The Anatomy of an Entrepreneur

Family Background and Motivation

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Introduction and Findings

Entrepreneurs are among the most celebrated people in our culture. Celebrity entrepreneurs such as Steve Jobs, Bill Gates, Sergei Brin, and Larry Page often grace the covers of prominent publications. These company founders and innovators fuel economic growth and give the nation its competitive edge. According to the U.S. Small Business Administration, in 2004 small firms (<500 employees) employed 50.9 percent of the private-sector work force and generated 50.7 percent of the non-farm private gross domestic product.¹ According to that same report, in 2004 firms with fewer than 500 employees had $1.9 trillion in annual payroll, not including benefits. An extensive report released in November 2008 by the U.S. Small Business Administration found that small firms had a higher percentage of patents per employee than larger firms, and that younger firms were more likely to have a higher percentage of patents per employee than older firms.²

However, very little is known today about the backgrounds, life histories, motivations, and beliefs of the founders of businesses in high-growth industries. Understanding how entrepreneurs develop, the circumstances that can foster or induce entrepreneurship, and the mindset and beliefs of entrepreneurs could prove helpful both in supporting the existing class of entrepreneurs and in augmenting the ranks of entrepreneurs. This paper is aimed at helping to begin filling some of those information gaps by providing high-level insights into the backgrounds (socio-economic, educational, and familial) and motivations of entrepreneurs.

This is a follow-up to several research projects by the Global Engineering and Entrepreneurship project at Duke University, which has been researching the effect of globalization on the engineering profession and on U.S. competitiveness. Our previous research had focused on the contributions of skilled immigrants, the education and backgrounds of technology company founders, and the differences between immigrants and U.S.-born company founders.

For this project, we surveyed 549 company founders in a variety of industries, including aerospace and defense, computer and electronics, health care, and services. (This was a broader range of industries than we previously researched). We also asked founders more detailed questions about their backgrounds, motivations, and experiences in launching companies.

While our research cannot be generalized to the entire population of entrepreneurs in the United States, it is meant to be illustrative of the backgrounds of entrepreneurs in industries that we expected to be higher growth.³ Unfortunately, like most research in this area, we are affected by a survivor bias, in that we are able only to reach entrepreneurs whose companies are still alive.

Here are some of our key findings. Detailed statistics and charts are available in latter sections of this paper.

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3. The Survey of Business Owners from the Census Bureau is a good source of overview statistics on business owners in the United States, but is only completed every five years and has very limited space for questions (http://www.census.gov/econ/sbo/index.html). Other private surveys, such as the Kauffman Firm Survey, also have information on owner backgrounds, but are focused on a different population of businesses (http://www.kauffman.org/research-and-policy/kauffman-firm-survey.aspx).
Company founders tend to be middle-aged and well-educated, and did better in high school than in college

- The average and median age of company founders in our sample when they started their current companies was 40. (This is consistent with our previous research, which found the average and median age of technology company founders to be 39).
- 95.1 percent of respondents themselves had earned bachelor’s degrees, and 47 percent had more advanced degrees.
- 75 percent ranked their academic performance among the top 30 percent of the high school class, with a majority (52.4 percent) ranking their performance among the top 10 percent.
- 67 percent ranked their academic performance among the top 30 percent of their undergraduate class, but a smaller percentage (37.5 percent) ranked their performance among the top 10 percent.

These entrepreneurs tend to come from middle-class or upper-lower-class backgrounds, and were better educated and more entrepreneurial than their parents

- 71.5 percent of respondents came from middle-class backgrounds (34.6 percent upper-middle class and 36.9 percent lower-middle class). Additionally, 21.8 percent said they came from upper-lower-class families (blue-collar workers in some form of manual labor).
- Less than 1 percent came from extremely rich or extremely poor backgrounds
- The average birth order of respondents in their family was 2.2 and the average number of siblings was 3.1.
- The fathers of 50.1 percent of the company founders held bachelor’s or advanced degrees, as did 33.9 percent of the mothers.

- More than half (51.9 percent) of respondents were the first in their families to launch a business. Only 38.8 percent, 6.9 percent, and 15.2 percent, respectively, had a father, mother, or siblings who had previously started businesses.

Most entrepreneurs are married and have children

- 69.9 percent of respondents indicated they were married when they launched their first business. An additional 5.2 percent were divorced, separated, or widowed.
- 59.7 percent of respondents indicated they had at least one child when they launched their first business, and 43.5 percent had two or more children.

Early interest and propensity to start companies

- 52 percent of respondents had some interest in becoming an entrepreneur when they were in college, but 34.7 percent didn’t even think about it, and 13.3 percent had little or no interest. Those from lower-upper-class backgrounds were more likely to have been extremely interested in starting a business than the average (25 percent vs. 18.5 percent).
- Of the 24.5 percent who indicated that they were “extremely interested” in becoming entrepreneurs during college, 47.1 percent went on to start more than two companies (as compared to 32.9 percent of the overall sample).
- The majority of the entrepreneurs in our sample were serial entrepreneurs. The average number of businesses launched by respondents was approximately 2.3; 41.4 percent were starting their first businesses.
Motivations for becoming entrepreneurs: building wealth, owning a company, startup culture, and capitalizing on a business idea

- 74.8 percent of respondents indicated desire to build wealth as an important motivation in becoming an entrepreneur. This factor was rated as important by 82.1 percent of respondents who grew up in “lower-upper-class” families.
- 68.1 percent of respondents indicated that capitalizing on a business idea was an important motivation in becoming an entrepreneur.
- 64.2 percent of respondents said they have always wanted to own their own companies. This was a stronger factor for those from lower-upper-class backgrounds—78.6 percent ranked this as important.
- 66.2 percent said the appeal of a startup culture was an important motivation.
- 60.3 percent said that working for others did not appeal to them. Responses to this question were relatively evenly distributed in a rough bell curve, with 16 percent of respondents citing this as an extremely important factor and 16.8 percent of respondents citing it as not at all a factor.

Not important or less-important factors: inability to obtain employment or encouragement from others

- 80.3 percent of respondents stated that inability to find traditional employment was not at all a factor in starting their own businesses. Only 4.5 percent said this was an important factor.
- 37.8 percent of respondents said the role played by an entrepreneurial friend or family member was an important factor. A co-founder’s encouragement was important for 27.9 percent of the respondents.
- 18.1 percent had developed a technology they wanted to commercialize.

Most had significant industry experience when starting their companies

- The majority of respondents (75.4 percent) had worked as employees at other companies for more than six years before launching their own companies. Nearly half (47.9 percent) launched their first companies with more than ten years of work experience.
- Significant percentages of respondents started their first companies after working eleven to fifteen years (23.3 percent), sixteen to twenty years (14.3 percent), or greater than twenty years (10.3 percent) for someone else.

Early entrepreneurs and those with an early interest in entrepreneurship are different

- Entrepreneurs who started their companies soon after graduating (with zero to five years of work experience) and those who had an extremely strong interest in entrepreneurship in college were far less likely to be married (36.6 percent vs. the total sample average of 69.9 percent) or to have kids when they launched their first businesses (26.9 percent vs. the total sample average of 59.6 percent).
- Those who were “extremely interested” in starting a company while in college were far more likely to be early entrepreneurs. Of these entrepreneurs, 69 percent started their companies within ten years of working for someone else (as compared to 46.8 percent from the rest of the population).
- Level of interest in entrepreneurship during college was correlated to the number of years worked before starting a business—only 18 percent from the “extremely interested” group worked for at least fifteen years before starting their own businesses, as compared to 46.4 percent from the “not very interested” group.

60.3 percent said that working for others did not appeal to them. Responses to this question were relatively evenly distributed in a rough bell curve, with 16 percent of respondents citing this as an extremely important factor and 16.8 percent of respondents citing it as not at all a factor.
Methodology/Industries Surveyed and Detailed Findings
Methodology/Industries Surveyed

The primary data source for this work is a subset of an existing dataset of corporate records included in the OneSource Information Services Companies database. To construct our dataset, we extracted records of companies based in the following industries:

Automotive & Aerospace
- Aerospace & Defense

Computers & Electronics
- Audio & Video Equipment
- Computer Hardware
- Computer Networks
- Computer Peripherals
- Computer Services
- Computer Storage Devices
- Electronic Instruments & Controls
- Scientific & Technical Instruments
- Semiconductors
- Software & Programming

Health Care
- Biotechnology & Drugs
- Health Care Facilities
- Medical Equipment & Supplies

Services
- Computer Services
- Engineering Consultants
- Software & Programming

We extracted randomized records by region. We visited the Web sites of these companies to make sure the company was still in operation and to obtain names of founders and contact information. We contacted company founders via e-mail and requested they complete a brief online survey consisting of a series of questions about their own personal and family backgrounds, as well as their views on and motivations toward starting a business. Our team of researchers sent up to four unsolicited e-mails to these founders. In some cases, we followed up with phone calls.

Five hundred and forty-nine respondents took the survey, which was conducted between August 2008 and March 2009. We estimate that, of the founders we could reach, approximately 40 percent completed the survey.

The respondents were highly concentrated in technology sectors, with 77 percent indicating that their current company made computer hardware/software or other forms of technology products and services. Other sectors included biotech, medical, military, and other (non-technology).

We asked the founders to categorize their companies by industry. These responses were not always consistent with the OneSource classification of these companies. This report focuses on surviving businesses, thus may not be representative of the overall population of businesses.

![Image of Figure 1: Type of Business Currently Running or Founded]

![Image of Figure 2: Country of Birth]

**Definition of founder**

We allowed company executives to tell us if they were a founder. The guidelines we provided for defining a “founder” was “an early employee, who typically joined the company in its first year, before the company developed its products and perfected its business model.”
Detailed Findings

Age
The average and median age of company founders in our sample when they started their current company was forty. The standard deviation for this distribution was 7.7.

Company founders tend to be well-educated
Company founders in the industries we researched tend to be well-educated. More than 95.1 percent hold bachelor’s degrees or higher. A higher percentage of respondents had just bachelor’s degrees (48 percent) than advanced degrees (47 percent), however.

They tend to do very well in high school
A significant majority of respondents (75 percent) ranked their academic performance among the top 30 percent of the high school class, with a majority (52.4 percent) ranking their performance among the top 10 percent. But about 24.6 percent ranked their performance average or below average.

They also do well, but not as well, in college
A solid majority of respondents (67 percent) ranked their academic performance among the top 30 percent of their undergraduate class, but a smaller percentage (37.5 percent) ranked their performance among the top 10 percent. The percentage of founders that rated themselves in the bottom 30 percent of class performance was nearly the same in high school (4.9 percent) and college (4.4 percent).
Majority come from middle-class or upper-lower-class families

We used the following definitions for socioeconomic status by Dennis Gilbert.4

**UPPER-UPPER CLASS:** “Old money;” people who have been born into and raised with wealth; mostly consists of old “noble” or prestigious families.

**LOWER-UPPER CLASS:** “New money;” individuals who have become rich within their own lifetimes.

**UPPER-MIDDLE CLASS:** Professionals with a college education and, more often, with postgraduate degrees like MBAs, PhDs, MDs, JDs, MSs, etc.

**LOWER-MIDDLE CLASS:** Lower-paid white collar workers, but not manual laborers. Often hold associate’s or bachelor’s degrees.

**UPPER-LOWER CLASS:** Blue-collar workers and manual laborers. Also known as the “working class.”

**LOWER-LOWER CLASS:** The homeless and permanently unemployed, as well as the “working poor.”

What we found was that respondents tended not to come from either extreme of the socioeconomic spectrum, with 34.6 percent describing their socio-economic level as upper-middle class. Among respondents, 36.9 percent described themselves as lower-middle class, and 21.8 percent described themselves as upper-lower class. Only three respondents (0.7 percent) indicated their origins were lower-lower class and only three respondents (0.6 percent) indicated their origins were upper-upper class. These results seem to show that entrepreneurs, on the whole, are more likely to emerge from stable, comfortable family existences but not from circumstances of great family wealth.

Further, the results indicate that extreme poverty is a significant barrier to entrepreneurship. With regard to extremely wealthy families, the pool is so small in the United States that the low response rate might more be a reflection of a smaller population than anything else.

Entrepreneurs usually better educated than their parents

In terms of parents’ educational level, only 23 percent of entrepreneurs’ fathers earned advanced degrees and only 27.1 percent earned bachelor’s degrees. Among mothers of entrepreneurs, only 9.5 percent earned advanced degrees, and only 24.4 percent earned bachelor’s degrees; 55.6 percent earned high school degrees or no degree at all.

Entrepreneurship didn’t always run in the family

More than half (51.9 percent) of respondents were the first in their families to launch a business. For 38.8 percent of respondents, their father was the first to start a business in their family; 15.2 percent indicated siblings had previously started businesses.
Married with Children

One common stereotype of an entrepreneur is a childless, unmarried workaholic with no time for a wife or husband and children. This stereotype appears to be false, as 59.7 percent of respondents indicated they had at least one child when they launched their first businesses, and 43.5 percent had two or more children. Additionally, 69.9 percent of respondents indicated they were married when they launched their first businesses.

Early interest and propensity to start companies

The majority of the entrepreneurs in our sample were serial entrepreneurs; the average number of businesses launched by respondents was approximately 2.3. But 41.4 percent were running the first business they had started.

5. In this calculation, we assigned the weighted value ten to respondents who had indicated they had launched ten or more businesses. The potential for underestimating the average number of businesses launched per respondent is likely minimal, due to the small number of respondents claiming to have launched ten or more businesses.
Always thinking about entrepreneurship?
Only 24.5 percent indicated they were extremely interested in becoming entrepreneurs when they were completing their higher education. An additional 27.5 percent had some interest. But 34.7 percent didn’t give this any thought, and 13.3 percent indicated that they were not at all interested or not very interested.

Motivations for becoming an entrepreneur
The strongest motivations for respondents in starting their own businesses were building wealth, owning their own companies, capitalizing on business ideas they had, and the appeal of startup culture. Regarding desire to build wealth, 74.8 percent of respondents indicated they viewed this as an important, very important, or extremely important motivation in becoming an entrepreneur. In terms of capitalizing on business ideas they had, 68.1 percent of respondents indicated they viewed this as an important, very important, or extremely important motivation in becoming an entrepreneur. With regard to always wanting to own their own businesses, 64.2 percent of respondents viewed this as an important, very important, or extremely important motivation in becoming an entrepreneur. In terms of the appeal of a startup culture, 66.2 percent of respondents viewed this as an important, very important, or extremely important motivation in becoming an entrepreneur. And 60.3 percent said that an important, very important, or extremely important factor was that working for others did not appeal to them.
**Figure 18:**
Startup Company Culture Appealed to Me

- **Extremely important factor:** 20.8%
- **Very important factor:** 22.1%
- **Important factor:** 23.3%
- **Not very important factor:** 12.5%
- **Not at all a factor:** 18.0%
- **N/A:** 3.4%

**Figure 19:**
Have Always Wanted My Own Company

- **Extremely important factor:** 27.3%
- **Very important factor:** 15.9%
- **Important factor:** 20.8%
- **Not very important factor:** 17.8%
- **Not at all a factor:** 16.1%
- **N/A:** 1.9%

**Figure 20:**
Working for Someone Else Did Not Appeal To Me

- **Extremely important factor:** 16.0%
- **Very important factor:** 20.3%
- **Important factor:** 23.9%
- **Not very important factor:** 22.4%
- **Not at all a factor:** 16.8%
- **N/A:** 0.6%
Less important or not-important factors

Only 4.5 percent of respondents stated that inability to find traditional employment was an important motivator in starting their own businesses. In fact, 80.3 said that this was not at all a factor. Only 27.9 percent of respondents felt that encouragement by a co-founder, entrepreneurial friends, or family members to launch a company played an important, very important, or extremely important role in their motivations to launch a business. And only 18 percent of respondents said that taking a technology they already had developed in the lab and trying to see if it could make an impact was an important, very important, or extremely important motivator toward their business launch.

With regard to the impact of role models such as family members or entrepreneur friends, 37.8 percent of respondents indicated they played an important, very important, or extremely important role in the decision to start a company.
Most had significant industry experience when starting their companies

The majority of respondents (75.4 percent) had worked as employees at other companies for more than six years before launching their own companies. The highest percentage of entrepreneurs (52.2 percent) launched their companies after working as employees for other companies for between one and ten years. However, significant percentages of respondents started their first companies after working eleven to fifteen years (23.3 percent), sixteen to twenty years (14.3 percent), or greater than twenty years (10.3 percent) for someone else. In other words, while entrepreneurs do tend to launch companies early in their careers on average, significant portions (47.9 percent) wait until much later in their careers, after passing ten-plus years in the workforce before launching a company.

Early entrepreneurs and those with an early interest in entrepreneurship are different

We analyzed the number of years an entrepreneur had worked for someone else before launching his or her own business. Key differences emerged. Entrepreneurs who started their companies soon after graduating (with zero to five years of work experience) and those who had an extremely strong interest in entrepreneurship in college were far less likely to be married (36.6 percent vs. the total sample average of 69.9 percent) or to have children when they launched their first businesses (26.9 percent vs. the total sample average of 59.6 percent). The respondents who said that they were “extremely interested” in starting a company while in college were far more likely to be early entrepreneurs. Sixty-nine percent started their own companies within ten years of working for someone else (as compared to 46.8 percent from the rest of the population). Generally, we saw a correlation between the level of interest in entrepreneurship during college and the number of years worked before starting a business. For instance, only 18 percent from the “extremely interested” group worked for at least fifteen years before starting their own businesses, as compared to 46.4 percent from the “not very interested” group.
Serial entrepreneurs: extremely interested in starting business in college and motivated by wanting to own a company

Respondents who were “extremely interested” in entrepreneurship during college were more likely to start more than two companies (47.1 percent vs. an average of 28 percent from the rest of the population). Serial entrepreneurs also indicated that they always wanted their own companies (73 percent vs. an average of 59.6 percent from the rest of the population).
Respondents from a “lower-upper-class” background: more likely to be driven by wealth or wanting own company and interested in entrepreneurship during college

Fifty percent of respondents who came from a “lower-upper-class” background said that wealth was an extremely important or very important motivator for starting their own businesses, as compared to 42.6 percent of the overall population. People from this background were more likely to be driven by always wanting their own companies (78.6 percent vs. the overall sample average of 63.5 percent). Also, 41.4 percent of them indicated that they were “extremely interested” in entrepreneurship during college as compared to the overall sample average of 24.5 percent.
Analysis and Conclusions
Analysis and Conclusions

The core findings of this research are straightforward and contradict some prevailing stereotypes. In the industries we researched, entrepreneurs are more likely to come from a middle-class or upper-lower-class background, and very few come from backgrounds of extreme wealth or extreme poverty. These entrepreneurs are usually well-educated, with only 5 percent reporting having less than a bachelor’s degree. They also are likely to be better educated than their parents were, with half their fathers and a third of their mothers having at least bachelors’ degrees. They performed well in high school and in college, with the vast majority ranking average or above in their respective institutions. Entrepreneurs don’t always come from families of entrepreneurs; slightly more than half of our sample were the first in their families to launch businesses. On average, entrepreneurs tend to be the middle child in a three-child household. They are significantly more likely to be married and have children when they launch their first businesses. Entrepreneurs are far more likely to have worked for an employer for more than six years than to have quickly launched their own businesses. Their primary motivations for launching a business are to build wealth, to own their own company, and to capitalize on a business idea they had.

The findings perhaps provide some clues about what conditions might be helpful in supporting entrepreneurs and helping them become successful. Entrepreneurs typically are well-educated and experienced. In other words, they largely come from the existing workforce and not from college. They have ideas they want to commercialize, are motivated to build wealth, and like the idea of being their own bosses in a startup. These observations are based on initial analysis of the data; we are planning further detailed analysis of the dataset. But these observations could perhaps be useful guideposts for the next round of inquiry that attempts to understand not only the background and broad motivations of entrepreneurs but also the deeper formative factors that influence this select and incredibly important class of individuals.