

## **Promises to Keep**

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This new monograph (herein labeled as *PSED1 Overview*) by Paul Reynolds (2006) is a significant achievement in an effort (i.e., the Panel Study of Entrepreneurial Dynamics – PSED1) to develop and analyze one of the few generalizable longitudinal data sets on the process of business creation. This commentary is divided into three sections. First, while there have been some histories recounting significant milestones in the development of the PSED1 (Gartner, Shaver, Cater & Reynolds, 2004; Reynolds, 2000) I believe there is some additional value in placing the *PSED1 Overview* in the context of the initial expectations for creating this research dataset. Second, the commentary will offer some thoughts about the strengths and weaknesses of the *PSED1 Overview*, and third, provide some challenges to scholars for future research on emerging organizations.

The history of the PSED1 that I offer, is, admittedly, rather biased from my own experiences in field of entrepreneurship scholarship and in the creation of the PSED1, itself. Rather than attempt to speak for the entrepreneurship field, as a whole, or to suggest that I could offer a balanced perspective on the zeitgeist of entrepreneurship research over the past 25 years, it would be more appropriate to limit any claims to conjectures as to what I thought I was thinking. So, the perspective offered here is, undoubtedly a very narrow view of the history of the PSED's logic and development. I am sure there are also likely to be a number of inaccuracies in this account which I hope will be corrected by others recounting their beliefs and experiences of this period of time. The growth and development of entrepreneurship scholarship is dependent on a

community of researchers speaking the same language of interests, concerns, constructs, methods, and information (Gartner, Davidsson & Zahra, 2006). This commentary is only one view of a collaborative effort that requires many more voices to be told coherently and accurately.

### **The Promise of Generalizable Facts on Emerging Organizations**

Before the PSED1 research effort was initially begun in 1995, I had expressed a number of concerns about what scholars should study when exploring the phenomenon of entrepreneurship, as well as concerns about the generalizability and validity of samples of individuals involved in entrepreneurship (Gartner, 1985; 1988; 1989, 1990). Based on the experience of my dissertation research (Gartner, Mitchell & Vesper, 1989), it seemed, to me, that the phenomenon of entrepreneurship could be adequately addressed by studying business creation and that efforts at business creation were heterogeneous (Gartner, 1985). But, the empirical evidence used to study the phenomenon of entrepreneurship in the majority of research studies had serious flaws: Samples of entrepreneurs seemed to be poorly “constructed,” idiosyncratically collected, retrospective, proprietary, and suffered from “survivor bias.” It seemed that a typical sample of entrepreneurs were represented by individuals who were already managing existing businesses of various ages and sizes who were asked to respond to questions about their long ago past activities and thoughts during the startup process of their businesses. Comparisons to “non-entrepreneurs” were likely to be confounded by the non-representativeness of samples of these comparison groups. And, nearly all samples were retrospective efforts based on surviving established businesses, so there seemed to be no data on the efforts of those individuals who tried to start a business, and failed.

And, in all likelihood, those samples of entrepreneurs used for studies published in academic journals were proprietary.

It seemed that scholars studying business creation should study this process while it was occurring, which meant that scholars needed samples of individuals who were concurrently in the act of business creation (Katz & Gartner, 1988). And, these samples needed to be generated in a way so that the individuals surveyed reflected the business creation efforts of the population overall.

This last point needs some elaboration. There have been a substantial number of research studies that have focused on technology companies that have received venture capital financing (see Cornelius, Landstrom & Persson, 2006; Gregoire, Noel, Dery & Bechard, 2006; Reader & Watkins, 2006; Schildt, Zahra & Sillanpaa, 2006). While there is much value in focusing on the creation of businesses that will have significant impacts on technology creation and development, I have a concern that these studies are not matched to any sense of the startup population of firms, as a whole. For example, if we take, as a rough rule of thumb, the finding that there are 6,000,000 efforts at creating businesses each year, and that about 20% of these efforts (1,200,000) are started as corporations (the prior numbers taken from Reynolds, 2004), and that about 1,200 of these startup efforts receive venture capital funding (my guesstimate), then, a focus on venture capital financed firms is looking at about .0002 of business creation efforts overall. Venture capital funded business startups, then, are relatively rare events in the population of all business creation efforts (Reuf & Aldrich, 2006). Again, while these venture financed firms are extremely important to study, it would seem just as important to be able to understand, what exactly are the differences between these venture financed

firms and other business creation efforts. A focus on the other 99+% of all business creation efforts puts the venture capital financed firms in context, so that better insights are likely to be obtained about the characteristics of the entrepreneurs, their skills and abilities, social contacts, and efforts. Besides the application of venture capital, how different are these business creation efforts from other efforts to create firms? For example, to focus on venture capital financed businesses would then ignore other ways that high growth businesses are created, funded, and organized. A generalizable representative sample of all business creation efforts is critical for understanding the unique characteristics of any sub-set of the phenomenon.

Providentially, in 1994, Nancy Carter and Paul Reynolds approached me to collaborate on a study of individuals who were surveyed while they were in the process of starting businesses. The samples used: 1016 adult residents of the United States (Curtin, 1982) and 683 adult residents in Wisconsin (Reynolds & White, 1993) were generated in such a way as to be generalizable to the population of adult residents of the United States. This study (Carter, Gartner & Reynolds, 1996) offered some intriguing insights into activities involved in the creation of new businesses over a six to 18<sup>th</sup> month time frame. What was of primary concern though, in conducting this study, was the sample: 71 people. It is difficult to explore many variables without quickly getting to very small cell sizes.

From the experience of dealing with this small sample of nascent entrepreneurs grew the vision of creating a much larger sample of finding people in the process of creating a business, indeed creating a sample so large that a multitude of various analyses could be conducted so that the many factors which were likely to comprise aspects of the

business creation process could be ascertained. And, we also wanted to have a generalizable comparison group of “non-nascent entrepreneurs” to compare differences between the characteristics of the nascent entrepreneur sample and these “others.” And, we wanted a dataset that would be made public so that scholars could base their studies on a common set of empirical evidence so they could actually replicate and build on each other’s work. This was the original promise of the Panel Study of Entrepreneurial Dynamics.

And, one other thing: I believe there is a desperate need for facts about the business creation process. I believe that entrepreneurship scholarship is drifting towards a preponderance of theoretical speculation with few connections to any empirical evidence (Gartner, 2004; 2006a; 2006b). While I am not disparaging the need for theory as a way to help identify and make sense of facts, I am not thrilled with the creation of entrepreneurship theories that are marginally connected to only a few facts. As I observe dialogues among entrepreneurship scholars on various academic list servers and at academic conferences, I see many opinions based on beliefs about what scholars think entrepreneurs are doing, and few facts to back up these opinions about what entrepreneurs actually do. The PSED 1 dataset provides a “critical mess” of generalizable facts that are valuable for understanding the phenomenon of emerging organizations, not only for academic scholarship, but to policy makers and practitioners as well. This is another promise kept.

### **The Promise of the *PSED1 Overview***

I see the *PSED1 Overview* as a tour-de-force for its comprehensive analysis of the many variables in the PSED1 dataset that might, in a broad way, have an effect on: (1)

the decision to pursue a business creation effort, and (2) the many factors that might lead to the creation of an on-going business. The number of findings on the above two issues is impressive, of critical importance for scholars and policy makers, and should be considered as a catalogue of fundamental facts about the business creation process. This monograph must be in every entrepreneurship scholar's library.

As Reynolds suggests, the monograph offers one approach to understanding the phenomenon of business creation: a comprehensive data analysis of nearly all of the variables in the PSED1 dataset. He suggests that the traditional academic process of publishing journal articles and monographs, piecemeal, can also eventually result in a breadth and depth of insights, and, there are, actually, two overviews of PSED1 research, that do provide similar findings (Davidsson, 2006; Wagner, 2006), though not as thorough or comprehensive. There is a need for a comprehensive analytical overview of the PSED1, which Reynolds successfully achieves.

I too (Davidsson, 2006; Parker, in press), admit that there are a number of valid concerns about the ability of the PSED1 sampling process to capture certain types of business creation efforts, and that the longitudinal data collected on business creation failures, for example, has shortcomings. I would have preferred to see more questions in the PSED1 on the activities of the nascent entrepreneurs, their partners, and "helpers" in the business creation process, and I would have liked much more detail about the process of identifying and acquiring resources. I would assume that scholars who use the PSED1 dataset will not be able to find all of the variables they would ideally like to have, and that certain questions could have been worded better to capture more specific information about the phenomenon. Any dataset will have shortcomings.

The main strength of the *PSED1 Overview* is its comprehensive analysis of the “main effects” for the variables that scholars involved in the development of the PSED1 dataset posited might have some influence on: (1) the decision to pursue a business creation effort, and (2) the many factors that might lead to the creation of an on-going business. Reynolds points out that he used as his guide in identifying variables to analyze, the various chapters in the *Handbook* (Gartner, Shaver, Carter & Reynolds, 2004). One concern about the *PSED1 Overview* might be that the logic for specific analyses and connections to other research is missing. The theory and literature review for the *PSED1 Overview* is the *Handbook*. Indeed, I would think it would be difficult to grasp the value of the findings in the *PSED1 Overview* without the foundation of the *Handbook*.

Since my interest in the phenomenon of business creation tends to focus on entrepreneurial behavior, I will narrow my brief comments about the findings of in the *PSED1 Overview* to that section of the manuscript (Section D and Appendices D1 – D4), except for this one point: Reynolds’ work to link the PSED1 dataset to other public datasets on entrepreneurial activity is a powerful demonstration of the generalizability of the PSED1 data to datasets that capture other phases of the entrepreneurial process. This is no mean feat to do, and, this exercise shows scholars and policy makers how these various datasets are connected to each other, and that the findings from these other data sources converge.

The analysis of the startup activities in the *PSED1 Overview* is both creative and thorough. The challenge in exploring the sequence of activities that nascent entrepreneurs engage in is to make sense of the various sequences of specific activities.

The factor analysis of the 23 activities into 6 domains provides a helpful way to consider, broadly, whether certain categories of activities likely lead to ongoing businesses. I would note that these findings corroborate speculations made earlier (Carter, Gartner & Reynolds, 1996) that activities that make the emerging businesses visible to others increased the likelihood of an ongoing business. It is also worth noting that there is a rough ratio of “outcomes” of business creation efforts: 1/3 create on-going businesses, 1/3 quit, and 1/3 are “still trying,” and that successes and quitters seem to be similar in the intensity of their startup efforts during the first two years of gestation. The analyses of the interactions between various characteristics of the nascent entrepreneurs (e.g., industry experience, age, ethnicity, gender) and their behaviors into ten gestalts of successful business creation reemphasizes the heterogeneity of the business creation process (Gartner, 1985; 1988). There is no one “ideal” pattern of startup behaviors and that success at getting into business is full of interdependencies among the entrepreneur’s background, skill set, type of business started, and the competitive and environmental landscape. I am in agreement with Reynolds’ comments that success at business creation is primarily based on what individuals do, rather than on who they are.

It should be pointed out that many of the activity comparisons were between those who started businesses, and those who did not, which includes both the “still trying” and the quits (see Appendix D.3). As a number of the graphs indicate, the “still trying” group doesn’t engage in enough activity to either start a business, or quit. I think lumping the “still trying” with the quits muddles the comparisons between the ongoing business startups and the others. I think that analyses that separated the nascent entrepreneurs into three groups (on going business, quit, “still trying”) might have provided other findings

and insights. Given that the “quits” appear to behave similarly to those that start a business until the “quits” quit, the difference between these two groups may be less about the efficacy of specific activities, and more about the worthiness of the opportunity pursued. The more significant differences may be between the nascent entrepreneurs in the on going business and the quits categories compared to the “still trying” category.

The data provided in Appendix D1 has significant implications for scholars concerned with selecting an appropriate “risk set” within the PSED1 for analyses. As Reynolds points out, Delmar and Shane (2003) used cases only if the first behavior occurred within nine months of the first interview. We (Liao & Gartner, 2006) used a similar selection strategy that limited cases in the sample to those where the first behavior occurred within two years of the first interview. Part of our logic for selecting this sample involved analyses that appeared to indicate that cases with an initial activity date more than two years prior to the initial interview has significantly more activities accomplished and a higher propensity to fall into the ongoing business category (Gartner, Carter, Lichtenstein & Dooley, 2003). Reynolds offers some compelling evidence to suggest that an appropriate risk set for analyses involving the startup activities could use cases with an initial activity date within five years of the first interview. This risk set produces a substantially larger sample for analysis which would allow for more involved multivariate analyses.

Finally, Reynolds provides information in Appendix D.2 for each case in the PSED1 dataset on total time in the gestation process linked to the outcome measures (new firm, “still in” startup, and quit). This case file is information that scholars involved in studying the entrepreneurial process should add to their PSED1 dataset.

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In many respects, the *PSED1 Overview* is an invitation for more detailed analyses of the dataset to now occur. I believe that many profound insights into the phenomenon of business creation are still to be uncovered. While Reynolds offers some analyses of interactions among the variables, there are, I believe, significantly more analyses of various interactive effects that need to be achieved. For example, the accomplishment of a business plan has been shown to be a significant influence on subsequent success at creating an on-going business (Delmar & Shane, 2003; 2004; Honig and Karlsson, 2004; Liao & Gartner, 2006), but this main effect is also moderated by: when the business plan is undertaken during the business creation process, other activities nascent entrepreneurs accomplish before completing the business plan, and the perceived uncertainty of the environment. I believe that a substantial number of piecemeal efforts that analyze a limited number of variables will provide a richer and more thorough portrait of the business creation process. Much of the PSED1 dataset remains unexplored for answering specific issues that have continually plagued the entrepreneurship field. For example, while Xu and Ruef (2004) have found nascent entrepreneurs to be less risk-tolerant than the general population, there is still more work to be done to evaluate how risk perceptions might matter to different types of individuals who choose entrepreneurship, and how risk perceptions might influence the process of business creation. The breadth and depth of the information in the PSED1 dataset will continue to have much potential for generating critical insights into the nature of entrepreneurship.

I believe that the findings of the PSED1 will have a significant effect on other research efforts in the entrepreneurship field. By providing a context for what the general

phenomenon of business creation looks like, the PSED1 provides a scaffold for linking other kinds of research to the broad phenomenon of entrepreneurship. For example, the PSED1 data offers, in actuality, only a limited understanding of entrepreneurial behavior. The measures of entrepreneurial behavior in the PSED1 dataset are rather crude landmarks in a more varied terrain of subtle actions and surmises that entrepreneurs attend to during the business creation process. Comprehensive case studies and histories of entrepreneurs are necessary to understand the entrepreneurial process [c.f., Baker & Nelson (2005) and their exploration of the uses of bricolage in the process of creating businesses]. Research based on small samples, or on an “n of one,” can be placed within the context of the general population of business creation through the use of the PSED1 by linking the characteristics of the individuals in these small samples to the characteristics of the general population. Differences in findings can then be better understood in regards to the differences in the characteristics of the samples used.

Finally, I posit that the PSED1 data and research efforts are of such fundamental importance to entrepreneurship scholarship, overall, that every entrepreneurship scholar needs a basic familiarity with the data and its findings. Any theory or exegesis on business creation needs to recognize PSED1 findings. Indeed, I would hazard to suggest that findings and results generated from PSED1 research should take precedence over other research studies on the phenomenon of business creation. Given the generalizability of the PSED1 sample as described in the *PSED1 Overview*; other research studies on business creation need to offer comparisons of their samples to PSED1. The *PSED1 Overview* offers compelling evidence that the PSED research effort offers significant insights into the phenomenon of business creation. This monograph

will serve as a foundation for many more research insights to be generated in the future. There is much more work to do in exploring the PSED1 dataset, a promise that I hope more scholars will keep.

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