Investigating the Educational Background of
Successful Startup Founders in Egypt: An Exploratory Study

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Abstract

Purpose: This exploratory study investigates the educational background of successful startup founders in Egypt. Building upon the human capital theory, the researcher predicts that factors such as university education and entrepreneurial experience will increase the founders' prospects of success.

Design/ Methodology/ Approach: The researcher surveyed 51 successful startup founders from Egypt. The founders were asked to participate in a self-reported online questionnaire. Descriptive statistics were calculated to describe the sample. Next, Exploratory Factor Analysis (EFA) was performed to discover the underlying factors of the study variables, and multiple regression analysis was employed to investigate the direction and significance of the studied relationships.

Findings: The study found that half of the surveyed sample came from engineering backgrounds. Surprisingly, the findings revealed that the founders who viewed university education as highly valuable in determining the success of startups had less successful startups (B= -0.295, p-value= 0.075). In contrast, the founders who had higher entrepreneurial experiences and viewed this as highly valuable had more successful startups (B= 0.266, p-value= 0.086).

Originality/ Value: This study has significant implications for aspiring founders, support organizations, universities, and policymakers in Egypt. The findings emphasize the crucial role of entrepreneurial experience in shaping startup success in Egypt. Although this study does not underestimate the role of university education, it calls for a more balanced approach that integrates knowledge with practical experience.

Keywords: *Human capital, higher education, entrepreneurial education, previous experience, critical success factors.*

Introduction

It is commonly assumed that highly educated and experienced entrepreneurs, residing in countries with better entrepreneurial ecosystems, have higher chances of success (Capelleras et al., 2019). Therefore, the Egyptian government emphasized the need for accessible and high-quality entrepreneurship education in Egypt Vision 2030, to tackle issues such as youth unemployment and slow economic growth (Yousef & Ahmed, 2024). Egypt is home to some of the most prominent and successful startups in the Middle East and North Africa. According to Entlaq Holding (2024), the number of Egyptian startups was estimated at 2,118 startups in the first half of 2024; the sector attracted more than $88.69 million in investments in the first half of the year (across 39 different deals). The technology startup sector in Cairo is particularly thriving. For example, MNT-Halan (a Cairo-based fintech startup) was the first Egyptian-based startup to join the Crunchbase Unicorn

Board; the board consist of the most valued private startups in the business world. Despite the impressive growth in the number of startups in Egypt, from the year 2015 to the year 2023, only MNT-Halan made it to the Crunchbase Unicorn Board (Teare, 2023).

Study Problem

The current discussion in entrepreneurship literature revolves around whether those who receive entrepreneurship education have greater odds of creating successful ventures than those who do not (Gera et al., 2024). Nevertheless, Hattab (2023) pointed to the lack of empirical research on the impact of entrepreneurship education in Egypt, which makes it harder to determine its actual effectiveness in stimulating sustainable growth. Although, entrepreneurship education is regarded as critical for Egypt's sustainable growth, entrepreneurship research continues to be limited in Egypt. Sorour et al. (2021) stated that entrepreneurship studies in developing countries, like Egypt, are often investigated through macro-level surveys and deductive designs that focus on how culture, politics, or economic institutions discourage or empower entrepreneurs, which limits the exploration of micro-level factors.

Study Aim and Objectives

The study aims to contribute to the ongoing debate in entrepreneurship research and address the literature gaps in Egypt. Thus, the researcher thought to investigate the educational background of Egyptian startup founders to determine the impact of specific human capital factors, including university education and entrepreneurial experience, on startup success. The study adopts an exploratory research design that uses purposive sampling to offer a unique perspective on the individual experiences of Egyptian founders. The study aims to offer practical implications for entrepreneurs, educational institutions, and policymakers in Egypt. Furthermore, the findings could inform future interventions to advance entrepreneurship education in Egypt.

Literature Review

Theoretical Foundation: The Human Capital Theory

The Human capital theory is frequently cited in entrepreneurship research (Hahn et al., 2017; Khuong & Van, 2022; Qin & Kong, 2021; Unger et al., 2011). Typically, individuals acquire professional capital through formal schooling, and entrepreneurial capital through work and personal experiences (Iyigun & Owen, 1999). Therefore, the researcher expects that entrepreneurs who founded successful startups would have substantial professional and entrepreneurial capitals.

The Role of University Education

People are not born with entrepreneurial knowledge and skills; rather, they acquire them through the entrepreneurial learning process (Hahn et al., 2017). This learning process happens in universities, among other places. To teach entrepreneurship, universities use different pedagogical designs, which include academic curriculums that range from business planning to venture creation, as well as extracurricular activities such as field trips or guest speakers. Interestingly, entrepreneurship education was found to be more effective in enhancing the individual's entrepreneurial intention than business education (Bae et al., 2014).

Studies like Zhang et al. (2014), Agwu et al. (2017), and Hunady et al. (2018) suggest that the effectiveness of entrepreneurship education and the perceived role of universities in entrepreneurship may differ from one country to another. For instance, Zhang et al. (2014) found that entrepreneurship education had a significant positive impact on Chinese student's entrepreneurial intention in both technological and non-technological universities. Additionally, they found that male students and students from technological backgrounds particularly had higher entrepreneurial intentions.

Moreover, Hunady et al. (2018) collected data from 40 countries, inside and outside the European Union. They found that students who had university-level entrepreneurship courses were more likely to start new companies. In addition, university graduates from specific countries outside the EU, such as India, Portugal, and Brazil, highly valued their universities for preparing them to effectively start and run their businesses. On the other hand, Agwu et al. (2017) investigated the effectiveness of entrepreneurship education in Nigeria, using semi-structured interviews with 15 Nigerian university students who successfully created startups. The participants found entrepreneurship education to be very important for their success, as it motivated and stimulated their entrepreneurial activities. However, the students reported that the current state of entrepreneurship education in Nigerian universities might be heavily reliant on theoretical business knowledge. Thus, it may fail to provide the necessary practical experience required to help young individuals start and manage their own ventures.

Furthermore, Ratzinger et al. (2018) claimed that the type of university education that the founders acquire could impact their startup outcomes. They investigated the different impacts of technical, business, and general education (non-technical and non-business) on the probability of securing startup funding using a sample of 4,953 digital startup founders. The findings showed that having a co-founder with technical education increased the probability of being funded by 7% while having a co-founder with a general education increased the probability to 4%, and having a co-founder with a business background only increased this likelihood to 3%. This suggested that having a founding team with a diverse educational background could enhance the prospects for success.

The Role of Prior Entrepreneurial Exposure and Experience

Krueger (1993) refers to entrepreneurial exposure as the breadth of entrepreneurial experience, on the other hand, Peng et al. (2020) refer to entrepreneurial experience as the depth of entrepreneurial experience. The breadth of exposure to entrepreneurship includes having a parent/guardian who started a business, knowing someone who started a business, working for a small or new company, or previously launching a small or new company. This exposure helps the founders understand the market dynamics and effectively identify business opportunities. In contrast, the depth of experience which includes the knowledge, skills, and ideas that the individual picks up from previous work experiences provides the technical and managerial skills needed to create value and navigate the challenge of launching a new business.

Previous research shows conflicting results on the impact of prior entrepreneurial exposure and experience on entrepreneurial intentions and outcomes. For instance, in South Africa, Malebana and Mothibi (2023) found that personally knowing a local successful entrepreneur and having a prior startup experience could significantly increase the students' entrepreneurial intention and enhance their attitudes toward entrepreneurship. Likewise, Bignotti and le Roux (2020) found that the experiences gained from prior startup experience or other work experiences have a positive influence on entrepreneurial intentions in South Africa. Additionally, Cieślik and van Stel (2017) found that Polish students who ran a business or had entrepreneurial parents were more likely to be business owners after graduation.

However, Aloulou's (2017) study in Saudi Arabia revealed that the relationship between prior entrepreneurship experience and entrepreneurial intention among university students was not significant. Zhang et al. (2014) argued that exposure to negative entrepreneurship could lower the entrepreneurial intentions of young students, for instance, the researcher found that the failure rate of entrepreneurial activities among Chinese students is almost 98%, which highly discourages them from pursuing self-employment after graduation.

Capelleras et al. (2019) argued that introducing students to successful entrepreneurial role models could reduce the student's fear of failure. Additionally, Khuong and Van (2022) claimed that having a strong entrepreneurial ecosystem provides entrepreneurs with access to experienced mentors, professional

services, and networking opportunities, which could enhance the effects of entrepreneurial experience and exposure. Furthermore, Peng et al. (2020) stated that accumulating and integrating different types of experiences is critical for the process of entrepreneurial learning. However, Cieślik and van Stel (2017) argue that universities sometimes forget that some students have already accumulated basic knowledge and entrepreneurial experience before they enter the class. As a result, the traditional education programs may be less valuable for the experienced students.

Startup Success

Startup success is a subjective concept; thus, it could be defined in different terms depending on the context. For example, Baskoro et al. (2022) defined startup success as the ability to get funding from investors. Although Baskoro et al.'s definition could be suitable for startups in their early development stages, this definition does not differentiate between startups in different funding stages. Spiegel et al. (2016) definition considered startups successful when they reached a series A funding stage. On the other hand, Camelo Martinez (2019) referred to specific success criteria, including receiving more than one million Euros from investors, achieving at least 20% revenue growth over three years, and employing more than 10 full-time employees.

The literature cites several factors as determinants of startup success. For instance, Díaz-Santamaría and Bulchand-Gidumal (2021) cited startup size, startup age, good financial health, and obtaining initial investment and equity capital as firm-level success factors, while financial constraints, access to sources of funding, support from public administrations, and indirect entrepreneurship experience were cited as environment-level success factors. In addition, they cited prior work experience, prior startups, and prior managerial and commercial experience as founder-level success factors. On the other hand, Ziakis et al. (2022) cited entrepreneurial exposure, entrepreneurship education, business education, general education, higher education, mentorship, and social networking as entrepreneurial success factors.

Moreover, Staniewski (2016) also referred to organization-level factors, such as company age and size, as well as founder-level factors, such as the founder's age, educational background, managerial experience, previous business experience, industry experience, social skills, and entrepreneurial family background as key determinants of success. Thereby, startup success is viewed as a multi-dimensional variable that hinges on organizational, environmental, and individual-level factors. In the context of this study, the researcher defined startup success based on organization-level factors such as startup age and size, obtaining external financing, and having an overall good financial performance.

Methodology

The researcher adopted an exploratory design to investigate the impact of educational background on startup success in the context of Egypt. Researchers employ exploratory research to investigate undefined phenomena (Olawale et al., 2023). Exploratory studies can lead to better research questions, refined hypotheses, and discover unexpected relationships (Jebb et al., 2017). Based on the literature review, the researcher developed an exploratory question: What is the impact of different educational backgrounds on startup success in Egypt?

Measures

To answer the research question, the researcher developed a quantitative survey. The online questionnaire was self-administrated. The first section consisted of nine demographic variables, including age, gender, and education level. The second section consisted of ten items that covered the study variables. The perceived value of university education was measured using two items inspired by (Ziakis et al., 2022) and (Staniewski, 2016). The researcher employed a 5-point Likert scale to measure the perception of the founders regarding the value of their universities and chosen specialization to their entrepreneurial journey. The scale ranged from (1 not valuable at all) to (5 extremely valuable). In terms of the

founders' entrepreneurial experience, the researcher developed two items that were also inspired by (Ziakis et al., 2022) and (Staniewski, 2016). The participants were asked to rate their prior experience and exposure on a scale ranging from (1no prior experience) to (5 very high experience). The dependent variable, startup success, was measured using six organizational-level factors that were inspired by (Díaz-Santamaría & Bulchand-Gidumal, 2021). The founders self-reported their startup characteristics.

The researcher employed a pilot survey to evaluate the survey before circulation. Four founders were asked to take the survey to check for clarity and improve response rate. Based on their feedback, items in startup success were modified. The items for financial performance and growth rate were changed into categorical scales to increase the response rate, as the participants in the pilot test skipped these items and stated that they did not prefer to disclose sensitive information.

Sample and Data Collection

The researcher employed a purposive sampling technique to draw a non-random sample. He selected 51 participants out of a group of 100 entrepreneurs who attended the "Alumni Retreat" that JRNY hosted in October 2023 in Nuweibaa (a small coastal town in the Sinai Peninsula). JRNY, which is also known as El-Rehla, is a non-profit organization that is focused on building social networks for entrepreneurs in Egypt; thus, it offered a great pool of participants for this study.

Data Analysis Techniques

The researcher utilized IBM SPSS Software for data analysis. First, the data were cleaned, which resulted in the removal of 10 incomplete surveys and the acceptance of only 41 surveys for further analysis. Next, Cronbach's alpha was employed to test for the reliability of the questionnaire items. To map the educational background of the founders and the characteristics of their startups, the researcher used descriptive statistics techniques. Moreover, Exploratory Factor Analysis (EFA) was employed to discover the underlying factors of the study variables, while multiple regression analysis was employed to investigate the strength and nature of the relationships between the variables.

Findings and Discussions

Reliability

(Table 1) shows that the study variables have satisfactory internal consistency. Mostly, a Cronbach's alpha of .70 and above is satisfactory; however, lower scores could be considered satisfactory in exploratory research (Schmitt, 1996; Taber, 2018).

Table 1. Cronbach's Alpha Result

Variable	No. of Items	Cronbach's Alpha
Perceived Value of University Education	2	.720
Level of Entrepreneurial Experience	2	.606
Startup Success	6	.638

Note. Values above 0.60 are accepted.

Descriptive Statistics

As shown in (Table 2), the sample predominantly consisted of young male founders. For instance, 83% of the sample were males, and 63% were under the age of 35 years old. The study found a significant presence of Egyptian educational institutions. For instance, 68% of the founders obtained the Thanwya Amma diploma (public school system), and 29% attended Cairo University (public university) for their undergraduate degree. The unpredictable outcome in (Table 2) was that almost half of the surveyed founders (49%) came from an engineering background. The founders also had impressive academic credentials, while 37% of them had master's degrees, only 7% of them had doctoral-level degrees. This implies that a significant number of the sample had advanced and technical knowledge.

Interestingly, 51% of the founders did not receive formal entrepreneurship education. However, the majority participated in extracurricular activities during university. This implies that practical experience

was highly valued among the founders surveyed. Lastly, (Table 2) shows that 63% of the founders did not come from entrepreneurial families, suggesting that these founders might be independent and self-motivated.

(Table 3) shows that 31.7% of the startups were in their early stage of development (less than three years old). Almost 83% of the startups had less than 50 employees indicating their small size; yet 34% of the startups managed to raise external funds between EGP1 million and EGP100 million. As seen in (Table 3), 46% of the founders reported that their startups were profitable, while 63% reported steady growth rates. Although 29% of the founders preferred not to report on their startup annual revenue, 34% reported annual revenues between EGP 1 million to 10 million in 2023.

Table 3. Startups' Descriptive Statistics

	Variables	Frequency	(%)
Startup Age	Less than one year old	5	12.2
	1-2 years old	8	19.5
	3-5 years old	11	26.8
	6-10 years old	12	29.3
	10 years old or older	5	12.2
Startup Size	1-9 employees (including founder/s)	18	43.9
	10-49 employees	16	39.0
	50-249 employees	6	14.6
	250 employees or more	1	2.4
External Funds Raised	Prefer not to say	2	4.9
	No external funding	16	39.0
	Less than EGP 100,000	2	4.9
	EGP 100,000 - 1 million	5	12.2
	EGP 1 million −10 million	8	19.5
	EGP 10 million −100 million	6	14.6
	More than EGP 100 million	2	4.9
Financial Performance	Pre-profit	10	24.4
	Financially unstable	3	7.3
	Breaking even	9	22.0
	Profitable	19	46.3
Growth Rate	Slow or minimal growth	7	17.1
	Steady growth	26	63.4
	Rapid growth	7	17.1
	Hypergrowth	1	2.4
Annual Revenue (Year 2023)	EGP 1 million- 10 million	14	34.1
	EGP 10- 50 million	4	9.8
	EGP 50- 100 million	3	7.3
	Over EGP 100 million	1	2.4
	Pre-revenue	7	17.1
	Prefer not to say	12	29.3

Table 2. The Founders' Descriptive Statistics

	Variables	Frequency	(%)
Gender	Male	34	82.9
	Female	7	17.1
Age	Under 24 years old	2	4.9
	25-34 years old	24	58.5
	35-44 years old	13	31.7
	Over 45 years old	2	4.9
Type of High School Diploma	Thanwya Amma	28	68.3
	American Diploma	2	4.9
	IGCSE Diploma	8	19.5
	IB Diploma	2	4.9
	Azhar	1	2.4
Highest Level of Education	Bachelor's Degree	23	56.1
	Master's Degree	15	36.6
	Doctoral Degree	3	7.3
University Attended for Bachelor's Degree	Cairo University	12	29.3
	Ain Shams University	4	9.8
	Helwan University	4	9.8
	The German University in Cairo (GUC)	4	9.8
	Arab Academy for Science, Technology, and Maritime Transport (AASTMT)	3	7.3
	The American University in Cairo (AUC)	2	4.9
	The British University in Egypt (BUE)	2	4.9
	Alexandria University	2	4.9
	Others	8	19.3
Field of Study	Engineering	20	48.8
	Computer Science	4	9.8
	Pharmacy	3	7.3
	Medicine	1	2.4
	Law	3	7.3
	Business Administration	2	4.9
	Commerce	1	2.4
	Arts/Languages	2	4.9
	Fine Arts and Design	2	4.9
	Economics	1	2.4
	Tourism and Hotel Management	1	2.4
	Logistics and International Transport	1	2.4
Entrepreneurship Education	Yes, I received formal education	20	48.78
	No, I did not receive formal education	21	51.22
Extracurricular Activities	Yes, I Participated	39	92.68
	No, I did not Participate	3	7.32
Family Background	No Entrepreneurial Parents/Guardians	26	63.4
	Yes, I Had Entrepreneurial Parents/ Guardians	15	36.6

Exploratory Factor Analysis (EFA)

As seen in (Table 4), the data is suitable for factor analysis. The Kaiser-Meyer-Olkin (KMO) had a minimum value of 0.5, indicating sampling adequacy (Field, 2009). The Bartlett's test is significant as $p < 0.05$ (Shrestha, 2021). Additionally, (Table 4) shows that the total variance explained for the perceived value of university education and the level of entrepreneurial experience

were 78% and 72%, respectively. However, the total variance explained for startup success was 38%. This low percentage indicates that the factors extracted do not fully explain the complex and multi-dimensional nature of startup success.

Multiple Linear Regression

Contrary to expectations, (Table 5) shows that there is a positive relationship between the founder's entrepreneurial experience and startup success (B= 0.266, p-value= 0.086); however, the founder's perceived value of university education showed a negative relationship with start-up success (B= -0.295, p-value= 0.075). Moreover, (Table 5) indicates that multicollinearity is low in the regression model, as all variance inflation factor (VIF) values are close to 1.

Table 4. EFA Suitability and Total Variance Explained

Variables	KMO	Bartlett Test of Sphericity	Total Variance Explained (Cumulative %)
Perceived Value of University Education	.500	.000	78.292
Level of Entrepreneurial Experience	.500	.004	72.039
Startup Success	.536	.000	37.781

Note. The total variance explained extraction method was the Principal Component Analysis (PCA) method.

Table 5. Multiple Linear Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.680	.570		1.194	.241		
	Perceived Value of University Education	-.295	.161	-.287	-1.835	.075	.974	1.027
	Level of Entrepreneurial Experience	.266	.151	.273	1.765	.086	.996	1.004
	Founder's Age	-.284	.234	-.190	-1.211	.234	.973	1.027

Note. Dependent Variable: Startup Success.

Similar to Zhang et al.'s (2014) findings in China, the results showed that entrepreneurial activities in Egypt were higher among males and individuals from technical backgrounds. However, contrary to Hunady et al. (2018) results in India, Portugal, and Brazil, the participants in Egypt believed that university education played a less significant role in their startup success. Surprisingly, Egyptian founders who had higher entrepreneurial experience created more successful startups. This implies that founders with entrepreneurial experience may have more access to financial resources and entrepreneurial networks, which could help them navigate the complex startup environment. In comparison, founders who invest more in formal degrees miss the chance to develop practical skills and build social networks that could support them in their early stages. Our findings in Egypt align with previous research in the African context. For instance, Agwu et al. (2017) recommended that practical activities should be prioritized during formal education in Nigeria, while Bignotti and le Roux (2020) and Malebana and Mothibi (2023) emphasised the significant role of entrepreneurial experience and exposure, particularly in South Africa.

Implications

This exploratory study has several implications for aspiring founders, support organizations, universities, and policymakers in Egypt. The research findings indicate that entrepreneurs should attach greater importance to building entrepreneurial experience and being more involved in the Egyptian entrepreneurial ecosystem. Correspondingly, entrepreneurial support organizations should prioritize founders with more practical experience over those with more impressive academic degrees. Moreover, Egyptian universities should pay more attention to the significant role of extracurricular activities to better prepare young graduates for entrepreneurial success.

Study Recommendations

The role of universities should now be limited to providing theoretical and general business knowledge. Universities should enhance the student learning experience by offering experiential learning activities,

mentoring, and networking opportunities for students. Offering a comprehensive learning experience for young aspiring entrepreneurs could create more skilled founders who can navigate the challenging startup landscape. Moreover, entrepreneurship courses should be mandatory for engineering students because they show higher startup activities compared to their colleagues from business and general backgrounds.

Study Limitations and Future Research

The study had several limitations. First, the implications are limited to the Egyptian context, as the study relied on a small (purposive) sample of mostly male founders from Egypt. Second, the study relied on quantitative data, which provided limited explanations for the founders' perspective on the role of university education and the scope of their entrepreneurial experiences. Third, the items used to measure startup success did not fully explain the variable (Table 4). The generalizability of the findings could be enhanced by employing a larger and more balanced sample that includes both male and female founders. Moreover, employing qualitative interviews in subsequent research could increase the validity of the findings and provide a better understanding of the founders' perspectives and lived experiences. In-depth interviews could also help the researcher define a nuanced understanding of startup success from the founders' perspective.

Despite its limitations, this study opens the door for follow-up investigations. Subsequent research should investigate why some of the founders valued their university education less and why the more experienced founders had the more successful startups. This could be attributed to many factors, for instance, the theoretical knowledge of the founders may have failed to measure up to the volatile business environment in Egypt. Furthermore, future research could delve into the different educational and entrepreneurial experiences of founders from engineering backgrounds to determine whether it is a matter of entrepreneurial intentions or skills that drive engineering students to create more startups.

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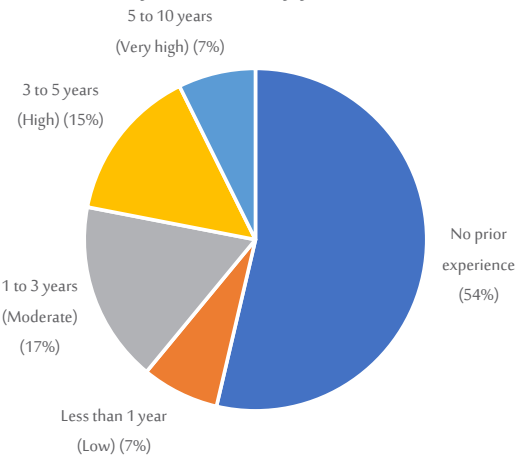
Appendices

How valuable was your university education to your entrepreneurialjourney?
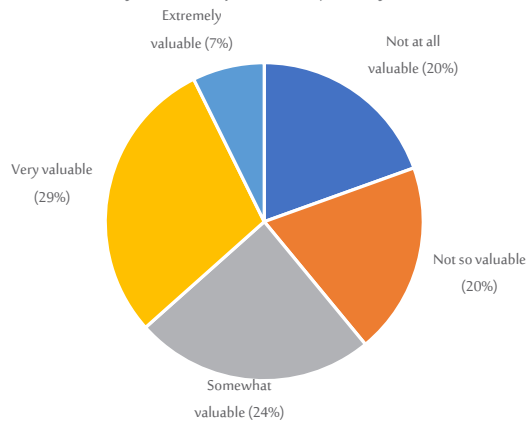
Note. The descriptive statistics for the founders' perceived value of the university are as follows: Min = 1.00, Max = 5.00, Mdn = 3.00, M = 2.85, and SD = 1.24.
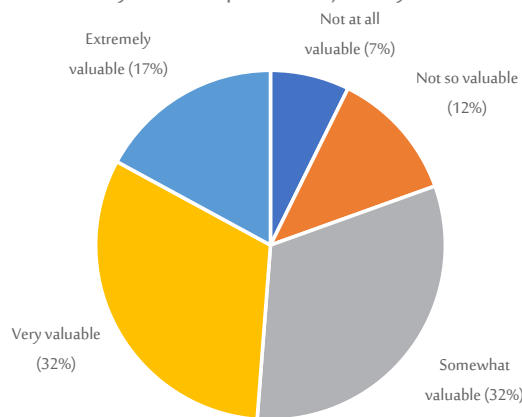
### Figure A1. Perceived Value of University Education.

How valuable was your university education to your entrepreneurialjourney?

Note. The descriptive statistics for the founders' perceived value of specialization are as follows: Min = 1.00, Max = 5.00, Mdn = 3.00, M = 3.39, and SD = 1.12.

Figure A2. Perceived Value of Specialization

Before starting your own start-up, did you have any prior experience working for a startup? If yes, how many years?

Note. The descriptive statistics for the founders' prior startup experience are as follows: Min = 1.00, Max = 5.00, Mdn = 1.00, M = 2.15, and SD = 1.39.

Figure A3. Prior Startup Experience

How would you rate your exposure to start-ups and theentrepreneurial ecosystem before starting your own start-up?
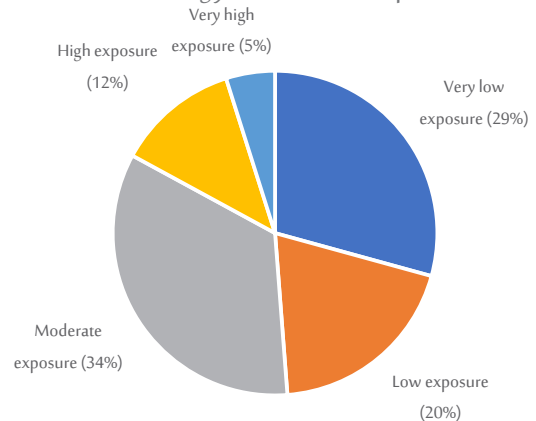
Note. The descriptive statistics for the founders' prior entrepreneurial exposure are as follows: Min = 1.00, Max = 5.00, Mdn = 3.00, M = 2.44, and SD = 1.17.

Figure A4. Prior Entrepreneurial Exposure