Chapter 10
Financing the Emerging Firm: Comparisons Between PSED I and PSED II

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10.1 Introduction

This chapter explores whether certain kinds of financing that are both expected and acquired by entrepreneurs during the venture startup process might have an influence on the likelihood that these efforts will lead to ongoing ventures. We look at whether entrepreneurs expect and utilize their own personal funds for business creation, as well as whether entrepreneurs expect and acquire funds from sources external to themselves. We offer a novel way of looking at external funding sources by dividing external funding into two categories: monitored and unmonitored.

Nearly all research in the entrepreneurship area on the process of acquiring financial capital has focused on new ventures rather than on emerging ventures (Astebro & Bernhardt, 2003; Cassar, 2004; Chaganti, DeCarolis, & Deeds, 1995; Ou & Haynes, 2006; Verheul & Thurik, 2001), though some research has been conducted on firm financing using the first Panel Study of Entrepreneurial Dynamics, PSED I (Reynolds, 2007; Stouder, 2002; Stouder & Kirchhoff, 2004). By emerging ventures, we mean those efforts undertaken by individuals to develop an on-going venture. Emerging ventures, therefore, are not ventures per se, but attempts by individuals to develop a venture. The successful outcome from the emerging venture process would be a new venture (Gartner, 1993; Gartner & Brush, 2007).

While Reynolds (2007) and Reynolds and Curtin (2008) offer some insights into some of the broad characteristics of emerging venture finance (e.g., amounts invested by individuals and teams), there appears to be little research on the structure of these financial investments and their relationship to venture creation success. Using theory from research on the sources of funding for new ventures (e.g., Cassar, 2004), we offer a set of hypotheses about the

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A version of this chapter, focusing on a portion of the PSED1 data only, was presented in (Gartner, Frid & Alexander, 2008)

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types of financial resources that certain kinds of emerging businesses expect to pursue and acquire, and we explore whether entrepreneurs using these expected and acquired funding sources are more likely to create on-going businesses. We test our hypotheses using data from the first Panel Study of Entrepreneurial Dynamics, PSED I (Gartner, Shaver, Carter, & Reynolds, 2004), and the second Panel Study of Entrepreneurial Dynamics, PSED II (Reynolds & Curtin, 2008); both are longitudinal data sets that track the activities of entrepreneurs in the process of starting ventures.

Our findings suggest that entrepreneurs who are able to acquire external financing of any kind (monitored or unmonitored) are significantly more likely to have started a business or remain in the business startup process. Indeed, the use of personal funds only was negatively correlated with startup survival.

10.2 Theory Development and Hypotheses

Entrepreneurs use a variety of financing sources for the development of their ventures: their own personal finances; the finances of their spouses, team members, family and friends; financing by equity investors; debt through personal loans; debt through loans to the business from banks, suppliers, capital financing, etc. Typically, the way that business financing has been understood, is by separating the sources of financial capital into two broad categories: debt or equity (Cassar, 2004; Chaganti et al., 1995). While for certain kinds and sizes of ongoing businesses the categories of "debt" and "equity" might provide meaningful insights into these firms' capital structures, the phenomenon of emerging ventures is different. For example, the nature of debt for an emerging venture can be of various types with various obligations for payment. An entrepreneur can provide a loan of personal funds to the emerging venture. An entrepreneur can have family and friends make loans to the emerging venture. An entrepreneur could acquire a bank loan to fund the emerging venture. We believe that the obligations to a debt holder who might be a family member or a friend would be very different than the obligations an entrepreneur would have for a bank loan. We believe that the label "debt," then, has very different consequences and implications for both the entrepreneur and the emerging venture when debt is acquired personally, from family or friends, or from banks and sophisticated investors.

We would offer the same logic for surmising that equity in emerging ventures may have different obligations to shareholders than in established organizations. An equity investment provided by family and friends to an emerging venture may have less of a claim on present or future earnings or have fewer obligations regarding control of the corporation compared to equity held by venture capitalists (VCs) or professional investors.

10.2.1 Personal, Monitored, and Unmonitored Financing Sources

We suggest that a better way to differentiate among various sources of financial capital used for creating new ventures is to consider the level of oversight and involvement the provider of a source of capital might require. First, we note that nearly all entrepreneurs are likely to use their own personal financial resources, and that they will also use personal funds from other team members. In terms of acquiring resources from others outside the venture team, we posit that there are two broad categories of funding sources that have different levels of oversight and involvement: unmonitored and monitored financial sources. Unmonitored sources of funds include funds from a second mortgage, credit cards, spouses, friends, and family. These funds are provided to the entrepreneur with little to no overview of the business plan or operations. For example, an entrepreneur can acquire capital through a credit card, and these funds are not strictly monitored in terms of what the funds are used for, and how these funds will eventually be paid off. In contrast, monitored sources of funding include loans from a bank, finance company, current employer, the Small Business Administration, and venture capital. These funds are provided after a thorough understanding of the business plan and operations have been achieved. A bank loan would require entrepreneurs to provide an indication of how the funds were to be used, and, to show how and when the funds would be paid back.

This categorization scheme of external financial resources into monitored and unmonitored is not without some concerns. Certainly it is possible that our categorization of various sources of financial capital into these two broad sources of funding may, at times, fall into the opposite category. A family member might loan money to an entrepreneur and require a business plan, and, continue to review the entrepreneur's efforts over time. Paul Reynolds (in a personal conversation) suggested that family members might monitor their financial investments through "dinner table" conversations, which might be more frequent and thorough than monitoring done by banks or sophisticated investors. And, a loan officer at a bank might provide a business loan without much documentation and oversight. But, we would surmise that the kinds of financial sources we have identified would likely fit into the two types of unmonitored or monitored categories in nearly all circumstances.

It should also be noted that we are interested in the kinds of funding that are expected and acquired *during* the process of venture creation. Our view of monitored and unmonitored funding assumes oversight *during* the venture creation process, and is less oriented towards what possible consequences might occur if these expected (or acquired) funds are not paid back to these external sources. Doug Bosse, in comments made at the Babson Entrepreneurship Research Conference in June 2008, suggested that entrepreneurs seeking outside funding might face either expected contractual consequences or expected social consequences from accepting resources from others. For example, the social consequences of failing to pay back either equity or debt to friends or family might be more serious to an entrepreneur than the failure to pay back funds to a bank or VC, so entrepreneurs may be more likely to insure venture success based on funding from family and friends, than from contractual sources such as banks or VCs. Our constructs of “monitored and unmonitored” are less about expected consequences of a venture investment, and more about whether or not venture investors are likely to pay methodical attention to their investment.

We believe that the “monitored and unmonitored” financing constructs do have some face value, and, therefore, at this initial stage, are worth exploring. We develop hypotheses about how various characteristics of these entrepreneurs and their firms will likely influence these entrepreneurs’ expectations of receiving these two types of financing, and whether the actual acquisition of these types of financing will affect successfully starting a new venture. And, we then subsequently provide a way to operationalize these two categories of financing. Further development of these constructs is certainly warranted through in-depth interviews of entrepreneurs to ascertain the ways that various investors actually interacted with these entrepreneurs during the venture creation process.

10.2.2 Characteristics of Funding Source Use

Parts “A” of the first five hypotheses focus on the expectations for funding, and, therefore, are only applicable to data analyzed from PSED I. We suggest that the entrepreneur’s expectations of the future size of the new venture will significantly influence whether monitored and unmonitored sources of funds are sought during the startup process. Smaller companies would require less capital. Furthermore, the expectation that a company would be small would likely mean the entrepreneur might be offered less capital, as well. Barriers to entry may exist relative to more sophisticated capital sources, so the access and cost of these funding sources may be too high for entrepreneurs contemplating starting companies that stay small. Larger firms would likely need outside funding for expansion. Finally, the cost to access certain kinds of funding may decline the larger the firm. Ang (1992) finds that the high transaction costs faced by small businesses in securing outside financing may preclude some sources of funding. Cosh and Hughes (1994) and Cassar (2004) find that smaller firms use relatively less outside financing.

H_{1A}: The expected size of the new firm will be positively related to an expected use of unmonitored and monitored sources of financing as a larger percentage of total resources.

H_{1B}: The expected size of the new firm will be positively related to the acquisition of unmonitored and monitored sources of financing as a larger percentage of total resources.

Financial institutions and VCs may consider the form of incorporation to be a signal of the credibility, internal operational quality, and accountability of the proposed business. Operational quality and accountability are often found in successful businesses. Prior evidence by Storey (1994), Freedman and Godwin (1994), and Cassar (2004) suggest a positive relationship between incorporation and leverage and/or bank financing.

H_{2A}: Emerging firms who are incorporated will be positively related to an expected use of more monitored sources of financing.

H_{2B}: Emerging firms who are incorporated will be positively related to the acquisition of more monitored sources of financing.

Agency conflicts between debt and equity holders tend to be higher for firms that are expected to grow more quickly. This results from the incentive for equity holders to leverage the company, as they are the residual claimants, whereas the debt holders are the fixed claimants. Michaelas, Chittenden, and Poutziouris (1999) find that leverage and debt are positively related to future growth. Cassar (2004) finds that future growth is positively related to the use of bank financing.

H_{3A}: Entrepreneurs who intend to start firms with higher rates of growth will be positively related to expecting to use more unmonitored and monitored sources of financing as a larger percentage of total resources.

H_{3B}: Entrepreneurs who intend to start firms with higher rates of growth will be positively related to acquiring more unmonitored and monitored sources of financing as a larger percentage of total resources.

H_{4A}: Entrepreneurs who intend to start firms with higher rates of growth will be positively related to expecting to use more monitored sources of financing.

H_{4A}: Entrepreneurs who intend to start firms with higher rates of growth will be positively related to acquiring more monitored sources of financing.

Characteristics of the entrepreneur may affect access to funding. Education and industry experience may provide entrepreneurs access to funding networks that may otherwise not be available. For example, Cleman and Cohn (2000) find that education is positively related to acquiring external loans. While Verheul and Thurik (2001) and Haynes and Haynes (1999) find that gender has no influence on the likelihood of getting a loan, we thought it worth exploring whether gender had an influence on the types of funding sources entrepreneurs are expected to acquire. In general, in terms of the characteristics of the business owner, overall, Cassar (2004) found that once firm characteristics were taken into consideration, the characteristics of the business owner do not affect the financing of the firm.

10.2.2.1 Gender

H_{5A}: Male entrepreneurs will be more likely to expect to use monitored and unmonitored sources of financing as a larger percentage of total resources than female entrepreneurs.

H_{5B}: Male entrepreneurs will be more likely to acquire monitored and unmonitored sources of financing as a larger percentage of total resources than female entrepreneurs.

10.2.2.2 Race

H_{5C}: White entrepreneurs will be more likely to expect to use monitored and unmonitored sources of financing as a larger percentage of total resources than minority entrepreneurs.

H_{5D}: White entrepreneurs will be more likely to acquire monitored and unmonitored sources of financing as a larger percentage of total resources than minority entrepreneurs.

10.2.2.3 Education

H_{5E}: The higher the entrepreneur's level of education, the greater the proportion of monitored and unmonitored funding the entrepreneur will expect to use.

H_{5F}: The higher the entrepreneur's level of education, the greater the proportion of monitored and unmonitored funding the entrepreneur will acquire.

10.2.2.4 Net Worth

H_{5G}: The higher the entrepreneur's net worth, the greater the proportion of monitored and unmonitored funding the entrepreneur will expect to use.

H_{5H}: The higher the entrepreneur's net worth, the greater the proportion of monitored and unmonitored funding the entrepreneur will acquire.

10.2.2.5 Startup Experience

H_{5I}: The greater the number of prior startups the entrepreneur has been involved in, the greater the proportion of monitored and unmonitored funding the entrepreneur will expect to use.

H_{5J}: The greater the number of prior startups the entrepreneur has been involved in, the greater the proportion of monitored and unmonitored funding the entrepreneur will acquire.

10.2.2.6 Industry Experience

H_{5K}: The greater the number of years the entrepreneur has worked in the same industry as the startup, the greater the proportion of monitored and unmonitored funding the entrepreneur will expect to use.

H_{5L}: The greater the number of years the entrepreneur has worked in the same industry as the startup, the greater the proportion of monitored and unmonitored funding the entrepreneur will acquire.

The critical words in the first five hypotheses are: expected and acquired. Because the data from both PSED I and PSED II looks at individuals who are in the process of starting businesses, it is possible to explore what these individuals expected to do (in PSED I) and, then, subsequently study what they actually did (in PSED I and PSED II). For the final two hypotheses, we examine whether the expectation and acquisition of using monitored sources leads to starting an on-going business. Given that the acquisition of monitored sources of financing is likely to require an entrepreneur to provide a business plan and financial projections, we would assume that these entrepreneurs would be better prepared during the startup process and that they would select the kinds of businesses that would be more likely succeed so as to merit the acquisition of monitored financing.

> H_{6A}: Entrepreneurs who expect to use monitored sources of financing are more likely to start an on-going business.

> H_{6B}: Entrepreneurs who acquire monitored sources of financing are more likely to start an on-going business.

10.3 Samples and Questions

We used a cleaned sample of 817 cases (Shaver, Carter, Gartner, & Reynolds, 2001) taken from the Panel Study of Entrepreneurial Dynamics I (Gartner et al., 2004) and a sample of 1,214 cases from the Panel Study of Entrepreneurial Dynamics II (Reynolds & Curtin, 2008) to explore the financing expectations and actions of entrepreneurs during the startup process. Analyses were conducted using weights so that these samples might better represent the general population of U.S. working age adults (Reynolds & Curtin, 2004).

There are a number of significant differences in the questions asked about financing in the PSED I and PSED II data sets. Stouder and Kirchhoff (2004) describe the financing questions in PSED I in some detail. Our chapter will therefore, point out how the PSED II financing question were organized, and how these questions differ from PSED I. Financing questions in PSED I are listed in Appendix Tables 10.8–10.10.

Three principal sections of the PSED II deal with emerging firm financing. Section E (Startup Finances) was designed to assess the following: whether or not external financing is sought or is even relevant to the startup; what activities are undertaken that affect both costs and revenues; the level of financial sophistication of the respondent (see Katz & Cabezuelo, 2004); and actions taken related to the official legal registration of the emerging firm.

In sections Q and R of the PSED II, items regarding startup investments and the net worth of the emerging firm are addressed. Similar to the items in PSED I, these two sections examine the sources and amounts of funding acquired by nascent entrepreneurs. However, items in the first wave of the PSED I were about financing *expectations* (such as whether funding was expected to come from source “x”, and, how much was expected from this source). Waves 2–4 in the PSED I asked respondents to indicate how much they actually acquired. For the two waves in the PSED II, respondents were asked to indicate how much they actually acquired from each source. Only one item in PSED II deals with financing expectations, and it asks respondents to gauge how much, overall, they expect to acquire to start the business, rather than their expectations of how much they expect to acquire from each financing source.

The logic for focusing on what nascent entrepreneurs actually acquired at each wave in the data collection process in PSED II (and particularly at Wave 1) was to provide more similarity in measuring actual behaviors in financing vis-à-vis other startup behaviors. So, while the PSED I questions ask nascent entrepreneurs what they expected to obtain for various sources of outside financing, the questions in PSED II asked respondents what they actually acquired for various sources of outside financing.

Another difference between the financing questions in PSED I and PSED II, is that questions in PSED II separate financing by whether the emerging venture has been legally registered or not. For many sources of financing a firm must be legally registered in order to acquire that source of funding. In PSED II, Section Q asks respondents about the source of funds from other persons and legal entities acquired *before* registering legally. Section R asks respondents about loans and other financial support received *after* registration. Financing sources are further categorized based on whether contributions are loans to the new business that are expected to be paid back (debt), or are provided as a percentage of ownership (equity).

Stouder and Kirchhoff (2004: 358–366) provide descriptions of finance variable names and interview questions in PSED I, which are reproduced here in Appendix Tables 10.8–10.10. PSED II variable names and interview questions are provided in chapter Appendix Tables 10.11–10.13. The "other choices" column lists associated variables (often the same item is applied to other owners of the emerging firm; i.e. AQ4_1, AQ4_2, AQ4_3, etc.). The final three columns describe the flow of the interview pattern based on responses to specific questions.

In Tables 10.1 (PSED I) and 10.2 (PSED II), we classify questionnaire items into the three categories of personal contributions, unmonitored external sources, and monitored external sources.

Table 10.1 PSED I questions used for personal, unmonitored, and monitored sources

Dependent variable	Wave 1 Expected	Wave 2 Acquired
Personal contributions*	Q198	R656
	Q212_1–5	R678_1–5
	–	R771
	–	R772
Unmonitored external sources		
Spouse	Q268	–
Spouse (of team members)	Q270	–
Family and friends	Q272	–
Family and friends (of team)	Q274	–
2nd Mortgage	Q277a	–
Credit card	Q282a	R779

Table 10.1 (continued)

Dependent variable	Wave 1 Expected	Wave 2 Acquired
Family (respondent + team)	–	R773, R773a
Friends (respondent + team)	–	R774, R774a
2nd Mortgage/refinancing car	–	–
Other	Q288a	R780, R781
Monitored external sources		
Employer	Q276	–
Bank	Q279	–
SBA loan	Q281	–
Venture capitalist	Q284	–
Personal finance company	Q286	–
Bank/financial institution/VC	–	R775, R775a
Private investors	–	R776, R776a
Government agencies	–	R777, R777a
Suppliers/subcontractors	–	R778
Personal finance firm	–	–
Other	Q288a	R780, R781

* Personal contributions in Wave 1 are acquired, not expected, by respondents.

Table 10.2 PSED II questions used for personal, unmonitored, and monitored sources

Dependent variable	Wave A	Wave B
Personal contributions		
Personal savings before registration	AQ4_1–5	BQ4_1–5
Personal (+ team) equity after registration	AR4	BR4
Personal loan after registration	AR10	BR10
Start-up team debt loan after registration	AR11	BR11
Unmonitored external sources		
Family and relatives before registration	AQ5_1–5	BQ5_1–5
Friends, employers, colleagues before registration	AQ6_1–5	BQ6_1–5
Credit cards (before registration)	AQ7_1–5	BQ7_1–5
Asset backed (2nd mortgage, car loan) before registration	AQ9_1–5	BQ9_1–5
Lease-backed (property and equipment) after registration	AR7	BR7
Spouses, family of start-up team after registration	AR12	BR12
Employees who will not own, after registration	AR13	BR13
Credit cards (after registration)	AR15	BR15
Monitored external sources		
Bank or financial institution loan before registration.	AQ8_1–5	BQ8_1–5
Asset backed (can be repossessed) before registration	AR6	BR6
Bank credit line after registration	AR8	BR8
Credit from suppliers after registration	AR9	BR9
Bank loan after registration	AR16	BR16
Venture capitalists	AR17	BR17
Government agency (non-SBA)	AR18	BR18
SBA-guaranteed loan	AR19	BR19

It should be noted that, because the PSED II data has only two waves, while the PSED I data has four waves, we will be using only the first two waves in PSED I so as to make similar comparisons over time between the two data sets.

For personal contributions, respondents were asked how much of their own money they had contributed to the business, and how much in personal funds other team members contributed to the business. These were added together to construct the personal contributions variable. For unmonitored and monitored external sources of funding, in PSED I, Wave 1 item numbers list what respondents *expected* they would receive in funding. Wave 2 PSED I item numbers are about what respondents actually *acquired* in external funding. Unmonitored sources of funds include funds from a 2nd mortgage, credit cards, spouses, friends, and family. These funds are provided to the entrepreneur with little to no overview of the business plan or operations. In contrast, monitored sources of funding include loans from a bank, finance company, current employer, the Small Business Administration, and venture capital. These funds are provided after a thorough understanding of the business plan and operations have been achieved.

We also control for firm characteristics such as the expected size of the business (AT2), industry (AB1), legal form (AC1, BC1), team size (AG2, BG2a), expected growth rate (AT1), and characteristics of the nascent entrepreneurs such as industry experience (AH11), prior startup experience (AH12), race (AH3, AH4), education (AH6), gender (qsex), and household net worth (AZ36x).

The startup outcome measure was determined using questions from Wave B, Section A. Efforts undertaken by nascent entrepreneurs were categorized as a *new firm* if all of the following conditions were met in more than 6 of the past 12 months: the new business received money from the sale of goods (BA30); monthly revenue was greater than monthly expenses (BA32); and salaries or wages of owners who were active in managing the business were included in monthly expenses (BA34).[1] Startup efforts were categorized as *active startups* if respondents answered "no" to any one of these conditions. Active startups also include efforts where the respondent devoted more than 160 h of full-time work to the startup during the past year, and expected to spend more than 80 h over the next 6 months (BA37, BA38); the respondent considered the startup to be a major focus of his or her work career (BA40); and he or she declared active involvement in the startup (BA42). Startup efforts were categorized as *quit* if respondents declared disengagement from the process (BA15 or BA42).

10.4 Comparisons of PSED I and PSED II

In this section of the chapter, we examine the effects of individual and emerging firm characteristics on the type and amount of funding used during the venture creation process. We compare the initial interview and first follow-up results from Waves 1 and 2 in PSED I to the Waves A and B in PSED II. It is worth noting how methodological differences in the finance sections between the two data sets affect statistical comparisons and analysis. In the PSED II data set, determining the amount of funding by source contributed to the emerging firm is straightforward. In Wave A, respondents are asked how much has been contributed; and in Wave B they are asked how much has been contributed overall (Wave A + Wave B). In addition, respondents are asked to confirm if the amount given is indeed correct. A manual examination of the financing variables will reveal that in almost all cases responses are consistent and that the total amount contributed will correspond to the value listed in the most recent wave of data collection, for each respondent.

In the PSED I, it is less clear whether question items are asking for a cumulative amount of money contributed to the emerging firm. In addition, questions differ between waves. Some sources of funding are reworded, combined with other sources of funding, or dropped altogether. After manually examining the data it appears that some respondents report how much "total, so far" has been contributed to the startup, while others report how much was contributed specifically for that particular wave.

We dealt with this in the following manner. First, most of the discrepancies show up in the later waves (S and T). Because this study looks only at Wave Q versus Wave R, we don't have this problem. All the Wave Q questions ask about expectations, and all the Wave R questions ask "How much has X put into the business." At Wave Q, if respondents indicated that they have already asked the source, and the source said "yes," that dollar amount was included in the acquired category. For example: Q266 asks if spouse was asked for funding. Q266a asks if the answer was "yes or no" or "will fund." Q268 asks how much was expected. If Q266a was "yes," then the amount from Q268 would be acquired.

There is no problem with determining unmonitored funding sources between items in Waves Q and R. Wave Q separates respondent friends, family, team friends, and team family into four separate items. Wave R combines respondent and team friends, and respondent and team family. As per the categorization scheme in Table 10.1, all of these sources are grouped together as "unmonitored." To explore funding of *only* friends or *only* family, we would combine the respondent and team items from Wave Q and compare these to Wave R. The logic for the monitored sources similarly applies. We are comparing total monitored at Wave Q to total monitored at Wave R. So while the bank/ financial institution/ VC are all combined into one question in Wave R, but separated into three items for Wave Q, we only run into problems when we want to compare *only* bank financing, or *only* VC financing. Similarly, questions regarding funding from private investors, government agencies, and suppliers/ subcontractors are asked in Wave R but not in Wave Q, which could inflate the values in the Wave R "acquired" category when compared to "expectations." But, the number of responses and funding provided for these categories was minimal [i.e., private investors (R776): 3 total, $12,000, $2,000, and $100; government agencies (R777): 2 total; $100,000 and $115,000; subcontractors (R778): 2 total; $30,000 and $10,000]. We also looked at the open-ended questions regarding expected financing in Wave Q, "other funding sources," and categorized these responses into either monitored or unmonitored. Presumably, if funding from private investors, government agencies, and subcontractors was expected, it would have shown up in the responses to the "other funding sources" item.

The logic underlying the finance questions in PSED I were meant to measure financing expectations, followed by what actually occurred. Wave 1 asks for *expected* amounts by source and Waves 2–4 ask for *acquired* amounts. None of this is to say that determining funding amounts in PSED I is impossible. Indeed, analyzing financing expectations and then seeing what actually occurred is a major benefit to using PSED I. What it does mean, however, is that comparisons between PSED I and PSED II are not as straightforward as one might expect.

PSED II values are all acquired funding, but, respondents are asked to reveal funding behavior before and after legal registration of the nascent venture. It appears that the logic for exploring "before and after" legal registration is that the failure to obtain legal registration may be a significant barrier to acquiring certain funding sources, and, that certain types of funding might only be given to legally registered businesses, rather than provided to the founders. (In hindsight, it might have been valuable to ask respondents whether they had also personally co-signed for any debt obligations made to the legal entity.)

Table 10.3 describes the frequency, mean, and median dollar amounts for each type of funding used (personal funds, personal funds only, unmonitored, and monitored) in PSED I and PSED II. Frequency counts for the type of funding used (personal funds, personal funds only, unmonitored, and monitored) indicate that there are significant differences in the distributions of sources of financing acquired between the two samples ($p < 0.001$ for personal, personal contributions only, and unmonitored funding). More respondents in PSED I used personal funds (90.4%) compared to those in PSED II (84.4%). PSED I respondents were less likely to use personal funds only (36.6%) to fund the emerging firm, compared to 46.7% using personal funds only in PSED II. More respondents in PSED I acquired unmonitored funding (59.9%) compared with 33.5% in PSED II. For the acquisition of monitored funding, no significant

Table 10.3 Use of personal and external funding by PSED I or PSED II (weighted)

	PSED I			PSED II		
	Frequency (%)	Mean ($)	Median ($)	Frequency (%)	Mean ($)	Median ($)
Personal contributions	90.4	37,100	8,000	84.4	31,700	5,000
Personal contributions *as the sole source of financing*	36.6	17,475	5,000	46.7	14,212	3,000
Acquired unmonitored	59.1	34,969	6,520	33.5	23,286	4,000
Acquired monitored	18.3	113,274	34,119	15.4	91,370	18,802

differences were found between nascent entrepreneurs in PSED I and PSED II: 18.3% of PSED I respondents acquired monitored funding, compared with 15.4% of the respondents in PSED II. Finally, it should be noted that Reynolds and Curtin (2008) also found significant differences in the distribution of "total funding by team members" between the PSED I and PSED II data sets. They discussed problems with accounting for "outliers" in the PSED II data set, and suggested that the differences reflect a number of respondents in PSED II who invested either larger or smaller amounts of funding than respondents in the PSED I cohort (Reynolds and Curtin, pp. 217–221).

The average amounts of funding from each source are heavily skewed due to extremely high values. Therefore, the median values in Table 10.3 provide a better measure of central tendency for both samples. Both average and median values are listed here.

To test for differences between the mean dollar amounts acquired for each source of funding in the two samples, we ran a series of independent-samples t-tests. Again, a number of methodological issues arose while making this comparison due to differences in questions between the two data sets. Reported funding amounts for monitored and unmonitored funding in Wave 1 of PSED I were recoded as actually having been acquired if the respondent indicated that funding for the emerging firm was complete, or if the funding source actually contributed the money. Comparisons of the mean funding amounts represent acquired funding only, not expectations, in PSED I and PSED II.

Also, financial data in both the PSED I and PSED II data sets are highly skewed. In both data sets, a few respondents and their respective team members made personal contributions in millions of dollars, while a large number of respondents made personal contributions of less than $5,000. Many respondents also reported acquiring zero dollars of external unmonitored and monitored funding, contributing to these skewed distributions. Following the logic of Reynolds and Curtin (2008), all high values were reset to three standard deviations above the mean. We also do not include the zero values in the analysis, since we are interested only in those nascent entrepreneurs who acquired funding.

Table 10.4 shows results from the tests, comparing the mean dollar amounts acquired by respondents in PSED I and PSED II. We report the means comparisons for the log—transformed variables for personal contributions, personal contributions only, acquired unmonitored, and acquired monitored funding. All values from the PSED I, collected in 1999, are adjusted for inflation to the 2005 PSED II values using the consumer price index (see Reynolds & Curtin, 2008). The analysis is also weighted.

Statistically significant differences were found between respondents in the PSED I and PSED II regarding the mean dollar amount in all four categories of funding sources. However, whether differences between the means for the two samples are substantive may be open to interpretation (see Table 10.3). The average amount of personal contributions from nascent entrepreneurs to their startups in the PSED I was 6% greater than in PSED II (PSED I mean = 3.890;

Table 10.4 Independent samples t-tests for differences in mean dollar amount acquired between PSED I and PSED II (log-transformed, weighted)

	PSED I			PSED II						
Source	*N*	Mean	SD	*N*	Mean	SD	Difference	t-test	df	*p*
Personal	712	3.890	0.835	998	3.666	0.810	0.224	5.546	1501	0.000
Personal *only*	293	3.658	0.816	552	3.509	0.798	0.149	2.555	583	0.011
Acquired unmonitored	374	3.803	0.828	404	3.614	0.837	0.189	3.164	773	0.002
Acquired monitored	98	4.635	0.896	185	4.231	0.885	0.404	3.631	196	0.000

Equal variances not assumed.
PSED I financing amounts adjusted for inflation using Consumer Price Index.

PSED II mean = 3.666) with a t-test statistic of 5.546, 1,501 degrees of freedom, and an associated P value of $p = 0.000$.

Nascent entrepreneurs in the PSED I who used only personal sources to fund their emerging ventures contributed 4% more money than nascent entrepreneurs in PSED II (PSED I mean = 3.658; PSED II mean = 3.509) with a t-test statistic of 2.555, 583 degrees of freedom, and an associated P value of $p = 0.011$.

The average amount of funding from unmonitored sources acquired in PSED I was 5% greater than in PSED II (PSED I mean = 3.803; PSED II mean = 3.614) with a t-test statistic of 3.164, 773 degrees of freedom, and an associated P value of $p = 0.002$.

The average amount of funding from monitored sources acquired in PSED I was 9% greater than in PSED II (PSED I mean = 4.635; PSED II mean = 4.231) with a t-test statistic of –3.631, 196 degrees of freedom, and an associated P value of $p = 0.000$.

A comparison of the median amounts of financing contributed in PSED I and PSED II using a nonparametric test (Mann–Whitney U Test), also found significant differences between the two samples for each of the four funding categories.

10.4.1 Sources of Financing Expectations

The amount of each type of funding as a proportion of total financing for the emerging firm was calculated (i.e., expected monitored / (expected monitored + expected unmonitored + personal contributions) for PSED I. Table 10.5 shows the correlations of selected firm- and entrepreneur- level characteristics by *expectations* of receiving funds from monitored and unmonitored sources. Note that personal funds in PSED I are actually acquired. A fourth category labeled “both” is included to show correlations for those entrepreneurs that expected or acquired both monitored and unmonitored sources to finance the emerging firm. Correlations on continuous variables used the Pearson coefficient, and categorical variable correlations used Spearman. Significant correlations are denoted by asterisks.

The findings on expectations of firm size were significantly and positively correlated to *expectations* of acquiring both monitored and unmonitored sources of financing as a greater proportion of total financing. Therefore, H1A was supported. In addition, use of personal funds as the sole means of financing was negatively correlated with larger expected firm size. The findings on incorporation were also significantly and positively correlated to the expected use of monitored and unmonitored sources of financing. Therefore, H2A was also supported. The findings on intentions to start firms with high growth rates were not correlated to expected use of unmonitored, monitored, or the use of both types of financing. Therefore, H3A and H4A were not supported.

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Table 10.5 PSED I correlations of nascent firm/entrepreneur characteristics by expected funding source (as a proportion of total financing, weighted)

	Expected funding (PSED I – Wave 1)			
H_{1A}		Pearson's correlations	Significance	*N*
Firm size	Monitored	0.324***	0.000	619
	Unmonitored	−0.056	0.161	619
	Personal	−0.190***	0.000	619
	Both	0.190***	0.000	619
	Firm size = log of expected first-year sales			
H_{2A}		Spearman's Rho	Significance	*N*
Legal form	Monitored	0.179***	0.000	675
	Unmonitored	0.078*	0.044	675
	Personal	−0.155***	0.000	675
	Both	0.155***	0.000	675
	0 = Not incorporated; 1 = Incorporated			
H_{3A}/ H_{4A}		Spearman's Rho	Significance	*N*
Firm growth	Monitored	−0.028	0.453	714
	Unmonitored	0.016	0.67	714
	Personal	−0.002	0.962	714
	Both	0.002	0.962	714
	0 = Grow as large as possible; 1 = Size to self-manage			
H_{5A}		Spearman's Rho	Significance	*N*
Gender	Monitored	−0.149***	0.000	723
	Unmonitored	0.089*	0.016	723
	Personal	0.020	0.598	723
	Both	−0.020	0.598	723
	0 = Male; 1 = Female			
H_{5C}		Spearman's Rho	Significance	*N*
Ethnicity	Monitored	−0.025	0.514	695
	Unmonitored	−0.048	0.207	695
	Personal	0.052	0.167	695
	Both	−0.052	0.167	695
	0 = White; 1 = Minority			
H_{5E}		Spearman's Rho	Significance	*N*
Education	Monitored	0.022	0.560	715
	Unmonitored	0.030	0.428	715
	Personal	−0.033	0.376	715
	Both	0.033	0.376	715
	Education = categorical; high-school through post-college			
H_{5G}		Pearson's correlation	Significance	*N*
Entrepreneur's household net worth	Monitored	0.034	0.429	534
	Unmonitored	−0.046	0.289	534
	Personal	0.012	0.788	534
	Both	−0.012	0.788	535
	Net worth = log of reported value			

Table 10.5 (continued)

	Expected funding (PSED I – Wave 1)			
H_{5I}		Spearman Rho	Sig.	*N*
Prior startup experience	Monitored	−0.018	0.640	715
	Unmonitored	−0.006	0.867	715
	Personal	0.022	0.560	715
	Both	−0.022	0.560	715
	0 = Zero; 1 = One start-up; 2 = 2 or more			
$H_{5\ K}$		Pearson corr.	Sig.	*N*
Industry experience	Monitored	0.114**	0.008	546
	Unmonitored	−0.127**	0.003	546
	Personal	0.022	0.605	546
	Both	−0.022	605	546
	Industry experience = years worked in same field as startup			
H_{6A}		Spearman Rho	Sig.	*N*
Outcome	Monitored	0.112*	0.019	442
	Unmonitored	0.048	0.316	442
	Personal	−0.088	0.066	442
	Both	0.088	0.066	442
	0 = Gave up; 1 = Still trying; 2 = In business			

The analyses of entrepreneur characteristics and the expected use of financing sources surfaces a few findings that we suggest are worth pointing out. We found a positive correlation between males and expectations of monitored funding as a greater proportion of total funding (shown as a negative correlation between females and monitored funding in Table 10.5). Therefore, H5A was supported. No correlation was found between ethnicity and expected use of any of the funding sources; nor were any correlations found for education, household net worth, or prior startup experience. H5C, H5E, H5G, and H5I were not supported.

Industry experience is negatively correlated with the expectation of using unmonitored financing sources, but positively correlated to use of monitored sources. H5K, the greater the number of years the entrepreneur has worked in the same industry as the startup, the greater the proportion of monitored and unmonitored funding the entrepreneur will *expect* to use, was partially supported.

Finally, H6A, nascent entrepreneurs who expect to use more monitored sources of funding are more likely to start an ongoing business, was supported.

10.4.2 Sources of Financing Acquired

Tables 10.6 and 10.7 show correlations between firm and entrepreneur characteristics, and the type of funding *acquired* as a proportion of total financing, in PSED I and II, respectively.

Table 10.6 PSED I correlations of nascent firm/entrepreneur characteristics by acquired funding source (as a proportion of total financing, weighted)

	Acquired funding (PSED I - Wave 2)			
H_{1B}		Pearson's correlations	Significance	N
Firm size	Monitored	0.106	0.101	240
	Unmonitored	0.023	0.722	240
	Personal	−0.090	0.166	240
	Both	0.090	0.166	240
	Firm size = log of expected first year sales			
H_{2B}		Spearman's Rho	Significance	N
Legal form	Monitored	0.073	0.243	254
	Unmonitored	0.050	0.431	254
	Personal	−0.053	0.399	254
	Both	0.053	0.399	254
	0 = Not incorporated; 1 = Incorporated			
H_{3B}/ H_{4B}		Spearman's Rho	Significance	N
Firm growth	Monitored	0.044	0.471	268
	Unmonitored	0.125*	0.041	268
	Personal	−0.141*	0.021	268
	Both	0.141*	0.021	268
	0 = Grow as large as possible; 1 = Size to self-manage			
H_{5B}		Spearman's Rho	Significance	N
Gender	Monitored	−0.068	0.266	268
	Unmonitored	0.049	0.420	268
	Personal	−0.015	0.810	268
	Both	0.015	0.810	268
	0 = Male; 1 = Female			
H_{5D}		Spearman's Rho	Significance	N
Ethnicity	Monitored	−0.091	0.143	262
	Unmonitored	−0.069	0.264	262
	Personal	0.097	0.118	262
	Both	−0.097	0.118	262
	0 = White; 1 = Minority			
H_{5F}		Spearman's Rho	Significance	N
Education	Monitored	−0.097	0.115	268
	Unmonitored	−0.036	0.561	268
	Personal	0.082	0.180	268
	Both	−0.082	0.180	268
	Education = categorical; high school through post college			
H_{5H}		Pearson's correlation	Significance	N
Entrepreneur's household net worth	Monitored	−0.061	0.392	202
	Unmonitored	−0.101	0.155	202
	Personal	0.109	0.123	202
	Both	−0.109	0.123	202
	Net worth = log of reported value			

Table 10.6 (continued)

	Acquired funding (PSED I - Wave 2)			
H_{5J}		Spearman Rho	Sig.	N
Prior startup experience	Monitored	−0.201***	0.001	265
	Unmonitored	−0.206***	0.001	265
	Personal	0.228***	0.000	265
	Both	−0.228***	0.000	265
	0 = Zero; 1 = One start-up; 2 = 2 or more			
H_{5L}		Pearson corr.	Sig.	N
Industry experience	Monitored	0.011	0.878	214
	Unmonitored	0.104	0.131	214
	Personal	−0.080	0.241	214
	Both	0.080	0.241	214
	Industry experience = years worked in same field as startup			
H_{6B}		Spearman Rho	Sig.	N
Outcome	Monitored	0.354***	0.000	268
	Unmonitored	0.496***	0.000	268
	Personal	−0.556***	0.000	268
	Both	0.556***	0.000	268
	0 = Gave up; 1 = Still trying; 2 = In business			

Table 10.7 for PSED II shows that firm size (as measured by expected income in the first year of operations) is positively correlated with the use of monitored funding, and negatively correlated to personal and both monitored and unmonitored together. Table 10.6 for PSED I shows a slightly significant positive correlation (0.106, $p > 0.101$) between a larger expected firm size and use of monitored funding sources. Therefore, H1B had mixed support.

Table 10.7 shows a positive correlation was found between incorporation of the emerging firm and acquiring monitored funding in the PSED II data. A corresponding negative correlation between incorporation and use of personal funds was also found. No correlation was found between incorporation and monitored funding in PSED I. H2B has mixed support.

Table 10.7 shows that the growth aspirations of the entrepreneur in PSED II are not correlated to any one type of financing, but in PSED I (Table 10.6) there were strong positive correlations between high growth aspirations and more use of unmonitored, and a combination of monitored and unmonitored funds. Therefore, H3B and H4B had mixed support.

Gender was not correlated to acquiring any one type of funding in PSED I (Table 10.6), but in PSED II males were positively correlated to the use of more monitored financing than females (Table 10.7). H5B was partially supported. Ethnicity was not correlated to acquiring any one type of funding in PSED I, but in PSED II ethnicity was correlated with using more monitored funding, and less personal funding. Therefore, H5D was not supported. We suggest that these findings on ethnicity for both the PSED I and PSED II data sets are the

Table 10.7 PSED II correlations of nascent firm/entrepreneur characteristics by acquired funding source (as a proportion of total financing, weighted)

	Acquired funding (PSED II – Waves A and B)			
H_{1B}		Pearson's correlations	Significance	*N*
Firm size	Monitored	0.141***	0.000	955
	Unmonitored	0.007	0.825	955
	Personal	−0.101**	0.002	955
	Both	0.101**	0.002	955
	Firm size = log of expected first year sales			
H_{2B}		Spearman's Rho	Significance	*N*
Legal form	Monitored	0.202***	0.000	350
	Unmonitored	0.045	0.401	350
	Personal	−0.152**	0.004	350
	Both	0.152**	0.004	350
	0 = Not incorporated; 1 = Incorporated			
H_{3B}/ H_{4B}		Spearman's Rho	Significance	*N*
Firm growth	Monitored	−0.023	0.457	1,018
	Unmonitored	−0.042	0.177	1,018
	Personal	0.038	0.220	1,018
	Both	−0.038	0.220	1,018
	0 = Grow as large as possible; 1 = Size to self-manage			
H_{5B}		Spearman's Rho	Significance	*N*
Gender	Monitored	−0.074*	0.018	1,025
	Unmonitored	−0.007	0.829	1,025
	Personal	0.039	0.216	1,025
	Both	−0.039	0.216	1,025
	0 = Male; 1 = Female			
H_{5D}		Spearman's Rho	Significance	*N*
Ethnicity	Monitored	0.075*	0.017	1,008
	Unmonitored	−0.002	0.938	1,008
	Personal	−0.060*	0.056	1,008
	Both	0.060*	0.056	1,008
	0 = White; 1 = Minority			
H_{5F}		Spearman's Rho	Significance	*N*
Education	Monitored	0.062*	0.049	1,023
	Unmonitored	−0.006	0.855	1,023
	Personal	−0.022	0.477	1,023
	Both	0.022	0.477	1,023
	Education = categorical; high school through post-college			
H_{5H}		Pearson's correlations	Significance	*N*
Entrepreneur's household net worth	Monitored	0.059	0.102	766
	Unmonitored	−0.037	0.309	766
	Personal	−0.015	0.686	766
	Both	0.015	0.686	766
	Net worth = log of reported value			

Table 10.7 (continued)

	Acquired funding (PSED II – Waves A and B)			
$H_{5\ J}$		Spearman's Rho	Significance	*N*
Prior start-up experience	Monitored	0.060*	0.056	1025
	Unmonitored	0.057*	0.070	1025
	Personal	−0.066*	0.035	1025
	Both	0.066	0.035	1025
	0 = Zero; 1 = One start-up; 2 = 2 or more			
H_{5L}		Pearson's correlations	Significance	*N*
Industry experience	Monitored	0.003	0.937	807
	Unmonitored	−0.027	0.452	807
	Personal	0.019	0.600	807
	Both	−0.019	0.600	807
	Industry experience = years worked in same field as start-up			
H_{6B}		Spearman's Rho	Significance	*N*
Outcome	Monitored	0.130***	0.000	834
	Unmonitored	0.079*	0.023	834
	Personal	−0.099**	0.004	834
	Both	0.099**	0.004	834
	0 = Gave up; 1 = Still trying; 2 = In business			

result of using two waves of data, only, for analyses. When emerging ventures are tracked for longer periods of time in the PSED I data set (across Waves 1 through 4), Gartner, Frid, and Alexander (2008) found that minority nascent entrepreneurs were less likely to acquire monitored and unmonitored sources of funding as a proportion of total funding, and more likely to use personal funds as the sole source of venture financing.

Education was not correlated with use of any of the funding types in PSED I, but in PSED II higher levels of education was correlated with higher use of monitored funding. H5F was partially supported. The entrepreneur's household net worth was not correlated to acquiring any type of funding in either PSED I or PSED II. Therefore, H5H was not supported. Regarding the entrepreneur's prior startup experience, in PSED I strong negative correlations were found between having prior startup experience and use of monitored and unmonitored funding. It seems that the more prior startups, the greater the amount of personal funds as the sole source of funding was used in PSED I. In PSED II we find just the opposite (albeit with weak correlations). Table 10.7 shows that more prior startup experience is positively correlated with use of monitored and unmonitored funding, and negatively correlated with use of personal funds only. H5J is therefore partially supported. Industry experience was not correlated with types of funding in either PSED I or II, so H5L was not supported.

In both PSED I and PSED II, venture survival ("in business" or "still trying to start a business") was positively correlated with whether the nascent entrepreneur acquired monitored and unmonitored sources of capital. Negative correlations were found between venture survival and use of personal funds only in both PSED I and PSED II as well. Therefore, H6B was supported.

10.5 Discussion and Conclusions

The results of these analyses hinges on this observation: One time period is too short a time frame to determine what entrepreneurs actually do. As Reynolds (2007) points out in his analyses of the PSED I data set, the determination of whether an emerging venture will become an on-going venture, on average, takes over 24 months to ascertain. Since the analyses for this study looked at a time period of less than this, in both PSED I and PSED II, the mixed findings on the acquisition of various financing sources is likely to be due to the short time frame. We would encourage government agencies or foundations interested in supporting research that seeks to understand the venture development process to consider funding efforts to collect additional waves of data for PSED II. As we noted earlier, when a longer time frame is used to evaluate nascent entrepreneur financing activities and their outcomes, significant differences in what these individuals actually accomplish begin to appear (Gartner et al., 2008).

Since we are more confident of the findings generated from analyses from a longer period of time and with a more narrowly defined cohort of similar emerging ventures (Gartner et al., 2008), we will emphasize only one insight into the findings generated for this chapter that correspond to the findings from our other work.

The acquisition of outside funding, either monitored or unmonitored, is significantly correlated with venture survival. About 90% of entrepreneurs who are able to acquire outside financing were either in business or continuing to develop their emerging businesses compared to only 40% of entrepreneurs who depended on personal financing sources, only. This finding will be discussed further in the next section.

10.5.1 Directions for Future Research

We suggest that there is likely to be significant interactions among such characteristics of emerging ventures as the quality of the opportunity pursued, the "quality" of the entrepreneurs pursuing these opportunities, the kinds of efforts undertaken to develop these opportunities, and, the sources of financing that these entrepreneurs both expect and are able to acquire. An entrepreneur's expectation of acquiring outside funding (both unmonitored and monitored) is likely to have some correlation to the entrepreneur's perceptions of the quality of the opportunity being pursued, but, these perceptions are likely to be significantly tempered by the entrepreneur's skills and abilities to develop these opportunities. There is a need, then, for very detailed process research on the creation of ventures that follows both the thinking and actions of entrepreneurs more frequently over a period of time. Case research that explores why entrepreneurs select particular high- or low-quality opportunities, and, then pursue various resource acquisition strategies might better ascertain the kinds of barriers entrepreneurs encounter for developing their ventures.

We believe that many entrepreneurs have poor skills in accurately assessing the viability and value of the opportunities they pursue, as well as a poor assessment of their skills and abilities to successfully develop these ventures (Baron, 1998, 2007). Research that explored both the quality of the entrepreneur and the quality of the opportunity might better ascertain which kinds of entrepreneurs and which kinds of opportunities are more likely to receive funding. Given that many entrepreneurs use personal funds only, and that these efforts are more likely to result in failure, we suggest that "poor quality" entrepreneurs and "poor quality" opportunities are likely to be in this funding category.

The categorization of monitored and unmonitored funding sources could be further developed both empirically and theoretically as constructs for discerning among various ways entrepreneurs acquire outside financing. We suggest that detailed case studies need to be undertaken to track the process entrepreneurs undertake to coax others to provide funds, and, then, study what kinds of interaction occur between these entrepreneurs and others regarding these investments. There would also be value at exploring specific funding sources (e.g., use of credit cards, bank loans) to evaluate whether the use of specific funding sources might play a significant role in venture creation.

Since the acquisition of any outside funding (monitored or unmonitored) is a significant predictor of survival, it would be valuable to explore how entrepreneurs went about acquiring these sources of financing *and* whether external funding was the result of having other aspects of the emerging venture in place, beforehand, or not. For example, external funding might be provided if the entrepreneur has accomplished other activities, such as developing a prototype, engaging in marketing efforts, and writing a business plan. External funding, then, might be significantly correlated with emerging ventures that are more complete than other efforts. Or it might be possible that entrepreneurs who are able to acquire external funding are able, then, to subsequently engage in other venture creation activities because they have funding. Exploring when external funding is obtained, vis-à-vis other venture creation activities would provide important insights into whether external funding is the result of other entrepreneurial efforts, or more likely the catalyst for venture emergence.

Finally, while the analyses conducted on the cases in the PSED I and II data sets tended to minimize the influence of outliers and anomalies among various cases in these samples, these outliers might provide important insights into how and why some entrepreneurs are able to use (or not use) financial resources to create new businesses. For example, a number of entrepreneurs started businesses without using any personal funds: What kinds of businesses were started and did any of these businesses grow substantially? Baker and Nelson (2005) suggest that a critical resource utilization skill for many entrepreneurs is "bricolage," the ability to use whatever resources are at hand for the creation and pursuit of new opportunities. While we have shown that those entrepreneurs who would have acquired outside resources were significantly more likely to get into business or continue to pursue business development, there were a substantial number of entrepreneurs who still got into business without external resources. These entrepreneurs are worth knowing more about, particularly if they can offer insights into more effective and efficient ways to use resources at hand.

10.6 Conclusions

The financing data in PSED I and II are, in some respects, initially overwhelming. As can be seen in the appendixes, the number of questions about financing is substantial, and, as we have described earlier, the ways in which questions have been asked in PSED I and II about financing also influence what we can understand about this process. Much more effort needs to be undertaken to explore the nuances in these two data sets. There is much to learn from the outliers and anomalies that our statistical techniques tended to discount.

This chapter took a novel approach to exploring the financing variables. Tables 10.1 (PSED I) and 10.2 (PSED II) describe a variety of ways that nascent entrepreneurs might go about acquiring financial resources for the development of their emerging ventures. We categorized these many different financing activities into three broad approaches: personal, monitored and unmonitored. Our analyses, using our three categorizations of financing, generated mixed results. We believe that the use of only two waves of data for PSED I and PSED II limited the number of insights that could be generated about financing and the venture development process. We believe that when more waves of data are collected for PSED II, better clarity will emerge regarding the relationship of different sources of financing to success at creating new ventures.

We see that between what entrepreneurs believe will occur and what actually occurs in the development of their opportunities is still much of a mystery. Financial support of emerging ventures appears to be critical to their survival, yet it is unclear whether this support is the cause of their survival or the effect of previous activities to both insure survival and funding.

We hope that more attention will be given to the process entrepreneurs undertake to use their own personal funds and the funds of others in the creation of new ventures. Both the PSED I and PSED II data sets remain untapped in regard to the many insights they might produce regarding the venture financing process.

10.7 Appendix

Table 10.8 PSED I finance items: first phone interview (Waves 1 and 2)

Item number			
Wave 1	Wave 2	Response	Question
137	594	Yes/no	Projected financial statements?
138	595	Year	In what year did financial projections begin
138a	595a	Month	And in what month?
139	596	Yes/no	Saving money to invest in this business?
140	597	Finished/in process	Finished saving money, or still in process?
141	598	Intend/finished	Started saving money?
142	599	Year	Year started saving?
142a	599a	Month	And in what month?
143	600	Yes/no	Invested own money
144	601	Year	Year started investing?
144a	601a	Month	And in what month?
145	602	Yes/no	Asked other people or financial institutions?
146	603	Complete/in process	Asking others completed or still in process?
147	604	Others/not relevant	Will others be asked, or not relevant?
148	605	Year	Year seeking funds begin?
148a	605a	Month	And in what month?
149	606	Yes/no	Has credit with a supplier been established?
150	607	Year	Year supplier credit first established?
150a	607a	Month	And in what month?
160	617	Yes/no/existing acct	Opened bank account for new business?
161	618	Year	Year first open a commercial bank account?
161a	618a	Month	And in what month?
162	619	Yes/no	Received money from sales?
162a	620	Year	In what year was the first income received?
162b	620a	Month	And in what month?
163	621	Yes/no	Monthly revenue > monthly expenses?
164	622	Year	In what year did this first happen?
164a	622a	Month	And in what month?
165	623	Yes/no	Owner/manager salaries counted expenses?
166	624	Year	In what year did this first occur?
166a	624a	Month	And in what month?
175	633	Yes/no	Paid state unemployment insurance taxes?
176	634	Year	In what year were the first taxes paid?
176a	634a	Month	And in what month?
177	635	Yes/no	Paid any social security taxes (FICA)?
178	636	Year	Year first social security taxes (FICA) paid?
178a	636a	Month	And in what month?
179	637	Yes/no	Filed a federal income tax return?
180	638	Year	Year first federal return filed?
181	639	Yes/no	Listed with Dun & Bradstreet?
182	640	Year	Year first listed with Dun & Bradstreet?
182a	640a	Month	And what month?

Table 10.9 PSED I investment items: first phone interview (Wave 1)

Item number Wave 1	Response	Question
198	Dollar amount	Amount of own money put in (debt or equity)?
212	Dollar amount	Team personal money (debt or equity)?
224	Yes/no	Has (team) provided access financial assistance?
263	Dollar amount	Total funds needed to become self-sustaining?
264	Dollar amount	Cash needed to operate first 30 days?
265	Dollar amount	$ needed before attracting investors?
266	Yes/no/no	Asked spouse or household partner for funding?
266a	Yes/no/pending	Yes, no, or still pending?
268	Dollar amount	Amount expected from spouse or partner?
269	Yes/no/no	Asked spouses/partners from team members?
269a	Yes/no/pending	Yes, no, or still pending?
270	Dollar amount	Amount expected from team spouse/partner?
271	Yes/no	Asked friends and family for funding?
271a	Yes/no/pending	Yes, no, or still pending?
272	Dollar amount	Amount expected from friends and family?
273	Yes/no	Asked team friends and family for funding?
273a	Yes/no/pending	Yes, no, or still pending?
274	Yes/no/pending	Amount expected from team friends and family?
275	Yes/no/no employ	Asked current employer for funding?
275a	Yes/no/pending	Yes, no, or still pending?
276	Dollar amount	Amount expected from current employer?
277	Yes/no/NA	Taken a 2nd mortgage to fund new firm?
277a	Dollar amount	Amount expected from 2nd mortgage
278	Yes/no	Asked bank for loan?
278a	Yes/no/pending	Yes, no, or still pending?
279	Dollar amount	Amount expected from bank?
280	Yes/no	Asked SBA loan?
280a	Yes/no/pending	Yes, no, or still pending?
281	Dollar amount	Amount expected from SBA loan?
282	Yes/no/no credit cards	Used credit cards?
282a	Dollar amount	Amount expected from credit cards?
283	Yes/no	Asked venture capitalists?
283a	Yes/no/pending	Yes, no, or still pending?
284	Dollar amount	Amount expected from VCs
285	Yes/no	Asked personal finance company?
285a	Yes/no/pending	Yes, no, or still pending?
286	Dollar amount	Amount expected from personal finance co.
287	Yes/no	Asked other sources for funding?
287a	String	What is this other source of funding?
288	Yes/no/pending	Yes, no, or still pending?
289	Month	Months needed to pay back all sources?

Table 10.10 PSED I investment items: first follow-up interview (Wave 2)

Item number Wave 2	Response	Question
656	Dollar amount	Amount of own money put in (debt or equity)?
656a	Dollar amount	Team's personal money (debt or equity)?
770	Dollar amount	Total equity from all sources?
770a	Dollar amount	Total debt from all sources?
771	Dollar amount	Personal contributions (equity)?
771a	Dollar amount	Personal contributions (debt)?
772	Dollar amount	Team members' contributions (equity)?
772a	Dollar amount	Team members' contributions (debt)?
773	Dollar amount	Family and relatives (equity)?
773a	Dollar amount	Family and relatives (debt)?
774	Dollar amount	Friends and business associates (equity)?
774a	Dollar amount	Friends and business associates (debt)?
775	Dollar amount	Banks, VCs, institutions (equity)?
775a	Dollar amount	Banks, VCs, institutions (debt)?
776	Dollar amount	Private investors (equity)?
776a	Dollar amount	Private investors (debt)?
777	Dollar amount	Government agencies (equity)?
777a	Dollar amount	Government agencies (debt)?
778	Dollar amount	Suppliers, subcontractors (debt)?
779	Dollar amount	Credit cards?
780	Dollar amount	Other source (equity)?
780a	String	What is this other source of equity money?
781	Dollar amount	Other source (debt)?
781a	String	What was the other source of loans for the business?
782	Dollar amount	Estimated net worth of the business today?
783	Ratio: percent	What % of the firm do you personally own?

Table 10.11 PSED II Section E start-up finances: item overview

Item number Wave A	 Wave B		Other choices	Yes/ one or more	No/ not yet	Don't know/ irrelevant
AE1	BE1	Asked others for funds?		E2	E5	E5
AE2	BE2	Month/year first sought				
AE3	BE3	Received outside funds?		E4	E5	
AE4	BE4	Month/year first received				
AE5	BE5	Credit with supplier?		E6	E7	E7
AE6	BE6	Month/year supplier credit established				
AE7	BE7	Paid employees?		E8	E11	E11

Table 10.11 (continued)

Item number: Wave A	Wave B		Other choices	Yes/ one or more	No/ not yet	Don't know/ irrelevant
AE8	BE8	Month/year hired				
AE9	BE9	How many work 35 + hours/week?				
AE10	BE10	. . .less than 35 hours/week?				
AE11	BE11	Bank account for business?	BE11c	E12	E13, BE18	E13, BE18
AE12	BE12	Month/year opened				
AE13		Has business received income?		E14	E18	
AE14		Month/year of first income				
AE15		Has monthly revenue > expenses?		E16	E18	
AE16		Month/year first exceeded				
AE17		Are salaries for owner-managers computed as expenses?				
AE18	BE18	Accountant retained?		E19	E20	E20
AE19	BE19	Month/year retained				
AE20	BE20	Lawyer retained		E21	E22	E22
AE21	BE21	Month/year retained				
AE22	BE22	Has business become a member of a trade or industry association?		E23	E24	E24
AE23	BE23	Month/year joined				
AE24	BE24	Can potential customers contact firm by phone/ email/internet?	BE24c	E25	E26	E26
AE25	BE25	Month/year first listed				
AE26	BE26	Applied for federal EIN or employer ID number?		E27	E28	E28
AE27	BE27	Month/year applied				
AE28	BE28	DBA filed?		E29	E30	E30
AE29	BE29	Month/year filed				
AE30	BE30	State-unemployment insurance paid?		E31	E32	
AE31	BE31	Month/year paid				
AE32	BE32	FICA paid?		E33	E34	
AE33	BE33	Month/year paid				
AE34	BE34	Federal income tax filed?		E35	E36	
AE35	BE35	Month/year filed				
AE36	BE36	Dun & Bradstreet listed?		E37		
AE37	BE37	Month/year filed				
		Go to next section				

Table 10.12 PSED II Section Q start-up investments before legal registration: item overview

Item number Wave A	Item number Wave B		Other choices	Yes/ one or more	No/ not yet	Don't know/ irrelevant
AQ4_1	BQ4_1	Personal savings contributed (in $)	_2– _5 (A) _6 – _10 (B) BQ4c			
AQ5_1	BQ5_1	Family and relatives contribution	_2– _5 (A) _6–- _10 (B) BQ5c			
AQ6_1	BQ6_1	Friends, employers, co-workers	_2– _5 (A) _6 – _10 (B) BQ6c			
AQ7_1	BQ7_1	Credit card loans	_2 – _5 (A) _6 – _10 (B) BQ7c			
AQ8_1	BQ8_1	Bank and other financial institution	_2 – _5 (A) _6 – _10 (B) BQ8c			
AQ9_1	BQ9_1	Asset backed (2nd mortgage or car)	_2 – _5 (A) _6 – _10 (B) BQ9c			
AQ10_1	BQ10_1	Other sources	_2 – _5 (A) _6 – _10 (B) BQ10c			
AQ11_1	BQ11_1	What was the source of "other"?				
AQ12x_1	BQ12x_1	Total funding amount	_2 – _5 (A) _6 – _10 (B)			
AQ12_1	BQ12_1	Is this amount correct?	_2 – _5 (A) _6 – _10 (B)	Q13	Q4	
AQ13_1	BQ13_1	How much of the above do you expect to be paid back to [you/name]?	_2 – _5 (A) _6 – _10 (B)			
AQ14_1	BQ14_1	Month/year initial investment made	_2 – _5 (A) _6 – _10 (B)			
AQ15	BQ15	Interviewer checkpoint: is business registered?		NEXT (R0)	Q16	
AQ16	BQ16	How much additional funding will be needed to be registered as a legal entity?	BQ16c			
AQ17	BQ17	What proportion of this funding wi ll be shares in ownership of the new business?	BQ17c			
		Go to next section				

Table 10.13 PSED II Section R start-up investments after legal registration: item overview

Item number: Wave A	Item number: Wave B		Other choices	Yes/ one or more	No/ not yet	Don't know/ irrelevant
AR1	BR1	Has business directly received loans from you or others?	BR1c	R2	R26	
AR2	BR2	Month/year received				
AR3	BR3	Did you or others invest equity after the business was registered?	BR3c	R4	R6	
AR4	BR4	How much equity was invested?				
AR5	BR5	What % of total ownership did these investments account for?	BR5c			
AR6	BR6	Debts backed by assets (land, vehicles) that could be repossessed?	BR6c			
AR7	BR7	Debts in form of leases	BR7c			
AR8	BR8	Bank line of credit, or working capital loan?	BR8c			
AR9	BR9	Supplier credit	BR9c			
AR10	BR10	Personal loans	BR10c			
AR11	BR11	Team member loans	BR11c			
AR12	BR12	Spouse and family loans	BR12c			
AR13	BR13	Employee loans	BR13c			
AR14	BR14	Other individual loans	BR14c			
AR15	BR15	Credit card	BR15c			
AR16	BR16	Bank loans	BR16c			
AR17	BR17	Venture capital	BR17c			
AR18	BR18	Government agencies (not SBA)	BR18c			
AR19	BR19	SBA-guaranteed loans	BR19c			
AR20	BR20	Other	BR20c			
AR21x	BR21x	Total dollar amount				
AR21	BR21	Is this correct?		R22	R6	
AR22	BR22	If you sold the business, what would the net value be today?	BR22c			
AR23		Could anyone else claim ownership of the business?		R24	R26	
AR24		Who would claim ownership?				
AR25		What % would they expect?				
AR26	BR26	Additional funding required to complete 1st year of operations?	BR26c			
AR27	BR27	Will funds be loans or equity?				
AR28	BR28	How much additional debt?				
AR30	BR30	What % of total ownership or equity will you (or other owners) account for?				
AR32	BR32	All $ in commercial bank account?		Next	R35	
AR34	BR34	All $ in existing bank account?		Next	R35	
AR35	BR35	Proportion held elsewhere?				
		Go to next section				

Note

1. Additionally, respondents had to answer "yes" to item BA41, which asked if it was agreed that the current status of the business was indeed an operating business.

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Chapter 10

Query No.	Line No.	Query
AQ1	42	Please provide corresponding author "William B. Gartner" affiliation details.
AQ2	144	Please confirm if the edit to the sentence "We believe that...worth exploring." is ok.
AQ3	675	Please provide the significance for * in tables 10.5, 10.6 and 10.7.
AQ4	1036	Please check whether the edit of the sentence "While we have shown that..." is correct.
AQ5	1363	The reference "Avery et al. 1998" is not cited in the text part. Please provide.
AQ6	1378	The references "Delmar and Shane (2003, 2004)" are not cited in the text part. Please provide.
AQ7	1384	The reference "Gartner, W. B. (1985)" is not cited in the text part. Please provide.
AQ8	1390	The reference "Gartner et al. (2003)" is not cited in the text part. Please provide.
AQ9	1406	The reference "Petroni et al. (1992) is not cited in the text part. Please provide.
AQ10	1414	The reference "Reynolds et al. 2004" is not cited in the text part. Please provide.
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