

The Entrepreneurial Process: Evidence from a Nationally Representative Survey¹

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August 11th, 2017

Abstract: Despite significant research on “who” entrepreneurs are and from “where” they emerge, scholars have far fewer systematic insights into “what” entrepreneurs actually do. Using data from a new nationally representative survey of Americans, we document the process of entrepreneurship. We develop several new insights into the steps individuals considering entrepreneurship undertake. Fewer than half of those who considered starting a business take even the lowest-cost steps, such as searching the internet for potential competitors or speaking with a friend. Their rationales for quitting the entrepreneurial process include both the arrival of new information about their idea and the inability to complete the next step. Our results provide support for both economic and psychological perspectives on the entrepreneurial process.

¹ The authors gratefully acknowledge financial support from Duke University’s Innovation and Entrepreneurship Initiative and the Kauffman Foundation. We thank Ramana Nanda, Evan Starr, participants at the Duke University Strategy Seminar, George Washington University, Harvard Business School Workshop on Innovation in the Global Economy, the BYU-Utah Winter Strategy Conference, the London Business School, the Kenan Institute Frontiers of Entrepreneurship Conference and the Strategy Research Forum for their helpful comments and suggestions. All mistakes are our own.

INTRODUCTION

Scholarly inquiry into entrepreneurship has generated significant insight into “who” entrepreneurs are, measured by demographic attributes and attitudes, and from “where” they emerge in terms of prior employment. However, we know far less about “what” aspiring entrepreneurs actually do in pursuit of their business idea, which we refer to as “the entrepreneurial process.” This gap is somewhat surprising, given that the specific activities incipient entrepreneurs undertake are very likely related to their eventual odds of success.

Researchers have traditionally had difficulty systematically identifying an entrepreneurial process (or processes) or explaining variation in the process across different kinds of entrepreneurs and ideas. Moreover, with respect to well-known processes such as the “lean start-up” (Ries, 2011), we have no knowledge of how many incipient entrepreneurs actually employ this approach and if this incidence is correlated with factors such as demographic characteristics or attributes of the business idea. We aim to address this gap by developing and implementing a new national survey of Americans, designed to generate insights about the entrepreneurial process from a representative sample that includes some individuals considering and pursuing entrepreneurship.

We first confirm several previous stylized facts about would-be entrepreneurs and the kinds of business opportunities they pursue. We find that wealthier and more educated individuals are more likely to consider entrepreneurship and seek out larger opportunities. We also confirm prior findings from Hurst and Pugsley (2011) in that our survey respondents who consider entrepreneurship predominantly do so because of non-pecuniary factors related to work environment as opposed to pursuit of a large market opportunity. We also find results consistent with Elfenbein, Hamilton, and Zenger (2010) in that individuals working at small firms are more

likely to consider entrepreneurship, as are those who have held multiple jobs (Fallick, Fleischman, & Rebitzer, 2006). The consistency between our results and prior work is encouraging, and provides us greater confidence in the novel findings we report regarding the entrepreneurial process.

We find several previously unknown facts about the process by which individuals pursue business opportunities. We document that individuals pursuing entrepreneurial opportunities take surprisingly few steps, even low-cost ones such as speaking to a friend about their business idea. We compare these results to evidence on the greater number of steps individuals undertake in exploring salaried employment opportunities, in which between one half and three quarters of respondents talk to friends or family, send out resumes, or contact firms directly (Kuhn & Mansour, 2014: See Tables 2 and B1). Interestingly, some combinations of entrepreneurs and opportunities result in more and different kinds of steps taken. More educated and optimistic individuals are more likely to take steps. A U-shaped relationship exists between perceived quality of the idea and the number of steps taken. In terms of the rationales provided for quitting the entrepreneurial process, respondents cite both the arrival of new information about their idea and the inability to complete the next step in the process. These results and other insights into the entrepreneurial process are particularly notable given that, as Alvarez, Barney, and Anderson (2013) argue, very little work to date has examined the “processes for how entrepreneurs exploit opportunities,” conditional on who the entrepreneur is and the nature of the opportunity. Our findings speak directly to this gap in the extant literature.

Below, we briefly review prior work on the attributes and origins of entrepreneurs. We next turn to the limited theoretical and empirical work on the entrepreneurial process to motivate

our survey instrument and results. We conclude by offering several implications from our findings for scholarship and practice.

PRIOR LITERATURE

An early and influential stream of literature on entrepreneurship focused on the individual entrepreneur and his/her personal attributes. Scholars concluded that individuals who possess more assets (Holtz-Eakin, Joulfaian, & Rosen, 1993), have had more previous jobs (Evans & Leighton, 1989), exhibit overconfidence (Camerer & Lovallo, 1999), and have lower risk aversion (Cramer, Hartog, Jonker, & Van Praag, 2002) are more likely to become entrepreneurs than others. Research has found that other factors, such as having a self-employed parent (Dunn & Holtz-Eakin, 2000) and having a more internal locus of control (Evans & Leighton, 1989), are also correlated with the decision to become an entrepreneur.

Although economists conducted much of this early work, scholars of organizations soon contributed the idea that many entrepreneurs were “organizational products” (Freeman, 1986), spawned by existing organizations (Agarwal, Echambadi, Franco, & Sarkar, 2004; Gompers, Lerner, & Scharfstein, 2005; Klepper & Sleeper, 2005; Chatterji, 2009; McKendrick, Wade, & Jaffee, 2009). This intellectual pivot led to a significant advance in our understanding of selection into entrepreneurship, notably how individual characteristics interact with the social and professional context. This tradition continues in the most recent studies that have used nationally representative employer-employee matched data sets that allow for plausible counterfactuals in the study of entrepreneurial entry (e.g., Sørensen, 2007; Nanda & Sørensen, 2010; Campbell, Ganco, Franco, & Agarwal, 2012; Agarwal, Campbell, Franco, & Ganco, 2015).

Despite detailed studies about who entrepreneurs are and where they come from, much less work has focused on understanding *what* aspiring entrepreneurs actually do. The process of entrepreneurship is still somewhat of a mystery to scholars, as noted by Alvarez, Barney, and Anderson (2013). They argue that “there is little consensus in the field on how to study.....exploitation processes” and urge a shift in scholarly attention to how entrepreneurs actually pursue their business ideas. The practical challenges of collecting large data sets on individuals and the activities in which they engage can partially explain this research gap. Without such data, several important conceptual and empirical questions cannot be tested. For example, how much variation exists across individuals considering entrepreneurship in terms of the number of and nature of steps they take? What factors explain this variation?

Although they have been unable to answer the questions above to date, practitioners and scholars have provided some initial suggestions about what the *most effective* entrepreneurial processes could be, though no systematic evidence exists, to our knowledge, on how widespread these approaches are. The Lean Startup approach (Ries, 2011), popularized by Eric Ries and Steve Blank, provides a useful example. The approach characterizes entrepreneurship as if it were a series of experiments, and recommends a process of using successive experiments to reduce uncertainty about key parts of the business model. The “lean experiments” are those that do not require a significant commitment of resources but reveal a large amount of information about the proposed business idea. The notion of experiments in entrepreneurial strategy has made its way into the academic literature as well, though with slightly different connotations (Kerr, Nanda, & Rhodes-Kropf, 2014; Belenzon & Bennett, 2016; Chatterji, de Figueiredo Jr, & Rawley, 2016). But although experimentation is widely discussed in academic and practitioner communities, we still know little about how widespread this process is or which entrepreneurs

are most likely to take steps that are “lean” or “heavy” (requiring a significant commitment of time and resources).

Simple economic reasoning can provide some guidance on this question. Economic theory would suggest individuals pursuing entrepreneurship (implicitly) conduct cost-benefit analyses at each step in the process. The expected benefits of the information revealed after completing the step are weighed against the cost of undertaking the step. Individuals would order their steps according to a cost-benefit calculus as well, selecting first the steps that revealed the most information per unit of cost. This dynamic would lead to most individuals abandoning their pursuit of entrepreneurship early on. By moving through early steps that revealed significant amounts of information about their ideas, most individuals would learn enough about their prospects to end their journey quickly.

The balance between lean and heavy steps would proceed similarly. If the idea of lean steps is to reduce uncertainty, optimizing individuals would be expected to take a greater number of heavy steps as uncertainty declines. Incipient entrepreneurs who expect faster growth would take heavy steps earlier and more often, given that they expect a higher return on their investment of time and resources compared to individuals who do not expect their businesses to grow. Similarly, optimistic individuals or those who believed their idea to be of higher quality would be more likely to take heavy steps earlier in the process, compared to other individuals. Although these propositions are intuitive and in accordance with basic economic logic, none have been tested to our knowledge.

Still, other theories may offer different explanations for variation in the entrepreneurial process. Economic theory, after all, does not recognize that an incipient entrepreneur could “fail”

to start a business. Economic logic allows that an entrepreneur may learn new information that causes her to discontinue the entrepreneurial process, but there is no notion that she might be unable to take the next step or not know what that step would be. As a result, economic theory predicts only the quality of the idea and the opportunity cost of the individual drive heterogeneity in the entrepreneurial process. Theories from psychology, however, allow for the possibility that individuals might fail to achieve a goal they set for themselves or become “stuck” at some part of the process. Although significant work has been done on the psychological attributes of entrepreneurs (e.g., Zhao & Seibert, 2006), we have very little systemic evidence about how psychology influences the process of entrepreneurship itself, particularly prior to firm formation.

The large and diverse literature on goal setting (e.g., Locke & Latham, 2002) posits several factors that influence whether individuals will achieve their goals, including the difficulty of the goal, commitment to achieving the goal, the number of competing goals, the extent to which the individual believes she can achieve the goal, intermediate feedback on performance, and a variety of other factors. These variables would theoretically induce variation in the entrepreneurial process. In addition, a literature on self-regulation (Webb & Sheeran, 2003; Baumeister & Vohs, 2007) identifies the limits of our ability to modify our behavior to accomplish tasks. Whether in efforts to lose weight, save more money, or pursue entrepreneurship, a large literature in psychology allows for failures in moving to the next step of a process, even if the benefits might outweigh the costs.

If these theories were applied to the entrepreneurial process, we would also expect the vast majority of individuals considering entrepreneurship to take very few steps. However, a key distinction would be the reasons why individuals stopped at a particular step. Although economic theory would suggest the individual acquired information that made taking the next step not

optimal, psychological theories would predict failure to take even low-cost early steps because of issues around commitment, goal conflict, and self-regulation. The psychological view would be consistent with individuals being unaware of what the next step in the process was or simply being unable to complete it. We return to these various theoretical explanations when discussing our results.

PREVIOUS EMPIRICAL WORK ON NASCENT ENTREPRENEURSHIP

To understand variations in the entrepreneurial process, we must distinguish individuals who consider entrepreneurship (or “are at risk for” entrepreneurship) and do not pursue it from those who never consider it at all. Most early empirical studies focused on individuals who were already entrepreneurs, limiting insights into the process of entrepreneurship, because they excluded people who never embarked on or completed the process. These studies typically abstracted away the series of choices and activities undertaken between opportunity identification and company formation. Building representative data sets for these purposes has been a formidable task because collecting large amounts of data on the timing and nature of entrepreneurial ideas has generally been cost prohibitive (we discuss two exceptions below). Moreover, regardless of the resources available, accurately documenting the entrepreneurial process is incredibly challenging.

However, one relevant body of work on what scholars call “nascent entrepreneurship” (e.g., Carter, Gartner, & Reynolds, 1996; Davidsson & Honig, 2003; Arenius & Minniti, 2005; Johnson, Parker, & Wijbenga, 2006) has tried to address these important issues. This literature focuses on individuals who aspire to start a new business (typically expressed as engaging in specific activities in the preceding 12 months) and explores the process, cast as a “series of

decisions” (Johnson et al., 2006, p. 3), they undertake. These studies typically rely on one of either of two key data sources, which provide some large sample evidence on the entrepreneurial process: The Global Entrepreneurship Monitor (GEM) (Reynolds, Hay, & Camp, 1999) and The Panel Study of Entrepreneurial Dynamics (PSED) (Reynolds, 2000; Reynolds, Carter, Gartner, & Greene, 2004).

Two key differences exist between these data sources and the approach used in our study. The GEM is oriented toward generating cross-country comparisons of entrepreneurial intentions and activity, using random digit dialing in some nations and geographically clustered surveys in others to extrapolate results to the country level, which is the primary unit of analysis (Reynolds et al., 2005). The GEM is primarily used as a measure of the incidence of individuals in a given nation who are involved in some kind of entrepreneurial activity, and this survey is not designed to document the process of developing a business as a function of individual and idea characteristics.

Second, although the PSED screened a nationally representative set of households, it explicitly screened out those who were not “engag[ing] in starting a business” or failed to launch a business they were considering before the survey commenced. Ninety percent of the individuals in our survey who considered starting a business did not ultimately quit their salaried job, suggesting the “at-risk” set for entrepreneurship is much larger than the PSED sample. This sampling distinction can have important implications for drawing conclusions about the entrepreneurial process. If researchers do not account for individuals who consider entrepreneurship but do not pursue a particular opportunity or have previously pursued it and given up, one could draw erroneous conclusions about the nature of the entrepreneurial process.

Simply put, if researchers sample on the dependent variable, they will be measuring the entrepreneurial process conditional on those who are currently engaged in starting a business. This approach will likely yield very different conclusions about entrepreneurial process than an approach that explores the steps individuals undertook *whether or not* they are currently engaged in starting a business. For example, understanding why an individual with a business idea never decided to take the first step toward starting a business could be informative. Below, we explain how our approach can address these issues and present several new insights about the entrepreneurial process.

METHOD

In contrast to instruments discussed above, our survey is a nationally representative sample of Americans, allowing for more granular insights into the activities of individuals considering entrepreneurship. In brief, we are able to collect demographic and professional data on our respondents and information about a recent “business idea,” if they happen to have had one in the last five years. We can also assess the extent to which the individual made progress on their idea and how this process varies by their demographic and professional attributes. We describe this survey methodology in greater detail below and then present the results from three yearly waves in 2015, 2016, and 2017.

We intentionally designed this survey instrument to collect data on entrepreneurial intentions, the discrete steps a representative set of individuals take to pursue business formation and milestones. The survey was open to respondents 23 years and older living in the United States.² Qualtrics, a survey company based in Provo, Utah, administered the survey. In

² To avoid attrition, we do not ask about citizenship or immigration status.

partnership with the authors, Qualtrics distributed the survey through partnerships with up to 10 leading market research companies, which maintain Internet panels of respondents. Below, we explain in greater detail the process by which the survey was developed and deployed.

First, the authors independently developed the survey. The authors request a certain number of responses from Qualtrics's partner panels, stratified by region-by-gender and age to match the U.S. population. In practice, this request means Qualtrics's partner organizations send their respective panel participants direct links to the author survey. Neither the survey link nor the survey form itself contain any mention of the topic of the survey, which reduces the chances of participants selecting into the survey based on their interest in entrepreneurship. When respondents click on the link, their demographics are compared to the quotas set to have the requested number of responses match the strata. When a given demographic category is fully accounted for, respondents who click on the survey link are told they are no longer needed for this survey, or are redirected to another survey.³ Qualtrics prevents respondents from using the same IP address to answer the survey multiple times within and across their partner panels. In this context, there is no clear analogue to traditional survey response rates, because respondents are part of pre-existing panels. However, we do find that 90.68% of the respondents who begin the survey complete it, which suggests endogenous attrition is not a significant concern.

In the language of the survey literature, this collection design is known as a “non-probability sample” (NPS). The statistical literature has warned against using NPS quota surveys for inference, because the conditional distribution of demographics within the strata is not

³ Survey respondents are provided some small incentives to participate, typically 50 cents to \$1 per a 10-minute study. Qualtrics and their partners have policies in place to limit the number of surveys respondents take per week, and ban respondents who provide low-quality responses to surveys. For example, Qualtrics removes from the panel those respondents whose answers are inconsistent across surveys.

guaranteed to match the underlying population. However, due to the tremendous cost advantages of this sampling methodology, a number of innovations have emerged in recent years to overcome this issue.

Current research methods use the survey data in ways much more similar to observational studies. Rather than assuming randomization has matched the distribution of the sample to that of the population, researchers use post-sample modifications to select observations from the sample for inclusion to build a weighted subsample that matches the population distribution. We use an approach that has become popular in the literature, namely, raking. Raking essentially uses propensity score reweighting to make the sample population match the observables of the underlying population (Deville, Särndal, & Sautory, 1993; Kolenikov, 2014). Post weighting is analogous to well-established propensity score matching techniques in the empirical analysis of observational data and has been used in previous studies by strategy and organization scholars (Starr, Balasubramanian, & Sakakibara, 2017).

Both methods change the weight placed on observations from the NPS to make the overall average profile match the underlying population. Individuals that are underrepresented in the survey relative to the true population will receive greater weights. Since those individuals in the survey are representing many individuals in the population, it is critical to acquire a sufficient number of them, which is done through the stratification. This approach is quite different from the traditional stratified sample, where strata are used to match the survey demographics to the population.

The survey data was post-weighted based on three distinct sets of third-party data. From the Current Population Survey (CPS), we collected data on distributions of race-by-income

across the United States. We collected distributions of geography-by-age-by-gender from individuals over 25 years old from the American Community Survey (ACS) via IPUMS, a subsample of individual-level Census data maintained by the University of Minnesota Population Center (Ruggles, McCaa, Sobek, & Cleveland, 2015). These two sets of demographics allowed us to match the overall demographics of the survey sample to the demographics of the U.S. population.

Due to concerns that survey respondents might be disproportionately out of the labor force, we collected data on workforce participation from the Federal Reserve Bank of New York's Survey of Consumer Expectations (SCE). The SCE codes respondents as "working full time," "working part time," "not working, but would like to work," "temporarily laid off," "On sick or other leave," "Permanently disabled or unable to work," "Retiree or early retiree," "Student, at school, or in training," or "Homemaker." We rake the sample to make the distribution of employment situations match the distributions from the SCE.

Our survey has been administered three times, in Q1 of 2015, 2016, and 2017, for a total of 30,409 respondents. Below, we present the pooled results from 2015-2017, except where otherwise noted, because the results across the waves were strikingly similar. The complete survey instrument (2017 version) is presented in Exhibit 1.

RESULTS

We present our results in three parts. First, we report our results on "who" considers starting a business and "where" they come from. Next, we discuss the kinds of ideas these individuals have. Lastly, we discuss "what" these individuals do in their pursuit of entrepreneurship.

Who considers starting a business?

We begin by describing the features of individuals who answered that they had considered starting a business in the last five years. Table 1 presents the estimates of a linear probability model (LPM) showing conditional correlations of the likelihood that an individual would have considered starting a business. The results in column 1 suggest individuals aged 23 - 34 (the omitted category), males, those with graduate or professional degrees, and higher-income individuals were more likely to have considered starting a business. In column 2, we include an individual measure of optimism derived from Robinson and Puri (2007), based on our survey question that asked respondents how long they think they will live, which we then compare their answer to actuarial tables predicting length of life conditional on current age. We code those individuals who expect to live beyond the predictions of the actuarial table as “optimistic.” We find a positive association between optimism and considering starting a business, which is statistically significant at the 1% level.

In column 3, we create an indicator variable called “Entrepreneur” for an individual who had considered starting a business and took any of the following steps: (1) made a sale, (2) quit their job to work on the business, or (3) hired an employee. In an unreported analysis, we find significant variation in which kinds of entrepreneurs are likely to complete these three steps, indicating that determining when in the entrepreneurial process an individual becomes an entrepreneur is not straightforward. We find that being older and a female are positively associated with entrepreneurship, conditional on considering it in the first place. We find the gender result particularly interesting and worthy of future research. This finding is broadly consistent with Scott and Shu (2017), who find women founders with intellectual property are

more likely to enter entrepreneurship than men, but the result is reversed for founders who do not have any intellectual property.

Table 2 presents the self-described rationales for considering starting a business from Wave 3.⁴ Consistent with existing research (e.g., Hurst and Pugsley 2011), the vast majority of respondents had considered entrepreneurship for work-environment-related reasons (70%) rather than because they saw an untapped business opportunity (13%). Significant numbers of participants had considered entrepreneurship for familial reasons (23%) and because they had had trouble finding salaried employment (28%).

Figure 1 shows the propensity to have considered starting a business by the two-digit NAICS code of the industry in which the individual is working. We see a higher likelihood of considering entrepreneurship among those in industries including Wholesale and Retail Trade, Real Estate, Rental and Leasing, Management of Companies and Enterprises, Information, Construction, and Arts, Entertainment and Recreation.

We also look at whether, consistent with findings from Fallick, Fleischman, and Rebitzer (2006), individuals who have changed jobs several times were also more likely to consider starting a business. Figure 2 shows that those who had considered starting businesses had 25% more jobs in the last five years than those who had not considered starting a business. Relatedly, Table 3 presents a simple cross tabulation of the age and size of firms in which individuals who had considered starting a business currently worked. Consistent with predictions from Elfenbein, Hamilton, and Zenger (2010), those who had considered starting businesses were working at smaller and younger organizations than those who had not. Fifty-two percent (5,220/10,007) of

⁴ We modified the answer choices in Wave 3 to provide more specificity on this question. The results are essentially unchanged between Wave 3 and the first two waves.

those who considered entrepreneurship worked in an organization with less than 50 people compared to 42% (8,545/20,402) of those who had never considered entrepreneurship. Forty percent (4,025/10,007) of individuals who considered entrepreneurship worked in organizations five years old or younger compared to 24% (4,975/20,402) of individuals who had never considered entrepreneurship.

Next, we delved further into the relationship between optimism and considering entrepreneurship in our sample. Camerer and Lovallo (2009) find evidence that confident individuals were more likely to consider starting a business. Relatedly, De Meza and Southey (1996) argue that new business entrants will be more optimistic than the average individual. As discussed above, drawing on work by Puri and Robinson (2007), we ask respondents how long they think they will live, and we compare that information to actuarial tables predicting length of life conditional on current age. We code those individuals who expect to live beyond the predictions of the actuarial table as “optimistic.” Thirty-two percent of individuals who were not optimistic had considered starting a business, whereas 39% of those who were optimistic had ($p < .00001$).

To disentangle different types of optimism, we also ask respondents several other questions related to optimism. To estimate precision, we ask how confident they were in their life-expectancy estimate. Respondents who had considered starting a business were 6% more likely to provide a wider confidence interval for their estimate, suggesting that higher perceived precision of estimates does not drive consideration of starting a business. We also asked about their predictions of their own earnings. Table 4 shows that respondents who had considered starting businesses generally had higher expectations for their salary, housing prices, and gas prices. For example, 24% (2,427/10,007) of individuals who had considered starting a business

predicted their earnings to increase by 10% or more next year compared to 13% (2,698/20,402) of those who had never considered entrepreneurship. These results suggest optimism in one's own ability as well as in the economy generally appear to be associated with considering starting a business.

What ideas do incipient entrepreneurs have?

In this section, we analyze features of the business ideas articulated by our respondents who had considered entrepreneurship. Previous work has suggested entrepreneurs may be inspired to launch new businesses by their previous work experience (e.g., Anton & Yao, 1995; Gompers et al., 2005; Klepper & Sleeper, 2005; Chatterji, 2009). Our results are consistent with this prior literature, as seen in Figure 3, which shows the majority of business ideas are intended for the same two-digit NAICS industry as the respondent's employer. The tabulations in Table 5 indicate a large share of respondents said they identified a market opportunity based on their prior work experience (41%), with 26% considered an idea related directly to their employer's business and 15% considered an idea related to a customer or supplier. A significant number of individuals stated that their idea came from their own use of an existing product (34%). This finding is consistent with work by Eric von Hippel (2005) and colleagues, who observe that many innovations arise from consumers identifying unmet needs in existing products and developing solutions.

What do entrepreneurs do?

We now turn to explaining variation in the entrepreneurial process. Of those respondents who had considered starting a business, only a fraction quit their job to launch that business.⁵ Respondents who did not indicate they had quit their job were subsequently asked why they had not done so. Thirty-two percent responded that the business was launched and that it did not require him/her to quit his/her job. The 68 percent remaining had begun the entrepreneurial process but had not completed it. The prior literature largely ignores this group of individuals, and the results below are intended to shed new light on their activities.

Figure 4 presents the process steps by frequency, not in the order the participants undertook them. The majority of respondents had taken relatively few steps toward pursuing their idea (mean =1.18), with few respondents undertaking some low-cost steps, such as talking to a friend or searching the internet. Surprisingly, more than 80 percent of those considering entrepreneurship had never spoken to someone they did not already know about their business idea.

We delved deeper to understand why the next step in the entrepreneurial process was not taken by asking respondents, “Which of the following explains the most important reason why you stopped at that step?” Table 6 presents these results only for Wave 3, because we changed the list of possible responses after Wave 2 to gain further insight on this point. Respondents were permitted to select only one response. Potential responses from Wave 3 are grouped into two categories that we label “new information” and “execution problems.” We tabulate these

⁵ Roughly 10% of the individuals who had considered starting a business (30% of respondents in our survey) quit their job to start the business. This 3% transition rate is consistent with recent studies using nationally representative administrative data (Fairlie & Krashinsky, 2012).

responses in Table 6 according to the last step the individual had taken in the entrepreneurial process.

“New information” is consistent with a traditional economic perspective on entrepreneurship, in which the entrepreneur takes a series of steps that reveal information about the prospects of the business or the entrepreneur’s own quality. Information suggesting negative outcomes may change the entrepreneur’s beliefs about the possibility of success such that she abandons the idea. One implication of this logic is that aspiring entrepreneurs who begin the process with a more positive outlook about their business idea would require more negative information to abandon their idea than their peers would. “Execution problems” are more consistent with the psychological theories discussed above. These responses suggest the entrepreneur did not “choose” to stop after some new information emerged, but rather that she was unable to continue, perhaps despite the positive expected value of the idea.

Under the category of new information, the modal explanation was difficulty in obtaining financing. Surprisingly, of the 112 respondents who indicated they had stopped because they concluded obtaining financing would be harder than expected, only 10 reported they had actually pursued financing. The modal last step for these 112 individuals was talking to a friend (39). This result suggests these respondents, despite citing financing, did not stop pursuing their idea because they were turned down for a bank loan. In unreported results, we analyzed whether the percentage of respondents who cited financing varied geographically with the availability of financing. We found the percentage did not vary appreciably with the availability of financing in the geographic area.

This puzzling result could be interpreted in at least two ways. One possibility is that respondents treated information from friends as very informative, regardless of whether it was accurate. Perhaps friends were able to communicate new information about the likelihood of financing the business idea. Alternatively, respondents could have been attributing their failure to execute to difficulty obtaining financing, a factor over which they had no control.

Next, recall the proposed relationship between the outlook of the entrepreneur and number of steps undertaken. We asked respondents two related questions to gain insight into this issue: “What percentage of new firms in {your} industry, on average, do you think are still operating after 5 years?” and “How do you think a business based on your idea (or your actual business, if you've already started it) compares to the average new firm in the industry, in terms of likelihood of surviving for 5 years?” (See Exhibit 1 for more details.)

To gain insight into the issues raised above, we consider responses from only those individuals who provided an information-based reason for discontinuing the entrepreneurial process. Figure 5 presents the number of steps these individuals took according to their own assessment of their idea, compared to the average idea in this industry. We aggregated those individuals who answered that their chances were “much better” and “slightly better” into a category called “above average,” and those who responded “slightly worse” and “much worse” into a category called “below average.” Unsurprisingly, respondents who believed their idea had better prospects than average took more steps than those individuals who believed their idea was at the industry average. Surprisingly, however, individuals who thought their idea was below average also took more steps than those who thought their idea was average. Figure 5 can thus be interpreted as a U-shaped relationship between assessment of the idea and number of steps undertaken.

Returning to Table 6, 22% (98/447) of the respondents cite execution problems, not new information, as the reason for discontinuing the entrepreneurial process. Roughly a third of this group (27/98) suggested they were unable to complete the next step, even though they knew what it was. The high number who responded that they could not take the next step is somewhat surprising given the low cost of some of the steps they had remaining. This fact becomes somewhat less surprising when we consider that respondents who were working with teams report taking few basic project-management steps such as scheduling regular meetings (31%) or assigning each other deliverables (34%). This result implies that even developing a routine to work on a business idea was difficult for many of the respondents considering entrepreneurship.

Having established that respondents had taken very few steps and why, we next investigate which demographics are associated with the variation in steps taken. Figure 6 presents the differences in steps by the respondent's education level (we find very similar results using income). Respondents with a Bachelor's degree were more likely to take all steps. This finding corresponds with the result above that individuals pursuing market opportunities took more steps. These individuals also tend to have higher education, as noted in Figure 7.

Figure 8 presents the differences in steps by the rationale for considering starting the business. We denote individuals who responded that their rationale for considering entrepreneurship was having seen a business opportunity as "opportunity entrepreneurs," those who had trouble finding a job as "necessity entrepreneurs," and those who did it for work-environment reasons as "lifestyle entrepreneurs." Opportunity entrepreneurs were more likely to take nearly all of the steps. Lifestyle entrepreneurs took the early steps more than necessity entrepreneurs did, but as the burden of steps increased (i.e., became heavier), this advantage dissipated.

Now that we have documented variation in the number of steps according to demographic characteristics, we seek to further classify the different kinds of steps to gain more insight into these patterns. We defined a set of “lean” and “heavy” steps depicted in Table 7, according to our own estimates of the level of commitment required to undertake each step. We used this categorization to approximate the logic of the lean start-up process discussed above. Interestingly, the data suggest lean and heavy processes are not substitutes for one another. The number of lean and heavy steps taken is positively correlated at 0.54. The average number of lean and heavy steps taken conditional on having considered starting a business is 0.437 and 0.652, respectively.

In Table 8, column 1, we present the results of negative binomial regressions predicting the total number of steps taken. We find that being younger, male, highly educated, wealthier, African American or Native American, and optimistic are all positively associated with the number of steps taken. Columns 2 and 3 of Table 8 present results of negative binomial regressions predicting the number of lean and heavy steps an individual will take based on demographics. The results suggest younger, higher-income, higher-education, and African American males take the highest number of both lean and heavy steps.

Finally, one important question is whether these results imply that, on average, individuals considering entrepreneurial entry uniquely make little progress, or whether these patterns are endemic to other kinds of economic activity. For example, if individuals typically make little progress toward any of their goals, we cannot necessarily glean many insights about what our results imply for the entrepreneurial process specifically. Although finding the right analogue to the entrepreneurial process is challenging, a review of the literature of job-search activities provides some useful context. Using data from the National Longitudinal Survey of

Youth 1997 (NLSY97), Kuhn and Mansour (2014) document patterns in job search among workers in 2008 and 2009. Accounting for both online and offline search, they find 72% of unemployed workers sent out resumes or filled out applications, 65% contacted employers directly, and 55% contacted friends and relatives for information. In terms of activities that might expand their network of contacts, 38% reached out to public employment agencies and 33% placed or answered an ad. These numbers are similar for employed workers who engage in job-search activities, with 66% sending out resumes or filling out applications, 42% contacting employers directly, and 47% contacting friends and relatives for information. Twenty-four percent of the employed-worker sample placed or answered an ad and 12% reached out to a public employment agency. These descriptions of the job-search process differ markedly from our results on the entrepreneurial process, in which, for example, only about 20% of incipient entrepreneurs even spoke about their business idea to someone they did not already know. Based on this comparison, specific aspects of the entrepreneurial process, not just generic problems with completing tasks, appear to be behind our respondents' lack of progress.

DISCUSSION

The academic literature on entrepreneurship has provided increasingly comprehensive explanations for “who” entrepreneurs are in terms of demographics and “where” they come from in terms of prior experience. Scholars have generally focused less attention in recent years on “what” entrepreneurs actually do. Although some researchers have encouraged a reconceptualization of entrepreneurship as a process amenable to study (e.g., Shane & Venkataraman, 2000; Alvarez, Barney, & Anderson, 2013; McMullen & Dimov, 2013), lack of appropriate data has hampered these efforts. We introduce a new national survey on the

entrepreneurial process to address this gap and also generate insights for future theoretical development on the entrepreneurial process.

We begin by showing our new survey generates results largely consistent with prior work on entrepreneur demographics and past experiences, an encouraging sign, in our view, about the validity of the instrument. More interestingly, however, we proceed to report an intriguing fact about the entrepreneurial process. The vast majority of individuals considering starting a business do not make very much progress, even failing to complete low-cost yet highly revelatory steps. Different aspects of our results are consistent with the economic and psychological rationales discussed above. Consistent with economic logic, we do find that many aspiring entrepreneurs stop taking steps after their last step reveals significant information. However, the finding that so few people complete even the lowest-cost steps, such as talking about their business idea to someone they do not know, appears more consistent with the psychological theories. One would have to assume an incredibly low expected value for a business idea to make speaking to another person about it too costly. We should also note that judging whether a business idea is “good” or “bad” at the stage of the process we study is challenging. Opening up a new pizzeria in Portland, Oregon (a representative idea with respect to our respondents) is a business idea with wide-ranging probabilities of success depending on the characteristics of the owner, the location, and prevailing economic conditions.

Some of our results suggest that for at least some individuals, the abandonment of the entrepreneurial process is related to a failure to execute. These individuals cite rationales about not being able to complete the next step in the process or not knowing what the next step would be, which is more consistent with psychological explanations. We also find the teams of aspiring entrepreneurs struggled to set up basic routines to move through the process, such as setting up a

regular meeting time. The role of opportunity costs is also complex. Individuals with higher opportunity costs take more steps. Further, the relationship between perceived quality of one's own idea and number of steps taken is U-shaped, which is not consistent with a simple opportunity-cost story, if business ideas are distributed i.i.d.

Taken together, our survey results indicate some individuals do seem to embark on the entrepreneurial process, as economic theory would expect, whereas psychological theories seem to better explain the path of others. Although we cannot provide a unifying explanation, we do believe that continuing to study this process is important. Up to 100,000 Americans are trying to launch businesses every month, according to a recent analysis (Aldrich & Yang, 2012), and significant efforts are underway to provide practical, evidence-based strategic advice to entrepreneurs (Gans, Stern, & Wu, 2016). Furthermore, encouraging more entrepreneurship is a top priority for policymakers around the world because it is a primary mechanism to create jobs and spur economic growth (Lerner, 2009; Decker, Haltiwanger, Jarmin, & Miranda, 2014). A variety of instruments are used, ranging from favorable tax policies to reducing regulations and direct or indirect sponsorship of venture capital funds and accelerators (e.g., Chatterji, Glaeser, & Kerr, 2013). The key logic underlying most of these efforts appears to be that (a) a significant fraction of individuals want to be the kind of high-growth entrepreneurs who create valuable spillovers (Acs, Astebro, Audretsch, & Robinson, 2016) and (b) a significant number of promising business ideas are not translated into successful companies due to regulatory, financial, and training-related barriers (Klapper, Laeven, & Rajan, 2006).

However, scholars and practitioners have little insight into whether these assumptions are true, because we have little systematic data on the entrepreneurial process. This gap is crucial, because the significant decision to move from a salaried position to entrepreneurship consists of

several smaller choices and activities. Without a deeper understanding of the process incipient entrepreneurs go through to develop a business idea, discerning which instruments, if any, should be used to encourage more (or higher-quality) entrepreneurship is difficult.

One important priority for future work would be to try to generalize these insights to broader and different populations. Although our survey aims to be nationally representative, possible unobservable individual characteristics that are correlated with survey participation could influence our results. Prior work has found that online panel respondents are typically motivated by financial incentives or simply enjoy sharing their opinions (Hillygus, Jackson, & Young, 2014). If these individuals differ from the general population in unobservable ways, such differences would influence the interpretation of our results. However, our estimates appear similar to previously published work using administrative data, which gives us greater confidence that unobservable individual-level differences are not significantly influencing our results.

In sum, we hope our research lays the foundation for a broader inquiry into the economic and psychological factors that influence the entrepreneurial process, a topic that has received little academic attention given its importance. We believe scholars can fruitfully employ theoretical models, qualitative work, surveys, and other large data sets to gain more insight into what explains variation in entrepreneurial process. In doing so, we can learn more about what entrepreneurs actually do, and perhaps eventually generate evidence-based recommendations for how they can do it even better.

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Table 1: Linear probability model predicting who considered starting a business

VARIABLES	(1) Considered starting a business	(2) Considered starting a business	(3) Entrepreneur
age = 2, 35 years - 44 years	-0.0363*** (0.00982)	-0.0357*** (0.00982)	0.00841 (0.0135)
age = 3, 45 years - 54 years	-0.105*** (0.00959)	-0.105*** (0.00960)	0.00747 (0.0142)
age = 4, 55 years - 64 years	-0.184*** (0.00949)	-0.181*** (0.00954)	0.0616*** (0.0165)
age = 5, 65+ years	-0.260*** (0.00884)		
Female = 1	-0.0557*** (0.00600)	-0.0597*** (0.00693)	0.0318*** (0.0109)
education = 2, High school graduate (includes equivalency)	0.00628 (0.0211)	0.0120 (0.0231)	0.0909*** (0.0348)
education = 3, Some college or associate's degree	0.0672*** (0.0209)	0.0706*** (0.0228)	0.107*** (0.0339)
education = 4, Bachelor's degree	0.0626*** (0.0215)	0.0533** (0.0235)	0.0918*** (0.0349)
education = 5, Graduate or professional degree	0.0757*** (0.0226)	0.0710*** (0.0251)	0.111*** (0.0370)
income = 2, \$10,000 to \$14,999	0.0320* (0.0173)	0.0453** (0.0192)	0.0663** (0.0319)
income = 3, \$15,000 to \$24,999	0.0252* (0.0148)	0.0332** (0.0162)	0.0378 (0.0258)
income = 4, \$25,000 to \$34,999	0.0337** (0.0145)	0.0470*** (0.0157)	0.0459* (0.0245)
income = 5, \$35,000 to \$49,999	0.0394***	0.0541***	0.0286

	(0.0141)	(0.0152)	(0.0237)
income = 6, \$50,000 to \$74,999	0.0181	0.0313**	0.0249
	(0.0138)	(0.0148)	(0.0231)
income = 7, \$75,000 to \$99,999	0.0330**	0.0495***	0.0124
	(0.0148)	(0.0160)	(0.0247)
income = 8, \$100,000 to \$149,999	0.0364**	0.0561***	0.0101
	(0.0158)	(0.0172)	(0.0264)
income = 9, \$150,000 to \$199,999	0.0586***	0.0467*	0.0174
	(0.0221)	(0.0241)	(0.0367)
income = 10, \$200,000 or more	0.0682**	0.0951***	0.0883*
	(0.0277)	(0.0311)	(0.0460)
race = 2, Black or African American	0.104***	0.105***	-0.0282*
	(0.0102)	(0.0110)	(0.0150)
race = 3, American Indian or Alaskan native	0.0569**	0.0592**	0.0359
	(0.0264)	(0.0282)	(0.0397)
race = 4, Asian	-0.0412**	-0.0364**	-0.0142
	(0.0161)	(0.0167)	(0.0252)
race = 5, Native Hawaiian or other Pacific Islander	-0.0141	-0.0157	-0.0313
	(0.0435)	(0.0463)	(0.0688)
Optimism		0.0417***	0.0172
		(0.00700)	(0.0108)
Constant	0.375***	0.342***	0.0999***
	(0.0233)	(0.0252)	(0.0373)
Sample	All	All	Considered
Observations	30,409	24,566	8,955
R-squared	0.055	0.038	0.008

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2: Self-described rationale for considering starting a business

Work environment: wanted to be my own boss, wanted to turn hobby into a job, or wanted to control my own schedule	0.7024329
Business opportunity: saw an untapped market, wanted to satisfy a particular need, or wanted the earning potential	0.1266376
Family: wanted to provide opportunities for family or wanted to work with family	0.2323768
Was having trouble finding work	0.2760449
N	3,206

Table 3: Size and age of employer by whether individual had considered starting a business

	Considered		
	<i>No</i>	<i>Yes</i>	<i>Total</i>
How large was the organization in which you worked?			
Zero people, I founded the organization	3,238	2,707	5,945
Smaller than 50 people	5,307	2,513	7,820
51-500 people	4,831	2,280	7,111
More than 500 people	7,026	2,507	9,533
<hr/>			
How old was the organization in which you worked?			
5 years old or less	4,975	4,025	9,000
6 years old or more	15,427	5,982	21,409
Total	20,402	10,007	30,409

Table 4: Optimism in earnings and prices by whether the individual had considered starting a business

Prediction of change in earnings over next year	Considered starting a business		
	No	Yes	Total
Decreased by more than 5%	539	238	777
Decreased by 5% to 10%	328	167	495
Decreased by less than 5%	545	232	777
Stayed exactly the same	7,533	2,595	10,128
Increased by less than 5%	5,429	2,227	7,656
Increased by 5% to 10%	3,330	2,121	5,451
Increased by 10% or more	2,698	2,427	5,125
<hr/>			
12 mo. home prices prediction			
Decreased by more than 5%	331	159	490
Decreased by 5% to 10%	376	246	622
Decreased by less than 5%	942	555	1,497
Stayed exactly the same	4,039	1,402	5,441
Increased by less than 5%	5,385	2,480	7,865
Increased by 5% to 10%	5,693	3,024	8,717
Increased by 10% or more	3,636	2,140	5,776
<hr/>			
12 mo. gas price prediction			
Decreased by more than 5%	649	346	995
Decreased by 5% to 10%	814	413	1,227
Decreased by less than 5%	1,631	872	2,503
Stayed exactly the same	2,764	1,036	3,800
Increased by less than 5%	4,259	1,985	6,244
Increased by 5% to 10%	5,413	2,708	8,121
Increased by 10% or more	4,872	2,647	7,519

Total	20,402	10,007	30,409
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Table 5: Source of the business idea

	Freq.	%	Cum.
Identified a market opportunity through my work experience and this opportunity was specifically related to a supplier or customer of my employer	1,510	15.09	15.09
Identified a market opportunity through my personal use of an existing consumer product or recognizing an unmet need in a market I was familiar with	3,446	34.44	49.53
Read a media article which suggested a potential market opportunity	667	6.67	56.19
Partnered with another individual who had an existing idea	964	9.63	65.82
Other, please explain	833	8.32	74.15
Identified a market opportunity through my work experience and this opportunity was specifically related to my employer's business	2,587	25.85	100
Total	10,007	100	

Table 6: Last step taken last as a function of rationale for ceasing pursuing idea (Wave 3 only)

	New Information					Execution Problems		
Last step	I learned more about what would be required to run the business and decided it wouldn't be profitable enough.	I learned about potential competitors that could make the business unprofitable.	I still think the idea would be profitable, but decided I didn't have the skills.	I still think the idea would be profitable, but it would be too difficult to get financing.	The business could be profitable, but I decided it would be too risky.	I still think the business could be profitable, but I (or my founding team, if appropriate) wasn't able to complete the next step.	I still think the business could be profitable, but I (or my founding team, if appropriate) wasn't able to complete the next step.	Total
Discussed the business idea with a friend, work colleague, or acquaintance	35	10	21	39	32	22	11	170

Searched the Internet or stores to explore whether an existing organization already provided the service or product that your business would produce	15	6	4	18	6	7	3	59
Consulted a friend or acquaintance who was an expert on your target market	4	0	4	5	5	5	2	25
Sought out someone you did not already know who was an expert on your target market and discussed the idea with them	2	1	2	3	3	2	1	14
Created some sort of document (PowerPoint presentation, executive summary, etc.)	2	2	0	0	2	2	0	8

Created spreadsheets, financial models, or other numerical analysis to determine feasibility	3	2	1	2	4	2	0	14
Wrote a business plan for your proposed business	1	0	0	8	9	4	1	23
Made a sale	2	2	0	0	1	1	0	6
Built a working prototype or provided the service on a pilot basis	6	0	1	1	2	3	0	13
Tested demand for your product or service (i.e., surveys or advertising the business, whether up-and-running or not)	2	1	0	4	1	0	0	8
Approached a lawyer or accountant or researched the legal or tax implications of	1	1	0	5	4	2	1	14

starting the business									
Built a website for the business	2	1	0	5	0	3	2	13	
Collected feedback from customers who used your product	2	0	0	0	2	3	1	8	
Applied to an incubator/accelerator program or business plan competition	0	0	0	0	0	0	0	0	
Explored financing options with a bank, investors, or grant program	4	1	0	10	5	6	1	27	
Explored using patents, copyright, or trademark to protect your business idea	0	0	0	1	1	1	0	3	
Used feedback from pilot or demand testing to change	0	0	0	0	0	2	0	2	

business idea									
Explicitly considered how other firms might respond if you launched the business	0	2	0	4	1	3	0	10	
Made a sale	5	5	0	7	6	3	4	30	
Total	86	34	33	112	84	71	27	447	

Table 7: Lean and heavy steps

Heavy	Lean
<p>Created some sort of document (PowerPoint presentation, executive summary, etc.) to explain the business concept to others</p> <p>Created spreadsheets, financial models, or other numerical analysis to determine feasibility</p> <p>Wrote a business plan for your proposed business</p> <p>Approached a lawyer or accountant or researched the legal or tax implications of starting the business</p> <p>Explored using patents, copyright, or trademark to protect your business idea</p>	<p>Built a working prototype or provided the service on a pilot basis</p> <p>Tested demand for your product or service (i.e., surveys or advertising the business, whether up-and-running or not)</p> <p>Collected feedback from customers who used your product</p> <p>Used feedback from pilot or demand testing to change business idea</p>

Table 8: Negative binomial regressions predicting number of steps taken

VARIABLES	(1) steps	(2) lean	(3) heavy
	-	-	-
age = 2, 35 years - 44 years	0.170*** (0.0353)	0.202*** (0.0638)	0.268*** (0.0524)
	-	-	-
age = 3, 45 years - 54 years	0.419*** (0.0375)	0.409*** (0.0657)	0.474*** (0.0566)
	-	-	-
age = 4, 55 years - 64 years	0.671*** (0.0433)	0.601*** (0.0711)	0.759*** (0.0671)
	-	-	-
Female = 1	0.171*** (0.0291)	0.169*** (0.0494)	0.254*** (0.0440)
education = 2, High school graduate (includes equivalency)	0.199 (0.131)	0.118 (0.232)	0.0561 (0.251)
education = 3, Some college or associate's degree	0.559*** (0.127)	0.523** (0.225)	0.561** (0.245)
education = 4, Bachelor's degree	0.614*** (0.129)	0.576** (0.229)	0.689*** (0.247)
education = 5, Graduate or professional degree	0.756*** (0.134)	0.829*** (0.235)	0.869*** (0.251)
income = 2, \$10,000 to \$14,999	0.215** (0.0921)	0.150 (0.155)	0.145 (0.159)
income = 3, \$15,000 to \$24,999	0.174** (0.0795)	0.198 (0.133)	0.221 (0.137)
income = 4, \$25,000 to \$34,999	0.293*** (0.0760)	0.254** (0.126)	0.380*** (0.130)

income = 5, \$35,000 to \$49,999	0.309*** (0.0750)	0.266** (0.122)	0.394*** (0.129)
income = 6, \$50,000 to \$74,999	0.241*** (0.0729)	0.140 (0.121)	0.410*** (0.125)
income = 7, \$75,000 to \$99,999	0.340*** (0.0773)	0.252** (0.127)	0.543*** (0.129)
income = 8, \$100,000 to \$149,999	0.374*** (0.0803)	0.201 (0.131)	0.648*** (0.133)
income = 9, \$150,000 to \$199,999	0.414*** (0.102)	0.381** (0.173)	0.657*** (0.158)
income = 10, \$200,000 or more	0.635*** (0.130)	0.526*** (0.197)	0.925*** (0.198)
race = 2, Black or African American	0.231*** (0.0386)	0.168** (0.0691)	0.353*** (0.0583)
race = 3, American Indian or Alaskan native	0.300*** (0.103)	0.394** (0.161)	0.243 (0.173)
race = 4, Asian	- 0.205*** (0.0668)	- -0.229** (0.113)	- 0.369*** (0.103)
race = 5, Native Hawaiian or other Pacific Islander	0.0463 (0.180)	-0.0144 (0.260)	0.303 (0.228)
Optimism	0.160*** (0.0296)	0.0989** (0.0502)	0.140*** (0.0449)
Constant	-0.293** (0.141)	- 2.288*** (0.253)	- 2.069*** (0.270)
Observations	24,566	24,566	24,566

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Figure 1: Propensity to have considered starting a business by 2-digit NAICS code of employer

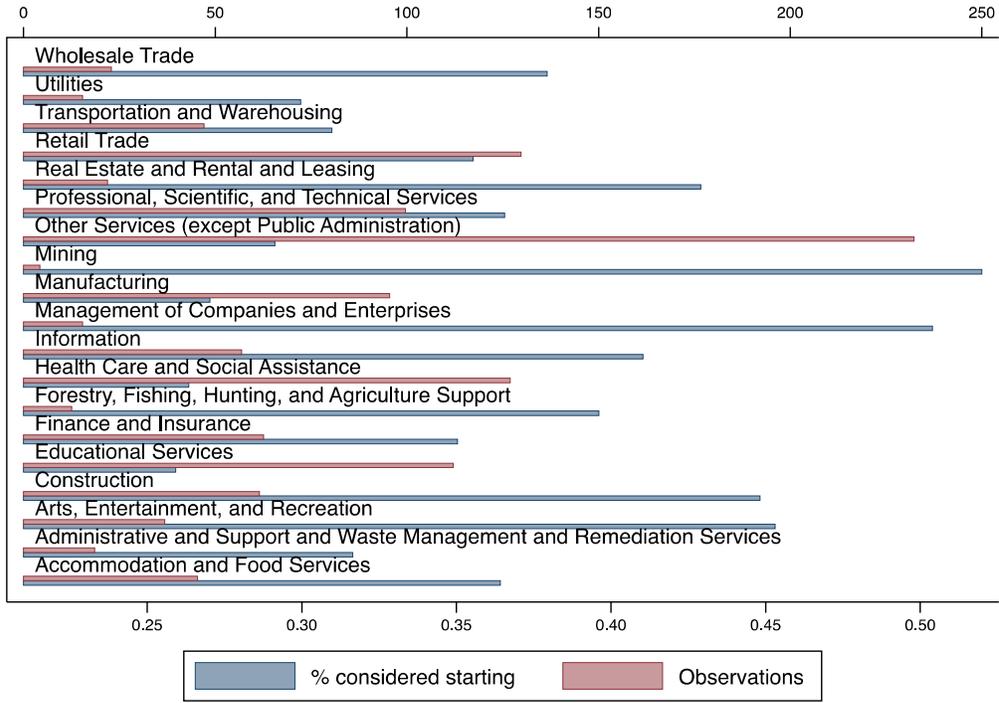


Figure 2: Number of employers in last 5 years by whether individual had considered starting a business

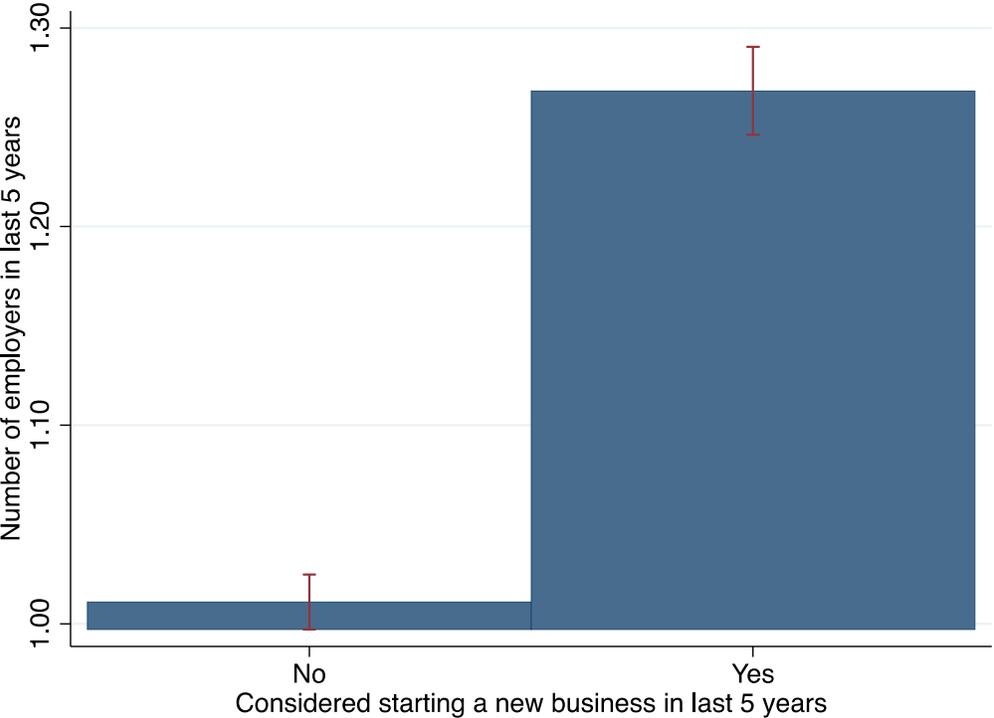


Figure 3: Industry of proposed venture mapped to individual's employer industry

Industry of job when venture conceived

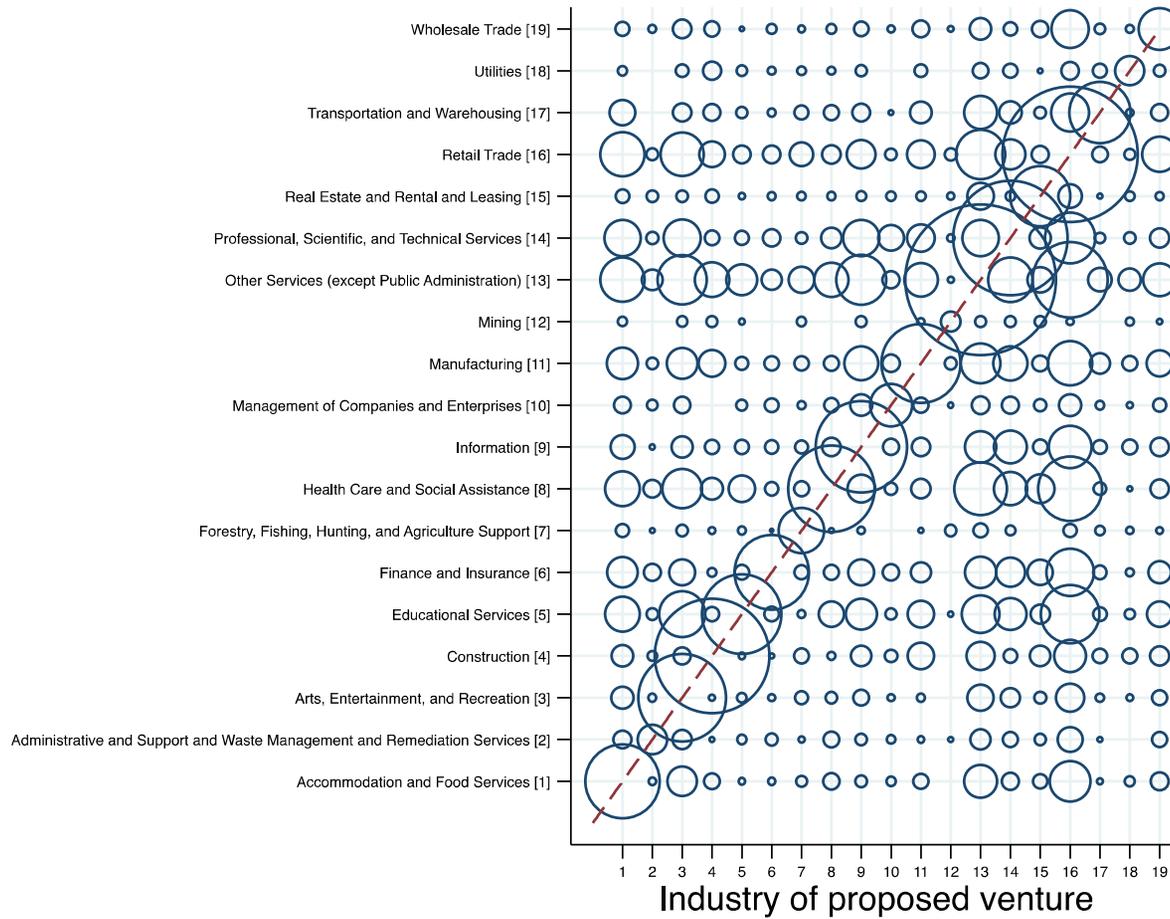


Figure 4: Percentage of individuals who considered starting a business that took each of the steps

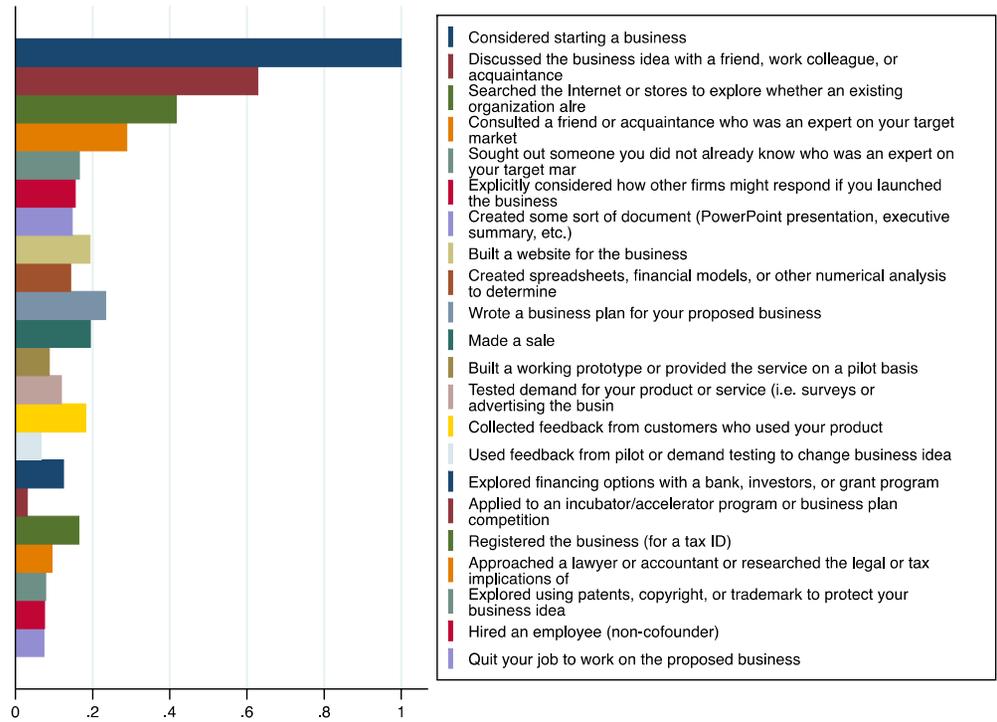


Figure 5: Steps by perceived idea quality (conditional on stopping due to new information about the business idea)

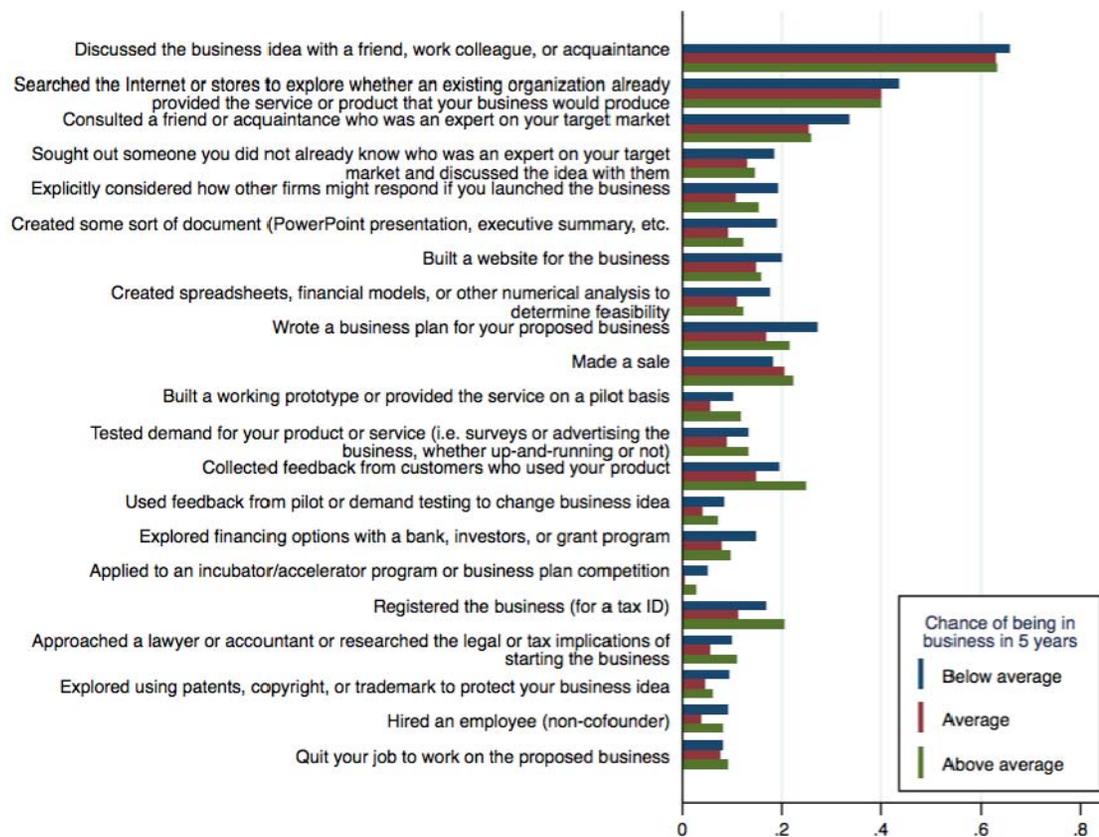


Figure 6: Differences in steps by respondent's education level

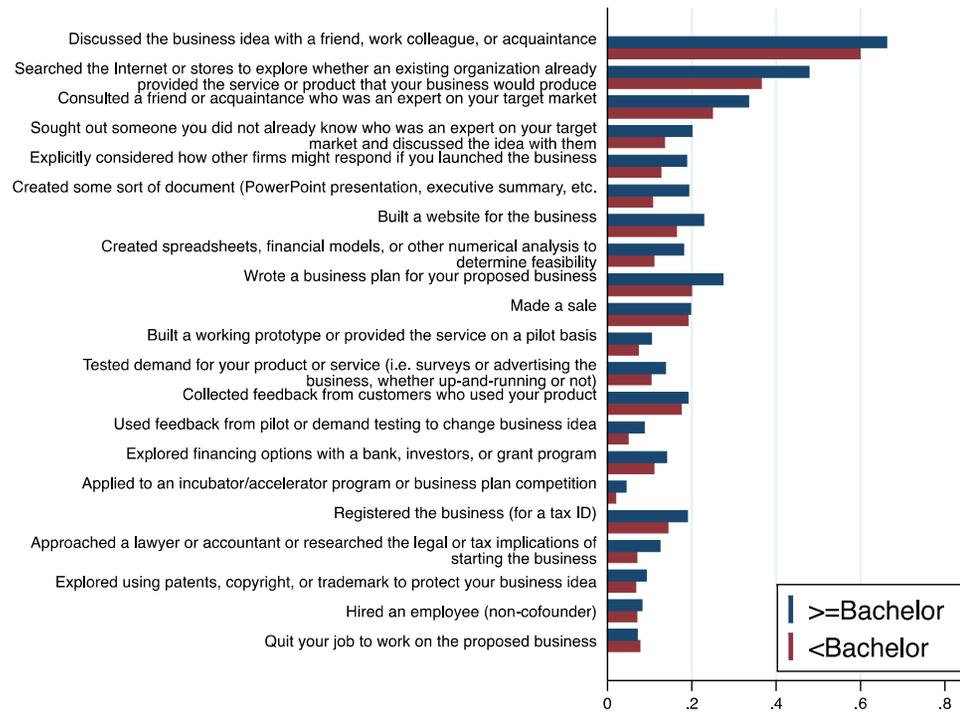


Figure 7: Rationale for starting business by education level

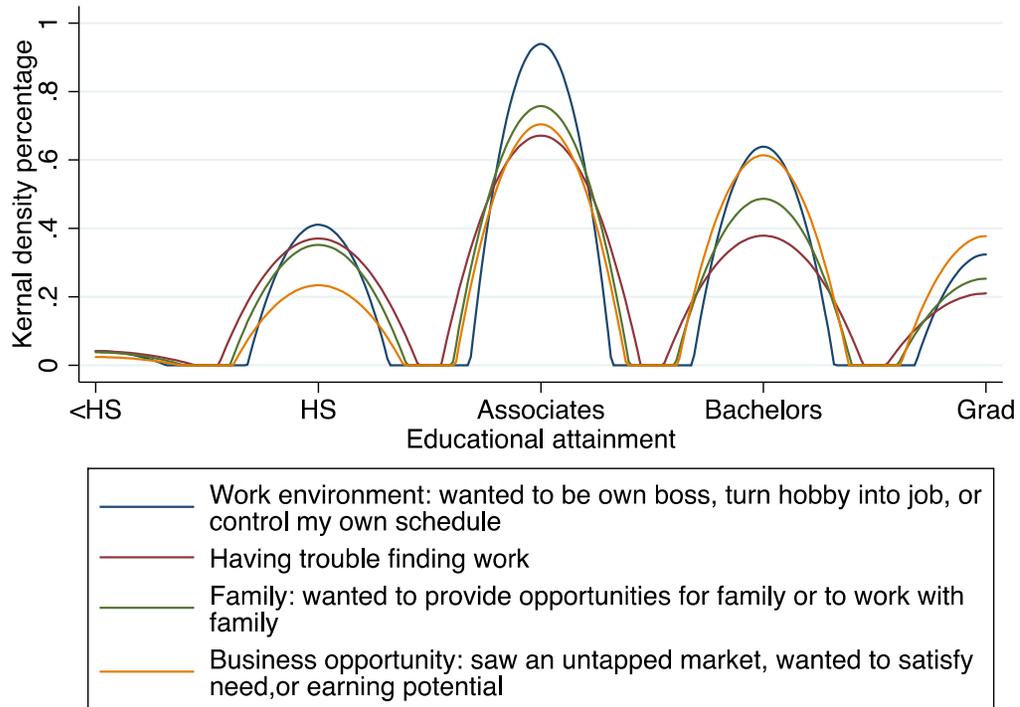


Figure 8: Steps taken by rationale for considering starting business

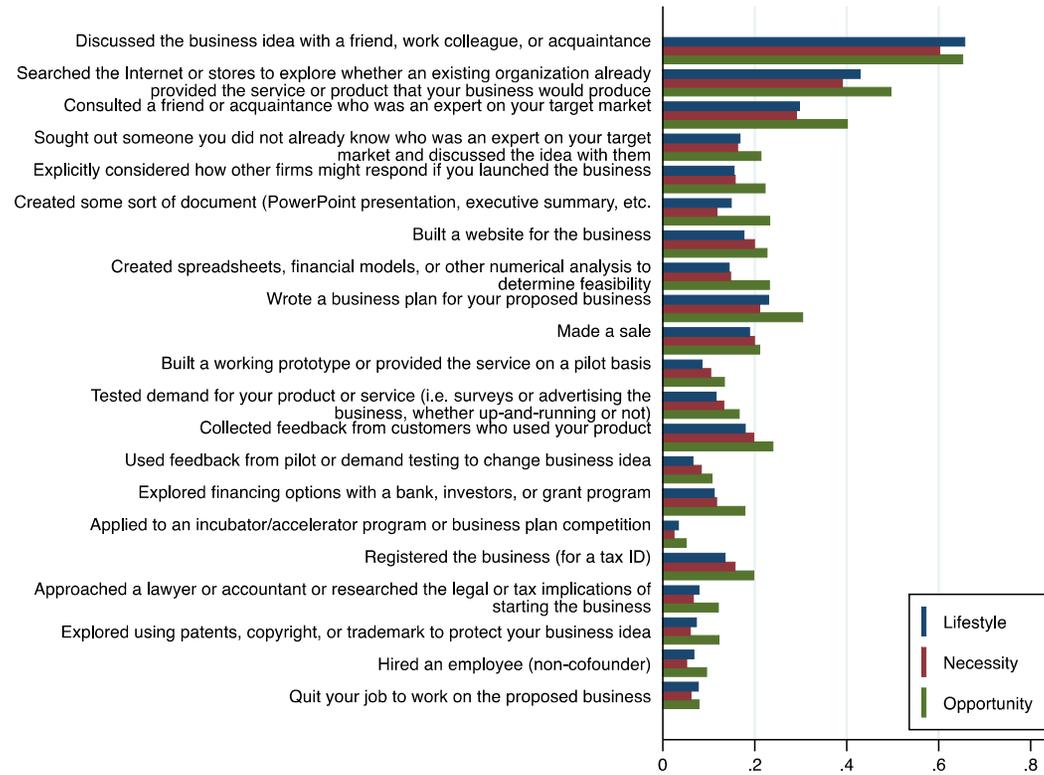


Exhibit 1: Entrepreneurial Process Survey

This survey is being conducted by researchers at Duke University interested in studying your business experience. The survey should take approximately 5-10 minutes and participation is voluntary. Respondents who complete the survey will receive compensation. All answers are anonymous and no one will be able to identify you or your responses. If you have additional questions, please email the Principal Investigators at businessexperience@duke.edu

Do you agree with the following statement? "I have read and understood the above consent form and wish to participate in this study."

- Yes
- No

If No Is Selected, Then Skip To End of Block

Please select the category that describes your household income for last year (2016):

- Less than \$10,000
- \$10,000 to \$14,999
- \$15,000 to \$24,999
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 to \$199,999
- \$200,000 or more

Do you earn more than 50% of your household's income?

- Yes
- No

Which of the following best describes your level of education?

- Less than high school graduate
- High school graduate (includes equivalency)
- Some college or associate's degree
- Bachelor's degree
- Graduate or professional degree

Which category includes your age:

- 23 years - 34 years
- 35 years - 44 years
- 45 years - 54 years
- 55 years - 64 years
- 65+ years

Please select your sex:

- Male
- Female

Do you consider yourself Hispanic or Latino?

- Yes
- No

Please select the race with which you identify:

- White/Caucasian
- Black or African American
- American Indian or Alaskan native
- Asian
- Native Hawaiian or other Pacific Islander

In which region of the United States do you currently live?

- Northeast
- Midwest
- South
- West
- I do not live in the United States

If I do not live in the United... Is Selected, Then Skip To End of Block

Please enter your 5-digit ZIP code:

About how many years do you expect to live?

	Less than 60	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-99	100 or more
	<input type="radio"/>									

Choose the statement that best describes how confident you are about predicting your life expectancy. I am 95% sure that my prediction is:

- within 5 years of the truth
- within 10 years of the truth
- within 20 years of the truth
- None of the above

What is your current employment situation?

- Working full-time (for someone or self-employed)
- Working part-time (for someone or self-employed)
- Not working, but would like to work
- Temporarily laid off
- On sick or other leave
- Permanently disabled or unable to work
- Retiree or early retiree
- Student, at school or in training
- Homemaker
- Other _____

How many organizations were you an employee of for at least 1 year in the last 5 years (2012-today)?

- 0
- 1
- 2
- 3 or more

Please think about 12 months from now. Suppose you are working in the exact same job(s) at the same place you currently work, and working the exact same number of hours. What do you expect to have happened to:

	Increased by 10% or more	Increased by 5% to 10%	Increased by less than 5%	Stayed exactly the same	Decreased by less than 5%	Decreased by 5% to 10%	Decreased by more than 10%
Your earnings, before taxes and deductions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The average home price nationwide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The price of a gallon of gas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For the questions below, "the organization" describes the organization you worked the most hours over the last 5 years (2012-today).

Which of the following best describes your situation at the organization?

- I work for someone else
- I am self-employed - I work as an independent contractor / consultant/ freelancer
- I am self-employed - I own the business

How large was the organization at the time you joined it?

- Zero people, I founded the organization
- Smaller than 50 people
- 51-500 people
- More than 500 people

How old was the organization at the time you joined it?

- 5 years old or less
- 6 years old or more

Which country were you working in? If you worked in multiple, choose the one you spent the most time in.

<<Dropdown menu of countries>>

Please classify the industry the organization was in:

<<Dropdown menu of NAICS codes>>

In the last 5 years (2012-today), did you ever consider starting your own business? If you did start a business, in the last 5 years only, please answer 'Yes'.

- Yes
- No

Please select "4" from the scale below in order to continue with the survey.

- 1 Strongly Agree
- 2
- 3
- 4
- 5 Strongly Disagree

Which of the following reasons best describes your motivations for considering starting your own business?

- Work environment: wanted to be my own boss, wanted to turn hobby into a job, or wanted control my own schedule
- Business opportunity: saw an untapped market, wanted to satisfy a particular need, or wanted the earning potential
- Family: wanted to provide opportunities for family or wanted to work with family
- Was having trouble finding work

Please choose the business idea you considered most seriously and answer the following questions about that business idea. It does not matter if the idea never turned into a company.

Please describe the business idea you considered most seriously in a sentence or two.

Which of the following best describes the business idea you considered most seriously in the last 5 years?

- I came up with the idea myself and was/would have been the only founder
- I came up with the idea myself, but worked with someone I considered/would have considered a cofounder
- I came up with the idea with at least one other person, and worked with at least one other person I considered/would have considered a cofounder
- Someone else came up with the idea, and I was/would have been his/her cofounder

Was your product or service to be offered to:

- Consumers
- Businesses
- Government

Please select the industry description that best describes your business idea.

<<Dropdown menu of NAICS codes>>

What percentage of new firms in this industry, on average, do you think are still operating after 5 years?

- less than 25%
- 26% to 50%
- 51% to 75%
- More than 75%

How do you think a business based on your idea (or your actual business, if you've already started it) compares to the average new firm in the industry, in terms of likelihood of surviving for 5 years?

- Much better chances
- Slightly better chances
- About the same
- Slightly worse chances
- Much worse chances

Please describe how you came up with the business idea:

- Identified a market opportunity through my work experience and this opportunity was specifically related to my employer's business
- Identified a market opportunity through my work experience and this opportunity was specifically related to a supplier or customer of my employer
- Identified a market opportunity through my personal use of an existing consumer product or recognizing an unmet need in a market I was familiar with
- Read a media article which suggested a potential market opportunity
- Partnered with another individual who had an existing idea
- Other, please explain _____

When you were considering the idea, how many employees (including yourself) did you expect your business to have 5 years after founding?

- 1-5
- 6-10
- 11-50
- 50-100
- More than 100

Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity? The business opportunity was the one you considered the most seriously in the last 5 years. (Mark all that apply)

- Discussed the business idea with a friend, work colleague, or acquaintance
- Searched the Internet or stores to explore whether an existing organization already provided the service or product that your business would produce
- Consulted a friend or acquaintance who was an expert on your target market
- Sought out someone you did not already know who was an expert on your target market and discussed the idea with them
- Explicitly considered how other firms might respond if you launched the business
- Created some sort of document (PowerPoint presentation, executive summary, etc.) to explain the business concept to others
- Built a website for the business
- Created spreadsheets, financial models, or other numerical analysis to determine feasibility
- Wrote a business plan for your proposed business
- Made a sale
- Built a working prototype or provided the service on a pilot basis
- Tested demand for your product or service (i.e. surveys or advertising the business, whether up-and-running or not)
- Collected feedback from customers who used your product
- Used feedback from pilot or demand testing to change business idea
- Explored financing options with a bank, investors, or grant program
- Applied to an incubator/accelerator program or business plan competition
- Registered the business (for a tax ID)
- Approached a lawyer or accountant or researched the legal or tax implications of starting the business
- Explored using patents, copyright, or trademark to protect your business idea
- Hired an employee (non-cofounder)
- Quit your job to work on the proposed business
- None of the above

The next set of questions appeared conditional on the respondents' prior answers. We have used "If" and "Then" categorizations to display the logic.

Display This Question:

If *“In the last 5 years (2012-today), did you ever consider starting your own business? If you did start a business, in the last 5 years only, please answer 'Yes'.”* <<**Yes is Selected**>>

And *“Which of the following best describes the business idea you considered most seriously in the last 5 years.”* <<**I came up with the idea myself and was/would have been the only founder is Not Selected**>>

Which of the following steps did you take with your cofounder(s)? (Mark all that apply)

- Established a regular meeting time to work on the idea
- Set specific milestones for each other and assigned tasks to each other
- Discussed a division of ownership of the company
- Did not take any of these steps

Display This Question:

If *“In the last 5 years (2012-today), did you ever consider starting your own business? If you did start a business, in the last 5 years only, please answer 'Yes'.”* <<**Yes is Selected**>>

And *“Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?”* <<**Quit your job to work on the proposed business is Not Selected**>>

And *“Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?”* <<**Hired an employee (non-cofounder) is Not Selected**>>

You indicated that you had considered starting a business, but never quit your job or hired an employee. Please select from the following the answer that best applies

- The business was launched. The nature of the business doesn't require my full time engagement or hiring anyone else
- I still plan to launch the business, but have not yet completed the tasks required
- I am not pursuing this idea anymore

You indicated that you are no longer pursuing the idea you considered. Which of the following was the last step you took before you stopped pursuing the idea?

Considered starting the business

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Discussed the business idea with a friend, work colleague, or acquaintance is Selected>>

Discussed the business idea with a friend, work colleague, or acquaintance

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Searched the Internet or stores to explore whether an existing organization already provided the service or product that your business would produce is Selected>>

Searched the Internet or stores to explore whether an existing organization already provided the service or product that your business would produce

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Consulted a friend or acquaintance who was an expert on your target market is Selected>>

Consulted a friend or acquaintance who was an expert on your target market

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Sought out someone you did not already know who was an expert on your target market and discussed the idea with them is Selected>>

Sought out someone you did not already know who was an expert on your target market and discussed the idea with them

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Created some sort of document (PowerPoint presentation, executive summary, etc.) to explain the business concept to others is Selected>>

Created some sort of document (PowerPoint presentation, executive summary, etc.) to explain the business concept to others

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Created spreadsheets, financial models, or other numerical analysis to determine feasibility is Selected>>

Created spreadsheets, financial models, or other numerical analysis to determine feasibility

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Wrote a business plan for your proposed business is Selected>>

- Wrote a business plan for your proposed business

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Built a working prototype or provided the service on a pilot basis is Selected>>

- Built a working prototype or provided the service on a pilot basis

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Tested demand for your product or service (i.e. surveys or advertising the business, whether up-and-running or not) is Selected>>

- Tested demand for your product or service (i.e. surveys or advertising the business, whether up-and-running or not)

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Applied to an incubator/accelerator program or business plan competition is Selected>>

- Applied to an incubator/accelerator program or business plan competition

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Registered the business (for a tax ID) is Selected>>

- Registered the business (for a tax ID)

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Approached a lawyer or accountant or researched the legal or tax implications of starting the business is Selected>>

- Approached a lawyer or accountant or researched the legal or tax implications of starting the business

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Quit your job to work on the proposed business is Selected>>

- Quit your job to work on the proposed business

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Hired an employee (non-cofounder) is Selected>>

- Hired an employee (non-cofounder)

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Built a website for the business is Selected>>

- Built a website for the business

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Collected feedback from customers who used your product is Selected>>

- Collected feedback from customers who used your product

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Explored financing options with a bank, investors, or grant program is Selected>>

- Explored financing options with a bank, investors, or grant program

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Explored using patents, copyright, or trademark to protect your business idea is Selected>>

- Explored using patents, copyright, or trademark to protect your business idea

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Used feedback from pilot or demand testing to change business idea is Selected>>

- Used feedback from pilot or demand testing to change business idea

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Explicitly considered how other firms might respond if you launched the business Is Selected>>

- Explicitly considered how other firms might respond if you launched the business

If “Which, if any, of the following steps did you (and those with whom you came up with the idea) take to pursue the business opportunity?” <<Made a sale Is Selected>>

- Made a sale

Which of the following explains the most important reason why you stopped at that step?

- I learned more about what would be required to run the business and decided it wouldn't be profitable enough
- I learned about potential competitors that could make the business unprofitable
- I still think the idea would be profitable, but decided I didn't have the skills
- I still think the idea would be profitable, but it would be too difficult to get financing
- The business could be profitable, but I decided it would be too risky
- I still think the business could be profitable, but I (or my founding team, if appropriate) wasn't able to complete the next step.
- I still think the business could be profitable, but I (or my founding team, if appropriate) didn't know what the next step was.