The Psychology of Entrepreneurial Resilience: How Tech Entrepreneurs Responded to a Year of Crisis

Cameron Keating, BSBA 2021
Advisor: Dr. Timothy Ott

Abstract
I conducted this study to compare the psychological profiles—composed of general self-efficacy, internal, chance, and other locus of control, and grit—of U.S. technology entrepreneurs to their expected and past entrepreneurial performance and how they responded to the impact of the global pandemic. I analyzed 84 survey responses and conducted two interviews, using an ordered multinomial logistic regression and principal components analysis to analyze the quantitative survey data and inductive coding techniques to run a content analysis on the survey’s qualitative data. Based on the model, I found differences between the three hypothetical entrepreneurial profiles in self-reported performance and between the three psychological groups on their responses to 2020’s adversity. I also discuss common themes amongst the entrepreneurs on how they dealt with said adversity, how my work contributes to current literature, and opportunities for future research to expand on my findings.

Introduction
99.9% of all businesses in the U.S. are small businesses, and small businesses generate double the number of jobs annually as large ones do (SBAA Office of Advocacy, 2019). Some research in entrepreneurial psychology has been conducted on the five traits I studied; namely general self-efficacy, internal locus of control, chance locus of control, others locus of control, and grit. However, literature explored these traits’ relationships to aspects of entrepreneurship—such as opportunity and firm performance—individually rather than as a configuration of the five. Additionally, past literature has looked at the psychology of entrepreneurs across industries rather than at one specific industry, which could be generalizable but doesn’t allow researchers to determine which traits may be more important for entrepreneurial success in specific industries. I studied tech entrepreneurship specifically because of this industry’s role in keeping the U.S. at the forefront of worldwide innovation. In fact, our country represents over a third of the global tech market (T06 Must-know Startup Statistics for 2021, 2020), showing that we play an integral role in the worldwide tech market, and tech plays an integral role in our society.

Next, other researchers have only evaluated the relationship between entrepreneurs’ psychology and their past firm performance, whereas I chose to look at both past and expected performance to understand better the relationship between these metrics and how they are correlated with founders’ psychological configurations.

Lastly, past research has studied how founders’ psychological traits are related to their firm’s performance in times of normal risk and adversity. However, I studied these tech entrepreneurs in a time of extreme adversity; the lockdowns spurred by the Covid-19 pandemic caused an economic recession that forced many U.S. small businesses to go out of business, close, not to mention the health threats and social isolation.

Research question: For U.S. tech entrepreneurs, how do configurations of psychological traits relate to firm performance and shape the entrepreneurs’ responses to crisis?

Materials
To collect the quantitative and qualitative data for my study, I administered a survey to 84 technology entrepreneurs of small businesses ($7.5m in annual revenue) in the U.S. and conducted two interviews with CEOs of large technology companies who were formerly entrepreneurs of smaller tech firms.

I use Qualtrics to administer my survey to the appropriate population. The survey consisted of several screening questions to ensure the respondents fit the criteria of my study, three psychological scales on 5-point Likert scales that measured the five traits of interest, four 5-point Likert-scale performance questions in which the entrepreneurs self-reported their firms’ past and expected performance in return on assets and sales growth, and three open-ended questions assessing the entrepreneurs’ responses to the adverse events of 2020.

The two interviews lasted roughly 45 minutes each and were conducted by phone. I asked each entrepreneur six questions relating to the psychological traits of interest and how the entrepreneurs viewed these traits in relation to their professional success over the course of their careers.

Results
Concerning the three psychological profiles of hypothetical U.S. tech entrepreneurs, two traits increased between the Extreme Low to Medium to High profiles: general self-efficacy, internal locus of control, and grit, and therefore were strongly correlated with firm performance. The other two traits followed the opposite trend. Additionally, effectiveness of performance exceeded past performance and was correlated for all three profiles, perhaps showing the relevancy of optimism in entrepreneurship.

Next, five major themes emerged as highlighting common experiences amongst the entrepreneurs during the adverse times of 2020. Here, creating problem-solving appeared as a trait like optimism that may serve as a ‘prequel’ to entrepreneurship.

Overall, the entrepreneurs were able to maintain their grit despite experiencing feelings of self-doubt and loss of control due to the events of 2020. When comparing the three psychological groups, the High group not only reported greater rates of behavior related to grit (i.e., overcoming setbacks, increasing their work ethic, increasing their passion in response to this crisis), but they also reported experiencing greater rates of company success than the other two groups. However, the Low group, both performed much more poorly than the High group. The Medium group often even doing worse than the Low group. These findings of a ‘nonlinear’ ability to cope with adversity support the notion that being Medium in psychological strength was not enough the entrepreneurs, on average, had to fall into the High group to experience the personal and company-wide benefits of these psychological traits.

As for the interviews, the two CEOs I spoke with agreed that grit was the most important of the traits in predicting tech entrepreneurs’ firm performance and founders’ abilities to overcome adverse situations. They also claimed that self-efficacy was the least important of the traits because (a) self-doubt is inevitable for tech entrepreneurs due to the speed at which they must make decisions, and (b) many founders have too much self-efficacy, especially with regard to their collaboration and leadership abilities. Lastly, they agreed that in times of crisis when things are made aware of the many things not within our control, we must focus on what is within our control in order to persevere through adversity.

Conclusion
As for the three psychological profiles of hypothetical U.S. tech entrepreneurs, the greater a profile was in the first three traits (i.e., grit, general self-efficacy, and internal locus of control) and the lower it was in the other two traits (i.e., others locus of control and chance locus of control), the higher its self-reported past and expected performance.

Additionally, the traits of creative problem-solving and optimism surfaced as potential ‘prerequisite’ traits for entrepreneurship. Independent of the five traits I originally chose to study, while grit may have been the most important trait for entrepreneurial success in adverse times.

Lastly, my research provides evidence for the High psychological group as more psychologically equipped to deal with adversity, as they responded more positively to the crises of 2020. In other words, although each of the three groups (i.e., Low, Medium, High) reported losing business and experiencing other setbacks, in addition to having feelings of loss of personal control and self-doubt, entrepreneurs in the High group consistently responded to this adversity best and perhaps, as a result, saw more company success and were able to overcome setbacks more effectively than the other two groups. These findings are particularly useful for three groups:

1. Aspiring tech entrepreneurs
2. Current tech entrepreneurs
3. Angel and VC investors wanting to invest in U.S. tech entrepreneurs

Investors can adjust their due diligence process to glean more insights into founders’ strengths in these traits.

Recommendations
Future research can expand upon my findings in several ways:

1. Replicate study with a larger sample size to determine if precision errors on performance metrics hold
2. Gather observational (not self-reported) data to eliminate the potential for bias
3. Gather a random sample to eliminate the potential for volunteer bias
4. Aim to establish a causal relationship between the entrepreneurs’ psychological configurations and their (a) firm performance, and (b) responses to extreme adversity
5. Study the differences in psychological makeup between current and former entrepreneurs (who closed their businesses), rather than only studying entrepreneurs who experienced varying levels of performance but who all kept their businesses open through 2020.

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