.0	135.6	86.9
Bus Education	133.3	78.9	75.0	83.1
Bus Law/ Legal Environment	131.3	103.2	91.5	72.7
CIS/ MIS	149.3	121.5	112.6	73.8
Econ/ Managerial Economics	141.6	104.3	101.2	67.7
Finance (incl Banking)	189.0	147.5	154.0	90.2
Health Services/ Hospital Admin	174.4	124.9	111.2	79.6
Hotel/ Restaurant/ Tourism	119.6	96.0	87.7	69.9
Insurance	167.7	136.3	125.1	80.3
International Bus	152.1	125.4	117.8	82.8
Management	145.8	117.7	109.1	75.6
Marketing	166.5	127.5	123.4	75.5
Operations Research	181.0	127.6	135.3	84.2
Production/ Operations Mgt	159.7	134.0	126.8	84.4
Strategic Management	182.4	136.7	129.3	91.5
Public Administration	170.1	104.6	128.6	72.9
Quantitative Methods	146.7	114.3	110.6	69.1
Real Estate	181.5	143.8	145.5	83.9
Statistics	152.8	112.6	111.8	68.2
Taxation	141.1	120.4	127.5	84.2
Supply Chain/ Transport/ Logistics	158.3	135.6	120.3	86.2
Other	181.6	108.3	110.9	79.5
Bus Communication	110.8	92.6	77.3	62.9
Bus Ethics (incl Corp Soc Resp)	159.8	119.2	115.2	89.9
Entrepreneurship/ Small Bus Admin	162.0	131.4	113.6	85.8
HR Mgt (incl Persnl and Ind/Labor Rel)	136.8	120.3	107.6	66.8
E-Bus (incl E-commerce)	148.1	98.1	110.6	53.5
General Bus	124.6	66.0	78.0	68.7

Source: AACSB

(471) since the inception of the study in 1989. The ratio of total jobs per candidate was 2.9, which was the second highest since 1989. This is a very strong number and proof that the field of entrepreneurship is increasingly becoming part of the curriculum within Schools of Business and Management.

Another sign of the field becoming increasingly institutionalized is the growth of international positions. There were 132 international positions in 2014/15, the second highest since 1989. The ratio of international positions per international candidate during 2014/15 was 2.93.

A final sign of increasing institutionalization was the number of jobs advertising for a candidate with a primary specialization in entrepreneurship. Of the job advertisements, 329 (70%) were for a candidate with a primary focus on entrepreneurship.

The second research question addressed in this study was: What are the trends in the market for faculty in higher education for tenure track positions in entrepreneurship (including tenure track AACSB positions)? In 2014/15, there were 261 tenure track positions. This was the third highest number of tenure track positions since 1989. The largest number of tenure track positions in the study peaked in 2005/06 at 292.

Of the 261 tenure track positions, 174 (67%) were documented as tenure track positions at AACSB accredited institutions. This was a very strong number compared to the only other study that was done on this topic. Finkle's (2007a) study found that there were 122 tenure track AACSB positions in 2004/05, an increase of 49 (40%). Thus, we can say that there is an increase in demand for tenure track AACSB faculty to fill these positions since 2004/05. This is a sign that more institutions are incorporating entrepreneurship into their curriculum.

The final research question the study examined was: Are the average salaries of entrepreneurship faculty at AACSB schools in the United States competitive with other more established fields such as finance, accounting, management, and marketing. The answer to this question is yes. As pointed out in Table 6, the salaries are competitive to other more established fields. Entrepreneurship even leads management at every rank. It also leads associate professors in marketing, and is comparable to full professors of accounting.

Does having a competitive salary at U.S. AACSB schools mean that entrepreneurship is institutionalized? Could it mean that there is a shortage of faculty in entrepreneurship and they have to increase salaries to be competitive within

the marketplace? It could mean that there is a strong demand for tenure track faculty due to the 174 openings. These numbers reflect a demand for entrepreneurship education. By hiring tenure track faculty to teach these courses, the institutionalization of the field is enhanced.

In summary, the findings of this study support the notion that the field of entrepreneurship is institutionalized in regards to job opportunities, candidates, AACSB positions, and salaries.

### **Implications for Faculty and Doctoral Students**

The findings of this study have several implications for faculty and doctoral students in the field of entrepreneurship. There is a plethora of opportunities to specialize in entrepreneurship. During 2014/15, the field saw the second highest number of tenure track positions advertised (261 versus 161 candidates seeking a tenure track position). There were 1.62 tenure track jobs per tenure track candidate. This is encouraging news for candidates. This data confirms that there is ample opportunity for faculty who are interested in pursuing entrepreneurship as their primary area of expertise. Therefore, it is recommended that candidates who are seriously interested in a career in entrepreneurship place this as their primary area of interest.

Candidates have the ability to create a competitive advantage in the marketplace by specializing in entrepreneurship. However, candidates must back up their abilities. Merely placing entrepreneurship as a primary area is fruitless if a candidate does not have the skill set. Candidates must seek out the specific needs for each position. Entrepreneurship is unlike other areas due to the strong practical dimensions of the field. The field may require a wide diversity of skill sets. Depending on the institution, some may require extremely strong research-oriented skills (research schools) and/or strong teaching skills (teaching schools). Significant differences and expectations can exist between institutions. These expectations need to be ferreted out before taking a job.

Most schools value scholarship differently. Schools usually have a list to classify journals (e.g., A, B, and C), but some schools may not even have one. As long as the study is refereed, that is what is required. It is imperative that faculty inquire about the rankings of entrepreneurship journals and where they should be publishing. In the early years, faculty had to fight for legitimacy due to the liability of newness (Stinchcombe, 1965) of the field. Although the field has come a long

way, there is no guarantee that some faculty may question research in entrepreneurship.

Some schools may be seeking entrepreneurship faculty who can create and grow a new entrepreneurship center or build a new program. Thus, a different type of skill set may be necessary such as sales, branding, advertising, fund-raising, etc. In general, the field values faculty who have entrepreneurial experience plus academic credentials. However, there are not as many of these individuals within the ranks of academia.

As the field continues to grow, schools will need faculty to build programs. There will be opportunities for junior and senior faculty to apply for these openings. However, faculty must be aware of the enormous amount of time it takes to build a program. This could restrict research productivity. It is recommended that junior faculty talk with several senior faculty members from other schools that have built programs to assist them in their decision making. Each institution will have its own history and specific needs.

The findings of this study also show a very strong demand for senior-level faculty. In 2014/15, 48 percent of the positions were seeking senior-level faculty. Due to the newness of the field and the small number of doctoral programs specializing in entrepreneurship, senior faculty are in demand. If senior faculty feel that they are being underpaid by their current institution, they can use these numbers to negotiate better deals (e.g., move from assistant to associate or associate to full or full to endowed chair). The findings of this study also give candidates the ability to negotiate their current salary to current market rates. For instance, in 2014/15, the average salary of full professors of entrepreneurship was \$162,000 at AACSB schools in the United States. If an associate professor with a strong record is being underpaid, he or she should seriously consider moving to another school as a full professor.

For international candidates, the findings of the study are extremely positive. In 2014/15, there were 132 positions and only 45 candidates or 2.93 international jobs per international candidate. These statistics are very similar to the overall number of positions and candidates in the table.

## Implications to Administrators

The findings of this study show the challenges that administrators face in trying to start and/or build an entrepreneurship program. As noted above, in 2014/15, the field saw the second highest number of tenure track positions advertised at 261 versus 161 candidates seeking a tenure track position (1.62 tenure track jobs per tenure track candidate). Administrators may have a hard time filling a slot with a qualified applicant. And if they do find someone, they may have to pay a higher rate to hire them. Also noteworthy is that 96 senior-level tenure track jobs were advertised in 2014/15 by schools. Thirty-seven percent of all tenure track jobs were for senior-level faculty (associate or above).

The findings in this study show that 2014/15 entrepreneurship salaries at AACSB institutions in the United States were relatively strong. The average nine-month salary for full professors in entrepreneurship was \$162,000 compared to accounting (\$162,200), Finance (\$189,000), management (\$145,800), and marketing (\$166,500). The average nine-month salary for associate professors in entrepreneurship was \$131,400 compared to accounting (\$138,900), finance (\$147,500), management (\$117,700), and marketing (\$127,500). It is evident that senior faculty in entrepreneurship are being valued competitively compared to other fields in business.

When recruiting candidates, administrators should have a clear vision on the role entrepreneurship will play in the future of the college and the university. Administrators need to communicate how the candidate fits into that vision. Also, administrators should communicate to candidates what their expectations are in research, teaching, and service.

## Limitations

This study has a few limitations. Advertising for a position does not mean that a school will actually hire a candidate. The school may have the position pulled due to budgetary issues. The school may decide not to hire anyone because they cannot find the right match. Another limitation is the inability to capture all of the job advertisements. Although, data is collected almost every day, there may be some cites that the author is not aware of that may have data that would enhance the study. Finally, the study was not able to capture the names and descriptions of faculty who already have positions and decided not to list themselves on any site.

## Future Research

Future research can be done to examine the institutionalization of the field of entrepreneurship by comparing the trends in salaries between fields over the long run. Are entrepreneurship faculties being paid at a competitive rate versus other mainstream fields that have achieved institutionalization within Schools of Business and Management? Are faculties that are being hired

as full-time entrepreneurship faculty members getting tenure? And if so, what requirements or demands are being placed on them at different types of institutions (e.g., teaching versus research schools)? How are schools valuing entrepreneurship journals? Are entrepreneurship faculties moving up in schools to management levels (e.g., deans, chairs of departments, etc.)? These are a few of the areas that can be investigated in future research.

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## REFERENCES

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- AACSB International. 2015. The Association to Advance Collegiate Schools of Business. Retrieved June 30, 2015, from: <http://www.aacsb.edu/accreditation/>
- AACSB International. Average Annual Salary Survey of AACSB Business Faculty 2000-2015. Tampa, FL.
- Academy of Management Placement Roster. Academy of Management Placement Service. Used all volumes from 1989–2015.
- Bruton, G., D. Ahlstrom, and H. Li (2010). Institutional Theory and Entrepreneurship: Where Are We Now and Where Do We Need to Be in the Future? *Entrepreneurship Theory & Practice*. May, 421–440.
- Chronicle of Higher Education. Washington, D.C. All volumes from 1989–2015.
- Dowling, J., and J. Pfeffer. 1975. Organizational Legitimacy: Social Values and Organizational Behavior. *Pacific Sociological Review* 18, 122–136.
- Finkle, T. A. 2016. A Current Look at Salaries and Faculty Demand within the Field of Entrepreneurship. *Journal of Applied Management & Entrepreneurship* 21 (2): 45–69.
- Finkle, T. A. 2013a. Job Opportunities for Faculty in the Field of Entrepreneurship. *Journal of Applied Management and Entrepreneurship* 18 (3): 94–112.
- Finkle, T. A. 2013b. Trends in the Market for Entrepreneurship Faculty from 1989–2011. *Journal of Entrepreneurship Education* 16, Special Issue, 59–76.
- Finkle, T. A. 2012a. Trends in the Market for Entrepreneurship Faculty during the Period 1989 to 2010. *Journal of Entrepreneurship Education* 15, 21–40.
- Finkle, T. A. 2012b. Trends in the Field of Entrepreneurship from 1989–2011. 26th Proceedings of the *Annual National United States Association for Small Business and Entrepreneurship Conference*, 1042–1055.
- Finkle, T. A. 2010. Entrepreneurship Education Trends. *Research in Business and Economics Journal* February, 1, 35–53.
- Finkle, T. A. 2008. Global Trends in the Job Market for Faculty and Schools in the Field of Entrepreneurship. *Proceedings of the 2008 Annual American Society of Business and Behavioral Sciences National Conference (ASBSS)*, 803–810.
- Finkle, T. A. 2007a. Trends in the Market for Entrepreneurship Faculty from 1989–2005. *Journal of Entrepreneurship Education*, 10, 1–25.

- Finkle, T. A. 2007b. A Comparative Analysis of U.S. versus International Entrepreneurship Centers. 21<sup>st</sup> Proceedings of the Annual National United States Association for Small Business and Entrepreneurship Conference, 125.
- Finkle, T. and D. Deeds. 2002. Trends in the Market for Entrepreneurship Faculty from 1989–2001. 16<sup>th</sup> Proceedings of the Annual National United States Association for Small Business and Entrepreneurship Conference, 121.
- Finkle, T. A. and D. Deeds. 2001. Trends in the Market for Entrepreneurship Faculty during the Period 1989–1998. *Journal of Business Venturing* 16 (6): 613–630.
- Finkle, T. A. and D.F. Kuratko. 2006. An Examination of Entrepreneurship Centers in the United States: A National Survey. *Proceedings of the 2005 International Conference for Small Business*.
- Finkle, T. A. and D. F. Kuratko. 2004. Characteristics of the Top Ranked Entrepreneurship Centers. *Frontiers of Entrepreneurship Research 2003: Proceedings of the Twenty-Third Annual Frontiers of Entrepreneurship Research Conference*, Edited by William D. Bygrave, Candida Brush, Per Davidson, Patricia Greene, R. Harrison, James O. Feit, Miri Lerner, G. Dale Meyer, Jeffrey Sohl, and A. Zacharackis. Babson College: MA.
- Finkle, T. A., D. F. Kuratko, and M. Goldsby. 2006a. An Examination of Entrepreneurship Centers in the United States: A National Survey." 50th Anniversary Special Issue of the *Journal of Small Business Management* 44 (2): 184–206.
- Finkle, T. A., D. F. Kuratko and M. Goldsby. 2006b. The State of Entrepreneurship Centers in the United States: A Nationwide Survey. *Proceedings of the 2005 International Conference for Small Business (ICSB)*.
- Finkle, T.A., T. V. Menzies, D. F. Kuratko and M. Goldsby. 2013. An Examination of the Financial Challenges of Entrepreneurship Centers Throughout the World. *Journal of Small Business and Entrepreneurship* 26 (1): 67–85.
- Finkle, T.A., T. V. Menzies, D. F. Kuratko and M. Goldsby. 2012. Financing Activities of Entrepreneurship Centers in the United States. *Journal of Business And Entrepreneurship* 23 (2): 48–64.
- Finkle, T.A., T. V. Menzies, M. Goldsby and D. F. Kuratko. 2010. A Global Examination of the Financial Challenges of Entrepreneurship Centers. *Proceedings of the 2010 International Conference for Small Business (ICSB)*, 1–39.
- Finkle, T. A., P. Stetz and D. Deeds. 2004. An Examination of Tenure Decisions for the Field of Entrepreneurship. *Frontiers of Entrepreneurship Research 2003: Proceedings of the Twenty-Third Annual Frontiers of Entrepreneurship Research Conference*, Edited by William D. Bygrave, Candida Brush, Per Davidson, Patricia Greene, R. Harrison, James O. Feit, Miri Lerner, G. Dale Meyer, Jeffrey Sohl, and A. Zacharakis. Babson College: MA.  
<http://www.babson.edu/entrep/fer/BABSON2003/IX/lx-S3/IX-S3.html>
- Finkle, T.A., P. Stetz and M. Mallin. 2007. Perceptions of Tenure Requirements and Research Records of Entrepreneurship Faculty Earning Tenure: 1964–2002. *Journal of Entrepreneurship Education* 10, 101–125.
- Katz, J.A. (2004). *Survey of Endowed Positions in Entrepreneurship and Related Fields in the United States*. Kansas City, MO: Kauffman Foundation.
- Loundsbury, M. 2002. Institutional Transformation and Status Mobility: The Professionalization of the Field of Finance. *Academy of Management Journal*, 45 (1): 255–266.
- Meyer, J. W. and B. Rowan. 1977. Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology* 83 (2): 340–363.
- Stinchcombe, A.L. 1965. Social structure and organizations in March, J. (Ed.), *Handbook of Organizations*. Chicago: Rand McNally, pp. 142–193.

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# An Integrated Model of Employee Adoption

Nelson Pizarro

*Proactive firms recognize that environmental and social issues are sources of competitive advantages, but whatever the motivation, organizations face challenges when implementing sustainable practices. For small and medium-sized enterprises (SMEs), sustainable practices have stemmed from multinational corporations (MNC), but SMEs cannot adopt sustainable practices from the knowledge and experiences of large corporations because the two entities differ critically. This study introduces an integrated model of employee adoption of sustainable practices in SMEs. It is based on five behaviors to select practical areas to which SMEs can make internal changes to achieve sustainable practices and the benefits gained from them. The theory of planned behavior is used to extend employee adoption of sustainable practices to SMEs.*

**Keywords:** SME; sustainability; employee engagement; competitive advantage

Most initiatives to adopt sustainable practices in small to medium enterprises (SMEs) face challenges and stay on paper because managers do not know why employees (the final adopters) adopt sustainable practices. Some researchers suggest that it is because “many employees may be unaware of sustainability issues beyond their immediate work possibilities” (Haugh & Talwar, 2010, p.384). In this study, we proposed that it is the entrepreneur’s lack of knowledge on how to motivate employees to adopt sustainable practices (Ramus & Killmer, 2007) that prevents employees from adopting them. We use the Theory of Planned Behavior (TPB) framework (Ajzen, 1985) to identify five behaviors that are critical, from an employee’s perspective, to discovering practical areas to which SMEs can make internal changes to achieve sustainable practices and the benefits gained from them.

It is natural to assume that SMEs should have adopted sustainable practices by now. This assumption stems partly from the notion that proactive firms recognize environmental and social issues as sources of competitive advantages (Fung, O’Rourke, & Sabel, 2001). However, Young (2015) reports that the adoption rate of U.S. SMEs is low, but it is starting to grow. Young also reported lack of information (50%) as being the largest hurdle for SMEs to implement sustainable practices. This can lead to the assumption that what we need is to educate SMEs about

sustainable practices, but knowing about sustainable practices does not mean doing sustainable practices. This is termed the “knowing-doing dilemma” and there is no simple answer for it (Pfeffer and Sutton, 2000). A clear example is the case of more than 4,000 managers in large corporations from 113 countries who were surveyed about developing and implementing sustainable business practices. A total of 70 percent placed sustainability permanently on their management agendas; two-thirds also reported that sustainability was necessary for being competitive in today’s markets. These managers ranked sustainability just 8th among other agenda items; thus, the fact that managers know or think about sustainable practices is not the same as doing.

SMEs cannot adopt sustainable practices from the knowledge and experiences of the large corporations because the two entities differ critically. As noted by Condon (2004), SMEs lack information concerning market changes that make sustainability an opportunity to innovate and inspire employees and resistance to voluntary sustainable practices (Revell & Rutherford, 2007; Rutherford, et al., 2000). Others suggest that the lack of information in SMEs is changing (Revell et al., 2010 Davis & O’halloran, 2013). In addition, the Bolton Report (1971) suggests four main characteristics that differentiate small firms from large: (1) SMEs are managed by the owner personally and do not use specialized management structure (e.g., supply chain management); (2) most SMEs are privately held and the owner/management fully participates in the day-to-day operations; (3) SMEs are not a subsidiary of a larger enterprise, and thus, SME owners have the autonomy to make decisions without outside influences (e.g., from board of directors), though their decisions are influenced by their personal values, beliefs, and attitudes (Battisti & Perry, 2011); and (4) SMEs serve local and/or regional rather than a national or international markets.

The above differences between SMEs and MNCs represent an opportunity for SMEs to create competitive advantages by becoming leaders in sustainability, instead of followers, because the entrepreneur/manager can have a huge influence in the process (see Battisti and Perry, 2011), particularly when they already have the desire to adopt sustainable practices. However, if they

Figure 1. Sustainable practices as behaviors with value-creating potential



do not have the desire to adopt sustainable practices, employees can pressure entrepreneurs to learn about a subject (Young and Sexton, 2003); in this case, it can be sustainable practices. In addition, the best way to acquire knowledge that is actually implemented is from learning by doing than from learning by reading, listening, or even thinking (Pfeffer and Sutton, 2000). SMEs are more nimble than MNCs because they are flatter and potentially quicker to act (Jamali, Zanhour, Keshishian, 2009). Thus, engaging in thoughtful action allows SMEs to learn about sustainability and its benefits such as increases in both productivity and creativity (e.g., design products for reuse), cuts in costs, decreases in environmental footprints, and increases in brand reputation (Brighter Planet, 2010; Little, 2005; Ramus & Killmer, 2007; Lepine, & Crawford, 2010).

This study adds to the existing literature a unique perspective by using Theory of Plan Behavior and focusing on the employee and the actions that the entrepreneur can do to motivate employees to adopt sustainable practices. The existing research has mostly focused on the internal and external environment and it has neglected almost entirely the employee; for example, drivers (Dillon & Fischer, 1992; Lampe, Ellis, & Drummond, 1991; Winn, 1995), supply chain (Aguilera, Rupp, Williams, & Ganapathi, 2007), reporting models (Palmer and van der Vorst, 1997), business support network (Shearlock, Hooper, & Millington

2000), barriers (Biondi, Frey, & Iraldo, 2002; Simpson, Taylor, & Baker, 2004), environmental management systems (McKeiver & Gadenne, 2005), perceived costs and benefits of implementation (e.g. Ilomaki & Melanen, 2001; European Commission, 2002), the role of regulation (e.g., Petts, 2000), motivational antecedent factors (e.g., Hutchinson & Hutchinson, 1995), and the firm's bottom line (Gonzalez-Benito & Gonzales-Benito, 2005). There are few studies on employees and CSR (Aguilera et al. 2007). Underlying CSR at the employee level is research on employee justice perceptions (e.g., Cropanzano, Byrne, Bobocel, & Rupp, 2001). Thus, considering employee perspective of sustainability is a critical step because employees are the final adopters of sustainable practices. This study fills the existing gap in the literature because there is no framework with which researchers can study the topic.

Scholars have used several theoretical frameworks to study sustainability in SMEs, however the most used include ethical and stakeholder theories (e.g., Argandoña & Hoivik, 2009; Devi & Hemant, 2009, Russo and Perrini, 2010). Perrini (2006) argues that stakeholder theory is more appropriate for MNCs. Theory of Planned Behavior (TPB) was used to design the model. The model includes attitudes toward a behavior, subjective norms about the behavior, and perceived behavioral control, which predict intentions to perform the behavior (Figure 1). By altering

the three antecedents of behavior intentions, managers can increase the chances that an employee will intend to behavior in some way, thus increasing the chances of that behavior. In this case, the behavior is adoption of sustainable practices in SMEs. The model suggests that entrepreneurs motivated to incorporate adoption of sustainable practices should include the following actions to influence employee adoption of sustainable practices:

1. Hire employees with preexisting, intrinsic attitudes toward sustainable practices (attitudes);
2. Provide organizational and second-party support (subjective norms);
3. Maintain willingness to support employees' desires to adopt sustainable practices in SMEs, without constraints (perceived behavioral control).

Thus, adoption of sustainable practices begins when a (future) employee holds positive attitudes toward sustainable practices (preexisting values and intrinsic motivation). After the employee is hired, subjective norms (i.e., social norms and second-party support) and perceived behavioral control (i.e., perceived organizational support) become critical for adoption of sustainable practices.

## Background

The word sustainability evokes fuzzy stereotypes of do-gooders putting ideals ahead of profit. For contemporary, global corporations, it is an essential *modus operandi*. As early as the 1980s, MNCs began to green their businesses (Schot & Fischer, 1993; Winn, 1995), partly because top managers believed that environmental protection provided a source of competitive advantage (Aragon, 1998; Hart, 1995; Stead & Stead, 1995). Many MNCs began adopting sustainable development policies and environmental protection, placing them far ahead of most SMEs. Engardio et al. (2007) illustrated that MNCs were changing both their practices and attitudes toward sustainability; MNCs had moved from an image perspective to a strategic approach. For example, Unilever CEO Patrick Cescau reports that in the past, CEOs framed sustainability in the context of moral responsibility, but by 2007, it was also about growth and innovation. In the future, it will be the only way to do business. The trend regarding sustainable practices presented by Engardio et al. (2007) continues, and has been adopted by a larger number of corporations. Managers believe that a sustainability strategy is a competitive necessity, and a large number of companies place sustainability permanently on their management agendas (Haanes, et al., 2012).

The literature cites major motivations for firms to adopt Corporate Social Responsibility (CSR), including regulatory compliance, competitive advantages, stakeholder pressures, ethical concerns, critical events, and top management initiatives fueled by societal pressures (Dillon & Fischer, 1992; Lampe, Ellis, & Drummond, 1991; Lawrence & Morell, 1995; Vredenburg & Westley, 1993; Winn, 1995). Haanes, et al., (2012) suggest that the drivers of sustainability have shifted. For example, customer preferences for sustainable products and services are significant external drivers of business model innovation. Applicants to universities and colleges and existing students demonstrate increasing levels of sensitivity to social and environmental issues (Amatucci, Pizarro, and Friedlander, 2013), a critical signal SMEs miss that helps them not only adopt sustainable practices, but also attract talented staff.

Morsing (2006, p. 2) argues that SMEs are motivated largely by social pressures or "because it is the right thing to do," and they refer to "organizational culture," "traditions," and "treating each other decently" to explain their motives for CSR (p. 3). Thus, CSR for SMEs seems to be a social norm rather than a corporate strategy. "It usually starts with the personal beliefs and values of the people running the SME, who are usually the owners" (Perrini, Russo, & Tencati, 2007, p. 285). These beliefs and values depend on the quality of personal relationships between small-firm owner-managers and various stakeholders (Jenkins, 2004; Vyakarnam, Bailey, Myers, & Burnnet, 1997). For MNCs, adopting CSR is a corporate strategy. Luetkenhorst (2004) argues that what seems to be a CSR trend will be impermanent unless a critical mass of SMEs adopts the philosophy. Some scholars and practitioners argue that CSR has already been incorporated into mainstream business practices in the United States (Godfrey & Hatch, 2007; Porter & Kramer, 2006).

Extant literature indicates a clear need to explore the relationship between SMEs and sustainable practices in-depth, particularly because SMEs are an important component of the economy, interact with large corporations, outnumber MNCs, and provide most employment worldwide (e.g., Katsikis & Kyrgidou, 2007; Moore and Spencer, 2006; Naffziger, Ahmed, & Montagno, 2003; Perrini, 2006; Perrini, et al., 2007; Russo & Tecanti, 2009). Many SMEs have adopted some sustainable practices but do not link them to their primary strategies, or call it CSR. Thus, it is not a continuous effort, and it lacks real impact (European Commission, 2002). Many CEOs

and managers of SMEs are skeptical of CSR programs that require expenditure with the promise of financial gain (Jenkins, 2004), and although scholars and practitioners argue that implementing sustainable practices benefits a business variously—financial gains, boosting reputation, and enhancing employee motivation—one challenge remains: how SME managers can promote and integrate these activities into their daily routines with full participation from employees.

This paper uses the Theory of Planned Behavior to develop a theoretical framework. The focus is SMEs—companies with fewer than 100 employees for service firms and 500 for manufacturing firms. Actions that influence employee adoption of sustainable practices include (1) intrinsic motivation, (2) personal disposition toward behavior, (3) perceived organizational support, (4) second-party support, and (5) social norms (Figure 1). Extant literature recognizes each factor individually as an influencer of prosocial behaviors (Fishbein & Ajzen, 2010; Bandura, 1977; Kahn, 1990; Larson & Rusk, 2011; Ramus & Steger, 2000; Hage & Dewar, 1973), but few researchers study relationships among these factors and adoption of sustainable practices in SMEs. This study focuses on the collective and interactive contributions of these five actions, offering researchers and practitioners a holistic view of the process, and positing that benefits gained from each variable are enhanced by the interactive contribution of each variable; the whole is greater than the sum of its parts. The model also allows researchers to use variables that have been validated empirically. This theoretical structure (Figure 2) suggests numerous proposals concerning adoption of sustainable practices, and these proposals can be used as a base for future research. Extant research rarely investigates employee perspectives of sustainability, and when it does, it examines only environmental dimensions of sustainability and MNCs (Ramus 2001, 2002; Ramus & Killmer, 2007).

Few studies examine employees and CSR (Aguilera et al. 2007), though underlying CSR at the employee level is research on employee justice perceptions (Cropanzano et al., 2001). “CSR perceptions shape the employees’ subsequent attitudes and behaviors toward the firm” (Aguilera et al., 2007, p. 840). Employee perceptions of work-environment fairness demonstrate benefits to both “employee well-being (e.g., job satisfaction, stress, health, emotion) and organizationally relevant outcomes, such as employee commitment, turnover, absenteeism, job performance, citizenship behavior,

and counter productivity” (Aguilera et al., 2007, p. 840). When employees perceive fairness, they are satisfied and work harder, and research suggests that positive moods promote prosocial behaviors (Brief & Motowidlo, 1986) that encourage employees to adopt sustainable practices. Job applicants’ perceptions of a firm’s CSR performance influence desires to work for the firm (Turban & Greening, 1997). Other scholarly perspectives of CSR in SMEs include ethical and stakeholder theories (Argandoña & Hoivik, 2009; Devi & Hemant, 2009; Moore, Slack, & Gibbon, 2009; Perrini, 2006; Perrini, Russo, & Tencati, 2007; Russo & Tencati, 2009).

This study explores actions that entrepreneurs/managers can take to change the three predictors in the TPB by applying organizational and motivational theories from an employee’s perspective. There exists a need to link organizational theories to greening (Starik & Marcus, 2000, p. 543.) Extant research links organizational research to environment management (Cordano & Frieze, 2000; Ramus and Steger, 2000). One example is from Ramus and Killmer (2007), who develop a framework of employee motivation based on corporate greening, within the theoretical context of value-creating behaviors and behavioral-intent models. They suggest that linking corporate greening to prosocial behaviors is an appropriate means to explore what motivates employees to engage in eco-initiatives. However, this does not apply to SMEs. SMEs need their own framework because as mentioned earlier SMEs cannot adopt CSR and environmental policies from the knowledge and experiences of large corporations (Morsing, 2006).

The TPB suggests that when a person intends to do something, he or she does it, though it is necessary to explore antecedents to those intentions. The theory is suitable for analyzing an employee’s motivation to perform extra-role, prosocial behaviors because they incorporate motivational drivers and apply them to behaviors performed in both weak and strong contexts (Cordano & Frieze, 2000; Fishbein & Ajzen, 2010). Sustainable practices constitute prosocial behaviors. Future research can use the framework to explore whether employees intend to adopt sustainable practices. This article is unique in its approach to the adoption of sustainable practices in the context of SMEs, and in particular to employees. It contributes to sustainability, employee engagement, and profitability (Figure 1).

## Theoretical Framework and Model Building

The TPB appears in many studies that link attitudes and behaviors (Conner & Armitage, 1998; Sutton, 1998), including recycling (Boldero, 1995; Taylor & Todd, 1995), green consumerism (Sparks & Sheperd, 1992), ethical behaviors (Kurland, 1995), and social networking (Caska, 1998). Fishbein and Ajzen (2010) argue that social behaviors follow reasonably, and often spontaneously, from beliefs people possess about a behavior. Beliefs originate from various sources such as experiences, education, media, and interactions with family and friends. However, individual differences (e.g., demographics and personality) influence not only the experiences people have and the sources of information to which they are exposed, but also the ways they interpret and remember this information. SME employees from disparate countries, regions, and social backgrounds likely differ regarding the beliefs they hold about sustainable practices. However, no matter how beliefs associate with a behavior, they guide the decision to perform or not perform that behavior. Thus, the TPB is useful for predicting whether a person intends to do something; it predicts the occurrence of a behavior if the behavior is intentional. Three variables—attitudes, subjective norms, and perceived behavioral control—predict intentions to perform a behavior. The terms intentions and behavior in the model reflect psychological constructs, and so have a special meaning within the theory.

### Intentions

Although a perfect relationship does not exist between behavioral intentions and behaviors, intentions represent a proximal measure of behavior. Thus, the variables in this model can be used to determine the effectiveness of implementation interventions even if a measure of behaviors is unavailable.

### Behavior

Interventions change the behaviors of an individual. Thus, the target behavior should be defined carefully in terms of its target, action, context, and time (TACT). For example, consider the behavior when hiring employees with personal dispositions (i.e., existing values, beliefs, and habits) about the environment, community, organization, and other stakeholders. The target is the employee, the action is hiring, the context is personal attitudes, and the time is (implicitly) during hiring.

## Attitudes toward a behavior

Attitudes represent overall evaluations of a behavior and involve two components—behavioral beliefs and outcome evaluations—that work together: beliefs about consequences of a behavior (i.e., behavioral beliefs) and corresponding positive or negative judgments about each of these features of the behavior (i.e., outcome evaluations). Thus:

**Proposition 1:** *Employee sustainability disposition (beliefs, values, habits) correlates positively with employee attitudes toward sustainability practices, which relate positively to adoption of sustainable practices.*

Given this proposition, values and intrinsic motivation influence more specific sustainability beliefs and evaluations (i.e., the components of attitude). Personal disposition refers to existing values, beliefs, and habits related to a behavior or task, and associates with existing values employees possess such as caring about the environment, a community, an organization, and other stakeholders. Witt and Wilson (1991) suggest that the importance of personal values lies in a person's motivation to engage in socially responsible behaviors (Figure 2), and Organ (1990) argues that personal attitudes relate more strongly to extra-role than in-role behaviors. Extra-role behaviors are positive social acts that are not specified formally in a job description (Brief & Motowidlo, 1986). During adolescence, youths begin working on identity and personal values—who am I, what do I care about, what do I want to do with my life? The values, goals, and life purposes they develop are part of the dispositions they bring to a job that influence their participation and experiences (Eccles, 2009; Nasir & Hand, 2008; Wortham, 2006). Damon (2008) describes it as “a stable and generalized intention to accomplish something that is at the same time meaningful to the self and consequential to the world beyond the self” (p. 21), leading to passionate engagement (Larson & Rusk, 2011). This is called prosocial motivation, defined as “acts such as helping, sharing, donating, cooperating, and volunteering. . . . They are positive acts carried out to produce and maintain the well-being of others” (Brief and Motowidlo, 1986, p.710).

People often identify a desire to make a positive difference in other people's lives as important, and some researchers assume all employees want to make a difference (Bornstein, 2004; Elkington & Hartigan, 2008; Everret, 1995), especially when employees describe their work in such terms. This common, prosocial motivation in work contexts (Grant, 2007) facilitates enhanced persistence,

performance, and productivity by enabling dedication to a cause (Thompson & Burderson, 2003), combined with expressions of moral principle (Shamir, 1990) and commitment to people who benefit from their effort (Grant, 2007). Some employees see work as a calling to make the world a better place; others do not (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). Not all employees embrace altruism (Meglino & Korsgaard, 2004), nor are all willing to give more to others than they receive (Huseman, Hatfield & Miles, 1987). However, as Cascio (2003) argues, Americans prefer an important and meaningful job to promotions, income, job security, and hours.

Intrinsic motivation suggests that the underlying driver of effort is enjoyment (i.e., a hedonic perspective). It motivates because a person feels good physically, but to feel good physically, a person needs to have meaning and purpose (i.e., a eudemonic perspective: happiness and well-being) (Kahn, 1990; McGregor & Little, 1998; Ryan & Deci, 2001; Waterman, 1993). For example, thinking about helping people affected by the 2011 tsunami in Japan is a prosocial behavior that occurs on two levels in the self, though simultaneously, while thinking about helping, a person feels good physically. "When you are working toward a goal, your body produces a set of biochemical responses that creates euphoria, and makes you resistant to pain" (Marano, 2006, p. 10).

By intrinsic psychologists mean an activity is or has become motivating; it is self-motivating. Intrinsic motivation can be experienced at play or during recreation and work—any challenging activity (Csikszentmihalyi, 1990; Sansone & Harackiewicz, 2000). Psychologists characterize extrinsic motivation when a person is driven not by an activity but by external rewards or threats (Larson & Rusk, 2011). Capacity for intrinsic motivation can develop; it is an open system (Mayr, 2001) shaped by experiences, cultures, and deliberate cultivation. There are four factors of intrinsic motivation: (1) being challenged by an activity (Csikszentmihalyi, 1996); (2) a sense of control over an activity, a feeling of "I (or we) can do it," similar to the experience of self- or collective efficacy (Bandura, 1977) (this sense of efficacy helps people think ahead, imagine emerging challenges, and decide how to deal with them (Bandura, 1997)); (3) deep attention, total attention on the task, with minds severed from issues pertaining to outside lives (Csikszentmihalyi, 1975, 1990); and (4) high motivation, feeling energized by an activity. For example, one surgeon reported, "It is so enjoyable that I would do it even if I didn't have to do it" (Csikszentmihalyi, 1990, p. 67).

Larson and Rusk (2011) suggest that the enjoyment and experience of volition make an activity self-sustaining. These positive feelings encourage people to keep engaging in an activity, returning to it in the future. For adolescents, the experience of intrinsic motivation is common in youth programs, a context in which youths take on complex, often unstructured, challenges (e.g., improving communities) (Csikszentmihalyi, Rathunde, & Whalen, 1993; Larson, 2000). Intrinsic motivation does not depend entirely on a person's current interaction with an activity; longer term factors contribute, including psychological needs, dispositional interest, and connections between an activity and personal goals. Three psychological needs are universal: need for connection, competency, and autonomy (Ryan & Deci, 2000). A basic need for connection is found across ages; people function and are more motivated when they experience trusting and supporting relationships with people (Lerner, Phelps, Forman, & Bowers, 2009; Wentzel, 2009). People are highly motivated with activities during which they have opportunities to experience competency (Dewett, 2007; Eccles & Roeser, 2009; White, 1959). Autonomy suggests humans have a need to experience volition (i.e., being an origin of one's actions), and it can be experienced as an individual or part of a group (Ryan & Deci, 2000). In addition to being a motivator of positive behaviors, intrinsic prosocial behaviors are drivers of creativity (Elschbach & Hargadon, 2006). Employees who are motivated intrinsically are driven by interest, curiosity, and a desire to learn (Ryan & Deci, 2000). Thus:

**Proposition 2:** *Employee intrinsic motivation correlates positively with perceived behavioral control, which relates positively to adoption of sustainable practices.*

Attitudes derived from prosocial behaviors and intrinsic motivation influence adoption of sustainable practices—defined broadly as changing organizational inputs, outputs (i.e., goals), and processes into more sustainable ones, which constitute functional behaviors and with the purpose of benefiting others. Sustainable practices create value whether by reducing costs or improving an organization's reputation. Their impact reaches beyond organizational boundaries to include suppliers, customers, families, and other community members. As a whole, organizations, including SMEs, benefit from sustainable practices and other extra-role, value-creating behaviors if employees at least perform them, even if the practices are complex and time consuming. For example, sustainable practices might

compete with an employee's time and attention on prescribed tasks. Since the latter are part of performance evaluations, they receive higher priority. Sustainable practices might be performed primarily in the context of weak situations (Mischel, 1973; Shamir, House, & Arthur, 1993), in which employee motivation results predominantly from personal predispositions (Shamir, 1990) rather than goals and rewards that constitute the focus of many classic management strategies. With this knowledge, it becomes possible for SMEs to transition from weak to strong situations by providing appropriate support to employees, including perceived organizational support (POS) and second-party support that enhance prosocial behaviors (i.e., sustainable practices). Thus:

**Proposition 3:** *Sustainability-related POS and second-party support correlate positively with sustainability perceived behavioral control, which relates positively to adoption of sustainable practices.*

Given this proposition, POS and second-party support influence skill and control beliefs. In the TPB, perceived behavioral control represents the extent to which a person feels able to enact a behavior. It involves two aspects: how much a person has control over a behavior (e.g., low control over pursuing sustainable practices if an opportunity arises) and how confident a person feels about being able to perform or not perform the behavior (e.g., insufficiently skilled at adopting sustainable practices). It is determined by control beliefs regarding the power of both situational and internal factors that inhibit or facilitate performing a behavior (e.g., "Whether I adopt sustainable practices is entirely up to me"; "I could adopt sustainable practices if I wanted to").

Employees consider the extent to which an organization values their contributions and cares about their well-being, which they consider favorable treatment (Eisenberger, Huntington, Hutchison, & Sowa, 1986). POS draws from social theory, which refers to "actions contingent on rewarding reactions from others" (Blau, 1964, p. 91), and is influenced by the norm of reciprocity—the notion that recipients of benefits are morally obliged to repay a provider, or at least help a recipient while doing no harm (Gouldner, 1960). When employees perceive high POS, they believe an organization not only values them and cares about their well-being, but will also continue helping them (Eisenberger, Cummings, Armeli, & Lynch, 1997). If an organization publishes environmental policies, employees assume the organization will treat them fairly,

so they are more likely to promote an environmental initiative personally within the company (Ramus & Steger, 2000); they demonstrate prosocial behaviors. Research suggests that an environmental policy is a sufficient driver of adoption of sustainable practices. The model presented in this article suggests that in the case of SMEs, POS is insufficient to have an environmental or CSR policy because company actions must corroborate organizational support. An SME must demonstrate that it incorporates sustainable practices in every activity (e.g., purchasing, hiring, and selling), allowing employees to perceive control over their behaviors.

Second-party support represents subjective norms. Research demonstrates that supervisor values influence organizational innovations (Hage & Dewar, 1973). Subordinates are influenced by a democratic/considerate style of management and open decision-making (Kanter 1983; Kimberley & Evanisko, 1981). The literature describes many ways managers influence subordinates, including "role modeling, goal definition, reward allocation, resource distribution, communication of organizational norms and values, structuring of work group interactions, conditioning subordinates' perceptions of the work environment, and influence over processes and procedures used" (Ramus & Steger, 2000, p. 608). Employees are motivated more when they perceive support from supervisors or another party responsible for overseeing a task (Conger & Kanungo, 1988). Second-party support also influences motivation for eco-initiatives (Ramus & Steger, 2000). Thus:

**Proposition 4:** *Sustainability-related second-party support and entrepreneur values correlate positively with sustainability subjective norms, which relate positively to adoption of sustainable practices.*

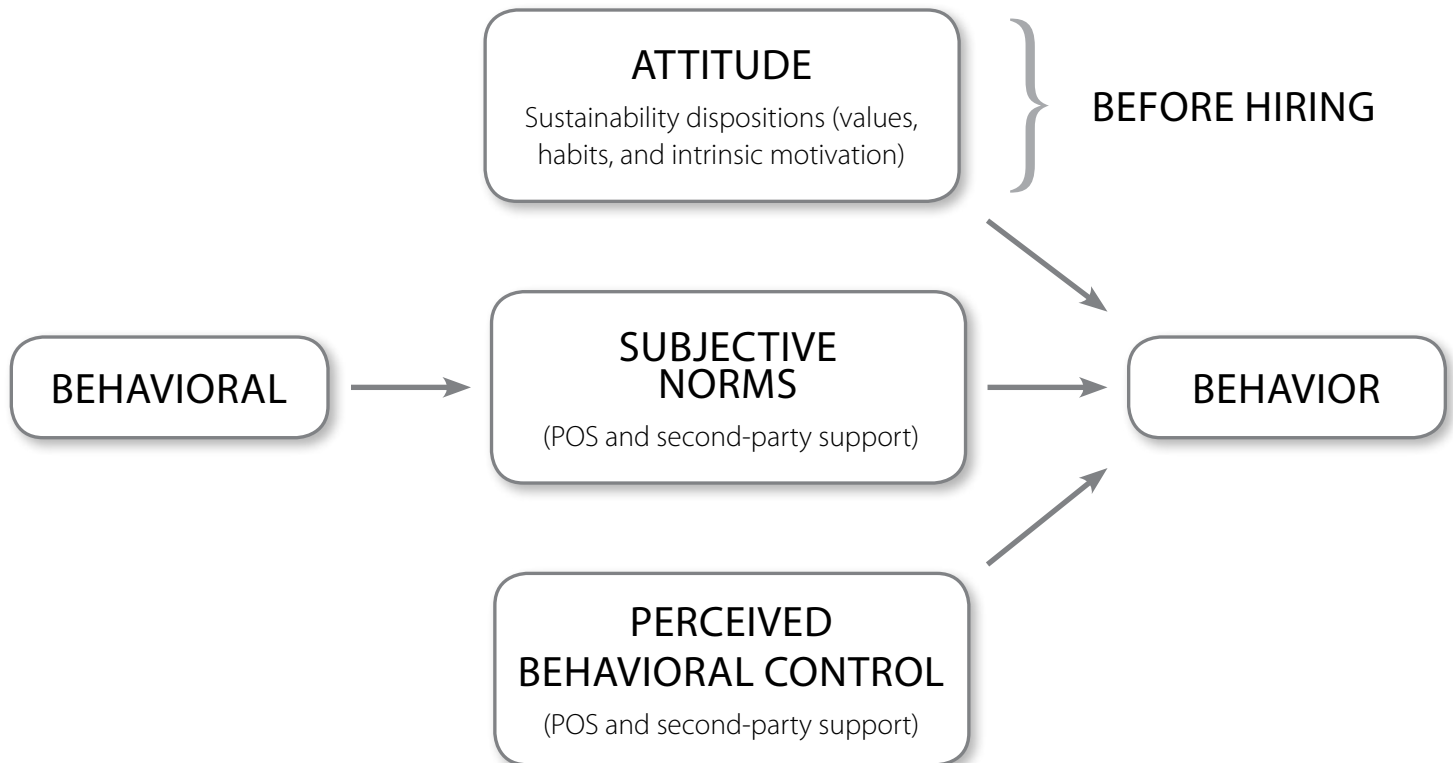
Given this proposition, second-party support and entrepreneur values influence normative beliefs and motivation to comply with those beliefs. In the TPB, subjective norms are a person's perceptions of social pressures to perform or not perform a behavior. How a person's reference group or social network evaluates the goodness of a behavior influences the intent to perform it (Fishbein & Ajzen, 2010). For example, leader values and behaviors cascade by role modeling and contagion through hierarchies (Antonakis & Atwater, 2002). Top-manager values have an even greater impact on individual, extra-role behaviors in contrast to in-role behaviors because the latter lacks a strong reward structure (Ramus & Killmer, 2007). According to literature on organizational

support, top-manager behaviors and organizational policies correlate positively with individual motivation to engage in sustainable practices (Ramus & Killmer, 2007). For SMEs, entrepreneurs passionate about sustainability have an easy job supporting employees.

By changing any of the three predictors in the TPB (i.e., attitudes, subjective norms, and perceived behavioral control) with actions suggested in our model (Figure 2), the chances a person intends to do a desired action increases, and thus increases the chances the person will do it. In this study, entrepreneur/manager actions

are examples of intentional behaviors, and the outcome is prosocial behaviors that motivate SME employees to adopt sustainable practices. Prosocial behaviors result from factors that influence behaviors, which include personal dispositions, intrinsic motivations, second-party support, POS, and social norms. Development of prosocial behaviors is cyclical; an employee develops personal dispositions, intrinsic motivations, and POS prior to being hired, and these factors are fostered by second-party support and social norms after an employee is hired.

**Figure 2. A model of prosocial behaviors for adoption of sustainable practices in SMEs**



The core process outlined in Figure 2 begins at adolescence. During this stage, an employee developed personal dispositions, which include values, beliefs, and habits regarding a community, an organization, and other stakeholders. However, dispositions can also be dispositions toward an activity, which emerge from immediate, ongoing experiences in the activity (Larson

& Rusk, 2011). As researchers have observed (Dawes & Larson, 2007, 2011), dispositions and intrinsic motivations influence each other. Experiences with activities feed development of knowledge, skills, and positive emotions, and simultaneously, people develop top-down life goals, values, and identities that feed investment and interest.

Personal dispositions and intrinsic motivations toward an activity are not the only variables that influence each other. POS influences intrinsic motivation, and is itself influenced by personal values. Underlying CSR at the employee level is employee justice perceptions (Cropanzano et al., 2001), and in turn, “CSR perceptions shape the employees’ subsequent attitudes and behaviors toward the firm” (Aguilera et al., 2007, p. 840). Employee perceptions of a working environment’s fairness demonstrate benefits to both “employee well-being (e.g., job satisfaction, stress, health, emotion) and organizationally relevant outcomes, such as employee commitment, turnover, absenteeism, job performance, citizenship behavior, and counter productivity” (Aguilera et al., 2007, p. 840). When employees perceive fairness, they are happy and work harder. Positive moods promote prosocial behaviors (Brief & Motowidlo, 1986) that influence employees to adopt sustainable practices, and a job applicant’s perceptions of a firm’s CSR performance influence desires to work for a firm (Turban & Greening, 1997).

The propositions above illustrate but do not exhaust those derived from the proposed theory.

### Future Research

The TPB is useful when designing strategies to help people adopt sustainable practices and to help SMEs increase their uptake of guidelines. This study provides evidence-based recommendations regarding the actions of SMEs to maximize adoption of sustainable practices. Field research is needed to assess the proposed theory. Propositions 1 through 4 can be tested quantitatively using an ex post facto survey design, involving a sample of SMEs that have employees who adopted sustainable practices. Future research is also needed to assess the domain to which the theory applies such as communities, governments, nonprofit organizations, and other nonprivate-sector organizations whose missions and performance are assessed disparately. These organizations are increasingly under pressure to display sustainable-practice behaviors. Does the theory of adoption of sustainable practices apply in these contexts? Testing the theory in nonprivate-sector contexts is necessary to identify the domains to which the theory does and does not apply.

### Implications of Results

Figure 2 illustrates disparities among factors. For example, personal dispositions and intrinsic motivations are often present in an employee before he or she enters an organization. An employee experiences second-party support, POS, and social norms after being hired. These factors increase an employee’s motivations to intend to adopt sustainable practices after he or she begins working at a company. Personal dispositions toward sustainable practices include, for example, the environment, the community, and future generations. Forum for the Future (2007) reports that future leaders care more about future happiness in the next ten years than having a job that pays well. The report further suggests that college students are not enticed by higher salaries, though this position might change when they complete their education and must repay student loans. This finding is a signal for both institutions of higher education and other organizations; students and future employees are looking for places that cultivate interests. It is critical for SMEs to not only adopt sustainable practices, but also to incorporate them into strategies to attract talented employees.

Intrinsic motivations influence employees differently. It is about pleasurable body sensations they experience when caring about the environment or community. This factor links with sustainability indirectly and independently of personal dispositions. If an individual is aware of connections between intrinsic motivation and personal dispositions, he or she wants to increase personal dispositions to increase intrinsic motivations. POS depends on organizational commitment to sustainability in that it should not be sustainability on paper, but implementation of real sustainable practices, including education. Second-party support and social norms also link in this context. Managers should not only support employees to adopt sustainable practices, but also model the behavior.

The model developed in this article suggests that these five actions should be explored concurrently since they interconnect. They mutually stimulate employee engagement, which leads to adoption of sustainable practices, job satisfaction, creativity, and efficiency. This approach provides benefits to an organization that lead to competitive advantages (e.g., reputation, brand value, and cost savings). The appeal of this framework is not that employees possess existing values, but rather that

a combination of existing values and other variables helps an organization by encouraging employees' natural tendencies to be prosocial. For organizations considering implementing sustainable practices, it is important to assess existing values in employees so they can design mechanisms that fit the employees' preferences. This article builds an initial theory of adoption of sustainable practices using TPB. The theory conceives adoption of sustainable practices as a multistage process in which SME owners/managers play roles. Both individual and situational disparities influence the process. In its present form, the theory offers opportunities for research into adoption of sustainable practices by SME employees. I expect that the theory will encourage researchers to develop it further.

The following activities will help SME owners inspire employees to adopt sustainable practices in their companies.

- Recruit employees who demonstrate sustainability dispositions (values, habits). This can be accomplished by checking if they have been engaged in any sustainability activity in their schools, or if they practice any sustainability activities personally at home (TPB–attitude).
- Demonstrate during the hiring process, training, and daily activities at work sustainability-related activities performed by employees, management, customers and suppliers. (TPB–subjective norms).
- Constantly show examples of sustainable practice initiatives by employees that are fully supported by managers and SME owners (TPB–perceived behavior control).

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## REFERENCES

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- Aguilera, R., Rupp, E. D., Williams, A. C., & Ganapathi, J. (2007). Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations. *Academy of Management Review*, 32(3): 836–863.
- Ajzen, I. (1985). "From intentions to actions: a theory of planned behavior" in Kuhl, J. and Beckmann, J. (Eds.), *Action control from cognition to behavior*, Springer–Verlag, Heidelberg, 4–39.
- Amatucci, Frances M., Pizarro, Nelson, & Friedlader, Jay. (2013). A paradigmatic shift in entrepreneurship education. *New England Journal of Entrepreneurship* 16 (1).
- Antonakis, J., & Atwater, L. (2002). Leader distance: a review and a proposed theory. *Leadership Quarterly*, 13(6): 673–670.
- Aragon, Correa J. (1998). Strategic proactivity and firm approach to the natural environment. *Academy of Management Journal*, 41, 556–567.
- Argandoña, A., & Hoivik, H. (2009). Corporate social responsibility: One size does not fit all. Collecting evidence from Europe. *Journal of Business Ethics*, 89(3): 221–239.
- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychology Review*, 84(2): 191–215.
- Battisti, M. & Perry, M. (2011). Walking the talk? Environmental responsibility from the perspective of small-business owners. *Corporate Social Responsibility and Environmental Management*, 18 (3): 172–185.
- Biondi, V., Frey, M. & Iraldo, F. (2000). Environmental management systems and SMEs. *Greener Management International*, 55–79.
- Bornstein, D. (2004). *How to change the world: social entrepreneurs and the power of new ideas*. New York, NY: Oxford University Press.
- Boldero, J. (1995). The prediction of household recycling of newspaper: the role of attitudes, intentions, and situational factors. *Journal of Applied Social Psychology*, 25, 440–462.

- Bolton Report. (1971) *Small Firms, Report of the Committee of Inquiry on Small Firms*, HMSO, Cmnd. 4811, London.
- Blau, P. (1964). *Exchange and power in social life*. New York, NY: Wiley.
- Brief, A., & Motowidlo, J. S. (1986). Pro social organizational behaviors. *Academy of Management Review*, 11(4):710–725.
- Brighter Planet. (2010). *Employee engagement survey 2009: An analysis of the extent and nature of employee sustainability programs* (pp. 1-38). San Francisco, CA: Brighter Planet.
- Caska, A. (1998). The search for employment: motivation to engage in a coping behavior. *Journal of Applied Social Psychology*, 28(3): 206–224.
- Cascio, W. F. (2003). Changes in workers, work, and organizations. *Handbook of Psychology*, 3(16):399–422.
- Condon, L. (2004). Sustainability and small to medium sized enterprises—how to engage them. *Australia Journal of Environmental Education*, 20(1): 57–67.
- Conger, J., & Kanungo, R. (1988). The empowerment process: integrating theory and practice. *Academy of Management Review*, 13(3):471–482.
- Conner, M., & Armitage, J. (1998). The theory of planned behavior: a review and avenues for further research. *Journal of Applied Social Psychology*, 28(15): 1429–1464.
- Cordano, M., & Frieze, I. (2000). Pollution reduction preferences of U.S. environmental managers: applying Ajzen's theory of planned behavior. *Academy of Management Journal*, 43(4): 627–641.
- Cropanzano, R., Byrne, S., Zinta, B., Ramona, D., & Rupp, D. (2001). Moral virtues, fairness heuristics, social entities, and other denizens of organizational justice. *Journal of Vocational Behavior*, 58(2): 164–209.
- Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. San Francisco, CA: Jossey-Bass.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, NY: Harper Perennial.
- Csikszentmihalyi, M. (1996). *Creativity: flow and the psychology of discovery and invention*. New York, NY: Harper Collins.
- Csikszentmihalyi, M., Rathunde, K., & Whalen, S. (1993). *Talented teenagers: the roots of success and failure*. New York, NY: Cambridge University Press.
- Damon, W. (2008). *Path to purpose: helping our children find their calling in life*. New York, NY: Free Press.
- Davis, C., & O'halloran, T. (2013). Needs of SMEs to advance on the sustainability path. *South West Regional Authority*.
- Dawes, P., & Larson, R. (2007). How youth become engaged in youth programs: the process of motivational change. *Applied Development Science*, 10(3), 121–131.
- Dawes, P., & Larson, R. (2011). How youth get engaged: grounded-theory research on motivational development in organized youth programs. *Development Psychology*, 47(1): 259–269.
- Devi, J., & Hemant, K. (2009). Corporate social responsibility perspective of small and medium enterprises (SMEs)—a case study of Mauritius. *Advances in Management*, 2(12): 27–45.
- Dewett, T. (2007). Linking intrinsic motivation, risk taking, and employee creativity in an R&D environment. *R&D Management*, 37(3):197–208.
- Dillon, P., & Fischer, K. (1992). *Environmental Management in Corporations*. Medford, MA: Tufts University Center of Environmental Management.

- Eccles, J. (2009). Who am I and what am I going to do with my life? Personal and collective identities as motivators of action. *Educational Psychologist*, 44(2): 78–89.
- Eccles, J., & Roeser, W. (2009). Schools, academic motivation, and stage-environment fit. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology* (3rd Ed.) (pp. 404–434). Hoboken, NJ: Wiley.
- Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. (1997). Perceived organizational support, discretionary treatment and job satisfaction. *Journal of Applied Psychology*, 82(5): 812–820.
- Eisenberger, R., Huntington, R., Hutchinson, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Apply Psychology*, 71(1): 500–507.
- Elkington, J., & Hartigan, P. (2008). *The power of unreasonable people*. Boston, MA: Harvard Business Press.
- Elschbach, K., & Hargadon, A. (2006). Enhancing creativity through “mindless” work: a framework of workday design. *Organization Science*, 17(4): 470–483.
- Engardio, P., Capell, K., Carey, J., and Hall, K. (2007). *Beyond the Green Corporation*. The Business Week Report.
- European Commission. (2002). *Observatory of European SMEs 2002, No 4*. Zoetermeer, The Netherlands: Enterprise Publications.
- Everret, M. (1995). *Making a living while making a difference: A guide to creating careers with a conscience*. New York, NY: Bantam Books.
- Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: the reasoned action*. New York, NY: Psychology Press.
- Forum for the Future. (2007). *The future leaders survey 2006/07*. London, England: Forum for the Future.
- Fung, A., O'Rourke, D., & Sabel, C. (2001). *Can we put an end to sweatshops?* Boston, MA: Beacon Press.
- Godfrey, P., & Hatch, N. (2007). Researching corporate social responsibility: An agenda for the 21st Century. *Journal of Business Ethics*, 70, 87–98.
- Gouldner, A. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25(2):161–178.
- Gonzalez-Benito, J., & Gonzalez-Benito, O. (2005). Environmental proactivity and business performance: An empirical analysis. *Omega* 33, 1–15.
- Grant, A. (2007). Relational job design and the motivation to make a prosocial difference. *Academy of Management Review*, 32(2):393–417.
- Haanes, K., Reeves, M., von Streng Velken, I., et al. (2012). Sustainability nears a tipping point. *MIT Sloan Management Review*. <http://sloanreview.mit.edu/issue/winter-2012/> (Accessed June 24).
- Hage, J., & Dewar, R. (1973). Elite values versus organizational structure in predicting innovation. *Administrative Science*, 18(3):279–290.
- Hart, S. (1995). A natural resource—based view of the firm. *Academy of Management Journal*, 20, 986–1014.
- Haugh, H.M., & Talwar, A. (2010). How corporations embed sustainability across the organization. *Academy of Management Learning & Education*.9, 384–396.
- Huseman, R., Hatfield, J., & Miles, E. (1987). A new perspective on equity theory: the equity sensitivity construct. *Academy of Management Review*, 12, 222–234.

- Hutchinson, A., & Hutchinson, C. (1995). Sustainable regeneration of UKs small and medium-sized enterprises sector: some implications of SME response to BS7750. *Greener Management International*, 9, 74–84.
- Ilomaki, M., & Melanen, M. (2010). Waste minimization in small and medium-sized enterprises—do environmental management systems help? *Journal of Cleaner Production*, 9, 209–217.
- Jamali, D., Zanhour, M., & Keshishian, T. (2009). Peculiar strengths and relational attributes of SMEs in the context of CSR. *Journal of Business Ethics*, 87 (3):355–377.
- Jenkins, H. (2004). A critique of conventional CSR theory: an SME perspective. *Journal of General Management*, 29 (4): 37–57.
- Kahn, W. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4): 692–724.
- Kanter, R. (1983). *The change masters*. New York, NY: Simon and Schuster.
- Katsikis, I.N., & Kyrgidou, L. (2007). Sustainable entrepreneurship global success and local development: the case of Mastiha in Chips, Greece. 47th *Congress of European Regional Association*. Paris, France.
- Kimberley, J., & Evanisko, M. (1981). Organizational innovation: The influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations. *Academy of Management Journal*, 24(4), 689–713.
- Kurland, B. (1995). Ethical intentions and the theories of reasoned action and planned behavior. *Journal of Applied Social Psychology*, 25(4):297–313.
- Lampe, M., Ellis, S., & Drummond, C. (1991). What companies are doing to meet environmental protection responsibilities: Balancing legal, ethical, and profit concerns. *Proceedings of the International Association for Business and Society*, (pp. 527, 537).
- Larson, R. (2000). Adolescent thinking. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology* (3rd Ed.) (pp. 152–186). Hoboken, NJ: Wiley.
- Larson, R., & Rusk, N. (2011). Intrinsic motivation and positive development. In R. M. Lerner, J. Lerner, & B. Janette (Eds.), *Advances in child development and behavior* (pp. 89–130). Burlington, VT: Academic Press.
- Lawrence, A., & Morell, D. (1995). Leading-edge environmental management: motivation, opportunity, resources, and processes. In *Research in corporate social performance and policy* (pp. 99–126). Greenwich, CT: JAI Press.
- Lepine, R., & Crawford, E. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal*, 53(3), 617–635.
- Lerner, J., Phelps, E., Forman, Y., & Bowers, E. (2009). Positive youth development. In L. Richard, & S. Lorraine (Eds.), *Handbook of adolescent psychology* (3rd Ed.) (pp. 524–558). Hoboken, NJ: Wiley.
- Little, A. (2005). ADL. Retrieved from [http://www.uploads/tx\\_extththoughleadership/ADL\\_innovation\\_High\\_Ground\\_report-03.pdf](http://www.uploads/tx_extththoughleadership/ADL_innovation_High_Ground_report-03.pdf)
- Luetkenhorst, W. (2004). Corporate social responsibility and development agenda: the case for actively involving small and medium enterprises. *Intereconomics*, 39 (3):115.
- Marano, E. H. (2006, July 31). The depressed exec. *Psychology Today*. Retrieved from <http://www.psychologytoday.com/articles/200303/the-depressed-exec>
- Mayr, E. (2001). *What evolution is*. New York, NY: Basic Books. Massachusetts Institute of Technology
- McGregor, I., & Little, B. R. (1998). Personal projects, happiness, and meaning: On doing well and being yourself. *Journal of Personality and Social Psychology*, 74 (2), 494.

- McKeiver, C., & Gadenne, D. (2005). Environmental management systems in small and medium businesses. *International Small Business Journal*, 23 (5): 513–537.
- Meglino, B. K., & Korsgaard, A. (2004). Considering rational self-interest as a disposition: organizational implications of other orientation. *Journal of Applied Psychology*, 89, 946–959.
- Mischel, W. (1973). Toward a cognitive social learning reconceptualization of personality. *Psychological Review*, 80, 200–213.
- Moore, F. J. (2006). Business ecosystems and the review from the firm. *Antitrust Bulletin*, 51 (1): 1–31.
- Moore, G., Slack, R., & Gibbon, J. (2009). Criteria for responsible business practice in SMEs: an exploratory case of UK fair trade organizations. *Journal of Business Ethics*, 89(2), 173–188.
- Morsing, M. (2006). Drivers of corporate social responsibility. *CBS.DK*. Retrieved from [http://www.ashridge.org.uk/website/IC.nsf/wFARATT/The%20Drivers%20of%20Corporate%20Social%20Responsibility:%20A%20Critical%20Review/\\$file/TheDriversOfCorporateSocialResponsibility.pdf](http://www.ashridge.org.uk/website/IC.nsf/wFARATT/The%20Drivers%20of%20Corporate%20Social%20Responsibility:%20A%20Critical%20Review/$file/TheDriversOfCorporateSocialResponsibility.pdf)
- Naffziger, D.W., Ahmed, N.U., & Montagno, R.V. (2003). Perceptions of environmental consciousness in U.S. small businesses: an empirical study. *SAM Advanced Management Journal*, 68 (2): 23–32.
- Nasir, S., & Hand, V. (2008). From the court to the classroom: Opportunities for engagement, learning and identity in basketball and classroom mathematics. *Journal of the Learning Sciences*, 17(2):143–180.
- Organ, D. (1990). The motivational basis of organizational citizenship behavior. In L. Cummings, & B. Staw (Eds.), *Research on organizational behavior* (Vol. 12) (pp. 43–72). Greenwich, CT: JAI.
- Palmer, J. and van der Vorst, R. (1997). New recipe green reporting for small and medium-sized enterprises. *Eco-management and Auditing*, 4, 57–67.
- Perrini, F., Russo, A., & Tencati, A. (2007). CSR strategies of SMEs and large firms. Evidence from Italy. *Journal of Business Ethics*, 74(3): 285–300.
- Perrini, F. (2006). SMEs and CSR theory: Evidence and implications from an Italian perspective. *Journal of Business Ethics*, 67: 305–316.
- Perrini, F., & Tencati, A. (2007). CSR strategies of SMEs and large firms. Evidence from Italy. *Journal of Business Ethics*, 74 (3): 285–300.
- Petts, J. (2000). The regulator—regulated relationship and environment protection: perceptions in small and medium-sized enterprises. *Environmental and Planning C: Government and Policy*. 18, 191–206.
- Pfeffer, J., & Sutton, I.R. (2013). *The Knowing-Doing Gap: How Smart Companies Turn Knowledge into Action*. Cambridge: Harvard Business Press.
- Porter, M., & Kramer, M. (2006). Strategy and society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84 (12): 78–92.
- Ramus, C. (2001). Organizational support for employees: Encouraging creative ideas for environmental sustainability. *California Management Review*, 43(3): 83–105.
- Ramus, C. (2002). Encouraging innovative environmental actions: what companies and managers do? *Journal of World Business*, 37(2): 151–164.
- Ramus, C., & Killmer, A. (2007). Corporate greening through prosocial extrarole behaviors—A conceptual framework for employee motivation. *Business Strategy and the Environment*, 16(8): 554–570.
- Ramus, C., & Steger, U. (2000). The roles of supervisor support behaviors and environmental policy in employee “ecoinitiatives” at leading-edge European companies. *Academy of Management Journal*, 43(4): 605–626.

- Revell, A., Rutherford, R. (2003). UK environmental policy and the small firm: broadening the focus. *Business Strategy and the Environment*, 12, 26–35.
- Revell, A., Stokes, D. & Chen, H. (2010). Small businesses and the environment: turning over a new leaf? *Business Strategy and the Environment*, 19: 273–288. doi: 10.1002/bse.628.
- Russo, A., & Perrini, F. (2010). Investigating stakeholder theory and social capital: CSR in large firms and SMEs. *Journal of Business Ethics*, 91(2): 207–221.
- Russo, A., & Tencati, A. (2009). Formal vs. informal CSR strategies: Evidence from Italian micro, small, medium-sized, and large firms. *Journal of Business Ethics*, 85(2): 339–353.
- Rutherford, R., Blackburn, R.A., and Spence, L.J. (2000). Environmental management in small firms: an international comparison. *International Journal of Entrepreneurial Behavior and Research*, 7(6).
- Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1): 68–78.
- Ryan, R., & Deci, E. (2001). On happiness and human potential: A review research on hedonic and eudaimonic well-being. *Annual review of Psychology*, 52 (1): 141–166.
- Sansone, C., & Harackiewicz, J. (Eds.). (2000). *Intrinsic and extrinsic motivation: the search for optimal motivation and performance*. New York, NY: Taylor Francis.
- Schot, J., & Fischer, K. (1993). "Introduction: The Greening of the Industrial Firm". In J. Schot, & K. Fischer (Eds.), *Environmental Strategies for Industry* (pp. 3–33). Washington, D.C.: Island Press.
- Shamir, B. (1990). Calculations, values, and identities: the sources of collectivistic work motivation. *Human Relations*, 43(4): 313–332.
- Shamir, B., House, R., & Arthur, M. (1993). The motivational effects of charismatic leadership: a self-concept based theory. *Organizational Science*, 4(4):577–594.
- Shearlock, C., Hooper, P., and Millington, S (2000). Environmental improvement in small and medium-sized enterprises: a role for the business support network. *Greener Management International*, 3, 50–60.
- Simpson, M., Taylor, N., & Baker, K. (2004). Environmental responsibility in SMEs: Does it deliver competitive advantage? *Business Strategy and the Environment*, 13 (3): 156–171.
- Sparks, P., & Sheperd, R. (1992). Self-identity and the Theory of Planned Behavior: assessing the role of identification with green consumerism. *Social Psychology Quarterly*, 55(4): 388–399.
- Starik, M., & Marcus, A (2000). Special research forum on the management of organizations in the natural environment: a field emerging from multiple paths, with many challenges ahead. *Academy of Management Journal*, 43(4): 539–547.
- Stead, W., & Stead, J. (1995). "An empirical investigation of sustainability strategy implementation in industrial organizations". In D. Collins, & S. M (Eds.), *Research in corporate social performance* (pp. 43–66). Greenwich, CT: JAI Press.
- Taylor, S., & Todd, A. (1995). Understanding Information Technology usage: a test of competing models. *Information Systems Research*, 6, 144–176.
- Thompson, J., & Bunderson, S. (2003). Violations of principle: Ideological currency in the psychological contract. *Academy of Management Review*, 28(4): 571–586.
- Turban, D., & Greening, D. (1997). Corporate social performance and organizational attractiveness to prospective employees. *Academy of Management Journal*, 40(3): 658–672.

- Vredenburg, H., & Westley, F. (1993). Environmental leadership in three contexts: managing for global competitiveness. *Proceedings of the International Association of Business and Society* (pp. 495–500).
- Vyakarnam, S., Bailey, A., Myers, A., & Burnett, D. (1997). Towards an understanding of ethical behavior in small firms. *Journal of Business Ethics*, 16(15): 1625–1636.
- Waterman, S. A. (1993). Two conceptions of happiness: contrast of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, 64(4): 678–691.
- Wentzel, K. (2009). Students' relationships with teacher as a motivational context. In K. R. Wentzel, & A. Wigfield (Eds.), *Handbook of motivation at school*. New York, NY: Guilford, 301–322.
- White, R. (1959). Motivation reconsidered: the concept of competence. *Psychological Review*, 66(5): 297–333.
- Winn, M. (1995). "Corporate Leadership and Policies for the Environment". In D. Collins, & M. Starik (Eds.), *Research in Corporate Social Policy and Performance—Sustaining the Natural Environment: Empirical Studies on the Interface Between Nature and Organizations* (pp. 127–162). Greenwich, CT: JAI Press.
- Witt, A., & Wilson, J. (1991). Moderating effect of job satisfaction on the relationship between equity and extrarole behaviors. *Journal of Social Psychology*, 131(2): 247–252.
- Wortham, S. (2006). *Learning identity: The joint emergence of social identification and academic learning*. New York, NY: Cambridge University Press.
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: people's relations to their work. *Journal of Research in Personality*, 31, 21–33.
- Young, E.J. and Sexton, L.D. (2003). What makes entrepreneurs learn and how do they do it? *The Journal of Entrepreneurship*, 12(2): 155–182.
- Young, M. (2015, March 6). Report: State of Sustainable Business Practices for SMEs. Retrieved October 6, 2015.

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# Entrepreneurship Research in Management and Organization Studies:

## A Contribution-Based Assessment of the Literature

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*Entrepreneurship-related research in management and organizational journals has experienced rapid growth, particularly in the last several years. The purpose of this study is to identify the researchers and universities that have had the greatest influence on entrepreneurship research since the turn of the century. Using a systematic and comprehensive study identification protocol, the authors delve into the individual and institutional actors contributing to scholarship in entrepreneurial studies for the period from 2000 to 2015. Examination of top-tier management and organizational journals revealed that a total of 371 entrepreneurship-related articles were published during this period by 618 authors from 303 different institutions. Rankings for the most prolific individuals as well as institutions, adjusted and unadjusted for journal quality, are presented. The article concludes with a discussion of the limitations and implications of the research undertaken here.*

**Keywords:** research impact; management journals; entrepreneurship research

It has been about three decades since the Academy of Management accorded division status to the field of entrepreneurship (Bygrave, 2007). In these years, entrepreneurship research has proliferated (Chiles, Bluedorn, & Gupta, 2007). Despite its loosely defined nature, entrepreneurship as a field of inquiry has become increasingly accepted by researchers and academics worldwide (Baker & Welter, 2014). An increasing number of journal articles, special issues, and conference presentations in management and organizational studies have been devoted to entrepreneurship, suggesting its increasing acceptance within the research community. The purpose of this study is to “take stock” of entrepreneurship-related research by examining the actors who are contributing to research published in leading journals.

As a body of literature develops, it is useful to take inventory of the published studies. This is particularly critical in a field like entrepreneurship, which has grown rapidly in a relatively short time and has become known for its eclectic nature, attracting interest from a variety of disciplines (Ireland & Webb, 2007). Periodical reflections on the way a field of academic inquiry is developing is essential to derive maximal benefits from existing research, and to propel future investigations into new directions. One way to understand the state of extant research is to identify the institutions and people that have shaped the development of the field. Academic fields characterized by the participation of diverse groups of contributors in the research process tend to be more conducive to the emergence and diffusion of novel sampling frames, hypotheses development, statistical techniques, and research methodologies. Conversely, fields that are more insular—whether naturally or due to deliberate actions of incumbent players—tend to become inward-directed and self-referential with little tolerance for multiple perspectives and divergent approaches.

In the present study, we provide an understanding of the impact of individual researchers and academic institutions on entrepreneurship research published in leading management and organizational journals. We focus our efforts on research published between 2000 and 2015 (both inclusive) to identify leading contributors to the entrepreneurship literature. Given that there is no overwhelming consensus on what constitutes entrepreneurship research, we rely on Busenitz et al. (2003)'s well-regarded conception to seek relevant articles for our purpose. Thus, our research will systematically and comprehensively evaluate the influence of researchers and institutions who have facilitated the growth and development of entrepreneurship. Given that “new interesting issues and works seem to emerge all the time” in entrepreneurship research (Landstrom, 2014: 34), our reflective effort should help better understand the

actors who are able to maintain their influence over a considerable period of time.

### Conceptual Framework

Entrepreneurship, conceived broadly, is probably as old as civilization itself (Neergaard & Ulhøi, 2007), but the academic field of entrepreneurship is relatively young. Despite its short history, entrepreneurship is tremendously popular in academia, attracting scholars from a range of disciplines and from around the world. Almost every major university in the United States now has programs and courses in entrepreneurship, and international schools and colleges are following suit. The growing popularity of entrepreneurship is also reflected in the scholarship in this area, as research has become more diverse, more rigorous, more complex, and more prominent. As a consequence, entrepreneurship research has now achieved acceptance with various stakeholders (e.g., deans and tenure committees) and is considered a legitimate field of inquiry.

The impressive growth of entrepreneurship research engenders the need to understand and learn about the researchers and institutions that have been instrumental in furthering the field. Merton (1968, 1988) observed that some scholars and universities gain tremendous influence for their research productivity in scientific communities, while many others were relegated to relative obscurity. He termed this the ‘Matthew effect’ as it resembled Matthew (25: 29) from the New Testament: “For those who have will be given more, and they will have an abundance. As for those who do not have, even what they have will be taken from them.” The implication of the Matthew effect for academic scholarship is that a relatively small number of institutions and researchers will account for the majority of high-quality research in a discipline. Indeed, in their survey of family business research, Debicki et al. (2009: 152) found that “research in the field has been dominated by a relatively small number of scholars who appear to be connected in terms of backgrounds, institutional affiliations, and interests.”

A “contribution-based” approach is one way to assess scholarly output by measuring contributions to prestigious journals (Morrison & Inkpen, 1991). Instead of attempting to cover every article to overview the scholarly literature in an area, researchers can focus on a select set of top-tier academic journals. The strength of such an approach lies in its (a) manageable focus, (b) relative objectivity, and (c) easy comparability with previous reviews (e.g., Shane, 1997).

Although contribution-based assessment of the literature is not able to fully account for all published studies in a topic area, we believe that its benefits outweigh the drawbacks, especially when the goal is to assess the major influences in an area. Not surprisingly, the contribution-based approach has found favor with researchers in many disciplines, including international business (Morrison & Inkpen, 1991), management (Podsakoff, MacKenzie, Posakoff, & Bachrach, 2008), Chinese studies (Peng, Shenkar, & Wang, 2001), and family business (Debicki, Matherne, Kellermanns, & Chrisman, 2009), to name a few. A focus on contributions as a way to make sense of the field is not unknown to entrepreneurship researchers as Shane (1997) conducted such a study to reflect on the early years of scholarship in entrepreneurship.

The diversity of research that falls under the broad umbrella of “management and organization” makes it challenging to parsimoniously identify acceptable high-quality journals that publish research on managerial and organizational topics. Many scholars have argued that the definition of quality outlets in a particular field must come from within the field. As MacMillan (1993) noted, “each field of inquiry has a forum in which work of scholars in that field should be presented, whereby if a candidate’s work is accepted in that forum, then such work is deemed scholarly.” In this vein, Busenitz et al. (2003) identified seven high-quality journals in what they termed “business management.” Their selection of journals is informed by expert opinion as well as number of citations received by journals (Barman, Tersine, & Buckley, 1991; Coe & Weinstock, 1984; Franke, Edlund, & Oster, 1990; Gomez-Mejia & Balkin, 1992; Johnson & Podsakoff, 1994; Salancik, 1986). For our purpose, we adopt Busenitz et al.’s (2003) list of high-quality outlets to delineate the forum for publishing high-quality entrepreneurship research.

### Methodology and Results

We identified and analyzed entrepreneurship articles published in seven major academic journals in business management. We examined *Academy of Management Journal*, *Academy of Management Review*, *Strategic Management Journal*, *Journal of Management*, *Organization Science*, *Management Science*, and *Administrative Science Quarterly* for research papers in entrepreneurship. We focused on these journals as they publish articles covering a variety of topics in the field of business management, and not just on the topics in entrepreneurship. As such, we did not include discipline-specific journals, such as *Entrepreneurship Theory & Practice* and *Journal of Business*

*Venturing* in our study. In addition, as the journals we selected are published only in English, our study is limited to contributions made in the English language. Studies published in languages other than English are thus excluded from our study. Our decision to focus on top English-language journals is consistent with similar studies in other fields (e.g., Podsakoff et al., 2008).

We chose to analyze articles published in the time period January 1, 2000, to December 31, 2015, for two reasons. First, 2000 was chosen as the start year because it signals the start of the new century and it allows us to enhance prior research on contributions to the entrepreneurship literature published until 1999 (Busenitz et al., 2003). Second, the end of 2015 has been selected as the cut-off to ensure consistency of article publication as journals have different publication dates and issues in a year.

We used Business Source Complete database to gain access to articles published in the seven journals selected for this study. We searched and selected entrepreneurship articles that used entrepreneurship-related keywords such as entrepreneur/entrepreneurial/entrepreneurship, small business/emerging business, new venture/emerging venture, and founder(s) in an abstract or title of the article (Busenitz et al., 2003). To ensure that only relevant articles were selected, we omitted editor notes, book reviews, and replies to published articles.

Three coders reviewed the selected entrepreneurship articles based on the criteria specified. A total of 12,722 articles were reviewed by the coders. Of these, 371 papers (~ 2.9% of the total) were selected as entrepreneurship-related research articles. The selection of articles was based on a manual search and visual analysis, so that each article was perused by at least two coders. Both coders agreed on the final selection for 98% of the articles. For articles where discrepancy was observed, the selection was rechecked and article included if both coders agreed. After rechecking, coders agreed on 100% of the selection of articles. The distribution of entrepreneurship articles in each of the seven journals in the time period 2000–2015 that meets the selection criteria is presented in Table 1.

Consistent with the global and diverse nature of entrepreneurship research, we find that authorship of the sample articles was attributed to multiple scholars from various institutions around the world. Specifically, a total number of 618 authors from 303 different institutions published entrepreneurship related research in the seven selected journals from 2000–2015.

### Impact of Authors

In measuring the impact of authors in publication of entrepreneurship-related research, we employ Shane's (1997) methodology and adopt four different measures. First, authors were ranked on the number of entrepreneurship articles they had published in the seven

**Table 1. Distribution of Entrepreneurship Articles in Journals**

Journal Name	Number of ENT Articles
Academy of Management Journal	61
Strategic Management Journal	70
Administrative Science Quarterly	29
Journal of Management	63
Academy of Management Review	40
Management Science	50
Organization Science	58
<b>TOTAL</b>	<b>371</b>

selected journals from 2000–2015. Table 2 shows the most published authors as per this ranking, listing authors who have greater or equal to four counts of articles.

Second, authors were ranked on the basis of the “adjusted number of appearances” in the articles selected. This measure is used to control for the number of articles that have multiple coauthors and to give equal weight

based on the combined contribution of each author to the article. Based on approaches used by Morrison and Inkpen (1991), Shane (1997), and Heck and Cooley (1988), the adjusted number of appearances is calculated as follows. For each published article, a score of 1 is assigned to each author for a single-authored article, 0.5 for an article with two authors, 0.33 for an article with three authors, etc. Table 3 shows the top authors ranked by

**Table 2. Most Published Authors Ranked by Total Number of Articles**

Rank	Author	Total Number of Articles
1	Shane, Scott A	15
2	Shepherd, Dean A	12
3	Agarwal, Rajshree	9
3	Ireland, R. Duane	9
5	Baron, Robert A	8
5	Gruber, Marc	8
5	Sine, Wesley D	8
8	Eisenhardt, Kathleen M	6
8	Hitt, Michael A	6
8	Ketchen Jr., David J	6
8	Simsek, Zeki	6
8	Zahra, Shaker A	6
13	Alvarez, Sharon A	5
13	Busenitz, Lowell W	5
13	Ganco, Martin	5
13	Hsu, David H	5
13	McDougall, Patricia Phillips	5
18	Atuahene-Gima, Kwaku	4
18	Delmar, Frédéric	4
18	Dushnitsky, Gary	4
18	Glynn, Mary Ann	4
18	Li, Haiyang	4
18	Priem, Richard L	4
18	Sørensen, Jesper	4
18	Venkataraman, S	4

adjusted number of appearances in the seven journals in the time period from 2000 to 2015.

The quality of the journal plays a critical part in the scholarly impact of the article by the author. To consider this factor, we employ a third measure to score the impact of authors by linking their contribution to the quality of the journal in which the articles were published. MacMillan's (1993) study of high-quality entrepreneurship research journals evaluates the quality

of journals as "outstanding," "significant," "appropriate," and "not appropriate" and assigns ratings of 1 to 4 based on the quality (where 4 is highest quality and 1 is lowest). We employ this criterion to factor in the quality of journal as it is an established and well-accepted independent measure of journal quality. The ratings of the seven selected journals as per MacMillan's (1993) study are provided in Table 4. Given that the journals we considered are all top outlets in the field, it is not surprising that we only have

**Table 3. Top Authors Ranked by Adjusted Appearances**

Rank	Author	Adjusted Appearances
1	Shane, Scott A	8.87
2	Shepherd, Dean A	5.24
3	Baron, Robert A	3.69
4	Gruber, Marc	3.65
5	Agarwal, Rajshree	3.07
6	Sine, Wesley D	2.99
7	Hsu, David H	2.83
8	Eisenhardt, Kathleen M	2.66
9	Ireland, R. Duane	2.58
10	Simsek, Zeki	2.57
11	Dushnitsky, Gary	2.50
11	Sørensen, Jesper B	2.50
11	Vissa, Balagopal	2.50
14	Ganco, Martin	2.41
15	Peng, Mike W	2.33
16	Ketchen Jr., David J	2.25
17	Almandoz, Juan	2.00
17	Atuahene-Gima, Kwaku	2.00
17	de Bettignies, Jean-Etienne	2.00
17	Kacperczyk, Aleksandra J	2.00
17	Kor, Yasemin Y	2.00
17	Li, Haiyang	2.00
17	Phillips, Damon J	2.00
17	Wasserman, Noam	2.00

“outstanding” and “significant” journals in the sample. Following Shane (1997), we calculate the third measure for impact of authors named as “weighted appearances.” The weighted appearances score is calculated by taking the mean quality score (rating) for the journals in which the articles were published summed across all articles for a given author. Table 5 shows the top authors ranked by the weighted appearances in quality entrepreneurship journals from 2000–2015.

The quality of the journal outlet as well as the number of coauthors can influence the scholarly contribution of the author at the same time. Accounting for this factor, we use a fourth measure, “composite measure” (Shane, 1997),

which uses both quality of the journal and percentage of authorship to arrive at a score for each author. This measure is calculated by dividing the rating for the journal by the number of authors for each article and then summed across for each author. Table 6 shows the top authors ranked based on composite measure.

To check for any selection bias of journals or coauthors by scholars, we compute the Spearman rank correlation for the four author impact measures. The correlation indicates the convergent validity of these four measures. The results, given in Table 7, show significant convergent validity across the measures, which indicates the absence of bias in these measures.

**Table 4. Mean Quality (Modal) Rating of Journals (MacMillan, 1993)**

Journal Name	Modal Rating
Academy of Management Journal	4
Strategic Management Journal	4
Administrative Science Quarterly	4
Journal of Management	2
Academy of Management Review	4
Management Science	3
Organization Science	3

### Impact of Institutions

To analyze the contribution of institutions to entrepreneurship research, four different established measures of institutional productivity have been used (Shane, 1997). First, institutions were ranked on the basis of the number of entrepreneurship articles that their faculty had published in the seven selected journals from 2000–2015. Table 8 shows the top institutions according to this ranking.

Second, institutions were ranked on the basis of “adjusted number of appearances” their faculty had made in the relevant articles. This measure is used to control for the occurrence of multiple authors from a single institution for the same article that will result in higher numbers of appearances for that institution. For each

published article selected based on earlier mentioned set criteria, a score of 1 is assigned to each institution for a single-authored article by its faculty, 0.5 for an article with two authors, 0.33 for an article with three authors, and so on (Morrison & Inkpen, 1991; Shane, 1997; Heck & Cooley, 1988). For faculty affiliated with more than one institution, the weight of their contribution to each article is divided and given equally to both institutions. Table 9 shows the top institutions ranked by adjusted number of appearances of their faculty in the seven journals during the time period 2000–2015.

To incorporate the role of quality of journal in the scholarly contribution of institutions, we employ a third measure, “weighted appearances,” which assesses the impact of institutions linking it to the quality of the journal in which

**Table 5. Top Authors Ranked by Weighted Appearances**

Rank	Author	Weighted Appearances
1	Shane, Scott A	48.00
2	Agarwal, Rajshree	34.00
2	Shepherd, Dean A	34.00
4	Sine, Wesley D	29.00
5	Ireland, R. Duane	26.00
6	Gruber, Marc	25.00
7	Eisenhardt, Kathleen M	24.00
8	Baron, Robert A	23.00
9	Hitt, Michael A	20.00
9	Simsek, Zeki	20.00
9	Zahra, Shaker A	20.00
12	Ganco, Martin	19.00
13	Ketchen Jr., David J	18.00
14	Hsu, David H	16.00
14	Li, Haiyang	16.00
14	McDougall, Patricia Phillips	16.00
17	Atuahene-Gima, Kwaku	15.00
17	Dushnitsky, Gary	15.00
17	Glynn, Mary Ann	15.00
20	Busenitz, Lowell W	14.00
20	Sørensen, Jesper B	14.00
20	Venkataraman, S	14.00
23	Alvarez, Sharon A.	13.00

**Table 6. Top Authors Ranked by Composite Measure**

Rank	Author	Composite Measure
1	Shane, Scott A	28.60
2	Shepherd, Dean A	14.83
3	Baron, Robert A	11.57
4	Agarwal, Raishree	11.50
5	Gruber, Marc	11.00
5	Sine, Wesley D	11.00
7	Eisenhardt, Kathleen M	10.67
8	Ganco, Martin	9.33
9	Dushnitsky, Gary	9.00
9	Hsu, David H	9.00
9	Simsek, Zeki	9.00
9	Sørensen, Jesper B	9.00
9	Vissa, Balagopal	9.00
14	Almandoz, Juan	8.00
14	Li, Haiyang	8.00
14	Phillips, Damon J	8.00
17	Atuahene-Gima, Kwaku	7.50
18	George, Gerard	7.33
18	Ireland, R. Duane	7.33
18	Peng, Mike W	7.33

**Table 7. Spearman Rank Correlation of Author Impact Measures**

			AbA	AdA	WA	CM
<b>Spearman's rho</b>		Corr	1	.66**	.73**	.61**
	Absolute Appearances (AbA)	Sig. (2-tailed)		0	0	0
		N	618	618	618	618
		Corr	.66**	1	.59**	.92**
	Adjusted Appearances (AdA)	Sig. (2-tailed)	0		0	0
		N	618	618	618	618
		Corr	.73**	.59**	1	.76**
	Weighted Appearances (WA)	Sig. (2-tailed)	0	0		0
		N	618	618	618	618
		Corr	.61**	.92**	.76**	1
	Composite Measure (CA)	Sig. (2-tailed)	0	0	0	
		N	618	618	618	618

\*\*Correlation is significant at the 0.01 level (2-tailed)

their faculty had published the article (Shane, 1997). This score has been calculated by taking the mean quality score (rating) for the journals based on MacMillan's 1993 study in which the article was published summed across all articles for faculty from each institution. Table 10 shows the top institutions ranked by the weighted appearances of their faculty in quality entrepreneurship journals.

A fourth measure, "composite measure" is employed to incorporate both the quality of the journals in which the articles have been published and percentage of authorship for each faculty from the institutions. This measure is calculated by dividing the modal rating for the journals by the number of authors for each article and then summed across articles for faculty from each institution (Shane, 1997). Table 11 shows the top institutions ranked based on composite measure.

To check for any selection bias of journals or coauthors by faculty from various institutions, we compute the Spearman rank correlation for the four institutional impact measures. The results, given in Table 12, show significant convergent validity across the measures and indicate absence of bias.

To summarize, our methodology allowed us to unearth the researchers and institutions credited with publishing entrepreneurship research in top-tier journals in management and organization studies. We were able to assess the absolute productivity of scholars and institutions publishing entrepreneurship papers as well as their weighted productivity based on three different criteria: number of authors on a paper, quality of journal in which the paper was published, and combination of number of authors and quality of journals. The four criteria were found to be highly correlated, albeit with some minor variations in the rankings based on the different criteria.

**Table 8. Top Institutions Ranked by Appearances**

Rank	Institution	Appearances
1	Indiana University	32.00
2	University of Pennsylvania	32.00
3	University of Maryland	24.00
4	Texas A&M University	20.00
5	Cornell University	19.00
6	University of Connecticut	16.00
7	Ohio State University	14.00
7	University of Washington	14.00
9	University of California, Berkeley	13.00
9	University of Illinois at Urbana-Champaign	13.00
11	Georgia State University	12.00
11	Harvard Business School	12.00
11	INSEAD	12.00
11	Stanford University	12.00
11	University of Alberta	12.00
11	University of Minnesota	12.00
17	Arizona State University	11.00
18	Ecole Polytechnique Fédérale de Lausanne	9.00
18	Rensselaer Polytechnic Institute	9.00
18	University of Oklahoma	9.00

## Discussion

The purpose of our research was to cast light on the individual and institutional actors publishing entrepreneurship research in top journals. We were interested in understanding whether high-quality scholarship in the area of entrepreneurial studies is concentrated in a few universities and researchers, and in identifying those actors who have had the biggest impact

on the field since the turn of the century. As a result, we focused only on top-tier journals and limited the scope to research published in 2000 and after. Our study provides a systematic and comprehensive assessment of the impact of researchers and institutions on scholarly publications in entrepreneurship. The importance of our study is multifold. The ranking of an individual researcher in the field is an important question for promotion and tenure decisions

**Table 9. Top Institutions Ranked by Adjusted Appearances**

Rank	Institution	Adjusted Appearances
1	University of Pennsylvania	15.75
2	University of Maryland	12.75
3	Indiana University	11.28
4	Cornell University	8.00
5	Ohio State University	6.94
6	Texas A&M University	6.83
7	INSEAD	6.33
8	Harvard Business School	6.25
9	University of Minnesota	6.08
9	University of Washington	6.08
11	Stanford University	6.00
12	University of Illinois at Urbana-Champaign	5.83
13	University of Connecticut	5.63
14	University of California, Berkeley	5.33
15	Rensselaer Polytechnic Institute	5.00
16	Massachusetts Institute of Technology	4.83
17	University of Alberta	4.67
18	Ecole Polytechnique Fédérale de Lausanne	4.17
19	Georgia State University	4.03
20	University of Texas at Austin	4.00
20	University of Wisconsin-Madison	4.00

(MacMillan, 1993). Our study provides an objective measurement of the influence of researchers publishing entrepreneurship-related articles in high-quality journals. Universities and institutions are concerned with the scholarly contribution of their faculty. However, publicly available rankings do not consider research publications

in their evaluation. Our study provides a research-based institutional ranking for entrepreneurship-related publications. Finally, studies like ours satisfy the curiosity to know about the intellectual leaders in a field by conducting a relatively exhaustive and specific selection of publications, as opposed to making inferences based

**Table 10. Top Institutions Ranked by Weighted Appearances**

Rank	Institution	Weighted Appearances
1	University of Pennsylvania	102.50
2	Indiana University	94.00
3	University of Maryland	78.00
4	Cornell University	69.00
5	Texas A&M University	65.00
6	University of Washington	54.00
7	University of Connecticut	50.00
8	University of Illinois at Urbana-Champaign	46.00
8	University of California, Berkeley	46.00
8	University of Alberta	46.00
11	Stanford University	45.00
12	University of Minnesota	44.00
13	Ohio State University	41.00
14	INSEAD	39.00
14	Georgia State University	38.00
16	Harvard Business School	36.50
17	University of Wisconsin-Madison	32.00
18	University of Texas at Austin	31.00
19	Arizona State University	30.00
19	University of Central Florida	30.00

on arbitrary criteria, intuition, popularity, or haphazard selection procedures.

As mentioned earlier, we found that 2.9 percent of total articles addressed entrepreneurship. This finding compares favorably to the 1.8 percent entrepreneurship-related articles Busenitz et al. (2003: 288) found in their comparable sample, providing empirical support for their predication that the number of entrepreneurship articles

published in top-tier business journals will increase with time. We find that *Strategic Management Journal* (SMJ) published the most entrepreneurship articles during our study period (4.3 per annum) for a total of 70 articles. This finding echoes that of Busenitz et al. (2003) as they too found that SMJ published the highest number of entrepreneurship articles ( $n = 24$ ) for the 15-year period in their study. Notably, while Busenitz et al. (2003)

**Table 11. Top Institutions Ranked by Composite Measure**

Rank	Institution	Composite Measure
1	University of Pennsylvania	52.83
2	University of Maryland	40.50
3	Indiana University	32.30
4	Cornell University	29.33
5	University of Washington	23.50
6	Stanford University	22.50
6	INSEAD	22.50
8	University of Minnesota	22.33
9	Texas A&M University	21.67
10	Harvard Business School	21.25
11	Ohio State University	20.39
12	University of Illinois at Urbana-Champaign	20.00
13	University of California, Berkeley	19.00
14	University of Connecticut	18.83
15	University of Alberta	18.00
16	Massachusetts Institute of Technology	16.83
17	University of Wisconsin-Madison	16.00
18	University of Texas at Austin	15.67
19	Rensselaer Polytechnic Institute	15.00
20	Duke University	14.08

found *Administrative Science Quarterly* had the highest percentage of entrepreneurship articles for their period of search, we find that this journal not only published the fewest (1.8 per annum) but was also only slightly above *Managerial Science* (1.47%) for least percent of published articles (1.52%).

While the number of entrepreneurship articles published in top-tier management and organization

journals has increased over time, it seems to still be quite low. Our observation of relatively fewer entrepreneurship publications in elite business management journals gains greater salience when one considers that the Entrepreneurship Division is among the largest in the Academy of Management (Wiklund, Davidsson, Audretsch, Karlsson, 2011). Critics may charge that our perception about top journals not publishing much entrepreneurship

research is motivated by the “passion syndrome” (Ireland, Reutzel, & Webb, 2005)—researchers believe journals do not publish greater numbers of articles on a chosen discipline only because they are passionate about their area. In fact, as far as entrepreneurship research in top journals is concerned, the numbers we present speak for themselves. For example, Kirkman and Law (2005) found that *Academy of Management Journal*, which takes prides in its multifaceted and eclectic nature, published 116 articles on international management during a five-year period (2000–2004) compared to only 61 articles on entrepreneurship over the 16-year period in our research. The difference in frequency of publications between international management scholarship and entrepreneurship research in *Academy of Management Journal* is starker when one compares annual average: 23.1 and 3.8 per year, respectively. Our findings do not counter Davidsson’s (2003: 315) contention that “important works in entrepreneurship appear in high respected, mainstream journals,” but do reveal an

underemphasis on entrepreneurship research in the top journals. We are unable to examine whether the low frequency of entrepreneurship research in our sample journals is because of fewer submissions or greater rejection rates, an issue we leave for future investigations to untangle.

Turning our attention to researchers publishing entrepreneurship research, our findings seem consistent with the Matthew effect. Specifically, we find that 17 scholars published one-third of all entrepreneurship research published in the top journals during the sample period. The researchers with the most prolific record in terms of absolute frequency were Scott Shane, followed by Dean Shepherd, Rajshree Agarwal, R. Duane Ireland, Robert Baron, Marc Gruber, and Wesley Sine, respectively. Adjusted appearances, which account for the number of authors on a publication, has no effect on the ranking of Shane and Shepherd. The relative rankings of Agarwal, Baron, Gruber, and Sine do change when we consider adjusted appearances, but together these scholars continue

**Table 12. Spearman Rank Correlation of Institution Impact Measures**

		AbA	AdA	WA	CM
Spearman’s rho	Corr	1	.92**	.87**	.94**
	Absolute Appearances (AbA)				
	Sig. (2-tailed)		0	0	0
	N	303	303	303	303
	Corr	.92**	1	.89**	.97**
	Adjusted Appearances (AdA)				
	Sig. (2-tailed)	0		0	0
	N	303	303	303	303
	Corr	.87**	.89**	1	.92**
	Weighted Appearances (WA)				
	Sig. (2-tailed)	0	0		0
	N	303	303	303	303
	Corr	.94**	.97**	.92**	1
	Composite Measure (CM)				
	Sig. (2-tailed)	0	0	0	
	N	303	303	303	303

\*\*Correlation is significant at the 0.01 level (2-tailed)

to occupy the top six rankings in our sample. Weighted appearance, which accounts for mean quality of journal based on MacMillan's (1993) ranking, has no influence on Shane's and Shepherd's rankings at the top of the list, while Agarwal moved up to the third position. Finally, using a composite measure, which accounts for quality of journal and number of coauthors simultaneously, reveals Shane as the most prolific author, followed by Shepherd, Baron, Agarwal, Gruber, and Sine. Thus, across all four techniques we adopted to assess individual productivity, Shane remains at the helm of the rankings. Furthermore, regardless of the specific technique we adopt, the six most published scholars in entrepreneurship almost remain unchanged.

We find even stronger evidence for the Matthew effect when we consider institutions publishing entrepreneurship research. Specifically, when ranked by appearance, 20 institutions were credited for 307 of the 371 articles in our samples, representing 95.6 percent of the total articles in our sample. Of these, Indiana University and University of Pennsylvania ranked at the top with 32 articles in each. The University of Pennsylvania's appearance at the top of the list should come as no surprise. Shane (1997) had found University of Pennsylvania to be the leading institution for publishing entrepreneurship research during the 1987–1994 period ( $n = 51$  appearances), way ahead of the second-ranked Purdue University and Georgia Institute of Technology ( $n = 20$  each). University of Pennsylvania was also recognized for being the top-cited institution in management studies during the 1981–2004 time period (Podsakoff et al., 2008). The surprising institutional actor here is Indiana University, which was ranked 14 by Shane for entrepreneurship research during the 1987–1994 period, but ranked at the top of our list for the most recent 16-year period.

It is possible that institutional rankings based on appearance are skewed toward universities where multiple authors appear on the same article. When we consider adjusted appearances—accounting for number of authors on an article—University of Pennsylvania remains at the top, followed by University of Maryland and Indiana University, respectively. For weighted appearance, which considers quality of journal based on MacMillan (1993), University of Pennsylvania remains ahead of Indiana University (2) and University of Maryland (3). Finally, when considering composite measure, which accounts for journal quality and number of authors on the article, University of Pennsylvania is still at the top, followed by

Maryland (2) and Indiana (3). Together, these results reveal that University of Pennsylvania is undoubtedly the top institutional actor for entrepreneurship research in top journals, followed by Indiana University and University of Maryland as the other two top-ranked players.

While our findings suggest that few researchers and some prestigious institutions have the most influence on entrepreneurship research in terms of being published in the highest quality mainstream journals, our research design precludes us from delving into the mechanisms through which such influence comes to be. It is possible that prolific actors have better ideas, superior methods, and access to good data, all of which are not available to others. It is also possible that prolific actors have networks with greater access to top journals. Another possibility is that the gatekeepers at top journals are more receptive to works from prolific actors and from more reputable institutions, creating a self-reinforcing effect. We can only speculate as to why some actors are drastically more prolific than others. Future research is needed to illuminate the mechanisms underlying our findings.

Our explicit goal in this study was to conduct a contribution-based assessment of the research published on entrepreneurship in top-tier management journals. All researchers and universities mentioned in our rankings made a substantial contribution to the development and progress of scholarship in entrepreneurial studies. Despite the potential contributions of our research endeavor, we acknowledge that assessment of scholarly contribution is fraught with problems. For instance, we focused on quantity and quality of articles, ignoring the content of those articles. A logical follow-up study would involve examining the topical areas in entrepreneurship that have been published in elite journals considered here. Furthermore, it is also possible that an article published in a journal not included in our study makes a substantial impact on the field. Another issue is that the findings of our study are mostly descriptive and hence have little predictive efficacy, in that our methodology or findings cannot be used to predict researcher or institutions that will have the most impact on the field in the future. While past performance is usually a good predictor of future performance (Bamberg, Ajzen, & Schmidt, 2003), publications are a dynamic phenomenon in that they may be altered as actors or their motivations and resources change. Lastly, our study provides a snapshot of entrepreneurship research for one specific time

period (2000-2015; both inclusive). Changing the time period may reveal a different picture of productivity in entrepreneurship research. For example, if we look at just the 2005-2015 time period, the most prolific authors in entrepreneurship research considered here are Rajshree Agarwal, Robert Baron, Marc Gruber, and Wesley Sine, all sharing the top position.

Notwithstanding some limitations of our study, we provide a robust and in-depth assessment of the performance of individual and institutional actors contributing to entrepreneurship-related research. We are hopeful that our findings will be of relevance to resource providers who manage the flow of support to institutions and faculty; tenure, promotion, and reward committees; doctoral students seeking academic advisors; and institutions interested in comparing their performance on research productivity. We believe

people interested in learning where and by whom high-quality entrepreneurship research is published in top-tier managerial and organizational journals will find our study useful. Based on our findings, we predict that entrepreneurship research published in elite journals will increase going forward, but we are concerned that more entrepreneurship researchers will be competing for limited journal space compared to other fields of inquiry. Finally, given the strong evidence we found for the Matthew effect, we hope our findings will lead to some consideration of whether the current publication system at elite journals favors incumbents over new entrants. In all, if we are able to stimulate conversations and discussions about the status of entrepreneurship research published in top-tier journals, this research effort would be worthwhile.

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## REFERENCES

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- Baker, T., & Welter, F. 2014. *The Routledge Companion to Entrepreneurship*. Routledge.
- Bamberg, S., Ajzen, I., & Schmidt, P. 2003. Choice of travel mode in the theory of planned behavior: The roles of past behavior, habit, and reasoned action. *Basic and Applied Social Psychology*, 25(3), 175-187.
- Barman, S., Tersine, R. J., & Buckley, M. R. 1991. An empirical assessment of the perceived relevance and quality of POM-related journals by academicians. *Journal of Operations Management*, 10(2), 194-212.
- Busenitz, L. W., West, G. P., Shepherd, D., Nelson, T., Chandler, G. N., & Zacharakis, A. 2003. Entrepreneurship research in emergence: Past trends and future directions. *Journal of Management*, 29(3), 285-308.
- Bygrave, W. D. 2007. The entrepreneurship paradigm (I) revisited. *Handbook of Qualitative Research Methods in Entrepreneurship*, 17-48.
- Chiles, T. H., Bluedorn, A. C., & Gupta, V. K. 2007. Beyond creative destruction and entrepreneurial discovery: A radical Austrian approach to entrepreneurship. *Organization Studies*, 28(4), 467-493.
- Coe, R., & Weinstock, I. 1984. Evaluating the management journals: A second look. *Academy of Management Journal*, 27(3), 660-666.
- Davidsson, P. 2003. The domain of entrepreneurship research: Some suggestions. *Advances in Entrepreneurship, Firm Emergence and Growth*, 6(3), 315-372.
- Debicki, B. J., Matherne, C. F., Kellermanns, F. W., & Chrisman, J. J. 2009. Family business research in the new Millennium an overview of the who, the where, the what, and the why. *Family Business Review*, 22(2), 151-166.
- Franke, R. H., Edlund, T. W., & Oster III, F. 1990. The development of strategic management: Journal quality and article impact. *Strategic Management Journal*, 11(3), 243-253.

- Gomez-Mejia, L. R., & Balkin, D. B. 1992. Determinants of faculty pay: An agency theory perspective. *Academy of Management Journal*, 35(5), 921–955.
- Heck, J. L., & Cooley, P. L. 1988. Most frequent contributors to the finance literature. *Financial Management*, 17(3), 100–108.
- Ireland, R. D., Reutzel, C. R., & Webb, J. W. 2005. Entrepreneurship research in AMJ: what has been published, and what might the future hold? *Academy of Management Journal*, 48(4), 556–564.
- Ireland, R. D., & Webb, J. W. 2007. A cross-disciplinary exploration of entrepreneurship research. *Journal of Management*, 33(6), 891–927.
- Johnson, J. L., & Podsakoff, P. M. 1994. Journal influence in the field of management: an analysis using Salancik's index in a dependency network. *Academy of Management Journal*, 37(5), 1392–1407.
- Kirkman, B., & Law, K. 2005. International management research in AMJ: Our past, present, and future. *Academy of Management Journal*, 48(3), 377–386.
- Landström, H. 2014. Entrepreneurship research and its historical background. *The Routledge Companion to Entrepreneurship*, 21.
- MacMillan, I. C. 1993. The emerging forum for entrepreneurship scholars. *Journal of Business Venturing*, 8(5), 377–381.
- Merton, R. K. 1968. *Social Theory and Social Structure*. Simon and Schuster.
- Merton, R. K. 1988. The Matthew effect in science, II: Cumulative advantage and the symbolism of intellectual property. *Isis*, 606–623.
- Morrison, A. J., & Inkpen, A. C. 1991. An analysis of significant contributions to the international business literature. *Journal of International Business Studies*, 22(1), 143–153.
- Neergaard, H., & Ulhoi, J. P. (Eds.). 2007. *Handbook of Qualitative Research Methods in Entrepreneurship*. Edward Elgar Publishing.
- Peng, M. W., Lu, Y., Shenkar, O., & Wang, D. Y. 2001. Treasures in the China house: A review of management and organizational research on Greater China. *Journal of Business Research*, 52(2), 95–110.
- Podsakoff, P. M., MacKenzie, S. B., Podsakoff, N. P., & Bachrach, D. G. 2008. Scholarly influence in the field of management: A bibliometric analysis of the determinants of university and author impact in the management literature in the past quarter century. *Journal of Management*, 34(4), 641–720.
- Salancik, G. R. 1986. An index of subgroup influence in dependency networks. *Administrative Science Quarterly*, 31(2), 194–211.
- Shane, S. A. 1997. Who is publishing the entrepreneurship research? *Journal of Management*, 23(1), 83.
- Wiklund, J., Davidsson, P., Audretsch, D. B., & Karlsson, C. 2011. The future of entrepreneurship research. *Entrepreneurship Theory and Practice*, 35(1), 1–9.

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