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WHY AREN'T THERE MORE MINORITY ENTREPRENEURS?

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Why Aren't There More Minority Entrepreneurs?

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**ABSTRACT**

We study racial and gender disparities in entrepreneurial activity through the lens of a Roy model, focusing on the distinction between idea generation and execution. Using nationally representative survey data, we find that Black and Hispanic individuals demonstrate higher entrepreneurial intentions than white respondents. They are much less likely, however, to launch ventures once ideas are conceived. A critical determinant of this gap is differential reliance on social networks, which shapes both the likelihood of launching a business as well as the reasons for stopping. Variation in the strength of local, own-group entrepreneurship reveals that stronger networks enhance the relationship between social engagement and business formation. Also, as predicted by the model, access to social networks also predicts seeking capital. The interconnections between socialization and searching for capital are important for understanding policies aimed at boosting rates of entrepreneurship in underrepresented groups.

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# 1 Introduction

In 1996, the rate of business ownership in the U.S. was three times higher for white than Black working-age adults. This gap has narrowed in recent decades, but the convergence has occurred primarily due to declining rates of White business ownership rather than substantial increases among underrepresented groups. As of 2020, the rate of white business ownership was still double that of Black adults (Fairlie and Robinson, 2022).<sup>1</sup> These persistent disparities in entrepreneurial participation raise important questions about the structural, economic, and social barriers that differentially affect individuals based on race and gender. Why do differences in new business formation across different racial groups persist?

This paper examines these disparities by leveraging a novel, nationally representative survey to explore racial and gender differences in entrepreneurial intentions and outcomes. Our approach focuses on the pathways that lead to business formation—or the lack thereof. We frame our analysis around a version of a Roy (1951) model that breaks the decision to choose entrepreneurship over standard wage employment into three critical stages: the intention to start a business, the steps taken to develop an idea, and the ultimate decision to launch.

Our findings challenge conventional narratives. Black and Hispanic respondents are more likely than white to *consider* starting a business but significantly less likely to launch a business conditional on forming an idea for one. In contrast, women are less likely to consider starting a business, but significantly more likely to actually start the business conditional on considering an idea. These differences cannot be explained by differences in idea quality. Black and Hispanic respondents report higher confidence in the survival and growth potential of their ideas relative to their white counterparts. Also contrary to that explanation, women report lower confidence in survival and growth prospects.

Instead, we find that differences in socialization—such as discussing ideas with peers or seeking advice from experts—are critical factors. Our data allow us to explore this channel by examining differences in the steps taken by those who have considered new businesses. We measure eighteen different steps that can be broken into four broad categories: (i) socializing the idea; (ii) codifying the idea through creating business plans, websites, etc.; (iii) seeking market feedback through steps such as building a prototype, etc.; and (iv), seeking financing and engaging with business service professionals such as lawyers or accountants. We see no significant differences in the unconditional rate at which Black or Hispanic respondents approach

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<sup>1</sup>These calculations are based on a definition of business ownership used in the Current Population Survey that include employer and non-employer incorporated and non-incorporated businesses. Similar racial disparities exist among other categories of self-employment.

outside investors. Instead, Black respondents are much less likely than white to undertake initial steps to socialize their ideas within their peer group. This is unlikely to be attributable to taking the idea less seriously, because we see a higher incidence of demanding time-intensive steps like codifying the idea through writing a business plan or executive summary. Also, we do not observe an analogous significant difference among Hispanic or female respondents.

Differences in socialization that we observe between underrepresented groups are important for explaining differences in rates of new business formation. Our model predicts that taking more socialization steps is associated with taking more financial steps. We find evidence in support of this. The association arises through the complementarity of financial capital and idea quality. These effects are weaker among Black respondents and stronger among women. We find patterns consistent with some of this difference being driven by differences in the availability of a local network with whom to socialize. Taking both more social and more financial steps leads to a greater likelihood of starting the business.

Previous work has illustrated importance of learning from peers for the decision to enter entrepreneurship (Lerner and Malmendier, 2013; Nanda and Sørensen, 2010; Wallskog, 2024). Wallskog (2024), in particular, uses Census data to show that individuals learn from their on-the-job peers with prior entrepreneurship experience and shows that these peer learning channels are considerably muted for females and Black Americans. Our analysis also finds that socialization pathways are more muted for historically underrepresented groups. By distinguishing between ideation and execution, our analysis brings nuance to results obtained in large-sample data.

Lower reliance on social networks could reflect a reluctance to engage, or it could reflect a lack of availability of relevant social networks. While we can observe neither the information being communicated through the socialization process, nor the characteristics of those from whom they are receiving feedback, we can leverage geographic variation in minority business ownership to proxy for the availability of social networks. We measure the proportion of same-group minority business ownership occurring in the commuting zone of the respondent as a proxy for the availability of relevant social networks. We find strong evidence that easier access to relevant social networks is important for Black and Hispanic respondents, but not for female respondents. This further suggests that own-group social interactions are the driving force behind the socialization results we find.

We can also infer aspects of the information being communicated through social interaction by exploring how social interaction changes the perceptions of hurdles or roadblocks to starting a business. Among those who have abandoned their idea, those who took more social steps are more likely to report

that they were stymied by anticipated financing difficulties or that they lacked the necessary skills. These effects play out differently across different underrepresented groups, suggesting that the specific feedback they receive varies across groups. In particular, among those who have stopped searching, the probability of reporting difficulty obtaining financing as the main reason is higher among those who took more social steps, and much more so for Black and Hispanic respondents than for female or White respondents.

The message that emerges from this fact pattern is that race- and gender-specific perceived barriers to starting a business are either dispelled or amplified through social interaction, and these perceptions influence gender and racial differences in entrepreneurial choice. Perceived financial barriers to entrepreneurship have their roots in social interaction, but act differently on different underrepresented groups due to different base-rates of idea formation and different network availability. This builds on recent findings by Bennett and Chatterji (2023), who report that only a small minority of individuals who report the inability to obtain financing as an impediment to entrepreneurship actually met with a banker or other financing provider. It also squares with Fairlie, Robb and Robinson (2022), which finds that Black entrepreneurs are much more likely than similar white entrepreneurs to report that they did not seek financing because they feared denial.

The balance of the paper is organized as follows. In Section 2, we offer a simple analytical framework designed to frame the empirical analysis. Section 3 presents the data. In Section 4 we present results on the difference between entrepreneurial intention and entrepreneurial execution. Section 5 explores how racial and gender differences in the types of steps taken. Section 6 demonstrates the importance of various steps for the decision to launch the business or abandon the idea. In Section 7 we explore how localized variation in the strength of local networks effects socialization. Section 8 concludes with a discussion of policy implications and directions for future research.

## **2 Analytical Framework**

To fix ideas and frame our empirical analysis, this section sketches a simple Roy (1951) model in the spirit of Evans and Jovanovic (1989). The model extends the standard framework by breaking the decision to start a business into three stages: idea generation, viability assessment, and execution.

## 2.1 Idea Generation

Let  $\lambda$  represent the probability that an individual generates or encounters a viable business idea. The rate of idea generation depends on personal characteristics ( $X$ ), such as education or exposure to entrepreneurial networks, and structural factors ( $Z$ ), such as workplace environment:

$$\lambda = f(X, Z)$$

An idea arrives in raw form and can be perfected by applying effort to improve it. Initially, an idea is a draw  $\theta_0$  from a distribution  $N(\mu_\theta, \sigma_\theta)$ . The idea combines with capital  $k$  to generate output according to  $y = \theta_0 k$ . Given that a unit of capital has a rental price of  $r$ , the expected profit associated with entrepreneurship is then  $\pi = (\theta_0 - r)k$ . At this stage, before the would-be entrepreneur has invested any effort in improving or sharpening the idea, the expected utility of entrepreneurship is given by:

$$U(\pi) = (\theta_0 - r)k - \frac{\gamma}{2} \sigma_\theta^2 k^2 \tag{1}$$

Thus, the utility from entrepreneurship is a function of the idea's initial perceived quality ( $\theta_0$ ), the risk ( $\sigma_\theta^2$ ) of the project, the cost of capital  $r$ , the amount of capital ( $k$ ) applied to the idea, and  $\gamma$ , the individual's risk aversion.

Because capital is essential for launching the business, the amount of capital,  $k$ , is an important parameter in the entrepreneur's decision problem. We assume that an entrepreneur can choose some level of capital  $k \in [0, \bar{k}]$ , where  $\bar{k}$  represents the entrepreneur's subjective views of the maximum amount of capital that they could receive based on the idea. Variation in  $\bar{k}$  across individuals or minority groups could be an important component of the decision to enter entrepreneurship for the reason highlighted in Evans and Jovanovic (1989): namely, because sub-optimal levels of capital make entrepreneurship look unattractive relative to wage employment even if the underlying idea quality  $\theta$  is high.

After receiving an idea, an agent can choose whether to expend effort to improve the idea before making the decision to launch it.

## 2.2 Viability Assessment

To capture the idea that a would-be entrepreneur can take steps to improve their idea, we assume that a potential entrepreneur can expend costly effort  $e$  to improve the quality of the idea as follows:

$$\theta_1 = (\theta_0 + \alpha e) - \frac{e^2}{2} \quad (2)$$

The idea here is that an initial idea is rough, but through effort, can be refined.<sup>2</sup> A would-be entrepreneur can improve or refine their idea by taking steps to differentiate it from competitors, to improve its marketing, etc. Although our survey data allow us to distinguish in fine detail between the various types of steps that an entrepreneur might take to bring their idea to fruition, here we simply model the overall process assuming that effort has a marginal impact  $\alpha$  on the quality of the idea.

## 2.3 Execution

The would-be entrepreneur's optimization problem is to choose effort  $e$  and capital  $k$  to maximize the value of the startup idea, and then choose entrepreneurship if the utility of the optimal startup plan exceeds that of standard employment: ie., if  $U(\pi^*) > w$ . Given that this casts the decision as a static choice, it is natural to think of  $w$  as the utility of the capitalized value of lifetime wage earnings, and the utility of entrepreneurial earnings as the utility of the capitalized profit stream associated with launching a business.

Putting these pieces together, the measure of practicing entrepreneurs that we observe in the data is then given by:

$$\lambda \cdot Pr((\theta_0 + \alpha e^* - r)k^* - \frac{\gamma}{2}(k^* \sigma_y)^2 - \frac{e^{*2}}{2} > w) \quad (3)$$

This is the key equation for generating empirical predictions. It states that the amount of entrepreneurship we observe is given by the arrival rate of ideas times the probability that an optimally refined idea exceeds the outside option of wage employment, given the availability of capital.

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<sup>2</sup>To keep the analysis as simple as possible we have ruled out the possibility that through additional effort the entrepreneur learns that the idea was worse than originally thought. This could be introduced by incorporating a random shock into Equation 2 or by introducing the possibility of learning about other parameters, such as  $\bar{k}$ . We leave these extensions for future work.

## 2.4 Predictions

Equation 3 immediately illustrates that there are two primary reasons why we might observe differences in the rate of entrepreneurship between different groups. One is that underrepresented groups, such as Black, Hispanic, and female individuals, may have lower  $\lambda(X, Z)$  due to systemic inequities that affect the arrival of suitable ideas for new business formation. Formally:

**Prediction 1:** Observed rates of entrepreneurial activity are lower in some groups because those groups experience lower arrival rates of entrepreneurial ideas.

The second broad reason is that resource considerations affect the optimal tradeoff between wage employment and entrepreneurship conditional on the existence of an entrepreneurial idea. Disparities in perceived initial idea quality ( $\theta_0$ ), returns to effort spent improving the idea ( $\alpha e$ ), risk tolerance ( $\gamma$ ), access to capital ( $k$ ) may drive differences in this decision. For example, minority entrepreneurs might face heightened uncertainty ( $\sigma^2$ ) due to limited access to market knowledge or resources, or they might face lower returns to additional effort  $\alpha$ , because they lack available resources for improving the idea. Formally:

**Prediction 2:** Observed rates of entrepreneurial activity are lower in some groups because risk preferences, perceived quality, or perceived resource constraints make entrepreneurship less attractive than traditional employment.

The granularity of our survey data allow us to explore Prediction 2 in considerable detail. As we discuss below, our data allow us to observe a variety of reasons why an entrepreneurial idea was abandoned, and we can also observe the manner in which the would-be entrepreneur's effort was directed.

Additional predictions arise from considering how the optimal choice of  $k^*$  and  $e^*$  are interconnected. Taking the first-order condition for the entrepreneur's expected utility, the optimal level of capital is given by:

$$k^* = \min\left[\frac{\theta_1^* - r}{\gamma\sigma_\theta^2}, \bar{k}\right]. \quad (4)$$

This equation shows that the optimal scale of the firm is larger for better ideas, smaller for more risk-averse agents, but is larger if more effort has been spent refining the idea.

The parameter  $\theta_1^*$  reflects the optimal effort choice of the entrepreneur. The first-order condition for Equation 2 yields  $e^* = \alpha k^*$ . Combining these expressions, we have the following expressions for optimal capital and effort choice:

$$k^* = \min\left[\frac{\theta_0 - r}{\gamma\sigma_\theta^2} + \frac{\alpha \cdot (\theta_0 - r)}{\gamma\sigma_\theta^2 \cdot (\gamma\sigma_\theta^2 - \alpha^2)}, \bar{k}\right] \quad (5)$$

$$e^* = \min\left[\frac{\theta_0 - r}{\gamma\sigma_\theta^2 - \alpha^2}, \alpha\bar{k}\right] \quad (6)$$

When the constraint on available capital does not bind, the expression for  $k^*$  states that the optimal amount of capital is a function of the net return on capital, scaled by the utility cost of the project’s riskiness, augmented by the improvement to the initial idea induced by additional effort to improve the idea’s quality. In general, better initial ideas are associated with more effort and more capital, and more risk averse entrepreneurs optimally exert less effort and find lower amounts of capital desirable.

These equations establish the interdependence of learning and perceptions of future resource constraints. The optimal level of effort shrinks as anticipated capital constraints bind, while, all else equal, the probability of becoming an entrepreneur increases with the amount of effort expended on improving the idea. Formally, we have:

**Prediction 3:** Potential entrepreneurs who anticipate more difficulty raising capital expend less effort improving their idea. Conversely, entrepreneurs who expend more effort on their idea are more likely to seek outside capital.

In the remainder of the paper we use these predictions to steer our empirical analysis.

### 3 Survey Data

Our survey builds on recent work by Bennett and Chatterji (2023). In partnership with Qualtrics, we surveyed a total of 51,255 respondents across five waves conducted between January, 2015 and March, 2017. Qualtrics distributed the survey through relationships with market research firms that maintain panels of internet respondents. None of the survey solicitation materials mentioned the purpose of the survey.

Following the methodology described in Bennett and Chatterji (2023), we used a raking strategy to weight our responses so that the survey is representative of the US population. We relied on three distinct sets of third-party data to do this: the Current Population Survey (for race-by-income matching); the American Community Survey IPUMS subsample (geography-by-age-by-gender from individuals over 23 years old); and the Federal Reserve Bank of New York’s Survey of Consumer Expectations (for labor force participation). With the resulting sample weights, our sample matches the US population on race-by-income, geography-by-age-by-gender, and employment status.

Our data differ from other studies examining the origins of entrepreneurial activity in several respects. Most critically, because the data come from a representative sample, rather than one conditioning on

the dependent variable of entrepreneurship—like the Global Entrepreneurship Monitor (GEM) and the Panel Study of Entrepreneurial Dynamics (PSED)—we are able to explore the conditions under which entrepreneurship was not considered. We also collect the steps a prospective entrepreneur took toward entrepreneurship, allowing us to build on prior research that used data on self employment from Census data on barriers to entrepreneurship by distinguishing people in the risk set, those who even considered entrepreneurship, from those that did not.

The full survey instrument is included in the Appendix. It includes questions about demographics as well as intentions for starting a business. To elicit entrepreneurial intentions, the survey asks, “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.” If the individual answers in the affirmative, the survey then asked about the steps taken, if any, toward starting the business. The survey also asked about expectations for the success of the considered business, as laid out below in Table 3. A total of 15,904 individuals had considered starting a business across the two survey waves, and of those, 4,178 met our criteria for starting the business: they either made a sale (3,041), quit their job to work full-time at the new business (1,114), or hired an employee (1,060). For 9,735 respondents who considered but did not start the business, we collected self-reported reasons why they are no longer pursuing the business. These are also explored in Table 3.

Insert Table 1 here

Table 1 provides a breakdown of key demographic information based on the race of the respondent. There are racial differences in whether a respondent is a primary income earner, whether they are currently unemployed, and in the educational background of respondents. There are also differences in average annual income across racial categories. Appendix Section C provides a tabulation of income, age, and education by the categories used in the survey. We control for these demographic categories in all our regression specifications unless specifically noted.

## 4 Where Do Racial Differences in Entrepreneurship Begin?

In this section we use the framework discussed in the Introduction to explore the three potential channels behind the observed racial differences in business ownership. We begin first by exploring differences in the rate at which individuals consider starting new businesses. Then we explore differences in the rates of actually starting businesses conditional on having an idea for one.

## 4.1 Ideation versus Formation

In the left panel of Table 2, we report marginal effect estimates from probit models in which the dependent variable is a dummy for considering starting a business. The first column reports results for the full sample, while the second and third columns break the sample at the median on income. Column (4) subsamples only those individuals who work in firms that are five years old or younger.

Insert Table 2 here

Across the board, Black respondents are much more likely than white or other non-Hispanic respondents to indicate that they considered starting a business. Similarly, Hispanic respondents are also more likely than non-Hispanic respondents to have considered an idea. Women are much less likely to report considering starting a business across all specifications. For both Black and Hispanic respondents, there are significant differences, roughly 7 and 6 percentage points respectively, between individuals who report earning \$75,000 per year or more (roughly the upper quartile of respondents) than for those earning less than \$34,999 (roughly the lower quartile of respondents). For female respondents, we do not observe a significant difference based on income. Column (5) presents tests of the differences in marginal effects between columns (2) and (3). The effect is still significant among Black individuals who work in young organizations, but recall that these point estimates are capturing racial *differences*: 53% of Black respondents working in young organizations report having considered an idea, compared to 38% of Black respondents working in older organizations. The corresponding percentages for Hispanic respondents are 57% and 37%, and for women, 41% and 22%. Thus, young organizations differentially attract entrepreneurially-minded individuals, even if the racial differences in ideation are attenuated here.

The point estimates on race and gender are economically as well as statistically significant. The mean rate of consideration in Column (1) for non-Black respondents is about 31%, whereas for Black respondents the rate is 43.5%. For Hispanics, the rate is 37% versus 32% for non-Hispanics, and for men the rate is 35.6% versus 29.7% for women. The differences are similar in the other subgroups.

In Columns (6)-(9), we restrict the sample to those who indicated that they had considered starting a business, and we explore the decision to start a business with the same specifications as Columns (1)-(4). In Column (6), Black respondents who had considered starting a business were statistically significantly less likely than white to start the business. The marginal effect corresponds to about 3 percentage points of difference, which is about 12 % of the mean.

To explore the effect further, columns (7) and (8) break the sample into roughly the upper and lower income quartiles of respondents. Column (10) provides statistical tests of the differences in marginal effects between those two groups. The results suggest that high income Black respondents were actually more likely to start their business than white respondents; the negative effect in Column (6) is attributable to lower income respondents. Column (7) also shows a higher rate of business formation for higher income respondents, and that explains the overall greater rate of female business formation conditional on considering.

Column (9) of Table 2 looks at the sub-sample of individuals who currently work in firms that are less than five years old. The idea behind this specification is that one reason why individuals may not begin pursuing ideas they consider is that they are unfamiliar with the process of starting a business, as in Wallskog (2024). Presumably, individuals working in young firms (firms five years old or less) have some affinity with the firm formation process, and could seek counsel from coworkers about important challenges faced by their employer in the business formation process. Yet we see in Column (8) that the negative coefficient on the Black race indicator is even more negative among the sample of individuals who themselves currently work in new firms. This result also echoes findings in Wallskog (2024) showing that on-the-job peer-learning channels are significantly weaker for traditionally underrepresented groups than for others.

## 4.2 Expectations of Business Quality

Table 2 demonstrates that, in the language of the model sketched in Section 2, differences in rate of idea formation  $\lambda$  across racial groups are not consistent with the observed patterns of entrepreneurship that we see in the data. Another potential channel for persistent differences in self-employment are differences in the distribution of perceived idea quality,  $\theta$ . To test for this, we use two measures that capture variation in the perceived quality of an idea. One is the response to the question, “How do you think a business based on your idea (or your actual business, if you started it) compares to the average new firm in the industry, in terms of the likelihood of surviving for 5 years?” Responses are “much better, slightly better, the same, slightly worse, much worse,” and we code a dummy to capture when respondents answer “much better.” The second measure is based on the question, “When you were considering the idea, how many employees (including yourself) did you expect your business to have five years after founding?” Potential responses are 1-5 employees, 6-10, 11-50, 51-100, or more than 100 employees. Similarly, we code a dummy to capture respondents who answer that they expected to employ 1-5 employees after five years.

Insert Table 3 here

Table 3 presents the results. Black and Hispanic respondents are significantly more likely to report that they expected their business idea to have much better than average survival odds. Female respondents, in contrast, are much less likely than men to believe that their business had much better than average survival chances.

In Column (2), the dependent variable is a dummy for expecting the business to have between one and five employees after five years. Black and Hispanic respondents both report that they are much less likely to believe this of their business. Female respondents, on the other hand, are much more likely to believe this.

Understanding why the business has not been launched if the would-be founders consider it to be a good idea allows us to explore the idea quality channel from a cost-of-implementation standpoint. The specific survey question asks “You indicated that you had considered starting a business, but never quit your job or hired an employee. Why not?” Responses are tabulated in Table 3.

Black respondents are less likely than the reference group to indicate that they stopped pursuing the idea because they could not obtain financing, it would not be worth the effort, it was too risky, or they lacked requisite skills. Hispanic respondents also were much less likely than the reference group to report that they stopped working on the project because it was too risky or not worth it. Unlike Black respondents, Hispanic respondents were less likely to report that they were stuck at the next stage. Women, in contrast, were much more likely to report that they had stopped working on the idea because they were stuck, unable to complete the next step.

Taken together, these results tell us that racial differences in observed rates of business formation hide a more complex story of the business formation process. By looking at business formation rates alone, we conflate two measures that affect the rate of new business formation: the rate of new idea formation,  $\lambda$ , and the rate of activation conditional on new idea formation, which is a function of idea quality, capital availability, and other parameters. Black respondents are much more likely than white respondents to consider starting a business, but much less likely to start it conditional on identifying an opportunity. This cannot be readily explained by perceptions of the quality of the idea. These results stand in contrast to those that describe another historically-underrepresented group in entrepreneurship, women, who are less likely to consider new ideas, but also less likely to see their ideas as having better-than-average growth or survival chances.

## 5 Racial Differences in Steps Taken

In this section, we dig deeper into the gap between consideration and action by exploring racial differences in the steps entrepreneurs take. The patterns we observe shed some light on the gap between desire to form a business and actually doing so. Specifically, we build on two results from Bennett and Chatterji (2023). They suggest that the pre-foundation stage for entrepreneurs appears to involve a series of increasingly costly information gathering steps that prospective entrepreneurs only continue to pursue when they believe their chances of success are high enough. Second, they note that many prospective entrepreneurs stop after very early stages, where the pecuniary costs of subsequent stages are very low. For example, very few prospective entrepreneurs approach friends to get feedback on their idea and a fraction of those are willing to approach a domain expert they did not already know. Bennett and Chatterji (2023) suggest that those results are consistent with the social costs of information seeking being very large. Our results below provide patterns consistent with those social costs, which could include reputation or fear of expropriation, being higher in racial minority communities which may explain the disproportionate drop-off between rates of entrepreneurship consideration and actual business formation.

Table 4 here

We take up these issues in Table 4, which compares Black, Hispanic, and female respondents to other respondents along eighteen steps on the path to business formation. We break these steps up into four groups. “Socializing the idea” measures whether respondents shared their idea with friends or strangers. The three socialization steps distinguish between friend and stranger, and between expert and non-expert in terms of from whom advice is being sought. This step would involve almost no pecuniary cost whatsoever, although it may be psychologically costly to face the risk of receiving negative or critical feedback about an idea from a friend or stranger, or there may be reputational effects from sharing the idea and then not succeeding. “Codified the idea” includes steps like writing a business plan, build a financial model, developing a pitch document. These steps have modest pecuniary costs but may involve a larger time cost.

A third group of steps is labeled “Sought Market Feedback” and includes a range of activities that capture various aspects of measuring potential market demand for a product as well as possible competitive responses. Also included here are steps associated with building a prototype and testing it with market participants to gauge their acceptance of the product. These steps could easily involve substantial time commitment and considerable cost depending on the nature of the product or idea.

The final group of actions is “Undertook Logistical Steps.” This involves engaging with business service professionals like lawyers, accountants, or potential funding sources to seek outside capital, register a business, and pursue intellectual property protection. Certainly not every business would need to take these steps, but these are steps that presumably only make sense if an individual is seriously considering starting a business.

In terms of the model sketched in Section 2, these steps map into the effort choice that the entrepreneur makes to improve the quality of the idea, albeit in considerably more detail than the model admits. The parameter  $\alpha$  in the model captures the returns to effort in general terms; empirically, one could imagine that each of these components of effort could have different returns, which in turn might vary across groups.

There are highly statistically significant differences between Black and non-Black respondents in socialization steps. One reason for this might be that Black respondents self-filtered and did not take their own ideas seriously, but both the aforementioned differences in reported business quality and differences in the codification steps speak against this interpretation: Black respondents are more likely than white respondents to report that they created some sort of document or made a business plan.<sup>3</sup> Although they are less likely to create financial models, this could be a reflection of the timing of steps taken; for example, perhaps financial models are only built immediately before seeing a banker, or are difficult to build without industry knowledge on cost and revenue. There are no significant patterns of racial differences in terms of seeking market feedback, and while Black respondents are less likely to speak to a lawyer or accountant, they are more likely to apply to an incubator and not detectably different in terms of exploring other types of financing alternatives.

We do not see the same patterns among Hispanic respondents. Indeed, we see the opposite: they are more likely to socialize the idea to friends, either expert or non-expert. Hispanic respondents are more likely than non-Hispanic respondents to take many market feedback steps, and to take steps to codify the idea. They are more likely to reach out to potential funding sources, but less likely to register the business for a tax ID, which may itself reflect that their businesses were intended to be run as sole proprietorships rather than as S- or C-corporations.

Finally, we see an entirely different pattern of differences when we split respondents based on gender. Female would-be entrepreneurs are more likely to engage in conversations with friends, but less likely to reach

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<sup>3</sup>Black respondents taking this costly step at a higher rate than white respondents suggests that their higher rate of “considering” entrepreneurship is not simply a function of having a less restrictive definition of what it means to “consider” an idea.

out to strangers who might be subject-matter experts. They are less likely to codify the idea, and while they do undertake certain market feedback steps with greater frequency, these steps are tentative ones such as considering how other firms would react, or collecting feedback from potential consumers. They are less likely to take any sort of logistical steps such as to seek funding, speak to an attorney, etc. While there are no doubt numerous explanations behind any one of these differences in isolation, the larger issue is that the patterns differ significantly based on gender and racial background. This underscores the fact that variation in cultural context is important for understanding barriers to entrepreneurial action.

Table 5 here

Table 4 only provides univariate comparisons based on race and gender. Table 5 explores several measures of socialization with probit regressions that include controls for income, age, and education categories. In Column (1) the dependent variable is a dummy equaling one if the respondent did not speak to anyone about their idea. Here we see that Black respondents are significantly more likely to speak to no one about their idea, holding constant demographic factors. In Column (2), the dependent variable equals one if the respondent spoke to a friend or acquaintance. Black respondents are significantly less likely to take either of these steps. In Column (3) the dependent variable is a dummy for whether the respondent spoke to a stranger who was an expert about their idea; Black respondents are 12.5% more likely to have taken this step.

Thus, Table 5 shows that Black respondents are more likely to speak to no one, and less likely to speak to personal acquaintances, than non-Black respondents. When they seek expertise they seek it from strangers. While it is difficult to know whether this reflects the availability of expertise among friends or a reluctance to air ideas among friends, it is important to note that the same patterns do not hold for Hispanics and women. Controlling for demographics, there are no significant differences between Hispanic and non-Hispanic respondents. Women are more likely to speak to a friend, but less likely to speak to an expert. Differences in the composition and the reliance on personal networks is an important factor distinguishing women from men and different racial groups from one another.

## 6 Do the Steps Matter?

The final piece of our analysis explores the impact of taking these socialization steps on business formation. We start by analyzing the connection between different socialization pathways and starting a business.

Then we explore how plausibly exogenous variation in the availability of networks impacts the efficacy of socialization.

## 6.1 Socialization and Business Formation

To explore whether the feedback received from peers influences the business formation decision, we revisit the main specification in Table 2, but condition on different patterns of communication.

Table 6 here

First, in Table 6 we repeat the regression reported in Column (6) of Table 2, but split the sample according to various criteria. Column (1) simply repeats Column (6) of the previous table for ease of exposition.

Column (2) restricts attention to those who spoke to no one as a benchmark. Point estimates from this sample, based on 4,077 observations, are similar for Black respondents, but go in the opposite direction from the main result for Hispanic and female respondents.

Column (3) restricts attention to the 11,297 respondents who spoke to a friend about their idea. Sharing the idea with friends is associated with a wider racial entrepreneurship gap. The difference in point estimates is large; the *Black* marginal effect grows in absolute value by about 50%, although the statistical significance of the difference is weak. While the *Hispanic* coefficient was small and insignificant among respondents who had not talked to anyone, it becomes large and significant among those who talked to a friend. Women who share the idea with friends are 3 percentage points more likely than men to start their business, conditional on considering it, and 5 percentage points more likely than women who spoke to no one.<sup>4</sup> All three differences are significant.

Column (4) shows that we cannot reject that the entrepreneurship gap for Black respondents is erased for those who sought advice from a stranger. Comparing the point estimates from Columns (2) and (4) for Black respondents, we see that the difference is statistically as well as economically significant. This differs from what we see among Hispanic respondents, where those who spoke to previously-unknown experts were considerably less likely to start their business.

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<sup>4</sup>One might be concerned that the difference is attributable to differences in who female respondents define to be “friends.” In a sample of only female respondents who spoke to friends or strangers, the rate of starting is higher among those who spoke to strangers ( $p \leq .011$ ). If the distinction was purely one of classification of the same people, we would not expect to see a difference in a real outcome.

Although we cannot measure the nature of information flow across the social network between the would-be entrepreneur and their peers, we can measure differences in a variety of other outcomes that help us understand how socialization affects business formation. One approach is to consider the connections between taking social steps and taking financial steps: Prediction 3 of the model sketched in Section 2.

This test is presented in Table 7, which reports ordered logit specifications in which the dependent variable is the count of the number of financing steps taken.

Insert Table 7 here

Column (1) in Table 7 shows that taking more social steps predicts taking more financing steps. The point estimate is highly statistically significant. The loadings on the key demographic variables — *Black*, *Hispanic*, *female* — indicate that in general, Black and Hispanic respondents are more likely to take more financial steps, holding constant the number of social steps taken, but that women generally take fewer financial steps.

In Column (2) we replace the count of the social steps with dummy variables for having taken only one, only two, or three social steps. We do not impose any ranking across the steps: i.e., an individual who only talks to a stranger is treated the same as an individual who only talks to a friend. The point estimates across the count indicators reveal a strong monotone relationship between the number of social steps taken and the number of financial steps taken.

Finally, in Column (3) we report interactions between key demographic categories and the count of social steps. Adding together the three coefficients (for example,  $0.57 + 0.49 + -0.17$  for Black respondents) shows that in each case, the overall effect of social steps is positive within each under-represented group. Nevertheless, we see pronounced differences across the groups. Socialization has a much stronger association with taking financial steps for women than for men, and a much weaker effect for Black than for non-Hispanic white respondents. There is no difference between Hispanic and non-Hispanic white respondents in the effect of social steps on financial steps.

Thus, on balance, social steps appear to nudge respondents towards taking additional steps along the path to business formation, but much less so for Black respondents. In terms of our analytical framework, this is consistent with black respondents anticipating a lower  $\bar{k}$ , the binding capital constraint. It also appears to change the reasons for quitting among those who are no longer pursuing their idea, as we show in Table 8.

Insert Table 8 here

Table 8 repeats the analysis contained in Table 3, but includes the number of social steps taken as an independent variable. Generally, social steps increase the belief that financing would be difficult or that the individual lacked the necessary skills, but decreases the probability that they report not knowing the next step, being stuck, thinking the problem they were solving was too difficult, or that competition would be too great. As before, these effects are generally attenuated for Black respondents, and generally work in the opposite direction for female respondents. The feedback from social feedback appears to be a mix of encouragement and an appraisal of the challenges associated with raising resources for starting the new venture.

Table 8 suggests that among those who quit, socialization leads individuals to be more likely to report that financing difficulties drove them to abandon the project. This suggests that one element of socialization is that as would-be entrepreneurs potentially improve their idea through feedback, they become more aware of the potential for financing constraints to bind. In our model, higher values of  $\theta$  make it more likely that the financing constraint will bind, all else equal. This illustrates how learning about financing opportunities through social network interactions can precede any actual attempt to speak to a banker or a potential source of equity financing. Indeed, Bennett and Chatterji (2023) report that the vast majority of respondents who report that they stopped because financing was difficult to obtain did not report exploring financing options with a bank or other source of funding. Figure 1 To see how this plays out differently along race and gender lines.

Insert Figure 1 here

Figure 1 reports the probability of reporting difficulty in financing as the reason for stopping by racial and gender category as a function of the number of social steps taken. Among those who are no longer trying to start a business, those who took more social steps are more likely to report difficulty in financing. Moreover, this effect is much more pronounced among Black and Hispanic respondents than among female respondents or the omitted category.<sup>5</sup>

Table 9 combines social and financial steps and examines how each impacts the probability of starting a business. The dependent variable in each column is a dummy variable for whether the respondent started the considered business, and the columns focus on different sample splits.

Insert Table 9 here

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<sup>5</sup>In terms of the analytical framework sketched in Section 2, this suggests that agents refine their estimate of  $\bar{k}$  with additional effort in a manner that is a function of their group.

Column (1) includes the full sample as a baseline. Both the number of social steps and the number of financial steps has a positive association with the probability of starting a business. Their interaction is positive, indicating that those who took social steps *and* financial steps are even more likely to go through with their intention to start a business. Column (2) repeats the analysis but only for the sample of Black respondents who considered a business. The magnitudes of the main effects of social and financial capital is less than half as large, but the interaction doubles. For Hispanic and female respondents, the interaction effects are closer to that of the full sample, but individual effects differ. Financing steps have a stronger association for Hispanic respondents, while social steps have a strong association for women.

Taken together, the results of this section indicate that socializing the idea for a business spurs additional information gathering and that this both increases the probability of launching the business, but also changes the reasons for quitting among those who choose not to continue pursuing the business. The effects of socialization appear to vary across different underrepresented groups in a manner that suggests networks available to Black respondents are potentially weaker than those available to others. This leads to explore potentially exogenous variation in the availability of social networks.

## 7 Varying the Strength of Local Networks

The final step in our analysis is to try to introduce plausibly exogenous variation in the strength of local networks as a way of further examining the role that social networks play in the path to starting a business. To the extent that deeper local networks lower the cost of accessing relevant information, this can be thought of as measuring variation in the parameter  $\alpha$  from Section 2.

To do this, we incorporate a measure of the strength of relevant social networks into our analysis. Using data from the 2012 US Census Survey of Business Owners, we calculate the percentage of local businesses in a commuting zone that are owned by the relevant minority group and match these to our survey data. The identifying assumption is that areas with larger percentages of relevant minority business ownership are areas in which it is easier to access advice about the business idea. We confirm this in Table 10, which reports ordered logit regressions of the number of social steps taken on the size of the relevant social network.

Insert Table 10 here

Column (1) confirms the previous findings that Black respondents take fewer social steps. In Column (2), we

restrict the sample to only Black respondents who had considered starting a business and include the size of the relevant social network as an independent variable. This column shows that the average number of social steps taken among Black respondents is significantly higher in areas where there is a greater percentage of employer businesses operated by Black entrepreneurs. We see a similarly positive, but much smaller effect, when we restrict the sample to Hispanic respondents. The size of the relevant social network has no significant effect on the number of steps taken by female respondents.

Next we examine how the efficacy of social steps varies with the strength of the relevant social network. These results are presented in Table 11.

Insert Table 11 here

Table 11 presents estimations in which the dependent variable is a dummy for whether the business was started. In Column (1), when we include the full sample, we see that the interaction between the number of social steps and the strength of the local network is positive. This indicates that social steps have a bigger impact on business formation outcomes where the proportion of same-group business owners is larger. The remaining columns subset the data based on the three minority groups. The interaction effect is strongest for Black respondents, even though the main effect of social steps is weakest in this subsample. The interaction effect is weaker, but still significantly positive, for Hispanic respondents, and is not detectable for female respondents.

All told, this section provides additional evidence that socialization is important for new business formation. Although we cannot measure the information that flows through the social steps we measure. We cannot rule out the possibility that a respondent chose their geographic location based on the availability of network resources. Nevertheless, our findings show that when it is easier to access same-group business owners, the effect of socialization on business outcomes is stronger.

## 8 Conclusion

This paper empirically explores racial and gender disparities in entrepreneurship through the lens of a Roy (1951) model adapted to separate entrepreneurial intention from entrepreneurial execution. This allows us to offer new insights into the nature of underrepresentation in entrepreneurship. Leveraging a nationally representative survey, we demonstrate that while Black and Hispanic individuals are more likely to consider starting a business than white individuals, they are significantly less likely to act on these intentions. Our

findings reveal that this gap is not driven by differences in the perceived quality of entrepreneurial ideas but by barriers in socialization and access to peer networks.

The findings highlight the importance of social capital in the entrepreneurial process. Black respondents, for example, are less likely to discuss business ideas with peers or personal networks compared to other groups, a factor that appears to contribute to the observed disparities in entrepreneurial outcomes. The challenges faced by underrepresented groups are multifaceted and extend beyond purely economic factors. The results also indicate that the strength of local entrepreneurial ecosystems moderates these effects. In areas with deeper networks of same-group business owners, socialization has a bigger impact on new business formation.

The results help to clarify why some policy interventions have had limited effectiveness in the past. Our theoretical framework highlights the interplay between capital availability and mentorship. Specifically, it suggests that increasing mentorship is unlikely to have a large impact on entrepreneurship in settings where anticipated capital availability is low. Likewise, attempts to spur capital availability may have limited availability if potential founders lack strong social networks. Our results suggest that increasing access to socialization opportunities in tandem with greater capital availability is likely to have a bigger impact than either channel in isolation. The results also suggest that tailoring interventions to specific demographic groups could address the distinct barriers faced by different populations.

This study raises several questions for future research. Longitudinal studies or experiments could provide further insights into the causal mechanisms linking socialization and business formation. In particular, research could examine the extent to which peer interactions influence the perceived viability of entrepreneurial ideas or the likelihood of securing financial resources. Additionally, further exploration of geographic and industry-specific contexts could enhance our understanding of how structural factors intersect with individual-level barriers. Finally, a more detailed examination of the intersection of race and gender could provide a richer account of how these factors jointly shape entrepreneurial pathways.

By situating social and network capital alongside financial constraints, this study broadens the framework for understanding disparities in entrepreneurship. Our work illustrates how social networks shape perceptions of financial constraints, and how this matters for entrepreneurship. Thus, disparities are not solely the result of financial limitations or differences in idea quality, but are also shaped by the broader social and institutional context in which entrepreneurs operate.

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Figure 1: Social Steps and the Lack of Financing

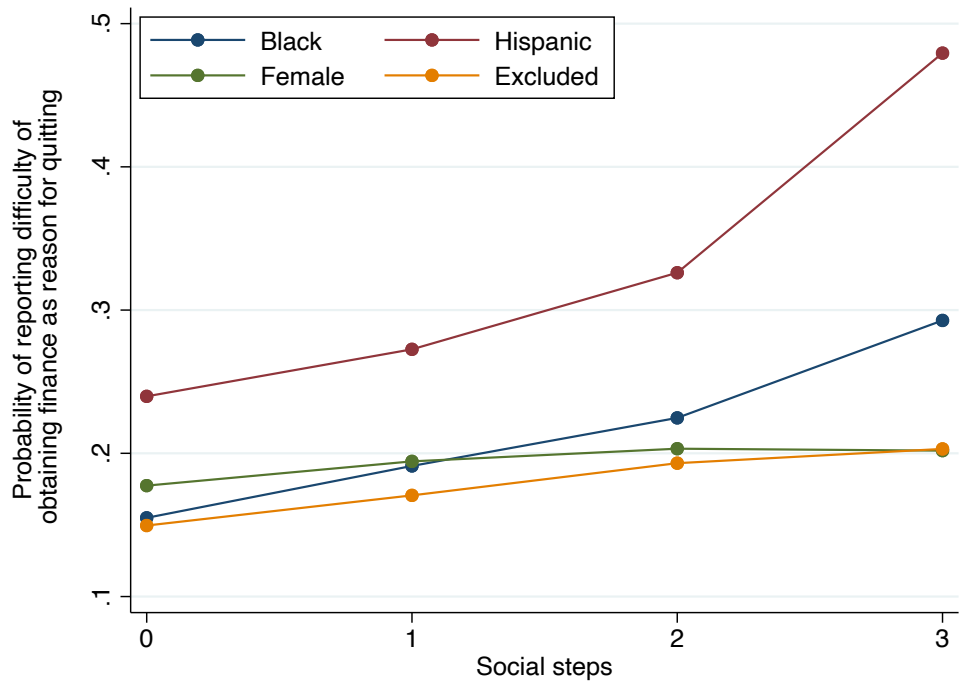


Table 1: Summary Statistics by Race

This table presents statistics for the full sample of 20,846 respondents, of whom 1,601 identify as Black and 1,132 identify as Hispanic. On a weighted basis, the sample is 12% Black and 6.6% Hispanic. Overall is the grand mean over all 20,846 observations. Columns under 'Means' report weighted means by group. The right-most column provides the p-value from an unweighted t-test of equal proportions.

|                               | Overall | Means: |       | B=W   |
|-------------------------------|---------|--------|-------|-------|
|                               |         | White  | Black | p-val |
| Primary income earner [Dummy] | 0.68    | 0.67   | 0.72  | 0.00  |
| Fulltime Employed             | 0.46    | 0.46   | 0.45  | 0.96  |
| Unemployed                    | 0.07    | 0.06   | 0.11  | 0.00  |
| No High School Deg.           | 0.02    | 0.02   | 0.03  | 0.00  |
| College Grad or Higher        | 0.45    | 0.46   | 0.33  | 0.00  |
| Income Grp                    | 5.57    | 5.70   | 4.59  | 0.00  |
| Age Grp                       | 2.95    | 3.00   | 2.61  | 0.00  |
| Female                        | 0.51    | 0.50   | 0.57  | 0.00  |
| Considered                    | 0.33    | 0.31   | 0.44  | 0.00  |

|                               | Overall | Means:       |          | NH=H  |
|-------------------------------|---------|--------------|----------|-------|
|                               |         | Non-Hispanic | Hispanic | p-val |
| Primary income earner [Dummy] | 0.68    | 0.68         | 0.72     | 0.00  |
| Fulltime Employed             | 0.46    | 0.45         | 0.60     | 0.00  |
| Unemployed                    | 0.07    | 0.07         | 0.07     | 0.02  |
| No High School Deg.           | 0.02    | 0.02         | 0.03     | 0.00  |
| College Grad or Higher        | 0.45    | 0.45         | 0.44     | 0.01  |
| Income Grp                    | 5.57    | 5.56         | 5.67     | 0.08  |
| Age Grp                       | 2.95    | 3.01         | 2.20     | 0.00  |
| Female                        | 0.51    | 0.51         | 0.50     | 0.09  |
| Considered                    | 0.33    | 0.32         | 0.43     | 0.00  |

Table 2: The Action Gap in New Business Formation

This table reports marginal effect estimates from a Probit model. In columns (1)-(4), the dependent variable is a dummy variable for whether the respondent considered starting a new business. In columns (5)-(8), the dependent variable is a dummy variable that equals one if the respondent made a sale, hired an employee, or quit their job to start the business. Columns (4) and (8) include only those who currently work in businesses that are less than five years old. All specifications include as controls indicator variables for income category, education, and age category. Standard errors computed using 100 replications of raked weights. Differences in marginal effects computed using the technique described in Mize, Doan and Long (2019).

| Differences  | Col (1)-(5): DV is Considered |              |              |          | Col (6)-(10): DV is Started if Considered |        |              |              |          |       |
|--------------|-------------------------------|--------------|--------------|----------|---|--------|--------------|--------------|----------|-------|
|              | (1)                           | (2)          | (3)          | (4)      | (5)                                       | (6)    | (7)          | (8)          | (9)      | (10)  |
| Black        | 0.109                         | 0.152        | 0.081        | 0.090    | 0.072                                     | -0.029 | 0.022        | -0.046       | -0.053   | 0.069 |
| <i>se</i>    | 0.006                         | 0.014        | 0.007        | 0.009    | 0.016                                     | 0.006  | 0.001        | 0.004        | 0.009    | 0.004 |
| <i>p</i>     | 0.000                         | 0.000        | 0.000        | 0.000    | 0.000                                     | 0.000  | 0.000        | 0.000        | 0.000    | 0.000 |
| Hispanic     | 0.055                         | 0.088        | 0.029        | 0.022    | 0.060                                     | -0.041 | -0.048       | -0.048       | -0.072   | 0.000 |
| <i>se</i>    | 0.005                         | 0.002        | 0.012        | 0.009    | 0.012                                     | 0.008  | 0.002        | 0.018        | 0.013    | 0.018 |
| <i>p</i>     | 0.000                         | 0.000        | 0.013        | 0.017    | 0.000                                     | 0.000  | 0.000        | 0.008        | 0.000    | 0.997 |
| Female       | -0.059                        | -0.061       | -0.053       | -0.085   | -0.008                                    | 0.016  | 0.015        | -0.015       | -0.003   | 0.030 |
| <i>se</i>    | 0.004                         | 0.004        | 0.006        | 0.006    | 0.007                                     | 0.005  | 0.002        | 0.006        | 0.007    | 0.006 |
| <i>p</i>     | 0.000                         | 0.000        | 0.000        | 0.000    | 0.259                                     | 0.000  | 0.000        | 0.013        | 0.723    | 0.000 |
| Sample       | Full                          | Upper quart. | Lower quart. | Works In |   | Full   | Upper quart. | Lower quart. | Works In |       |
|              | Income                        | Income       | Income       | Startup  |   | Income | Income       | Income       | Startup  |       |
| Observations | 51255                         | 10384        | 14575        | 13643    |   | 15904  | 3173         | 4546         | 6091     |       |

Table 3: Can Differences in Expected Outcomes Explain the Action Gap?

This table reports marginal effect estimates from a Probit model. In Column (1), the dependent variable is a dummy variable equaling one if the respondent answers “much better” to the question, “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?” Choices are Much better, slightly, same, slightly worse, much worse. In column (2), the dependent variable is a dummy variable equaling one if the respondent reports 1-5 employees as the answer to the question, “When you were considering the idea, how many employees (including yourself) did you expect your business to have 5 years after founding?” Choices are 1-5, 6-10, 11-50, 50-100, more than 100. Panel A includes 15,904 observations who considered starting a business. In Columns (3)-(8), the sample is restricted to those who report that they are no longer pursuing the idea that they considered. Potential responses included: (No Finance) I still think the idea would be profitable, but it would be too difficult to get financing; (Too Hard) I learned more about what would be required to run the business and decided it wouldn’t be profitable enough; (Competition) I learned about potential competitors that could make the business unprofitable; (Too Risky) The business could be profitable, but I decided it would be too risky; (Lacked Skills) I still think the idea would be profitable, but decided I didn’t have the skills; (Stuck) I still think the business could be profitable, but I wasn’t able to complete the next step. All columns include controls for income category, education, and age. Standard errors are in parenthesis. One, two and three asterisks denote significance at the 10, 5, and 1% level, respectively.

|              | Quit for Following Reason: |                     |                            |                     |                  |                     |                     |                     |
|--------------|----------------------------|---------------------|----------------------------|---------------------|------------------|---------------------|---------------------|---------------------|
|              | Bus. Quality               |                     | Quit for Following Reason: |                     |                  |                     |                     |                     |
|              | Good Idea                  | 1-5 Empl.           | No finance                 | Too hard            | Competition      | Lacked Skills       | Too risky           | Stuck               |
|              | (1)                        | (2)                 | (3)                        | (4)                 | (5)              | (6)                 | (7)                 | (8)                 |
| Black        | 0.11***<br>(0.014)         | -0.12***<br>(0.014) | -0.03***<br>(0.009)        | -0.03***<br>(0.009) | -0.00<br>(0.008) | -0.03***<br>(0.009) | -0.05***<br>(0.009) | -0.01<br>(0.013)    |
| Hispanic     | 0.09***<br>(0.016)         | -0.11***<br>(0.016) | 0.02<br>(0.016)            | -0.04***<br>(0.011) | 0.02<br>(0.012)  | 0.02<br>(0.016)     | -0.04***<br>(0.010) | -0.04***<br>(0.013) |
| Female       | -0.05***<br>(0.009)        | 0.13***<br>(0.010)  | 0.01<br>(0.007)            | 0.00<br>(0.008)     | -0.01<br>(0.006) | 0.01<br>(0.007)     | 0.00<br>(0.008)     | 0.03***<br>(0.008)  |
| Observations | 15,904                     | 15,904              | 7,851                      | 7,851               | 7,851            | 7,851               | 7,851               | 7,851               |

Table 4: Racial and Gender Differences in Pathways to Entrepreneurship

This table reports racial differences in the steps taken towards starting a business for those who indicate that they considered starting a new business. All refers to full sample. W/B indicates white or black respondent. H/NH indicates Hispanic or non-Hispanic respondent. M/F indicates male or female respondent. Full text of survey steps is provided in the appendix.

|   | Means: |      | B=W  |       | Means: |      | NH=H  |      | Means: |       | M=F  |      |
|---|--------|------|------|-------|--------|------|-------|------|--------|-------|------|------|
|   | All    | W    | B    | p-val | NH     | H    | p-val | M    | F      | p-val | M    | F    |
| <i>Socialized the idea:</i>                 |        |      |      |       |        |      |       |      |        |       |      |      |
| Discussed idea with friend/acquaintance     | 0.64   | 0.65 | 0.58 | 0.00  | 0.64   | 0.64 | 0.49  | 0.62 | 0.65   | 0.00  | 0.62 | 0.65 |
| Consulted friend/acquaintance w/ expertise  | 0.29   | 0.29 | 0.27 | 0.03  | 0.29   | 0.31 | 0.00  | 0.30 | 0.27   | 0.00  | 0.30 | 0.27 |
| Sought out expert you did not already know  | 0.16   | 0.16 | 0.18 | 0.03  | 0.16   | 0.18 | 0.01  | 0.17 | 0.15   | 0.00  | 0.17 | 0.15 |
| <i>Codified the idea:</i>                   |        |      |      |       |        |      |       |      |        |       |      |      |
| Created presentation                        | 0.15   | 0.14 | 0.17 | 0.00  | 0.15   | 0.16 | 0.03  | 0.16 | 0.13   | 0.00  | 0.16 | 0.13 |
| Created spreadsheets or financial models    | 0.14   | 0.15 | 0.11 | 0.00  | 0.14   | 0.15 | 0.05  | 0.15 | 0.13   | 0.00  | 0.15 | 0.13 |
| Wrote a business plan                       | 0.22   | 0.22 | 0.24 | 0.00  | 0.22   | 0.23 | 0.30  | 0.25 | 0.20   | 0.00  | 0.25 | 0.20 |
| <i>Sought Market Feedback:</i>              |        |      |      |       |        |      |       |      |        |       |      |      |
| Explored whether already exists             | 0.42   | 0.42 | 0.43 | 0.05  | 0.42   | 0.46 | 0.03  | 0.41 | 0.44   | 0.00  | 0.41 | 0.44 |
| Considered how incumbents might respond     | 0.15   | 0.16 | 0.14 | 0.11  | 0.15   | 0.16 | 0.00  | 0.18 | 0.13   | 0.00  | 0.18 | 0.13 |
| Built a website for the business            | 0.18   | 0.18 | 0.19 | 0.43  | 0.18   | 0.19 | 0.06  | 0.19 | 0.18   | 0.84  | 0.19 | 0.18 |
| Built a working prototype or pilot          | 0.09   | 0.09 | 0.08 | 0.07  | 0.09   | 0.10 | 0.07  | 0.11 | 0.07   | 0.00  | 0.11 | 0.07 |
| Surveyed demand for your product or service | 0.12   | 0.11 | 0.12 | 0.26  | 0.12   | 0.10 | 0.92  | 0.11 | 0.12   | 0.38  | 0.11 | 0.12 |
| Collected customer feedback                 | 0.18   | 0.19 | 0.16 | 0.26  | 0.18   | 0.17 | 0.44  | 0.17 | 0.19   | 0.00  | 0.17 | 0.19 |
| Used Mkt feedback to change business idea   | 0.07   | 0.07 | 0.07 | 0.39  | 0.07   | 0.08 | 0.00  | 0.08 | 0.06   | 0.00  | 0.08 | 0.06 |
| <i>Undertook Logistical Steps:</i>          |        |      |      |       |        |      |       |      |        |       |      |      |
| Explored outside financing options          | 0.12   | 0.12 | 0.12 | 0.65  | 0.11   | 0.13 | 0.01  | 0.13 | 0.10   | 0.00  | 0.13 | 0.10 |
| Applied to incubator or b. plan comp.       | 0.03   | 0.03 | 0.05 | 0.01  | 0.03   | 0.05 | 0.00  | 0.04 | 0.02   | 0.00  | 0.04 | 0.02 |
| Registered the business (for a tax ID)      | 0.16   | 0.16 | 0.14 | 0.05  | 0.16   | 0.12 | 0.00  | 0.17 | 0.15   | 0.01  | 0.17 | 0.15 |
| Engaged a lawyer or accountant              | 0.09   | 0.10 | 0.07 | 0.00  | 0.09   | 0.08 | 0.51  | 0.10 | 0.09   | 0.00  | 0.10 | 0.09 |
| Explored patents, copyrights, or trademarks | 0.08   | 0.08 | 0.09 | 0.02  | 0.08   | 0.08 | 0.27  | 0.08 | 0.07   | 0.06  | 0.08 | 0.07 |

Table 5: Talking to Strangers and Friends

This table reports marginal effect estimates from a Probit model estimated on the 15,904 respondents who reported having considered an idea for a new business. The dependent variable in Column (1) is a dummy equaling one if the respondent spoke to no one about their idea. In Column (2) the dependent variable is a dummy equaling one if the respondent spoke to a friend, regardless of whether they possessed relevant expertise. In the final column the dependent variable is a dummy equaling one if the respondent only sought out someone they did not already know. All specifications include controls for age, income and education categories. Standard errors computed using 100 replications of raked weights. Differences in marginal effects computed using the technique described in Mize, Doan and Long (2019).

|              | (1)    | (2)    | (3)      | (4)              | (5)                |
|--------------|--------|--------|----------|------------------|--------------------|
| Talked to:   | No One | Friend | Stranger | No one vs Friend | No one vs Stranger |
| Differences: |        |        |          | (1)-(2)          | (1)-(3)            |
| Black        | 0.027  | -0.038 | 0.020    | 0.065            | 0.007              |
| <i>se</i>    | 0.005  | 0.006  | 0.004    | 0.009            | 0.007              |
| <i>p</i>     | 0.000  | 0.000  | 0.000    | 0.000            | 0.327              |
| Hispanic     | -0.006 | 0.006  | -0.010   | -0.012           | 0.004              |
| <i>se</i>    | 0.006  | 0.006  | 0.006    | 0.012            | 0.010              |
| <i>p</i>     | 0.328  | 0.314  | 0.107    | 0.316            | 0.673              |
| Female       | -0.003 | 0.011  | -0.012   | -0.015           | 0.008              |
| <i>se</i>    | 0.006  | 0.006  | 0.002    | 0.011            | 0.007              |
| <i>p</i>     | 0.533  | 0.044  | 0.000    | 0.178            | 0.213              |

Table 6: Socialization and Business Formation

The dependent variable is a dummy for whether the business was started. Column (1) repeats Column (5) of Table 2. Column (2) restricts the sample to those who spoke to a friend about their idea. Column (3) restricts the sample to those who spoke to no one about their idea. Column (4) restricts the sample to those who sought out the feedback of someone they did not know. All specifications include controls for age, income and education categories. Standard errors computed using 100 replications of raked weights. Differences in marginal effects computed using the technique described in Mize, Doan and Long (2019).

|              | DV=Started |                     |                     |                            | Differences: |         |
|--------------|------------|---------------------|---------------------|----------------------------|--------------|---------|
|              | (1)        | (2)                 | (3)                 | (4)                        | (2)-(3)      | (2)-(4) |
| Black        | -0.029     | -0.022              | -0.034              | 0.002                      | 0.012        | -0.025  |
| <i>se</i>    | 0.006      | 0.004               | 0.007               | 0.008                      | 0.008        | 0.009   |
| <i>p</i>     | 0.000      | 0.000               | 0.000               | 0.758                      | 0.130        | 0.004   |
| Hispanic     | -0.041     | 0.004               | -0.051              | -0.117                     | 0.054        | 0.121   |
| <i>se</i>    | 0.008      | 0.005               | 0.009               | 0.012                      | 0.010        | 0.013   |
| <i>p</i>     | 0.000      | 0.517               | 0.000               | 0.000                      | 0.000        | 0.000   |
| Female       | 0.016      | -0.023              | 0.034               | -0.008                     | -0.057       | -0.014  |
| <i>se</i>    | 0.005      | 0.007               | 0.004               | 0.006                      | 0.008        | 0.009   |
| <i>p</i>     | 0.000      | 0.001               | 0.000               | 0.163                      | 0.000        | 0.122   |
| Sample       | All        | Talked to<br>no one | Talked to<br>friend | Talked to<br>stranger only |              |         |
| Observations | 51,255     | 4,077               | 11,297              | 1,334                      |              |         |

Table 7: Taking Social Steps Leads to Taking Capital Steps

This table reports ordered logit specifications in which the dependent variable is a count of the number of financial steps taken (0, 1, 2). Standard errors are in parenthesis. One, two and three asterisks denote significance at the 10, 5, and 1% level, respectively.

|                         | (1)                 | (2)                 | (3)                 |
|-------------------------|---------------------|---------------------|---------------------|
| Social Steps            | 0.59***<br>(0.018)  |                     | 0.57***<br>(0.026)  |
| Black                   | 0.26***<br>(0.029)  | 0.26***<br>(0.028)  | 0.49***<br>(0.063)  |
| Hispanic                | 0.10***<br>(0.022)  | 0.10***<br>(0.021)  | 0.14***<br>(0.043)  |
| Female                  | -0.31***<br>(0.025) | -0.31***<br>(0.025) | -0.53***<br>(0.054) |
| Black× Social Steps     |                     |                     | -0.17***<br>(0.034) |
| Hispanic× Social Steps  |                     |                     | -0.03<br>(0.021)    |
| Female× Social Steps    |                     |                     | 0.15***<br>(0.034)  |
| Took One Social Step    |                     | 0.34***<br>(0.043)  |                     |
| Took Two Social Steps   |                     | 1.00***<br>(0.045)  |                     |
| Took Three Social Steps |                     | 1.74***<br>(0.055)  |                     |
| Observations            | 15,637              | 15,637              | 15,637              |

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 8: Socialization Changes the Reasons for Quitting

The sample is restricted to those who report that they are no longer pursuing the idea that they considered. Potential responses included: (No Finance) I still think the idea would be profitable, but it would be too difficult to get financing; (Too Hard) I learned more about what would be required to run the business and decided it wouldn't be profitable enough; (Competition) I learned about potential competitors that could make the business unprofitable; (Too Risky) The business could be profitable, but I decided it would be too risky; (Lacked Skills) I still think the idea would be profitable, but I didn't have the skills; (Stuck) I still think the business could be profitable, but I wasn't able to complete the next step; (Don't Know) I'm not sure what the next steps are. All columns include controls for income category, education, and age. Standard errors are in parenthesis. One, two and three asterisks denote significance at the 10, 5, and 1% level, respectively.

|                  | (1)                 | (2)                 | (3)                 | (4)                 | (5)                 | (6)                 | (7)                 |
|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                  | No finance          | Too hard            | Competition         | Lacked Skills       | Too risky           | Stuck               | Don't Know          |
| Social Steps     | 0.05***<br>(0.003)  | -0.02***<br>(0.002) | -0.15***<br>(0.002) | 0.05***<br>(0.003)  | 0.00<br>(0.004)     | -0.06***<br>(0.002) | -0.35***<br>(0.003) |
| Black            | -0.26***<br>(0.023) | -0.26***<br>(0.018) | -0.10***<br>(0.011) | -0.26***<br>(0.023) | -0.16***<br>(0.033) | 0.04<br>(0.024)     | -1.71***<br>(0.025) |
| Black × Steps    | 0.01<br>(0.020)     | 0.00<br>(0.015)     | 0.03***<br>(0.012)  | 0.01<br>(0.020)     | -0.36***<br>(0.018) | -0.10***<br>(0.021) | 0.81***<br>(0.006)  |
| Hispanic         | 0.18***<br>(0.030)  | -0.20***<br>(0.025) | 0.23***<br>(0.028)  | 0.18***<br>(0.030)  | -0.17***<br>(0.039) | -0.38***<br>(0.021) | 0.05<br>(0.035)     |
| Hispanic × Steps | -0.06***<br>(0.018) | -0.08***<br>(0.015) | -0.01<br>(0.017)    | -0.06***<br>(0.018) | -0.14***<br>(0.020) | 0.13***<br>(0.012)  | -0.26***<br>(0.027) |
| Female           | 0.11***<br>(0.019)  | 0.02*<br>(0.010)    | -0.33***<br>(0.008) | 0.11***<br>(0.019)  | 0.03<br>(0.028)     | 0.20***<br>(0.012)  | 0.07***<br>(0.009)  |
| Female × Steps   | -0.05***<br>(0.006) | -0.01***<br>(0.005) | 0.20***<br>(0.004)  | -0.05***<br>(0.006) | -0.02***<br>(0.007) | -0.03***<br>(0.007) | 0.05***<br>(0.007)  |
| Observations     | 7,720               | 7,720               | 7,720               | 7,720               | 7,720               | 7,720               | 7,720               |

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 9: Taking Steps Leads to Business Formation

This table presents probit estimates in which the dependent variable is a dummy variable for whether the business was started. The key independent variables are the count of the number of social steps, the count of the number of financial steps taken, and the interaction between the two. Each column repeats the estimation equation on a different sample of respondents. Column (1) uses the full sample, while columns (2)-(4) present estimations based on Black, Hispanic, and female respondents, respectively. Standard errors are in parenthesis. One, two and three asterisks denote significance at the 10, 5, and 1% level, respectively.

|                       | (1)                 | (2)                 | (3)                 | (4)                 |
|-----------------------|---------------------|---------------------|---------------------|---------------------|
| Social Steps          | 0.13***<br>(0.010)  | 0.05***<br>(0.016)  | 0.08***<br>(0.002)  | 0.18***<br>(0.011)  |
| Capital Steps         | 0.19***<br>(0.023)  | 0.08***<br>(0.027)  | 0.23***<br>(0.008)  | 0.17***<br>(0.028)  |
| Social× Capital Steps | 0.12***<br>(0.014)  | 0.26***<br>(0.017)  | 0.10***<br>(0.001)  | 0.14***<br>(0.018)  |
| Black                 | -0.09***<br>(0.020) |                     | -0.06***<br>(0.014) | -0.16***<br>(0.010) |
| Hispanic              | -0.14***<br>(0.036) | -0.25***<br>(0.005) |                     | -0.24***<br>(0.060) |
| Female                | 0.06***<br>(0.015)  | -0.10***<br>(0.021) | -0.06**<br>(0.031)  |                     |
| Constant              | -0.99***<br>(0.072) | -1.11***<br>(0.071) | -0.94***<br>(0.020) | -1.15***<br>(0.064) |
| Observations          | 15,637              | 1,986               | 1,371               | 7,372               |
| Sample                | All                 | Black               | Hispanic            | Female              |

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 10: Search Costs and Socialization

This table reports Ordered Logit specifications in which the dependent variable is the count of the number of Social Steps taken by the respondent. The key dependent variable, "Relevant Local Network," is the percentage of employer firms in the respondent's commuting zone that are operated by a member of the relevant minority group (Black, Hispanic, female).

|                        | (1)                 | (2)                 | (3)                 | (4)                 |
|------------------------|---------------------|---------------------|---------------------|---------------------|
| Black                  | -0.12***<br>(0.030) |                     | -0.07***<br>(0.016) | -0.30***<br>(0.040) |
| Hispanic               | -0.04<br>(0.033)    | -0.08***<br>(0.015) |                     | -0.12***<br>(0.017) |
| Female                 | 0.01<br>(0.020)     | -0.55***<br>(0.047) | -0.30***<br>(0.014) |                     |
| Relevant Local Network |                     | 1.81***<br>(0.394)  | 0.66***<br>(0.139)  | -0.89*<br>(0.506)   |
| Observations           | 15,637              | 1,975               | 1,360               | 7,287               |
| Sample                 | All                 | Black               | Hispanic            | Female              |

Table 11: Socialization is Stronger Where Networks are Deeper

The dependent variable is a dummy for whether the business was started. The key independent variable, Relevant Local Network, measures the strength of local business networks. It is computed as the proportion of businesses in the respondents commuting zone that are founded by a member of the specific minority group. All specifications include controls for age, income and education categories. Standard errors computed using 100 replications of raked weights. Differences in marginal effects computed using the technique described in Mize, Doan and Long (2019). One, two and three asterisks denote significance at the 10, 5, and 1% level, respectively.

|                                 | (1)                 | (2)                 | (3)                 | (4)                 |
|---------------------------------|---------------------|---------------------|---------------------|---------------------|
| Social                          | 0.06**<br>(0.029)   | 0.03***<br>(0.011)  | 0.10**<br>(0.038)   | 0.23***<br>(0.034)  |
| Relevant Local Network          | -1.39***<br>(0.347) | 0.27<br>(0.270)     | -0.49<br>(0.336)    | -1.76***<br>(0.502) |
| Social × Relevant Local Network | 1.00***<br>(0.163)  | 0.97***<br>(0.092)  | 0.45***<br>(0.162)  | 0.04<br>(0.192)     |
| Black                           | -0.14***<br>(0.028) |                     | -0.07***<br>(0.016) | -0.13***<br>(0.028) |
| Hispanic                        | -0.18***<br>(0.023) | -0.26***<br>(0.018) |                     | -0.20***<br>(0.013) |
| Female                          | -0.01<br>(0.027)    | -0.26***<br>(0.020) | -0.07***<br>(0.018) |                     |
| Constant                        | -0.81***<br>(0.049) | -1.02***<br>(0.022) | -0.79***<br>(0.048) | -0.83***<br>(0.083) |
| Observations                    | 8,900               | 1,975               | 1,360               | 7,287               |
| Sample                          | All                 | Black               | Hispanic            | Female              |

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## A Survey Overview

This appendix provides a detailed look at the survey instrument and the summary statistics of the respondent pool.

### A.1 Protocol

The survey was administered using the protocol described in Bennett and Chatterji (2023), but on a different sample. The sample was taken from residents of ten MSAs selected as matched pairs with similar demographics, but at opposite poles on measures of entrepreneurship from the Kauffman Firm Survey. The survey was open to respondents 23 years and older living in the United States.<sup>6</sup> The age threshold was selected so that the five-year retrospective window would not include high school.

The survey was administered by Qualtrics, a survey company based in Provo, Utah. In partnership with the authors, Qualtrics distributed the survey through partnerships with up to ten leading market research companies, which maintain Internet panels of respondents.

The process is as follows. The survey designers requested a set number of responses from Qualtrics with quotas stratified by MSA-by-gender and age to match the U.S. population.

Qualtrics then sources these responses from their partner panels.<sup>7</sup> In practice, Qualtrics' partner organizations send direct links to potential respondents. When those respondents click the link, Qualtrics determines whether their demographics, collected and verified across previous surveys, fall within a stratum where the quota is not yet filled. If they fall within a full stratum, they are directed to another of Qualtrics' clients' surveys.<sup>8</sup>

Of the 29,481 prospective subjects who saw the survey, 99.94% completed the survey. Of those, 8,499 were disqualified based on reporting demographics different from what was reported in previous surveys for that respondent account, moving through too quickly, or failing the attention check. That left 20,846 responses, constituting 70.71% of prospective subjects being included.

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.

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<sup>6</sup>We did not ask about citizenship or immigration status to prevent attrition.

<sup>7</sup>Qualtrics's partners are organizations that maintain marketing panels used frequently by businesses as well as researchers (e.g., Bordalo et al., 2020; Alsan and Eichmeyer, 2021).

<sup>8</sup>Survey respondents receive a 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, by removing those whose responses to demographic questions inconsistent survey-to-survey from the panel or they fail attention checks or move through surveys too quickly.

## A.2 Generating a representative sample

The sample, as described so far, is what the survey literature refers to as a “non-probability sample” (NPS), but we then use current methods from the survey literature to rebalance the sample to match population demographics.

These methods have analogues in tools used in observational studies. The approach we use, called iterative proportional fitting or raking, essentially uses reweighting to make the sample population match the observables of the underlying population (Deville, Särndal and Sautory, 1993; Kolenikov, 2014).

Post-weighting was done through the raking algorithm proposed by Kolenikov (2014) based on three distinct sets of third-party data.

We collected data on distributions of race-by-income across the U.S. from the Current Population Survey (CPS). From the American Community Survey (ACS) via IPUMS (Ruggles et al., 2015). The combination of these two demographic distributions allow us to re-weight the observations to match the sample to that of the U.S. population.

To address the possibility that the proportion of respondents out of the labor force might be higher than the proportion in the population, we also rebalanced survey responses using 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”, “Homemaker.”

Combined, the re-weighting functions to force the demographic distributions of the respondent sample match the population. This improves our estimate, not only of summary statistics describing the population of prospective entrepreneurs, but also of the distribution of steps they took toward entrepreneurship. Those results combined allow us to shed light on the so-far-undescribed factors associated with quitting pursuit of a venture.

## B Survey Instrument

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](mailto: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 |
|--|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
|  |              |       |       |       |       |       |       |       |       |             |

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 |                          |                        |                           |                         |                           |                        |                            |
| The average home price                     |                          |                        |                           |                         |                           |                        |                            |

|                              |  |  |  |  |  |  |  |
|------------------------------|--|--|--|--|--|--|--|
| nationwide                   |  |  |  |  |  |  |  |
| The price of a gallon of gas |  |  |  |  |  |  |  |

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.

## C Summary Statistics

Table 12: Respondent Demographics

|   | Frequency     |
|---|---------------|
| <b>Age Grp</b>                              |               |
| 23 years - 34 years                         | <b>11,161</b> |
| 35 years - 44 years                         | <b>10,336</b> |
| 45 years - 54 years                         | <b>11,207</b> |
| 55 years - 64 years                         | <b>8,741</b>  |
| 65+ years                                   | <b>9,810</b>  |
| <b>Total</b>                                | <b>51,255</b> |
|   |               |
|   | Frequency     |
| <b>Income Grp</b>                           |               |
| Less than \$10,000                          | <b>2,357</b>  |
| \$10,000 to \$14,999                        | <b>2,031</b>  |
| \$15,000 to \$24,999                        | <b>4,408</b>  |
| \$25,000 to \$34,999                        | <b>5,779</b>  |
| \$35,000 to \$49,999                        | <b>7,641</b>  |
| \$50,000 to \$74,999                        | <b>11,013</b> |
| \$75,000 to \$99,999                        | <b>7,642</b>  |
| \$100,000 to \$149,999                      | <b>6,699</b>  |
| \$150,000 to \$199,999                      | <b>2,149</b>  |
| \$200,000 or more                           | <b>1,536</b>  |
| <b>Total</b>                                | <b>51,255</b> |
|   |               |
|   | Frequency     |
| <b>education</b>                            |               |
| Less than high school graduate              | <b>795</b>    |
| High school graduate (includes equivalency) | <b>8,629</b>  |
| Some college or associate's degree          | <b>18,190</b> |
| Bachelor's degree                           | <b>15,065</b> |
| Graduate or professional degree             | <b>8,576</b>  |
| <b>Total</b>                                | <b>51,255</b> |