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Uncovering What Helps Entrepreneurs Start Businesses: Lessons from Indiana

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Abstract: Although a great deal of research has been dedicated to the characteristics of entrepreneurs, a relatively small amount of research has focused on the factors affecting the transition of emerging entrepreneurs to firm birth. Virtually no studies have explored the role of Extension professionals in providing effective programs for entrepreneurs. Therefore, the objective of this research was to analyze the transition of emerging entrepreneurs to firm birth, noting the significant factors impacting movement beyond the gestation stage. Results from the model indicate that education significantly affects an entrepreneur's transition to firm birth and provide relevant information to Extension personnel.

Introduction

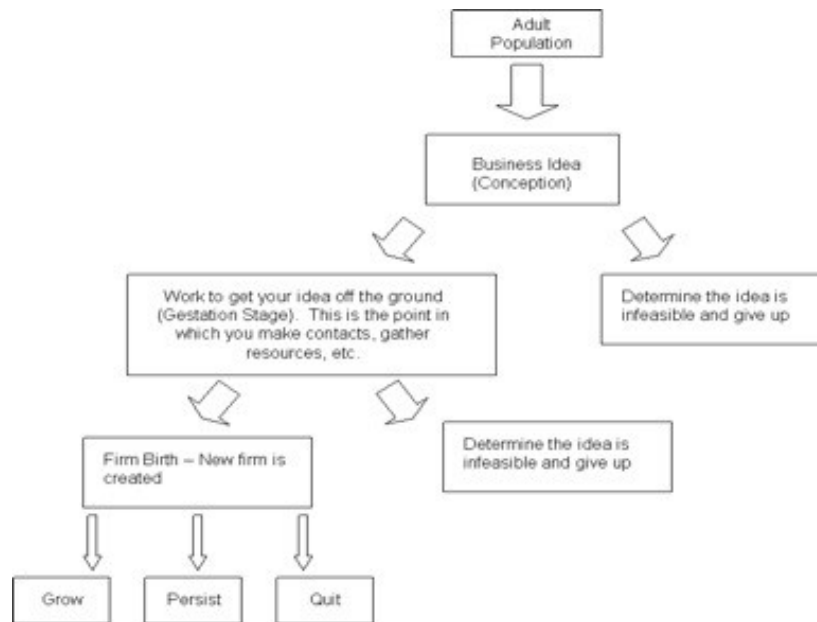
Increasing emphasis has been placed on the importance of entrepreneurs as a means through which economic growth is stimulated. Because approximately 86% of all firm establishment births over the past several years have been small firms, entrepreneurs and/or the self-employed are often associated with small businesses. The Small Business Administration (SBA) reported that small firms represent over 99% of all employer firms, have generated from 60% to 80% of net new jobs annually over the past decade, and made up 97% of all known exporters in 2004. Entrepreneurs are also credited with employing half of all private sector employees and producing 13 to 14 times more patents per employee than large patent firms (SBA).

From the data provided by the SBA, it is without doubt that entrepreneurs and small businesses are vital to the U.S. economy. Despite the importance of entrepreneurs to society, relatively little is known about the elements directly affecting entrepreneurial success. Further, the role Extension professionals play in educating entrepreneurs throughout the start-up process has gone virtually unexplored. This is surprising, given that many universities are attempting to increase entrepreneurial education through Extension programs. With increasing awareness of entrepreneurs' crucial role in the economy, research related to entrepreneurs and how Extension professionals may better serve their needs is both relevant and essential.

Multiple models of venture creation processes have been introduced by several authors such as Vesper (1980), Gartner (1985), Bhave (1994), and Reynolds, Carter, Gartner, and Greene (2004). One particular item consistent across their research is the transitioning of entrepreneurs through a distinct developmental process as they advance their business ideas. Below is a diagram of the entrepreneurial process as detailed by Reynolds et al. (2004).

Figure 1.

Depiction of the Entrepreneurial Process from Reynolds et al. (2004)



The diagram above illustrates that the gestation stage of the entrepreneurial process is a particularly crucial time for entrepreneurs, because during this stage of the process entrepreneurs are forming networks, gathering financial and human capital resources, etc. Entrepreneurs may also determine a particular idea is infeasible at this time and exit the process. Although exiting the entrepreneurial process is not typically measured as a "success," recognizing a poor business idea prior to start-up is likely beneficial to an entrepreneur. Thus, the gestation stage is an opportune point in the entrepreneurial process at which to study the factors that significantly contribute to entrepreneurs successfully transforming their business ideas into new firms or exiting the entrepreneurial process altogether.

Isolating Entrepreneurs in the Gestation Stage

Research based on nascent, or emerging, entrepreneurs in the gestation stage of the process and on their transition from gestation to firm birth has been limited because entrepreneurs at this stage of the process are both difficult and costly to identify (Kim, Aldrich, & Keister, 2006; Reynolds & White, 1997). For this reason, prior entrepreneurship research has typically studied entrepreneurs farther along in the process of business formation (Kim et al., 2006). A number of studies in entrepreneurship have measured the traits and characteristics of entrepreneurs in the infancy stage and beyond, and have further related those traits and characteristics to entrepreneurial selection and/or the success or failure of the venture (Alba-Ramirez, 1994; Bailey, 1986; Bates, 1990; Blanchflower & Oswald, 1998; Bosma, van Praag, Thurik, & de Wit, 2004; Cooper, Dunkelberg, & Woo, 1988; Perry, 2001; Woo, Cooper & Dunkelberg, 1988).

A very limited number of studies, however, have examined emerging entrepreneurs in terms of their characteristics and/or factors that affect their prevalence or transition from the gestation stage to infancy (Arenius & Minniti, 2005; Kim et al., 2006; Newbert, 2005; Parker & Belghitar, 2006; Reynolds et al., 2004;). Kim et al. (2006) suggested that research related to entrepreneurs should ideally focus on those in the gestation stage, because those individuals are participating in the process of gathering and organizing the knowledge and resources necessary for operating a new business.

Although the need for more research related to entrepreneurs in the gestation stage is widely recognized, the difficulty in isolating these individuals has hindered the progress of research in this area. Of the research cited above related to emerging entrepreneurs, Newbert is the sole author who has ventured outside the use of the Panel Survey of Entrepreneurial Dynamics (PSED) data set. Virtually no diversity exists in terms of data sets used to examine entrepreneurs in the gestation stage of the entrepreneurial process.

For Extension professionals to effectively cater to the educational needs of emerging entrepreneurs, the needs of those entrepreneurs must first be explicitly identified.

With this in mind, the objective of the study described here is to further research the transition of emerging entrepreneurs to firm birth in Indiana. Results from the analysis contribute additional insight into the relative effects of demographic, community, human capital, and financial capital factors on the likelihood of entrepreneurs in the gestation stage entering firm birth. Such information equips Extension professionals with the knowledge needed to create and deliver Extensions programs that will best meet the needs of entrepreneurs at this imperative stage of their development process.

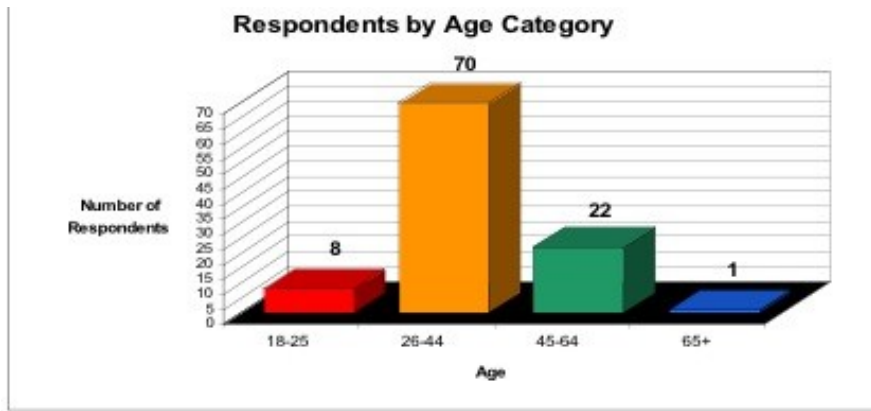
Who Are Entrepreneurs in the Gestation Stage?

To identify entrepreneurs in the gestation stage of the entrepreneurial process, we distributed surveys at two primary outlets: two Purdue University affiliated entrepreneurship workshops and several Small Business Development Center (SBDC) seminars across Indiana. Of the 231 Indiana entrepreneurs given the opportunity to participate in the study, 101 agreed to participate for the 2-year term (January 2004 - January 2006), which yielded a response rate of approximately 44%. The study was done over 2 years because the gestation stage can take up to 2 years. The survey requested information related to personal demographics, community characteristics, industry, human capital, financial capital, and social capital. A number of interesting general conclusions emerge from the analysis.

During the 2-year time frame in which the survey was distributed, approximately 30% of respondents had participated in a business start-up, while the remaining 70% were still working to get their idea off the ground. Nearly two-thirds of respondents indicated that they had attempted to create a business plan; however, only one-quarter of those individuals indicating that they had attempted to create a business plan had actually completed it.

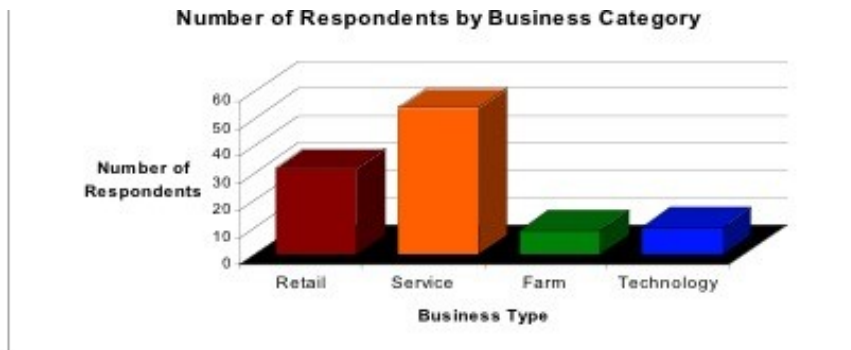
The age of individuals participating in these workshops is also of importance, so organizations/entities sponsoring the workshops can know whom to target with their advertisements and announcements. As can be seen in Figure 2, the vast majority of entrepreneurs attending the workshops (nearly 70%) were between the ages of 26 and 44 years old.

Figure 2.
Respondents Separated by Age Category



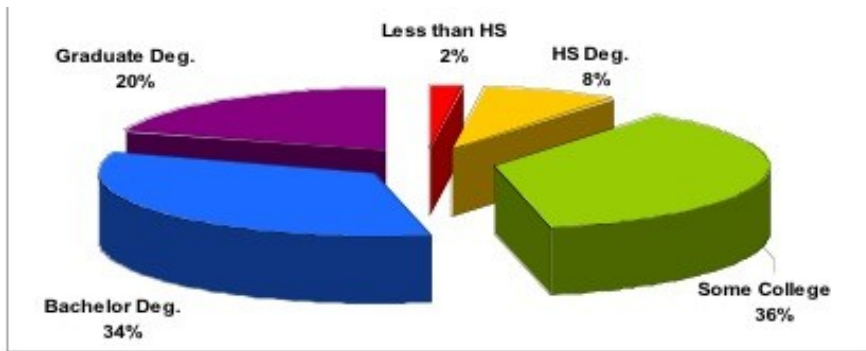
When the entrepreneurs were separated by business category, as illustrated in Figure 3, entrepreneurs with service industry-related business concepts or start-ups comprised more than half the respondents. This is not surprising given that the service industry continues to increase in size in the U.S. The retail industry comprised approximately one-third of respondents, while the remaining 9% and 10% were farm-related and technology-related businesses, respectively.

Figure 3.
Respondents Separated by Business Category



The education level of entrepreneurs attending beginning entrepreneurship workshops is also important. Figure 4 below illustrates that approximately 70% of respondents had at least some college education and that more than half of the respondents had earned a bachelor and/or graduate degree.

Figure 4.
Respondents Separated by Education Level



It is also important to note that relatively few entrepreneurs at this stage, approximately 17%, had secured total funding for their business concepts or start-ups, which may be a direct point of interest in beginning entrepreneurship workshops and seminars. In terms of social networks, approximately 42% of entrepreneurs reported having self-employed parents, while nearly 75% of respondents reported having friends and/or family who were self-employed.

Logit Model

A logistic regression model was estimated to further explore significant determinants of gestation stage entrepreneurs participating in business start-up. Based on the data provided by the 101 respondents, six key factors were found to significantly influence an entrepreneur in transitioning from the gestation stage of the process into business start-up. Variable definitions can be found in Table 1. Results can be found in Table 2 and are discussed in detail below.

The results indicate that participating in a more specialized workshop, such as the one sponsored by Purdue University, significantly affects an entrepreneur's participation in a start-up by about 46%. The Purdue workshops are typically more industry focused and require participants to pay a registration fee. From casual observation, the entrepreneurs attending the Small Business Development workshops were seeking more general basic information about starting a small business and were not required to pay a registration fee. Payment of a registration fee and attending a specialty workshop may signal the entrepreneur's dedication to the potential venture.

Being female was found to significantly increase the chances of an entrepreneur participating in a start-up by approximately 21%. This is a bit surprising, considering previous findings on the subject. For example, Reynolds et al (2004) found that in general women were responsible for only one-third of start-ups. In our case, women are both more frequently involved in the entrepreneurial process and more likely to participate in a start-up. This is consistent with female entrepreneurship trends in Indiana.

Table 1.
Variable Definitions

Variable	Variable Definition
Purdue workshop	

	Attended a Purdue workshop 1=Yes, 0= NO; Reference is attended SBDC workshop
Female	1=Yes, 0=No; Reference is Male
Age: 45+	Age 45 or older, 1=Yes, 0=No
Black	1=Yes, 0=No; Reference is White
Other race	1=Yes, 0=NO; Reference is White
Single	Single never married, 1=Yes, 0=No
No children under 18 in the household	1=Yes, 0=No; Reference is 2 or more children at home
1 child under 18 in the household	1=Yes, 0=No; Reference is 2 or more children at home under 18 years old
Type of business: retail	1=Yes, 0=No; reference is technology based business under 18 years old
Type of business: service	1=Yes, 0=No; reference is technology based business
Type of business: farm	1=Yes, 0=No; reference is technology based business
Major retail chain present in community	1=Yes, 0=No
Stable community	1=Yes, 0=No; Reference is growing community
Deteriorating community	1=Yes, 0=No; Reference is growing community
Some college education	1=Yes, 0=No; Reference is high school education
Bachelors degree	1=Yes, 0=No; Reference is high school education
Graduate degree	1=Yes, 0=No; Reference is high school education
Previous start-up experience	1=Yes, 0=No
Attempted business plan	Attempted to write a business plan 1=Yes, 0=No
Net worth less than \$50,000	1=Yes, 0=No; Reference is net worth more than \$50,000

Table 2.
Logistic Regression Results for Factors Affecting Business Start-Up

Variable	Parameter Estimates	p-value
Constant	-6.2287**	0.0029
Purdue workshop	2.4836**	0.0274
Female	1.6025**	0.0223

Age: 45+	0.0262	0.9749
Black	-0.1038	0.8376
Other race	1.3726	0.3485
Single	-1.0452	0.1523
No children under 18 in the household	-1.3346*	0.0810
1 child under 18 in the household	1.3553	0.1412
Type of business: retail	-0.0982	0.8468
Type of business: service	1.3225**	0.0340
Type of business: farm	-1.2174	0.1488
Major retail chain present in community	3.1271*	0.0696
Stable community	-0.3854	0.5627
Deteriorating community	0.7779	0.4540
Some college education	1.1310	0.3160
Bachelors degree	0.1497	0.9017
Graduate degree	2.1560*	0.0723
Previous start-up experience	0.4832	0.4628
Attempted business plan	0.5848	0.3351
Net worth less than \$50,000	1.0983*	0.0992
Note: *, **, *** denote statistically significant at the 10%, 5%, 1% level, respectively. Percent correctly predicted is 86.14%. Log Likelihood Function is -43.77. Heckman test was not statistically significant.		

Having no children in the household under the age of 18 negatively and significantly impacted participation in a start-up. Entrepreneurs without children under 18 in the household only have an approximately 9% chance of being involved in a start-up. Macpherson (1988) reported that the number of children in the household positively and significantly affected males' movement from paid to self-employment. Additionally, Robinson and Sexton (1994) indicated that the number of children positively and significantly influenced an individual's probability of entering self-employment and that having children positively and significantly affected earnings for the self-employed.

Compared to starting a technology-related firm, attempting to start a business in a service-related industry increases the likelihood of transitioning to start-up. Those involved in attempting a service-related business venture have an approximately 12% chance of reaching start-up.

Having a major retail chain, such as Wal-Mart, Target, K-Mart, etc., in the community was discovered to increase the chances of an entrepreneur participating in a business start-up by approximately 27%. This suggests that a community having sufficient infrastructure to support a major retail chain may likewise have sufficient infrastructure to support small businesses. Martens (2006) and Hicks and Wilburn (2001) found

that entry of a major retail chain may actually increase the number of retail-related businesses in a community.

Having a graduate degree was found to increase the likelihood of starting a business. This suggests that an entrepreneur was 53% more likely to start a business than someone with a high school degree. Reynolds et al. suggest that higher levels of education are generally associated with higher prevalence rates for nascent entrepreneurs.

Net worth less than \$50,000 was found to increase the likelihood of starting a business by 31%. Most previous studies have found higher net worth values to be associated with increasing likelihood of entering entrepreneurship (Evans & Jovanovic, 1989; Evans & Leighton, 1989; Georgellis & Wall, 1998; Holtz-Eakin, Joulfaian, & Rosen, 1994). Perhaps entrepreneurs in the gestation stage with lower net worth values are looking to invest in a small business to increase their income and/or equity.

Conclusions and Implications for Extension Professionals

With universities placing increased focus on entrepreneurship outreach and education, it is becoming ever more important for Extension professionals to both know and understand the characteristics of entrepreneurs as well as the unique challenges that face them. This research isolated entrepreneurs in one of the most crucial points in the entrepreneurial process-the gestation stage-and determined factors affecting entrepreneurs in their transition to firm birth from gestation.

Although additional data must be gathered to substantiate our findings, understanding the types of entrepreneurs attending these seminars is essential to providing them with the most relevant information. Our data suggests that entrepreneurs between the ages of 26 and 44, who are involved in the service industry, sought out informational workshops. The data related to the completion of business plans is also telling. Because less than a quarter of the individuals who started business plans actually finished them, this may suggest that workshops with a focus on business plan development are needed.

One of the most interesting findings for Extension professionals is likely the significant impact of entrepreneurs attending more specialized, university-sponsored workshops on their transition to firm birth. This result does not undermine the usefulness or effectiveness of the most basic entrepreneurship workshops or programs. It does, however, suggest that perhaps universities should host a number of more specialized workshops to more effectively meet the needs of their Extension clientele.

As an example of the usefulness of such information, Purdue University Extension Specialists designed a user-friendly Web tool for entrepreneurs to write their business plan. We understood from the research that attempting to write a business plan was an important factor for start-up (Ehmke & Boehlje, 2006).

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