Expected Costs of Startup Ventures

by

Blade Consulting Corporation
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1.0 EXECUTIVE SUMMARY

The number of new businesses founded in the United States continues to grow each year, and given the levels of downsizing at large firms and the rapid advancements in information technology, the trend toward more new business startups is likely to continue. As a result of the growing number of small businesses in the United States as well as in blossoming capitalist systems around the world, there has been increasing interest in entrepreneurship and the study of how to successfully create a new venture. For would-be entrepreneurs, an important question is, "What do I expect the startup costs of my venture to be?"

The purpose of this study is to explore the explicit and implicit costs of new venture creation. Using data collected through the Panel Study of Entrepreneurial Dynamics (PSED) project, the analyses in this report studies the costs incurred and investments made by over 800 nascent entrepreneurs (NEs) – those individuals who are in the process of starting a business – as they pursue their startup ventures. Special attention is given to the similarities and differences between solo NEs (those who work to found businesses on their own) versus team-based NEs (those in the process of founding new ventures as part of a startup team) and their firms.

The PSED dataset is described in detail in this report and it allows researchers to study the process of new venture creation as it is happening. Based on the analyses of the PSED data in this report, it appears that most nascent entrepreneurship within the United States involves relatively small, mostly home-based business activity and that the median investments made by both solo and team-based NEs into their businesses are relatively modest. The median projection

of funds to create a self-sustaining venture was $6,000 for a solo venture and $20,000 for a team-based venture. It is also shown that having two or more co-founders increases the resource base of the firm over just being a solo business founder which can improve the chances for entrepreneurial survival and success. For team-based NEs in this study, 27 percent expect to earn over $500,000 by their fifth year, versus 13 percent for solo NEs.

These results and other findings are detailed and discussed in the report as are the policy implications. Overall, the findings suggest that efforts to spur entrepreneurship should include a networking component that encourages team building and efforts to assist NEs in saving or gaining access to relatively modest amounts of money can have a big economic impact.

2.0 PROJECT BACKGROUND AND INTRODUCTION

Thousands of new businesses are founded in the United States each year and over the last decade the rate of new venture formation has increased (Zimmerer & Scarborough, 2002). The increase in the rate of entrepreneurship is likely to continue, given the levels of downsizing at large firms as a result of the poor economy, global economic conditions, global competition, and increasingly affordable and ever more powerful information technologies. As a result of the growing number of businesses in the United States and blossoming capitalist systems around the world, there has been increasing interest in entrepreneurship research, particularly in light of the fact that most net new jobs within economies come from newly-formed firms (Birch, 1987; Zimmerer & Scarborough, 2002).

The economic costs of starting a business include explicit and implicit costs. Explicit costs are the time and money spent to acquire market information, comply with government regulations, and search for labor. The implicit costs of entrepreneurship comprise the foregone earnings that the entrepreneur would otherwise have made from wage employment. Individuals must recognize and be willing to pay both costs in order to become entrepreneurs. While some of these costs are measured through straightforward economic data, the willingness of entrepreneurs to pay the costs is often more difficult to measure because they are impacted by less tangible variables such as the need to achieve self-fulfillment, or the need for independence. For example, an individual who earns a six figure salary may be willing to take a pay cut to found a new business even at a loss of income in order to achieve personal goals. Simple economic

analyses of costs may not be enough to understand entrepreneurial activity and new venture creation.

The purpose of this study is to explore the explicit and implicit costs of new venture creation. Using data collected through the Panel Study of Entrepreneurial Dynamics (PSED) project, the analyses in this report studies the costs incurred and investments made by nascent entrepreneurs – those individuals who are in the process of starting a business – as they pursue their startup ventures. Special attention is given to the similarities and differences between solo nascent entrepreneurs (those who work to found businesses on their own) versus team-based nascent entrepreneurs (those in the process of founding new ventures as part of a startup team).

Following a literature search and discussion of the broad research hypotheses, the sample of nascent entrepreneurs and research methods used in this study are described. The empirical research results are then presented followed by a discussion of the overall findings, research limitations, and policy implications. The report provides concluding remarks and closes with a list of references cited in the literature review and provides the theoretical basis for the research and discussion throughout the report.

3.0 LITERATURE REVIEW AND BROAD RESEARCH HYPOTHESES

Entrepreneurial activity involves new venture creation (Vesper, 1996) and new entry into promising markets (Lumpkin & Dess, 1996). Prior research has examined why new businesses survive or close during the early years of formation and establishment within marketplaces (Carroll & Hannan, 1989; Singh, Tucker, & House, 1986). For obvious reasons, this is an area of great interest. Most notably, new ventures foster administrative and technological innovation in industries (Brittain & Freeman, 1980; Tushman & Anderson, 1986), spur economic development by creating new jobs (Birch, 1987; Birley, 1986; Zimmerer & Scarborough, 2002), and improve and transform societies (Schumpeter, 1934).

It is well known that new firms struggle to survive in their formative years (Stinchcombe, 1965) and prior entrepreneurship studies have shown that the survival rates of new firms are poor (Dollinger, 2003; Hogan, 1991; Timmons, 1986). Empirical studies of firm failure rates in various industries have also consistently shown that new firms have a much greater likelihood of closing than established firms (e.g., Carroll & Hannan, 1989; Fichman & Levinthal, 1991; Singh, Tucker, & House, 1986; Utterback & Suárez, 1993). Between 20 and 30 percent of new startups close during their first year of existence and after six years, less than 80 percent remain (Dollinger, 2003). Thus, individuals who choose to become entrepreneurs face long odds for survival and success.

Timmons' (1994) model of the three crucial driving forces of entrepreneurship: (1) the founders (entrepreneurs), (2) the recognition of the opportunity, and (3) the resources needed to found the firm. Surrounding the process are such things as risk, chaos, information asymmetries, resource

scarcity, uncertainty, paradoxes, and confusion, all of which complicate the process. Only when all three components *fit* together can successful entrepreneurship take place. The challenge for the entrepreneur is to manipulate and influence the surrounding factors in *real time* to improve the chances for success of the venture. As Timmons (1994) points out, time does not stand still and the process of recognizing and seizing an opportunity often relies on the right timing. However, ultimately, the survival and performance of a new business will be greatly impacted by the resources and capabilities mobilized by the firm (Castrogiovanni, 1991; Chandler & Hanks, 1993; Tushman & Anderson, 1986). In fact, firms with abundant resources and capabilities survive with relatively little effort (Castrogiovanni, 1991). Although resources may be available in the environment, in new business startups it is critical that the founder(s) have the ability to mobilize such resources.

The most important resource to secure is cash/capital for the business to finance startup and ongoing operations. Financing can come from a variety of sources including personal savings, friends and family, banks, credit unions, angel investors, and venture capital firms. However, even before securing financing, it is important for entrepreneurs to understand the cost structures of their business. Realistically estimating the required startup costs can be challenging. It requires entrepreneur to estimate both recurring (e.g., monthly costs such as rent, utilities, etc.) and nonrecurring costs such as fees, licenses, permits, utility deposits, tools, equipment, office supplies, fixtures, equipment, remodeling and decorating, funds for opening promotional events (if applicable), signs, and professional fees for attorneys and accountants. Unfortunately, there is no book that can accurately predict these costs because working capital needs will depend upon the individual company and industry in which it operates (i.e., the opportunity).

Because there is uncertainty and differences in the cost structures of businesses, it is important for the founding entrepreneur(s) to have experience in the industry. Without prior experience it is almost impossible to realistically determine these costs. Entrepreneurs are often confronted by problems associated with obtaining credit and financing for the business. This is often a result of not having the requisite managerial and technical experience that facilitates success. Because an entrepreneur's prior experience with the venture's customers, suppliers, products, and services is positively related to both performance and survival (Gimeno, Folta, Cooper, & Woo, 1997), it is less likely for a startup entrepreneur to secure institutional financing (e.g., bank, venture capital) for a venture in which he/she has little or no experience.

Building on the above discussion of experience, there can be a significant advantage to putting together a startup team as opposed to being an individual or "solo" entrepreneur. Team-based entrepreneurs can enjoy higher levels of human/intellectual capital for their firms as a result of the combined industry experience of all of the founders. This can help such firms better address and overcome early challenges to survival and success.

Beyond the human and financial capital, experience, and other resources, efficiency in any organization requires coordinated action between interdependent actors. Stinchcombe (1965) hypothesized that newly-formed organizations suffered from what he labeled the *liability of newness*, which is a direct result of budding, but incomplete, social structures. He identified four specific problematic social structure issues that new organizations face which increase their likelihood of failure. These can be paraphrased as follows:

1. Roles - Individuals must learn new roles consistent with the organization's specific goals.

2. Norms - Once roles have been established individuals must develop and follow standard social routines.

3. Relationships between Employees - Trust, kinship, and loyalty between organization members (or a corporate culture) must develop.

4. Social Ties to Clients/Customers - Relationships with those who use or purchase organizational goods/services must be cultivated.

Summarizing, new business startups are susceptible to failure because individuals and stakeholders associated with new organizations have not directly worked together on the startup for a long period of time and must establish roles and relationships to do so effectively. Without the development of these roles and relationships firms cannot maximize employee efforts to achieve organizational goals. However, by working with co-founders some of these relationships can be established before firm founding because there are existing relationships before the new venture is created.

Clearly, entrepreneurial activity does not occur in a vacuum. Instead, it is embedded in cultural and social contexts, and within webs of human networks that are both social and economic (Reynolds, 1992). The personal networks of entrepreneurs are critical to the entrepreneurial process (Dubini & Aldrich, 1991) and Johannisson (1990; p. 41) describes entrepreneurs' personal networks as the "most significant resource of the firm." At founding, there is a great need for a heightened level of information exchange between relevant actors in an entrepreneurial setting because of the uncertainty involved in starting a new firm. Exchanges between relevant contacts within the entrepreneur's social network may influence, shape, and direct entrepreneurial activity. The qualities and costs and benefits of relevant ties in an entrepreneur's network can go a long way in

determining the success or failure of a venture. Because of the heightened sensitivity of newly founded entrepreneurial firms to their environments, those who enjoy ties with relevant others can gain a competitive advantage over those who do not.

Entrepreneurship arises from the exploitation of disequilibrium created by the unequal access to information by different market participants (Gilad, Kaish, & Ronen, 1989). However, no economic actor has perfect information with which to make rational choices and decisions. Individuals are limited in their ability to process and store information which results in bounded rationality (Simon, 1976). An entrepreneur's social network can help expand the boundaries of rationality by allowing access to knowledge from which to assess and determine a course of action. Through social network ties, a good business opportunity can be identified, screened and assessed, and then, if appropriate, acted upon. Successful resource acquisition to take advantage of an opportunity is also facilitated through networks, and combining the personal networks of founding team members should offer larger resource pools from which to draw from over firms with single founders.

Intuitively, it would seem that an entrepreneur should strive to utilize strong ties (e.g., close friends and family members) to help develop a business because of the personal interest, support, and commitment strong ties offer; however, it is highly unlikely that an entrepreneur will have strong ties to all of the business contacts needed to build a successful company. The likelihood of having enough friends and/or relatives who can provide raw materials, make the product, market the product, finance operations, work as employees, manage operations, etc. is extremely low. In addition, there is an upper bound limit on the number of close contacts one may physically interact

with because of the maintenance costs associated with more intimate relationships. As a result, an entrepreneur will almost definitely need to go outside his circle of close friends and relatives. However, it is possible for individuals to have many casual contacts. A college acquaintance, someone met at a dinner party, church members, or parents of a child's teammate on a little league baseball team do not require high maintenance, but can potentially help an entrepreneur access information and resources or develop interest in a new venture.

In his classic paper on the strength of weak ties, Granovetter (1973) argued that weak ties act as "bridges" to information sources not necessarily contained within an entrepreneur's immediate (strong-tie) network. Access to such individuals who can assist in developing the business may be critical to entrepreneurs. They give an entrepreneur an information option to turn to in order to receive advice, knowledge, skills, or experience, which is much more likely to result in success than being forced to make "cold calls" to strangers. Thus, theoretically, the number of weak ties within an entrepreneur's personal social network should make it more likely he/she will achieve success with the new firm.

Having partners or being part of an entrepreneurial team at startup can allow the team to combine complementary skills (e.g., one partner has marketing expertise, one has finance/accounting skills, etc.) and reduce the liability of newness. However, based on the discussion above, it is hypothesized that having partners to found a venture can also expand the boundaries of rationality and provide access to larger networks of individuals through the combined contacts of team members, and thus, greater access to resources and skills beyond the founding team. It is also expected that there are significant differences between solo and team-based entrepreneurial efforts

with team-based nascent entrepreneurs pursuing higher potential opportunities in terms of expected future income. This is due to the fact that team-based entrepreneurs must share the expected financial rewards of entrepreneurship, and thus must generate greater profits than solo entrepreneurship efforts in order to make founding the firm worthwhile for the team members. In addition, differences in the types of businesses, costs, investment amounts, sources of capital, and combined experience levels between the two groups would exist. Specifically, team-based nascent entrepreneurs should theoretically have higher figures on all of these variables. These broad hypotheses are examined in this report.

4.0 RESEARCH METHODS

All data analysis for this research project was conducted using data collected as part of the Panel Study of Entrepreneurial Dynamics (PSED). This section describes the dataset and the research methods used in this study.

4.1 PSED Dataset

The PSED is a continuation of work begun by over 100 entrepreneurship scholars who came together as part of an organization labeled the "Entrepreneurial Research Consortium" (ERC)[1]. The purpose of the ERC was to undertake a multi-disciplinary longitudinal study to gain a better understanding of the entrepreneurship/new venture creation process. The research questions that make up the PSED were developed during a series of meetings held between 1995 and 1998 where leading research scholars discussed and debated the reliability and validity of various items and measures that might be used in phone and mail surveys.

The original data collection for the PSED was financed by the ERC[2]; however, additional financial support was later obtained from the National Science Foundation (NSF) and E.M. Kauffman Foundation. The University of Michigan's Institute for Social Research (ISR) currently administers the PSED. Although the PSED began as a proprietary database accessible only to institutional members of the ERC, the entire database is now available to the public.

[1] The U.S. Small Business Administration Office of Advocacy was one of the original funders of the ERC project.
[2] For a full list of all of the funding sources see Reynolds (1999) which is available at the following website: http://projects.isr.umich.edu/psed/Files/History.pdf

The basic methodology of the PSED is to collect data from a representative sample of the United States population using random digit dialing (RDD) telephone survey interviews, followed by a mail survey questionnaire. At the end of the telephone interview, respondents were asked to volunteer their first names, then their addresses, so that they could be sent $25 payment for taking part in the telephone interview, and the mail questionnaire. Not all respondents agreed, and not all those who agreed to receive the mail questionnaire actually returned it. From 1998 to 1999, through successive waves of phone calls, an initial sample of RDD calls was made, totaling 31,261 individuals (15,662 females and 15,599 males). The study methodology allows researchers to identify nascent entrepreneurs – those who are in the process of starting up a new venture – and following their progression through data collection periods conducted over time. A more complete history and discussion of the ERC, the questionnaire items, and the methods and sampling procedures used to generate the PSED can be found in Reynolds (2000).

4.2 Identification of Nascent Entrepreneurs within the PSED

Two questions in the telephone screening were designed to identify nascent entrepreneurs (people who might be starting businesses either as autonomous start-ups or as something being done in cooperation with a current employer): (1) Are you, alone or with others, now trying to start a business?, and (2) Are you, alone or with others, now starting a new business or new venture for your employer? An effort that is part of your job assignment? A respondent could answer "no" or "yes" to either question, thereby placing himself or herself into one of four categories (no start-up activity, start-up activity in conjunction with an employer, autonomous start-up activity, or both kinds of start-up activity). Those respondents who indicated that they were involved in some type of startup activity were considered nascent entrepreneurs.

Over 800 nascent entrepreneurs were identified through the PSED. Of these, 514 (62.8 percent) were White and 218 (26.7 percent) were Black. These figures include female and minority oversampling data. Almost 450 of the total number of nascent entrepreneurs were identified without the oversampling procedure. Of these nascent entrepreneurs 332 (75.8 percent) were White and 74 (16.9 percent) were Black. The dataset also contains 223 individuals who make up a comparison group that represents the U.S. population in general.

The oversampling procedure was conducted to identify additional female and minority nascent entrepreneurs as well as additional minority individuals for the PSED comparison group in order to get adequate numbers of nascent entrepreneurs for analysis and comparison group numbers for the various minority ethnic groups. The oversampling procedure yielded 384 of the 830 nascent entrepreneurs in the PSED and yielded an additional 208 individuals for the comparison group (431 people total in the comparison group).

4.3 PSED Sample Representation

Confidence that the PSED sample is an accurate reflection of the U.S. population is important to generalization of research results stemming from the dataset. This can be assessed by the extent to which the comparison group contained within the dataset is similar to the U.S. population as a whole. Table 4-1 provides a summary of some of the key demographics of the comparison group within the PSED dataset versus the U.S. population. The comparison group data was collected between July 1998 and May 1999 and the U.S. population figures come from the 2000

U.S. Census. There are some similarities and differences between the comparison group sample and the U.S. population as a whole, these are further discussed below.

TABLE 4-1
PSED DATASET COMPARISON GROUP VERSUS U.S. POPULATION

TEST VARIABLE	1998/1999 PSED COMPARISON GROUP	2000 U.S. POPULATION
Total Population (n)	223	281,421,906
Percentage of Population that is Female	53.4	50.9
Percentage of Population that is White	77.9	75.1
Percentage of Population that is Black	11.3	12.3
Total Median Number of Persons in Household	3.00	2.59
Total Median Household Income	$45,500	$42,228
Total Median White Household Income	$50,000	$44,517
Total Median Black Household Income	$27,500	$29,470

The U.S. Census estimates the population 18 and older to be about 200,000,000 of which 49.1 percent is male. The comparison group is made up of a sample that is 46.7 percent male. The comparison group also has an under-representation of people less than 25 years old or over 54 years old. This may reflect the emphasis on the primary economic decision-makers, head of household, or principal shopper in the data screening and collection protocols that were used to establish the PSED dataset.

There are also differences in the estimates of the ethnic composition of the U.S. adult population and the comparison group. There is a small under-representation of Blacks and a substantial

under-representation of Hispanics in the comparison group. Hispanics make up only 4 percent of the comparison group while they make up 11 percent of the U.S. population. This is likely due to the "English only" interview protocol used in the data collection. Respondents that had trouble with an English conversation were immediately dropped from the interview/data collection process. The under-representation of Blacks, and to some extent that of Hispanics, may also reflect the under-representation of those with low levels of household income and educational attainment. Those individuals with low levels of household income may not have phones and would not have been able to be interviewed. In addition, the under-representation of those with low levels of educational attainment is probably a reflection, in part, of the under-representation of older adults – those 55 and older. It is these age groups that are most likely to report lower levels of educational attainment.

4.4 PSED Sample Demographic Summary

Table 4-2 summarizes the overall demographic and socio-economic differences between nascent entrepreneurs and the comparison group (non-nascent control group) within the PSED dataset. The nascent entrepreneurs and comparison group summarized in Table 4-2 do not include the female and minority oversampling data that was collected. Overall, the two groups are largely similar in terms of education, marital status, household income and household income per member of the household. However, there are a number of statistically significant differences. Nascent entrepreneurs are younger, more likely to be male, and live in larger households.

The most notable difference was the ethnicity of the nascent entrepreneurs relative to the control group. It appears that Black individuals are much more likely to be involved in entrepreneurial

activity than White individuals. There is a dramatic difference in the control group (as well as the U.S. population in general) and the ethnic breakdown of the nascent entrepreneurs that were identified through the PSED protocol. This finding has been identified and is discussed by Reynolds (2000), but further examination and study of the differences between White and Black nascent entrepreneurs as well as to their respective comparison groups (control groups) is conducted in this research report.

TABLE 4-2
DEMOGRAPHIC SUMMARY OF NASCENT ENTREPRENEURS AND COMPARISON GROUP (NOT INCLUDING FEMALE AND MINORITY OVERSAMPLING DATA)

TEST VARIABLE	NASCENT ENTREPRENEUR	COMPARISON GROUP
Number of Respondents (n)	446	223
Age (years)	Mean = 40.0**	Mean = 42.6**
Gender***	61.7% male 38.3% female	46.6% male 53.4% female
Ethnicity	75.8% White 16.9% Black 3.4% Hispanic 3.9% Other	77.9% White 11.3% Black 4.5% Hispanic 6.3% Other
Education (5 point scale: 1=grade school, 2=some HS, 3=HS degree, 4=some college, 5=college degree, 6=post college education)	Mean = 4.8	Mean = 4.6
Marital Status	57.5% married 42.5% not married	51.6% married 48.4% not married
Total Household Income Last Year (self-report)	Mean = $65,035* Median = $50,000	Mean = $53,530* Median = $45,500
Total Number of Members in the Household	Mean = 3.1	Mean = 3.0
Household Income per Household Member	Mean = $25,970 Median = $19,292	Mean = $22,229 Median = $17,500

* $p < .05$ *** $p < .001$

Table 4-3 below provides a summary of the full PSED dataset including the female and minority oversampling data that was collected as part of the PSED protocol. While statistically significant differences are identified on Table 4-3 below, it should be noted that the minority oversampling data is largely responsible for the differences (minority individuals were less educated and had lower household income than White individuals).

TABLE 4-3
DEMOGRAPHIC SUMMARY OF NASCENT ENTREPRENEURS AND COMPARISON GROUP (INCLUDING FEMALE AND MINORITY OVERSAMPLING DATA)

TEST VARIABLE	NASCENT ENTREPRENEUR	COMPARISON GROUP
Number of Respondents (n)	830	431
Age (years)	Mean = 39.6	Mean = 40.5
Gender*	51.4% male 48.6% female	44.5% male 55.5% female
Ethnicity***	62.8% White 26.7% Black 7.2% Hispanic 3.3% Other	44.4% White 33.0% Black 16.3% Hispanic 6.3% Other
Education (5 point scale: 1=grade school, 2=some HS, 3=HS degree, 4=some college, 5=college degree, 6=post college education)	Mean = 4.7***	Mean = 4.2***
Marital Status***	54.6% married 45.4% not married	47.0% married 53.0% not married
Total Household Income Last Year (self-report)	Mean = $59,813** Median = $47,000	Mean = $49,339** Median = $41,000
Total Number of Members in the Household	Mean = 3.3	Mean = 3.2
Household Income per Household Member	Mean = $23,207* Median = $16,000	Mean = $19,860* Median = $15,000

* $p < .05$ *** $p < .001$

4.5 Statistical Methods and Analysis

The statistical methods utilized to test the broad hypotheses in this study were frequency results *chi*-square tests, and *t*-tests on mean responses between nascent entrepreneurs and the comparison group as well as solo nascent entrepreneurs (those founding businesses without partners) and team-oriented nascent entrepreneurs. The empirical analyses and statistical methods were conducted using SPSS 11.0 for Windows. The details on variables are provided with the individual analyses in the report.

5.0 RESEARCH RESULTS

This section presents and discusses the research results of the data analyses. The first part of this section examines the findings for all of the nascent entrepreneurs (NEs) who are working on startups on their own (solo NEs). The second part of this section examines NEs who are part of founding teams (team based NEs). A comparison of the two types of nascent entrepreneurs concludes this section. The findings and overall results presented in this section provide a snapshot of the type of costs and investments in entrepreneurial activity that are taking place in the United States at the current time.

5.1 Nascent Entrepreneurs: Solo Effort Businesses

A total of 388 NEs in the PSED dataset are in the process of founding a business as a solo entrepreneur. Figure 5-1 shows the breakdown of the types of firms by business sector. About half of the solo NEs are in the process of founding services firms and another 25 percent are founding retail businesses. The remaining 25 percent of solo NEs are founding a variety of other types of firms.

In terms of business formalization, Table 5-1 presents data results which show that while a majority of solo NEs have prepared business plans, two thirds have not prepared financial projections for their firms. Thus, most of the solo NEs have not completed the planning efforts for their would-be startups. Three quarters of the solo NEs are home based, and one third have opened separate bank accounts for their businesses and are devoting 35 hours or more to their business startup.

FIGURE 5-1
NUMBERS AND TYPES OF SOLO NASCENT ENTREPRENEUR BUSINESSES

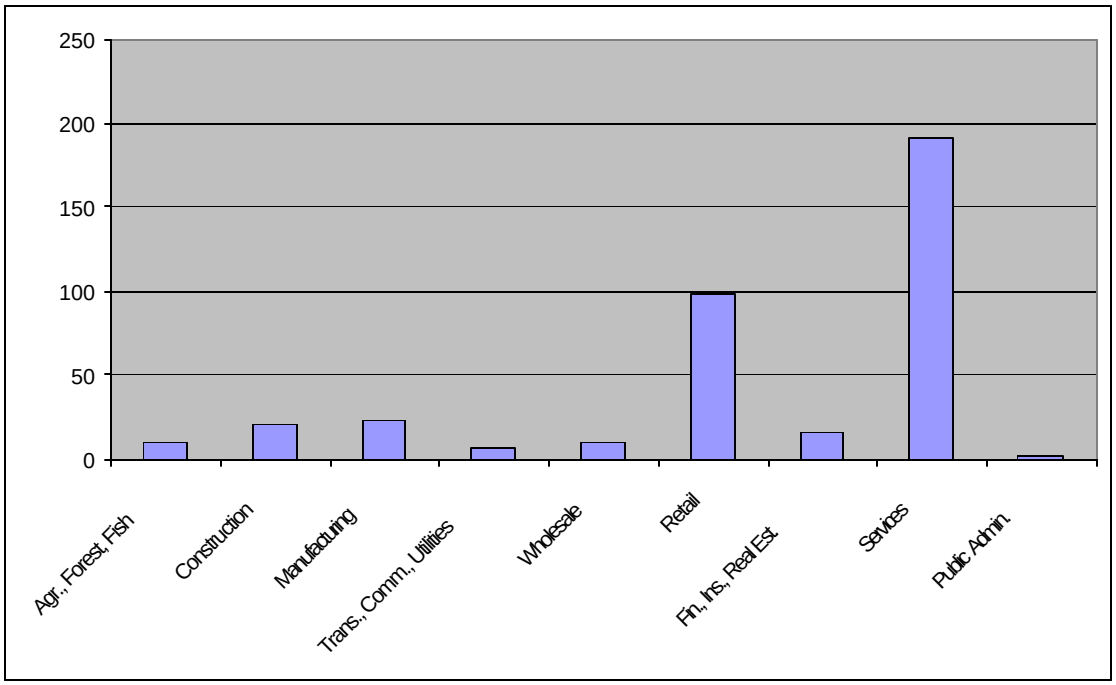


TABLE 5-1
FORMALIZATION OF SOLO NASCENT ENTREPRENEUR BUSINESSES

TEST VARIABLE	RESULTS
Has a business plan been prepared?	54.9% - yes 44.8% - no
Have formal projected financial statements been prepared?	32.2% - yes 67.8% - no
Nature of current physical setting.	73.4% - current residence 6.2% - site of existing business 8.5% - special location for startup 11.9% - location not yet needed
Devoting 35+ hours/week on the business?	32.2% - yes 67.8% - no
Have opened a separate business bank account?	32.0% - yes 68.0% - no

Table 5-2 presents data that allows us to understand the financial needs of the solo NE businesses, as well as the future expected financial potential of the new ventures. The median financial needs are relatively modest as are the expected firm income figures after the first and fifth years. There may be some impact on the figures shown in Table 5-2 due to the fact that a majority of the solo NEs have not prepared financial statements. However, based on the PSED sample, it would appear that the most of the entrepreneurship activity in the U.S. conducted by solo NEs involves the founding of small businesses with limited financial potential based on the expectations of the solo NEs.

TABLE 5-2
FINANCIAL NEEDS AND EXPECTED INCOME FOR SOLO NASCENT ENTREPRENEUR BUSINESSES

TEST VARIABLE	RESULT
Funds needed for startup to be self-sustaining?	Median = $6,000
First 30 days operating cash needs	Median = $1,000
Expected firm income: 1st year	Median = $25,000
Expected firm income: 5th year	Median = $90,000

Table 5-3 presents the years of experience, and the personal financial investments that have been made by the solo NEs into their business startups. Most of the solo NEs have at least five years of experience in the industry of their startup and as with most entrepreneurs recognize that they need to invest their own monies into the venture. The median investment in the businesses is $2,000, but the majority of solo NEs also report that they are still in the process of saving money for their firms.

Again, with startup costs estimated to be low for the businesses it is not surprising that the investments made in the nascent businesses remains low. The statistics support the finding that entrepreneurship is a drawn out process for most entrepreneurs and the results are consistent with earlier research that has shown that the majority of entrepreneurs take months or even years to go from the business idea to business founding (Singh, 2000).

TABLE 5-3
EXPERIENCE OF SOLO NASCENT ENTREPRENEURS AND PERSONAL FINANCIAL INVESTMENT INTO THEIR BUSINESSES

TEST VARIABLE	RESULT
Years of work experience in the industry of the startup.	Median = 6.0 Mean = 9.7 Std. Dev. = 10.2
Currently saving money to invest in business?	70.4% - yes 29.6% - no
Finished saving money or still in process?	4.8% - finished 95.2% - still in process
Invested any of own money in business?	93.0% - yes 7.0% - no
For those who invested, total amount put into startup.	Median = $2,000 Mean = $8,026 Std. Dev. = $25,752

Combining the results shown in Tables 5-3 and 5-4, it can be seen that the median costs that solo NEs must invest in their businesses is $6,000 and that most have made personal investments in their business (median investment is $2,000). Beyond personal savings, credit cards and home equity are often used as sources of funding and many solo NEs have asked or will ask others to

make investments in their firms. Table 5-4 shows that institutional sources of financing such as banks, assistance through SBA or venture capitalists are much less common than the use of personal credit cards, or friends and family.

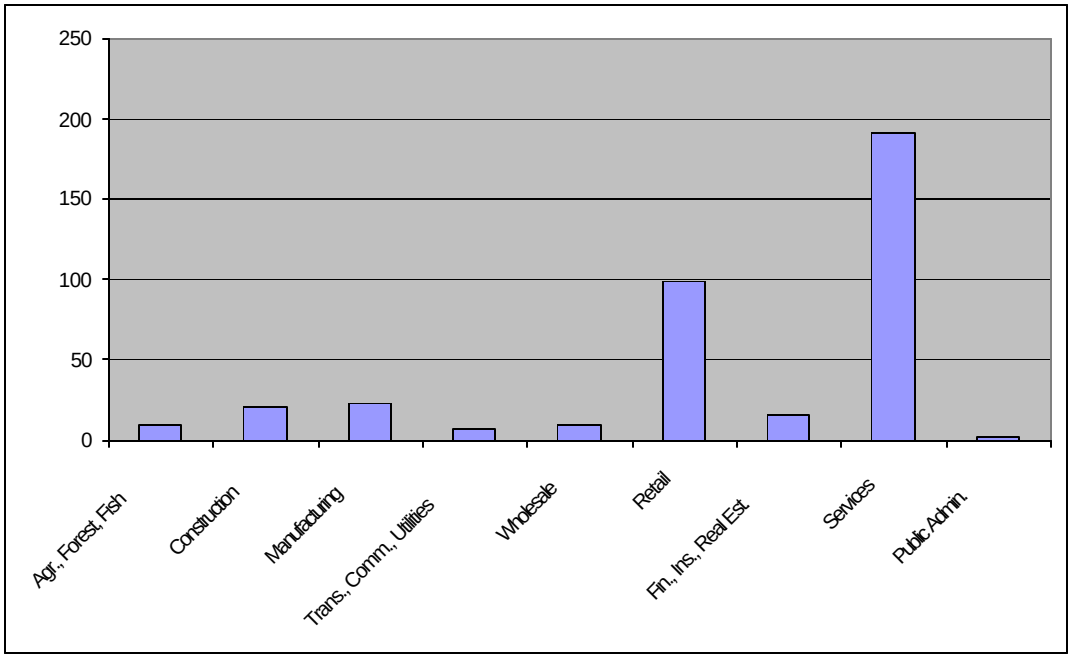
TABLE 5-4
SOURCES OF FUNDING FOR SOLO NASCENT ENTREPRENEUR BUSINESSES (BEYOND PERSONAL SAVINGS)

TEST VARIABLE	RESULT
Asked for funding from spouse	18.0% - Yes
Asked for funding from friend or family	13.7% - Yes
Have used a personal credit card	31.1% - Yes
Have taken a second mortgage	2.1% - Yes
Will seek a bank loan	8.0% - Yes
Asked for funding from SBA	3.4% - Yes
Asked for funding from a venture capitalist	2.6% - Yes

5.2 Nascent Entrepreneurs: Team Effort Businesses

Not all businesses are solo efforts and the data that is presented in this section provides a glimpse of the businesses that are being co-founded by two or more entrepreneurs. This section includes 423 team-owned businesses. Of these, 194 startups are being co-founded by the respondent and his/her spouse. Figure 5-2 below shows the breakdown of the types of firms by business sector. As with the solo NE businesses, about 75 percent are service firms or retail businesses with a similar breakdown of businesses in the other sectors.

FIGURE 5-2
NUMBERS AND TYPES OF TEAM-BASED NASCENT ENTREPRENEUR BUSINESSES



In Table 5-5 we see that the team-owned nascent businesses are less likely to be home-based businesses than the solo NE businesses and that they are more likely to have business plans, formal financial projections, and a separate bank account for the business. Over 15 percent more of the team-owned nascent businesses are likely to be outside the home and the establishment of a business bank account as well as the preparation of business plans and financial projections are 10 percent more likely than solo NE businesses. There appears to be a consistent percentage of NEs who devote 35 or more hours per week to the business, as this is the case with both solo and team-based NEs.

TABLE 5-5
FORMALIZATION OF TEAM-OWNED NASCENT BUSINESSES

TEST VARIABLE	RESULTS
Has a business plan been prepared?	66.7% - yes 33.3% - no
Have formal projected financial statements been prepared?	42.0% - yes 58.0% - no
Nature of current physical setting.	57.8% - current residence 12.1% - site of existing business 19.0% - special location for startup 11.1% - location not yet needed
Devoting 35+ hours/week on the business?	27.9% - yes 72.1% - no
Have opened a separate business bank account?	39.8% - yes 60.2% - no

The biggest difference between the solo NE businesses and the team-owned nascent businesses is in the funding needs and the expected firm sizes in terms of revenues. The team-owned nascent businesses are much larger entrepreneurial efforts, in terms of both financial needs and future financial potential. Table 5-6 presents data that allows us to understand the financial needs and the intended sizes of the team-owned nascent businesses. The overall financial results show that team-based NEs require much more investment and expect much higher income than solo NEs. There are major differences between the median figures provided in Tables 5-2 and 5-6 for solo NEs and team-based NEs, respectively. In addition, the mean fifth year expected income for solo NE businesses was $935,000, while it was $2.4 million for team NE businesses. These findings suggest that team-based NEs are more likely to create greater employment opportunities for the U.S. work force than solo NE efforts.

TABLE 5-6
FINANCIAL NEEDS AND EXPECTED REVENUES FOR TEAM-OWNED NASCENT BUSINESSES

TEST VARIABLE	RESULT
Funds needed for startup to be self-sustaining?	Median = $20,000
First 30 days operating cash needs	Median = $3,200
Expected firm income: 1st year	Median = $50,000
Expected firm income: 5th year	Median = $125,000

The costs of starting the team-based NE businesses are much higher than solo NE businesses. Table 5-2 showed that the median amount needed to make solo NE startups self-sustaining was $6,000 and that the operating cash needs for the first 30 days was $1,000. Table 5-6 shows that team-based NEs require about three times as much for their businesses. However, the expected firm incomes are also higher for team-based NEs. Thus, it appears that the higher capital/investment needs are required for the higher potential return of team-based NE efforts.

Table 5-7 presents the total combined years of experience of the founding team members for team-based NE ventures, and the total personal financial investments that have been made by the co-founders into their business startups. In both cases, we find differences between the two types of NE. The team-owned nascent businesses enjoy twice as much industry experience and twice as much investment in terms of the median figures as their solo NE business counterparts. This illustrates the major advantage of team-based nascent entrepreneurship as resources can be pooled together to invest in the business – both human capital as well as financial capital.

TABLE 5-7
TOTAL EXPERIENCE OF CO-FOUNDERS AND TOTAL COMBINED PERSONAL FINANCIAL INVESTMENT INTO THEIR BUSINESSES

TEST VARIABLE	RESULT
Total combined number of years of work experience in the industry of the startup.	Median = 12.0 Mean = 18.6 Std. Dev. = 20.3
Currently saving money to invest in business?	68.6% - yes 31.4% - no
Finished saving money or still in process?	5.9% - finished 94.1% - still in process
Invested any of own money in business?	83.7% - yes 16.3% - no
Total combined investment into the startup to date.	Median = $4,000 Mean = $37,975 Std. Dev. = $182,201

Beyond personal savings, the investment sources used or to be used by the entrepreneurs in the team-owned nascent business category are listed in Table 5-8.

TABLE 5-8
SOURCES OF FUNDING FOR TEAM-OWNED NASCENT ENTREPRENEUR BUSINESSES (BEYOND PERSONAL SAVINGS)

TEST VARIABLE	RESULT
Asked for funding from spouse	25.1% - Yes
Asked for funding from friend or family	14.0% - Yes
Have used a personal credit card	30.5% - Yes
Have taken a second mortgage	4.5% - Yes
Will seek a bank loan	16.4% - Yes
Asked for funding from SBA	5.7% - Yes
Asked for funding from a venture capitalist	3.8% - Yes

Given that there are significant differences in the capital requirements of the firms founded by solo versus team-based NEs, it is not surprising that team-based NEs were more likely to report that they seek investment from institutional sources (e.g., banks, SBA, and venture capitalists). They were also less likely to report seeking funding from their friends and family.

5.3 Comparison of Solo versus Team-Based Nascent Entrepreneurs

Adding to the results for solo and team-based nascent entrepreneurs that were reported in Tables 5-2 and 5-6 earlier, respectively, Figures 5-3 through 5-6 illustrate the clear differences between solo NEs and team-based NEs in terms of the estimated capital needs and expected firm incomes. For both groups the median startup investment needs and expected incomes were relatively low. However, there is a wide range on the needs and future expected firm income values, with higher figures for team-based NEs on both fronts.

Figure 5-3 shows that almost 50 percent of the solo NEs needed just $5,000 or less to make their business self-sustaining. However, less than 40 percent of the team-based NEs reported needing $5,000 or less. On the other end of the spectrum, 19 percent of team-based NEs projected their financial needs to be over $100,000 to just 4 percent of solo NEs.

Consistent with the capital required to make the NE firms self-sustaining, there were differences between the two types of NEs with respect to the required operating cash needs for the first 30 days of business. By a 2 to 1 margin solo NEs were more likely to indicate that they needed $1,000 or less, but they were half as likely as team-based NEs to estimate cash needs to be $10,000 or more (see Figure 5-4).

FIGURE 5-3
TOTAL FUNDS NEEDED BY NASCENT ENTREPRENEURS
TO MAKE THEIR BUSINESSES SELF-SUSTAINING

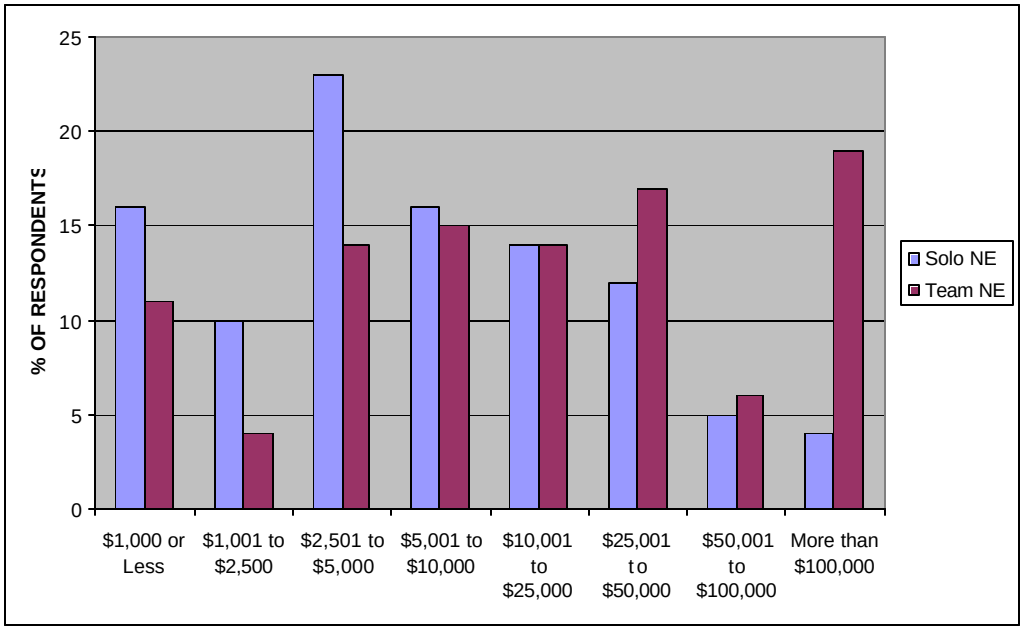
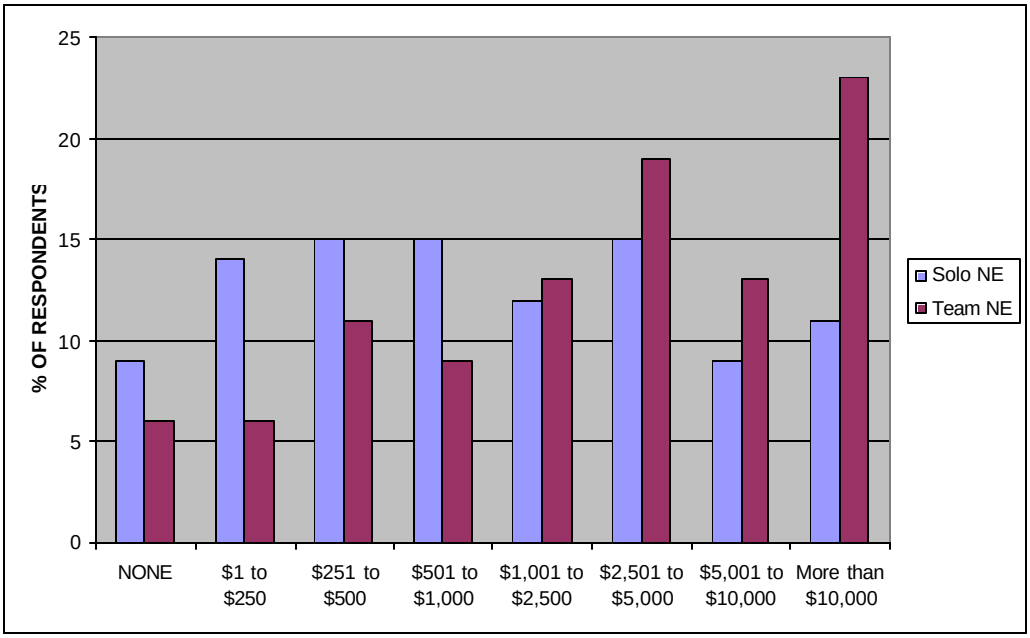


FIGURE 5-4
1ST 30 DAYS OPERATING CASH NEEDS FOR
NASCENT ENTREPRENEUR BUSINESSES



Not only were the capital needs to found the business different, but there were also dramatic differences with respect to the projected earnings of the businesses. As expected, the projected incomes for both the 1st and the 5th year of operations were higher for the team-based NE businesses (see Figures 5-5 and 5-6). The majority of solo NEs expected less than $100,000 in annual income after five years for their business, while the majority of team-based NEs expected more than $100,000. More specificially, only 13 percent of the solo NEs expected to earn over $500,000 per year after their fifth year of operation, with 62 percent projecting $100,000 or less. For team-based NEs, 27 percent expected to earn over $500,000 and only 47 percent projected $100,000 or less. Thus, for solo NEs, the entrepreneurial activity appears to be an effort to provide income for the entrepreneur and not much else (e.g., salaries for employees).

FIGURE 5-5
EXPECTED FIRM INCOME: 1ST YEAR OF NASCENT ENTREPRENEUR BUSINESSES

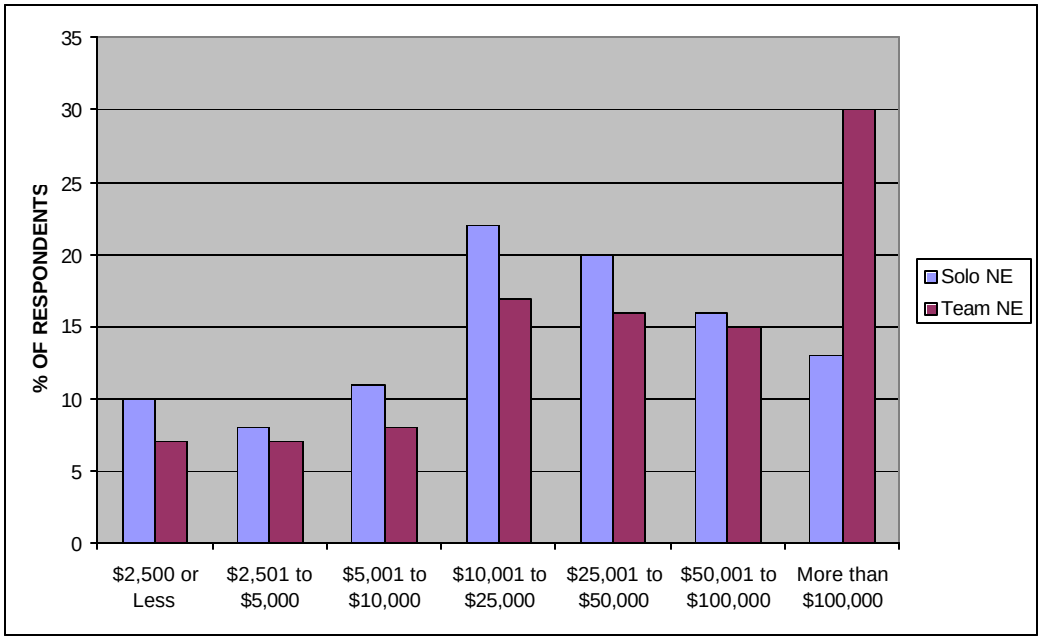
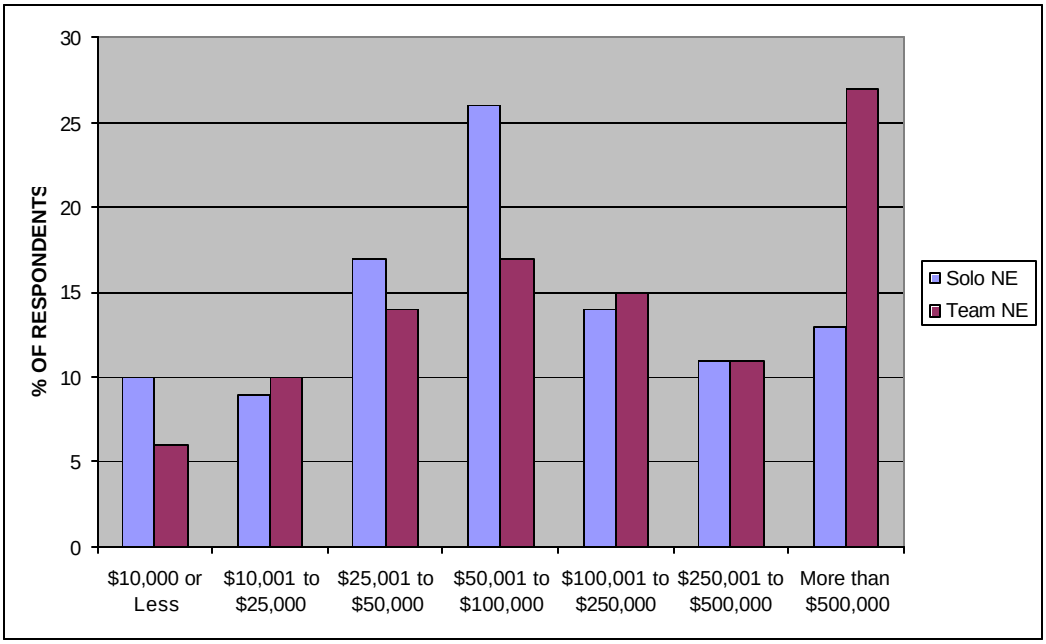
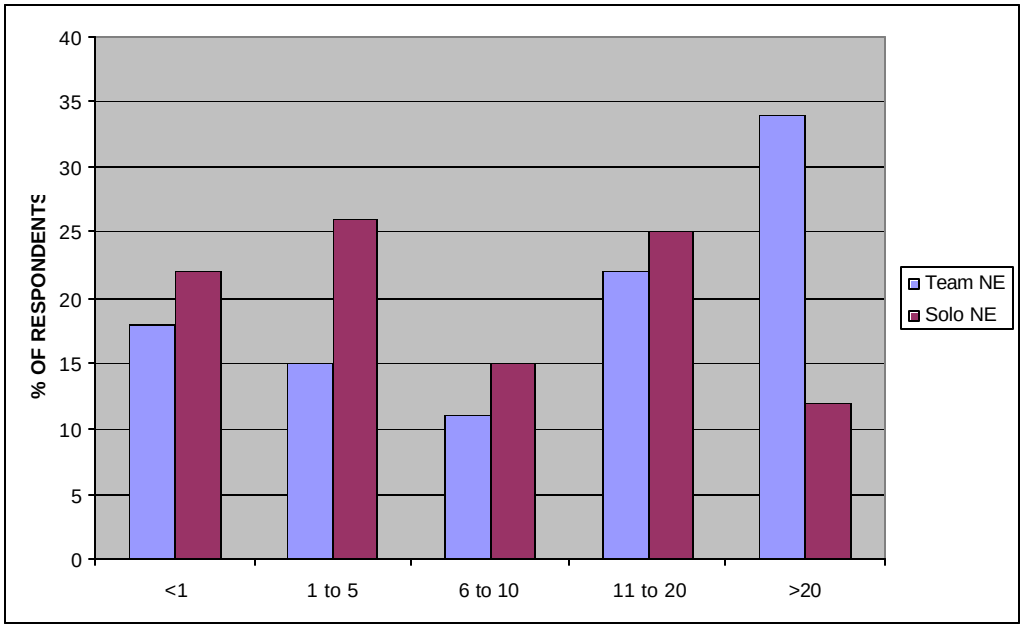


FIGURE 5-6
EXPECTED FIRM INCOME: 5TH YEAR OF NASCENT ENTREPRENEUR BUSINESSES



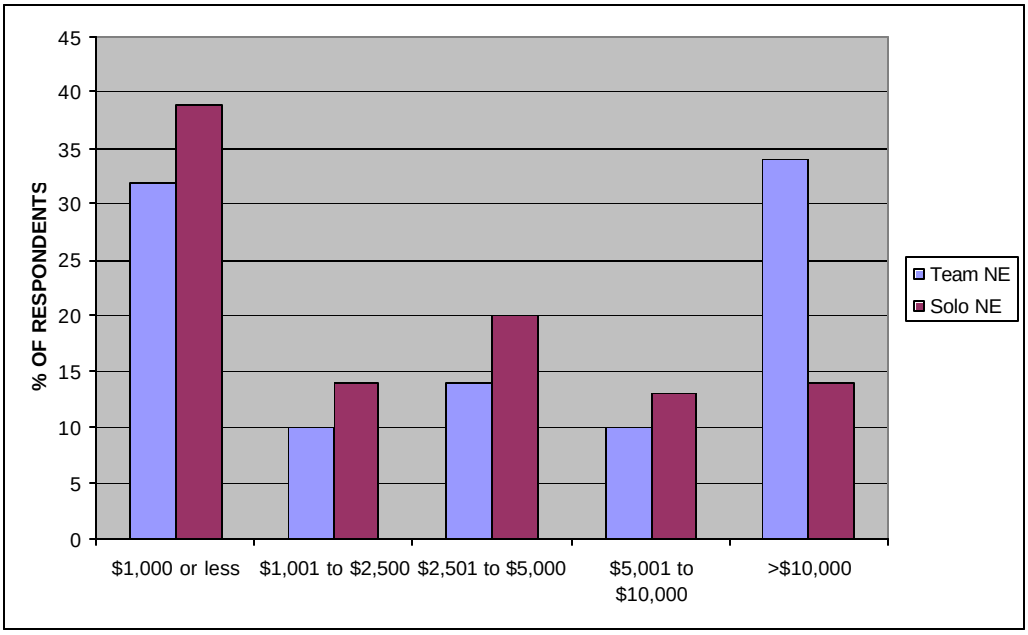
The amount of experience that the NEs brought to their firms was significantly different depending on whether they were solo NEs or part of a team. Based on the data provided in Tables 5-3 and 5-7, we can see that team-based NEs brought twice as much industry experience to their potential businesses as solo NEs. We would expect to find more industry experience with team NE efforts because of the combined experience of the founders. The mean levels of experience were 9.7 years to 18.6 years for solo NE and team-based NE businesses, respectively. Figure 5-6 illustrates the ranges of experience for the two types of NE businesses. The most notable difference is the wide gap between the solo and team-based NE businesses with greater than 20 years of experience. Only 12 percent of solo NE businesses fit into this category, while 34 percent of team-based NE businesses have over 20 years of combined experience in the industry.

FIGURE 5-7
TOTAL YEARS OF EXPERIENCE IN THE INDUSTRY OF THE EXPECTED STARTUP



Tables 5-3 and 5-7 also showed the significant differences in investment that were made into the two types of firms. The median levels of financial investment that were made into the two types of firms were $2,000 and $4,000, with team-based NEs reporting twice the investment of solo NEs. However, the mean differences were much different. Team-based NEs reported investing almost $38,000 as the total mean investment into their startups, whereas solo NEs only reported mean investment of about $8,000. The range of investments shown in Figure 5-8 show that almost 40 percent of solo NEs had invested less than $1,000 into their potential startups. Again, it was expected that team-based NE businesses would not only offer greater financial potential but would enjoy the greater combined investment of multiple co-founders. While this is true, there is an interesting dynamic that appears to be taking place with team-based NE businesses. Team-based NE efforts appear to be bi-modal in the level of investments as 32 percent reported investing $1,000 or less and 34 percent reported investing more than $10,000.

FIGURE 5-8
TOTAL FINANCIAL INVESTMENT MADE INTO THE EXPECTED STARTUP



The following section provides additional discussion of the findings and implications of the similarities and differences found between the two types of businesses. Policy implications and the limitations of this research are also discussed.

6.0 DISCUSSION

6.1 Overall Research Findings

Based on the PSED data, it appears that most nascent entrepreneurship within the United States involves relatively small, mostly home-based business activity and that the median investments made by both types of NEs into their businesses is relatively modest. This is consistent with prior research that shows that most businesses in the U.S. are founded with less than $50,000 in investment (Vesper, 1996). However, small and home-based business activity should not be discounted as McKenna (1988) has shown that most large markets evolve from small, niche markets. In addition, recent research has also found that home-based businesses contribute $314 billion to the U.S. economy and these businesses employed over 3.5 million people both at home and off-site (Pratt, 1999). Obviously, most large businesses started small at founding and grew over time.

With respect to the businesses that are being pursed by NEs in this study, both groups are pursuing mostly retail and service type businesses, but team-based NE businesses are more formalized than those of solo NEs (business plan development, non-home based businesses, etc.) and the financial needs are greater which leads to greater expected use of institutional sources of funding. Consistent with prior research, the majority of both types of businesses will be self-funded or will be funded by friends and family. The need for greater resources is also coupled with the fact that there are significant differences in the expected income of the businesses of solo NEs versus team NEs. As stated earlier, the entrepreneurial activity of solo NEs appears to be an effort to provide income for the entrepreneur and not much else. However, team NE

businesses are expected to be much larger and are projected to be more likely to provide employment opportunities for people outside of the team. This finding may indicate that efforts to spur entrepreneurship should include a networking component that encourages team building.

Team based entrepreneurship offers the benefit of having a greater pool of resources to draw from. This can include financial resources for founding and the increased intellectual capital of having several co-founders. Since most businesses are self-financed by the founding entrepreneur(s), having additional pools of savings and capital to draw from can be critical to finding adequate startup funds to establish a new venture. In addition, having a partner or team members with complementary skills can help achieve success. For example, having one founder with marketing experience and one founder with accounting experience can help a startup because of the intellectual capital resources contained by the firm should be greater than those within a startup that only has one founder with a strong marketing background. However, there is another major advantage of team-based entrepreneurship that goes beyond the individual skills and experience of the founding entrepreneurs and that is the access to expanded networks of people (who can provide access to additional resources) through the combined networks of founders.

As discussed earlier, successful entrepreneurship arises from information asymmetries in the marketplace (Gilad, Kaish, & Ronen, 1989). Because no individual can know all things, social network contacts can help entrepreneurs identify these information asymmetries to improve opportunity recognition. Team-based NEs can have a significant advantage over solo NEs because they have additional access to financial and human/intellectual capital through their social networks.

Having access to more people can help expand the boundaries of rationality (Simon, 1976) by allowing access to knowledge from which to assess and determine a course of action. Through social network ties, a good business opportunity can be identified, and resource acquisition can be better facilitated to exploit the recognized opportunity. Toward this end, team-based NEs reported that they were more likely to seek institutional funding than solo NEs. Part of the explanation may lie in the fact that teams have larger networks from which to draw information and resources and know who to approach for institutional funding.

This research provides some of the explicit costs of pursuing entrepreneurial activity in the United States, but there are also opportunity costs to entrepreneurship (Amit, Mueller, & Cockburn, 1995). These opportunity costs are implicit costs that are not as easy to measure. As with the differences in the explicit costs of team-based NE firms versus solo NE firms, there are also conclusions that can be drawn about the implicit opportunity costs associated with the decision to engage in team-based entrepreneurial activity. Recognizing that higher growth businesses usually require significantly greater commitments of time and capital than low growth businesses in order to succeed and achieve the expected growth, it is argued that team-based entrepreneurs have more to lose by starting their firms. The increased levels of investment capital for these NEs can be seen by the results of this study; however, given the projected incomes of team-based NE businesses and solo NE businesses, it is more likely that team-based NEs expect to stop working for any outside employers as part of their new venture formation process and forego wages that they otherwise would earn. Solo NEs have much lower financial expectations and based on the relatively low expected annual income figures after five years, many solo NEs may be able to establish their firms as part-time ventures and keep outside employment.

Thus, there are greater financial risks for team-based NEs and there are also likely to be higher opportunity costs resulting from salaries that are given up to pursue and found a new business.

6.2 Research Limitations

The primary limitation of this study is the reliance on self-report data. There is no independent verification or objective measure of variables such as the total investment in the business, the expected 1st and 5th year annual incomes, the capital required to make the business self-sustaining, the first 30 days cash needs, and whether a business plan was prepared. While there does not appear to be any apparent reason for respondents to over- or under-estimate most of these variables, the estimates may result from poor or incomplete research and planning, and some data such as business plan preparation are likely to be exaggerated (respondents may feel pressure to appear more legitimate by indicating they had prepared a plan for their business). This can be considered a "flaw" of the PSED data collection methodology; however, the PSED dataset allows researchers to study a wide range variables on many different types of nascent entrepreneurs that otherwise may not have been well studied.

The second limitation of this study may be that it examines data on nascent entrepreneurs and not on actual entrepreneurs. Some respondents who are identified by the PSED as nascent entrepreneurs may never actually start their businesses and this could muddle the meanings of the data results. Examining those entrepreneurs who found new ventures could reveal differences not captured in this report. However, the PSED provides a glimpse at the process of new venture creation in the United States as it is taking place. The activities, attitudes, and demographic characteristics of

nascent entrepreneurs are valuable even without firm founding because they can help researchers better understand the entrepreneurial process.

Another limitation is that the study only utilizes cross-sectional data. The results of this study suggest that there are some significant differences in the types of entrepreneurial opportunities pursued by solo and team-based NEs. Actual firm founding and future financial performance of the two types of nascent entrepreneurs was not examined. The question then becomes, what difference, if any, is there in the quality of opportunities? Do solo NEs enjoy any better chances for success than team-based NEs, or vice versa? To answer this question, longitudinal research is needed and in coming years, there may be data to allow more refined, longitudinal analysis.

Finally, there is an under-representation of certain minority groups (particularly Hispanics) in the original data collection discussed in Section 4.0. This under-representation as well as the relatively small number of total respondents (about 830 total NEs), may call into question some or all of the generalizability of the results in this paper to the overall U.S. population. Under the PSED methodology for data collection, efforts were made to develop a database that is representative of the U.S. population and the PSED is considered the best available dataset on NEs by leading entrepreneurship scholars around the country.

6.3 Policy Implications

Based on the discussion throughout the report, several recommendations can be made to policy makers for improving economic development and job creation through entrepreneurship. The findings of this study strongly suggest that promoting team-based entrepreneurship over the

entrepreneurial efforts of single individuals is likely to have more of a positive economic impact on local, regional, or national marketplaces. A word of caution, the results should not be interpreted that solo entrepreneurship is somehow weak, only that, as a group, team-based NEs are more likely to pursue more lucrative new venture opportunities than solo NEs. In practice, each opportunity should be evaluated independently whether pursued by an individual or a team of entrepreneurs.

This study finds that team-based entrepreneurs pursue opportunities with greater financial potential than solo NEs, and they have greater combined resources than solo NEs. This would indicate that team-based entrepreneurs are more likely to expand the tax base and employment base in their marketplaces than solo NEs. The chances for success can also be impacted by the choice to be a solo entrepreneur or a team-based entrepreneur. Team-based entrepreneurship allows individuals to pool resources and expand the networks of individuals who can be accessed to help form and build the business. By actively engaging in exchange behaviors with relevant social contacts (potential clients, friends, business contacts, family members), entrepreneurs may be better equipped to obtain resources such as financial backing, psychological support, physical goods, and business information to facilitate their ventures' survival (Hansen & Allen, 1992). Recognizing this, economic policy makers should promote and facilitate communication between relevant stakeholders. This can help build economic clusters of firms which can dramatically alter the economy of a local, regional, or national market (Porter, 1998; 2000).

Cluster development encourages networking opportunities among various economic development stakeholders (entrepreneurs, investors, government officials, etc.) and creates an environment that is ripe for entrepreneurship, particularly team-based entrepreneurship. Many

more new businesses are formed in clusters rather than in isolated locations (Porter, 2000). A cluster is a "geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities" (Porter, 2000, p. 16). The presence of a well developed cluster provides powerful benefits to productivity and the capacity to innovate that are hard to match by firms based elsewhere (Porter, 1998). Most cluster participants service different market segments and are not direct competitors; however, they share many commonalities. The cluster provides a constructive and efficient forum for dialogue among related companies, their suppliers, government, and other institutions. Valuable network contacts are more readily available within a cluster and, thus, can improve the chances for entrepreneurial success by providing the benefits discussed throughout this report.

Another benefit of cluster development is a greater level of competition among firms. While this may seem in conflict with economic development efforts, Porter (2000) points out, the productivity and prosperity of a location rest not on the industries in which its firms compete but rather on how they compete. Firms can be more productive in any industry if they follow "best practices," employ sophisticated methods, use advanced technology, and offer unique products and services, whether the industry is shoes, agriculture, or semiconductors. Many cluster advantages rest on external economies or spillovers across firms, industries, and institutions. Thus, a cluster is a system of interconnected firms and institutions whose whole is more than the sum of its parts. The effects of clusters on competition depend, to some extent, on personal relationships, face to face communication, and networks of individuals and institutions that interact. Policy makers who nurture clusters can spur economic development and one of the major reasons is that more team-based entrepreneurship is likely to emerge as a result.

7.0 CONCLUSIONS

Given the rapidly changing global economy, the need to understand successful new venture creation processes is greater than ever. This project discusses the costs and investments that nascent entrepreneurs are incurring and making in order to found new ventures in the United States. The research was made possible by the unique PSED dataset which provides researchers with the ability to examine nascent entrepreneurs while they are in the process of founding their new ventures. If there is anything that the entrepreneurship literature has proven it is that there is no unique profile of successful entrepreneurs; they come in all shapes and sizes. In this report, data analyses describe the differences between nascent entrepreneurs who are working to found ventures on their own versus those who are pursuing entrepreneurial opportunities with other team members.

Overall, the findings show that there are significant differences as well as similarities between solo NEs and team-based NEs. Among the findings, team-based NEs are pursuing higher potential opportunities and investing more capital into their ventures. But funds projected by the entrepreneurs to start and sustain both solo and team-based ventures are relatively low at $6,000 and $20,000, respectively.

The limitations of this report not withstanding, the results of this study make an important contribution to the entrepreneurship literature by providing a discussion of the differing costs of team-based nascent entrepreneurship and solo nascent entrepreneurship. The findings are consistent with social network theories that argue that the networks of entrepreneurs impact their firms' performance. At the most basic level, having two or more co-founders increases the

resource base of the firm over just being a solo business founder. However, theoretically, teams are also able to expand the networks of available outsiders who may be critical for identifying and securing resources.

These results have implications for policy makers and practicing entrepreneurs and should be considered by entrepreneurs before founding. For policy makers and economic development stakeholders the results suggest that solutions to improve economic development should look beyond tax incentives, economic development grants, and such things as providing physical resources through incubator services to include facilitating the development of entrepreneurs' social networks. By improving the networking opportunities of would-be entrepreneurs, it may be possible to bring teams of individuals with complementary skills and expanded networks together to improve the chances for the creation of successful ventures with higher impact on the tax and employment bases of local, regional, and national marketplaces.

8.0 REFERENCES

Amit, R., Mueller, E., & Cockburn, I. (1995). Opportunity costs and entrepreneurial activity. *Journal of Business Venturing*, 10, 95-106.

Birley, S. (1986). The role of networks in the entrepreneurial process. *Journal of Business Venturing*, 1, 107-117.

Birch, D. L. (1987). *Job creation in America.* New York: Free Press.

Brittain, J. W., & Freeman, J. H. (1980). Organizational proliferation and density dependent selection. In J. R. Kimberly and R. H. Miles (Eds.), *The Organizational Life Cycle* (pp. 291-3388). San Francisco: Jossey-Bass.

Carroll, G. R., & Hannan, M. T. (1989). Density dependence in the evolution of populations of newspaper organizations. *American Sociological Review*, 54: 524-541.

Castrogiovanni, G. (1991). Environmental munificence: A theoretical assessment. *Academy of Management Review*, 16(3), 542-565.

Chandler, G. N., & Hanks, S. H. (1993). Measuring the performance of emerging businesses: A validation study. *Journal of Business Venturing*. 8(5), 391-408.

Dollinger, M. J. (2003). *Entrepreneurship: Strategies and resources (3rd edition)*. Upper Saddle River, NJ: Prentice Hall.

Dubini, P., & Aldrich, H. (1991). Personal and extended networks are central to the entrepreneurship process. *Journal of Business Venturing*, 6(5): 305-313.

Fichman, M., & Levinthal, D. A. (1991). Honeymoons and the liability of adolescence: A new perspective on duration dependence in social and organizational relationships. *Academy of Management Review*, 16: 442-468.

Gilad, B., Kaish, S., & Ronen, J. (1989). Information, search and entrepreneurship: A pilot study. *Journal of Behavioral Economics*, 18, 217-235.

Gimeno, J. F., Folta, T. B., Cooper, A. C., & Woo, C. Y. (1997). Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms. *Administrative Science Quarterly*, 42: 750-783.

Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*. 78(6), 1360-1380.

Hansen, E. L., & Allen, K. R. (1992). The creation corridor: Environmental load and Pre-organization information-processing ability. *Entrepreneurship Theory and Practice*, 17(1), 57-66.

Hogan, B. (1991). How to hatch new businesses. *D&B Reports*, 39(4), 54-55.

Johannisson, B. (1990). Economics of overview - guiding the external growth of small firms. *International Small Business Journal*, 9, 32-44.

Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21, 135-172.

McKenna, R. 1988. Marketing in an age of diversity. *Harvard Business Review*.

Porter, M. E. (1998). The microeconomic foundations of economic development (parts I and II). In *The Global Competitiveness Report 1998* (pp. 197-287). Boston: Harvard Business School Press.

Porter, M. E. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, 14(1): 15-34.

Pratt, J. H. (1999). *Homebased business: The hidden economy.* Research report completed by Joanne H. Pratt Associates under U.S. SBA contract no. SBAHQ-97-M-0862.

Reynolds, P. D. (1992). Sociology and entrepreneurship: Concepts and contributions. *Entrepreneurship Theory and Practice.* 16(2): 47-70.

Reynolds, P. D. (1999). National panel study of U.S. business startups: Background and methodology. In J. A. Katz (Ed.), *Advances in entrepreneurship: Firm emergence, and growth.* Stamford, CT: JAI Press.

Reynolds, P. D. (2000). National panel study of U.S. business startups: Background and methodology. Databases for the Study of Entrepreneurship. 4, 153-227.

Schumpeter, J. (1934). *The theory of economic development*. Cambridge, MA: Harvard University Press.

Simon, H. A. (1976). *Administrative behavior*, 3rd edition. New York: Free Press.

Singh, R. P. (2000). *Entrepreneurial opportunity recognition through social networks.* New York: Garland Publishing.

Singh, J. V., Tucker, D. J., & House, R. J. (1986). Organizational change and organizational mortality. *Administrative Science Quarterly*, 31, 587-611.

Stinchcombe, A. L. (1965). Social structure in organizations. In J. G. March (Ed.), *Handbook of organizations*: 142-193. Chicago: Rand McNally.

Timmons, J. A. (1986). Growing up big. In Sexton, D. L., and Smilor, R. W. (Eds.), *The art and science of entrepreneurship.* Cambridge, MA: Ballinger.

Timmons, J. A. (1994). Opportunity recognition: The search for higher-potential ventures. In W. D. Bygrave, (ed.), *The Portable MBA in Entrepreneurship* (pp. 26-54). New York: John Wiley & Sons.

Tushman, M. L., & Anderson, P. (1986). Technological discontinuities and organizational environments. *Administrative Science Quarterly*, 31: 439-465.

Utterback, J. M., & Suárez, F. F. (1993). Innovation, competition, and industry structure. *Research Policy*, 22: 1-61.

Vesper, K. (1996). *New venture experience*. Revised, Seattle, WA: Vector Books.

Zimmerer, T. W. & Scarborough, N. M. (2002). *Essentials of entrepreneurship and small business management (3rd ed.).* Upper Saddle River, NJ: Prentice Hall.